

Industralås

Handbook for Industrial Applications



- Locks
- Latches
- Handles
- Hinges
- Sealing profiles
- Miscellaneous
- Stainless products

One philosophy.
Many solutions.





DIVERSITY

QUALITY

COMMUNICATION

INTELLIGENT USE
OF RESOURCES

INTEGRITY

PROFITABILITY

CUSTOMER FOCUS

VISION

TEAMWORK

ATTITUDE


CONTINUOUS IMPROVEMENTS

LEADERSHIP

AMBITION TO GROW

COMPETENCE DEVELOPMENT

ENVIRONMENT



Welcome to this 2019 edition of our solutions guide, composed to meet the ever-growing expectations of the world's leading industry experts! We hope our philosophy is evident on every page and that you find inspiration that will enhance the performance of your designs.

VÄLKOMMEN TO OUR WORLD!



Fredrik Mölzer

WITH THIS SYMBOL WE ILLUSTRATE WHAT OUR PHILOSOPHY IS ALL ABOUT.

While the circle represents our teamwork, where we've chosen to put the human being in the centre, there is also a strong leadership focused on new opportunities and the resourcefulness of each team member's knowledge, experience and skills.

The name of our symbol is Victor.

The key symbolizes our attitude and our approach to challenges. Nothing is impossible.

The gesture of victory illustrates that our philosophy produces success.

At Industrilås we also created the concept "One philosophy, many solutions." This slogan is true to this day, appropriately summing up our identity, and we use it with pride in many different situations.





- Headquarters
- Production sites
- Subsidiaries
- Sales partners

INDUSTRILAS WORLDWIDE

GROUP HEADQUARTERS

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The Industrilas Group Headquarters is situated in South Sweden. This is where our main R&D centre, tool shop, production, assembly as well as logistics, service centre and Group Management are located. All worldwide activities are coordinated from here and all customers who are outside the service area of distributors and other Industrilas hubs are serviced from here.

NORTH AMERICA

● **INDUSTRILAS US**

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CONTENT

ONE PHILOSOPHY.
MANY SOLUTIONS.

| | |
|-------------------------------|----------------|
| About Industrias | Page 6 - 17 |
| Quality Management System | Page 18 - 19 |
| WWW: CAD and Online Catalogue | Page 20 - 21 |
| Legend of Symbols | Page 22 - 23 |
| Technical explanations | Page 24 -25 |
| Cut-outs | Page 26 - 27 |
| | |
| Products | Chapter 1 - 6 |
| | |
| Materials and Processes | Page 454 - 461 |
| Index | Page 462 - 479 |
| About this catalogue | Page 480 |

SWING & LIFT HANDLES
ROD LATCH SYTEMS

QUARTER-TURN
LATCHES
HANDLES
ACCESSORIES

HINGES FOR
FLUSH OR SURFACE
MOUNTED DOORS

EDGE PROTECTION
SEALING PROFILES
ACCESSORIES

ACCESSORIES
MISCELLANEOUS

STAINLESS STEEL
PRODUCT RANGE

1

- Vision System for outside / inside sealed area
- Swing handles
 - for round cylinder
 - tool operated
 - for profile cylinder
- Lift handles
- Flat rod latching systems
- 3-point cams
- Round rods
- Rod guides, accessories
- Vision plugs for profile cylinder devices
- Profile cylinder



2

- Vibration resistant quarter-turns
 - L- / T-handles
 - Compression latches
 - Cylinder locks
 - Cams, round rods
 - Flush handles
 - Keys, accessories
- Specials:**
System Klima-flex for HVAC applications
Vector T-handles: latches with compression; Vector P: paddle latches



3

- Concealed hinges
 - Lift-Off hinges
 - Adjustable hinges
 - Corner hinges
 - External hinges
 - Bolt-on / weld-on hinges
 - Butt hinges
 - Piano hinges
- Specials:**
Vision hinges, Klima-flex hinges



4

- Edge protection
- Sealing profiles
- Glazing profiles
- Self-adhesive sealing profiles
- Tools and accessories



5

- Spring loaded latches
 - Cover stays
 - Handles
 - Drawing pockets
 - Pull-down catches
- Specials:**
Klima-flex inspection windows
3D-Intelliclamp unit connection system



6

- Swing handles
- Quarter-turn latches
- L- / T-handles
- Padlockable defeater handles
- Compression latches
- Hinges
- Pull-down catches
- Accessories





WE KNOW THE BUSINESS.

Industrilas specializes in the production and sales of commercial products and system solutions for latches, hinges and sealing technology for industrial applications. We offer a wide range of standard products as well as the development and manufacturing of customized solutions.

ENCLOSURE SOLUTIONS



Solutions for sheet metal and stainless steel applications, enclosures and cabinets.

- Switch cabinet housings
- Machinery manufacturing
- Panels, covers
- HVAC units
- Vehicle bodies
- Urban and city furniture
- Garbage and disposal equipment



SWITCH-GEAR AND CONTROL CABINETS



Industralas carries a wide spectrum of specific solutions for the electrical industry or IT/TELCO racks. The product range Vision includes swing handles, rod latch systems and hinges for enclosures and data cabinets.



VISION PRODUCT LINE

- Systems for outside or inside sealed area
- Swing handles tool operated
- Swing handles for cylinders
- Multi-point latching systems
- Flat or round rods
- Hinges for 90° - 270° opening angle
- Stainless steel version



HVAC SYSTEMS AIR HANDLING UNITS



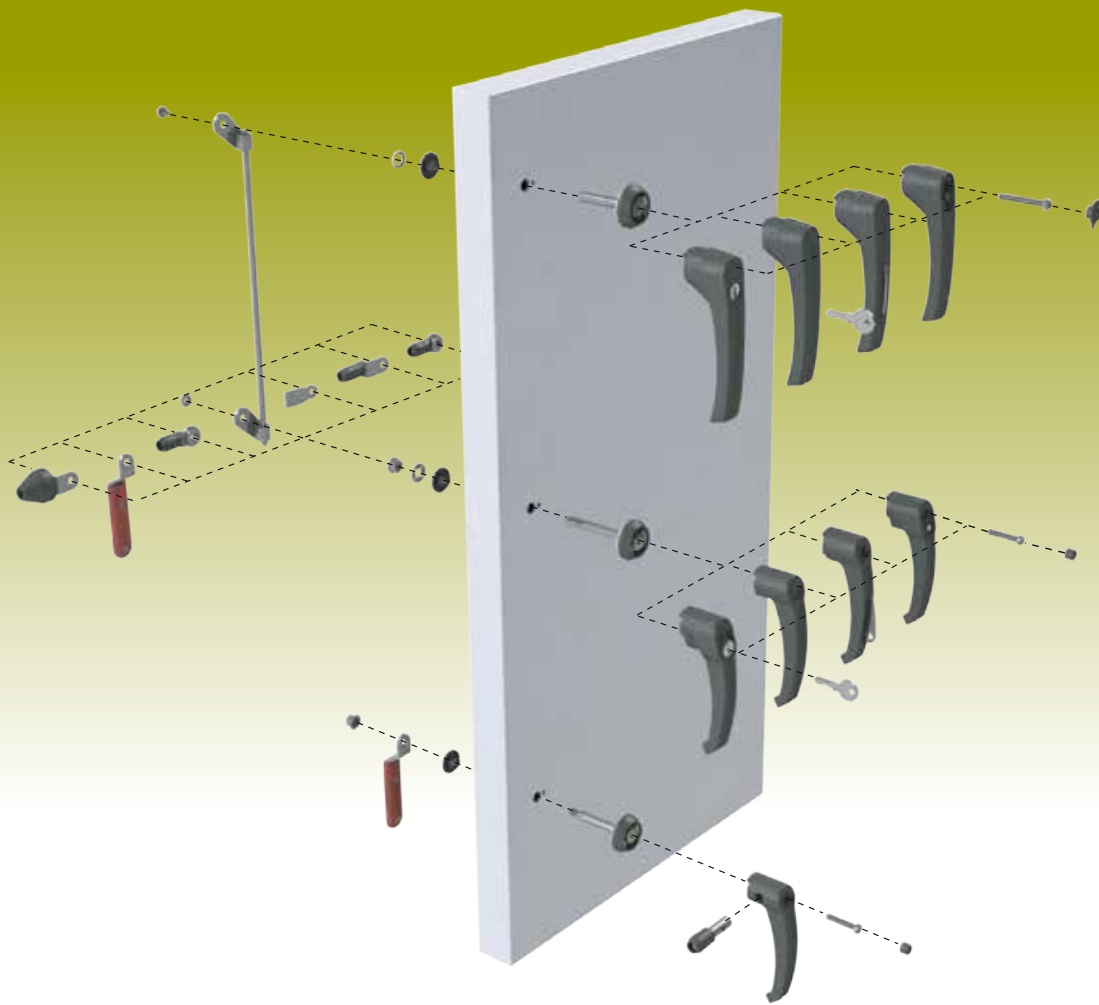
COMPONENTS FOR HVAC APPLICATIONS

The industrial-oriented Klima-flex program offers solutions for HVAC applications. It now represents the state of the art based on the latest HVAC guidelines. For advice and special solutions we offer experienced development, design and manufacturing teams.



The Klima-flex line of products is designed for HVAC applications, fulfilling the strict requirements for housings of air conditioning, ventilation and heating equipment, especially with insulated doors or panel designs.

- Lock systems
- Latches
- Hinges
- Sealing profiles
- Inspection windows
- Connectors
- Accessories



Klima·flex[®]
PARTS FOR HVAC-UNITS

HVAC industry: solutions for sheet metal housings and enclosures.

Products verified according to RLT-guidelines, VDI 6022, etc.

- Heating
- Ventilation
- Air Condition
- Cooling
- Refrigeration
- Air treatment
- Filter technology equipment





PRODUCTS MEETING THE HIGHEST DEMANDS.

Industralas is an international supplier for the railway industry. The standard product line offers numerous application possibilities for exterior and interior uses. Depending on the task Industrilas develops custom solutions. Industrilas supports the railway industry by consistently taking relevant standards into account. Project-related developments complement solutions from Industrilas' modular system.

SOLUTIONS FOR RAILWAY INDUSTRY



The European rail network continues to grow together and internationally valid standards are becoming increasingly important.

DIN EN 61373 (DIN EN 61373:2011-04, Category 1, Class B):

Railway Applications, Rolling Stock Equipment: Shock and Vibration Tests (IEC 61373:2010)

EN 45545-2 (DIN EN 45545-2:2016-02):

Railway Uses, Fire Protection on Railway Vehicles: Part 2 Requirements for Fire Behaviour of Materials and Components

SOLUTIONS “MADE IN SWEDEN”.

Applications for products and assemblies from Industrilas can be found in all categories of vehicles on tracks:

- Trams
- Subways
- Commuter trains
- Rapid transit
- High-speed trains

Project management tailor-made for the customer assures a close and boundary-breaking cooperation with the suppliers.

Rolling Stock manufacturers as well as passengers are expecting solutions for a safe and comfortable environment while also meeting economic and environmental requirements.



An extensive product range is available for exterior and interior applications.

- Vibration-resistant quarter-turn latches
- Quarter-turn compression latches
- Compression latches
- Flush-mounted latches
- Hinges
- Sealing profiles
- Special solutions

Targeted advice and specific customer solutions are provided by an internationally experienced development, design and manufacturing team.



Industrilas components close and seal hatches, doors, panels and maintenance facilities in exterior and interior areas of railway vehicles.

COMMERCIAL VEHICLES



A SUITABLE SOLUTION FOR EACH TERRAIN.

Industralas has for many years been an international service partner to the commercial vehicle industry and supplier to specialty vehicle manufacturers. In addition to numerous standard products the Vector latching system was developed for these special requirements, based on practical experiences.

In exterior environments, flush-mounted or recessed latching offer multiple applications. The focus is on panels and housing parts as well as under-body storage boxes. Robust design, vibration resistance and quality materials are particularly characteristic of Industrilas products.

In interior environments, Industrilas specializes in being a development partner for customized solutions. Cabs, cabins or interiors represent particular challenges of functionality and design for latches and hinges.

Industralas components close and seal hatches, doors, panels and maintenance facilities in exterior and interior areas of vehicles.



HEAVY DUTY, HANDY AND PRACTICAL.

Applications for Industrilas products and assemblies are found in many categories such as:

- Caravans and motorhomes
- Municipal vehicles
- Tanker vehicles
- Construction equipment machinery
- Agricultural engineering
- Forestry
- Generators
- Trailers
- Trucks

Targeted advice and specific customer solutions are provided by an internationally experienced development, design and manufacturing team.



Vector[®]



Product lines for hatches, doors, panels and maintenance facilities:

- Flush mounted / recessed latches with compression function
- Flush mounted / recessed latches with slam-latching function
- Vibration-resistant quarter-turn latches
- Quarter-turn compression latches
- Compression latches
- Hinges
- Sealing profiles
- Special solutions



TOGETHER WE MOVE FORWARD!

Innovative designs only succeed with employees that combine industry experience, expertise and commitment for an application to create the best solution for you. We can help you decide what products to use in hot, freezing or rainy climates, as well as what items are most economical in your situation. Numerous projects and solutions demonstrate our competence.



DESIGN AND ENGINEERING



Industrilas works with the SolidWorks 3D CAD system. On this foundation we develop the industry-oriented solutions for your demanding applications.

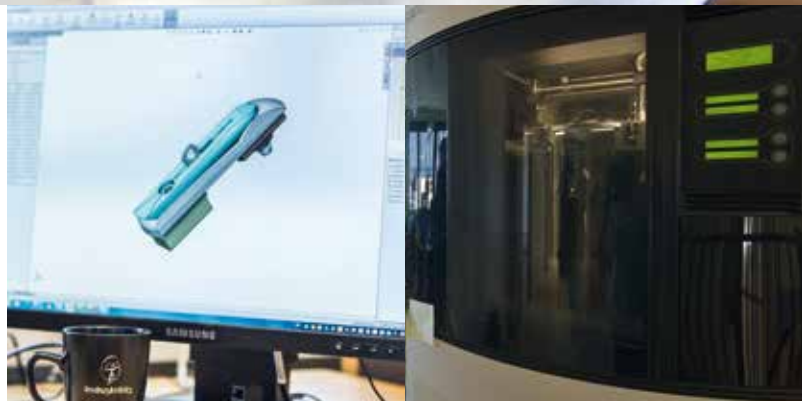
We design products with the requirement that ideas or market demands must be turned into working products at reasonable prices. This often includes that little extra “something“ using a blend of experience and unconventional thinking.

PROJECT MANAGEMENT, PROTOTYPING & TOOLSHOP



Industralas has implemented a powerful project management. The goal is to increase the flow of projects with the focus on the customers' benefits. All processes for engineering, tool design and production are related to necessary input, decisions and resources.

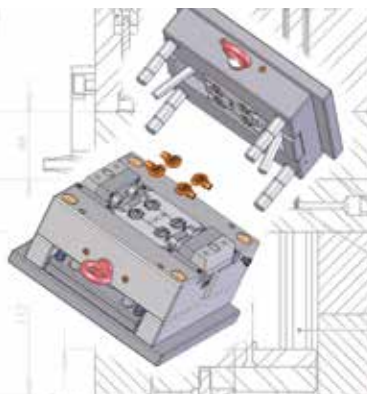
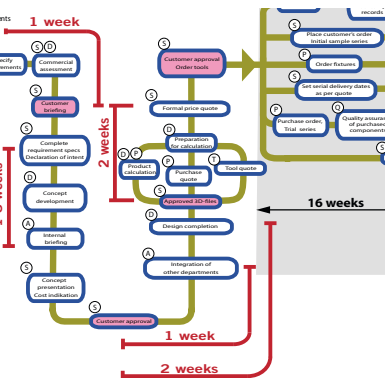
The Industrilas division iToolconcepts combines innovative thinking, cooperation and production resources with great experience. In addition to the own tool-making shop a vast international network of talented and trustworthy suppliers manufacture tools for injection molding of plastics, die-casting in zinc as well as stamping tools.



DESIGNED WITH PASSION

Good design and great function is very important for us in this process. That is why we provide our customers with functional special design prototype models, so that form and function can be perfectly coordinated.

Industralas offers support all the way, from idea to manufactured product, with the needed infrastructure backing customers through the entire process.



UNDER ONE ROOF



COMPETENCE CREATES TRUST.

Integrated latching, hinge and sealing applications are a challenge unto themselves. Here, knowledge and overview are required. Industrias possesses excellent know-how and controls the entire process chain from initial conception to production, to the finished, coated end product.

- Prototypes, 3D-printer
- Tooling and moulding
- Plastics technology
- Casting / die-cast zinc
- Turning, milling, forming, stamping
- Surface treatment
- Foamed PUR-gasket technology
- Assembly, logistics

As we have all departments gathered under one roof, it is easy for our designers to constantly visit the different departments during their daily work. Feedback is immediate as we even eat lunch together, which results in development of new products with added improvements!

ONE PHILOSOPHY. MANY SOLUTIONS.

Education and experience combined with work in a creative environment generate our desire for more learning and unconventional thinking. This philosophy is what makes us a strong and efficient team. We actively seek out every opportunity to absorb, benefit from and share new knowledge and skills. This is how we generate many solutions.



QUALITY AND THE ENVIRONMENT.

The most important parameters for our activities are our co-workers, customers and the environment – in other words: work place safety, customer satisfaction and environmental protection. Industrilas has a number of good implements for the management, guidance and monitoring of all processes of the company. We call the system IMS – Industrilas Management Systems.

External accredited test laboratories perform required tests. Internally we have available facilities for durability and endurance tests and IP-protection, among others.

Industrilas is currently certified according to EN ISO 9001:2015 (Quality Management System) and EN ISO 14001:2015 (Environmental Management System).



Industrilas products comply with the RoHS Directive.

More information on the WEEE Directive, the REACH Regulation, the RoHS Directive, and the materials and processes used by Industrilas, can be found on page 460 or on our website: www.industrilas.com

PRODUCTION



The most important parameters for our activities are our co-workers, customers and the environment – in other words: work place safety, customer satisfaction and environmental protection. Industrilas has a number of good implements for the management, guidance and monitoring of all processes of the company. We call the system IMS – Industrilas Management Systems.

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QUALITY



CERTIFICATIONS

EN ISO 9001:2015

(Quality Management System)

This standard specifies the demands on a management system where a company has to, or wants to, prove their ability to perform systematic and goal-oriented quality work, while adhering to applicable statutes and providing products that fulfil customer requirements.

EN ISO 14001:2015

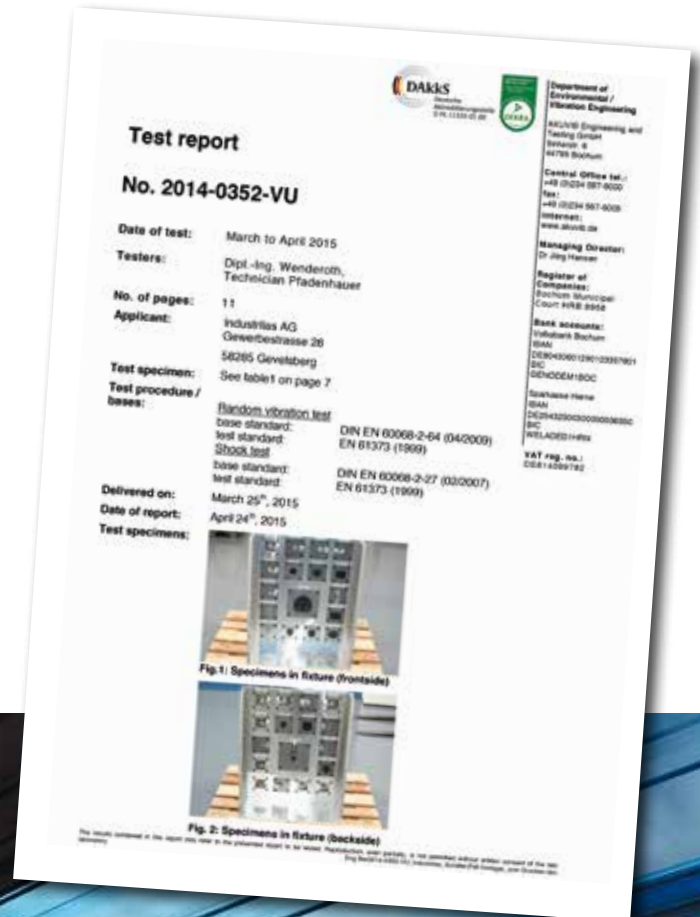
(Environmental Management System)

The purpose of this standard is to encourage companies to institute and maintain an environmental management system. Through methodical application of the rules of the standard, and continual improvements of its own environmental efforts, a company can accomplish reduced environmental impact caused by its activities.

DIN EN 61373: RAILWAY APPLICATIONS

TESTED PRODUCTS FOR VEHICLE MANUFACTURING.

Industrias latching and hinge products prove their suitability for special applications even under the stringent requirements of the tests in accordance with DIN EN 61373 Category 1, Class B (Railway Applications). Extensive vibration and shock tests were successfully run. The present certification tested serial-produced items from the standard product line.



Featured catalogue pages refer to certified or type-equivalent products.

SERVICE INSPIRED BY ENGINEERS.

All engineering and product development at Industrilas is based on 3D CAD-system SolidWorks™. Since 2008 Industrilas has been cooperating with SolidComponents™, an online solution for digital product catalogues providing quality CAD support. The system is currently used by designers from more than 140 different countries and supplies users with millions of CAD models every year.



WWW.INDUSTRILAS.COM

CAD / DOWNLOAD

The system supports all major CAD systems on the market. This enables customers to gain instant access to 2D and 3D CAD models of nearly all Industrilas products. Thanks to product configuration features, you can instantly create customized CAD models in the file format you desire.

Visit the home page www.industrilas.com and find the product you are interested in. The many SEARCH options will guide you through the wide range of Industrilas products.

Then simply follow the instructions to download the model for your current project! In only minutes, you will be ready to design your products using the hinges, handles and latches of your choice.



Supported 2D/3D formats:

- SolidWorks
- Pro/E
- Sat
- Step
- Parasolid
- Iges
- Dxf
- Dwg

SEE US ONLINE



MORE ON OUR WEBSITE

Our website gives you instant access to all our products and it offers the most updated information on our products and upcoming trade fairs where you can meet us. You will also find product news, contact forms, our distributor network, quick-loading product pages, PDF's, explanations, films and much more.

www.industrilas.com

WWW.INDUSTRILAS.COM

WEB CATALOGUE AND CAD-SERVICE

Our web-catalogue incorporates several search functions and a CAD-support system where you simply click on the part number to gain access to our customer CAD-system. This allows you to download most of our products as 3D-models in a wide variety of CAD-formats to fit your system.





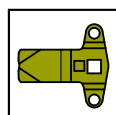
Indicates our own brand of Vision products



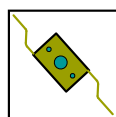
Indicates our own brand of Vector products



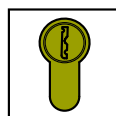
Indicates our own brand of Klima-Flex products



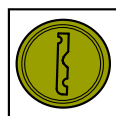
For use with cam



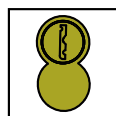
For use with control mechanism



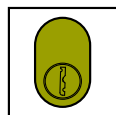
Can be equipped with profile cylinder



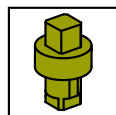
Can be equipped with round cylinder



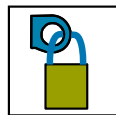
Can be equipped with BestLock cylinder



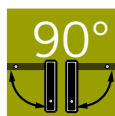
Can be equipped with Scandinavian oval cylinder



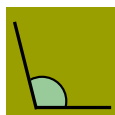
Equipped with tool operated insert



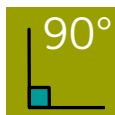
Can be or is equipped with padlock loop



Handle rotation 90° in both directions



Opening angle of hinges, applicable angle shown in numbers



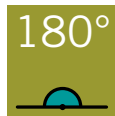
Opening angle of hinges, applicable angle shown in numbers



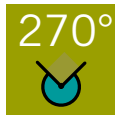
Opening angle of hinges, applicable angle shown in numbers








Opening angle of hinges, applicable angle shown in numbers









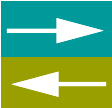
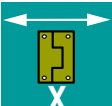
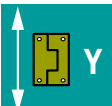
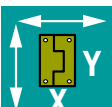

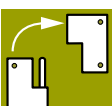
Opening angle of hinges, applicable angle shown in numbers

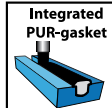



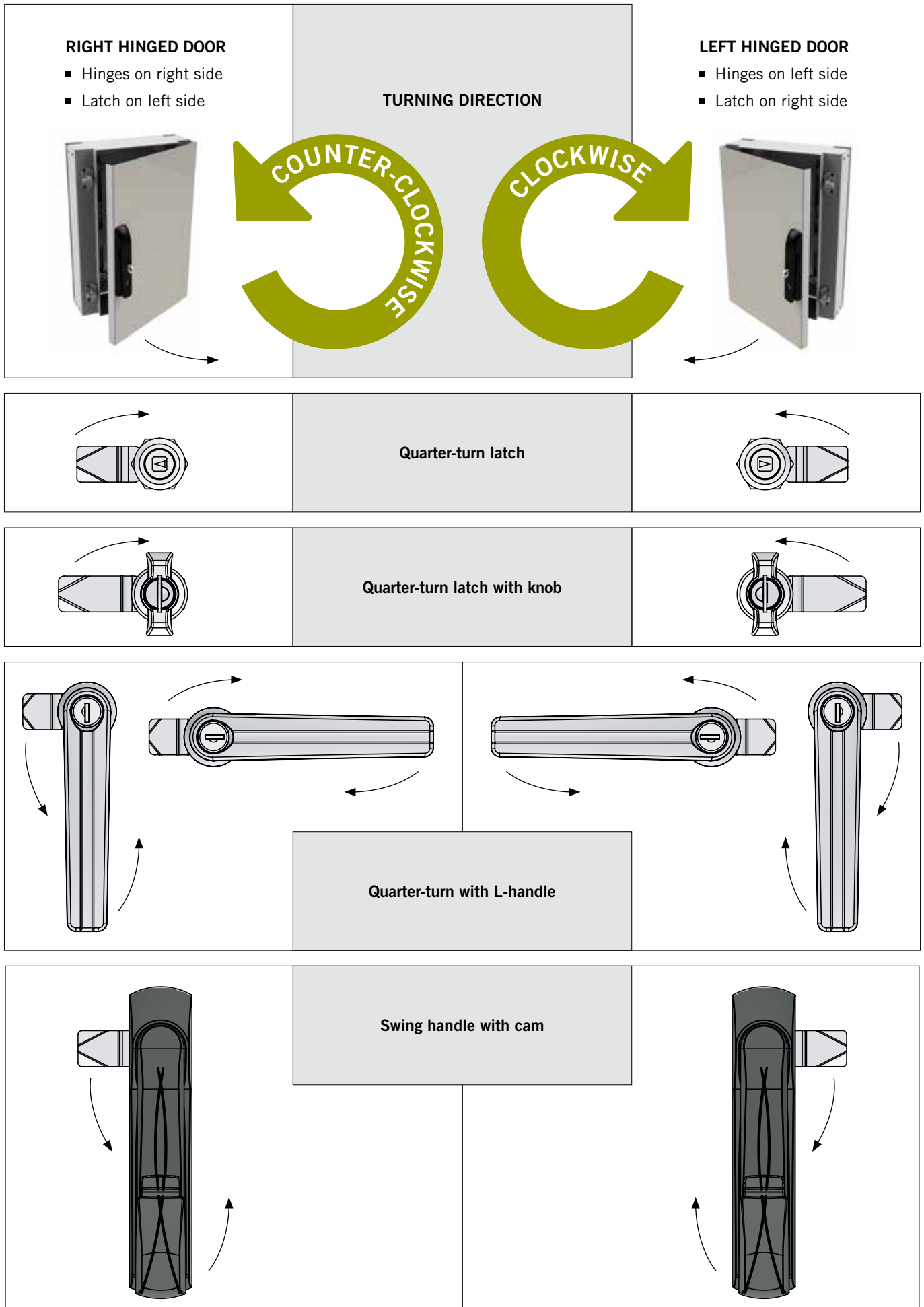
Opening angle of hinges, applicable angle shown in numbers

| | |
|---|---------------------------------------|
|  | Can be or is equipped with dust cover |
|  | Classified according to IP54 |
|  | Classified according to IP65 |
|  | Classified according to IP67 |
|  | Classified according to IP69K |
|  | Waterproof according to NEMA 4. |

| | |
|---|---|
|  | Stainless steel |
|  | UL-recognized |
|  | Vibration-resistant according to DIN EN 61373 |
|  | Classified according to VDI 6022 |
|  | Classified according to EN 45545 Fire protection on railway vehicles |
|  | Can be or is equipped with earthing/grounding |

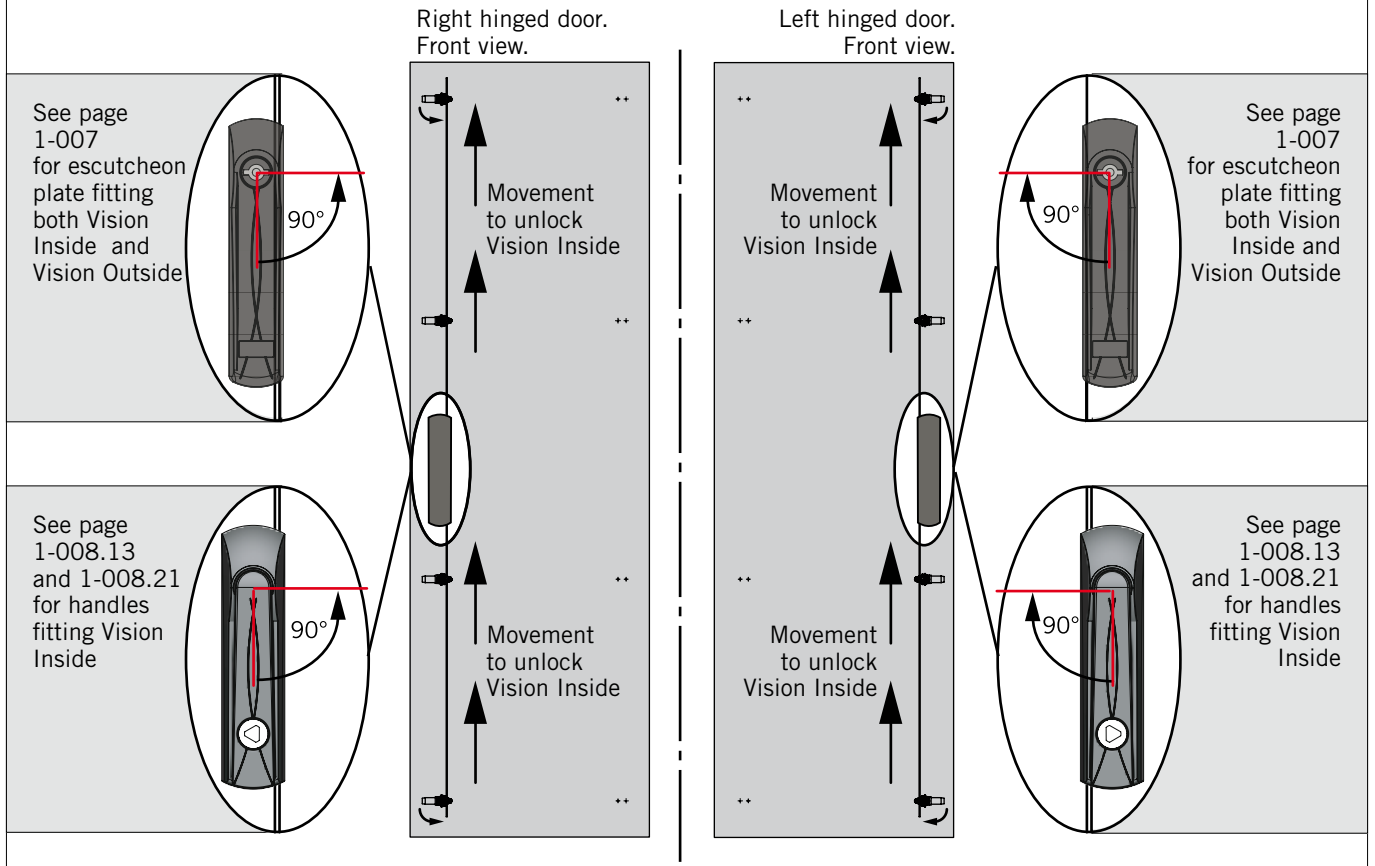
| | |
|---|-------------------------------------|
|  | Universally right or left mounted |
|  | Adjustable horizontally (X-axle) |
|  | Adjustable vertically (Y-axle) |
|  | Adjustable in X- and Y-axis |
|  | Adjustable in X-, Y- and Z-axis |
|  | Lift-off function, can be separated |

| | |
|---|--|
|  | Equipped with integrated PUR-gasket (a.k.a "Pour -In-Place-Foamed-Gasket" or "PIPG") |
|  | Latch with compression function |



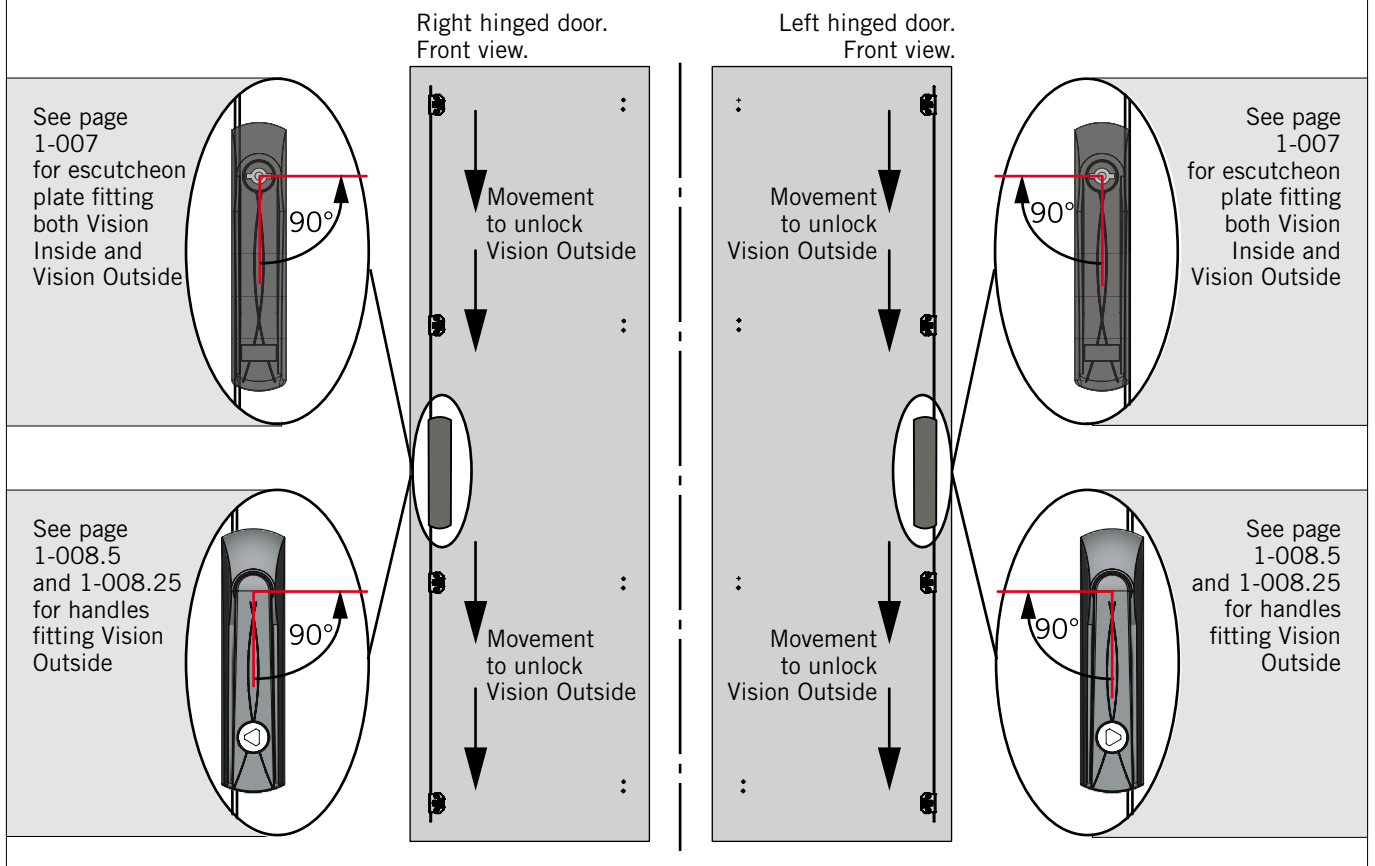
1

VISION INSIDE

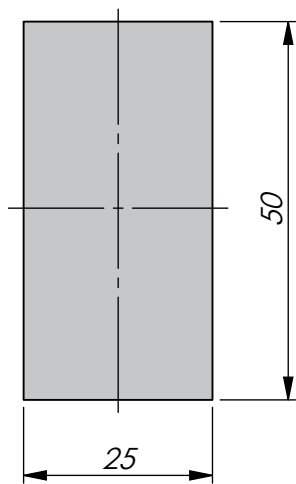


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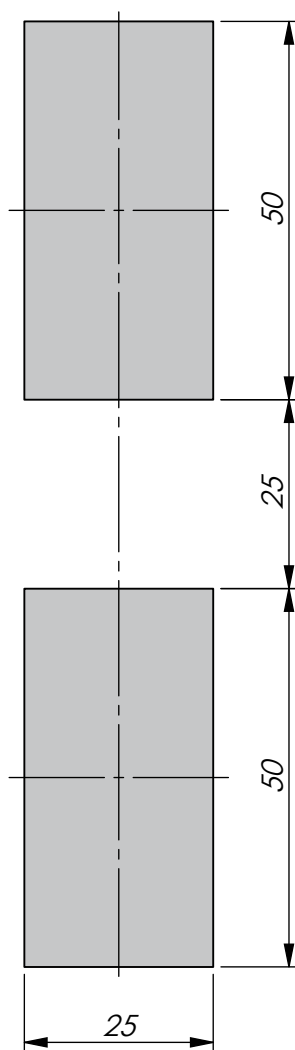
VISION OUTSIDE



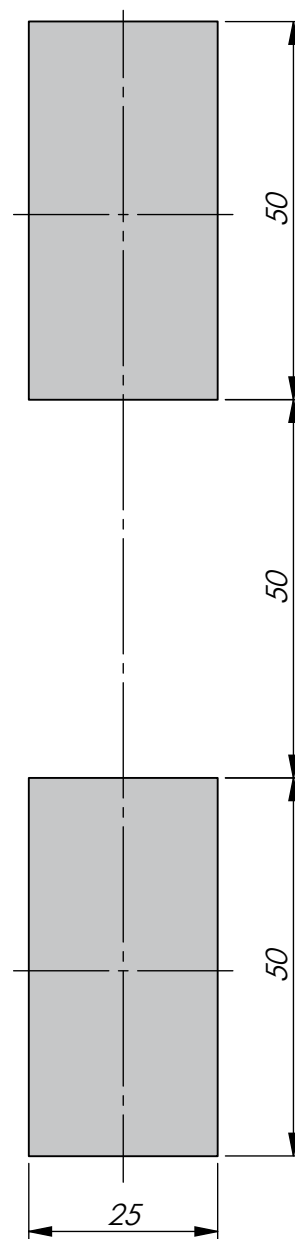
Version A



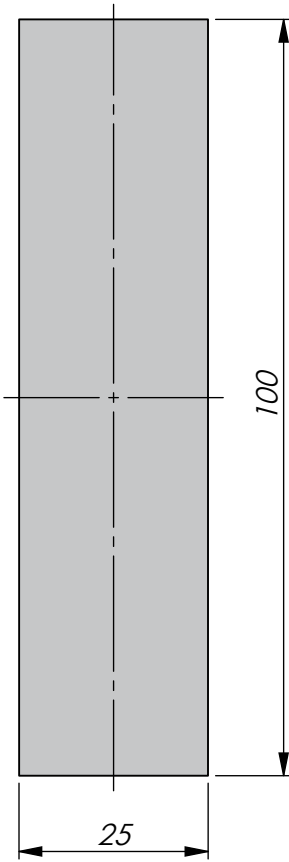
Version B



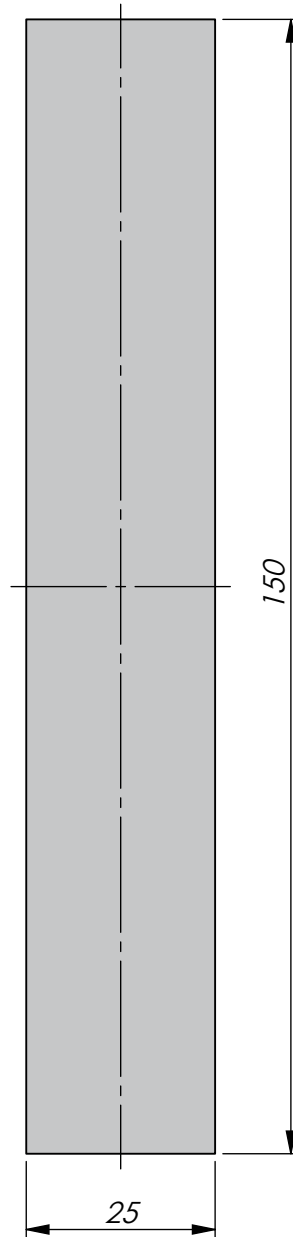
Version C



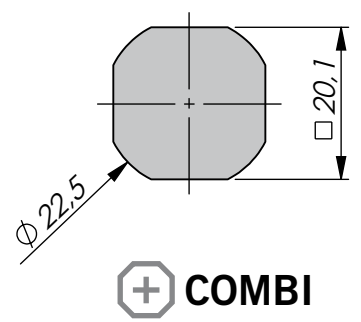
Version D



Version E

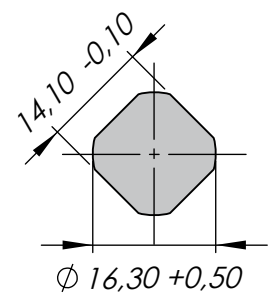


Version F

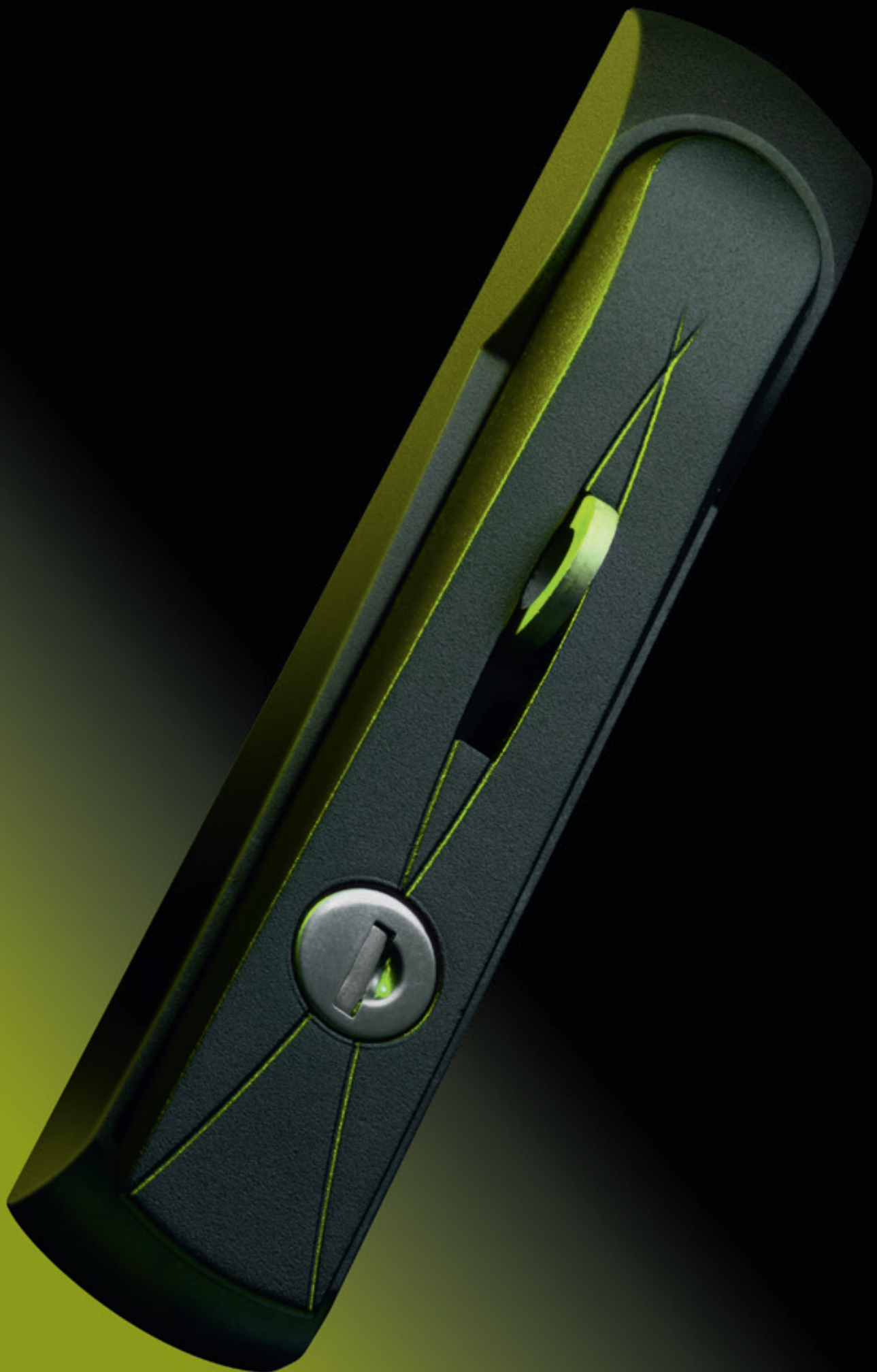


+ COMBI

Version G

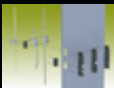
















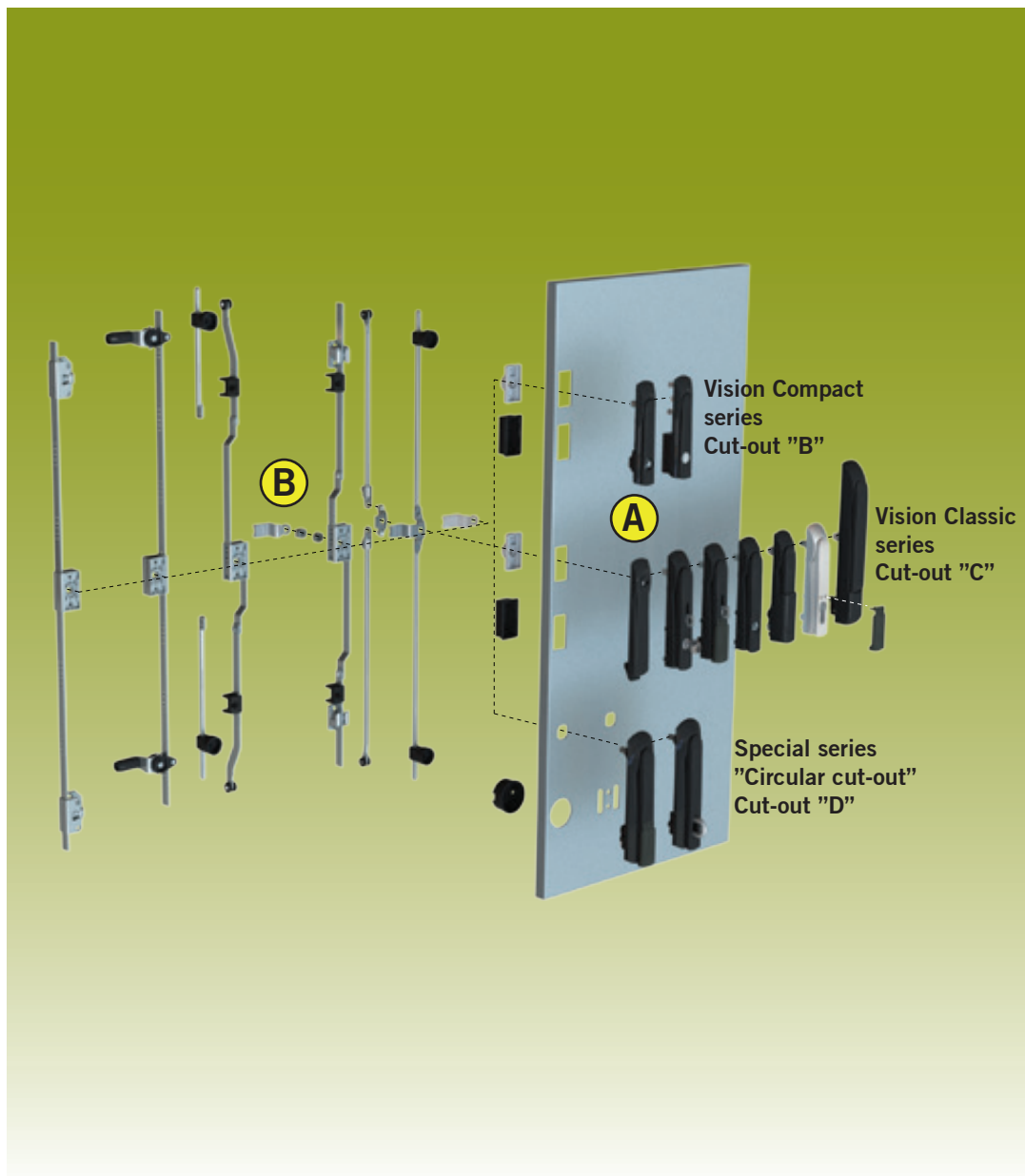
+ COMPACT



SWING HANDLES ROD LATCH SYSTEMS

1

| | | |
|---|---|---------------------|
| How to build your Vision-System |  | 1-000.00 A - B3 |
| Vision swing handles for control mechanism |  | 1.002.01 – 1.006.03 |
| Vision swing handles for cams and round rods |  | 1-002.11 – 1.006.13 |
| Vision Highlander swing handles for control mechanism or cams |  | 1-004.03 – 1.004.13 |
| Vision Compact swing handles for control mechanism |  | 1-006.01 – 1.006.03 |
| Vision Compact swing handles for cams and round rods |  | 1-006.11 – 1.006.13 |
| Vision Lift handle |  | 1-006.50 |
| Vision Escutcheon plate |  | 1-007 |
| Vision Heavy-Duty rod latch system |  | 1-008.04 |
| Vision Outside rod latch systems |  | 1-008.05 – 1.008.07 |
| Vision Inside rod latch system |  | 1.008.13 |
| Vision Classic dual action rod latch systems |  | 1-008.21 – 1.008.25 |
| 3-point cams, rods and rod guides |  | 1-008.50 – 1.008.57 |
| Vision swing handles / special types |  | 1-010 – 1-020 |
| Profile cylinders and Vision plugs for profile cylinder devices |  | 1-209 – 1-211 |



VARIOUS OPTIONS AND COMPONENTS RELATED TO VISION LATCHING SYSTEMS

Corner control mechanism for multi-point latching. See page 1-008-05a/b and 1-008.13a/b.



Click hinge for quick assembly. 120° opening angle. See page 3-094 and 3.095.



Hinge with electric earthing or grounding. 120° opening angle. See page 3-310.



A STEP 1: Choose the type of handle or escutcheon you prefer.

LOCKING VERSION WITH CYLINDER LOCK

Swing handle for **profile cylinder** 40/45 mm:
Page 1-002.02, 1-005.10 for rod latch systems with control mechanism

Page 1-002.12, 1-005.15 for rod latch systems with 1-, 2- or 3-point latching

Swing handle for **Bestlock cylinder**:

Page 1-002.08 for rod latch systems with control mechanism

Page 1-002.18 for rod latch systems with 1-, 2- or 3-point latching

Swing handle for **round cylinder** (with/without padlock loop):
Page 1-002.01, 1-005.10 for rod latch systems with control mechanism

Page 1-002.11, 1-005.15 for rod latch systems with 1-, 2- or 3-point latching

Lift handle for **profile cylinder** 40 mm or **round cylinder**:

Page 1-006.50 for rod latch systems with control mechanism

STAINLESS VERSION

Swing handle for **profile cylinder** 40 mm (with or without dust cover):

Page 6-010 for rod latch systems with control mechanism

Page 6-020 for rod latch systems with 1-, 2- or 3-point latching

VERSION FOR SPECIAL REQUIREMENTS

Swing handle "Highlander" with insert (tool operated, with or without padlock loop):

Page 1-004.03 for rod latch systems with control mechanism

Page 1-004.13 for rod latch systems with 1-, 2- or 3-point latching

LOCKING VERSION WITH INSERT (TOOL OPERATED)

Swing handle (optional with padlock loop):

Page 1-002.03 or 1-005.10 for rod latch systems with control mechanism

Page 1-002.13 or 1-005.15 for rod latch systems with 1-, 2- or 3-point latching

Lift handle:

Page 1-006.50 for rod latch system with control mechanism

Escutcheon:

Page 1-007 for rod latch system with control mechanism or 1-, 2-, or 3-point latching

COMPACT VERSION

Swing handle with **round cylinder** (with or without padlock loop):

Page 1-006.01 for rod latch systems with control mechanism

Page 1-006.11 for rod latch systems with 1-, 2- or 3-point latching

Swing handle with **insert** (tool operated):

Page 1-006.03 for rod latch systems with control mechanism

Page 1-006.13 for rod latch systems with 1-, 2- or 3-point latching

B STEP 2: Choose an inside latching system.

SYSTEM VISION

VISION Outside. Rod latch system is designed for mounting outside sealed area. See page 1-008.05 for rod latch system with control mechanism and accessories.

VISION Inside. Rod latch system is designed for mounting inside sealed area. See page 1-008.13a-d for rod latch system with control mechanism and accessories.

VISION for 1-, 2- and 3-point latching.

With round rods:

Page 1-008.50/51 for 2- and 3-point cams

Page 1-008.52/53 for round rods, with or with rollers

Page 1-008.54 for rod guides and accessories

SYSTEM VISION SPECIALS

VISION Inside Classic. Rod latch system for mounting inside sealed area. See Page 1-008.21 rod latch system with flat rods

VISION Outside Classic. Rod latch system for mounting outside sealed area.

Page 1-008.25 rod latch system with flat rods

VISION Outside Heavy Duty. Multi-point latch system for mounting outside sealed area for heavy duty applications.
Page 1-008.04a-d rod latch system with special accessories

VISION Outside "insulated". Multi-point latch system for mounting on insulated or double skinned housings.
Page 1-008.06/07 rod latch system with accessories

Add optional products:

Corner control for multi-sided latching:
Page 1-008.04 with VISION Heavy-Duty

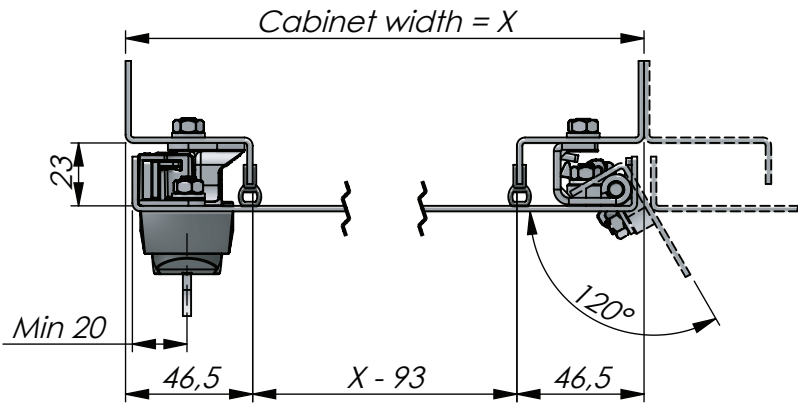
Plugs for profile cylinder devices:
Page 1-209 for inserts or round cylinders

Profile cylinders (40 mm):
Page 1-210 acc. to DIN 18252
Page 1-211 System DOM acc. to DIN 18252 and DIN EN 1303

Hinges: See chapter 3
Page 3-094/3-095 concealed hinge for quick assembly with 120° opening angle
Page 3-310 hinge with earthing/grounding function and 180° opening angle

Sealing profiles, edge protection: See chapter 4

Accessories for enclosures and control cabinets:
See chapter 5

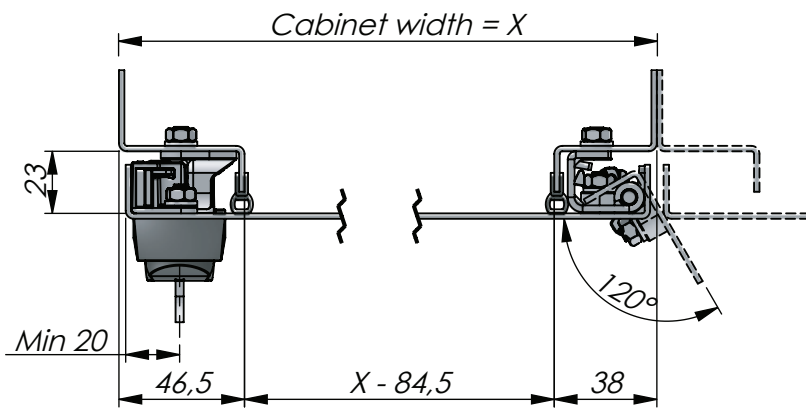


Symmetric frame, surface mounted door

Typical design for use of Vision Outside and concealed hinges.
Opening angle door: 120°

References

- Rod latch system: 1-008.05a-d
- Swing or Lift handle, escutcheon: various
- Hinges: 3-094, 3-095
- Sealing profiles: chapter 4

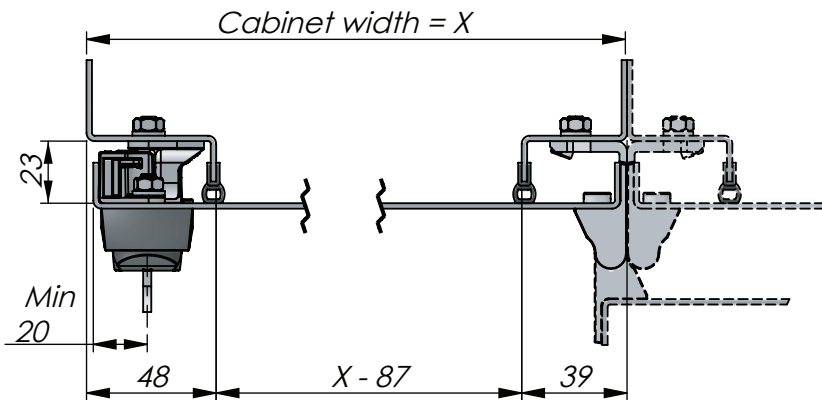


Asymmetric frame, surface mounted door

Minimized space for frame design, maximized usable cabinet width.
Concealed hinges.
Opening angle door: 120°.

References

- Rod latch system: 1-008.05a-d
- Swing or Lift handle, escutcheon: various
- Hinges: 3-094, 3-095
- Sealing profiles: chapter 4

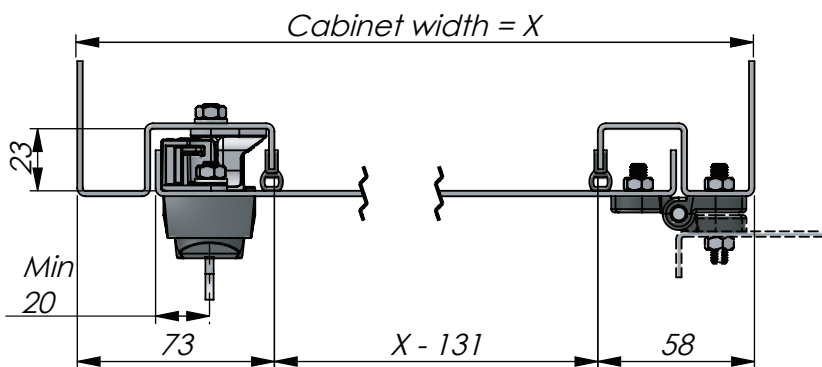


Asymmetric frame, surface mounted door, joined cabinets

Minimized space for frame design, maximized usable cabinet width. External hinges optional with earthing kit.
Opening angle door: 180°.

References

- Rod latch system: 1-008.05a-d
- Swing or Lift handle, escutcheon: various
- Hinge: 3-310
- Sealing profiles: chapter 4

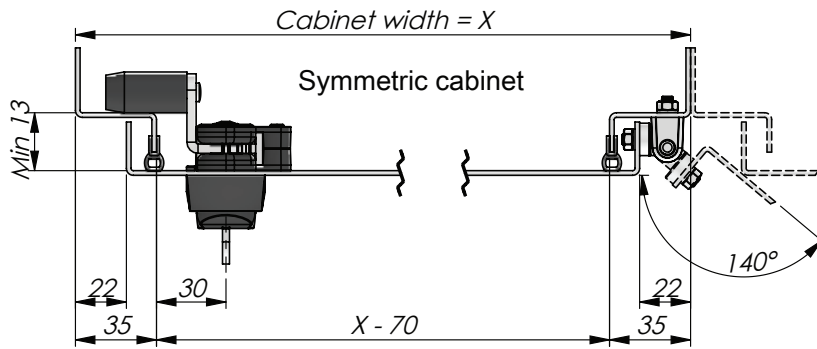


Symmetric frame, flush door

For flush mounted doors: minimized space for frame design, maximized usable cabinet width. External hinges, optional lift-off function.
Opening angle door: 180°.

References

- Rod latch system: 1-008.05a-d
- Swing or Lift handle, escutcheon: various
- Hinges: 3-328 to 3-413
- Sealing profiles: chapter 4

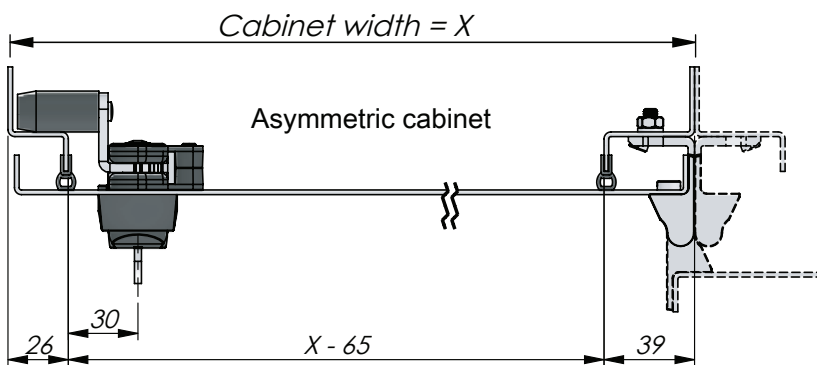


Symmetric frame, surface mounted door

Cabinet with standard frame. Door is not covering the total width of frame. Visible hinges.
Opening angle door: 140°.

References

- Rod latch system: 1-008.13a-d
- Swing or Lift handle, escutcheon: various
- Hinge: 3-451
- Sealing profiles: chapter 4

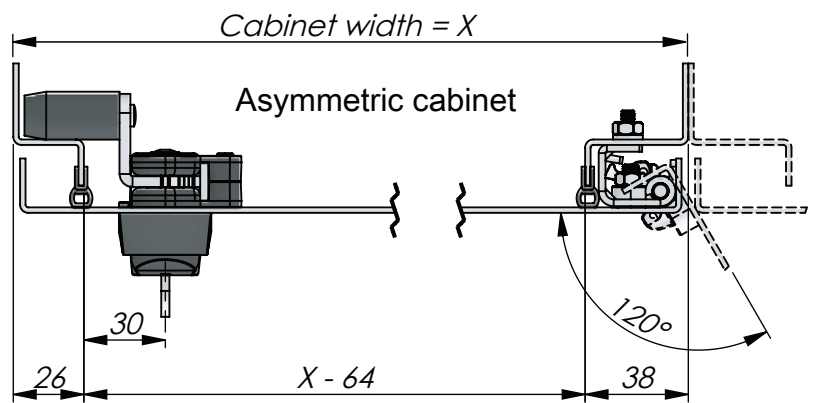


Asymmetric frame, surface mounted door, joined cabinets

Minimized space for frame design, maximal usable cabinet width. External hinges optional with earthing kit.
Opening angle door: 180°.

References

- Rod latch system: 1-008.13a-d
- Swing or Lift handle, escutcheon: various
- Hinge: 3-310
- Sealing profiles: chapter 4

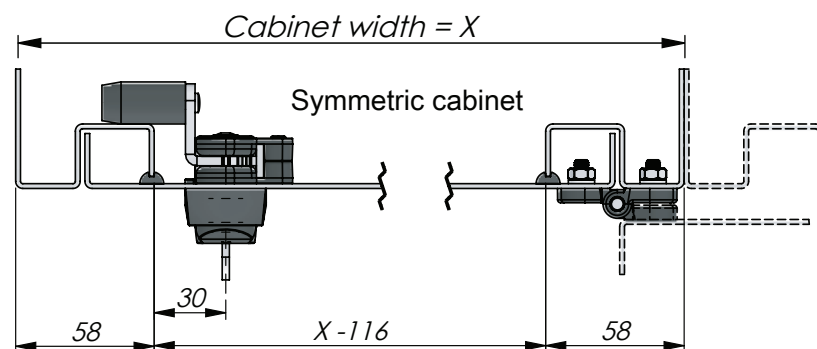


Asymmetric frame, surface mounted door

Minimized space for frame design, maximized usable cabinet width. Concealed hinges.
Opening angle door: 120°.

References

- Rod latch system: 1-008.13a-d
- Swing or Lift handle, escutcheon: various
- Hinges: 3-094, 3-095
- Sealing profiles: chapter 4

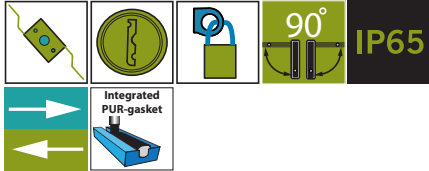


Symmetric frame, flush door

For flush mounted doors minimized space for frame design, maximized usable cabinet width. External hinges, optional lift-off function.
Opening angle door: 180°

References

- Rod latch system: 1-008.13a-d
- Swing or Lift handle, escutcheon: various
- Hinges: 3-328 to 3-413
- Sealing profiles: chapter 4



Material:

- Handle and dish: Zinc die-cast, black texture powder coated or fiber glass reinforced Polyamide (PA6GF30), black.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Pivot shaft: Zinc die-cast, zinc plated.
- Padlock loop: Stainless steel (304).

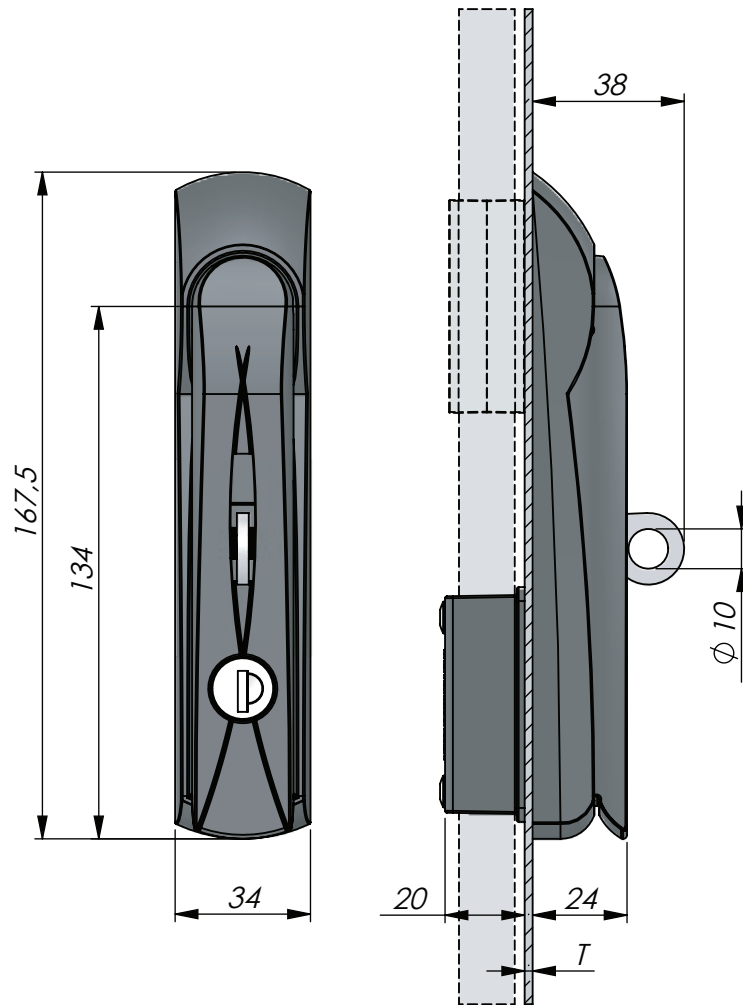
References, Accessories:

- Rod Latch Systems: Page 1-008.00 to 1-008.57.
- Vision Hinge: Page 3-094, 3-095 and 3-096.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

* Master key system on request.



Low profile swing handle with cylinder lock for control mechanism. Supplied with two keys.

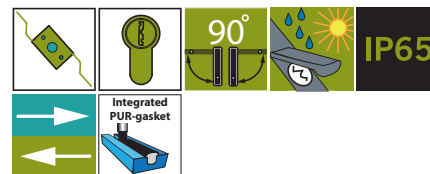
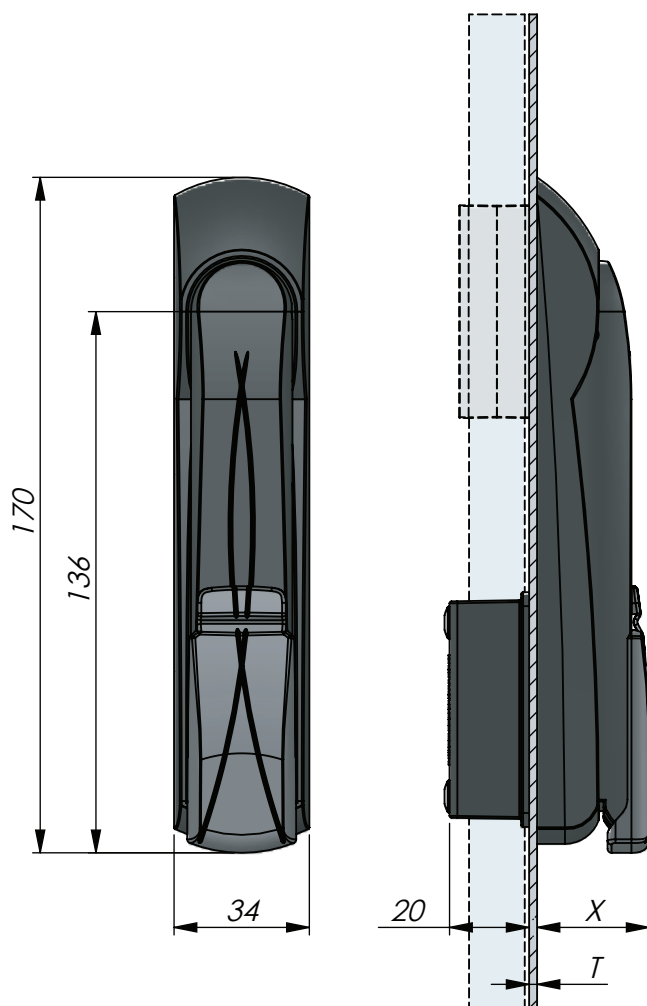
MODEL: Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle with Cylinder (AAAAAAABC-DDDD)

| AAAAAAA | Material | B | T= | C | PDL | -DDDD | Cylinder |
|---------|-------------------------|---|---------|---|-----|-------|--------------------------|
| 1216118 | Handle zinc / Dish PA6 | 1 | 0,8-1,5 | 0 | No | -C21S | Keyed alike IL101 |
| 1216418 | Handle zinc / Dish zinc | 2 | 1,6-2,5 | 1 | Yes | -C22S | Keyed to differ* |
| 1250118 | Handle PA6 / Dish PA6 | 3 | 2,6-3,5 | | | -C23S | Keyed alike IL0333 |
| | | | | | | -500S | No cylinder (Blind plug) |



Material:

- Handle and dish: Glass fibre reinforced polyamide (PA6GF30), black or zinc, die-cast, black texture powder coated.
- Dust cover: TPE.
- Pivot shaft: Zinc die-cast, zinc plated.

References, Accessories:

- Stainless version: Page 6-010.
- Profile cylinders: Page 1-209a/b, 1-211, 1-210.
- Rod Latch Systems: Page 1-008.00 to 1-008.57.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

Low profile swing handle for 40 mm or 45 mm profile cylinder and control mechanism.

MODEL: Turn-to-latch = The door is locked by turning the key.

T = For door thickness: 0,8-3,5 mm.

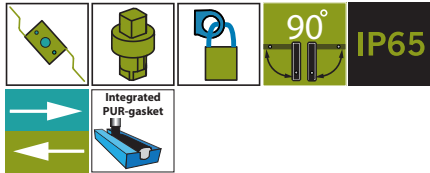
PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle for 40 mm Profile Cylinder (AAAAAAABC-DDDD)

| AAAAAAA | Material | B | T= | C | PDL | -DDDD | Dust cover |
|---------|-------------------------------|---|---------|---|-----|-------|------------|
| 1216118 | Handle zinc / Dish PA6. X=28 | 1 | 0,8-1,5 | 0 | No | -C60U | No |
| 1216418 | Handle zinc / Dish zinc. X=28 | 2 | 1,6-2,5 | | | -C60D | Yes |
| 1250118 | Handle PA6 / Dish PA6. X=28 | 3 | 2,6-3,5 | | | | |

VISION Swing Handle for 45 mm Profile Cylinder (AAAAAAABC-DDDD)

| AAAAAAA | Material | B | T= | C | PDL | -DDDD | Dust cover |
|---------|-------------------------------|---|---------|---|-----|-------|------------|
| 1216118 | Handle zinc / Dish PA6. X=33 | 1 | 0,8-1,5 | 0 | No | -C65U | No |
| 1216418 | Handle zinc / Dish Zinc. X=33 | 2 | 1,6-2,5 | | | -C65D | Yes |
| | | 3 | 2,6-3,5 | | | | |



Material:

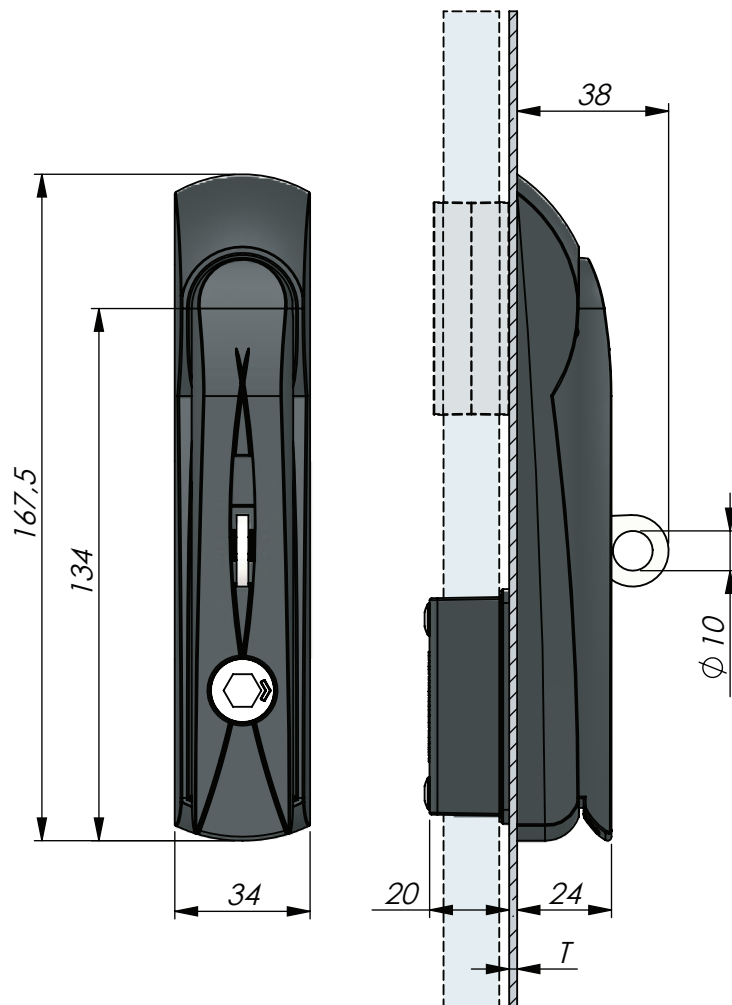
- Handle and dish: Zinc die-cast, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Insert: Zinc die-cast, chrome plated.
- Pivot shaft: Zinc die-cast, zinc plated.
- Padlock loop: Stainless steel (304).

References, Accessories:

- Rod Latch Systems: Page 1-008.00 to 1-008.57.
- Keys: Page 2-370 and 2-372.
- For stainless version, see page 6-010.

Notes, Tests:

Cut-out, version C: Page 1-001.01.



Low profile swing handle with insert for control mechanism.

MODEL: (see table below)

Turn-to-latch = The door is locked by turning the key.

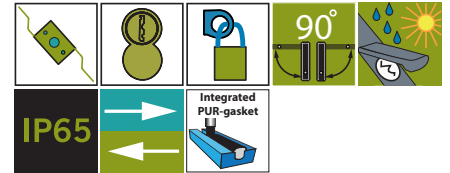
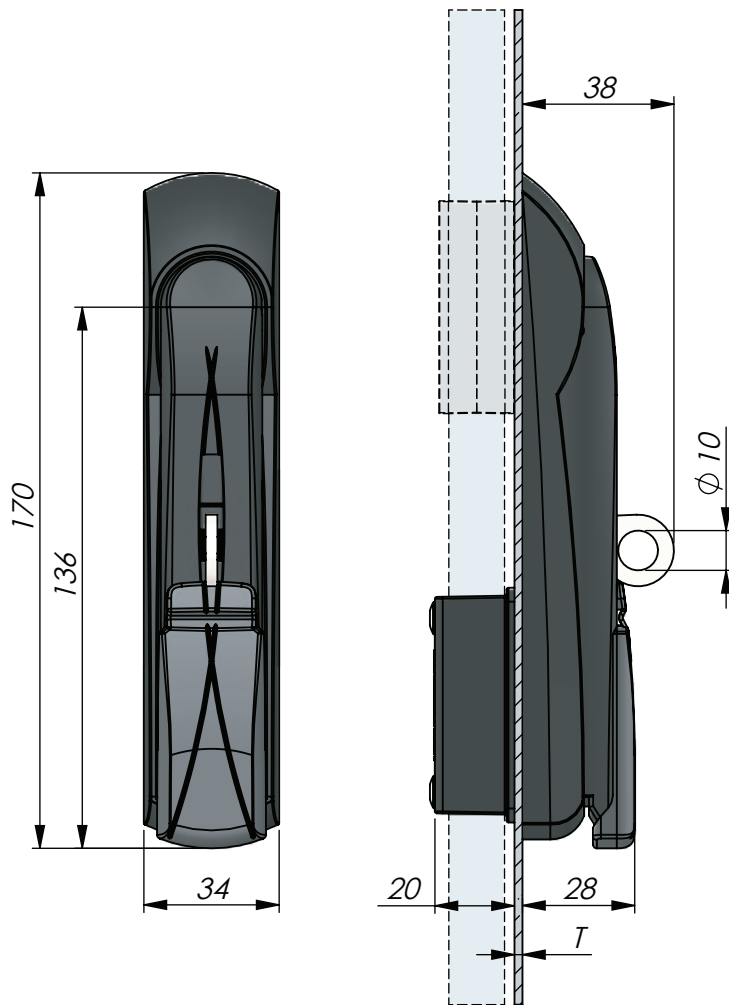
Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle, Tool Operated (AAAAAABC-DDDDE)

| AAAAAAA | Material | B | T= | C | PDL | -DDDD | Insert | E | Model |
|---------|-------------------------|---|---------|---|-----|-------|----------------------------|---|---------------|
| 1216118 | Handle zinc / Dish PA6 | 1 | 0,8-1,5 | 0 | No | -1301 | Hexagon 11 | 0 | Turn-to-latch |
| 1216418 | Handle zinc / Dish zinc | 2 | 1,6-2,5 | 1 | Yes | -1308 | Square 7 | 1 | Push-to-latch |
| 1250118 | Handle PA6 / Dish PA6 | 3 | 2,6-3,5 | | | -1309 | Square 8 | | |
| | | | | | | -1312 | Triangular 7 | | |
| | | | | | | -1313 | Triangular 8 | | |
| | | | | | | -1316 | Double Bit 3 | | |
| | | | | | | -1317 | Double Bit 5 | | |
| | | | | | | -1347 | Recessed hex. 8 / 3 mm pin | | |



Material:

- Handle and dish: Zinc die-cast, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Pivot shaft: Zinc die-cast, zinc plated.
Padlock loop: Stainless steel (304).

References, Accessories:

- Rod Latch Systems: Page 1-008.00 to 1-008.57.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

Low profile swing handle for BestLock cylinder and control mechanism.

MODEL: Turn-to-latch = The door is locked by turning the key.

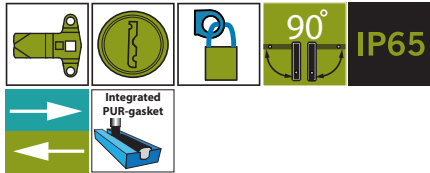
T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle for Bestlock cylinder (AAAAAABC-DDDD)

| AAAAAA | Material | B | T= | C | PDL | -DDDD | Dust cover |
|---------|-------------------------|---|---------|---|-----|-------|------------|
| 1216118 | Handle zinc / Dish PA6 | 1 | 0,8-1,5 | 1 | Yes | -C70U | No |
| 1216418 | Handle zinc / Dish zinc | 2 | 1,6-2,5 | | | -C70D | Yes |
| | | 3 | 2,6-3,5 | | | | |





Material:

- Handle and dish: Zinc die-cast, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Pivot shaft: Zinc die-cast, zinc plated.
- Padlock loop: Stainless steel (304).

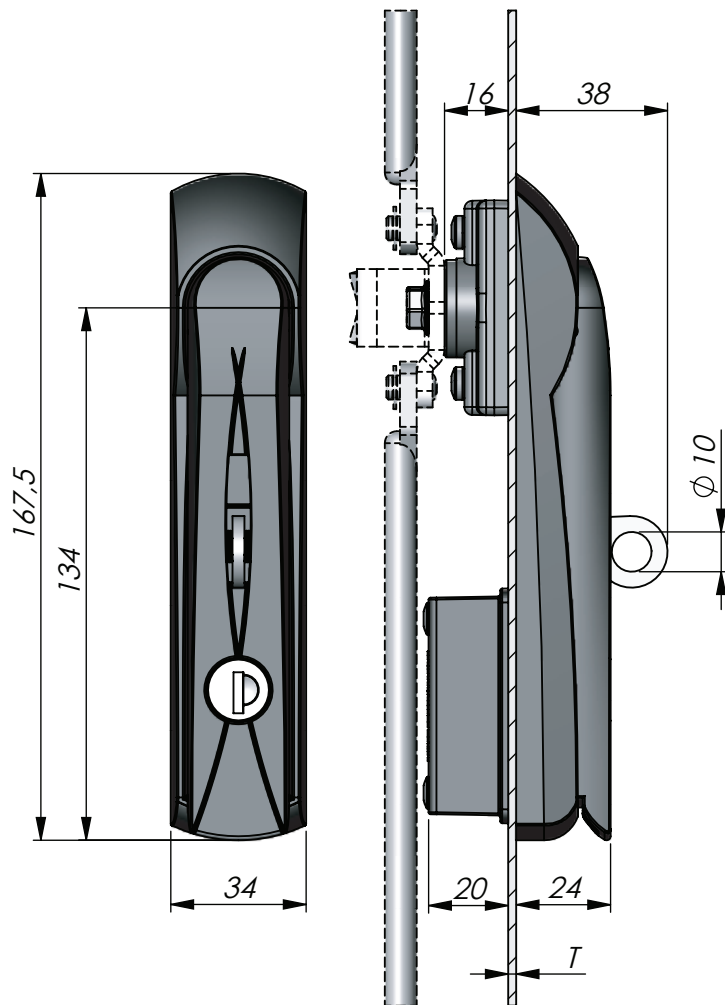
References, Accessories:

- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

* Master key system on request.



Low profile swing handle with cylinder lock for cam. Supplied with two keys.

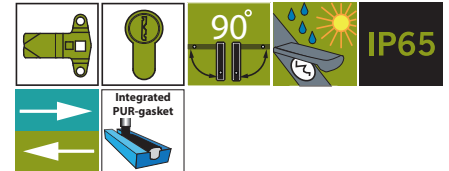
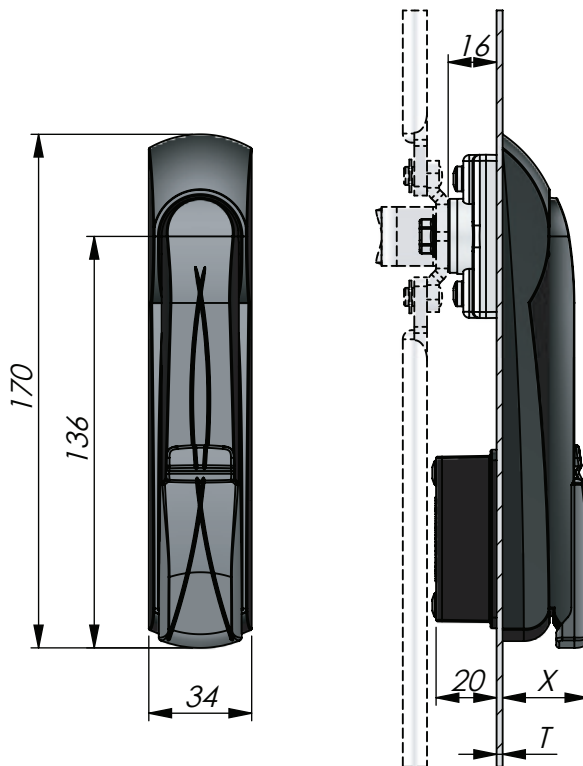
MODEL: Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle with Cylinder (AAAAAABCD-EEEE)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Cylinder |
|--------|-------------------------|---|-------------------------------------|---|---------|---|-----|-------|--------------------|
| 121611 | Handle zinc / Dish PA6 | 1 | 90° clockwise or counter-clockwise. | 1 | 0,8-1,5 | 0 | No | -C21S | Keyed alike IL101 |
| 121641 | Handle zinc / Dish zinc | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | 1 | Yes | -C22S | Keyed to differ * |
| 125011 | Handle PA6 / Dish PA6 | 3 | 90° clockwise | 3 | 2,6-3,5 | | | -C23S | Keyed alike IL0333 |
| | | | | | | | | -500S | No cylinder |



Material:

- Handle and dish: Zinc, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Dust cover: TPE.
- Pivot shaft: Zinc die-cast, zinc plated.

References, Accessories:

- Stainless version: Page 6-020.
- Profile cylinders: Page 1-209a/b, 1-210 and 1-211.
- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

Low profile swing handle for 40 mm or 45 mm profile cylinder and cam.

MODEL: Turn-to-latch = The door is locked by turning the key.

T = For door thickness: 0,8-3,5 mm.

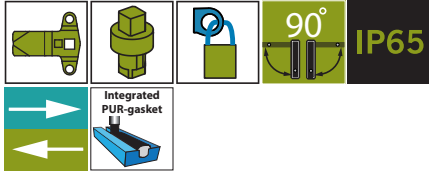
PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle for 40 mm Profile Cylinder (AAAAAABCD-EEEE)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Dust cover |
|--------|-------------------------------|---|------------------------------------|---|---------|---|-----|-------|------------|
| 121611 | Handle zinc / Dish PA6. X=28 | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -C60U | No |
| 121641 | Handle zinc / Dish zinc. X=28 | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | | | -C60D | Yes |
| 125011 | Handle PA6 / Dish PA6. X=28 | 3 | 90° clockwise | 3 | 2,6-3,5 | | | | |

VISION Swing Handle for 45 mm Profile Cylinder (AAAAAABCD-EEEE)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Dust cover |
|--------|-------------------------------|---|------------------------------------|---|---------|---|-----|-------|------------|
| 121611 | Handle zinc / Dish PA6. X=33 | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -C65U | No |
| 121641 | Handle zinc / Dish zinc. X=33 | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | | | -C65D | Yes |
| | | 3 | 90° clockwise | 3 | 2,6-3,5 | | | | |



Material:

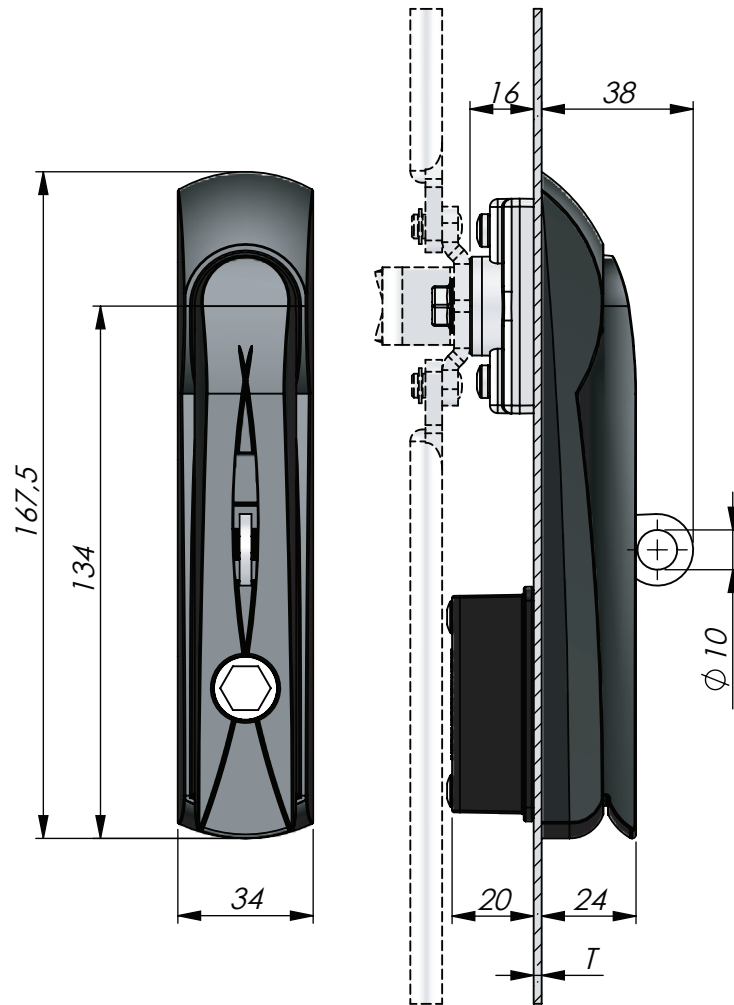
- Handle and dish: Zinc die-cast, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Insert: Zinc die-cast, chrome plated.
- Pivot shaft: Zinc die-cast, zinc plated.
- Padlock loop: Stainless steel (304).

References, Accessories:

- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.
- Keys: Page 2-370 and 2-372.
- Stainless version, see page 6-020.

Notes, Tests:

Cut-out, version C: Page 1-001.01.



Low profile swing handle with insert, for cam.

MODEL: (see table below)

Turn-to-latch = The door is locked by turning the key.

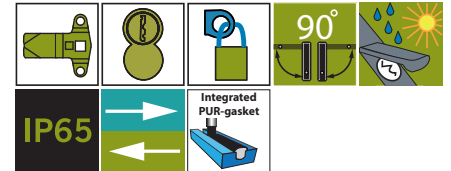
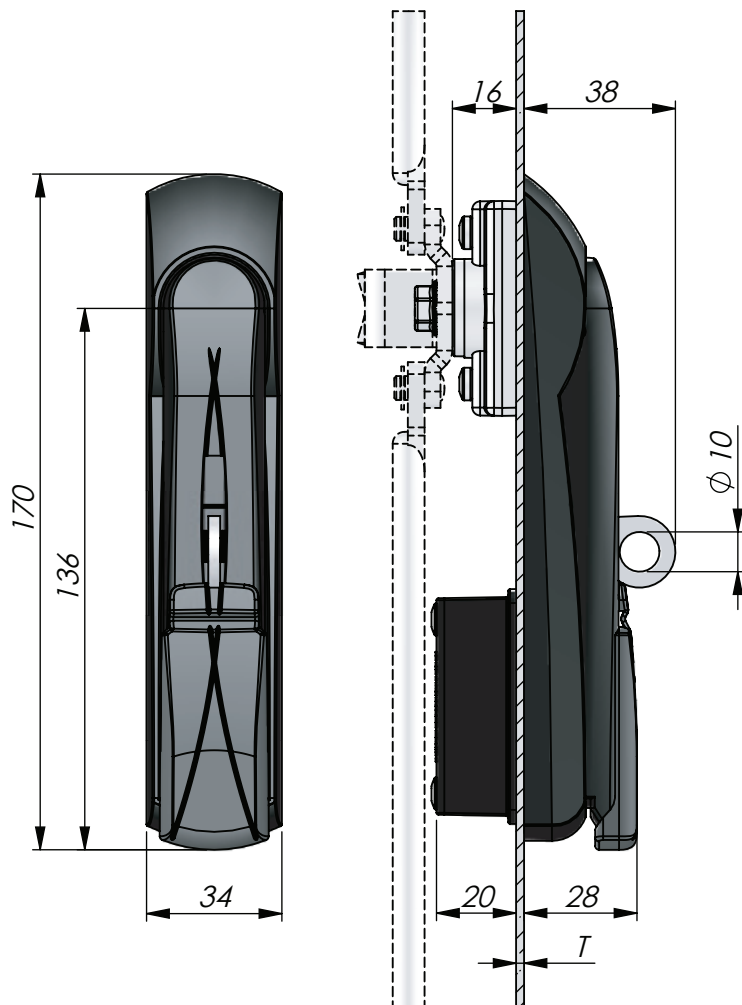
Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle, Tool Operated (AAAAAABCD-EEEEF)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Insert | F | Model |
|--------|-------------------------|---|------------------------------------|---|---------|---|-----|-------|---------------------------|---|---------------|
| 121611 | Handle zinc / Dish PA6 | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -1301 | Hexagon 11 | 0 | Turn-to-latch |
| 121641 | Handle zinc / Dish zinc | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | 1 | Yes | -1308 | Square 7 | 1 | Push-to-latch |
| 125011 | Handle PA6 / Dish PA6 | 3 | 90° clockwise | 3 | 2,6-3,5 | | | -1309 | Square 8 | | |
| | | | | | | | | -1312 | Triangular 7 | | |
| | | | | | | | | -1313 | Triangular 8 | | |
| | | | | | | | | -1316 | Double Bit 3 | | |
| | | | | | | | | -1317 | Double Bit 5 | | |
| | | | | | | | | -1347 | Recessed hex 8 / 3 mm pin | | |



Material:

- Handle and dish: Zinc die-cast, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Dust cover: TPE.
- Pivot shaft: Zinc die-cast, zinc plated.
- Padlock loop: Stainless steel (304).

References, Accessories:

- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

Low profile swing handle for BestLock cylinder and cam.

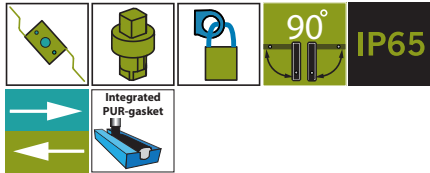
MODEL: Turn-to-latch = The door is locked by turning the key.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle for Bestlock Cylinder (AAAAABCD-EEEE)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Dust cover |
|--------|-------------------------|---|------------------------------------|---|---------|---|-----|-------|------------|
| 121611 | Handle zinc / Dish PA6 | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 1 | Yes | -C70U | No |
| 121641 | Handle zinc / Dish zinc | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | | | -C70D | Yes |
| | | 3 | 90° clockwise | 3 | 2,6-3,5 | | | | |



Material:

- Handle and dish: Zinc die-cast, black texture powder coated or glass fiber reinforced Polyamide (PA6GF30), black.
- Pivot shaft: Zinc die-cast, special surface treatment *.
- Padlock loop and insert: Stainless steel (304).

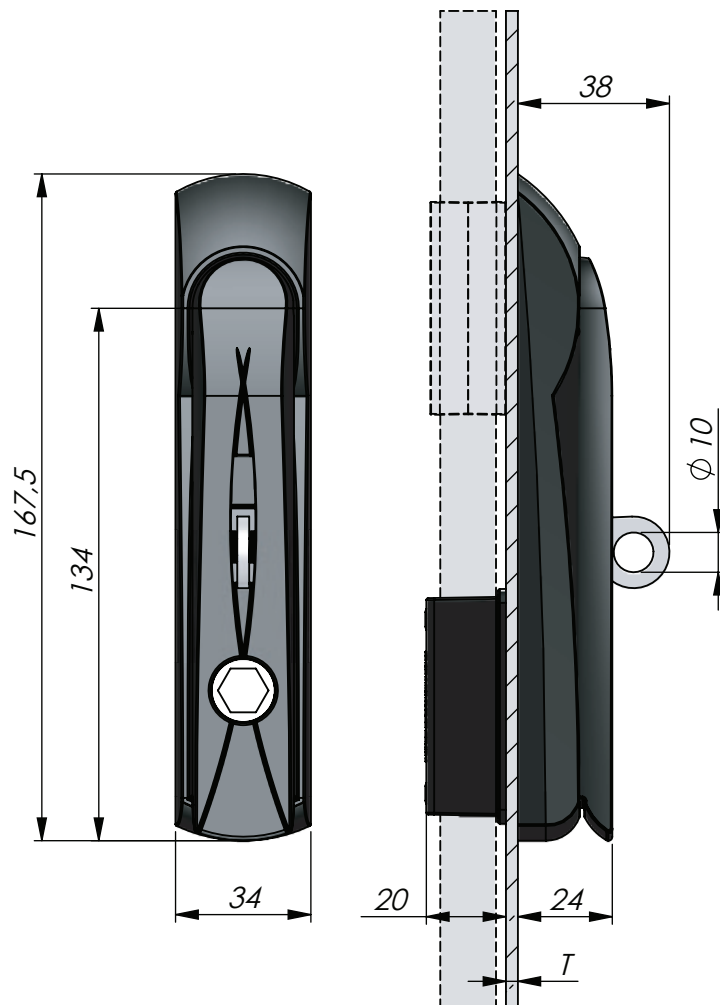
References, Accessories:

- Rod Latch Systems: Page 1-008.00 to 1-008.57.
- Keys: Page 2-370 and 2-372.
- For stainless version, see page 6-010.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

* Passes 30 day salt-spray test according to ISO 9227, equivalent to ASTM B 117.



Low profile swing handle for control mechanism with insert. Vision Highlander design withstands 1000 hours in salt fog and 45 Nm torque.

MODEL: (see table below)

Turn-to-latch = The door is locked by turning the key.

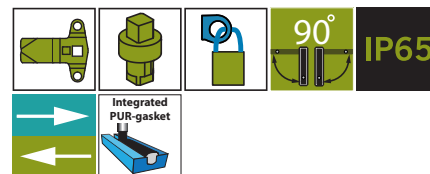
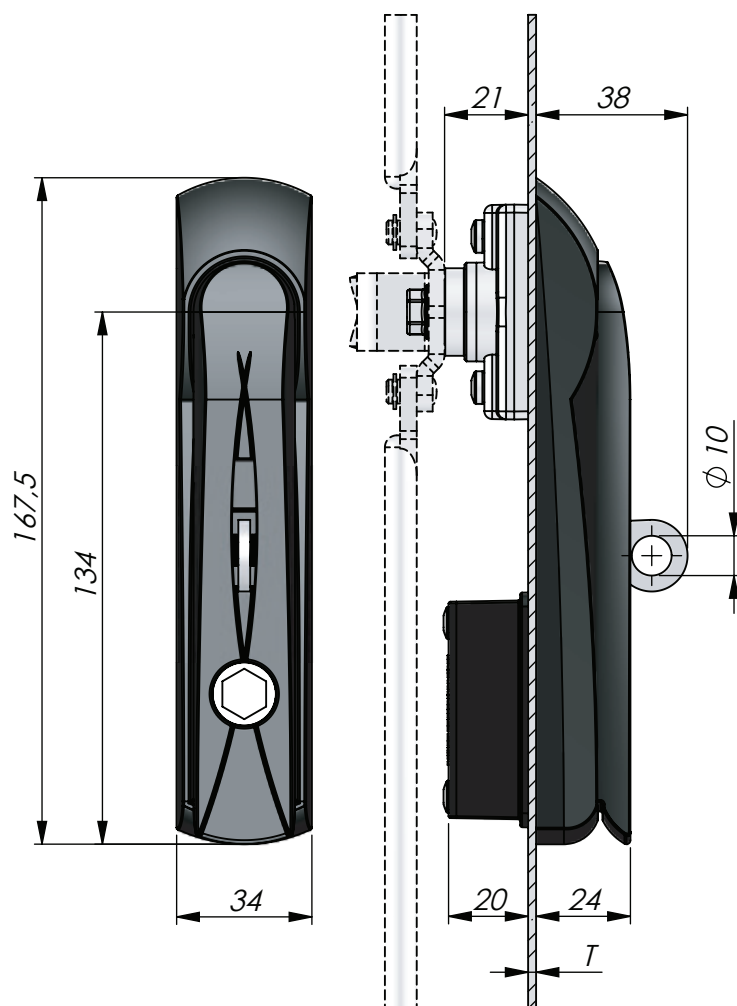
Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Highlander Swing Handle, Tool Operated (AAAAAABC-DDDDE)

| AAAAAAA | Material | B | T= | C | PDL | -DDDD | Insert | E | Model |
|---------|-------------------------|---|---------|---|-----|-------|---------------------------|---|---------------|
| 1216117 | Handle zinc / Dish PA6 | 1 | 0,8-1,5 | 0 | No | -9001 | Hexagon 11 | 0 | Turn-to-latch |
| 1216417 | Handle zinc / Dish zinc | 2 | 1,6-2,5 | 1 | Yes | -9047 | Recessed hex 8 / 3 mm pin | 1 | Push-to-latch |
| | | 3 | 2,6-3,5 | | | | | | |



Material:

- Handle and dish: Zinc die-cast, black texture powder coated or glass fiber reinforced Polyamide (PA6GF30), black.
- Pivot shaft: Steel, special surface treatment *.
- Padlock loop and insert: Stainless steel (304).

References, Accessories:

- Rod latch system "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.
- Keys: Page 2-370 and 2-372.
- For stainless version, see page 6-020.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

* 30 day salt-spray test according to ISO 9227, equivalent to ASTM B 117.

Low profile swing handle with insert, for cam. Vision Highlander design withstands 1000 hours in salt fog.

MODEL: (see table below)

Turn-to-latch = The door is locked by turning the key.

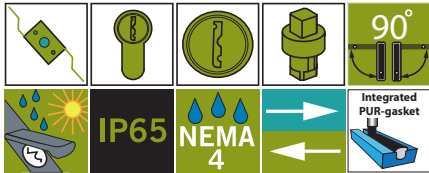
Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Highlander Swing Handle, Tool Operated (AAAAAABCD-EEEEF)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Insert | F | Model |
|--------|-------------------------|---|------------------------------------|---|---------|---|-----|-------|--------------------|---|---------------|
| 121611 | Handle zinc / Dish PA6 | 4 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -9001 | Hexagon 11 | 0 | Turn-to-latch |
| 121641 | Handle zinc / Dish zinc | 5 | 90°, counter-clockwise | 2 | 1,6-2,5 | 1 | Yes | -9047 | Insex 8 / 3 mm pin | 1 | Push-to-latch |
| | | 6 | 90° clockwise | 3 | 2,6-3,5 | | | | | | |

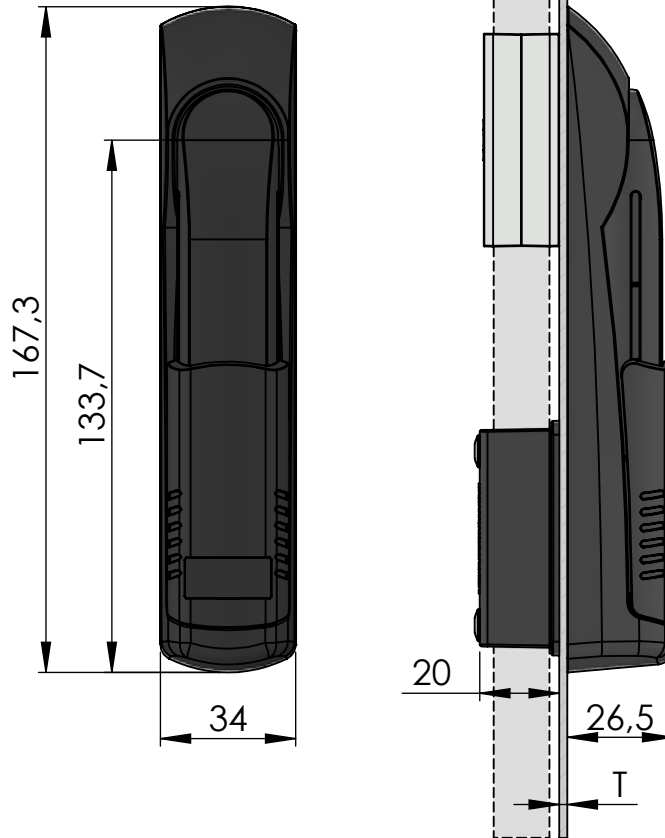


Material:

- Handle, dish, push-button and dust cover: Glass fibre reinforced Polyamide (PA6GR30), black.
- O-rings: NBR.

References, Accessories:

- Profile cylinders: Page 1-210 and 1-211.
- Rod Latch Systems: Page 1-008.00 to 1-008.57.



Low profile swing handle for 40 mm profile cylinder or equipped with push button. This swing handle can also be equipped with locking device for tool operated insert or round cylinder option found at page 1-209 that fits right into the geometry for the profile cylinder.

The profile cylinder or push button is located in the dish of the swing handle and provide a more ergonomic design when maneuvering the handle, compared to other swing handles in the market with locking components embedded in the handle itself.

This swing handle is used together with latching systems with control mechanism and flat rods.

Profile cylinder is covered under a sliding polyamide dust cover, which can be equipped with your logo upon request. Swing handle is equipped with PUR-gasket and o-rings to ensure IP65 / water proof according to NEMA 4. Handle is spring loaded and pops out when cylinder is unlocked or push button is pressed.



Notes, Tests:

MODEL WITH PROFILE CYLINDER:
Turn-to-latch = The door is locked by turning the key.

MODEL WITH INSERT, PUSH-BUTTON OR ROUND CYLINDER:
Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

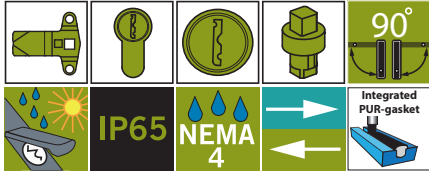
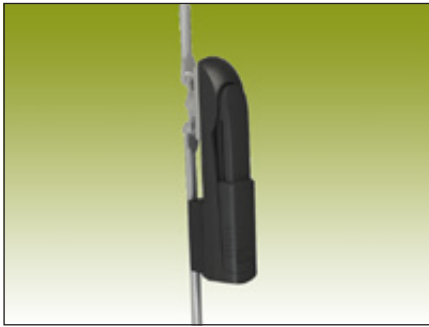
Cut-out, version C: Page 1-001.01.

* Handle supplied without profile cylinder.

Example: PN 1530-24252-00 describes a handle with control mechanism, chrome plated "Double Bit 5" insert, sealed to IP65. It is suited for sheet metal with thickness 1,6 - 2,5 mm. Last two digits "-00" are added to all these handles.

VISION Swing Handle Ergonomic Line (AAAA-BBCDE-FF)

| AAAA- | Type | BB | Insert / cylinder | C | Surface Treatment Insert | D | IP Classification | E | Door Thickness | -FF | Serial Number |
|-------|------------------------------|----|---------------------------|---|--------------------------|---|-------------------|---|----------------|-----|-----------------|
| 1530- | Handle for control mechanism | 01 | Square 6 | 2 | Chrome Plated | 5 | IP65 | 1 | 0,8 - 1,5 | -00 | Standard Suffix |
| | | 02 | Square 7 | | | | | 2 | 1,6 - 2,5 | | |
| | | 05 | Square 8 | | | | | 3 | 2,6 - 3,5 | | |
| | | 07 | Square 8 / Slotted | | | | | | | | |
| | | 11 | Square 8 / Recessed | | | | | | | | |
| | | 14 | Triangle 7 | | | | | | | | |
| | | 15 | Triangle 8 | | | | | | | | |
| | | 16 | Triangle 10 | | | | | | | | |
| | | 22 | Double Bit 3 | | | | | | | | |
| | | 24 | Double Bit 5 | | | | | | | | |
| | | 26 | Slotted | | | | | | | | |
| | | 29 | Slotted, Recessed | | | | | | | | |
| | | 32 | Hexagon 11 | | | | | | | | |
| | | 34 | Recessed Hexagon 8 | | | | | | | | |
| | | 35 | Recessed Hexagon 10 | | | | | | | | |
| | | 36 | Recessed Hex 8 / 3 mm pin | | | | | | | | |
| | | 80 | Keyed to Differ | | | | | | | | |
| | | 81 | Keyed Alike IL101 | | | | | | | | |
| | | 82 | Keyed Alike IL0333 | | | | | | | | |
| | | 83 | Profile Cylinder * | | | | | | | | |
| | | 90 | Push Button | | | | | | | | |

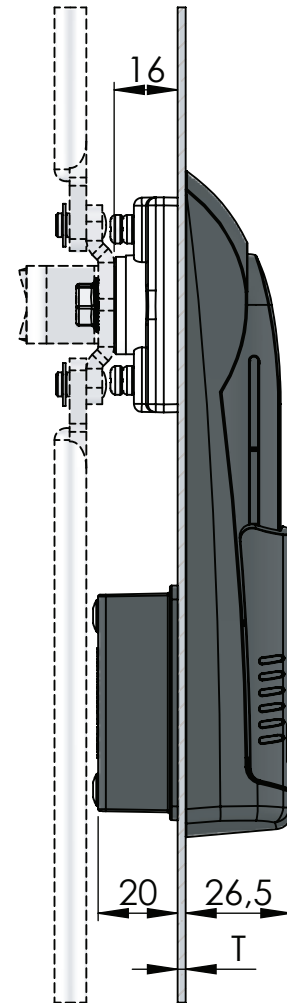
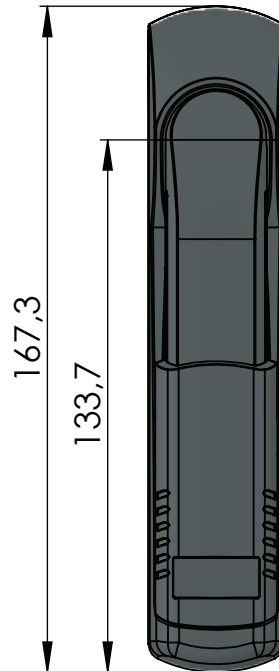


Material:

- Handle, dish, push-button and dust cover: Glass fiber reinforced Polyamide (PA6GF30), black.
- Shaft and turn stop for cam: Zinc die-cast, zinc plated.
- O-rings: NBR.

References, Accessories:

- Profile cylinders: Page 1-210 and 1-211.
- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.



Low profile swing handle for 40 mm profile cylinder or equipped with push button. This swing handle can also be equipped with locking device for tool operated insert or round cylinder option found at page 1-209 that fits right into the geometry for the profile cylinder. The profile cylinder or push button is located in the dish of the swing handle and provide a more ergonomic design when maneuvering the handle, compared to other swing handles in the market with locking components embedded in the handle itself.

This swing handle is used with "Vision classic" latching systems, traditional cams and round rods. Profile cylinder is covered under a sliding polyamide dust cover, which can be equipped with your logo upon request. Swing handle is equipped with PUR-gasket and O-rings to ensure IP65 / water proof according to NEMA 4. Handle is spring loaded and pops out when cylinder is unlocked or push button is pressed.



Notes, Tests:

MODEL WITH PROFILE CYLINDER:
Turn-to-latch = The door is locked by turning the key.

MODEL WITH INSERT, PUSH-BUTTON OR ROUND CYLINDER:
Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

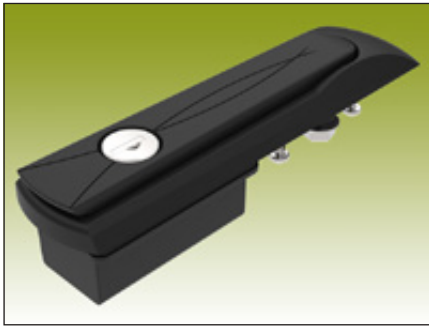
Cut-out, version C: Page 1-001.01.

* Handle supplied without profile cylinder.

Example: PN 1532-15253-00 describes an Escutcheon plate for counter-clockwise function. It has a chrome plated "Triangle 8" insert, sealed to IP65. It is suited for sheet metal with thickness 2,6 - 3,5 mm. Last two digits "-00" are added to all these handles.

VISION Swing Handle Ergonomic Line (AAAA-BBCDE-FF)

| AAAA- | Type | BB | Insert / cylinder | C | Surface Treatment Insert | D | IP Classification | E | Door Thickness | -FF | Serial Number |
|-------|--------------------------------------|----|---------------------------|---|--------------------------|---|-------------------|---|----------------|-----|-----------------|
| 1531- | Escutcheon Plate 180° | 01 | Square 6 | 2 | Chrome Plated | 5 | IP65 | 1 | 0,8 - 1,5 | -00 | Standard Suffix |
| 1532- | Escutcheon Plate - Counter Clockwise | 02 | Square 7 | | | | | 2 | 1,6 - 2,5 | | |
| 1533- | Escutcheon Plate - Clockwise | 05 | Square 8 | | | | | 3 | 2,6 - 3,5 | | |
| | | 07 | Square 8 / Slotted | | | | | | | | |
| | | 11 | Square 8 / Recessed | | | | | | | | |
| | | 14 | Triangle 7 | | | | | | | | |
| | | 15 | Triangle 8 | | | | | | | | |
| | | 16 | Triangle 10 | | | | | | | | |
| | | 22 | Double Bit 3 | | | | | | | | |
| | | 24 | Double Bit 5 | | | | | | | | |
| | | 26 | Slotted | | | | | | | | |
| | | 29 | Slotted, Recessed | | | | | | | | |
| | | 32 | Hexagon 11 | | | | | | | | |
| | | 34 | Recessed Hexagon 8 | | | | | | | | |
| | | 35 | Recessed Hexagon 10 | | | | | | | | |
| | | 36 | Recessed Hex 8 / 3 mm pin | | | | | | | | |
| | | 80 | Keyed to Differ | | | | | | | | |
| | | 81 | Keyed Alike IL101 | | | | | | | | |
| | | 82 | Keyed Alike IL0333 | | | | | | | | |
| | | 83 | Profile Cylinder * | | | | | | | | |
| | | 90 | Push Button | | | | | | | | |



Material:

- Handle: Zinc die-cast, black texture powder coated.
- Dish: Glass fiber reinforced Polyamide (PA6GF30), black.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Pivot shaft: Zinc die-cast, zinc plated.

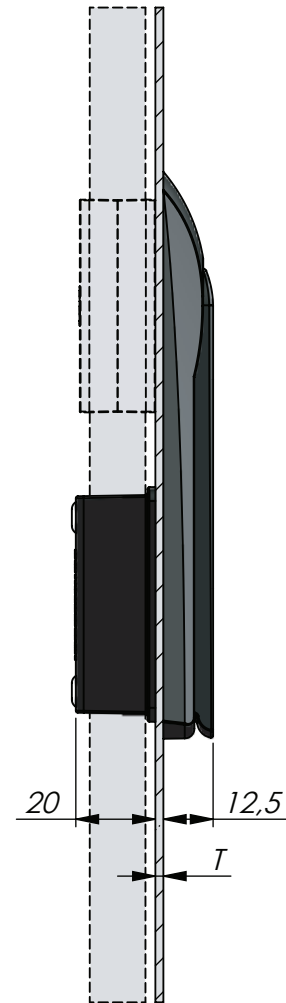
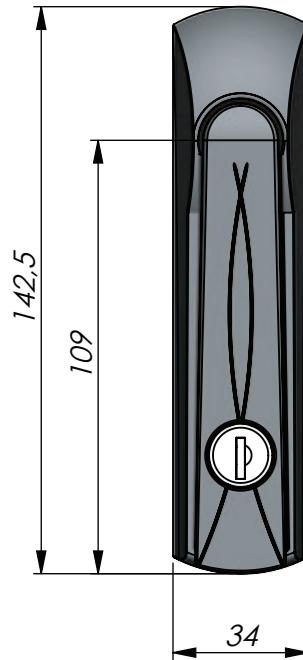
References, Accessories:

Rod Latch System, see pages 1-008.00 to 1-008.57.

Notes, Tests:

Cut-out, version B: Page 1-001.01.

* Master key on request.



Low profile compact swing handle with cylinder for control mechanism. Supplied with two keys.

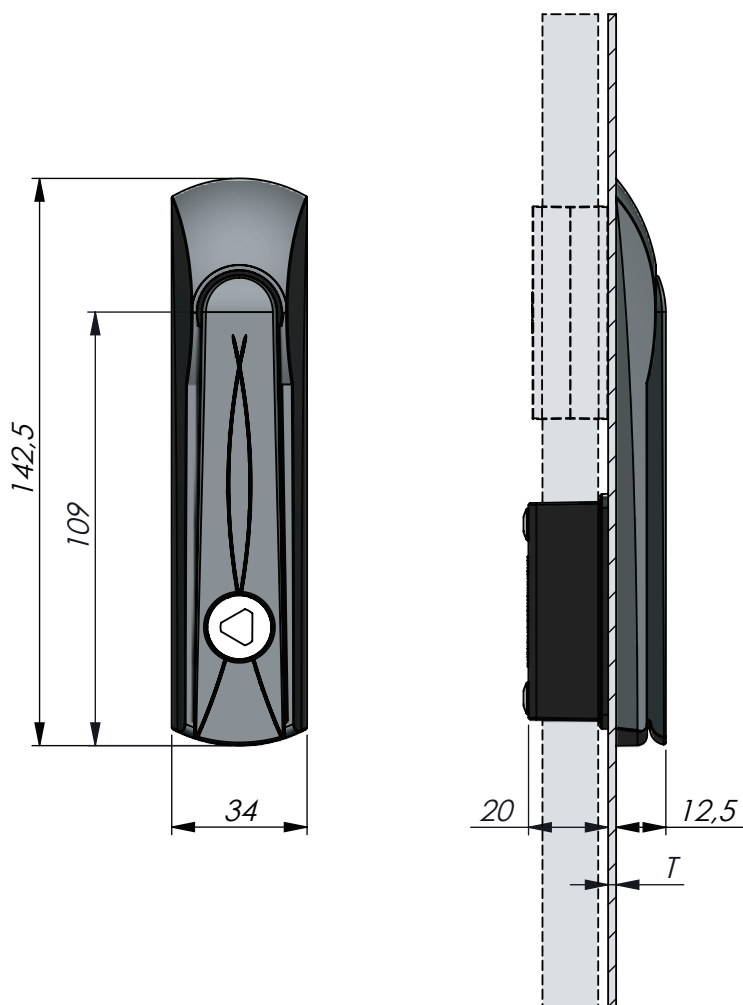
MODEL: Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Compact Swing Handle with Cylinder (AAAAAABC-DDDD)

| AAAAAAA | Material | B | T= | C | PDL | -DDDD | Cylinder |
|---------|------------------------|---|---------|---|-----|-------|--------------------|
| 1416118 | Handle zinc / Dish PA6 | 1 | 0,8-1,5 | 0 | No | -C21S | Keyed alike IL101 |
| | | 2 | 1,6-2,5 | | | -C22S | Keyed to differ * |
| | | 3 | 2,6-3,5 | | | -C23S | Keyed alike IL0333 |



Material:

- Handle: Zinc die-cast, black texture powder coated.
- Dish: Glass fiber reinforced Polyamide (PA6GF30), black.
- Insert: Zinc die-cast, chrome plated.
- Pivot shaft: Zinc die-cast, zinc plated.

References, Accessories:

- Rod Latch Systems: See pages 1-008.00 to 1-008.57.
- Keys: Page 2-370 and 2-372.

Notes, Tests:

Cut-out, version B: Page 1-001.01.

Low profile compact swing handle with insert for control mechanism.

MODEL: Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Compact Swing Handle, Tool Operated (AAAAAABC-DDDDE)

| AAAAAA | Material | B | T= | C | PDL | -DDDD | Insert | E | Model |
|---------|------------------------|---|---------|---|-----|-------|--------------------|---|---------------|
| 1416118 | Handle zinc / Dish PA6 | 1 | 0,8-1,5 | 0 | No | -1301 | Hexagon 11 | 1 | Push-to-latch |
| | | 2 | 1,6-2,5 | | | -1308 | Square 7 | | |
| | | 3 | 2,6-3,5 | | | -1309 | Square 8 | | |
| | | | | | | -1312 | Triangular 7 | | |
| | | | | | | -1313 | Triangular 8 | | |
| | | | | | | -1316 | Double Bit 3 | | |
| | | | | | | -1317 | Double Bit 5 | | |
| | | | | | | -1347 | Insex 8 / 3 mm pin | | |



Material:

- Handle: Zinc die-cast, black texture powder coated.
- Dish: Glass fiber reinforced Polyamide (PA6GF30), black.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Pivot shaft: Zinc die-cast, zinc plated.

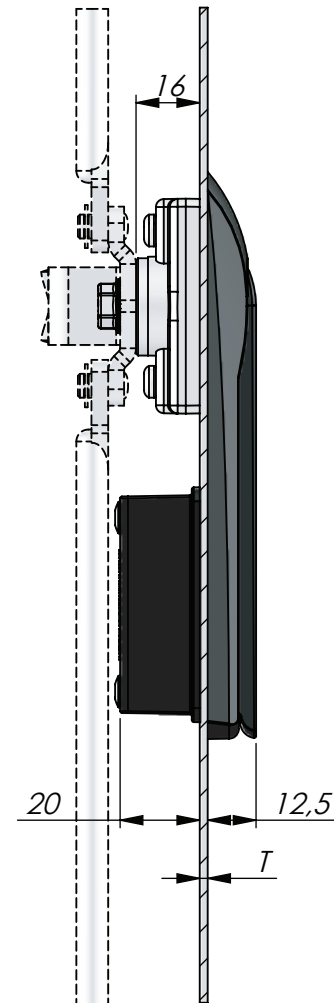
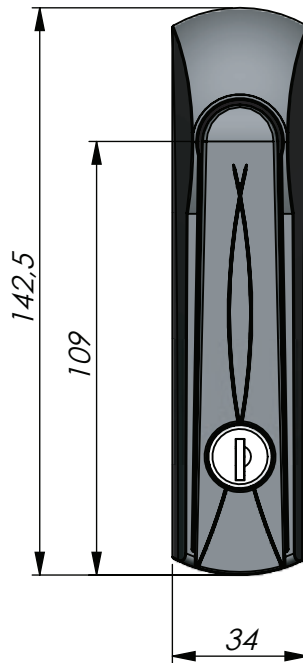
References, Accessories:

- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.

Notes, Tests:

Cut-out, version B: Page 1-001.01.

* Master key system on request.



Low profile compact swing handle with cylinder for cam. Supplied with two keys.

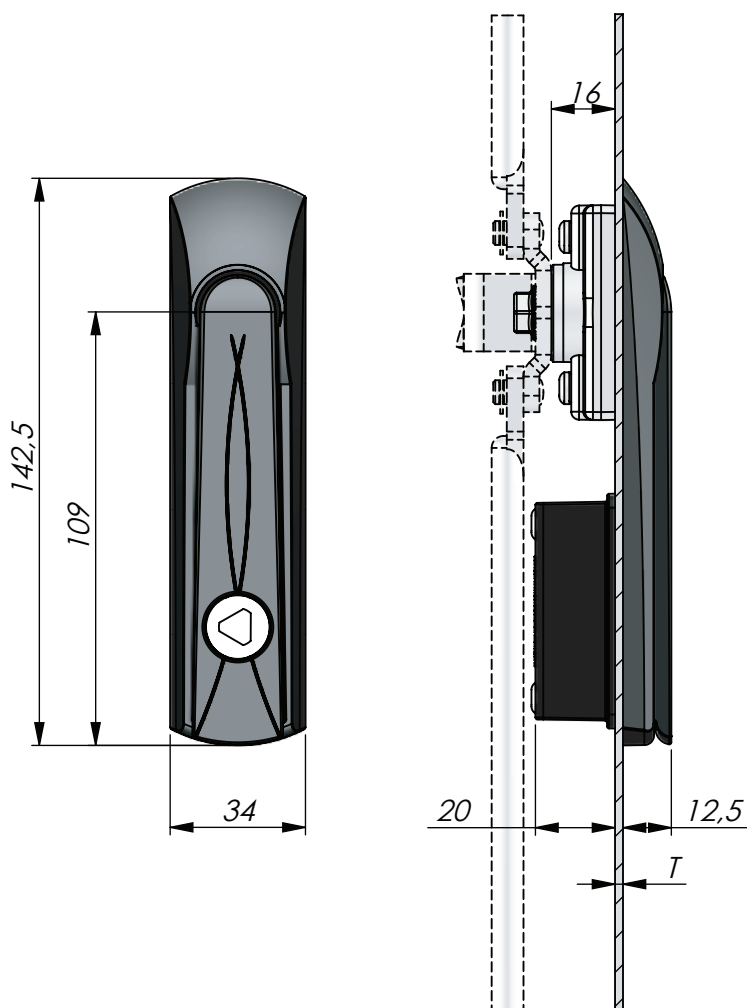
MODEL: Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Compact Swing Handle with Cylinder (AAAAAABCD-EEEE)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Cylinder |
|--------|------------------------|---|------------------------------------|---|---------|---|-----|-------|--------------------|
| 141611 | Handle zinc / Dish PA6 | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -C21S | Keyed alike IL101 |
| | | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | | | -C22S | Keyed to differ * |
| | | 3 | 90° clockwise | 3 | 2,6-3,5 | | | -C23S | Keyed alike IL0333 |



Material:

- Handle: Zinc die-cast, black texture powder coated.
- Dish: Glass fibre reinforced polyamide (PA6GF30), black.
- Insert: Zinc die-cast, chrome plated.
- Pivot shaft: Zinc die-cast, zinc plated.

References, Accessories:

- Rod Latch System "Vision Classic": Page 1-008.51, 1-008.52 and 1-008.53.
- Keys: Page 2-370 and 2-372.

Notes, Tests:

Cut-out, version B: Page 1-001.01.

Low profile compact swing handle with insert for cam.

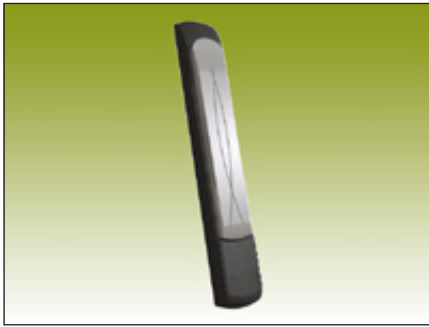
MODEL: Push-to-latch = Spring loaded cam latches when the handle is pushed in.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Compact Swing Handle, Tool Operated (AAAAAABCD-EEEEF)

| AAAAAA | Material | B | Opening rotation | C | T= | D | PDL | -EEEE | Insert | F | Model |
|--------|------------------------|---|------------------------------------|---|---------|---|-----|-------|--------------------|---|---------------|
| 141611 | Handle zinc / Dish PA6 | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -1301 | Hexagon 11 | 1 | Push-to-latch |
| | | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | | | -1308 | Square 7 | | |
| | | 3 | 90° clockwise | 3 | 2,6-3,5 | | | -1309 | Square 8 | | |
| | | | | | | | | -1312 | Triangle 7 | | |
| | | | | | | | | -1313 | Triangle 8 | | |
| | | | | | | | | -1316 | Double Bit 3 | | |
| | | | | | | | | -1317 | Double Bit 5 | | |
| | | | | | | | | -1347 | Insex 8 / 3 mm pin | | |



Material:

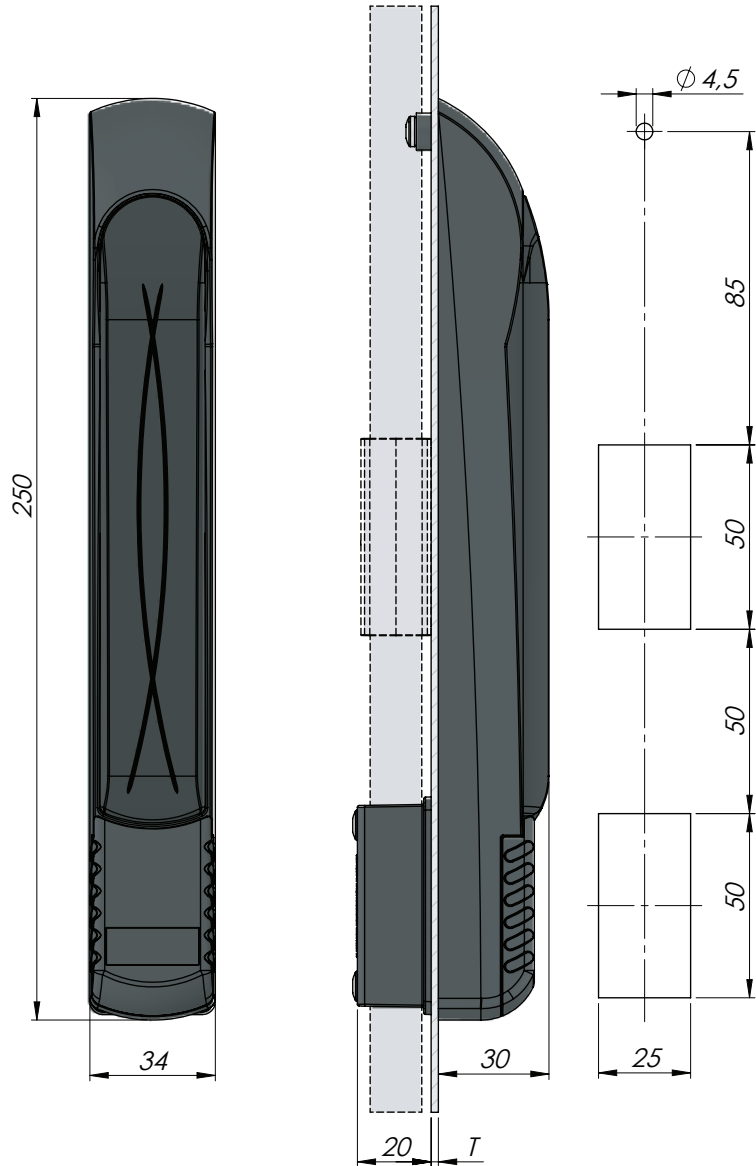
- Handle: Zinc die-cast, black texture powder coated.
- Dish: Glass fibre reinforced polyamide (PA6GF30), black.
- Insert: Zinc die-cast, chrome plated.
- Pivot shaft: Zinc die-cast, zinc plated.

References, Accessories:

- Profile cylinders: Page 1-210 and 1-211.
- Rod Latch Systems: Page 1-008.00 to 1-008.25.

Notes, Tests:

The lift handle fits into a cut out similar to version C (See page 1-001-01), but with an additional $\varnothing 4,5$ mm hole on top. Suitable for door thickness 0,8-3,5 mm.



Patent pending Vision lift handle that operates our Vision latching systems with flat rods with a comfortable lifting / pushing movement of the handle to open / close the door and unlatch / latch it simultaneously.

The 40 mm profile cylinder is located below the handle itself, which provides an ergonomic grip when operating the handle. The profile cylinder is covered by a sliding polyamide dust cover, which can be equipped with your logo upon request. Handle is spring loaded and pops out when cylinder is unlocked. Profile cylinder has to be ordered separately (page 1-210 or 1-211).

The handle can also be ordered with tool operated inserts or round cylinders keyed to differ or keyed alike according to table on opposing page. With round cylinders are two keys supplied with each handle.
 Key extraction profile cylinder: Closed.
 Key extraction round cylinder: Open/closed.
 PUR-gaskets and o-rings ensure dust and water tightness according to IP65 / water-proof according to NEMA 4.



Notes, Tests:

When viewed from the outside, the right hinged version has a pivot shaft that rotates counter-clockwise when opening.

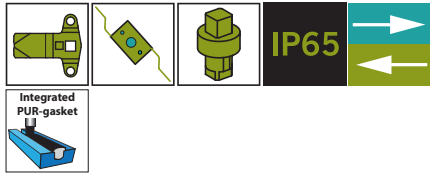
The left hinged version rotates clockwise when handle is opened.

* Handle supplied without profile cylinder.

VISION Lift Handle (AAAA-BBCDEF-GG)

| AAAA- | Material | BB | Insert / Cylinder | C | Surface treatment Insert | D | IP Classification | E | Surface treatment Handle | F | Model | -GG |
|-------|-----------------------|----|-------------------------------|---|--------------------------|---|-------------------|---|--------------------------|---|-----------------------|-----|
| 1510- | For control mechanism | 01 | Square 6 | 2 | Chrome plated | 5 | IP65 | 6 | Black powder coated | 0 | For right hinged door | -00 |
| | | 03 | Square 7 | | | | | 6 | Silver powder coated | 1 | For left hinged door | |
| | | 05 | Square 8 | | | | | | | | | |
| | | 07 | Square 8 / Slotted | | | | | | | | | |
| | | 11 | Square 8 / Recessed | | | | | | | | | |
| | | 14 | Triangle 7 | | | | | | | | | |
| | | 15 | Triangle 8 | | | | | | | | | |
| | | 16 | Triangle 10 | | | | | | | | | |
| | | 22 | Double Bit 3 | | | | | | | | | |
| | | 24 | Double Bit 5 | | | | | | | | | |
| | | 26 | Slotted | | | | | | | | | |
| | | 29 | Slotted, Recessed | | | | | | | | | |
| | | 32 | Hexagon 11 | | | | | | | | | |
| | | 34 | Recessed Hexagon 8 | | | | | | | | | |
| | | 35 | Recessed Hexagon 10 | | | | | | | | | |
| | | 36 | Recessed Hexagon 8 / 3 mm pin | | | | | | | | | |
| | | 80 | Keyed to differ | | | | | | | | | |
| | | 81 | Keyed alike IL101 | | | | | | | | | |
| | | 82 | Keyed alike IL0333 | | | | | | | | | |
| | | 83 | Profile cylinder * | | | | | | | | | |





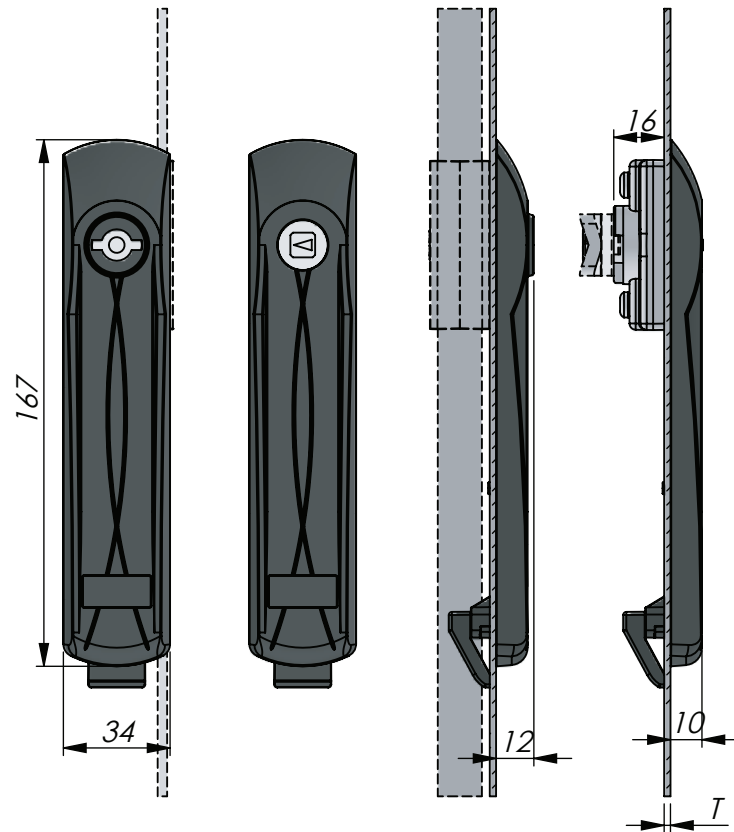
Material:

- Escutcheon: Glass fibre reinforced polyamide (PA6GF30), black.
- Insert: zinc die-cast, black powder coated or chrome plated.
- Insert extension and cam base: Zinc die-cast, zinc plated.
- Mounting hardware: Steel, zinc plated.

Notes, Tests:

Suitable cut-out is either "E" on page 1-001.02 or cut-out "C" on page 1-001.01.

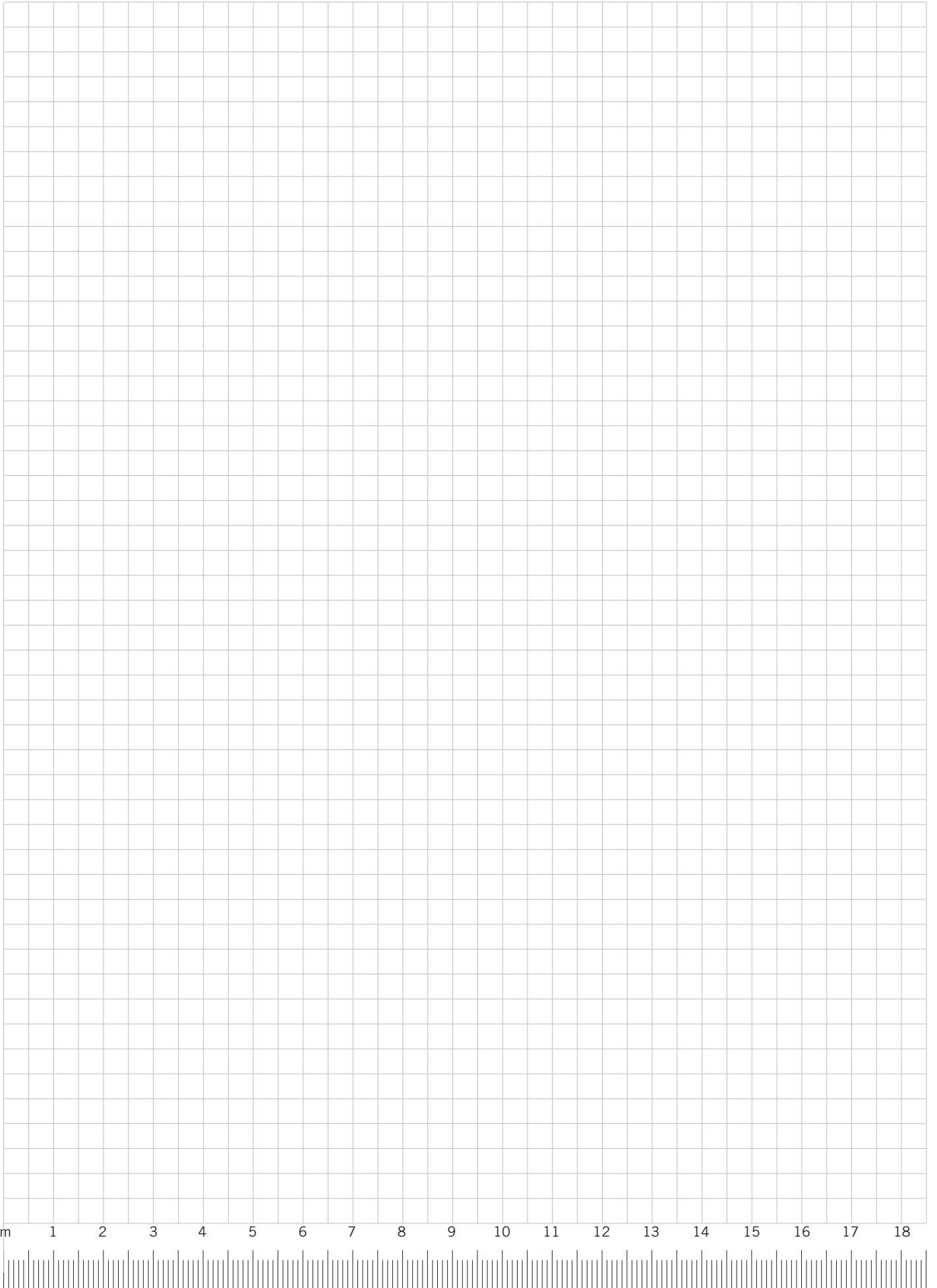
The product is suitable for metal thicknesses 0,8 mm – 3,5 mm.

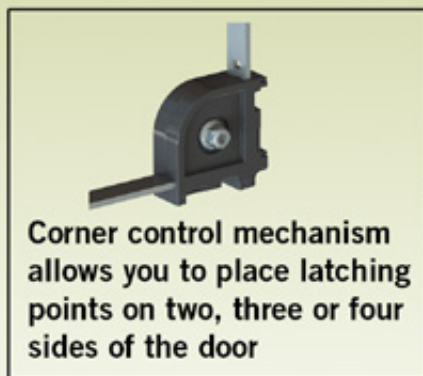


Vision escutcheon plate is available for control mechanism (with flat rods) or available for cam with round rods. The escutcheon plate with Double Bit 3 or Double Bit 5 insert (marked with * in the table) can be combined with a partially covered insert ("key capture"), which makes the key stay attached to the escutcheon plate in the open position. This way the key may be used as handle while operating the door and can be removed again when the insert is turned to the closed position. The escutcheon plate is available as IP65 and is equipped with PUR-gasket and O-ring.

VISION Escutcheon Plate with Insert (AAAA-BCDEFF)

| AAAA- | Housing | B | Material - insert | C | Surface treatment - Insert | D | IP Classification | E | Partially covered insert | FF | Insert |
|-------|------------------------------------|---|-------------------|---|----------------------------|---|-------------------|---|--------------------------------------|----|------------------------|
| 1520- | Control mechanism | 1 | Zinc | 3 | Chrome | 0 | IP54 | 0 | No | 01 | Square 6 |
| 1521- | 90° clockwise or counter-clockwise | | | 6 | Black powder coated | 1 | IP65 | 1 | Yes (key capture if combined with *) | 03 | Square 7 |
| 1522- | 90° counter-clockwise | | | | | | | | | 05 | Square 8 |
| 1523- | 90° clockwise | | | | | | | | | 07 | Square 8 / Slotted |
| | | | | | | | | | | 08 | Square 8 / M6 |
| | | | | | | | | | | 11 | Square 8 / recessed |
| | | | | | | | | | | 14 | Triangle 7 |
| | | | | | | | | | | 15 | Triangle 8 |
| | | | | | | | | | | 16 | Triangle 10 |
| | | | | | | | | | | 22 | Double Bit 3 * |
| | | | | | | | | | | 24 | Double Bit 5 * |
| | | | | | | | | | | 26 | Slotted |
| | | | | | | | | | | 29 | Slotted, recessed |
| | | | | | | | | | | 36 | Recessed hex 8/3mm pin |







Vision Outside HEAVY-DUTY is designed to be tested in low- and medium voltage applications with risk for electric arc explosions. The Vision HEAVY-DUTY latching system makes it possible to operate heavy-duty locking points along several sides of a door. Space the heavy-duty locking points according to your needs, and add Vision guide points to simplify closing the door. Add a re-directional corner for each additional door side you want the locking points on. When using the latching system to prevent accidents during an electric arc (explosion-proof use), the whole application (enclosure and latching system) must be tested and approved by appropriate authorities to receive a certificate for use. Handles: See pages 1-002.01 /02 /03 /08 and 1-006.01 /03. Please specify the design of your application and we will help you calculating the correct hole pattern for the components.



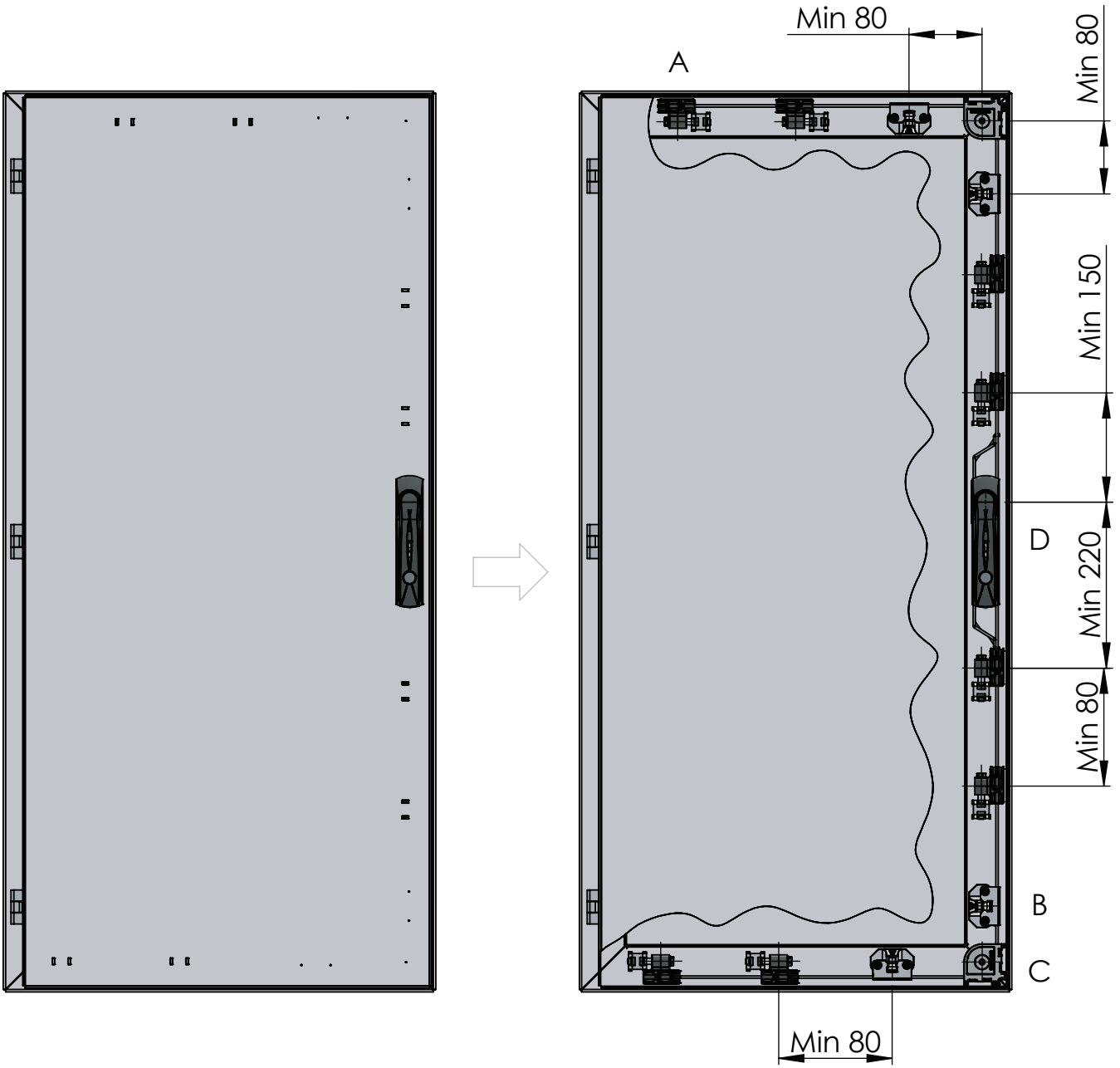
The robust latching points with 8 mm pins in stainless steel are good for forces up to 1300 kgs (2800 pounds) per piece. The latching point is bolted on the frame and welded on the door. Their special shape makes it easy to open and close the door. Cut-outs in the door are used to align the latching points during welding.

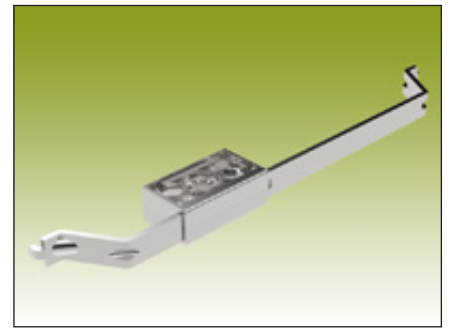
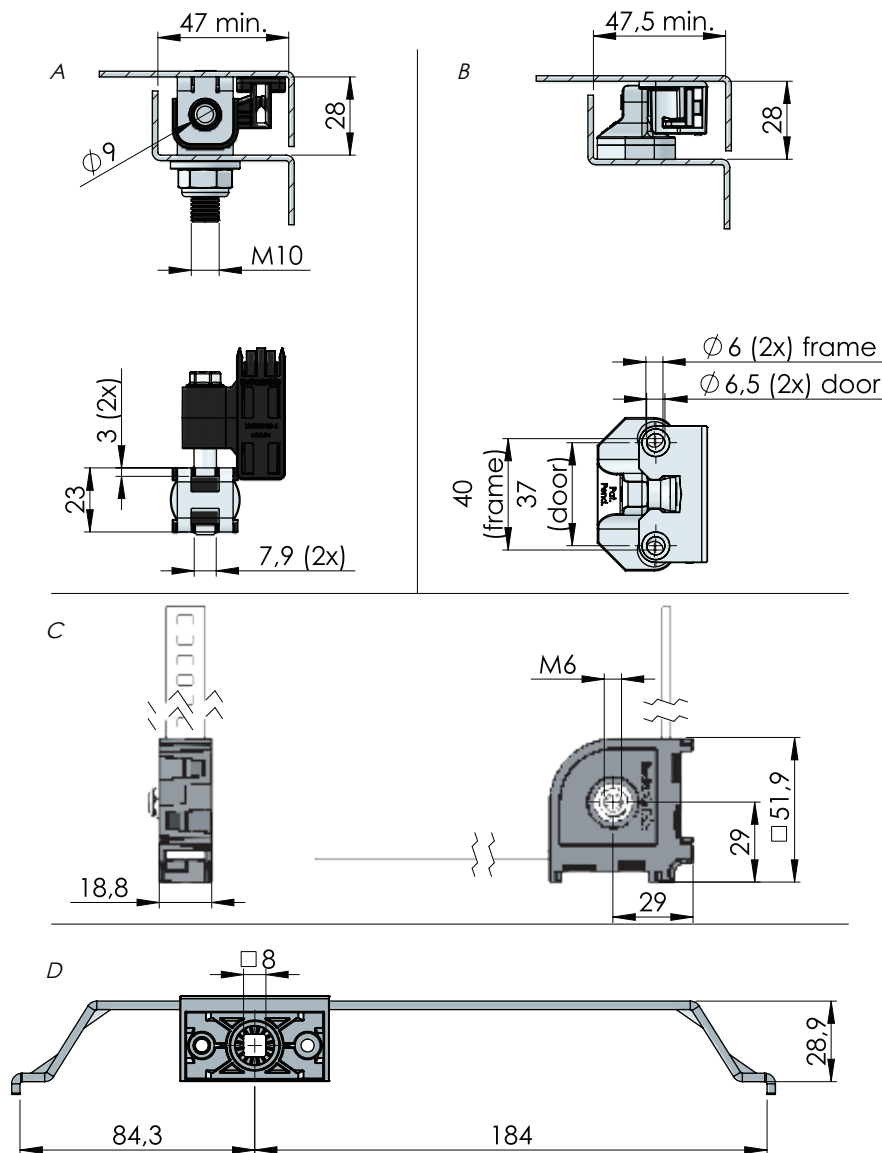


The corner control mechanism allows you to place latching points along every side of the door. Manoeuvring all latching points is done with a single handle.

The advantages with Vision HEAVY-DUTY:

- Heavy-duty locking points (Ø 8 mm stainless steel) insures maximum protection so that door will stay on the enclosure in case of an accident.
- The Vision guide-blocks guide the door when closing and positions the door in the right position prior to latching.
- The corner control mechanism allows you to place locking points along any side of the door. You can even place locking points between the hinges!
- The latching mechanism is placed outside the sealed door area, resulting in a "clean" door design with no cut-outs in critical areas of the door.
- System can be maneuvered with any of our Vision-styled handles.
- As door is latched - it is fixed in all dimensions (X, Y and Z) creating a vault-type latching performance, second to none.
- Direct load transfer from frame to door i.e. no oscillations from load transfer via rods.
- Unlike other systems on the market, this system operates with door allocation prior to gasket compression, and finally the heavy-duty locking points are activated. No shearing or side loads on the gasket means better sealing properties and longer gasket life.
- Versatile and flexible means that the Vision system is capable of filling all your enclosure latching needs. Single system designation means higher production efficiency and less supply chain costs.





Material:

Latch point heavy-duty: Steel, polyamide (PA6GF30) and latch pin from stainless steel (303).
 Latch point, "Vision Outside": Zinc die cast, zinc plated. Brass rollers.
 Flat rod: Steel, zinc plated or stainless steel (316).
 Guide block: Zinc, zinc plated, polyamide (PA6GF30).
 Corner control mechanism: Polyamide (PA6GF30). Cog wheel: Stainless steel (304).

Notes, Tests:

Rods will be designed for each application. Please contact Industrilas.
 The door part of the heavy-duty latching point is welded onto the door. The assembly is powder-coated after welding and finally the PA6 guide bushings are snapped in position.

Components for the Vision Heavy-Duty System

| P/N | Description | Drawing |
|-----------|--|---------|
| 132107-06 | Latching point - Heavy-Duty. Bolt-on frame part with weld-on door part. | A |
| 131108 | Vision latching point. Frame part and door part included. Both for bolt-on mounting. | B |
| 135001 | Corner control mechanism | C |
| 131105 | Control mechanism | D |

Door open



Door closed but not latched



Door closed and latched



Concealed hinge



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Vision Outside - the patented industry leading latching system for high quality applications.

Vision Outside is especially developed for enclosures that require absolute protection against the elements.

When you need to protect valuable electronics from a harsh environment, this is the system for you. The system has a built-in 3 mm compression function. Attention to detail and dedicated craftsmanship from the team that master every manufacturing technique from metal casting to powder coating ensures the finest latching system available in the market - Vision Outside.



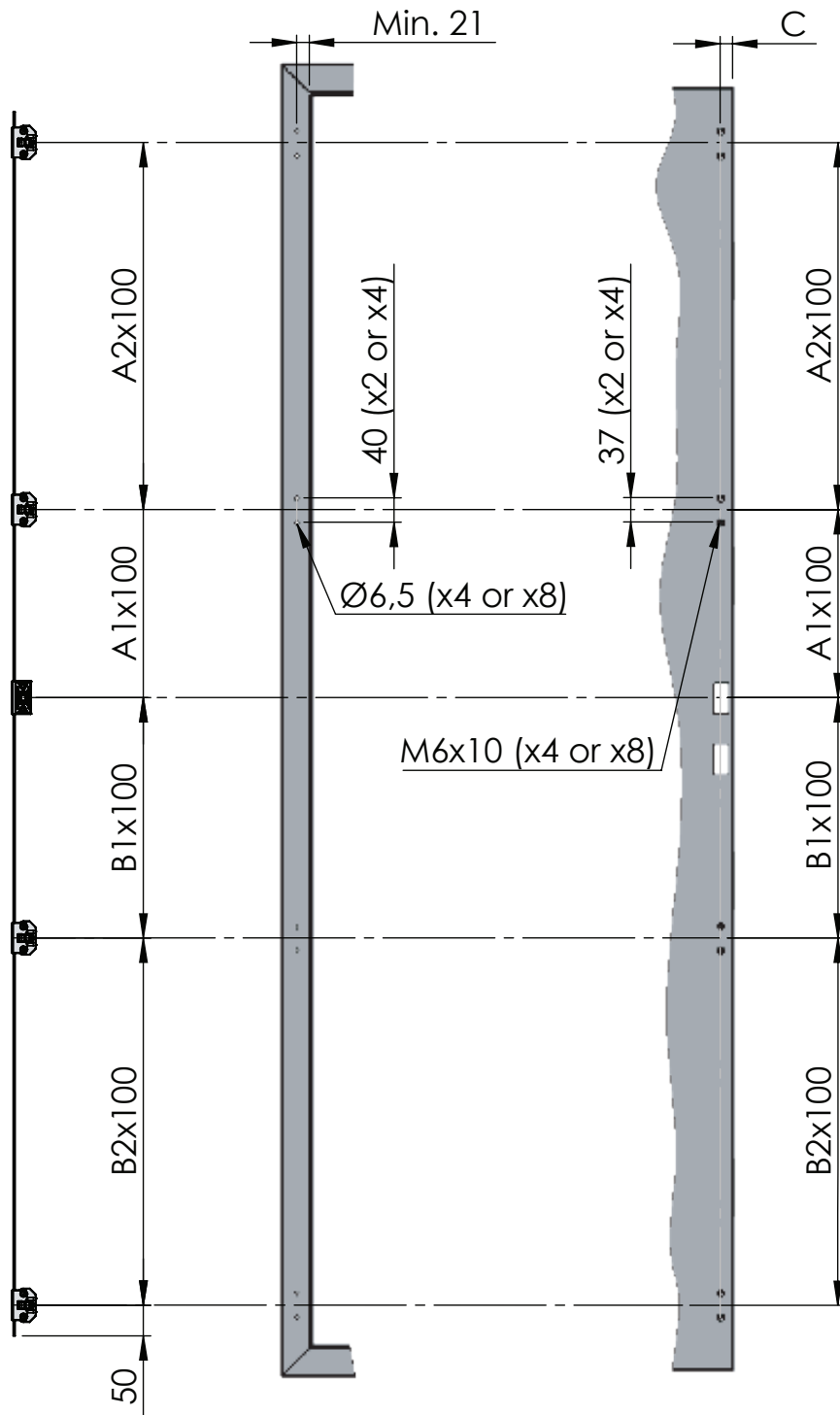
The L-shaped latching plates completely engages the latching point, ensuring a multi-dimensional alignment and perfect location of the door.



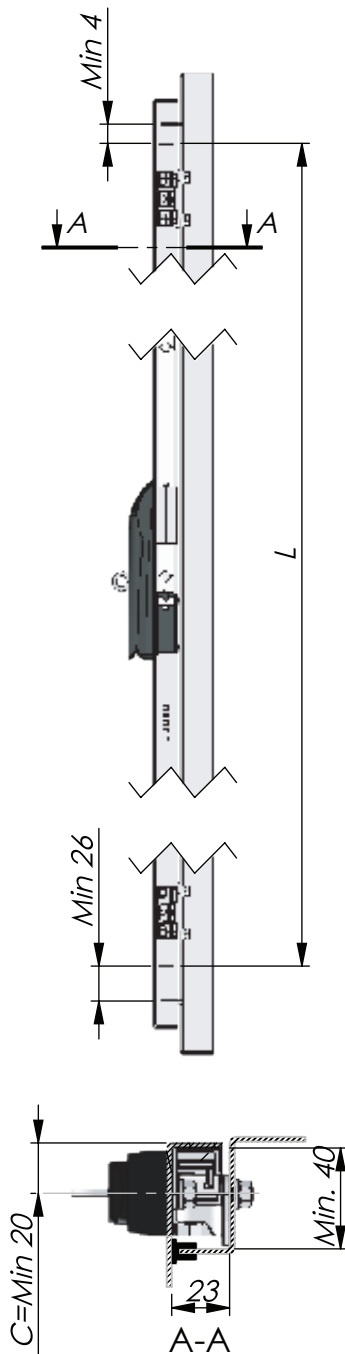
All mechanisms are placed outside the sealed area for easier sealing of the enclosure itself.

The Vision Outside advantages:

- The latching mechanism is placed outside the sealed door area, resulting in a clean door design with no cut-outs in critical areas.
- As door is latched - it is fixed in all dimensions (X, Y and Z) creating a vault-type latching performance, second to none.
- Direct load transfer from frame to door i.e. no oscillations from load transfer via rods.
- Unlike other systems on the market, Vision Outside operates with door allocation prior to gasket compression. No shearing or side loads on the gasket means better sealing properties and longer gasket life.
- The system complies with the world's most stringent requirements for vibration tests, torque tests and corrosion tests for use in Zone 4 telecom equipment applications and similar.
- Versatile and flexible means that the Vision system is capable of filling all your enclosure latching needs. Single system design means higher production efficiency and less supply chain costs.
- The system complies with the world's most stringent requirements for vibration tests, torque tests and corrosion tests for use in Zone 4 telecom equipment applications and similar.
- Versatile and flexible means that the Vision system is capable of filling all your enclosure latching needs. Single system design means higher production efficiency and less supply chain costs.



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Material:

- Control mechanism and latch point: Zinc die cast, zinc plated, special surface treatment* or glass fiber reinforced polyamide (PA6GF30).
- Flat rod: Steel, zinc plated or stainless steel (316).
- Rollers in latch point: Brass, raw or nickel plated.

References, Accessories:

- Handles: Page 1-002.01, 1-002.02, 1-002.03, 1-002.08, 1-004.03, 1-006.01 and 1-006.03.

Notes, Tests:

- Multiple latching points for perfect latching and compression in tall applications.
- System with more than four latching points available upon request.
- Control mechanism comes complete assembled with flat rod. Latching points ordered separately.

*30 day salt-spray test according to ISO 9227, equivalent to ASTM B 117.

Vision Outside latching system is mounted outside the sealed area.

Unique patented latching points align the door in all three dimension and create a direct load transfer from door to frame (no load transfer via rods), assure extremely good latching in vibrating and shaky environments.

No shearing of the gasket due to door alignment prior gasket compression.

VISION Outside Rod Latch System

| P/N Standard | P/N Highlander | P/N Polyamide | Description |
|-----------------|-----------------|-----------------|---|
| 131106 | 131406 | 135006 | Latch point (door part + frame part) |
| 1301-00A1A2B1B2 | 1301-01A1A2B1B2 | 1351-00A1A2B1B2 | Control mechanism with pre-assembled flat rod |



Vision Outside - Insulated - the specially adapted version for designs in Telecom, HVAC-applications and similar where insulated or double skinned doors are used.

Vision Outside - Insulated is especially developed for your electric enclosures that need to keep valuable electronics in a climate controlled environment under a fixed temperature. Used with insulated doors to maintain a temperature controlled climate inside the enclosure, protecting the electronics.

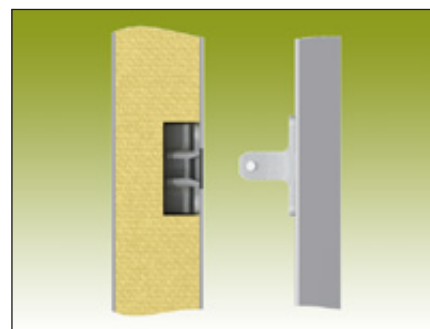
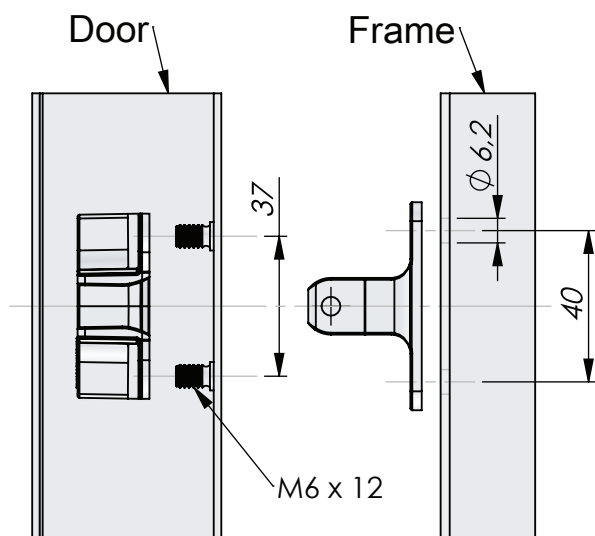


The system is designed for enclosures that are equipped with climate control (HVAC, HEX etc). The system is hidden inside the insulated door providing thermal break and preventing condensation to form.

The locking points consists of a protruding frame part and a receptacle hidden on the inside of the door.

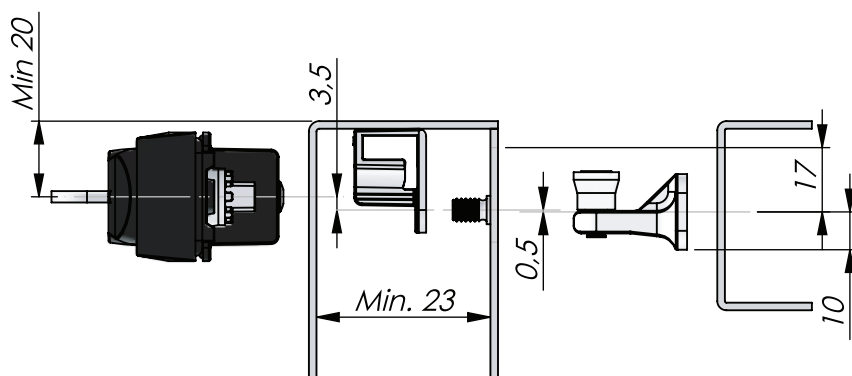
The advantages of Vision Outside - Insulated:

- Allows an insulated door to be open, closed and locked in the most professional way in the market.
- Concealed mounting resulting in an aesthetically appealing design.
- The latching mechanism is placed outside the sealed door area, resulting in a "clean" door design with no cut-outs in critical areas.
- As door is latched - it is fixed in all dimensions (X, Y and Z) creating a vault-type latching performance, second to none.
- Direct load transfer from frame to door i.e. no oscillations from load transfer via rods. · Unlike other systems on the market, Vision Outside - Insulated operates with door allocation prior to gasket compression. No shearing or side loads on the gasket means better sealing properties and longer gasket life.
- The system complies with the world's most stringent requirements for vibration tests, torque tests and corrosion tests for use in Zone 4 telecom equipment applications and similar.
- Versatile and flexible means that the Vision system is capable of filling all your enclosure latching needs. Single system designation means higher production efficiency and less supply chain costs.



Material:

- Latch point: Zinc die cast, zinc plated, special surface treatment or glass fiber reinforced polyamide (PA6GF30).
- Flat rod: Steel, zinc plated or stainless steel (316).
- Rollers in latch point: Brass, raw or nickel plated.



Products marked with * are available on request only.

Rod Latch System VISION Outside - Insulated - For Double-Skinned Doors, 25-100 mm Thickness

| P/N Standard | P/N Highlander | P/N Polyamide | Description |
|-------------------|-------------------|---------------|---|
| 131106-01 | 131406-01 | 135006-01 | Latching point (door part + frame part) |
| 13210600-XXXX-YY* | 13900600-XXXX-YY* | - | Flat rod. XXXX and YY are in mm |



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Vision Inside - the flexible latching system for latching inside the sealed area of the door. Vision Inside is developed for doors that require multiple latching points. One of the many advantages of the system lies in the compact assembly.

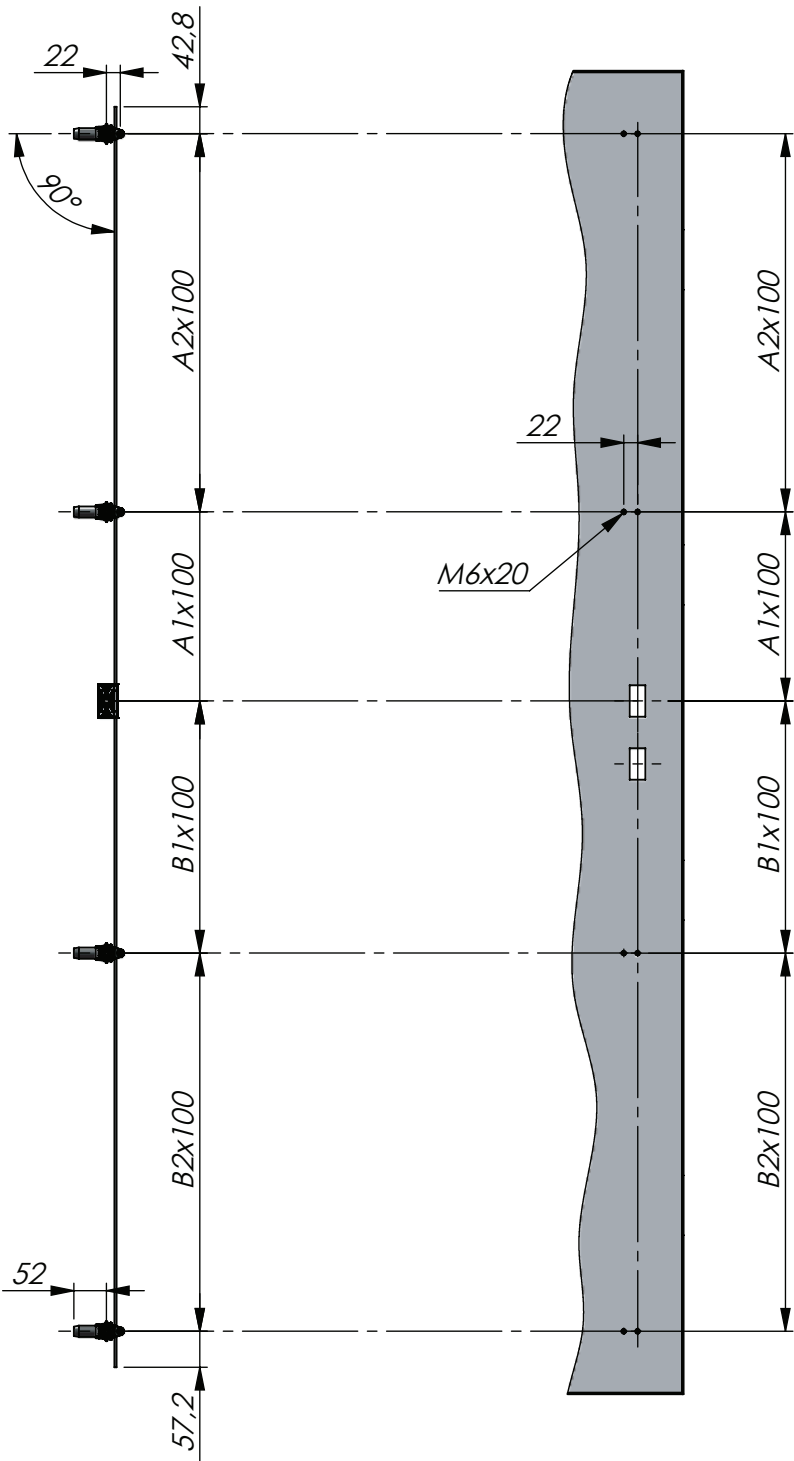
It is suitable for both large and small applications and takes up very little space in the enclosure. The cams are equipped with polyamide rollers, allowing for a very smooth opening and closing of the door.

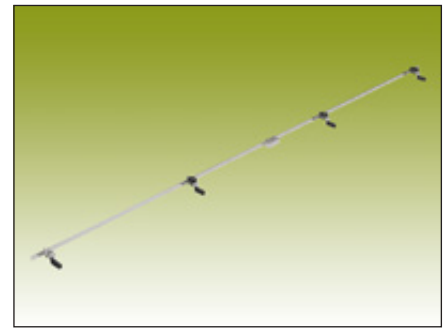
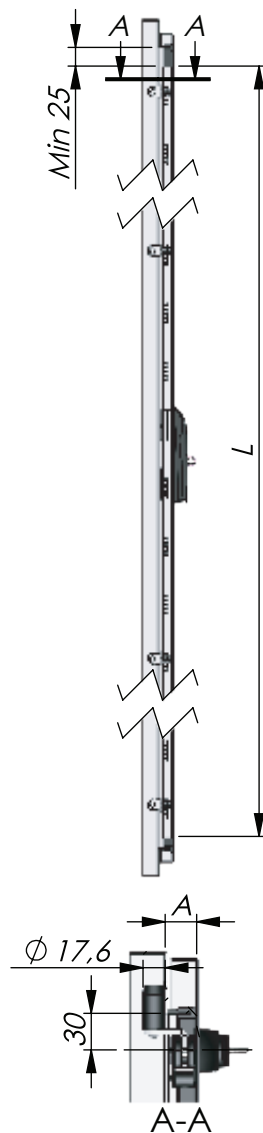


The Vision Inside advantages:

- Glass fibre-reinforced rollers ensure perfect tolerance take-up, smooth compression and latching action.
- Sealed to IP65-standards.
- Quick assembly with a single rod connecting all latching points.
- Flexible - The number of latch points is variable.
- Intuitive operation of handle.
- Low-profile versions available.
- Version "Highlander" with a surface treatment suitable for heavy duty applications.
- A suitable, concealed hinge for these applications is the "click-hinge" that allows for a quick assembly and disassembly of the door. The door is quickly attached to the hinge pin with an audible "click" as proof of a secure connection. Read more on page 3-094 and 3-095.







Material:

- Control mechanism: Zinc die cast, zinc plated or special surface treatment or glass fiber reinforced Polyamide (PA6GF30).
- Flat rod: Steel, zinc plated or stainless steel (316).
- Roller cam and nut: Steel, zinc plated.
- Roller and latching points: Glass fiber reinforced Polyamide (PA6GF30), black.
- Adapter: Zinc die cast, zinc plated.

References, Accessories:

- Handles: Page 1-002.01, 1-002.02, 1-002.03, 1-002.08, 1-004.03, 1-006.01 and 1-006.03.
- Cams: Page 2-481.

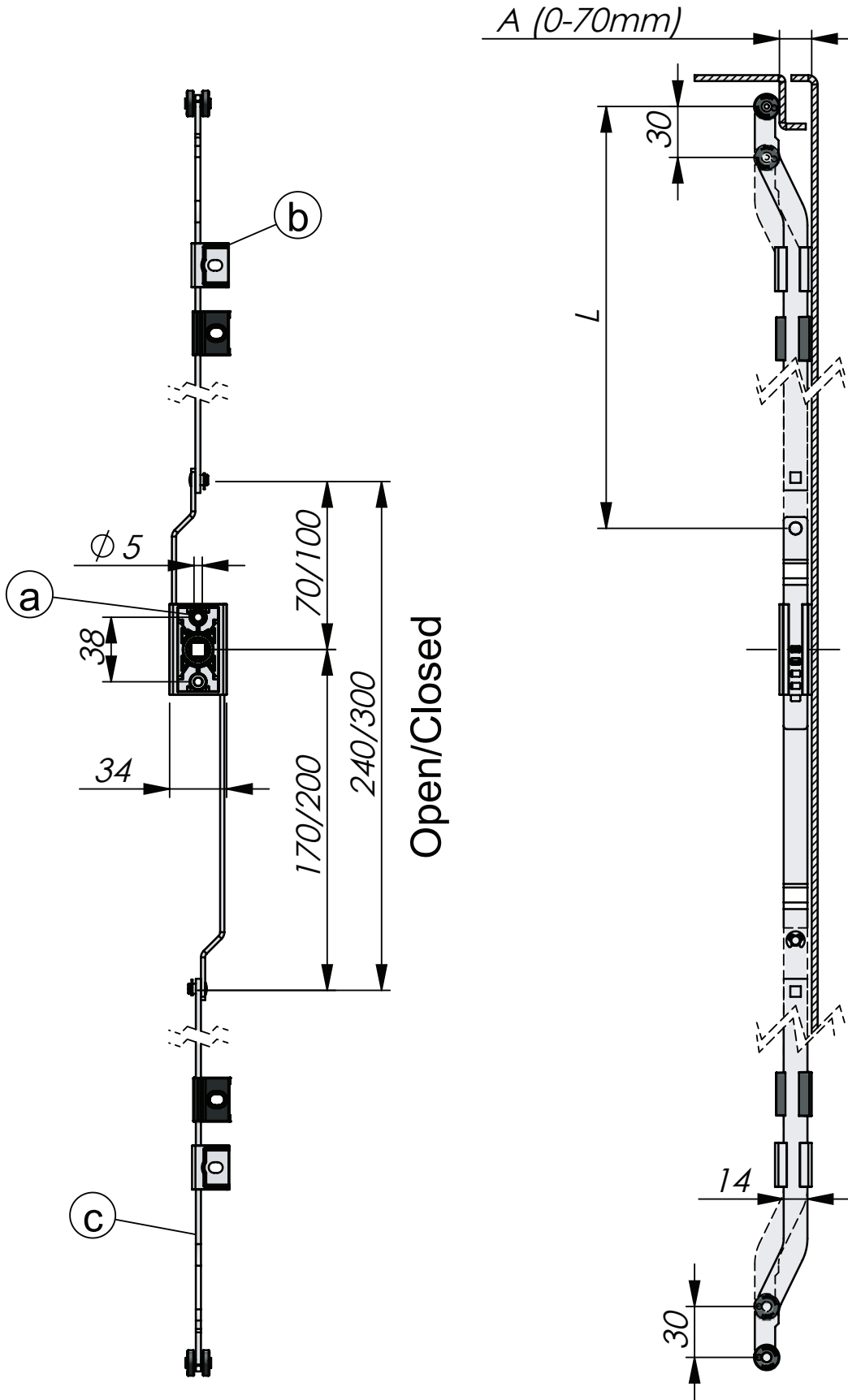
Vision Inside latching system is mounted inside the sealed area and provide IP65 together with our Vision Swing handles. Latching points equipped with roller cams for smooth compression and latching. Multiple latching points for perfect sealing in tall applications.

System with more than four latching points available upon request. Control mechanism comes complete assembled with flat rod. Latching points ordered separately.

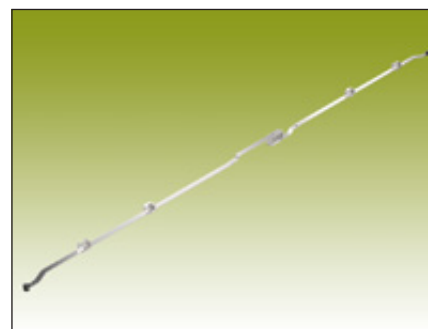
Vision inside system can be equipped with additional standard cam on the control mechanism together with adapter (see table), for center latching point.

VISION Inside Rod Latch System

| P/N Standard | P/N Highlander | P/N Polyamide | Description |
|-----------------|-----------------|-----------------|---|
| 132110-A | 139010-A | - | Roller cam |
| 135010 | 135010 | - | Latch point |
| 1302-00A1A2B1B2 | 1302-01A1A2B1B2 | 1352-00A1A2B1B2 | Control mechanism with pre-assembled flat rod |
| 131116-07 | - | - | Adapter for attaching standard cam on control mechanism |
| 131116-05 | - | - | Adapter for attaching roller cam on control mechanism |



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Material:

- Control mechanism: Zinc die cast, zinc plated, special surface treatment "Highlander" or glass fiber reinforced Polyamide (PA6GF30).
- Rod guide: Polyamide (PA6GF30), black. Rod: Steel, zinc plated.
- Adapter: Zinc die cast, zinc plated.

References, Accessories:

- Handles: Page 1-002.01 /02 /03 /08 and 1-006.01 /03.
- Cams: Page 2-481.

Notes, Tests:

Product marked with * is available on request only.

The system is mounted inside the sealing area. When the swing handle is turned to close, the upper flat rod is moving upwards and the lower rod downwards. The rod can be supplied within the maximum and minimum A-dimensions 0-70 mm.

For three-point locking, a standard cam can be used on the control mechanism with an adapter (see table).

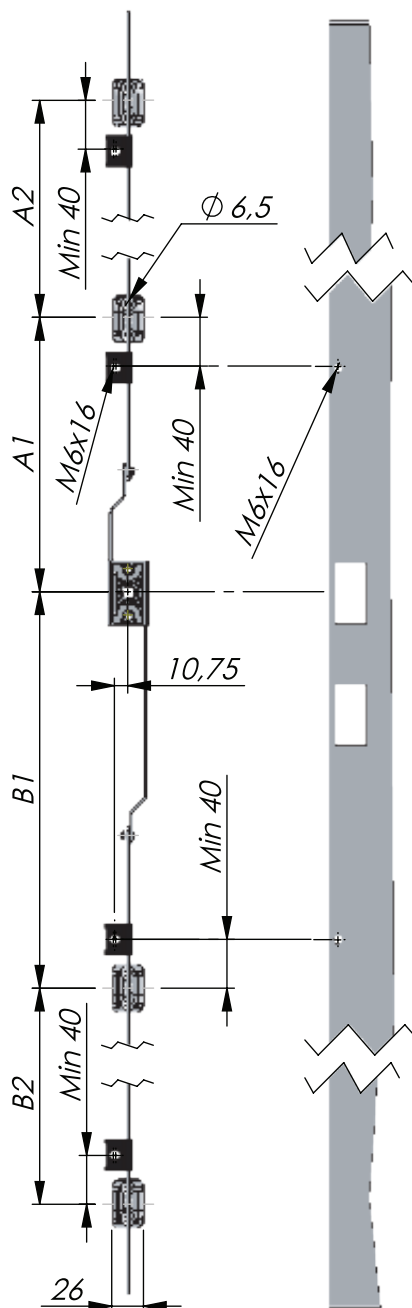
Note that our latching rods fit both control mechanisms with E-clips and Quick-fit connectors.

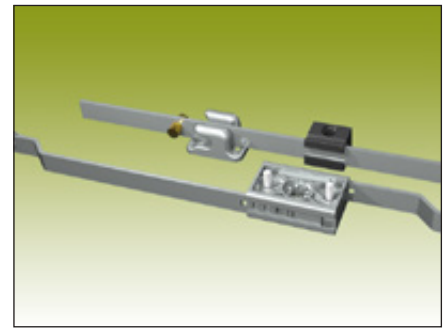
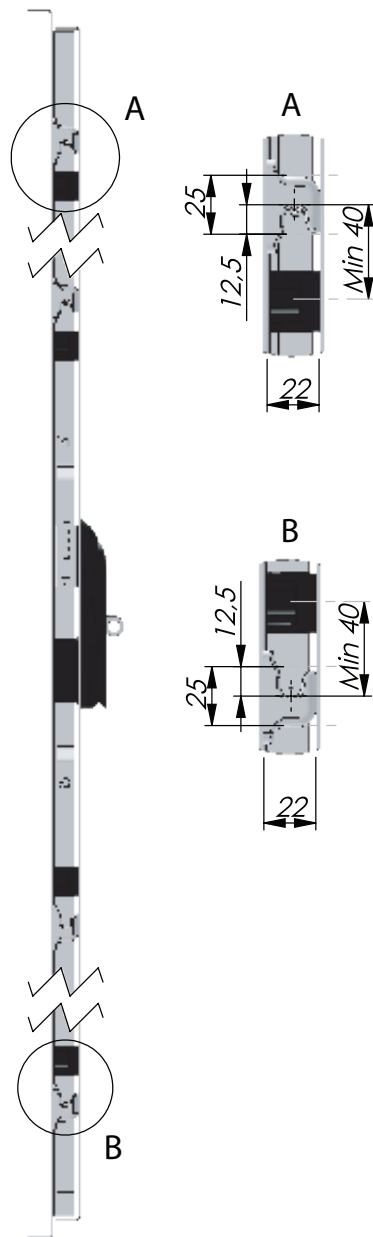
VISION Customized Rod Latch System

| P/N Steel | Description | Drawing on page |
|-----------------|--|-----------------|
| 131116 | Dual action control mechanism (Standard) - connection with E-clips | a |
| 131416 | Dual action control mechanism (Highlander**) - connection with E-clips | a |
| 135016 | Dual action control mechanism (PA6) - connection with E-clips | a |
| 131103 | Dual action control mechanism (Standard) - with Quick-fit connectors | a |
| 131403 | Dual action control mechanism (Highlander) - with Quick-fit connectors | a |
| 135003 | Dual action control mechanism (PA6) - with Quick-fit connectors | a |
| 285025 | Rod guide (PA6) for flat rods. | b |
| 281125 | Rod guide (zinc) for flat rods. | b |
| 282170-AA-LLLL* | Rod, flat | c |
| 131116-07 | Adapter for use of standard cam on control mechanism - drawing a | - |
| 131116-05 | Adapter for use of roller cam on control mechanism - drawing a | - |



Fixing pattern for the door





Material:

- Control mechanism and catch: Zinc die cast, zinc plated, special surface treatment "Highlander" * or glass fiber reinforced polyamide (PA6GF30).
- Rod guide: Polyamide (PA6GF30), black, or zinc, zinc plated or with special surface treatment "Highlander" *.
- Rod: Steel, zinc plated or stainless steel (304).

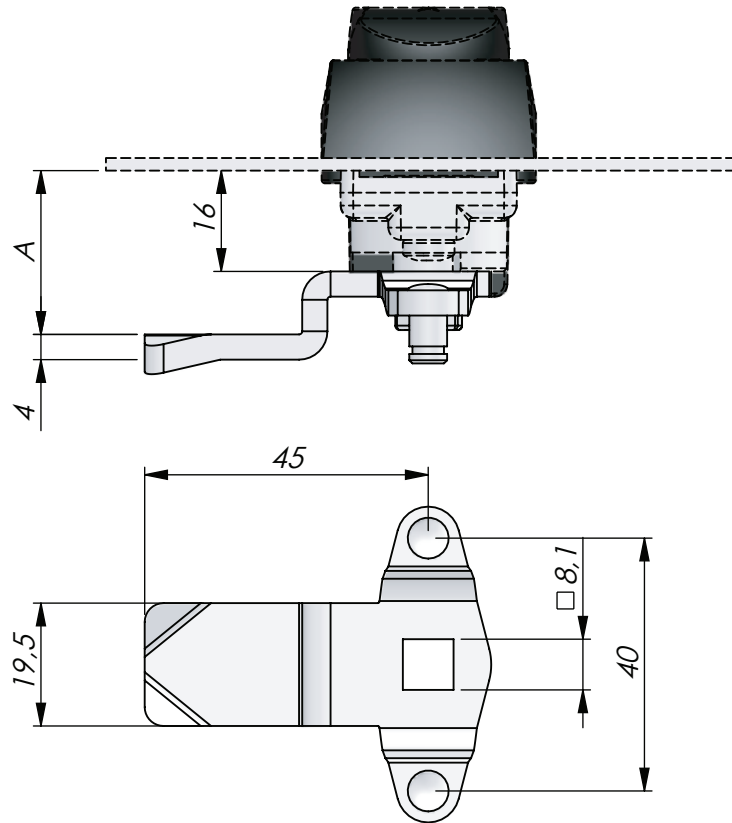
References, Accessories:

- Handles: Page 1-002.01, 1-002.02, 1-002.03, 1-002.08, 1-006.01 and 1-006.03.

The system is mounted outside the sealing area. When the swing handle is turned to close, the upper flat rod is moving upwards and the lower rod downwards. The rod is customized with the latching points A1/A2 and B1/B2 specified according to your application.

VISION Classic Outside - Dual Action Control Mechanism - Flat Rod and Rod Guide

| P/N Standard | P/N Highlander | P/N Polyamide | Description |
|-----------------|-----------------|-----------------|---|
| 1303-00A1A2B1B2 | 1303-01A1A2B1B2 | 1353-00A1A2B1B2 | Control mechanism with flat rodsRod connection points with E-clip. |
| 1304-00A1A2B1B2 | 1304-01A1A2B1B2 | 1354-00A1A2B1B2 | Control mechanism with flat rodsRod connection points with Quick-Fit. |
| 13110201 | 13140201 | - | Catch |
| 285025 | 285025 | 285025 | Rod guide, PA6 |
| 281125 | 281425 | - | Rod guide, zinc |



Material:

- Steel, zinc plated or stainless steel (304).

References, Accessories:

- Rods: Page 1-008.52 and 1-008.53.

Notes, Tests:

* Straight cam

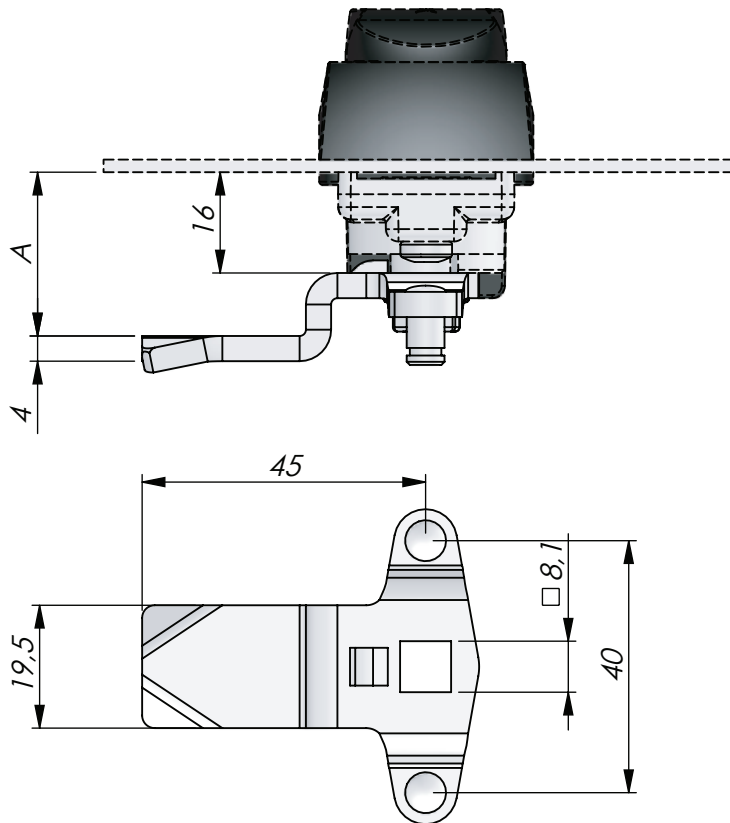
Other cam sizes and cam versions are available on request.

Three-point cams without projection for swing handles. Stroke: 20 mm. Supplied with E-clips.

A = Inside face to engagement point of cam.

Three-Point Cam WITHOUT Projection for Swing Handles

| P/N Steel | P/N SS (304) | Description | A | P/N Steel | P/N SS (304) | Description | A |
|---------------|---------------|-------------|----|-------------|--------------|-------------|----|
| 2321S01PU | 2330S01PU | 3-point cam | 2 | 2321S02PU | 2330S02PU | 3-point cam | 4 |
| 2321S03PU | 2330S03PU | 3-point cam | 6 | 2321S04PU | 2330S04PU | 3-point cam | 8 |
| 2321S05PU | 2330S05PU | 3-point cam | 10 | 2321S07PU | 2330S07PU | 3-point cam | 12 |
| 2321S08PU | 2330S08PU | 3-point cam | 14 | 2321S09PU * | 2330S09PU * | 3-point cam | 16 |
| 2321S10PU | 2330S10PU | 3-point cam | 18 | 2321S11PU | 2330S11PU | 3-point cam | 20 |
| 2321S12PU | 2330S12PU | 3-point cam | 22 | 2321S14PU | 2330S14PU | 3-point cam | 24 |
| 2321S15PU | 2330S15PU | 3-point cam | 26 | 2321S16PU | 2330S16PU | 3-point cam | 28 |
| 2321S17PU | 2330S17PU | 3-point cam | 30 | 2321S18PU | 2330S18PU | 3-point cam | 32 |
| 2321S20PU | 2330S20PU | 3-point cam | 34 | 2321S21PU | 2330S21PU | 3-point cam | 36 |
| 2321S22PU | 2330S22PU | 3-point cam | 38 | 2321S23PU | 2330S23PU | 3-point cam | 40 |
| 2321S24PU | 2330S24PU | 3-point cam | 42 | 2321S29PU | 2330S29PU | 3-point cam | 44 |
| 2321S28PU | 2330S28PU | 3-point cam | 46 | 2321S27PU | 2330S27PU | 3-point cam | 48 |
| 2321S09-00MPU | 2330S09-00MPU | 2-point cam | - | | | | |



Material:

- Steel, zinc plated or stainless steel (304).

References, Accessories:

- Rods: Page 1-008.52 and 1-008.53.

Notes, Tests:

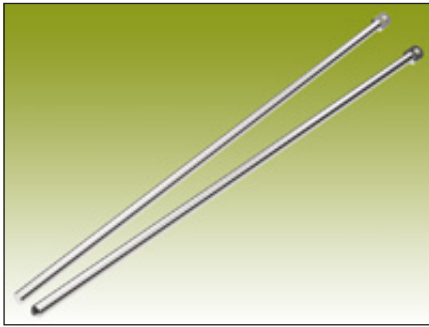
- * Straight cam.

Three-point cams with projection for swing handles. Stroke: 20 mm. Supplied with E-clips.

A = Inside face to engagement point of cam.

Three-Point Cam WITH Projection for Swing Handles

| P/N Steel | P/N SS (304) | Description | A | P/N Steel | P/N SS (304) | Description | A |
|--------------|--------------|-------------|----|------------|--------------|-------------|----|
| 2321S01P | 2330S01P | 3-point cam | 2 | 2321S02P | 2330S02P | 3-point cam | 4 |
| 2321S03P | 2330S03P | 3-point cam | 6 | 2321S04P | 2330S04P | 3-point cam | 8 |
| 2321S05P | 2330S05P | 3-point cam | 10 | 2321S07P | 2330S07P | 3-point cam | 12 |
| 2321S08P | 2330S08P | 3-point cam | 14 | 2321S09P * | 2330S09P * | 3-point cam | 16 |
| 2321S10P | 2330S10P | 3-point cam | 18 | 2321S11P | 2330S11P | 3-point cam | 20 |
| 2321S12P | 2330S12P | 3-point cam | 22 | 2321S14P | 2330S14P | 3-point cam | 24 |
| 2321S15P | 2330S15P | 3-point cam | 26 | 2321S16P | 2330S16P | 3-point cam | 28 |
| 2321S17P | 2330S17P | 3-point cam | 30 | 2321S18P | 2330S18P | 3-point cam | 32 |
| 2321S20P | 2330S20P | 3-point cam | 34 | 2321S21P | 2330S21P | 3-point cam | 36 |
| 2321S22P | 2330S22P | 3-point cam | 38 | 2321S23P | 2330S23P | 3-point cam | 40 |
| 2321S24P | 2330S24P | 3-point cam | 42 | 2321S29P | 2330S29P | 3-point cam | 44 |
| 2321S28P | 2330S28P | 3-point cam | 46 | 2321S27P | 2330S27P | 3-point cam | 48 |
| 2321S09-00MP | 2330S09-00MP | 2-point cam | - | | | | |



Material:

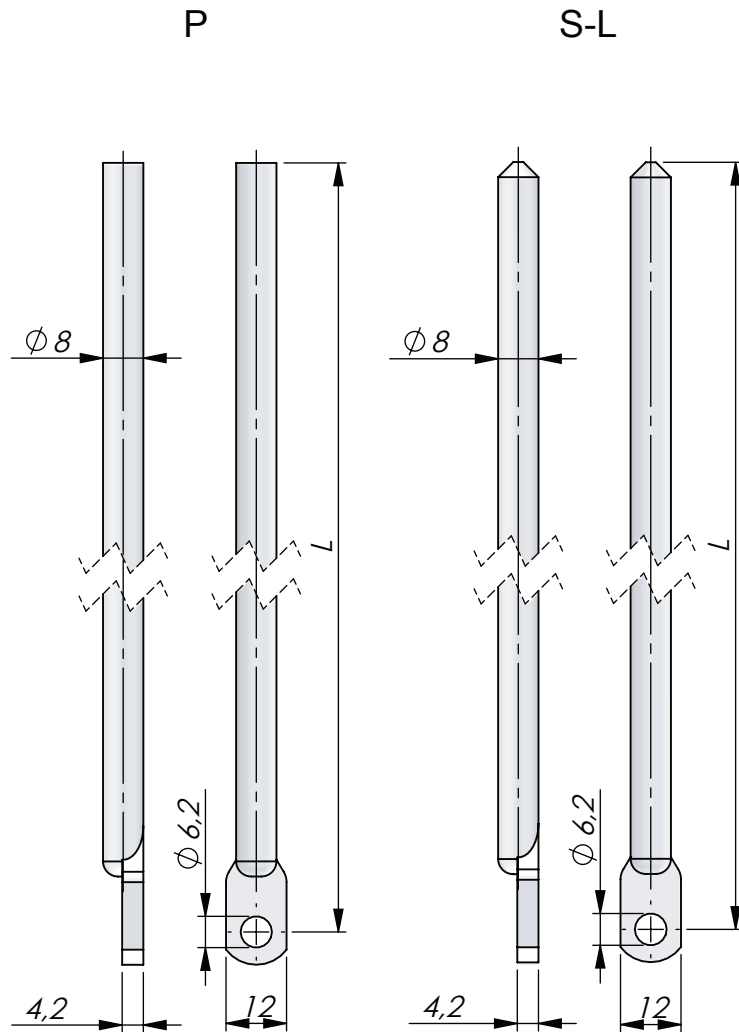
- Steel, zinc plated or stainless steel (304).

References, Accessories:

- Rods with rollers: Page 1-008.53.
- Rod guides: 1-008.54.

Notes, Tests:

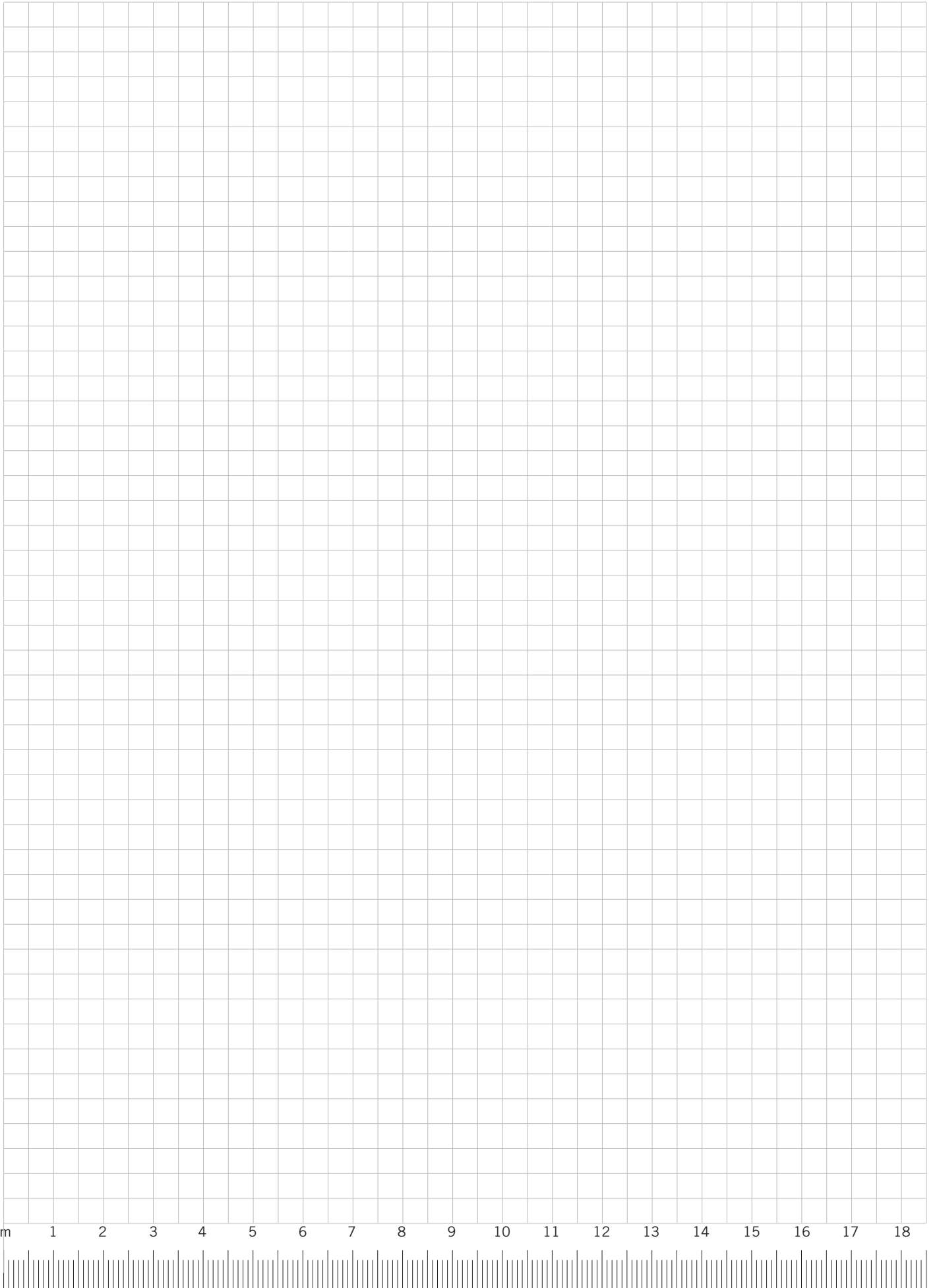
Product marked with * is available on request only.

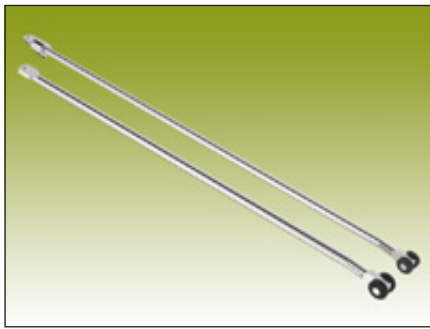


Round Ø 8 mm rod, for swing handles. Rod model with stamped, flat end with eyelet. The length L is the total length from the center of the eye to the end of the rod.

Round Rods - System VISION Classic

| P/N Type P | | P/N Type S-L | | Dimensions |
|------------|----------|--------------|--------------|---------------------|
| Steel | SS (304) | Steel | SS (304) | L = mm |
| 282101 | 283001 | 282110-400 | 283010-400 | 400 |
| 282102 | 283002 | 282110-500 | 283010-500 | 500 |
| 282103 | 283003 | 282110-600 | 283010-600 | 600 |
| 282104 | 283004 | 282110-700 | 283010-700 | 700 |
| 282105 | 283005 | 282110-800 | 283010-800 | 800 |
| 282106 | 283006 | 282110-900 | 283010-900 | 900 |
| 282107 | 283007 | 282110-1000 | 283010-1000 | 1000 |
| 282108 | 283008 | 282110-1100 | 283010-1100 | 1100 |
| 282109 | 283009 | 282110-1200 | 283010-1200 | 1200 |
| - | - | 282110-LLLL* | 283010-LLLL* | LLLL = length in mm |





Material:

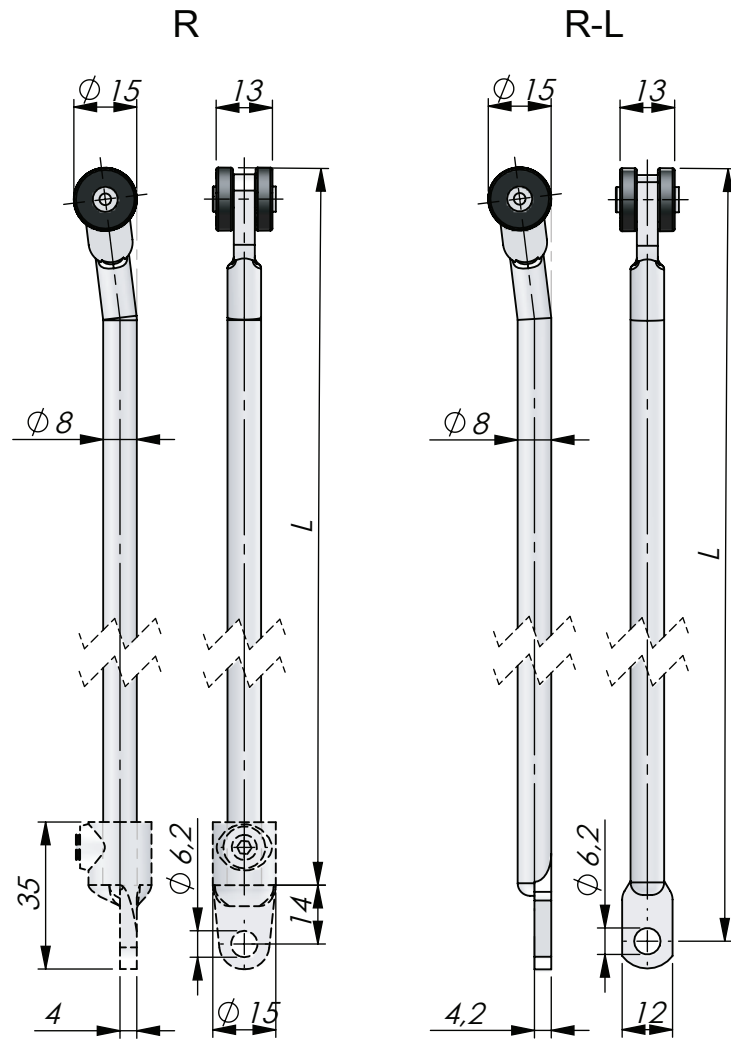
- Steel, zinc plated or stainless steel (304).
- Rollers: Glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

- Rods with Ø 25 mm rollers: Page 2-545.
- Rods without rollers: Page 1-008.52.
- Rod guides and adapter: 1-008.54.

Notes, Tests:

Products marked with * are available on request only.

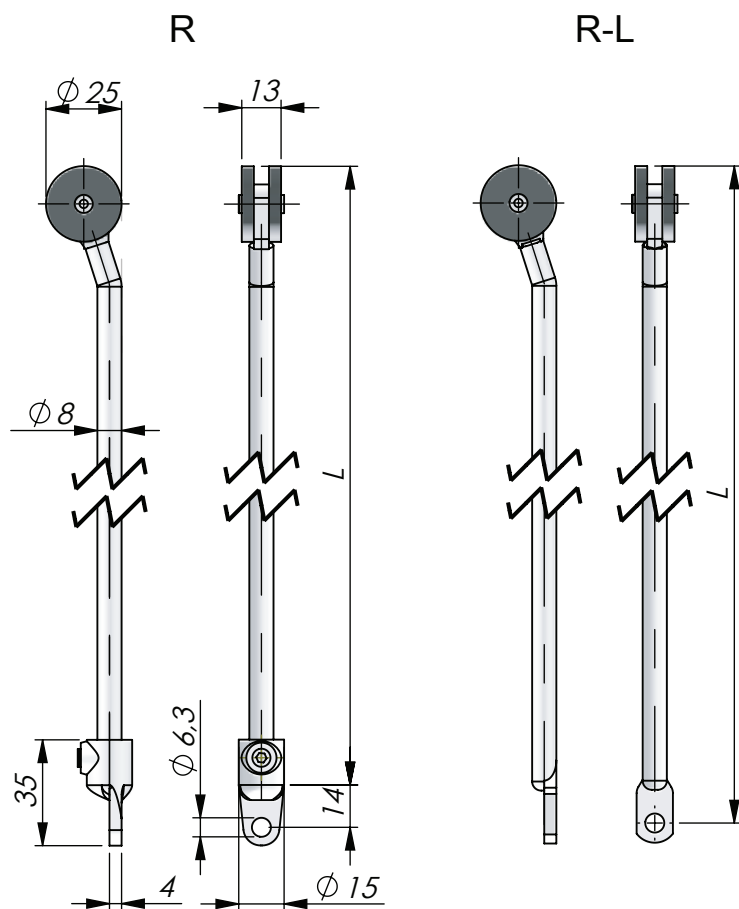


Round Ø 8 mm rod with Ø 15 mm rollers, for swing handles.

- Rod model R-L with stamped, flat end with an eye. The length L is the total length from the center of the eye to the end of the roller.
- Rod model R is used with a rod adapter. The length L is the total length to the end of the roller. The adapter adds 14 mm to the total length

Round Rods - System VISION Classic

| P/N Type R | | P/N Type R-L | | Dimensions |
|------------|----------|--------------|--------------|---------------------|
| Steel | SS (304) | Steel | SS (304) | L = mm |
| 282111 | 283011 | 282120-400 | 283020-400 | 400 |
| 282112 | 283012 | 282120-500 | 283020-500 | 500 |
| 282113 | 283013 | 282120-600 | 283020-600 | 600 |
| 282121 | 283021 | 282120-700 | 283020-700 | 700 |
| 282114 | 283014 | 282120-800 | 283020-800 | 800 |
| 282115 | 283015 | 282120-900 | 283020-900 | 900 |
| 282116 | 283016 | 282120-1000 | 283020-1000 | 1000 |
| 282117 | 283017 | 282120-1100 | 283020-1100 | 1100 |
| 282118 | 283018 | 282120-1200 | 283020-1200 | 1200 |
| - | - | 282120-LLLL* | 283020-LLLL* | LLLL = length in mm |



Material:

- Rod and rivet: Steel, zinc plated or stainless steel (304).
- Adapter: Zinc die cast, zinc plated or stainless steel (304).
- Roller: Glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

- Swing handles: Chapter 1.
- Cams: Page 2-490, 2-491, 2-500b and 2-510.
- Rod guides: Page 2-560 and 2-570.

Notes, Tests:

Custom lengths marked with * are available on request only.

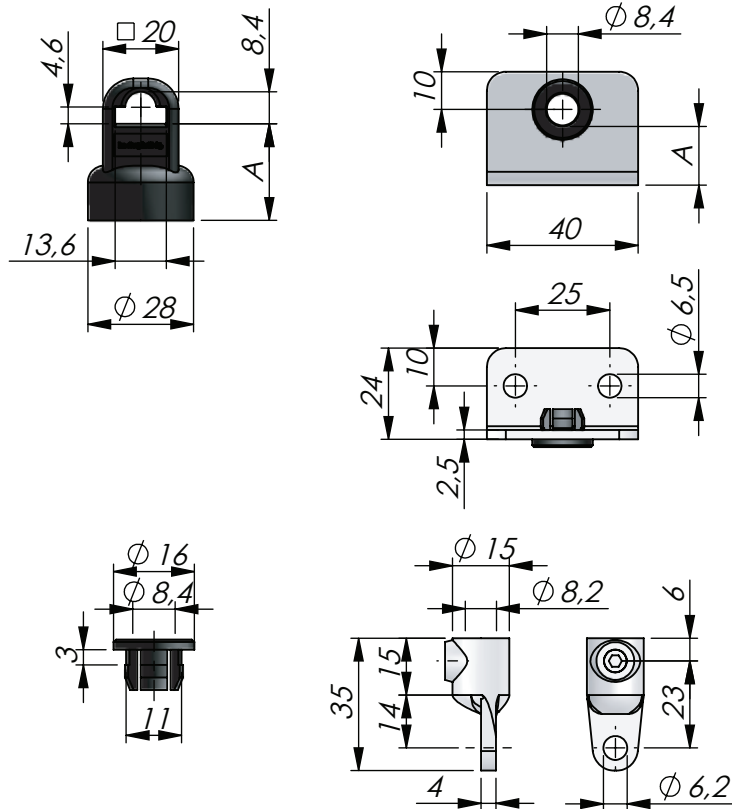
Round \varnothing 8 mm rod with 25 mm roller, for handles and latches with multi-point cams. Rod model R is used with a rod adapter. The length L is the total length to the end of the roller. The adapter adds 14 mm to the total length (see drawing). Rod model R-L has a stamped, flat end with an eye. The length L is the total length from the center of the eye to the end of the roller.

Rod Adapter

| P/N | For rod | Material | P/N | For rod | Material |
|----------|---------|----------|-----------|---------|----------|
| 282119-6 | 6 mm | Zinc | 282119-10 | 10 mm | Zinc |
| 282119 | 8 mm | Zinc | 283019 | 8 mm | SS (304) |

Round Rod (\varnothing 8 mm) for Latching System - 25 mm Rollers

| P/N steel | P/N SS (304) | Type | Length in mm |
|--------------|--------------|---------|-------------------|
| 282151 | 283051 | Rod R | L=400 |
| 282152 | 283052 | Rod R | L=500 |
| 282153 | 283053 | Rod R | L=600 |
| 282161 | 283061 | Rod R | L=700 |
| 282154 | 283054 | Rod R | L=800 |
| 282155 | 283055 | Rod R | L=900 |
| 282156 | 283056 | Rod R | L=1000 |
| 282157 | 283057 | Rod R | L=1100 |
| 282158 | 283058 | Rod R | L=1200 |
| 282160-LLLL* | 283060-LLLL* | Rod R-L | LLLL=Length in mm |



Material:

- Rod guide (A): Glass fibre reinforced polyamide (PA6GF30), black.
- Nut: Steel, zinc plated.
- Rod guide (B): Bracket: Steel, zinc plated or stainless steel (304).
- Bushing (C): Glass fibre reinforced polyamide (PA6GF30), black.
- Adapter (D): Zinc die-cast, zinc plated or stainless steel (304).

References, Accessories:

Please refer to rods for latch system Vision Classic: 1-008.52, 1-008.53.

Notes, Tests:

- A is the distance between the inside face of the door and the rod.
- Rod bushing (C) for other applications or rod guides.
- Rod adapter (D) for rod type R, adds 14 mm to the total length.

Version A

Rod guide with cast-in M6-nut, for round Ø 8 mm rod. For weld-on stud or screw. The opening allows the flat end through the rod guide.

Version B

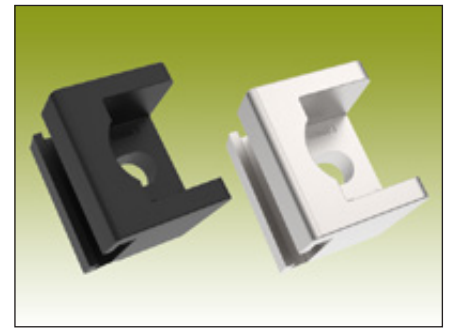
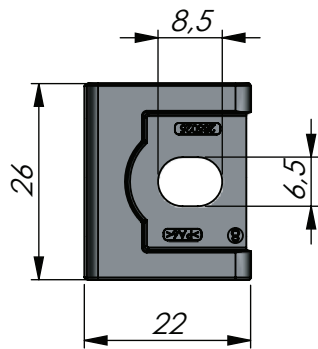
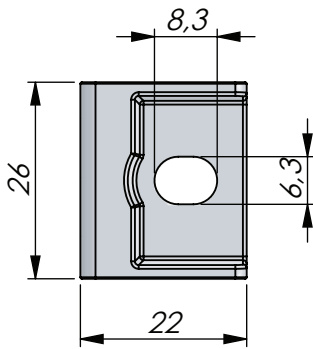
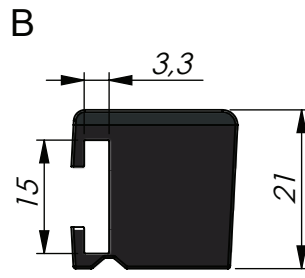
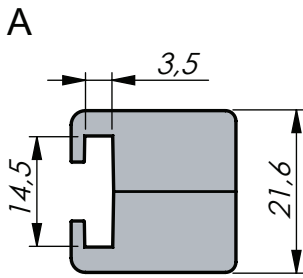
Rod guide supplied with Polyamide bushing, for low friction and silent movement of the rod. For screw-on or weld-on mounting.

Rod bushing (C) for other applications or rod guides.

Rod adapter (D) for rod type R, adds 14 mm to the total length.

Rod Guides and Accessories - System VISION Classic

| P/N | Description | Material | Spec. | For rod type | Drawing |
|----------|----------------|----------|-----------------|--------------|---------|
| 285023 | Rod guide | PA6 | A=26 | All | A |
| 285024 | Rod guide | PA6 | A=20 | All | A |
| 282123 | Rod guide | Steel | A=16 | P, R, S-L | B |
| 283023 | Rod guide | SS (304) | A=16 | P, R, S-L | B |
| 282124 | Rod guide | Steel | A=22 | P, R, S-L | B |
| 283024 | Rod guide | SS (304) | A=22 | P, R, S-L | B |
| 28212302 | Bushing Ø 8 mm | PA6 | Cut-out Ø 11 mm | P, R, S-L | C |
| 282119 | Rod adapter | Zinc | Ø 8 mm | R | D |
| 283019 | Rod adapter | SS (304) | Ø 8 mm | R | D |



Material:

- Zinc model: Zinc, zinc plated or surface treatment "Highlander".
- Plastic version: Glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

Please refer to latch systems with flat rods:
1-008.21a/b, 1-008.25a/b.

Version A

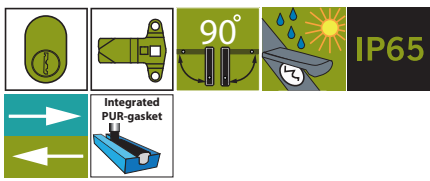
Rod guide in two parts made from zinc. Placed around the flat rod and attached to the door using screw, welding stud, rivet etc. The item is supplied in two halves per ordered rod guide.

Version B

Model made from one part of molded Polyamide. The rod is "folded" in the rod guide, that is then mounted on to the door with the slit facing down, which secures the rod in the rod guide. Use screw, welding stud, rivet or similar to attach the rod guide to the door.

Rod Guides for Flat Rods

| P/N | Description | Material | Drawing |
|--------|------------------------|--|---------|
| 281125 | Rod guide in two parts | Zinc, zinc plated | A |
| 281425 | Rod guide in two parts | Zinc with surface treatment "Highlander" | A |
| 285025 | Rod guide in one part | Polyamide | B |



Material:

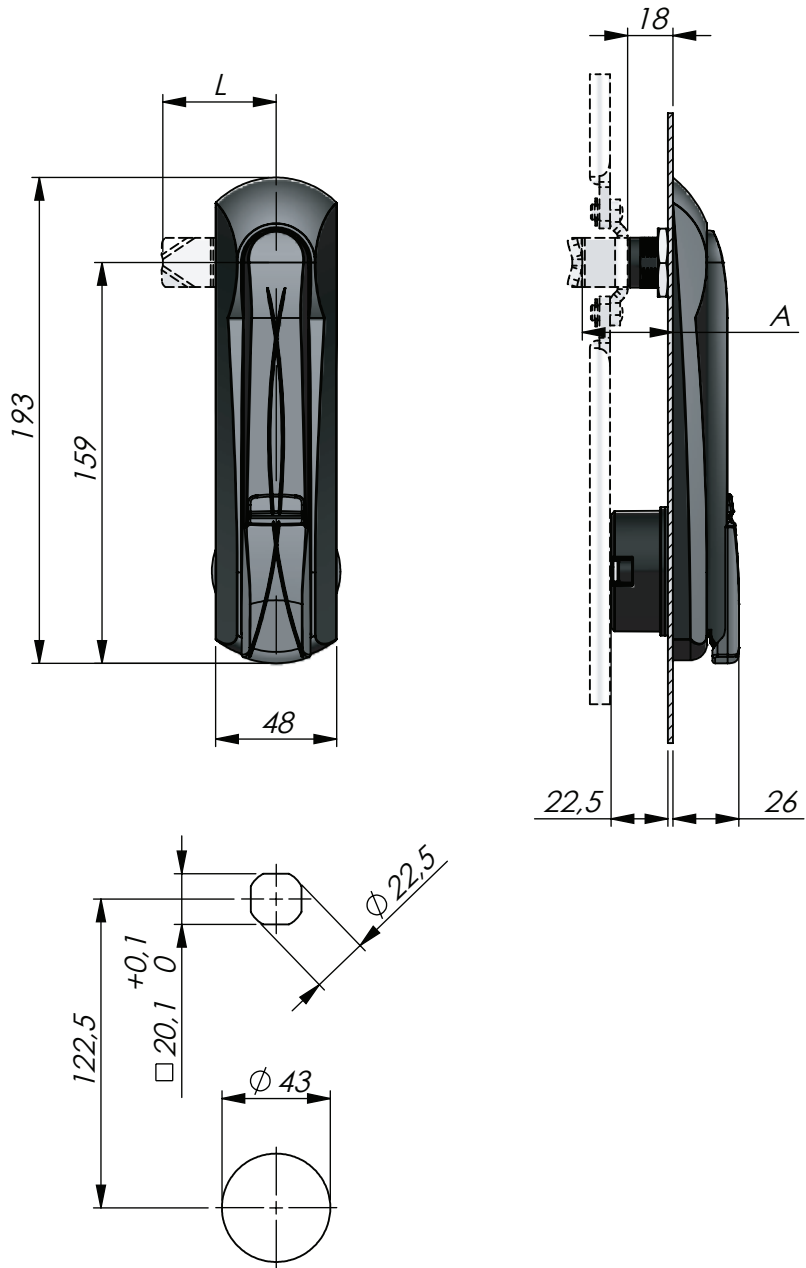
- Handle and dish: Glass fibre reinforced polyamide (PA6GF30), black.
- Nut and pivot shaft: Brass, zinc plated.
- Screws, bolt, washer: Steel, zinc plated.
- Dust cover: TPE.

References, Accessories:

- Cams: Page 1-008.50.
- Rods: Page 1-008.52 and 1-008.53.
- Rod guides: Page 1-008.54.

Notes, Tests:

A and L on the drawing refer to measurements on cams shown on page 1-008.50.

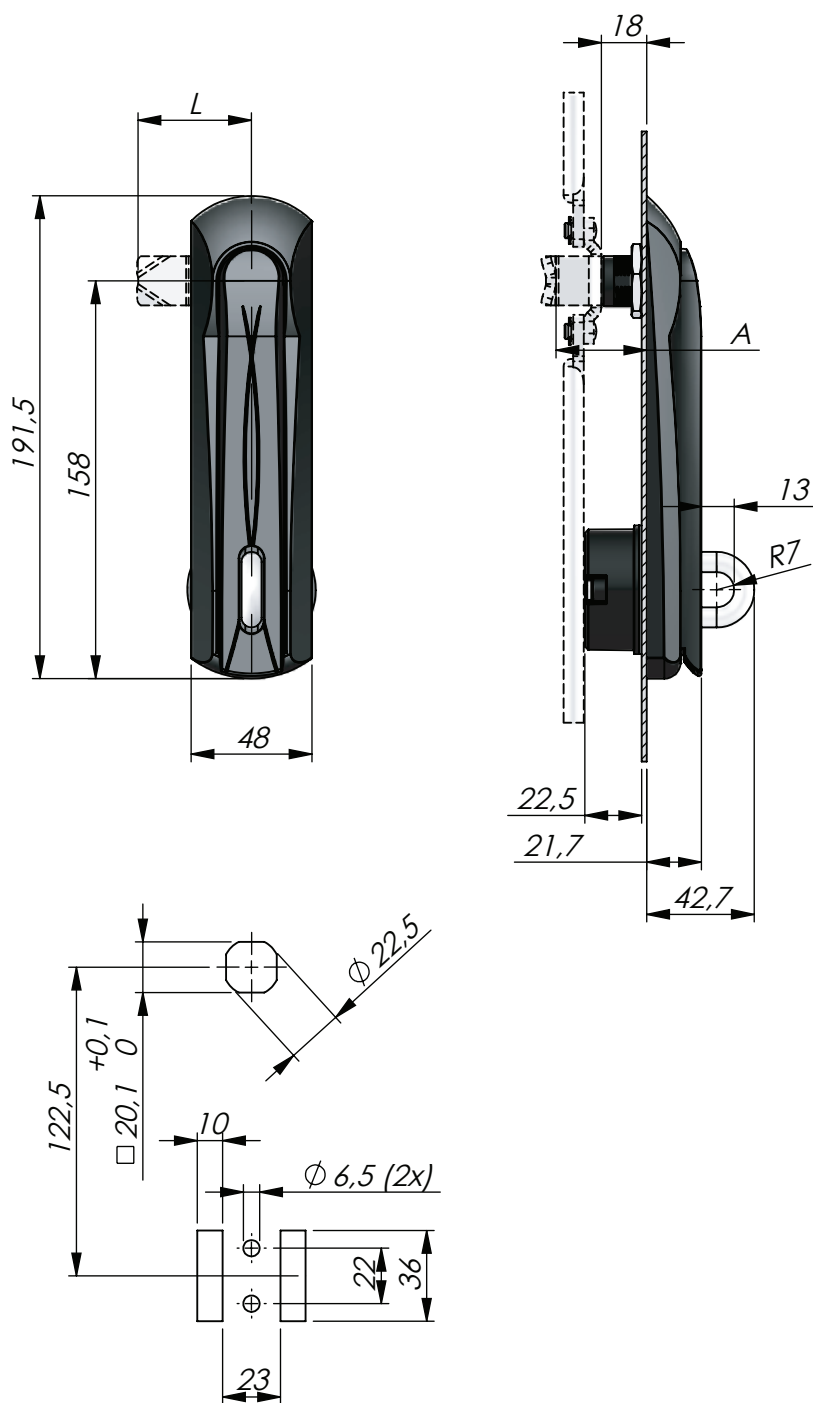


Swing handle for Scandinavian oval cylinder and cam. Equipped with a soft cover to protect the cylinder from dust and rain.

Cylinder to be ordered separately. See table below.

Swing Handle for Scandinavian Oval Cylinder

| P/N | Description | P/N | Description |
|----------|--|----------|----------------------------------|
| 275001 | Swing handle for 6- and 7-pin cylinder | 275002 | Swing handle for 5-pin cylinder |
| 248801-3 | 6-pin cylinder - keyed alike IL 313536 | 248801-4 | 6-pin cylinder - keyed to differ |



Material:

- Handle and dish: Glass fibre reinforced polyamide (PA6GF30), black.
- Nut and shaft: Brass, zinc plated.
- Screws, bolt, washer and padlock loop: Steel, zinc plated.

References, Accessories:

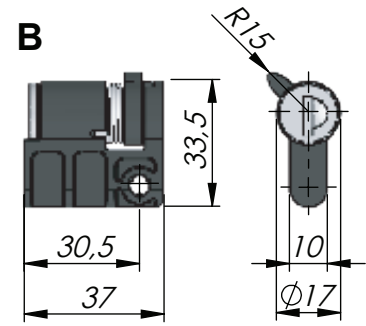
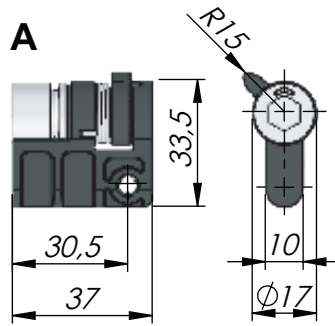
- Cams: 1-008.50.
- Rods: Page 1-008.52 and 1-008.53.
- Rod guides: Page 1-008.54.

Notes, Tests:

A and L on the drawing refer to measurements on cams shown on page 1-008.50.

Swing Handle for Padlock

| P/N | Description |
|--------|--------------------------|
| 275008 | Swing handle for padlock |



Material:

- Insert: Zinc die cast, black powder coated or chrome plated.
- Cylinder: Zinc die-cast with stainless steel (304) dust cap and shutter.
- Plug housing: Polyamide (PA6GF30), black.
- Screw: Steel, zinc plated.

References, Accessories:

Handles for profile cylinder: Page 1-002.02, 1-002.12, 1-005.10, 1-005.11, 6-010 and 6-020.

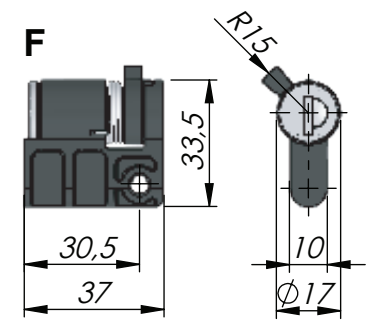
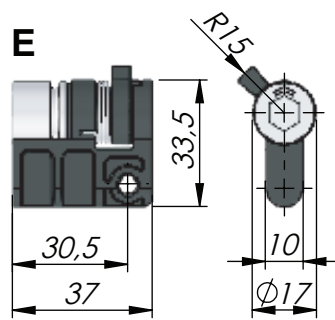
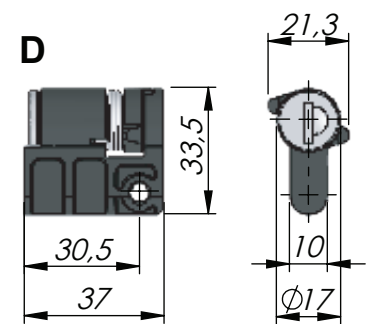
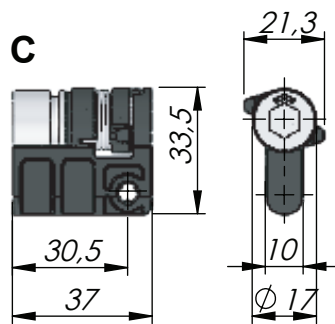
Keys for tool operated inserts on page 2-370 and 2-372.

Notes, Tests:

Drawing A and B for ErgoLine.

Drawing C and D for swing handle.

Drawing E and F for lift handle.



Plug with either tool operated insert or key locking cylinder, that fits into Vision products designed for a 40 mm profile cylinder. Could be used as long term solution as well as a plug used to keep the cabinet closed until end user of the cabinet replace this plug with their own profile cylinder into the Vision handle. Both insert and cylinder version is spring loaded and goes back to closed position by itself after opening. Mounting screw included.

Notes, Tests:

Round cylinder version delivered with two keys.

How to order.

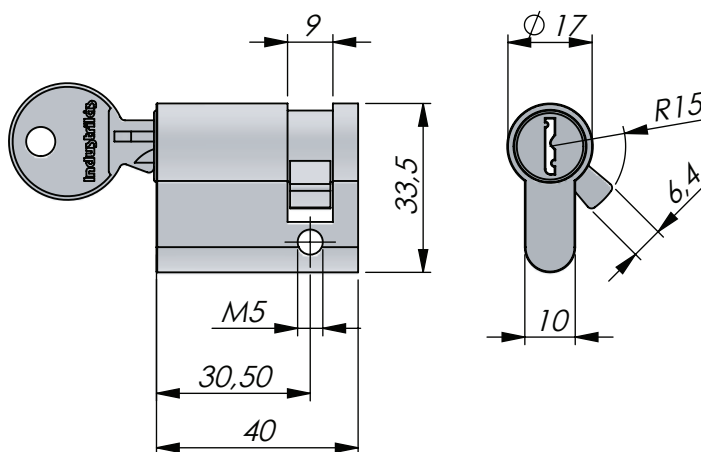
Example: P/N 511067-5205

- Vision plug from PA6 and zinc insert.
- For "Ergo Line" handle.
- Chrome plated insert - Square 8.

VISION Plug for Profile Cylinder (AAAAAA-BCDD)

| AAAAAA- | Housing | B | For this product: | C | Surface treatment, insert | DD | Insert |
|---------|--------------------------------|---|-------------------|---|---------------------------|----|---------------------------|
| 511067- | VISION Plug PA6 / Zinc inserts | 5 | Ergo Line | 0 | Always = 0 with cylinder | 01 | Square 6 |
| | | 6 | Swing handle | 2 | Chrome plated | 03 | Square 7 |
| | | 7 | Lift handle | 6 | Black powder coated | 05 | Square 8 |
| | | | | | | 07 | Square 8 - slotted |
| | | | | | | 11 | Square 8 - recessed |
| | | | | | | 14 | Triangle 7 |
| | | | | | | 15 | Triangle 8 |
| | | | | | | 16 | Triangle 10 |
| | | | | | | 22 | Double Bit 3 |
| | | | | | | 24 | Double Bit 5 |
| | | | | | | 26 | Slotted |
| | | | | | | 29 | Slotted recessed |
| | | | | | | 32 | Hexagon 11 |
| | | | | | | 34 | Recessed hexagon 8 |
| | | | | | | 35 | Recessed hexagon 10 |
| | | | | | | 36 | Recessed hex 8 / 3 mm pin |
| | | | | | | 80 | Keyed to differ |
| | | | | | | 81 | Keyed alike IL101 |
| | | | | | | 82 | Keyed alike IL0333 |





Material:

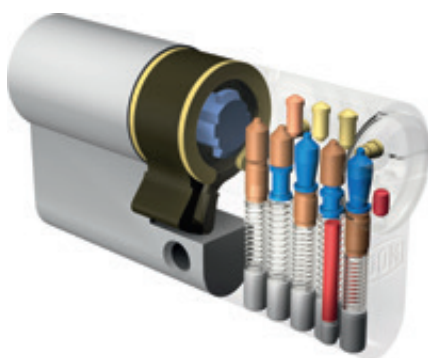
- Cylinder: Brass, nickel plated in matt finish.
- Cam: Hardened steel.
- Solid plug: Polyamide (PA6GF30), black.

Profile cylinder 40 mm in brass with 360° rotation. The cylinders are manufactured according to DIN 18252 and have five pins. Supplied with three keys and fixing screw. The cam can be positioned 8x45°.

The "Solid plug" is used for plugging a hole shaped like a profile cylinder. It is supplied with a screw for fixing it into the cylinder hole of a handle etc, when no profile cylinder is wanted. The plug is spring loaded to obtain "Push-to-Latch" function.

Profile Cylinders

| P/N | Description |
|-------------|---|
| 511059-1001 | Profile cylinder, keyed to differ. |
| 511066-1000 | Solid plug, black. |
| 511054-1001 | Profile cylinder, keyed alike LL 34512. |



Certified in accordance with DIN EN ISO 9001:2008 and EN14001:2004. All products conform to RoHS. Copyright © 2014, Industrilas, Inc.

Pictured: DOM System ixHT.

Profile half cylinder according to DIN EN 1303 and DIN 18252. Lengths of 40 and 45 mm, made of brass, with 360° cam, adjustable in 8 increments of 45°. (8-position adjustability) It is supplied with three keys.

System description of cylinder / key technology:

- Locking side has 5 spring-loaded, solid tumblers, axially arranged.
- Consists of 10 sectionally arranged core- and body pins with "waist".
- Solid pin tumblers with a minimum diameter of 3 mm, made from tempered bronze/steel.
- Nickel plated hardened steel core pins and housing pins.
- One-piece solid brass cylinder housing, with a multi-layer galvanized surface treatment for higher corrosion protection.
- One-piece solid brass cylinder core with a minimum diameter of 13 mm.
- Convex core head with guide funnel and core head groove for positive torque-transfer when opening and closing.
- Supplied with 3 reversible keys from nickel-silver for added corrosion- and wear-resistance.
- Horizontal keyhole.
- Cam adjustable in increments of 45° and made from one piece of sintered steel.
- Spare parts available for min. 25 years.

Other systems available on request:

- Locking Type Z / ZHS / HS / GHS with security card.
- Coded individual locking with security card.
- Locking systems VdS 2156 class A, B, B+ possible.
- Systems with technical copy protection, mobile elements in the key, optionally with increased drilling- and/or impact- and pulling protection.
- Profile double cylinder with and without knob, cam cylinders, padlocks, mechatronic or electromechanical locking system.

Profile Cylinders - DOM System

| P/N | Description | Length | Type of locking |
|----------------|-----------------------------------|--------|-----------------|
| 511058-1002 | Profile cylinder, keyed alike | 40 mm | IL 4711 |
| 511059-1002 | Profile cylinder, keyed to differ | 40 mm | Keyed to differ |
| 511058-1020 | Profile cylinder, keyed alike | 40 mm | IL 4710 |
| 511058-1004 | Profile cylinder, keyed alike | 40 mm | IL 4712 |
| 511058-1005 | Profile cylinder, keyed alike | 40 mm | IL 4713 |
| 511058-1006 | Profile cylinder, keyed alike | 40 mm | IL 4714 |
| 511058-1007 | Profile cylinder, keyed alike | 40 mm | IL 4715 |
| 511058-1008 | Profile cylinder, keyed alike | 40 mm | IL 4716 |
| 511058-1009 | Profile cylinder, keyed alike | 40 mm | IL 4717 |
| 511058-1010 | Profile cylinder, keyed alike | 40 mm | IL 4718 |
| 511058-1011 | Profile cylinder, keyed alike | 40 mm | IL 4719 |
| 511058-1012 | Profile cylinder, keyed alike | 40 mm | IL 4720 |
| <hr/> | | | |
| 511158-1000 | Profile cylinder, keyed alike | 45 mm | IL 4711 |
| 511159-1000 | Profile cylinder, keyed to differ | 45 mm | Keyed to differ |
| <hr/> | | | |
| 511058-1002-01 | Spare key, keyed alike | | IL 4711 |

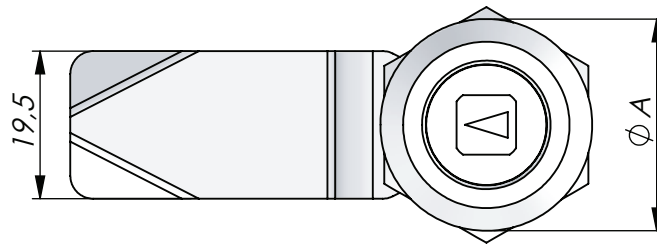
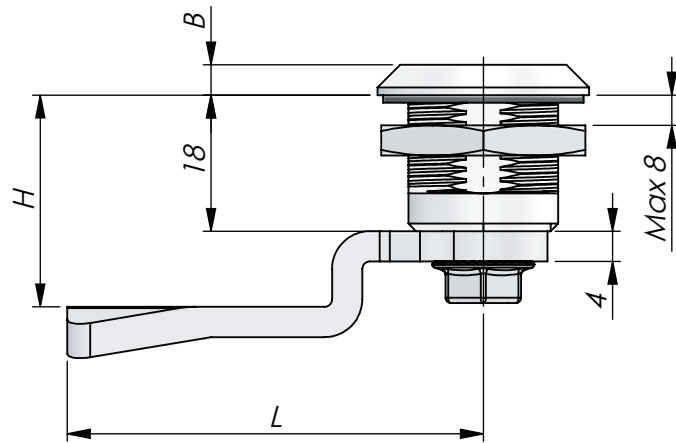
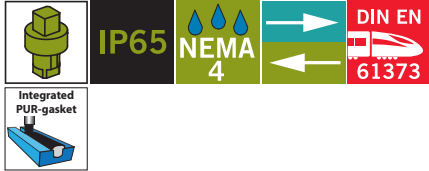




QUARTER-TURN LATCHES, HANDLES, ACCESSORIES

2

| | | |
|---|---|---------------------------------|
| Vibration resistant quarter-turn latches 18 mm housing |  | 2-020 – 2-022 |
| Vibration resistant quarter-turn latches 12 mm housing |  | 2-040 – 2-042 |
| Quarter-turn latches, 30 - 56 mm |  | 2-050 – 2-060 |
| COMPACT vibration resistant quarter-turn latches 13,5 mm housing |  | 2-110a – 2-117 |
| Vibration resistant quarter-turn latch - for railway industry, 18 mm housing |  | 2-120 |
| Compression-latches |  | 2-130 – 2-136, 2-210 – 2-215 |
| Wing knobs, T-handles and L-handles |  | 2-252 – 2-305, |
| Klima-flex 1 for HVAC |  | 2-309 – 2-314, 2-316 |
| Klima-flex 2 for HVAC |  | 2-315 |
| Klima-flex HingeLatches for HVAC |  | 2-317 |
| Padlockable defeater handles |  | 2-340 – 2-352 |
| Keys |  | 2-370 – 2-380 |
| Flush compression latches |  | 2-396 – 2-398 |
| Cams, rods, rod guides and quarter-turn accessories |  | 2-400 – 2-590 |
| Cylinder locks, electronic code lock, push button latches |  | 2-117, 2-220, 2-610 – 2-741 |
| Vector T-Handles |  | 2-800 – 2-820 |
| Vector P-handles |  | 2-830 – 2-834 |



Material:

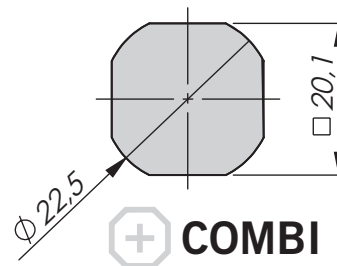
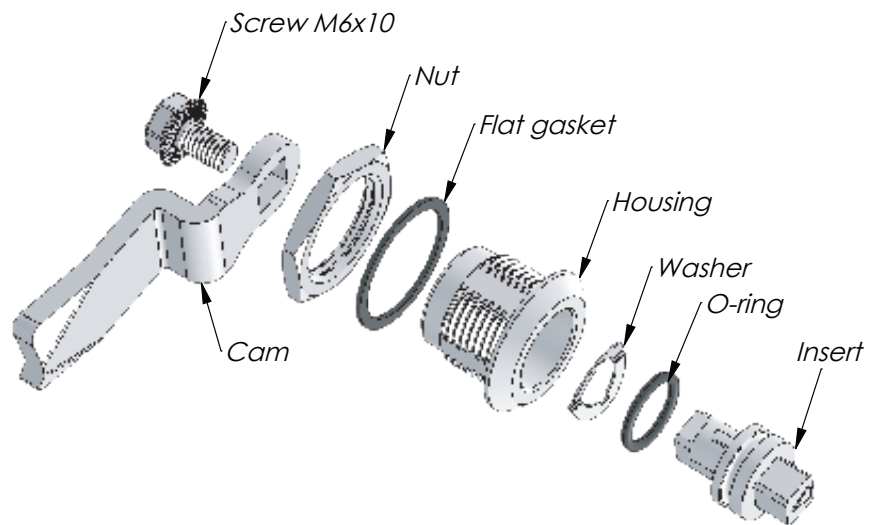
- Housing: Zinc die-cast, chrome plated, black texture powder coated, zinc plated with black PA6 collar or glass fiber reinforced Polyamide PA6, black.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Cam and screw: Steel, zinc plated. Washer: Stainless steel (304).

References, Accessories:

- Housings: Page 2-021.
- Inserts: Page 2-022.
- Knobs and handles: Page 2-360.
- Cams: Page 2-481, 2-491, 2-510, 2-520.
- Keys: Page 2-370, 2-372, 2-380.
- Padlock adapter: Page 2-400.
- Anti rotation bracket: Page 2-420.
- Logo plate: Page 2-585.
- Finger pull, Dust cover: Page 2-590.
- Stainless version: Page 6-115a and 6-115b.
- Quarter-turn latch with "DB insert" (Deutsche Bahn) on page 2-120.

Notes, Tests:

- Vibration-resistant acc. to DIN EN 61373
- * = also classed "Waterproof according to NEMA 4".



A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65 *, an O-ring is placed on the insert and a flat gasket on the housing. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.
Nuts: SN = Standard nut. EN = Earthing nut.

How to order.

Example: P/N 2412-005250-2245

- Housing - chrome plated A=28 B=4, standard nut.
- Insert square 8 - chrome plated, IP65-assembled.
- Cam - zinc plated H=22 mm L= 45 mm.

Protection degree IP65 is achieved by an O-ring on the insert and a flat gasket on the housing.

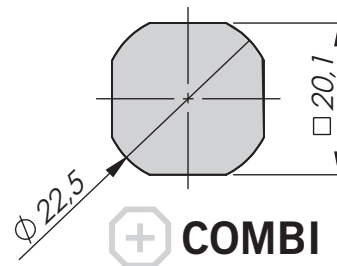
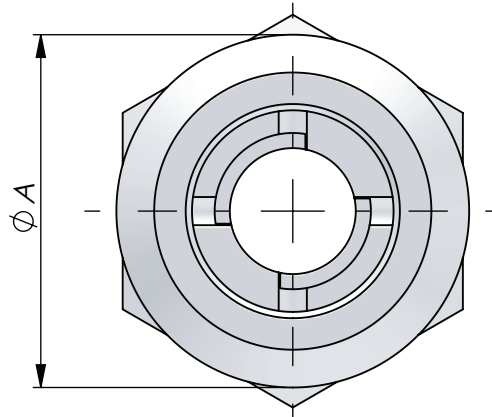
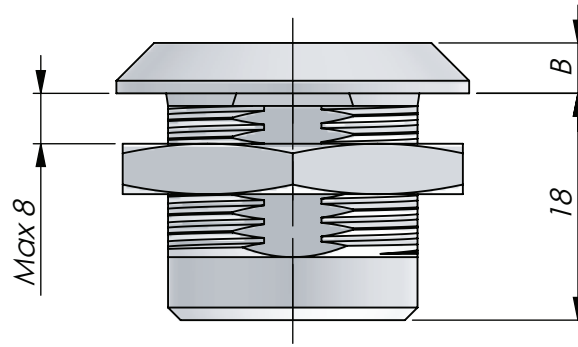
Notes, Tests:

To fulfill DIN EN 61373 the latch can be supplied with screw with mechanical thread lock, see column B in P/N table.

Nuts: SN = Standard nut.
EN = Earthing nut.
TUF = Assembled with TUF-loc screw to achieve DIN EN 61373.

Vibration Resistant Quarter-Turn Latch - 18 mm (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|------------------------------------|---|--------|----|----------------------------|---|---------|---|----------------------|---|-------|-------|-----------|
| 2412- | Zinc - chrome plated A=28, B=4 | 0 | SN | 01 | Square 6 | 2 | Chrome | 0 | IP54 - not assembled | 0 | Steel | -0000 | No cam |
| 2415- | PA6 - black A=28, B=4 | 1 | EN | 03 | Square 7 | 6 | Black | 1 | IP65 - not assembled | | | -0445 | 4/45 |
| 2416- | Zinc - black A=28, B=4 | 2 | SN+TUF | 05 | Square 8 | | | 2 | IP54 - enclosed cam | | | -0645 | 6/45 |
| 2422- | Zinc - chrome plated A=32, B=6 | 4 | EN+TUF | 07 | Square 8 - slotted | | | 3 | IP65 - enclosed cam | | | -0845 | 8/45 |
| 2425- | PA6 - black A=32, B=6 | | | 08 | Square 8 / M6 | | | 4 | IP54 - assembled | | | -1045 | 10/45 |
| 2426- | Zinc - black A=32, B=6 | | | 11 | Square 8 - recessed | | | 5 | IP65 - assembled | | | -1245 | 12/45 |
| 2442- | Zinc - plastic collar A=28, B=4 | | | 14 | Triangle 7 | | | 6 | PUR - not assembled | | | -1445 | 14/45 |
| | | | | 15 | Triangle 8 | | | 7 | PUR - enclosed cam | | | -1645 | 16/45 |
| | | | | 16 | Triangle 10 | | | 8 | PUR - assembled | | | -1845 | 18/45 |
| | | | | 17 | Triangle 10 / M5 | | | | | | | -2045 | 20/45 |
| | | | | 18 | Triangle 10 / M6 | | | | | | | -2245 | 22/45 |
| | | | | 19 | Triangle 10 / SEN | | | | | | | -2445 | 24/45 |
| | | | | 21 | Triangle 10 - radius (ES3) | | | | | | | -2645 | 26/45 |
| | | | | 22 | Double Bit 3 | | | | | | | -2845 | 28/45 |
| | | | | 24 | Double Bit 5 | | | | | | | -3045 | 30/45 |
| | | | | 26 | Slotted | | | | | | | -3245 | 32/45 |
| | | | | 28 | Slotted with arrow | | | | | | | -3445 | 34/45 |
| | | | | 29 | Slotted recessed | | | | | | | -3645 | 36/45 |
| | | | | 31 | Hexagon 8,5 | | | | | | | -3845 | 38/45 |
| | | | | 32 | Hexagon 11 | | | | | | | -4045 | 40/45 |
| | | | | 34 | Recessed hexagon 8 | | | | | | | -4245 | 42/45 |
| | | | | 35 | Recessed hexagon 10 | | | | | | | -4445 | 44/45 |
| | | | | 36 | Recessed hex 8 / 3 mm pin | | | | | | | -4645 | 46/45 |
| | | | | 37 | Solid (plug) | | | | | | | -4845 | 48/45 |
| | | | | 39 | Triangle 10 - radius | | | | | | | -5045 | 50/45 |



Material:

- Housing: Zinc die-cast, chrome plated, black texture powder coated, zinc plated with black PA6 collar or glass fibre reinforced polyamide PA6.
- Standard or Earthing nut: Zinc die-cast, zinc plated.

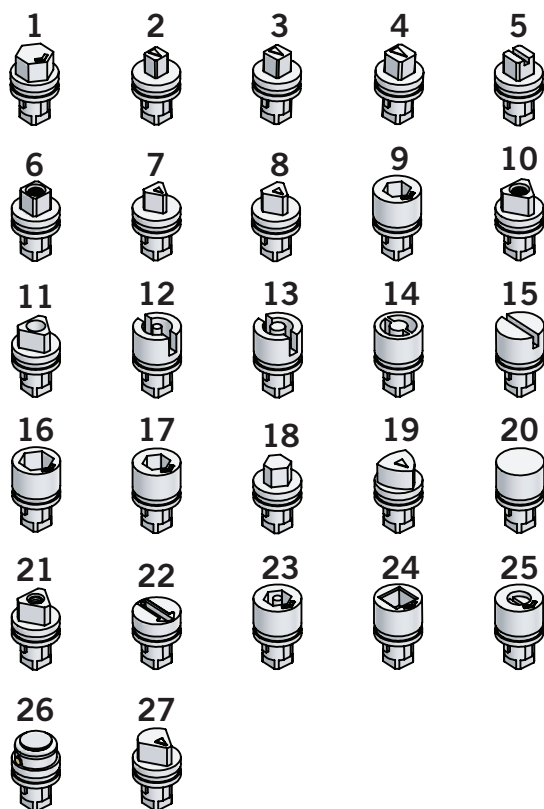
References, Accessories:

- Stainless version: Page 6-111.
- Complete latch assembly: Page 2-020a.
- Inserts: Page 2-022.
- Cams: Page 2-481, 2-491, 2-510 and 2-520.

Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Earthing nut is recommended for all applications where electricity is connected.

Housing for Vibration-Resistant Quarter-Turn Latch - 18 mm

| P/N | Description | Material | Surface treatment | Nut | A | B |
|-----------|--------------------|----------|-------------------|--------------|----|---|
| 211301-IB | Housing | Zinc | Chrome | Standard | 28 | 4 |
| 211302-IB | Housing | Zinc | Chrome | Earthing nut | 28 | 4 |
| 211305-IB | Housing | Zinc | Chrome | Standard | 32 | 6 |
| 211306-IB | Housing | Zinc | Chrome | Earthing nut | 32 | 6 |
| 211601-IB | Housing | Zinc | Black | Standard | 28 | 4 |
| 211602-IB | Housing | Zinc | Black | Earthing nut | 28 | 4 |
| 211605-IB | Housing | Zinc | Black | Standard | 32 | 6 |
| 211606-IB | Housing | Zinc | Black | Earthing nut | 32 | 6 |
| 215032-IB | Housing | PA6 | - | Standard | 28 | 4 |
| 215033-IB | Housing | PA6 | - | Standard | 32 | 6 |
| 219150-IB | Housing/PA6 collar | Zinc/PA6 | - | Standard | 28 | 4 |
| 219151-IB | Housing/PA6 collar | Zinc/PA6 | - | Earthing nut | 28 | 4 |



Material:

- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Screw: Steel, zinc plated.
Washer: Stainless steel (304).

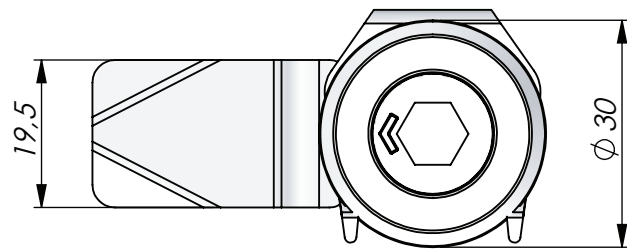
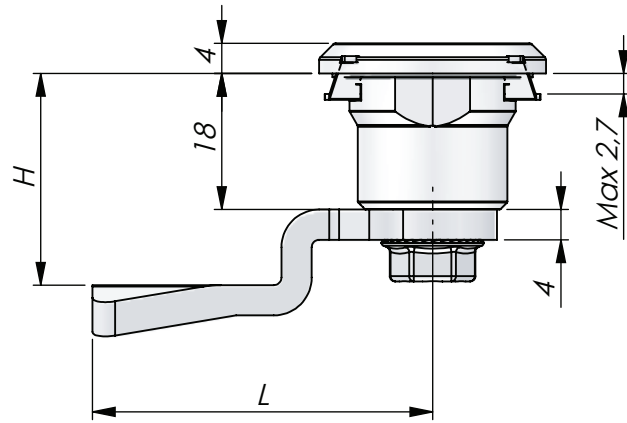
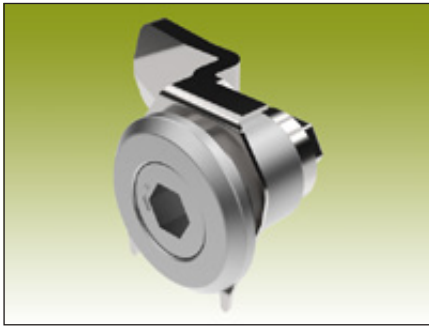
References, Accessories:

- Complete latch assembly: Page 2-020a.
- Housings: Page 2-021.
- Cams: Page 2-481, 2-491, 2-510 and 2-520.
- Stainless inserts: Page 6-112.

Inserts with chrome plated or black texture powder coated surface. Each insert is supplied with fixing screw and washer.

Insert for Vibration Resistant Quarter-Turn Latch - 18 mm

| P/N, chrome | P/N, black | Description | Drawing | P/N, chrome | P/N, black | Description | Drawing |
|-------------|------------|---------------------|---------|-------------|------------|---------------------------|---------|
| 221301-IB | 221601-IB | Hexagon 11 | 1 | 221318-IB | 221618-IB | Daimler Benz | 14 |
| 221307-IB | 221607-IB | Square 6 | 2 | 221320-IB | 221620-IB | Slotted | 15 |
| 221308-IB | 221608-IB | Square 7 | 3 | 221321-IB | 221621-IB | Recessed hexagon 10 | 16 |
| 221309-IB | 221609-IB | Square 8 | 4 | 221322-IB | 221622-IB | Recessed hexagon 8 | 17 |
| 221310-IB | 221610-IB | Square 8 / slotted | 5 | 221323-IB | 221623-IB | Hexagon 8,5 | 18 |
| 221311-IB | 221611-IB | Square 8 / M6 | 6 | 221324-IB | 221624-IB | ES 3 | 19 |
| 221312-IB | 221612-IB | Triangular 7 | 7 | 221326-IB | 221626-IB | Blind plug | 20 |
| 221313-IB | 221613-IB | Triangular 8 | 8 | 221328-IB | 221628-IB | Triangular 10 / M5 | 21 |
| 221314-IB | 221614-IB | Triangular 10 | 9 | 221341-IB | 221641-IB | Slotted, recessed | 22 |
| 221315-IB | 221615-IB | Triangular 10 / M6 | 10 | 221347-IB | 221647-IB | Recessed hex 8 / 3 mm pin | 23 |
| 221319-IB | 221619-IB | Triangular 10 / SEN | 11 | 221348-IB | 221648-IB | Recessed square 8 | 24 |
| 221316-IB | 221616-IB | Double Bit 3 | 12 | 221349-IB | 221649-IB | Slotted 3 | 25 |
| 221317-IB | 221617-IB | Double Bit 5 | 13 | 221351-IB | 221651-IB | Sthlm Energy | 26 |
| | | | | 221339-IB | 221639-IB | Triangle 10 - radius | 27 |

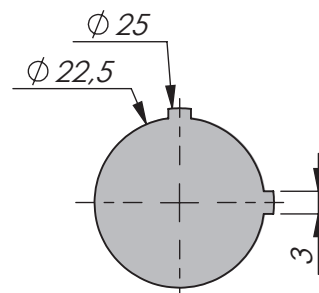
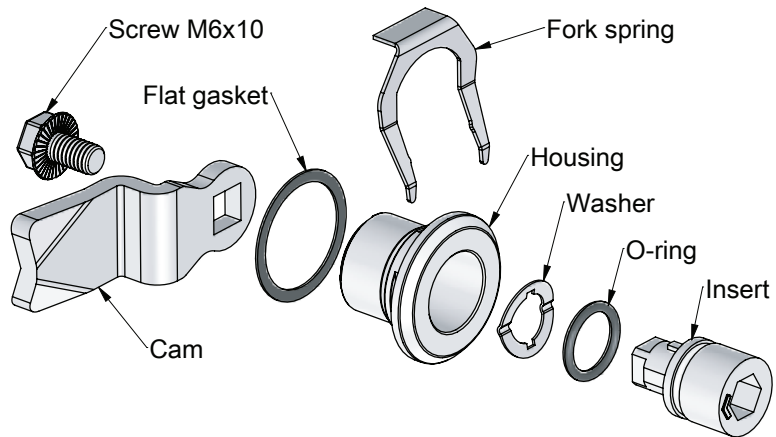


Material:

- Housing: Zinc die-cast, chrome plated or black texture powder coated.
- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Cam and screw: Steel, zinc plated.
- Washer: Stainless steel (304).
- Fork spring: Spring steel, zinc plated.

References, Accessories:

- Knobs and handles: Page 2-360.
- Cams: Page 2-481, 2-491, 2-510 and 2-520.
- Keys: Page 2-370 and 2-372



A complete latch consists of housing, fork spring, insert, washer, screw and cam. To achieve better sealing, an O-ring and flat gasket are applied. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

Material:

- Housing and insert: Zinc, die-cast, chrome plated or black texture powder coated.
- Cam and screw: Steel, zinc plated.
- Washer: Stainless steel (304)
- Fork spring: Spring steel, zinc plated.

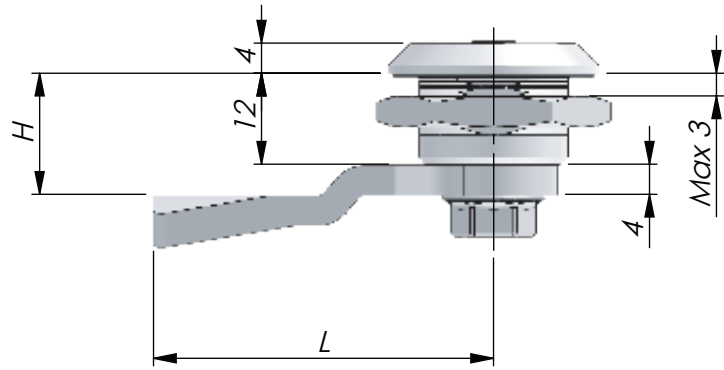
References, Accessories:

Keys: Page 2-370 and 2-372.

Housing for vibration resistant quarter-turn latch. Fork spring feature saves assembly time and keeps the latch securely in place. Designed for metal thickness up to 2,7 mm. O-ring on the insert and a flat gasket on the housing provide the sealing of the latch.

Vibration Resistant Quarter-Turn Latch - 18 mm – Fork Spring Assembly (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Fastening | CC | Insert | D | Surface - insert | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|---------------|---|-------------|----|---------------------------|---|------------------|---|------------------------|---|-------|-------|-----------|
| 2912- | Chrome plated | 0 | Fork spring | 01 | Square 6 | 2 | Chrome | 1 | Sealed - not assembled | 0 | Steel | -0000 | No cam |
| 2916- | Black coated | | | 03 | Square 7 | 6 | Black | 3 | Sealed - enclosed cam | | | -0445 | 4/45 |
| | | | | 05 | Square 8 | | | 5 | Sealed - assembled | | | -0645 | 6/45 |
| | | | | 07 | Square 8 -slotted | | | | | | | -0845 | 8/45 |
| | | | | 08 | Square 8 / M6 | | | | | | | -1045 | 10/45 |
| | | | | 11 | Square 8 - recessed | | | | | | | -1245 | 12/45 |
| | | | | 14 | Triangle 7 | | | | | | | -1445 | 14/45 |
| | | | | 15 | Triangle 8 | | | | | | | -1645 | 16/45 |
| | | | | 16 | Triangle 10 | | | | | | | -1845 | 18/45 |
| | | | | 17 | Triangle 10 / M5 | | | | | | | -2045 | 20/45 |
| | | | | 18 | Triangle 10 / M6 | | | | | | | -2245 | 22/45 |
| | | | | 19 | Triangle 10 / SEN | | | | | | | -2445 | 24/45 |
| | | | | 21 | Triangle 10 -radius (ES3) | | | | | | | -2645 | 26/45 |
| | | | | 22 | Double Bit 3 | | | | | | | -2845 | 28/45 |
| | | | | 24 | Double Bit 5 | | | | | | | -3045 | 30/45 |
| | | | | 26 | Slotted | | | | | | | -3245 | 32/45 |
| | | | | 28 | Slotted with arrow | | | | | | | -3445 | 34/45 |
| | | | | 29 | Slotted recessed | | | | | | | -3645 | 36/45 |
| | | | | 31 | Hexagon 8,5 | | | | | | | -3845 | 38/45 |
| | | | | 32 | Hexagon 11 | | | | | | | -4045 | 40/45 |
| | | | | 34 | Recessed hexagon 8 | | | | | | | -4245 | 42/45 |
| | | | | 35 | Recessed hexagon 10 | | | | | | | -4445 | 44/45 |
| | | | | 36 | Recessed hex 8 /3 mm pin | | | | | | | -4645 | 46/45 |
| | | | | 37 | Solid (plug) | | | | | | | -4845 | 48/45 |
| | | | | 39 | Triangle 10 - radius | | | | | | | -5045 | 50/45 |



Material:

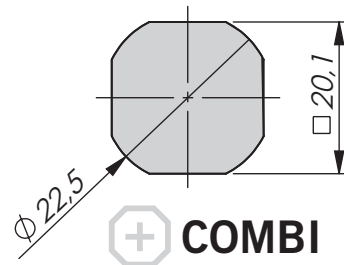
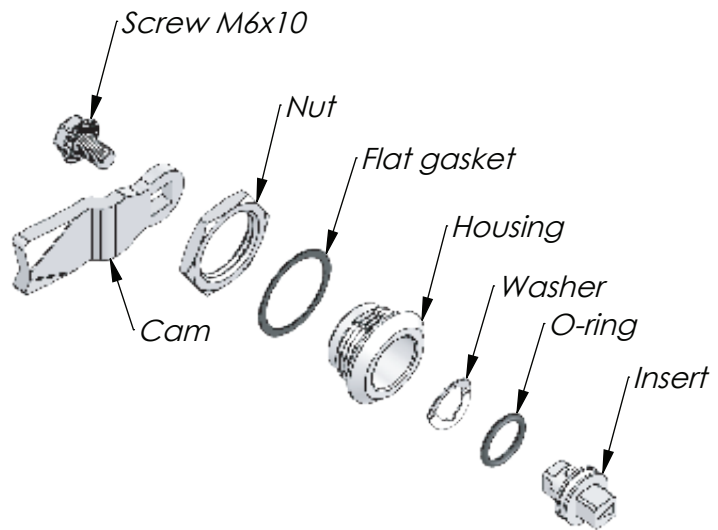
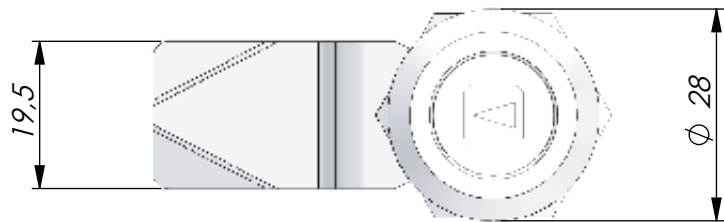
- Housing: Zinc die-cast, chrome plated, black texture powder coated or zinc plated with black PA6 collar.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Cam and screw: Steel, zinc plated.
Washer: Stainless steel (304).

References, Accessories:

- Knobs and handles: Page 2-360.
- Cams: Page 2-481, 2-491, 2-510, 2-520.
- Keys: Page 2-370, 2-372, 2-380.
- Padlock adapter: Page 2-400.
- Anti rotation bracket: Page 2-420.
- Logo plate: Page 2-585.
- Finger pull, Dust cover: Page 2-590.

Notes, Tests:

*=also classed "Waterproof according to NEMA 4".



A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65*, an O-ring is placed on the insert and a flat gasket on the housing. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

How to order.

Example:

- Housing - chrome plated A=28 B=4, standard nut.
- Insert square 8 - chrome plated.
- IP65-assembled.
- cam - zinc plated H=22 mm L= 45 mm.
- = P/N 2402-005250-2245.

To achieve protection degree IP65, an O-ring is placed on the insert and a flat gasket on the housing. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

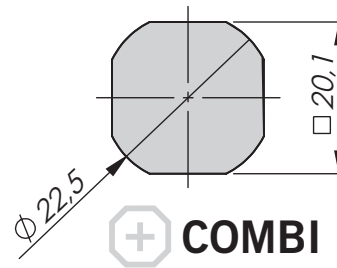
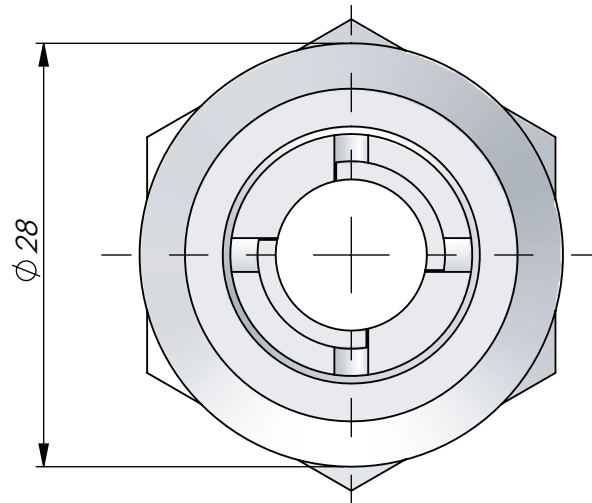
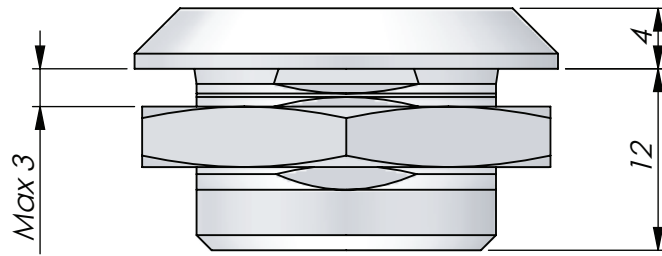
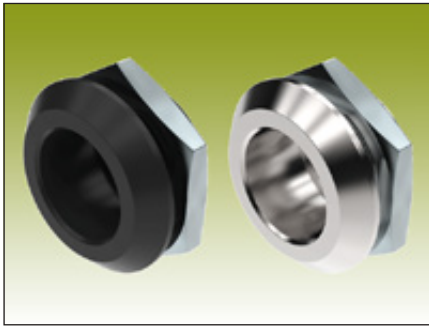
Notes, Tests:

To fulfill DIN EN 61373 the latch can be supplied with screw with mechanical thread lock, see column B in P/N table.

Nuts: SN = Standard nut.
EN = Earthing nut.
TUF = Assembled with TUF-loc screw to achieve DIN EN 61373.

Vibration Resistant Quarter-Turn Latch - 12 mm (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|--------------------------|---|--------|----|---------------------------|---|---------|---|----------------------|---|-------|-------|-----------|
| 2402- | Zinc, chrome plated | 0 | SN | 01 | Square 6 | 2 | Chrome | 0 | IP54 - not assembled | 0 | Steel | -0000 | No cam |
| 2406- | Zinc - black | 1 | EN | 03 | Square 7 | 6 | Black | 1 | IP65 - not assembled | | | -0245 | 2/45 |
| 2430- | Zinc with plastic collar | 2 | SN+TUF | 05 | Square 8 | | | 2 | IP54 - enclosed cam | | | -0445 | 4/45 |
| | | 4 | EN+TUF | 07 | Square 8, slotted | | | 3 | IP65 - enclosed cam | | | -0645 | 6/45 |
| | | | | 08 | Square 8 / M6 | | | 4 | IP54 -assembled | | | -0845 | 8/45 |
| | | | | 11 | Recessed square 8 | | | 5 | IP65 -assembled | | | -1045 | 10/45 |
| | | | | 14 | Triangle 7 | | | 6 | PUR - not assembled | | | -1245 | 12/45 |
| | | | | 15 | Triangle 8 | | | 7 | PUR - enclosed cam | | | -1445 | 14/45 |
| | | | | 16 | Triangle 10 | | | 8 | PUR - assembled | | | -1645 | 16/45 |
| | | | | 17 | Triangle 10 / M5 | | | | | | | -1845 | 18/45 |
| | | | | 18 | Triangle 10 / M6 | | | | | | | -2045 | 20/45 |
| | | | | 19 | Triangle 10 / SEN | | | | | | | -2245 | 22/45 |
| | | | | 21 | Triangle 10 radius (ES3) | | | | | | | -2445 | 24/45 |
| | | | | 22 | Double Bit 3 | | | | | | | -2645 | 26/45 |
| | | | | 24 | Double Bit 5 | | | | | | | -2845 | 28/45 |
| | | | | 26 | Slotted | | | | | | | -3245 | 30/45 |
| | | | | 28 | Slotted - recessed | | | | | | | -3245 | 32/45 |
| | | | | 29 | 3 mm slotted recessed | | | | | | | -3445 | 34/45 |
| | | | | 31 | Hexagon 8,5 | | | | | | | -3645 | 36/45 |
| | | | | 32 | Hexagon 11 | | | | | | | -3845 | 38/45 |
| | | | | 34 | Recessed hexagon 8 | | | | | | | -4045 | 40/45 |
| | | | | 35 | Recessed hexagon 10 | | | | | | | -4245 | 42/45 |
| | | | | 36 | Recessed hex 8 / 3 mm pin | | | | | | | -4445 | 44/45 |
| | | | | 37 | Solid (plug) | | | | | | | | |
| | | | | 39 | Triangle 10 - radius | | | | | | | | |



Material:

- Housing: Zinc die-cast, chrome plated, zinc plated with black PA6-collar or black texture powder coated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.

References, Accessories:

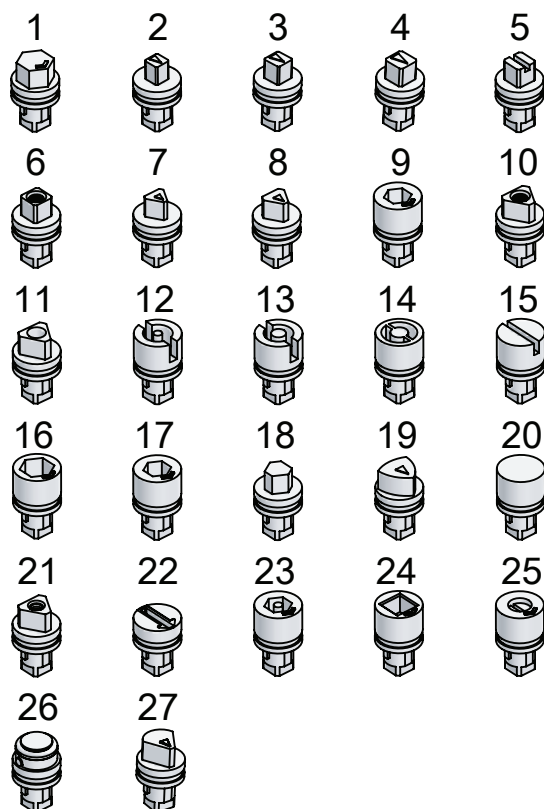
- Inserts: Page 2-042.
- Cams: Page 2-481, 2-491, 2-510 and 2-520.

Vibration-resistant housings with internal limitation of the rotation. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut.

Earthing nut is recommended for all applications where electricity is connected.

Housing for Vibration Resistant Quarter-Turn Latch - 12 mm

| P/N | Description | Material | Surface treatment | Nut |
|-------------|--------------------|----------|-------------------|--------------|
| 211301-12IB | Housing | Zinc | Chrome | Standard |
| 211302-12IB | Housing | Zinc | Chrome | Earthing nut |
| 211601-12IB | Housing | Zinc | Black | Standard |
| 211602-12IB | Housing | Zinc | Black | Earthing nut |
| 219150-12IB | Housing/PA6 collar | Zinc/PA6 | - | Standard |
| 219151-12IB | Housing/PA6 collar | Zinc/PA6 | - | Earthing nut |



Material:

- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Cam and screw: Steel, zinc plated.
- Washer: Stainless steel (304).

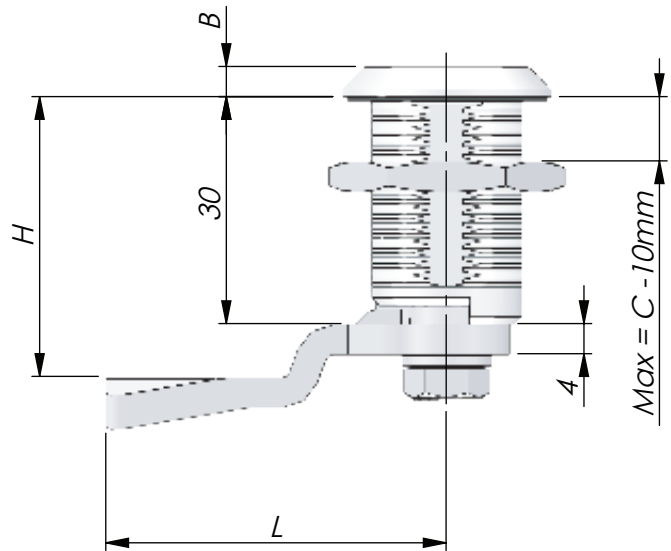
References, Accessories:

- Complete latch assembly: Page 2-040a.
- Housings: Page 2-041.
- Cams: Page 2-481, 2-491, 2-510 and 2-520.

Inserts with chrome plated or black texture powder coated surface. Each insert is supplied with fixing screw and washer.

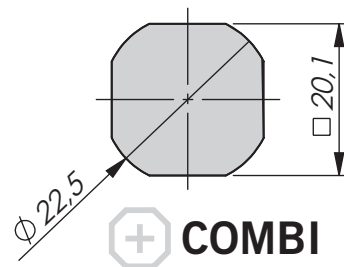
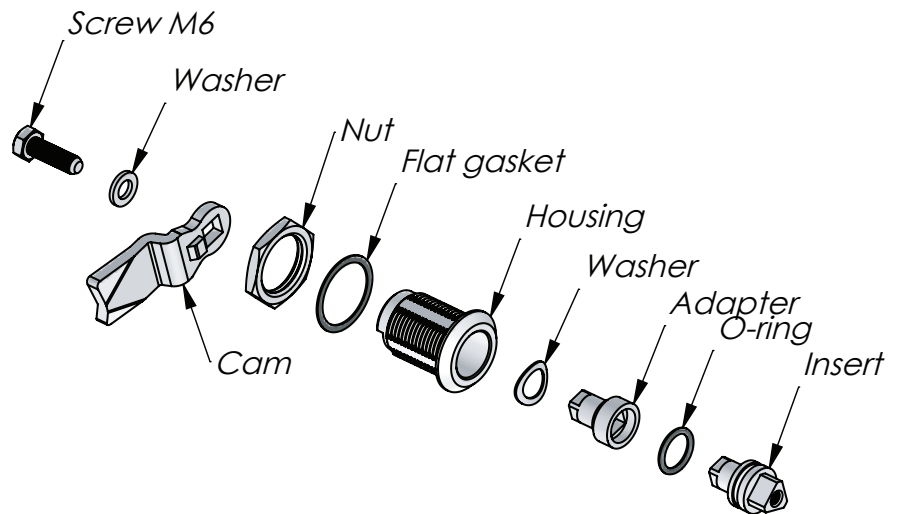
Insert for Vibration Resistant Quarter-Turn Latch - 12 mm

| P/N, chrome | P/N, black | Description | Drawing | P/N, chrome | P/N, black | Description | Drawing |
|-------------|-------------|---------------------|---------|-------------|-------------|---------------------------|---------|
| 221301-12IB | 221601-12IB | Hexagon 11 | 1 | 221318-12IB | 221618-12IB | Daimler Benz | 14 |
| 221307-12IB | 221607-12IB | Square 6 | 2 | 221320-12IB | 221620-12IB | Slotted | 15 |
| 221308-12IB | 221608-12IB | Square 7 | 3 | 221321-12IB | 221621-12IB | Recessed hexagon 10 | 16 |
| 221309-12IB | 221609-12IB | Square 8 | 4 | 221322-12IB | 221622-12IB | Recessed hexagon 8 | 17 |
| 221310-12IB | 221610-12IB | Square 8 / slotted | 5 | 221323-12IB | 221623-12IB | Hexagon 8,5 | 18 |
| 221311-12IB | 221611-12IB | Square 8 / M6 | 6 | 221324-12IB | 221624-12IB | ES 3 | 19 |
| 221312-12IB | 221612-12IB | Triangular 7 | 7 | 221326-12IB | 221626-12IB | Blind plug | 20 |
| 221313-12IB | 221613-12IB | Triangular 8 | 8 | 221328-12IB | 221628-12IB | Triangular 10 / M5 | 21 |
| 221314-12IB | 221614-12IB | Triangular 10 | 9 | 221341-12IB | 221641-12IB | Slotted, recessed | 22 |
| 221315-12IB | 221615-12IB | Triangular 10 / M6 | 10 | 221347-12IB | 221647-12IB | Recessed hex 8 / 3 mm pin | 23 |
| 221319-12IB | 221619-12IB | Triangular 10 / SEN | 11 | 221348-12IB | 221648-12IB | Recessed square 8 | 24 |
| 221316-12IB | 221616-12IB | Double Bit 3 | 12 | 221349-12IB | 221649-12IB | Slotted 3 | 25 |
| 221317-12IB | 221617-12IB | Double Bit 5 | 13 | 221351-12IB | 221651-12IB | Sthlm Energy | 26 |
| | | | | 221339-12IB | 221639-12IB | Triangle 10 - radius | 27 |



Material:

- Housing: Zinc die-cast, chrome plated or black texture powder coated.
- Standard and Earthing nut and adapter: Zinc die-cast, zinc plated.
- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Cam, screw and washer: Steel, zinc plated.



A complete latch consists of housing, nut, insert, washer, screw and cam. Protection degree IP65 is achieved by an O-ring on the insert and a flat gasket on the housing. The latch can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

References, Accessories:

- Housings: Page 2-051.
- Inserts: Page 2-052.
- Knobs and handles: Page 2-360.
- * Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Keys: Page 2-370 and 2-372.

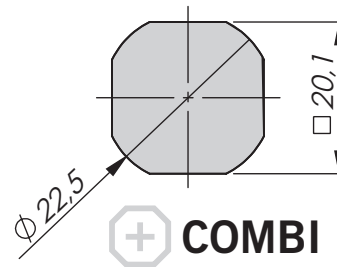
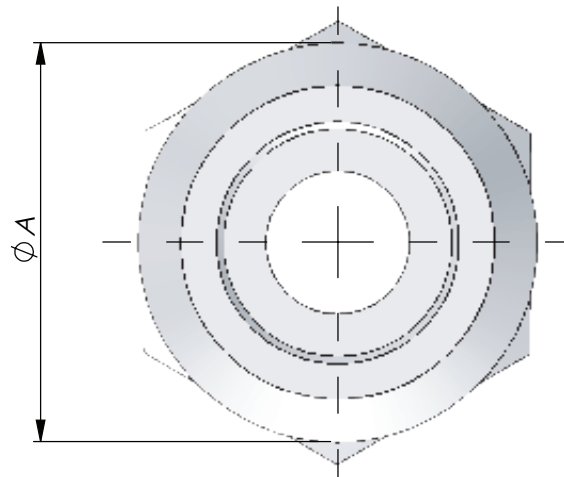
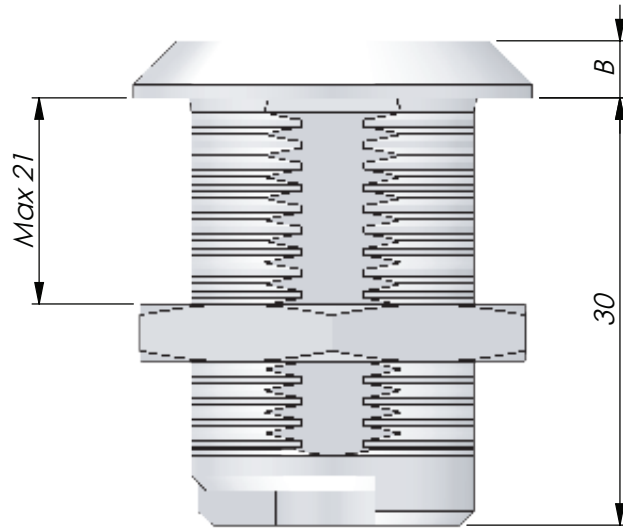
Notes, Tests:

Nuts: SN = Standard nut. EN = Earthing nut.

Example: Housing - chrome plated A=28 B=4, zinc nut, insert square 8 - chrome plated, IP65-assembled, cam - zinc plated H=22 mm L=45 mm = P/N 2362-005250-2245. Protection degree IP65 is achieved by an O-ring on the insert and a gasket on the housing.

Quarter-Turn Latch - 30 mm (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | H in mm |
|-------|------------------------------------|---|-----|----|----------------------------|---|---------|---|----------------------|---|-------|--------|---------------------|
| 2362- | Zinc - chrome plated A=28 B=4 C=30 | 0 | SN | 01 | Square 6 | 2 | Chrome | 0 | IP54 - not assembled | 0 | Steel | -0000 | No cam |
| 2366- | Zinc - black coated A=28 B=4 C=30 | 1 | EN | 03 | Square 7 | 6 | Black | 1 | IP65 - not assembled | | | -HHLL* | See page ref. above |
| 2372- | Zinc, chrome plated A=32 B=6 C=30 | | | 05 | Square 8 | | | 2 | IP54 - enclosed cam | | | | |
| 2376- | Zinc, black coated A=32 B=6 C=30 | | | 07 | Square 8 - slotted | | | 3 | IP65 - enclosed cam | | | | |
| | | | | 08 | Square 8 / M6 | | | 4 | IP54 -assembled | | | | |
| | | | | 11 | Recessed square 8 | | | 5 | IP65 -assembled | | | | |
| | | | | 14 | Triangle 7 | | | | | | | | |
| | | | | 15 | Triangle 8 | | | | | | | | |
| | | | | 16 | Triangle 10 | | | | | | | | |
| | | | | 17 | Triangle 10 / M5 | | | | | | | | |
| | | | | 18 | Triangle 10 / M6 | | | | | | | | |
| | | | | 19 | Triangle 10 / SEN | | | | | | | | |
| | | | | 21 | Triangle 10 - radius (ES3) | | | | | | | | |
| | | | | 22 | Double Bit 3 | | | | | | | | |
| | | | | 24 | Double Bit 5 | | | | | | | | |
| | | | | 26 | Slotted | | | | | | | | |
| | | | | 28 | Slotted recessed | | | | | | | | |
| | | | | 29 | 3 mm slotted recessed | | | | | | | | |
| | | | | 31 | Hexagon 8,5 | | | | | | | | |
| | | | | 32 | Hexagon 11 | | | | | | | | |
| | | | | 34 | Recessed hexagon 8 | | | | | | | | |
| | | | | 35 | Recessed hexagon 10 | | | | | | | | |
| | | | | 36 | Recessed hex 8 / 3 mm pin | | | | | | | | |
| | | | | 37 | Solid (plug) | | | | | | | | |
| | | | | 39 | Triangle 10 - radius | | | | | | | | |



Material:

- Housing: Zinc die-cast, chrome plated or black texture powder coated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.

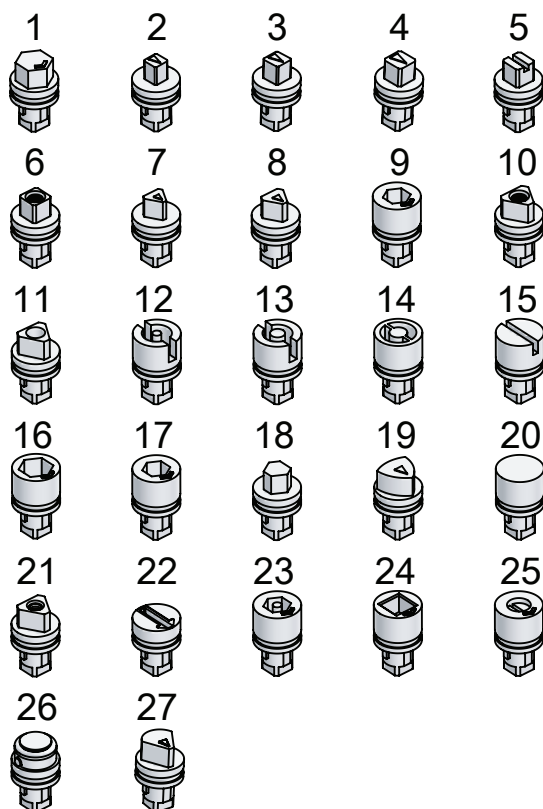
References, Accessories:

- Complete lock assembly: Page 2-050a.
- Inserts: Page 2-052.
- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Stainless version: Page 6-120.

Housing with external limitation of the rotation. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Earthing nut is recommended for all applications where electricity is connected.

Housing for Quarter-Turn Latch - 30 mm

| P/N | Description | Material | Surface treatment | Nut | A | B |
|--------|-------------|----------|-------------------|--------------|----|---|
| 211320 | Housing | Zinc | Chrome | Standard | 28 | 4 |
| 211321 | Housing | Zinc | Chrome | Earthing nut | 28 | 4 |
| 211322 | Housing | Zinc | Chrome | Standard | 32 | 6 |
| 211323 | Housing | Zinc | Chrome | Earthing nut | 32 | 6 |
| 211620 | Housing | Zinc | Black | Standard | 28 | 4 |
| 211621 | Housing | Zinc | Black | Earthing nut | 28 | 4 |
| 211622 | Housing | Zinc | Black | Standard | 32 | 6 |
| 211623 | Housing | Zinc | Black | Earthing nut | 32 | 6 |



Material:

- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Adapter: Zinc die-cast, zinc plated.
- Screw and washer: Steel, zinc plated.

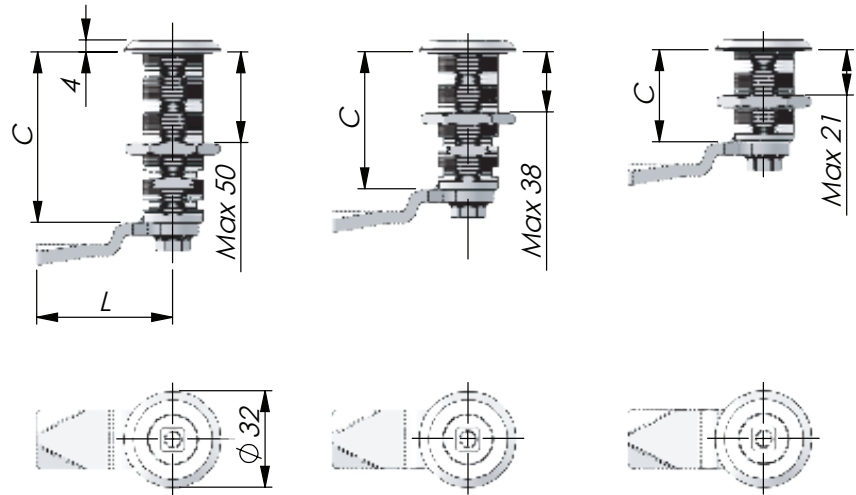
References, Accessories:

- Complete latch assembly: Page 2-050a.
- Housings: Page 2-051.
- Cams: Page 2-480, 2-490, 2-510 and 2-520.

Inserts with chrome plated surface or black texture powder coated surface. Supplied with screw and washer. Adapter (see table) to be ordered separately.

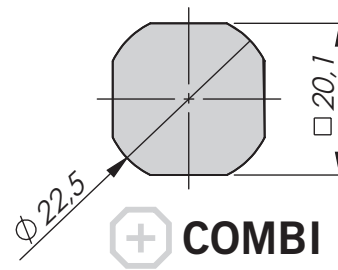
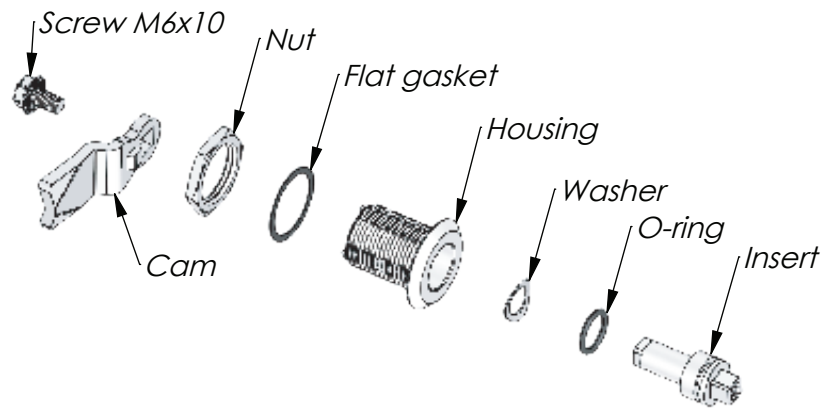
Insert for Quarter-Turn Latch - 30 mm

| P/N, chrome | P/N, black | Description | Drawing | P/N, chrome | P/N, black | Description | Drawing |
|-------------|------------|---------------------|---------|-------------|------------|---------------------------|---------|
| 221301 | 221601 | Hexagon 11 | 1 | 221320 | 221620 | Slotted | 15 |
| 221307 | 221607 | Square 6 | 2 | 221321 | 221621 | Recess hexagon 10 | 16 |
| 221308 | 221608 | Square 7 | 3 | 221322 | 221622 | Recess hexagon 8 | 17 |
| 221309 | 221609 | Square 8 | 4 | 221323 | 221623 | Hexagon 8,5 | 18 |
| 221310 | 221610 | Square 8 / slotted | 5 | 221324 | 221624 | ES 3 | 19 |
| 221311 | 221611 | Square 8 / M6 | 6 | 221326 | 221626 | Blind plug | 20 |
| 221312 | 221612 | Triangular 7 | 7 | 221328 | 221628 | Triangular 10 / M5 | 21 |
| 221313 | 221613 | Triangular 8 | 8 | 221341 | 221641 | Slotted, recessed | 22 |
| 221314 | 221614 | Triangular 10 | 9 | 221347 | 221647 | Recessed hex 8 / 3 mm pin | 23 |
| 221315 | 221615 | Triangular 10 / M6 | 10 | 221348 | 221648 | Recessed square 8 | 24 |
| 221319 | 221619 | Triangular 10 / SEN | 11 | 221349 | 221649 | Slotted 3 | 25 |
| 221316 | 221616 | Double Bit 3 | 12 | 221351 | 221651 | Sthlm Energy | 26 |
| 221317 | 221617 | Double Bit 5 | 13 | 221339 | 221639 | Triangle 10 - radius | 27 |
| 221318 | 221618 | Daimler Benz | 14 | 271103 | | Adapter | - |



Material:

- Insert and housing: Zinc die-cast, chrome plated or black texture powder coated.
- Washer, spring clip and screw: Steel, zinc plated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.



A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65, an O-ring is placed on the insert and a flat gasket on the housing. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

References, Accessories:

- Stainless version: Page 6-120.
- Spacer nut: Page 2-410.
- Keys: Page 2-370 and 2-372.
- Knobs and handles: Page 2-360.
- * Cams: Page 2-480, 2-490, 2-510 and 2-520.

Notes, Tests:

Other inserts on request.

Quarter-turn latch with longer housing for insulated hatches and doors. Housing 45,5 mm can be mounted with a spring clip for door thickness 29, 32 or 39 mm. Housing 56,5 can be mounted with a spring clip for door thickness 40, 43 and 50 mm. Fork spring clip option to be ordered separately (P/N: 271105).

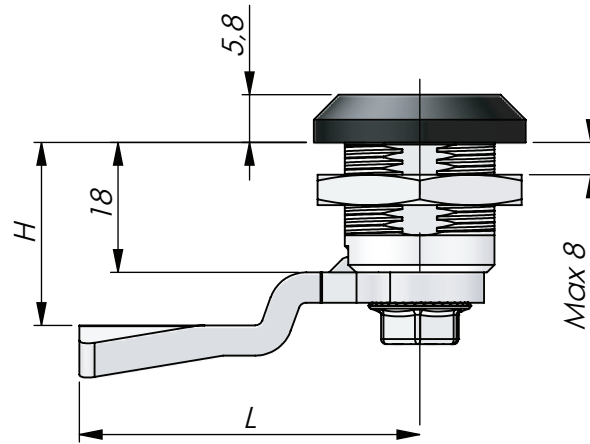
SN= Standard nut.

EN= Earthing nut.

Quarter-Turn Latch for Insulated Doors 30 - 56 mm (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | Hin mm |
|-------|---------------------------------|---|-----|----|--------------------|---|---------|---|----------------------|---|-------|--------|---------------------|
| 2102- | Zinc - chrome plated. C=30,5 mm | 0 | SN | 05 | Square 8 | 2 | Chrome | 0 | IP54 - not assembled | 0 | Steel | -0000 | -- |
| 2106- | Zinc - black coated. C=30,5 mm | 1 | EN | 08 | Square 8 / M6 | 6 | Black | 1 | IP65 - not assembled | | | -HHLL* | See page ref. above |
| 2112- | Zinc - chrome plated. C=45,5 mm | | | 15 | Triangle 8 | | | 2 | IP54 -enclosed cam | | | | |
| 2116- | Zinc - black coated. C=45,5 mm | | | 22 | Double Bit 3 | | | 3 | IP65 -enclosed cam | | | | |
| 2122- | Zinc - chrome plated. C=56,5 mm | | | 26 | Slotted | | | | | | | | |
| 2126- | Zinc - black coated. C=56,5 mm | | | 28 | Slotted with arrow | | | | | | | | |





Material:

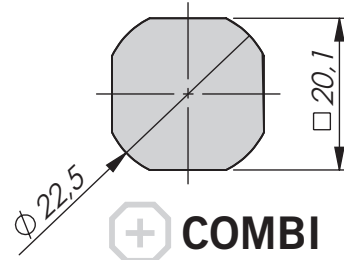
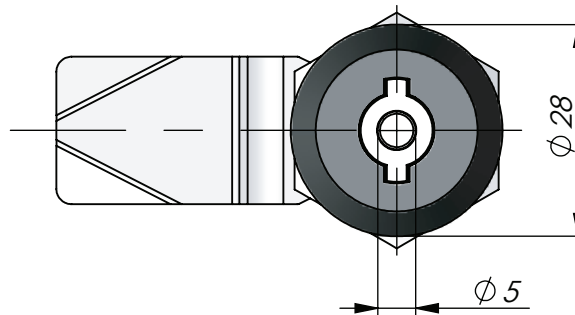
- Housing: Zinc die-cast with black PA6 collar.
- Insert and key: Zinc die-cast, chrome plated.
- Stop bracket: Zinc die-cast, nickel plated.
- Screw and spring: Steel, zinc plated.
- Nut: Zinc die-cast, zinc plated.

References, Accessories:

- Keys: Page 2-370 and 2-372.

Notes, Tests:

Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 271563-13**16**45 is a vibration proof latch with insert Triangle 8 with a cam having a H-measurement of **16** mm and a standard length of 45 mm. Latch is supplied with screw with mechanical thread lock.

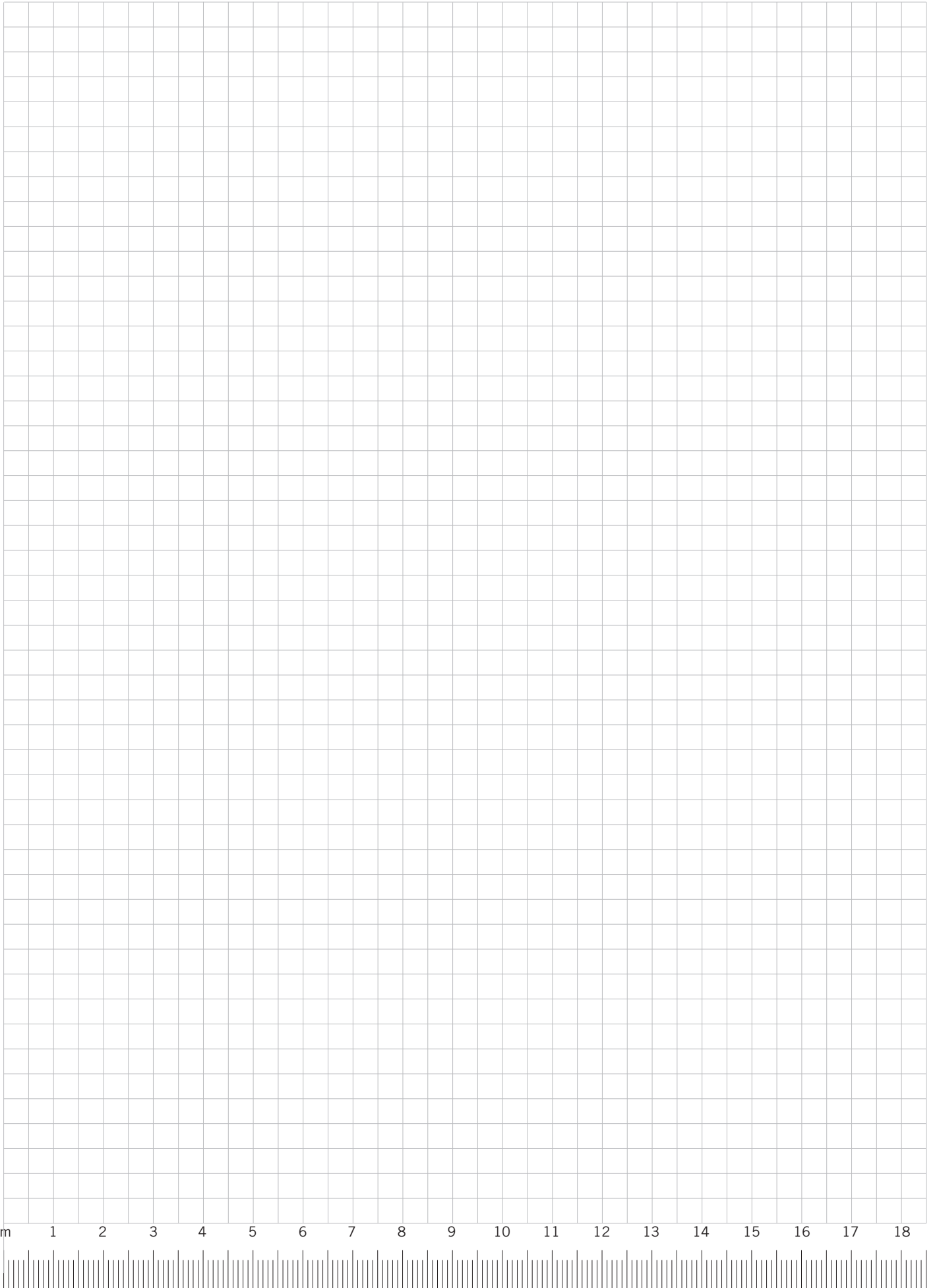


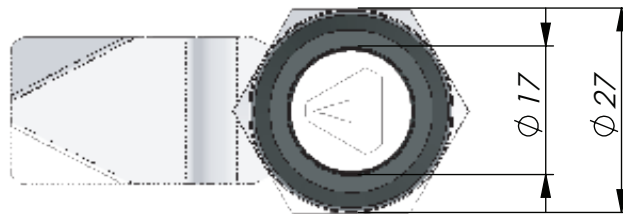
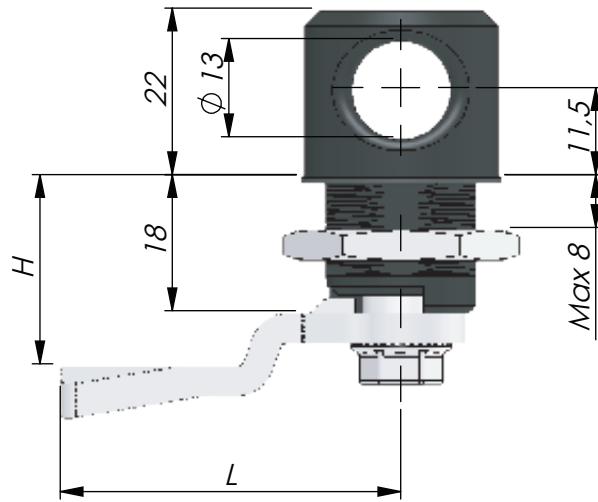
Vibration proof quarter-turn latch achieved by a spring loaded stop bracket that prevents the cam from moving, if not pushed in by the key. Using a double bit insert, the key is captured when turned to the open position, giving the key the function of a handle to operate the door.

The latch "Double Bit 5" is shown in the drawing.

Vibration Proof Quarter-Turn Latch - 18 mm (AAAAAA-A-HHLL)

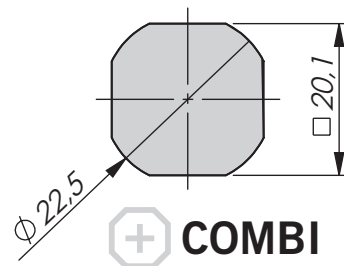
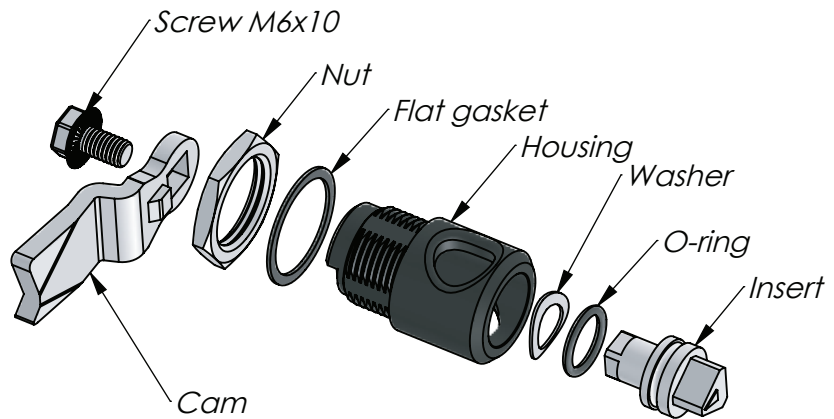
| AAAAAA-A | Description - insert | Cam rotation | -HHLL | Cam size in mm |
|-----------|-----------------------------|---------------------------|-------|--|
| 271161-H | Double Bit 3 | Right hinged door | -0000 | No cam |
| 271161-V | Double Bit 3 | Left hinged door | -HH45 | See cam ref. above. |
| 271162-H | Double Bit 5 | Right hinged door | | H between 4 and 50 mm in increments of 2 mm. |
| 271162-V | Double Bit 5 | Left hinged door | | |
| 271563-13 | Triangle 8 | Left or right hinged door | | |
| 291105-VP | Key for insert "Triangle 8" | - | | |





Material:

- Housing: Zinc die-cast, chrome plated or black texture powder coated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Insert: Zinc die-cast, chrome plated or black texture powder coated.
- Cam, washer and screw: Steel, zinc plated.



A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65*, an O-ring is placed on the insert and a flat gasket on the housing. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.
 *=also classed as "Waterproof according to NEMA 4".

References, Accessories:

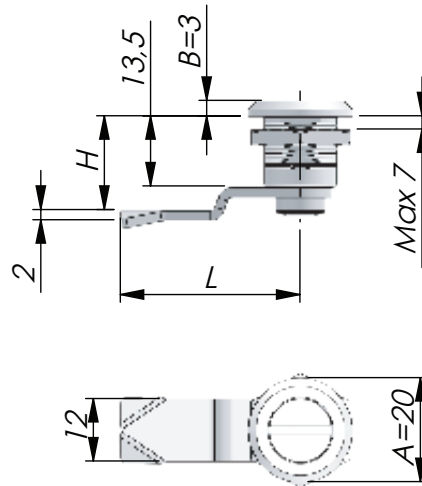
- Keys: Page 2-370.
- Cams: Page 2-480 and 2-490.

Quarter-turn latch with integrated padlock facility. When a padlock is placed in the loop, the insert is blocked from access.
 SN= Standard nut. EN= Earthing nut.

Padlockable Quarter-Turn Latch - 18 mm (AAAA-BCCDEF-GGGG)

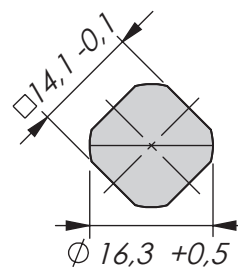
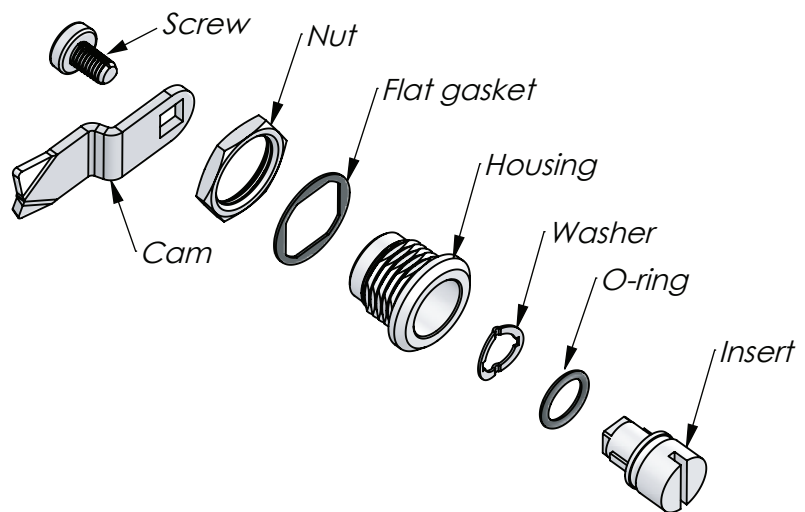
| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|----------------------------|---|-----|----|----------------------------|---|---------|---|----------------------|---|-------|-------|-----------|
| 2222- | Zinc - chrome plated. | 0 | SN | 01 | Square 6 | 2 | Chrome | 0 | IP54 - not assembled | 0 | Steel | -0000 | No cam |
| 2226- | Zinc - black powder coated | 1 | EN | 03 | Square 7 | 6 | Black | 1 | IP65 - not assembled | | | -0445 | 4/45 |
| | | | | 05 | Square 8 | | | 2 | IP54 - enclosed cam | | | -0645 | 6/45 |
| | | | | 07 | Square 8 - slotted | | | 3 | IP65 - enclosed cam | | | -0845 | 8/45 |
| | | | | 08 | Square 8 / M6 | | | 4 | IP54 -assembled | | | -1045 | 10/45 |
| | | | | 11 | Square 8 - recessed | | | 5 | IP65 -assembled | | | -1245 | 12/45 |
| | | | | 14 | Triangle 7 | | | | | | | -1445 | 14/45 |
| | | | | 15 | Triangle 8 | | | | | | | -1645 | 16/45 |
| | | | | 16 | Triangle 10 | | | | | | | -1845 | 18/45 |
| | | | | 17 | Triangle 10 / M5 | | | | | | | -2045 | 20/45 |
| | | | | 18 | Triangle 10 / M6 | | | | | | | -2245 | 22/45 |
| | | | | 19 | Triangle 10 / SEN | | | | | | | -2445 | 24/45 |
| | | | | 21 | Triangle 10 - radius (ES3) | | | | | | | -2645 | 26/45 |
| | | | | 22 | Double Bit 3 | | | | | | | -2845 | 28/45 |
| | | | | 24 | Double Bit 5 | | | | | | | -3045 | 30/45 |
| | | | | 26 | Slotted | | | | | | | -3245 | 32/45 |
| | | | | 28 | Slotted with arrow | | | | | | | -3445 | 34/45 |
| | | | | 29 | Slotted recessed | | | | | | | -3645 | 36/45 |
| | | | | 31 | Hexagon 8,5 | | | | | | | -3845 | 38/45 |
| | | | | 32 | Hexagon 11 | | | | | | | -4045 | 40/45 |
| | | | | 34 | Recessed hexagon 8 | | | | | | | -4245 | 42/45 |
| | | | | 35 | Recessed hexagon 10 | | | | | | | -4445 | 44/45 |
| | | | | 36 | Recessed hex 8 / 3 mm pin | | | | | | | -4645 | 46/45 |
| | | | | 37 | Solid (plug) | | | | | | | -4845 | 48/45 |
| | | | | 39 | Triangle 10 - radius | | | | | | | -5045 | 50/45 |





Material:

- Housing and insert: Zinc die-cast, chrome plated or black texture powder coated.
- Standard nut: Brass, zinc plated.
- Cam and screw: Steel, zinc plated.
Washer: Stainless steel (304).



A complete latch consists of housing, nut, insert, washer, screw and cam. Protection degree IP65 is achieved by an O-ring on the insert and a flat gasket on the housing. The latch can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

References, Accessories:

- Stainless version on page 6-130a and 6-130b.
- Knobs and handles: Page 2-111.
- Keys: Page 2-370 and 2-372.

Notes, Tests:

To fulfill DIN EN 61373 the latch can be supplied with screw with mechanical thread lock, see column B in P/N table.

SN = Standard nut.

TUF = Assembled with TUF-loc screw to achieve DIN EN 61373.

Example: Housing - chrome plated A=20 B=3, brass nut, insert - square 6 - chrome plated, IP65-assembled, cam - zinc plated H=16,5 mm L=27 mm = P/N 2452-001250-1627.

Protection degree IP65 is achieved with an O-ring on the insert and a gasket on the housing.

Vibration-Resistant Compact Quarter-Turn Latch - 13,5 mm (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|---------------------------|---|--------|----|--------------------|---|---------|---|----------------------|---|-------|-------|-----------|
| 2452- | Zinc - chrome A=20 B=3 | 0 | SN | 01 | Square 6 | 2 | Chrome | 0 | IP54 - not assembled | 0 | Steel | -0000 | No cam |
| 2456- | Zinc - black A=20 B=3 | 2 | SN+TUF | 02 | Square 6 / M3 | 6 | Black | 1 | IP65 not assembled | | | -0724 | 7,5/24 |
| | | | | 13 | Triangle 6,5 | | | 2 | IP54 cam enclosed | | | -0727 | 7,5/27 |
| | | | | 26 | Slotted | | | 3 | IP65 - cam enclosed | | | -0730 | 7,5/30 |
| | | | | 33 | Recessed Hexagon 6 | | | 4 | IP54 assembled | | | -0934 | 9/34 |
| | | | | | | | | 5 | IP65 assembled | | | -1027 | 10,5/27 |
| | | | | | | | | | | | | -1324 | 13,5/24 |
| | | | | | | | | | | | | -1327 | 13,5/27 |
| | | | | | | | | | | | | -1627 | 16,5/27 |
| | | | | | | | | | | | | -1834 | 18/34 |
| | | | | | | | | | | | | -1924 | 19,5/24 |
| | | | | | | | | | | | | -1927 | 19,5/27 |
| | | | | | | | | | | | | -2824 | 28/24 |

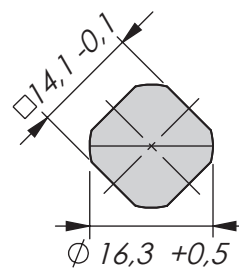
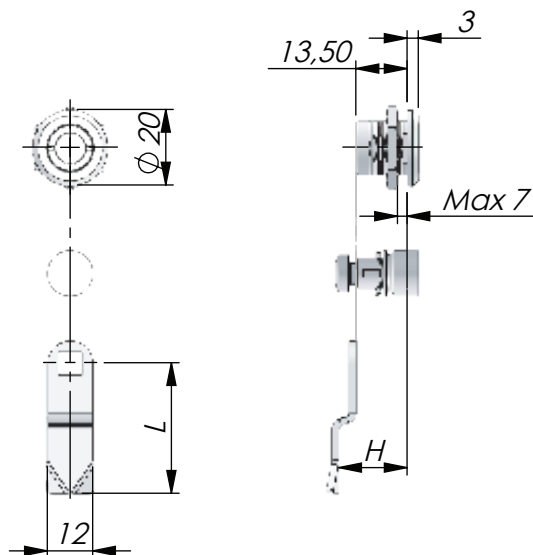


Material:

- Housing and insert: Zinc die-cast, chrome plated or black texture powder coated.
- Nut: Brass, zinc plated.
- Cam and screw: Steel, zinc plated.
- Knob: Glass fibre reinforced Polyamide (PA6GF30), black.
- Washer: Stainless steel (304).

Notes, Tests:

* Note: Insert marked * is not protected to IP65.



Components for vibration-resistant compact quarter-turn latch with internal limitation of the rotation. Universal clockwise or counter-clockwise rotation when opening / closing. Protection degree IP65 is achieved by an O-ring on the insert and a flat gasket on the housing.

Housing

| P/N Chrome | P/N Black |
|------------|-----------|
| 211376 | 211676 |

Cams

| P/N | H/L in mm |
|--------|----------------------|
| 232155 | 7.5 / 24 |
| 232156 | 7.5 / 27 |
| 232157 | 7.5 / 30 |
| 232158 | 9 / 34 |
| 232159 | 10.5 / 27 |
| 232160 | 13.5 / 24 (straight) |
| 232161 | 13.5 / 27 (straight) |
| 232162 | 16.5 / 27 |
| 232163 | 18 / 34 |
| 232164 | 19.5 / 24 |
| 232165 | 19.5 / 27 |
| 232166 | 28 / 24 |

Inserts

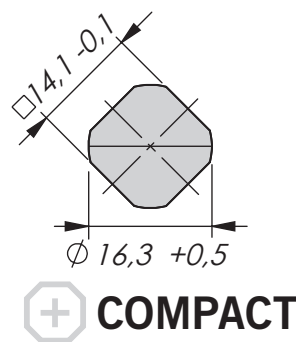
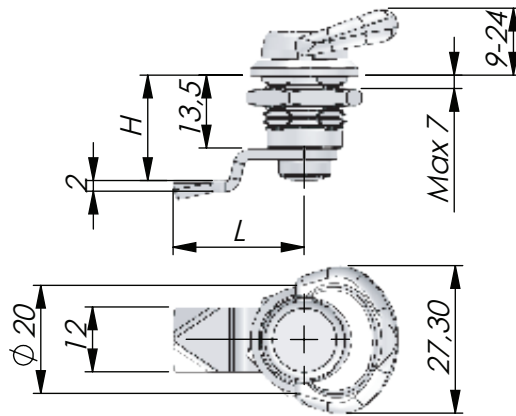
| P/N Chrome | P/N Black | Description |
|------------|-----------|--------------------|
| 221378 | 221678 | Square 6 |
| 221379 | 221679 | Triangle 6,5 |
| 221380 | 221680 | Slotted |
| 221381* | 221681* | Square 6 / M3 |
| 221383 | 221683 | Recessed hexagon 6 |

Accessories

| P/N | Description |
|--------|-----------------------------|
| 297003 | O-Ring |
| 297004 | Gasket |
| 295011 | Knob for insert square 6/M3 |

Vibration Resistant Compact Quarter-Turn Latch - Foldable Wing Knob - 13,5 mm

Latching



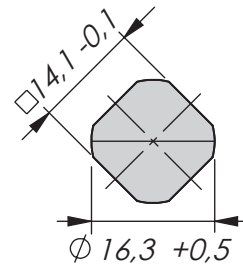
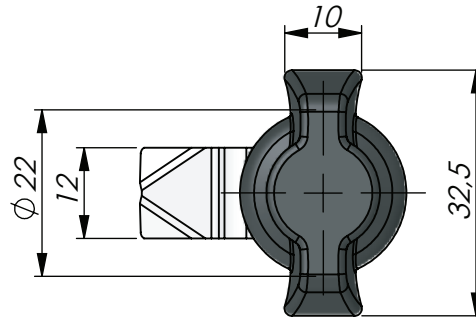
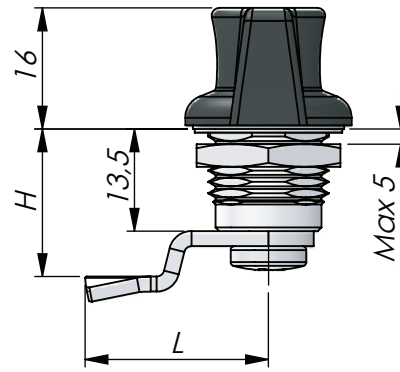
Material:

- Housing and wing knob: Zinc die-cast, chrome plated or black texture powder coated.
- Nut: Brass, zinc plated.
- Cam and screw: Steel, zinc plated.
- Washer: Stainless steel (304).

Vibration resistant compact quarter-turn latch with foldable wing knob. Universal clockwise or counter-clockwise rotation when opening / closing.
 Example: Latch with wing knob - chrome plated, IP65-assembled, cam - steel, zinc plated H=16,5 mm L=27 mm = P/N 2452-044250-1627.
 Protection degree IP65 is achieved with an O-ring on the insert and a gasket on the housing.
 * Straight cam.

Vibration Resistant Compact Quarter-Turn Latch - Foldable Wing Knob - 13,5 mm (AAAA-AAAABC-DDDD)

| AAAA-AAAA | Description | B | Assembly | C | Cam | DDDD | H/L in mm |
|-----------|-------------|---|-----------------------|---|-------|-------|-------------|
| 2452-0442 | Chrome | 0 | IP 54 - not assembled | 0 | Steel | -0000 | No cam |
| 2456-0446 | Black | 1 | IP 65 - not assembled | | | -0724 | 7,5 / 24 |
| | | 2 | IP 54 - cam enclosed | | | -0727 | 7,5 / 27 |
| | | 3 | IP 65 - cam enclosed | | | -0730 | 7,5 / 30 |
| | | 4 | IP 54 - assembled | | | -0934 | 9 / 34 |
| | | 5 | IP 65 - assembled | | | -1027 | 10,5 / 27 |
| | | | | | | -1324 | 13,5 / 24 * |
| | | | | | | -1327 | 13,5 / 27 * |
| | | | | | | -1627 | 16,5 / 27 |
| | | | | | | -1834 | 18 / 34 |
| | | | | | | -1924 | 19,5 / 24 |
| | | | | | | -1927 | 19,5 / 27 |
| | | | | | | -2824 | 28 / 24 |



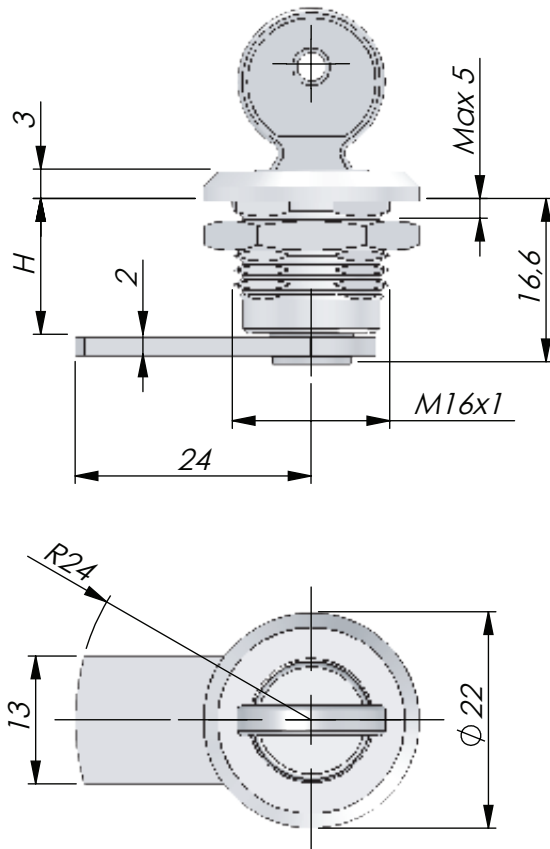
Material:

- Wing knob: Zinc die-cast, black texture powder coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Cam, screw and washer: Steel, zinc plated.
- Nut: Brass, zinc plated.

Compact vibration resistant wing knob quarter-turn latch with internal limitation of the rotation. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with or without locking cylinder. Ergonomic design enables firm grip when pulled. Supplied with two keys. Key extraction: Open/closed.

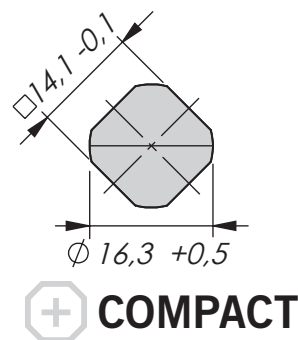
Complete Wing Knob Latch - 13,5 mm (AAAAAA-AA-HHLL)

| AAAAAA-AA | Description | -HHLL | Cam size in mm |
|-----------|-------------------|-------|----------------------|
| 241576-00 | Non-locking | -0000 | No cam |
| 241576-01 | Keyed alike 2233X | -0724 | 7,5 / 24 |
| | | -0727 | 7,5 / 27 |
| | | -0730 | 7,5 / 30 |
| | | -0934 | 9 / 34 |
| | | -1027 | 10,5 / 27 |
| | | -1324 | 13,5 / 24 (Straight) |
| | | -1327 | 13,5 / 27 (Straight) |
| | | -1627 | 16,5 / 27 |
| | | -1834 | 18 / 34 |
| | | -1924 | 19,5 / 24 |
| | | -1927 | 19,5 / 27 |
| | | -2824 | 28 / 24 |



Material:

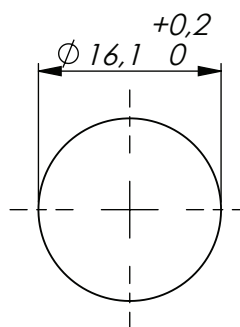
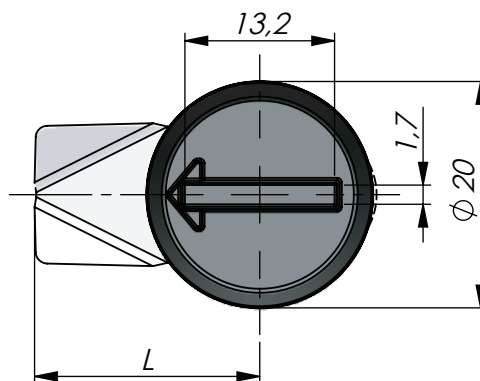
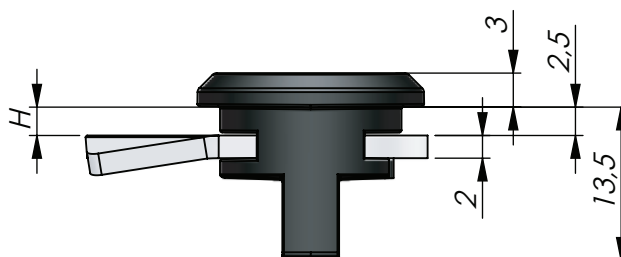
- Housing: Zinc die-cast, chrome plated.
Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Cam: Steel, zinc plated.
- Nut: Brass, zinc plated.



Compact cylinder lock with 90° rotation. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with two keys and cam.
Key extraction: Open/closed.

Compact Quarter-Turn Cylinder Lock - 13,5 mm

| P/N | Cylinder | H in mm |
|-----------|-------------------|---------|
| 241375-01 | Keyed alike 2233X | 13,5 |
| 241375-02 | Keyed alike 2233X | 7,5 |
| 241375-03 | Keyed alike 2233X | 19,5 |



Material:

- Snap latch: Glass fibre reinforced polyamide (PA6GF30) black.
- Cams: Steel, zinc plated.

Notes, Tests:

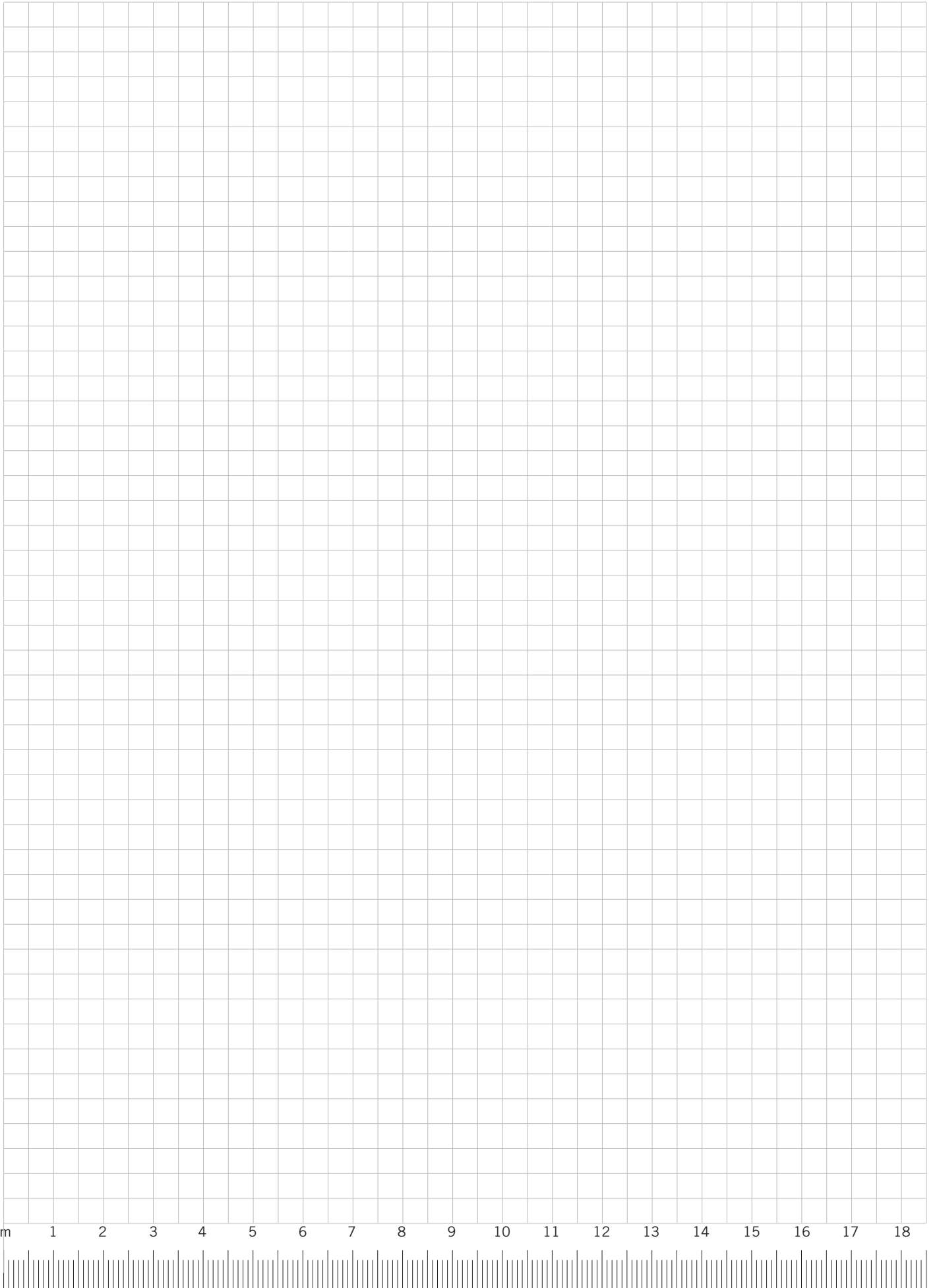
Cam marked with (*) are made from stainless steel (304).

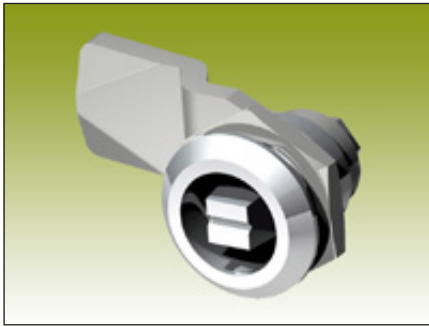
Latch for quick snap-in mounting in small doors and panels with a thickness of 2,5 mm. Moulded in one piece with a slotted front allowing you to open the latch with a regular flat-headed screwdriver. The inside of the latch is equipped with a small grip for manual opening of the latch. A cam is simply snapped into position providing a very quick-assembled latch.

Use with cams from the table below only. Special cams made on request.

Latch and Cams

| P/N | Description | |
|-------------------------------|----------------|----|
| Snap latch, slotted 245001 | For cams below | |
| Cams | H= | L= |
| 232160 | 2,5 | 24 |
| 232161 | 2,5 | 27 |
| 23210030 | 4,0 | 27 |
| 232163 | 7,0 | 34 |
| 232162-33 | 5,5 | 33 |
| 233062-33 * | 5,5 | 33 |



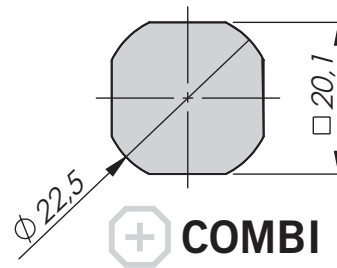
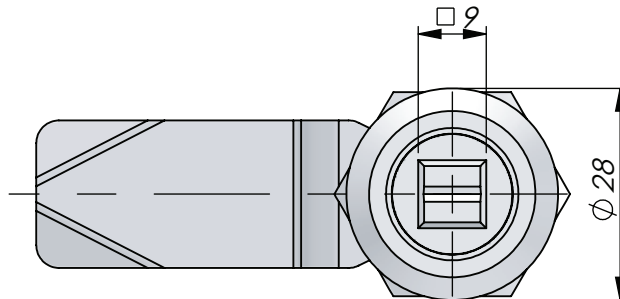
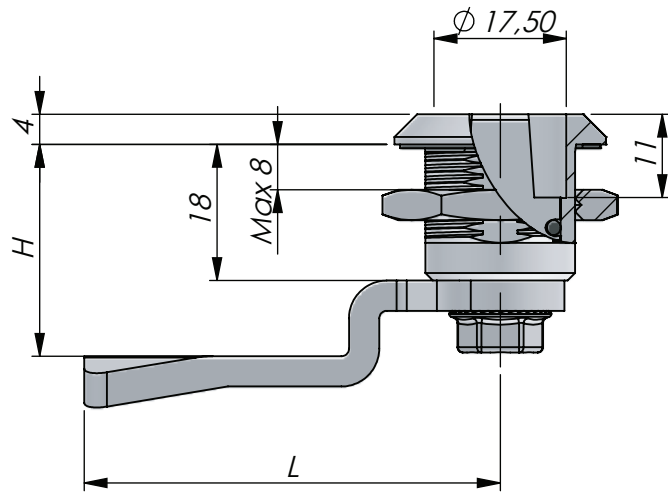


Material:

- Housing and insert: Zinc die-cast, chrome plated or black texture powder coated.
- Nut: Zinc die-cast, zinc plated.
- Cam: Steel, zinc plated.

References, Accessories:

- Cams: Page 2-481 and 2-491.



Vibration-resistant quarter-turn latch for use with railway applications with insert DB standard. The fastener is vibration-resistant to prevent unintentional opening. Universal clockwise or counter-clockwise rotation when opening / closing.

Protection degree IP65* is achieved by an O-ring on the insert and a flat gasket on the housing.

*=also classed "Waterproof according to NEMA 4".

Notes, Tests:

Nuts:
SN = Standard nut.
EN = Earthing nut.

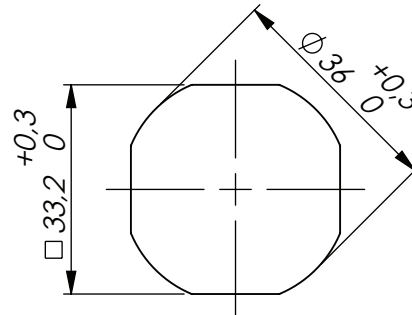
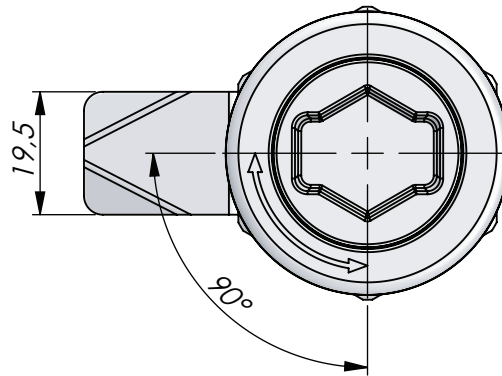
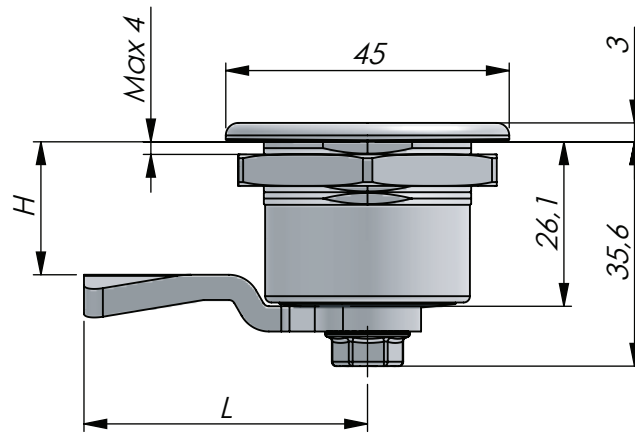
TUF = Assembled with TUF-loc to achieve DIN EN 61373.

Example: Housing - chrome plated A=28 B=4, zinc nut, insert Deutsche Bahn - chrome plated, IP65-assembled, cam H=22 mm L= 45 mm = P/N 2412-230250-2245.

Protection degree IP65 is achieved by an O-ring on the insert and a flat gasket on the housing.

Vibration Resistant Quarter-Turn Latch - 18 mm (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B Nut | CC Insert | D Surface | E Assembly | F Cam | -GGGG | H/L in mm |
|-------|-----------------------------------|----------|--------------------------|-----------|------------------------|---------|-------|-----------|
| 2412- | Zinc - chrome plated A=28, B=4 | 2 SN+TUF | 30 DB (Deutsche Bahn) | 2 Chrome | 0 IP54 - not assembled | 0 Steel | -0000 | No cam |
| 2416- | Zinc - black A=28, B=4 | 4 EN+TUF | | 6 Black | 1 IP65 - not assembled | | -0445 | 4/45 |
| | | | | | 2 IP54 - enclosed cam | | -0645 | 6/45 |
| | | | | | 3 IP65 - enclosed cam | | -0845 | 8/45 |
| | | | | | 4 IP54 - assembled | | -1045 | 10/45 |
| | | | | | 5 IP65 - assembled | | -1245 | 12/45 |
| | | | | | 6 PUR - not assembled | | -1445 | 14/45 |
| | | | | | 7 PUR - enclosed cam | | -1645 | 16/45 |
| | | | | | 8 PUR - assembled | | -1845 | 18/45 |
| | | | | | | | -2045 | 20/45 |
| | | | | | | | -2245 | 22/45 |
| | | | | | | | -2445 | 24/45 |
| | | | | | | | -2645 | 26/45 |
| | | | | | | | -2845 | 28/45 |
| | | | | | | | -3045 | 30/45 |
| | | | | | | | -3245 | 32/45 |
| | | | | | | | -3445 | 34/45 |
| | | | | | | | -3645 | 36/45 |
| | | | | | | | -3845 | 38/45 |
| | | | | | | | -4045 | 40/45 |
| | | | | | | | -4245 | 42/45 |
| | | | | | | | -4445 | 44/45 |
| | | | | | | | -4645 | 46/45 |
| | | | | | | | -4845 | 48/45 |
| | | | | | | | -5045 | 50/45 |



Material:

- Housing and insert: Die-cast zinc, chrome plated.
- Nut and cam: Steel, zinc plated.
- Spring washer: Spring steel, black.

References, Accessories:

- For cams described in table, see choices on page 2-481 and 2-491.

Notes, Tests:

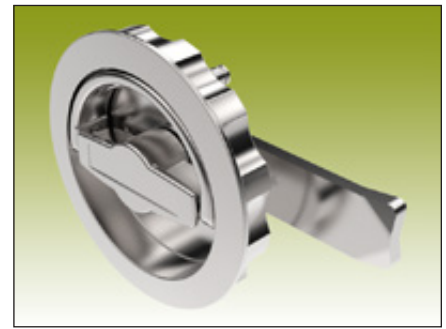
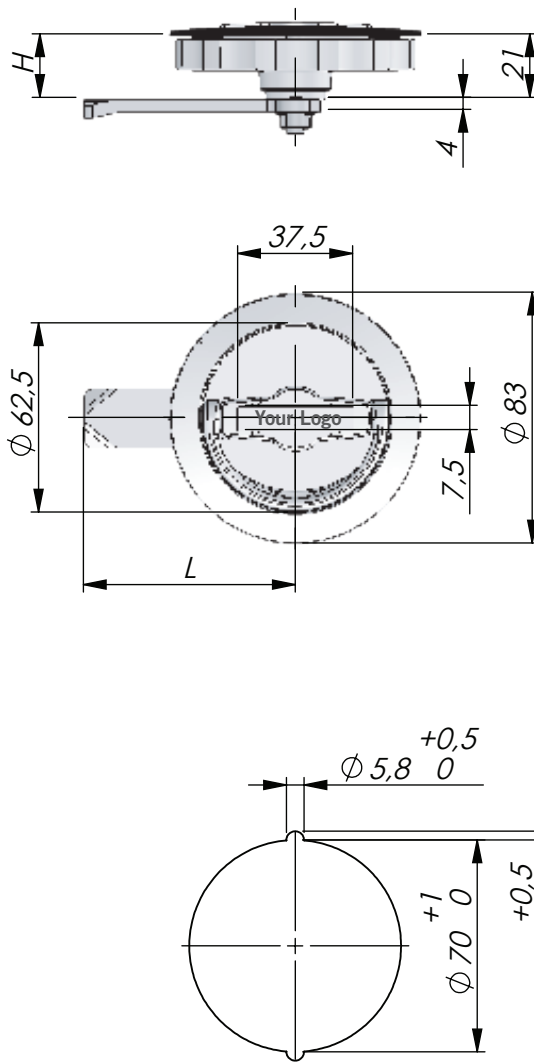
Other cams on request.

The -HHLL in the part number below describes the measurements of the cam.

Sturdy quarter-turn for equipment and appliances used by fire brigades but secured in normal buildings. The special fire brigade hatchet according to DIN 14924 and the special fire hydrant key A or B according to DIN 3223 can be used to operate these latches. Housing mounted with nut (supplied). Fits door thickness 0-4 mm.

Quarter-Turn Latch According to DIN 14925 - For Fire Brigades etc.

| P/N | Description |
|-----------------|---|
| 2413061-01-HHLL | Quarter-turn according to DIN 14925, for single-point latching. |
| 2413063-01-HHLL | Quarter-turn according to DIN 14925, for three-point latching. |



Material:

- Dish, D-ring and nut/ring: Die-cast zinc, chrome plated.
- Cam: Steel, Zinc plated.

Notes, Tests:

Other cams on request.

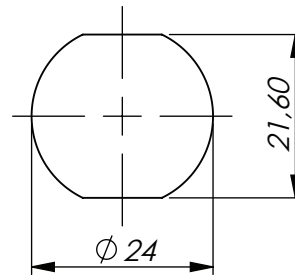
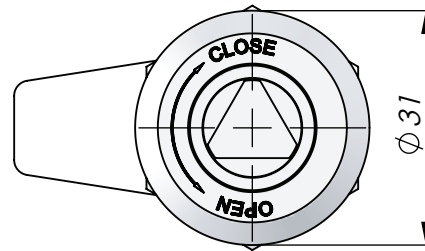
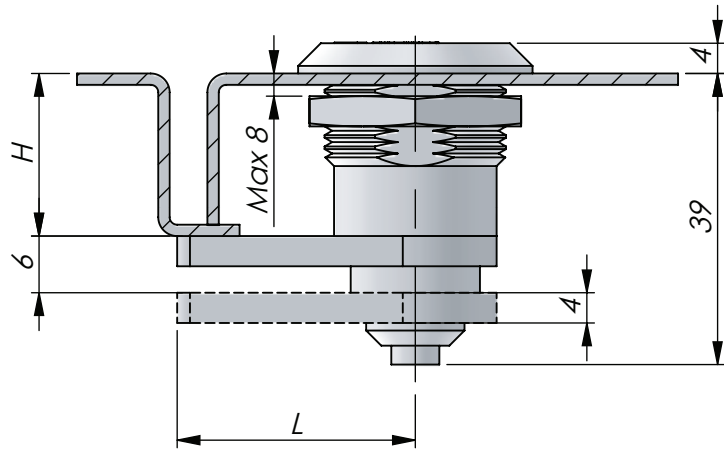
On request, the handle can be provided with your logo. See drawing.

Sturdy quarter-turn with recessed D-ring that is lifted and then turned to open or close. Equipped with holes for tamper-evident seals (not included) and has an audible and tactile "click" in the open and closed positions. The housing has a steep thread, making installation quick, as a turn of only 30° is enough to secure the latch to the sheet metal door using the large threaded ring.

Fits door thickness 0-3 mm.

D-Ring Latch, Vibration Resistant (AAAAAAA-LLLL)

| AAAAAAA | Cam | -LLLL | H/L in mm |
|---------|--------------|-------|-----------|
| 2413071 | Single-point | -1560 | 15/60 |
| 2413072 | Two-point | -1760 | 17/60 |
| 2413073 | Three-point | -1960 | 19/60 |
| | | -2160 | 21/60 |
| | | -2360 | 23/60 |
| | | -2560 | 25/60 |
| | | -2760 | 27/60 |
| | | -2960 | 29/60 |
| | | -3160 | 31/60 |
| | | -3360 | 33/60 |



Material:

- Housing: Zinc die-cast, zinc plated.
- Insert: Brass, nickel plated.
- Nut: Brass, zinc plated.
- Spring and cam: Stainless steel (304).

References, Accessories:

- Keys: Page 2-370 and 2-372.

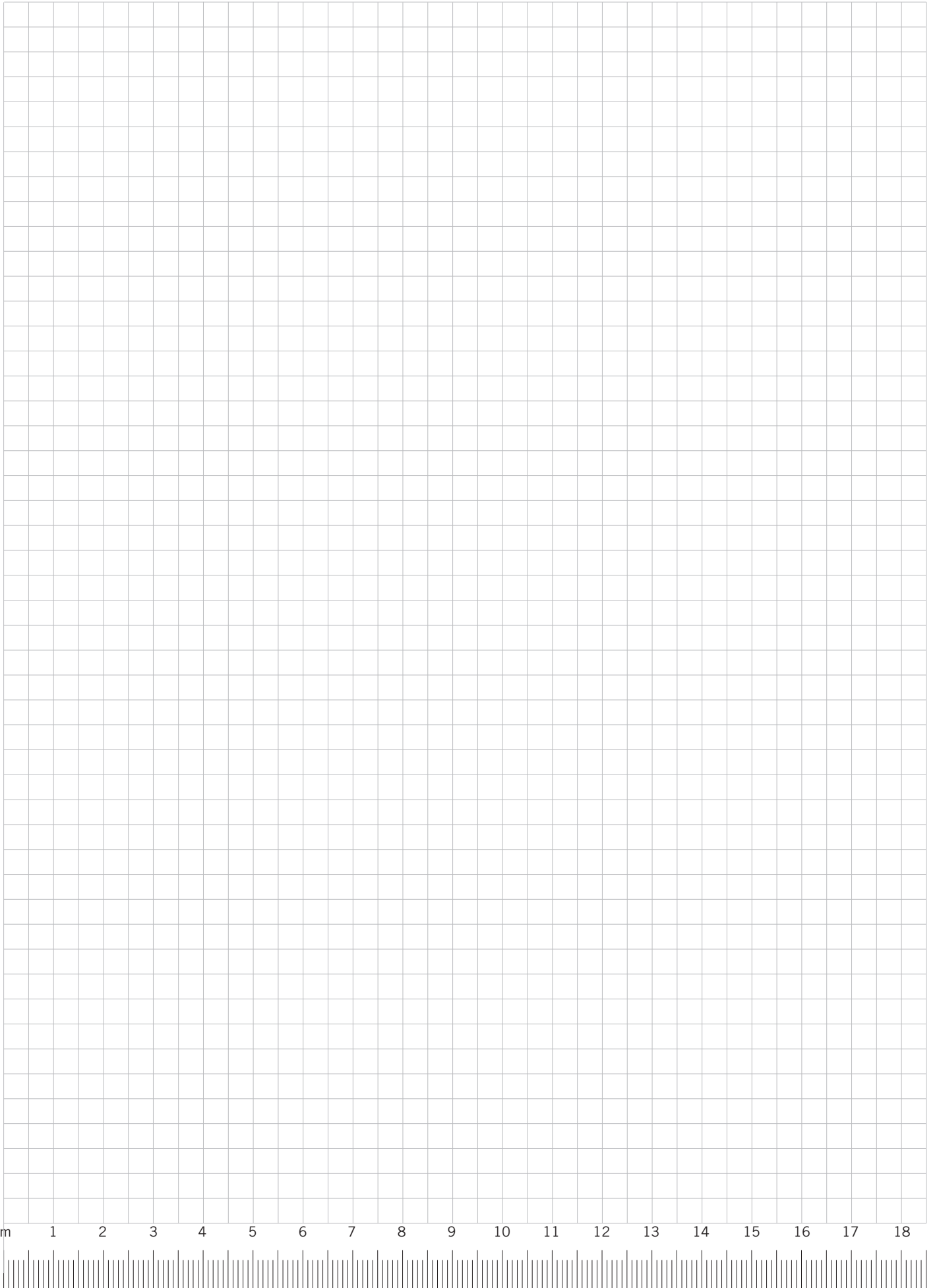
Notes, Tests:

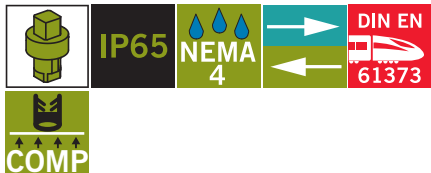
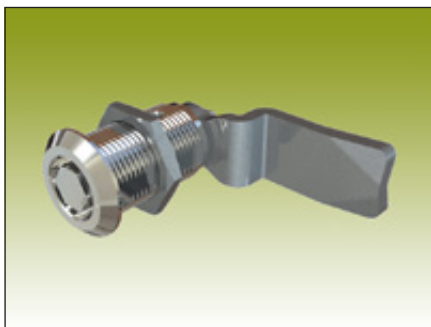
* Straight cam.

Compression latch for compression of sealing profiles etc. The latch is supplied fully assembled. Note that the H-dimension describes the cam in compressed position. Close and tighten by turning 4,5 revolutions with the key. The first 90° turn moves the cam 90° to closing position. Then turn four revolutions to retract/compress the cam 6 mm.

Compression Latch - 21,5 mm

| P/N | Description | Cam dimensions XX (H/L in mm) | | | | |
|-----------|---|-------------------------------|-------------|-----------|-----------|-----------|
| | | 18.0 / 30 | 21.5 / 31,5 | 27.0 / 30 | 20.0 / 45 | 21.5 / 45 |
| 241755-XX | Triangle 10 | 01 | 02 * | 03 | 04 | 05 * |
| 241756-XX | Triangle 10/SEN | 01 | 02 * | 03 | 04 | 05 * |
| 241757-XX | Double Bit 3 | 01 | 02 * | 03 | 04 | 05 * |
| 241762-XX | Double Bit 5 | 01 | 02 * | 03 | 04 | 05 * |
| 241758-XX | Square 8 | 01 | 02 * | 03 | 04 | 05 * |
| 241759-XX | Square 7 | 01 | 02 * | 03 | 04 | 05 * |
| 241760-XX | Triangle 7 | 01 | 02 * | 03 | 04 | 05 * |
| 241761-XX | Triangle 8 | 01 | 02 * | 03 | 04 | 05 * |
| 241763-XX | Slotted | 01 | 02 * | 03 | 04 | 05 * |
| 241766-XX | Recessed Hexagon 8 | 01 | 02 * | 03 | 04 | 05 * |
| 291138 | Knob (optional). Fitsinsert "Triangle 10/SEN" | - | - | - | - | - |





Material:

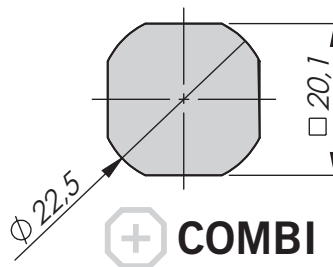
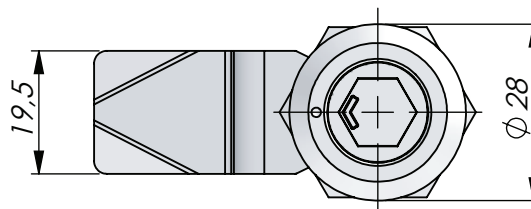
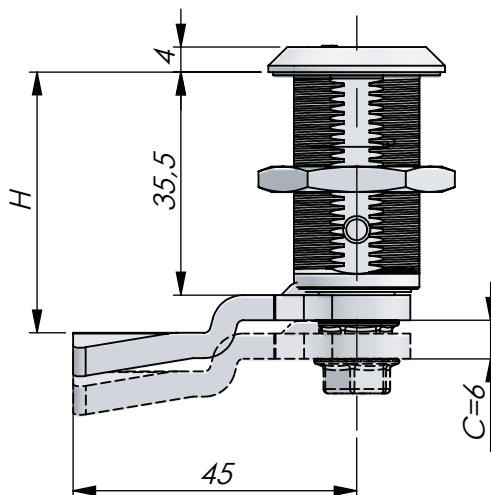
- Housing and insert: Zinc die-cast, chrome plated or black coated.
- Nut for housing: Zinc die-cast, zinc plated.

References, Accessories:

- Keys: Page 2-370 and 2-372.
- * Handles and knobs: Page 2-360.
- Stainless version: Page 6-135.

Notes, Tests:

Other inserts on request.



Notes, Tests:

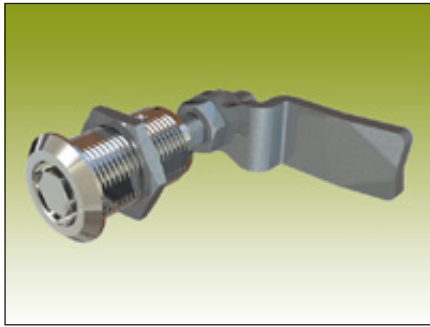
Latch is supplied with screw with mechanical thread lock.

Compression latch. Close and tighten with a single continuous half-turn motion. First 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm. The latch is supplied assembled, cam to be ordered separately. Protection degree IP65, also classed as "Waterproof according to NEMA 4".

Compression Latch (AAAAAA-BB-HHLL)

| AAAAAA- | Description | BB | Insert | -HHLL | Cam size in mm |
|---------|-------------|----|---------------------------------|-------|----------------|
| 241387- | Chrome | 01 | Hexagon 11 | -0000 | No cam |
| 241587- | Black | 09 | Square 8 | -2145 | 21/45 |
| | | 11 | Square 8 / M6 * | -2345 | 23/45 |
| | | 12 | Triangle 7 | -2545 | 25/45 |
| | | 13 | Triangle 8 | -2745 | 27/45 |
| | | 14 | Triangle 10 | -2945 | 29/45 |
| | | 15 | Triangle 10 / M6 | -3145 | 31/45 |
| | | 16 | Double Bit 3 | -3345 | 33/45 |
| | | 17 | Double Bit 5 | -3545 | 35/45 |
| | | 18 | DB (Deutsche Bahn). On request. | -3745 | 37/45 |
| | | 20 | Slotted | -3945 | 39/45 |
| | | 21 | Recessed hexagon 10 | -4145 | 41/45 |
| | | 22 | Recessed hexagon 8 | -4345 | 43/45 |
| | | 28 | Triangle 10/M5 | -4545 | 45/45 |
| | | 47 | Recessed hexagon 8 / 3 mm pin | -4745 | 47/45 |
| | | 56 | Tubular Asymmetric | -4945 | 49/45 |
| | | 79 | Triangle 6,5 | -5145 | 51/45 |
| | | | | -5345 | 53/45 |
| | | | | -5545 | 55/45 |
| | | | | -5745 | 57/45 |
| | | | | -5945 | 59/45 |
| | | | | -6145 | 61/45 |
| | | | | -6345 | 63/45 |
| | | | | -6545 | 65/45 |
| | | | | -6745 | 67/45 |





Material:

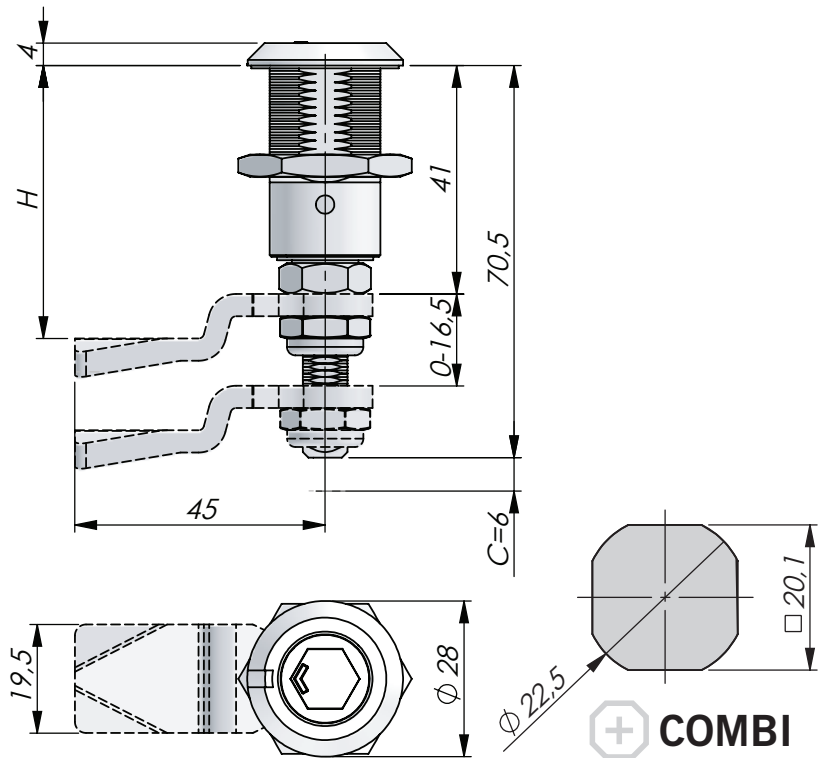
- Housing and insert: Zinc die-cast, chrome plated or black coated.
- Extended shaft: Steel, zinc plated.
- Nut for housing: Zinc die-cast, zinc plated.
- Counter-nuts: Steel, zinc plated.

References, Accessories:

- Cams: Page 2-481.
- Keys: Page 2-370 and 2-372.
- * Handles and knobs: Page 2-360.
- Stainless version: Page 6-136.

Notes, Tests:

Other inserts on request.
Protection degree IP65 is also classed "Waterproof according to NEMA 4".

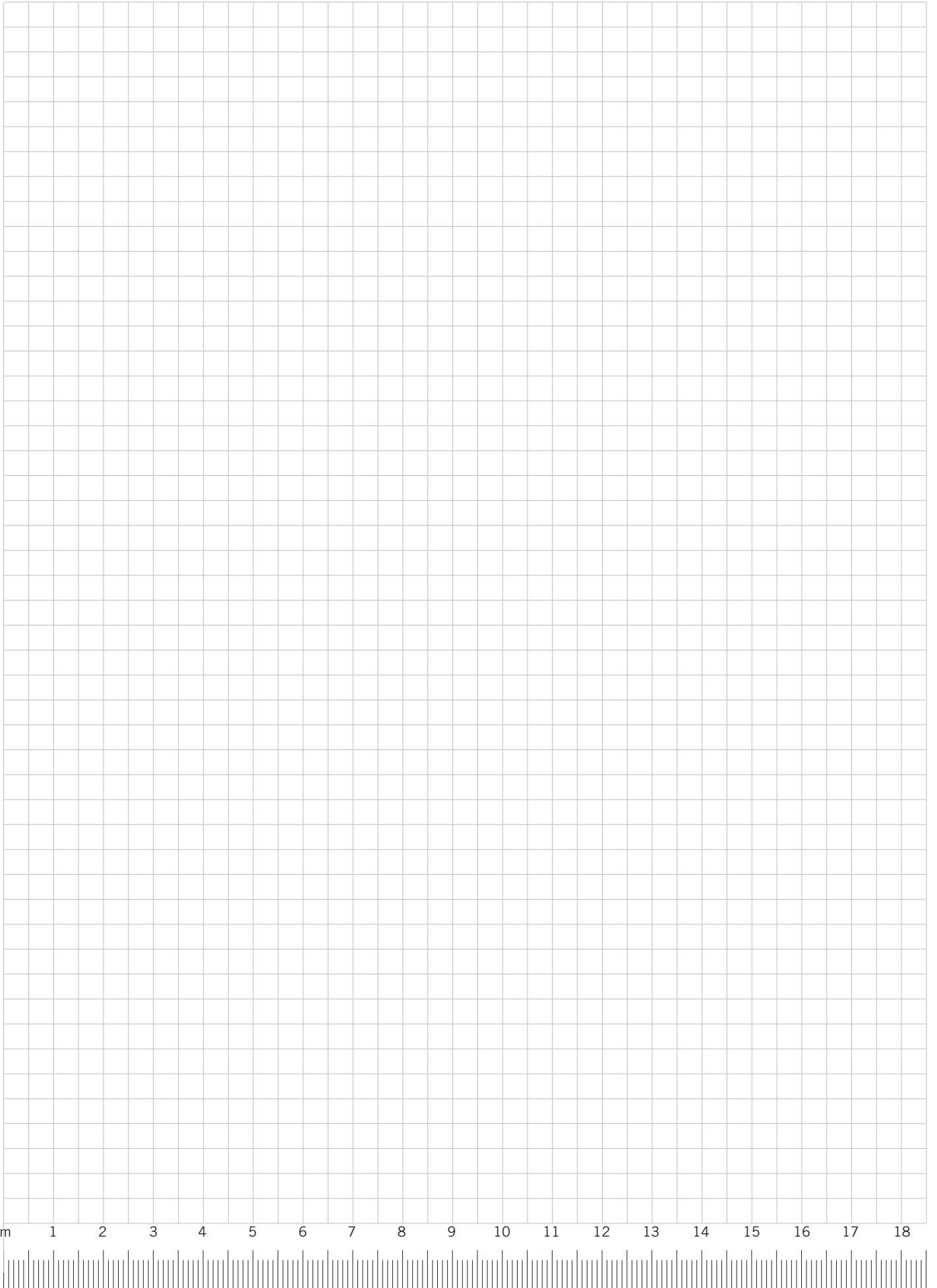


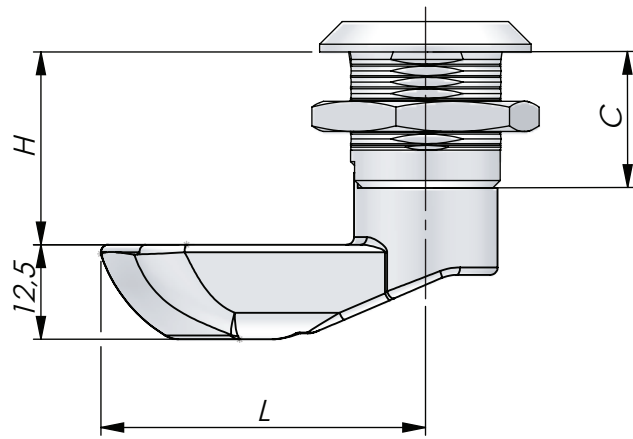
Compression latch. Close and tighten with a single continuous half-turn motion. The first 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm. This compression is shown as "C" in the drawing above.

The extended, threaded shaft allows you to place the cam along its entire length, resulting in a long distance for adjusting (a total of 20 mm). Fix the cam with counter-nuts. The latch is supplied assembled, cam to be ordered separately.

Compression Latch - 35 mm - Adjustable

| P/N chrome | P/N black | Insert |
|------------|-----------|---------------------------------|
| 241389-01 | 241589-01 | Hexagon 11 |
| 241389-09 | 241589-09 | Square 8 |
| 241389-11 | 241589-11 | Square 8/M6 * |
| 241389-12 | 241589-12 | Triangle 7 |
| 241389-13 | 241589-13 | Triangle 8 |
| 241389-14 | 241589-14 | Triangle 10 |
| 241389-15 | 241589-15 | Triangle 10 / M6 |
| 241389-16 | 241589-16 | Double Bit 3 |
| 241389-17 | 241589-17 | Double Bit 5 |
| 241389-18 | 241589-18 | DB (Deutsche Bahn). On request. |
| 241389-20 | 241589-20 | Slotted |
| 241389-21 | 241589-21 | Recessed hexagon 10 |
| 241389-22 | 241589-22 | Recessed hexagon 8 |
| 241389-28 | 241589-28 | Triangle 10/M5 |
| 241389-47 | 241589-47 | Recessed hexagon 8 / 3 mm pin |
| 241389-56 | 241589-56 | Tubular Asymmetric |
| 241389-79 | 241589-79 | Triangular 6,5 |



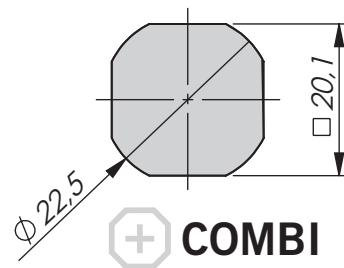
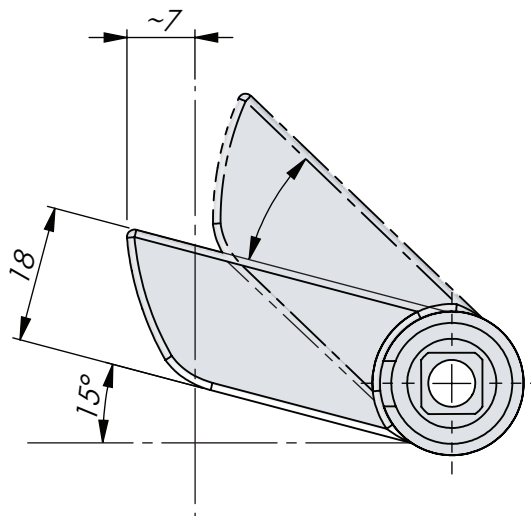


Material:

- Housing and insert: Zinc, die-cast chrome or black texture powder coated.
- Cam: Zinc die-cast, chrome plated.
- Spring: Stainless steel (304).
- Screw washer: Steel, zinc plated.
- Washer: Teflon.

Notes, Tests:

Version for left hinged door shown.



Notes, Tests:

TUF = Assembled with TUF-loc to achieve DIN EN 61373.

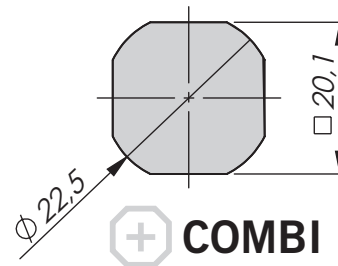
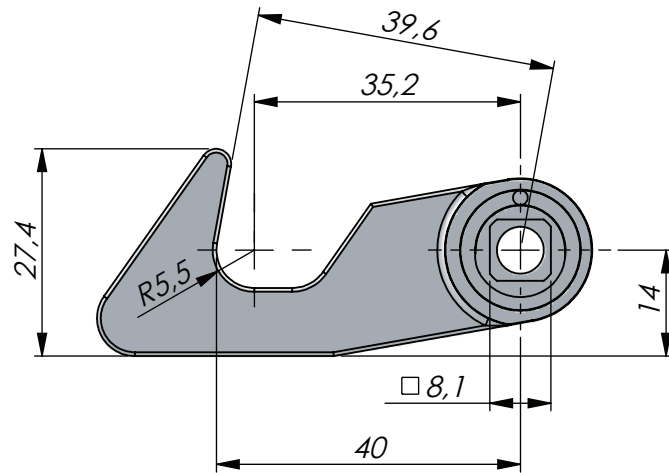
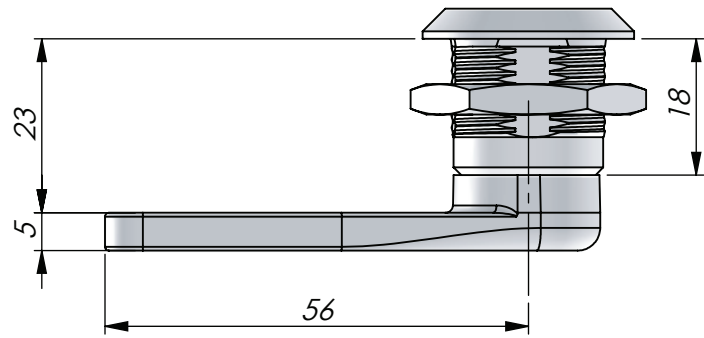
Spring loaded latch for slam-latch action.

Version for left hinged door is normally in 10 o'clock position and temporarily moves up to 11 o'clock position when pressed against the frame. When the door is fully closed the cam springs down to the 10 o'clock position again, latching the door.

Version for right hinged door is normally in 2 o'clock position and moves up to 1 o'clock position when pressed against the frame (inside view).

Tool Operated 18 mm Quarter-Turn Latch with Push-to-Close Cam (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | Cam H/L in mm | Cam rotation |
|-------|----------------------|---|---------|----|----------------------------|---|---------|---|------------------|---|----------------------|-------|---------------|-------------------|
| 2312- | Zinc - chrome plated | 0 | SN+ TUF | 01 | Square 6 | 2 | Chrome | 4 | IP54 - assembled | 0 | Zinc - chrome plated | -020L | 20,5/32 | Left hinged door |
| 2316- | Zinc - black | 1 | EN+ TUF | 03 | Square 7 | 6 | Black | | | | | -020R | 20,5/32 | Right hinged door |
| | | | | 05 | Square 8 | | | | | | | -025L | 25,5/43 | Left hinged door |
| | | | | 07 | Square 8 - slotted | | | | | | | -025R | 25,5/43 | Right hinged door |
| | | | | 08 | Square 8 / M6 | | | | | | | | | |
| | | | | 11 | Square 8 - recessed | | | | | | | | | |
| | | | | 14 | Triangle 7 | | | | | | | | | |
| | | | | 15 | Triangle 8 | | | | | | | | | |
| | | | | 16 | Triangle 10 | | | | | | | | | |
| | | | | 17 | Triangle 10 / M5 | | | | | | | | | |
| | | | | 18 | Triangle 10 / M6 | | | | | | | | | |
| | | | | 19 | Triangle 10 / SEN | | | | | | | | | |
| | | | | 21 | Triangle 10 - radius (ES3) | | | | | | | | | |
| | | | | 22 | Double Bit 3 | | | | | | | | | |
| | | | | 24 | Double Bit 5 | | | | | | | | | |
| | | | | 26 | Slotted | | | | | | | | | |
| | | | | 28 | Slotted with arrow | | | | | | | | | |
| | | | | 29 | Slotted recessed | | | | | | | | | |
| | | | | 31 | Hexagon 8,5 | | | | | | | | | |
| | | | | 32 | Hexagon 11 | | | | | | | | | |
| | | | | 34 | Recessed hexagon 8 | | | | | | | | | |
| | | | | 35 | Recessed hexagon 10 | | | | | | | | | |
| | | | | 36 | Recessed hex 8 / 3 mm pin | | | | | | | | | |
| | | | | 37 | Solid (plug) | | | | | | | | | |
| | | | | 39 | Triangle 10 - radius | | | | | | | | | |



Material:

- Housing and insert: Zinc, die-cast chrome or black texture powder coated.
- Cam: Zinc die-cast, chrome plated.
- Spring: Stainless steel (304).
- Screw washer: Steel, zinc plated.
- Washer: Teflon.

References, Accessories:

- Inserts: Page 2-052.

Spring loaded hooked cam for push-to-close action in sliding doors.
Left version shown above.

References, Accessories:

Keys: Page 2-370 and 2-372.

Notes, Tests:

Version A shown on drawing, page 2-160a.

Spring loaded cam for slam-latch action in sliding doors and similar applications.
Version A: Moves clockwise during closing / counter-clockwise spring return.
Version B: Moves counter-clockwise during closing / clockwise spring return.

Quarter-Turn Latch with Push-to-Close Hooked Cam (AAAA-BCCDEF-GGGG)

| AAAA- | Housing | B | Nut | CC | Insert | D | Surface | E | Assembly | F | Cam | -GGGG | Cam H/L in mm | Cam rotation |
|-------|----------------------|---|-----|----|----------------------------|---|---------|---|------------------|---|-------|-------|---------------|-----------------------|
| 2302- | Zinc - chrome plated | 0 | SN | 01 | Square 6 | 2 | Chrome | 4 | IP54 - assembled | 0 | Steel | -000L | 23/56 | For left hinged door |
| 2306- | Zinc - black | 1 | EN | 03 | Square 7 | 6 | Black | | | | | -000R | 23/56 | For right hinged door |
| | | | | 05 | Square 8 | | | | | | | | | |
| | | | | 07 | Square 8 - slotted | | | | | | | | | |
| | | | | 08 | Square 8 / M6 | | | | | | | | | |
| | | | | 11 | Square 8 - recessed | | | | | | | | | |
| | | | | 14 | Triangle 7 | | | | | | | | | |
| | | | | 15 | Triangle 8 | | | | | | | | | |
| | | | | 16 | Triangle 10 | | | | | | | | | |
| | | | | 17 | Triangle 10 / M5 | | | | | | | | | |
| | | | | 18 | Triangle 10 / M6 | | | | | | | | | |
| | | | | 19 | Triangle 10 / SEN | | | | | | | | | |
| | | | | 21 | Triangle 10 - radius (ES3) | | | | | | | | | |
| | | | | 22 | Double Bit 3 | | | | | | | | | |
| | | | | 24 | Double Bit 5 | | | | | | | | | |
| | | | | 26 | Slotted | | | | | | | | | |
| | | | | 28 | Slotted with arrow | | | | | | | | | |
| | | | | 29 | Slotted recessed | | | | | | | | | |
| | | | | 30 | DB (Deutsche Bahn) | | | | | | | | | |
| | | | | 31 | Hexagon 8,5 | | | | | | | | | |
| | | | | 32 | Hexagon 11 | | | | | | | | | |
| | | | | 34 | Recessed hexagon 8 | | | | | | | | | |
| | | | | 35 | Recessed hexagon 10 | | | | | | | | | |
| | | | | 36 | Recessed hex 8 / 3 mm pin | | | | | | | | | |
| | | | | 37 | Solid (plug) | | | | | | | | | |
| | | | | 39 | Triangle 10 - radius | | | | | | | | | |

0



Material:

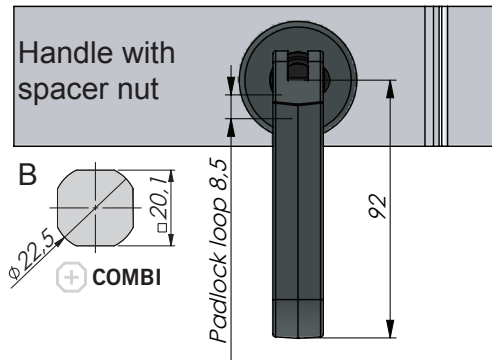
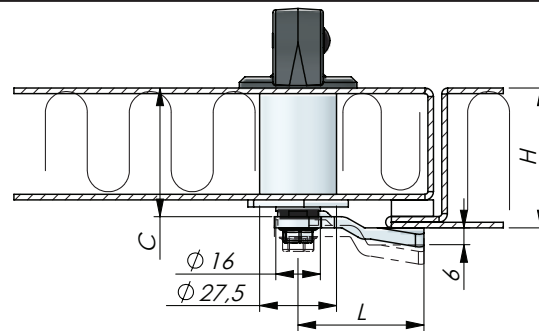
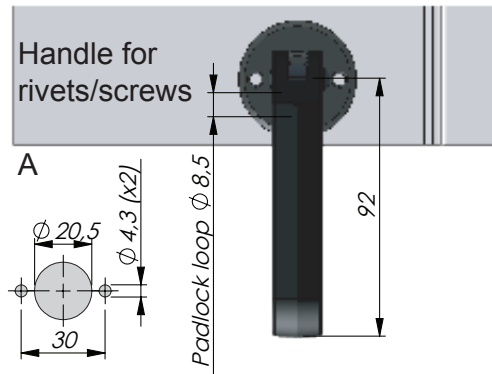
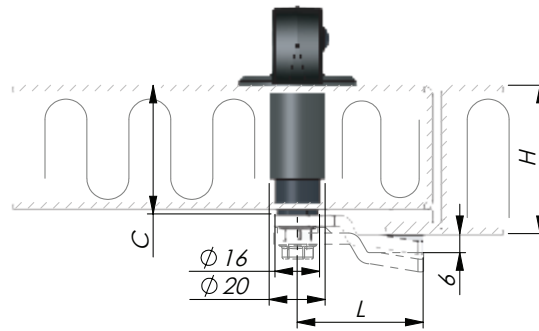
- Handle: Glass fibre reinforced polyamide (PA6GF30), black.
- Housing: Zinc die-cast, black coated.
- Shaft: Zinc die-cast, black passivated.
- Screw: Steel, zinc plated.
- Spacer nut: Zinc die-cast, zinc plated.

References, Accessories:

- Suitable for cams with or without projection: Page 2-480, 2-481, 2-490 and 2-491.

Notes, Tests:

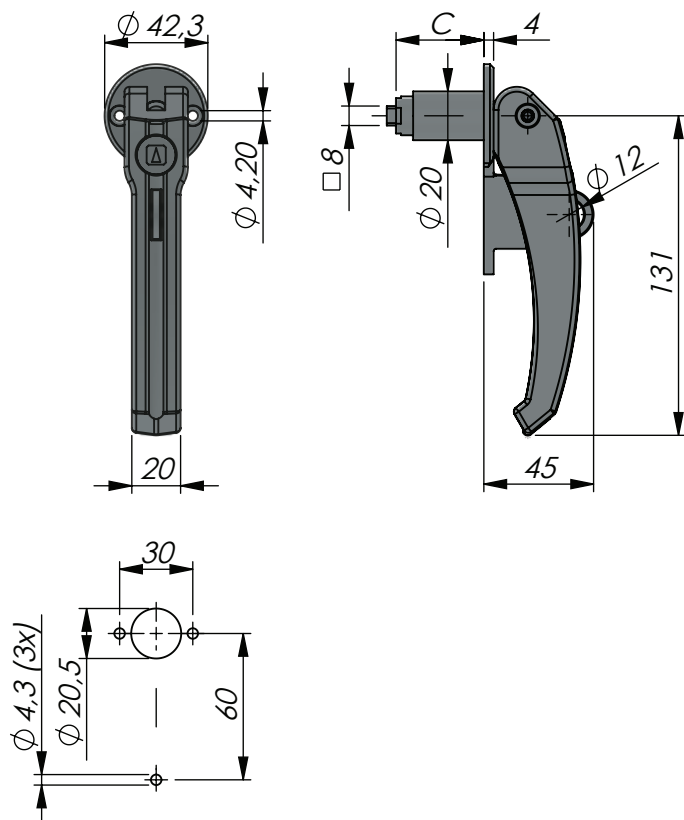
For handle version using spacer nut: the hole diameter in the inner door skin should be $\varnothing 28$ mm for the spacer nut to fit through.



Padlockable compression handle, with 6 mm compression stroke. Mounting: Rivets/screws (not included) or spacer nut (included). The C-dimension is the compressed position. The H-dimension is the distance from the outside face of the door to the engagement point of the cam in compressed position. Hole pattern is indicated in the table and is either "Combi" (version "F" on page 1-001.02) or the $\varnothing 20$ mm cut-out in the drawing above.

Padlockable Compression Handle 36 - 56 mm

| P/N | Description | C= | Cut-Out | P/N | Description | C= | Cut-Out |
|-----------|--------------------------|-------|-------------------------|-----------|------------------------|-------|-----------|
| 275004-30 | Handle for rivets/screws | 36 mm | 20 mm \varnothing (A) | 275006-30 | Handle with spacer nut | 36 mm | Combi (B) |
| 275004-40 | Handle for rivets/screws | 46 mm | 20 mm \varnothing (A) | 275006-40 | Handle with spacer nut | 46 mm | Combi (B) |
| 275004-50 | Handle for rivets/screws | 56 mm | 20 mm \varnothing (A) | 275006-50 | Handle with spacer nut | 56 mm | Combi (B) |



Material:

- Handle: Glass fibre reinforced polyamide (PA6GF30), black.
- Housing: Zinc, die-cast, black coated.
- Insert, pin and padlock loop: Zinc die-cast, black passivated.
- Screw: Steel, zinc plated.

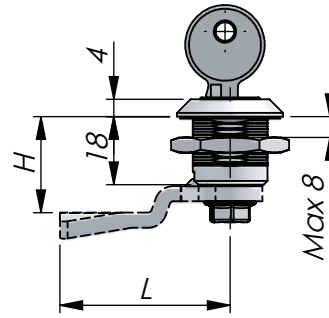
References, Accessories:

- Suitable for cams with or without projection: Page 2-480, 2-481, 2-490 and 2-491.
- Keys: Page 2-370 and 2-372.

Padlockable compression handle with insert and 6 mm compression stroke. Spring loaded padlock loop retracts when not in use. Mounting: Rivets/screws (not included). The C-dimension is the compressed position.
Example: Handle for C=46 mm with insert "Double Bit 3" = P/N 27501140-1216.

Padlockable Compression Handle, Tool Operated, 36 - 56 mm (AAAAAABB-CCCC)

| AAAAAA | Description | BB | C= | -CCCC | Insert |
|--------|-------------|----|-------|-------|-------------------------------|
| 275011 | Handle | 30 | 36 mm | -1201 | Hexagon 11 |
| | | 40 | 46 mm | -1207 | Square 6 |
| | | 50 | 56 mm | -1208 | Square 7 |
| | | | | -1209 | Square 8 |
| | | | | -1210 | Square 8 / slotted |
| | | | | -1212 | Triangle 7 |
| | | | | -1213 | Triangle 8 |
| | | | | -1214 | Triangle 10 |
| | | | | -1216 | Double Bit 3 |
| | | | | -1217 | Double Bit 5 |
| | | | | -1218 | Daimler Benz |
| | | | | -1219 | Triangle 10 / SEN |
| | | | | -1220 | Slotted |
| | | | | -1221 | Recessed hexagon 10 |
| | | | | -1222 | Recessed hexagon 8 |
| | | | | -1223 | Hexagon 8,5 |
| | | | | -1224 | ES3 |
| | | | | -1241 | Slotted recessed |
| | | | | -1247 | Recessed hexagon 8 / 3 mm pin |
| | | | | -1248 | Slotted recessed square 8 |



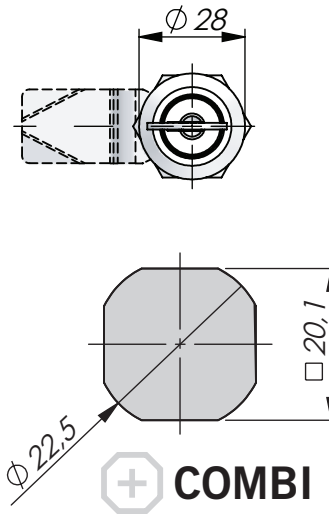
Material:

- Housing: Zinc die-cast, chrome plated or black powder coated.
- Cylinder: Zinc die-cast, stainless steel cap and dust shutter.
- Nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

Notes, Tests:

Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 241535-090-3845 is a black latch, keyed alike with cylinder IL 101, earthing nut, 90° cam rotation and a H-measurement of 38 mm and a standard cam length of 45 mm.

The master key system (marked with *) is supplied on request only.



Quarter-turn cylinder lock. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP54.

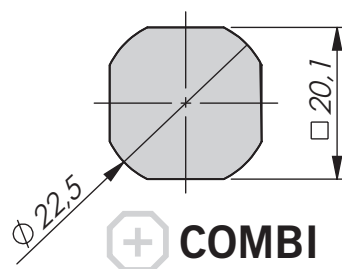
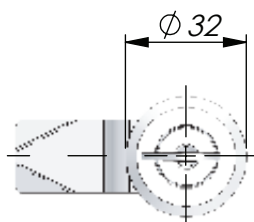
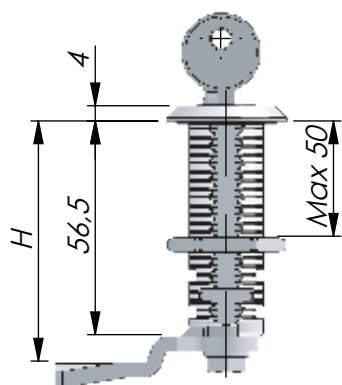
For cams that rotates 90°, the key can be removed in the locked position.

For cams that rotates 180°, the key can be removed in both open and locked position.

Supplied with two keys.

Cylinder Lock 18 mm (AAAAA-BBB-HHLL)

| AAAAA- | Surface treatment | Cylinder | Nut | BBB | Cam rotation | -HHLL | Cam size in mm |
|---------------|-------------------|---------------------|--------------|-----|--------------|-------|---|
| 241334- | Chrome | Keyed alike, IL 101 | Standard | 180 | 180° | -0000 | No cam |
| 241534- | Black | Keyed alike, IL 101 | Standard | 090 | 90° | -HH45 | See cam ref. above. |
| 241335- | Chrome | Keyed alike, IL 101 | Earthing nut | | | | H between 4-50 mm in increments of 2 mm |
| 241535- | Black | Keyed alike, IL 101 | Earthing nut | | | | |
| 241336- | Chrome | Keyed to differ | Standard | | | | |
| 241536- | Black | Keyed to differ | Standard | | | | |
| 241337- | Chrome | Keyed to differ | Earthing nut | | | | |
| 241539- | Black | Keyed to differ | Earthing nut | | | | |
| 241336-HNS- * | Chrome | Master key system* | Standard | | | | |
| 241536-HNS- * | Black | Master key system* | Standard | | | | |



Material:

- Housing: Zinc die-cast, chrome plated or black texture powder coated.
- Cylinder: Zinc die-cast, stainless steel cap and dust shutter.
- Nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

References, Accessories:

- Cams with projection: 2-480 and 2-490 - cam rotates 90° and the key can be removed in the locked position.
- Cams without projection: 2-481 and 2-491 - cam rotates 180° and the key can be removed in both open and locked position.

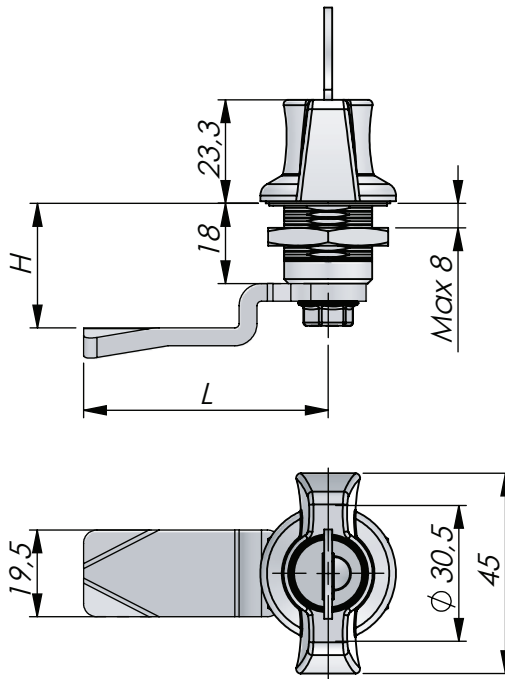
Notes, Tests:

Master key system (marked with *) is supplied on request only.

Quarter-turn cylinder lock. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP54. Supplied with two keys.

Cylinder Lock - 56,5 mm (AAAAA-BBB-HHLL)

| AAAAA- | Surface treatment | Cylinder | Nut | BBB | Cam rotation | -HHLL | Cam size in mm |
|--------------|-------------------|---------------------|--------------|-----|--------------|-------|--|
| 241356- | Chrome | Keyed alike, IL 101 | Standard | 180 | 180° | -0000 | No cam |
| 241556- | Black | Keyed alike, IL 101 | Standard | 090 | 90° | -HH45 | See cam ref. above. |
| 241358- | Chrome | Keyed alike, IL 101 | Earthing nut | | | | H between 42-88 mm in increments of 2 mm |
| 241558- | Black | Keyed alike, IL 101 | Earthing nut | | | | |
| 241357- | Chrome | Keyed to differ | Standard | | | | |
| 241557- | Black | Keyed to differ | Standard | | | | |
| 241359- | Chrome | Keyed to differ | Earthing nut | | | | |
| 241559- | Black | Keyed to differ | Earthing nut | | | | |
| 241357-HNS * | Chrome | Master key system | Standard | | | | |
| 241557-HNS * | Black | Master key system | Standard | | | | |



Material:

- Wing knob: Zinc die-cast, chrome plated, black texture powder coated or glass fibre reinforced Polyamide (PA6GF30), black.
- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

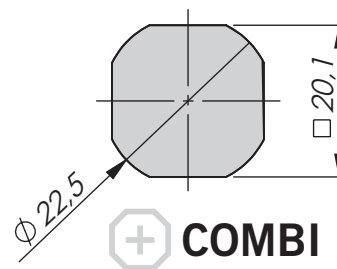
References, Accessories:

- Cams: Page 2-481, 2-491, 2-510 and 2-520.

Notes, Tests:

Note: Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 241642-7-**28**45 is a wing knob in zinc on a black latch with cylinder Keyed alike IL0333 with a cam having H-measurement of **28** mm and length 45 mm.

* Master key system on request.

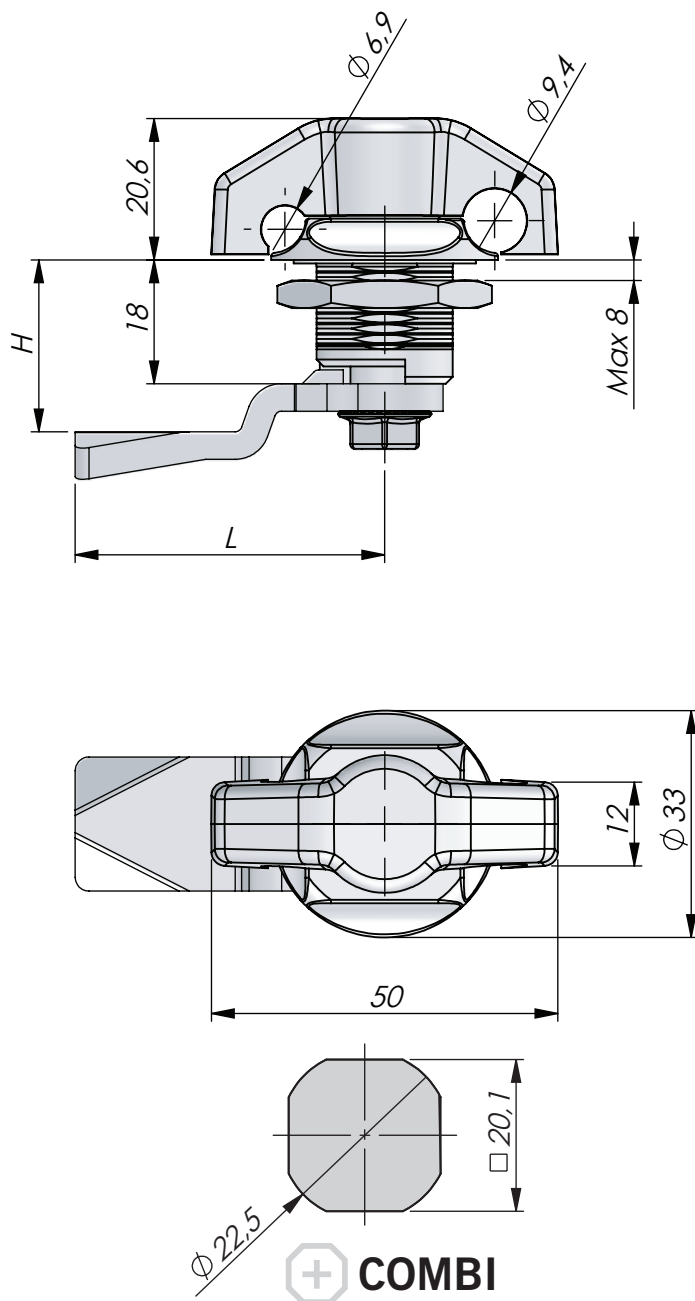


Quarter-turn wing knob in locking or non-locking version. Ergonomic design enables a firm grip when opening. Universal clockwise or counter-clockwise rotation when opening / closing. The key can be removed in both the open and locked position. Supplied with nut and two keys.

Protection degree IP65.

Quarter-Turn Wing Knob - 18 mm (AAAAAB-C-HHLL)

| AAAAA | Surface on wing knob/housing | B- Fixation nut | C Cylinder/Locking | -HHLL | Cam size in mm |
|--------|---------------------------------|-----------------|----------------------|-------|---|
| 24134- | Zinc wing knob. Chrome housing. | 2 Standard nut | 0 Non locking | -0000 | No cam |
| 24164- | Zinc wing knob. Black housing. | 3 Earthing nut | 1 Keyed alike IL101 | -HH45 | See cam ref. above |
| 24504- | PA6 wing knob. Zinc housing. | | 2 Keyed to differ * | | H between 4 - 50 mm in increments of 2 mm |
| | | | 7 Keyed alike IL0333 | | |



Material:

- Wing knob: Zinc die-cast, chrome plated, black texture powder coated or glass fibre reinforced polyamide (PA6GF30), black.
- Housing: Zinc die-cast, chrome plated.
- Cam: Steel, zinc plated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.

References, Accessories:

- Cams: Page 2-480, 2-490, 2-510 and 2-520.

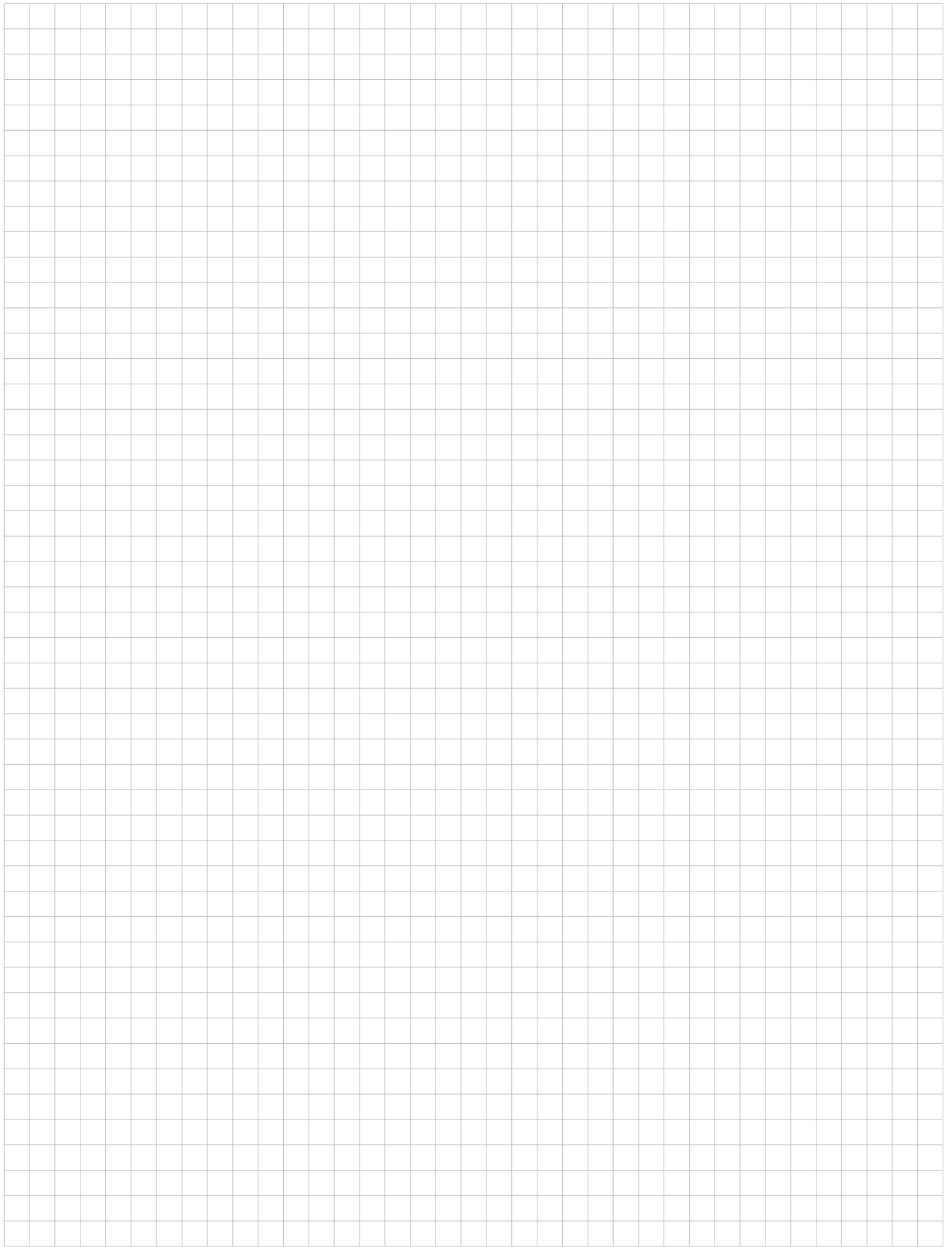
Notes, Tests:

Note: Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 241685-1445 is a wing knob with black surface and with a cam having H-measurement of 14 mm and length 45 mm.

Padlockable quarter-turn wing knob. The rotation of the wing knob can be blocked with a padlock. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP65.

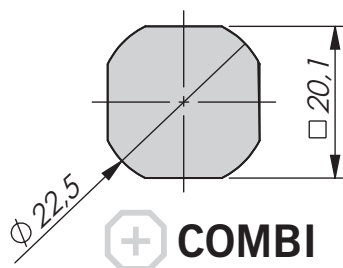
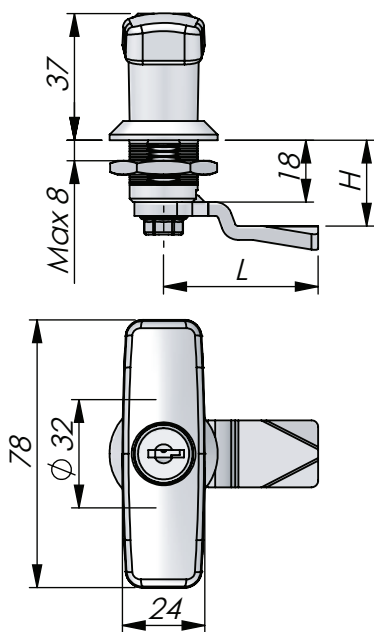
Padlockable Quarter-Turn Wing Knob - 18 mm (AAAAAA-HHLL)

| AAAAAA | Description - surface treatment | Nut | -HHLL | Cam size in mm |
|--------|---------------------------------|--------------|-------|---|
| 241385 | Chrome | Standard | -0000 | No cam |
| 241386 | Chrome | Earthing nut | -HH45 | See cam ref. above |
| 241685 | Black | Standard | | H between 4 - 50 mm in increments of 2 mm |
| 241686 | Black | Earthing nut | | |



cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





Material:

- Housing and handle: Zinc die-cast, chrome plated or black texture powder coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

References, Accessories:

- Stainless version: Page 6-150.
- Cams: Page 2-480, 2-490 and 2-510.
- Rods: Page 2-540, 2-541 and 2-545.

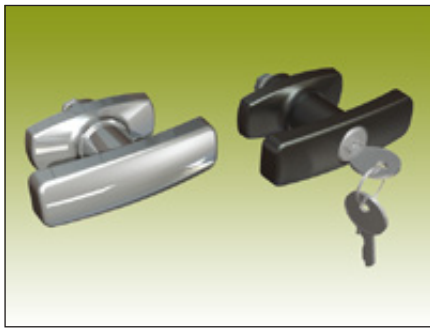
Notes, Tests:

* Master key system on request.

Quarter-turn T-handle in locking or non locking version. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut and two keys. Protection degree IP65.

Quarter-Turn T-Handle - 18 mm (AAAA-BCCDEF-HHLL)

| AAAA- Handle | B Nut | CC Cylinder | D Surface | E Assembly | F Cam | -HHLL H/L in mm |
|----------------------|----------------|----------------------|-----------|------------------------|---------|--|
| 2510- T-handle 18 mm | 0 Standard nut | 00 Non locking | 2 Chrome | 0 IP54 - Not assembled | 0 Steel | -0000 No cam |
| | 1 Earthing nut | 80 IL101 | 6 Black | 1 IP65 - Not assembled | | -HH45 See cam ref. above |
| | | 81 IL0333 | | 2 IP54 - Enclosed cam | | H-measurement available from 0-50 mm in increments of 2 mm |
| | | 90 Keyed to differ * | | 3 IP65 - Enclosed cam | | |
| | | | | 4 IP54 - Assembled | | |
| | | | | 5 IP 65 - Assembled | | |



IP54

Material:

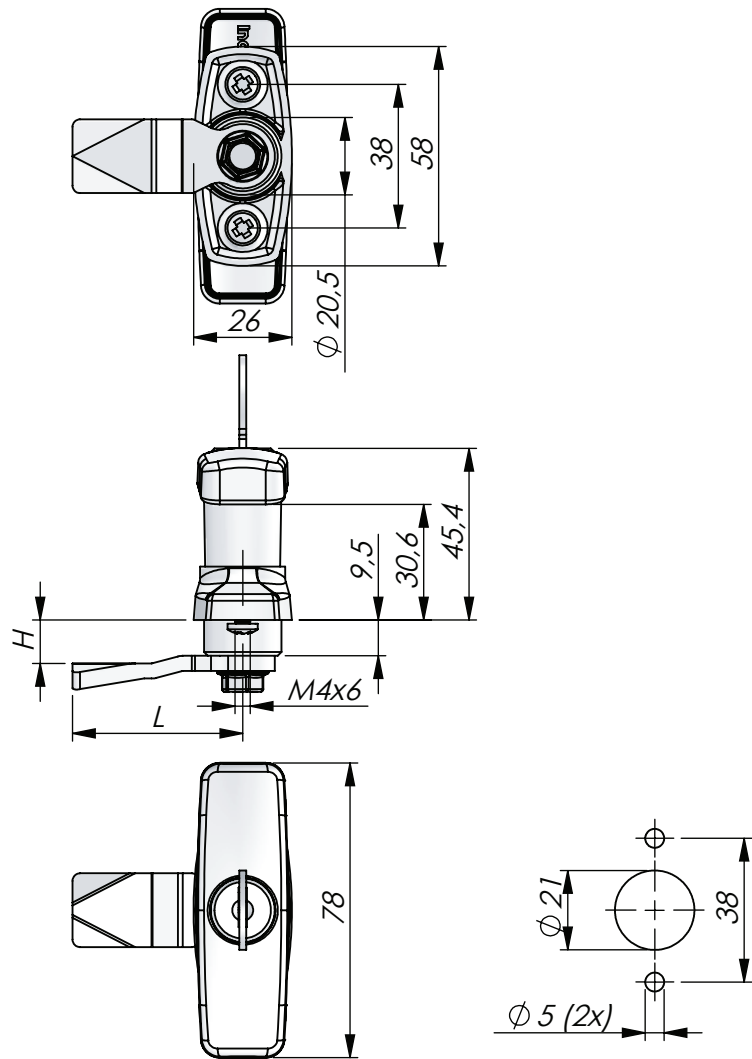
- Housing and handle: Zinc die-cast, chrome plated or black texture powder coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Screws and cam: Steel, zinc plated.

References, Accessories:

- Other cams: Page 2-481, 2-491, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.

Notes, Tests:

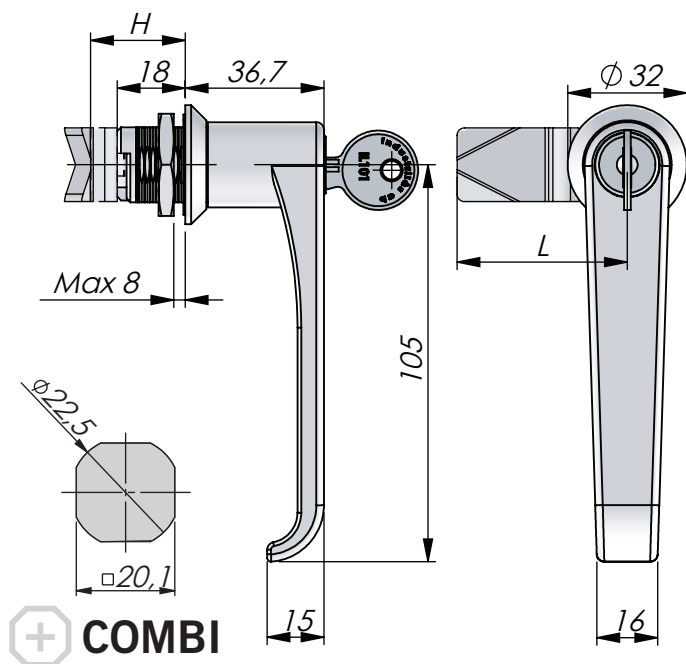
* Master key system on request.



Quarter-turn T-handle in locking or non-locking version. Housing for assembly with screws from inside. Open by turning handle clockwise or counter-clockwise (see table). Supplied with two mounting screws and two keys. Protection degree IP54. Key extraction: Open / closed.

Quarter-Turn T-Handle - (AAAA-BCCDEF-GGGG)

| AAAA- Handle | B Material/ Finish | CC Cylin- der | D Opening rotation | E Assembly | F Ma- terial cam | -GGGG | H/L in mm |
|----------------|--------------------|----------------------|-----------------------|--------------------------|------------------|--|-----------|
| 2511- T-handle | 1 Zinc / Chrome | 00 Non locking | 2 Counter-clock- wise | 0 IP54 - Not as- sembled | 0 Steel | -0000 | 0/00 |
| | 6 Zinc / Black | 80 IL101 | 3 Clock- wise | 1 IP54 - Enclosed cam | | -0445 | 4/45 |
| | | 81 IL0333 | | 2 IP54 - Assembled | | -0645 | 6/45 |
| | | 90 Keyed * to differ | | | | -0845 | 8/45 |
| | | | | | | -1045 | 10/45 |
| | | | | | | -1245 | 12/45 |
| | | | | | | -1445 | 14/45 |
| | | | | | | Cam "H" available from 14-46 in incre- ments of 2 mm | |
| | | | | | | -4645 | 46/45 |
| | | | | | | -4845 | 48/45 |
| | | | | | | -5045 | 50/45 |



Material:

- Housing and handle: Zinc die-cast, chrome plated or black coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

References, Accessories:

- Stainless version: Page 6-160.
- Other cams: 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.

Quarter-turn L-handle in locking or non-locking version. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with mounting nut and two keys. Protection degree IP65, also classed "Waterproof according to NEMA 4". Key extraction: Open / closed. * Master key system on request.

RH = Right hinged door.

LH = Left hinged door.

Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 261556-1-2245 is a latch for right hinged door with a black, non-locking L-handle, having a standard fixation nut and a cam having a H-measurement of **22** mm and standard length 45 mm.

Quarter-Turn L-Handle - 18 mm (AAAAAA-B-HHLL)

| AAAAAA | Description - cylinder | Surface treatment | Nut | -B | Assembly | -HHLL | Cam size in mm |
|--------|------------------------|-------------------|--------------|----|----------|-------|---|
| 261356 | Non-locking | Chrome | Standard | -0 | No cam | -0000 | No cam |
| 261357 | Non-locking | Chrome | Earthing nut | -1 | RH | -HH45 | See page ref. above. |
| 261556 | Non-locking | Black | Standard | -2 | LH | | H between 4-50 mm in increments of 2 mm |
| 261557 | Non-locking | Black | Earthing nut | | | | |
| 261358 | Keyed alike IL101 | Chrome | Standard | | | | |
| 261359 | Keyed alike IL101 | Chrome | Earthing nut | | | | |
| 261558 | Keyed alike IL101 | Black | Standard | | | | |
| 261559 | Keyed alike IL101 | Black | Earthing nut | | | | |
| 261369 | Keyed alike IL0333 | Chrome | Standard | | | | |
| 261370 | Keyed alike IL0333 | Chrome | Earthing nut | | | | |
| 261569 | Keyed alike IL0333 | Black | Standard | | | | |
| 261570 | Keyed alike IL0333 | Black | Earthing nut | | | | |
| 261360 | Keyed to differ * | Chrome | Standard | | | | |
| 261361 | Keyed to differ * | Chrome | Earthing nut | | | | |
| 261560 | Keyed to differ * | Black | Standard | | | | |
| 261561 | Keyed to differ * | Black | Earthing nut | | | | |

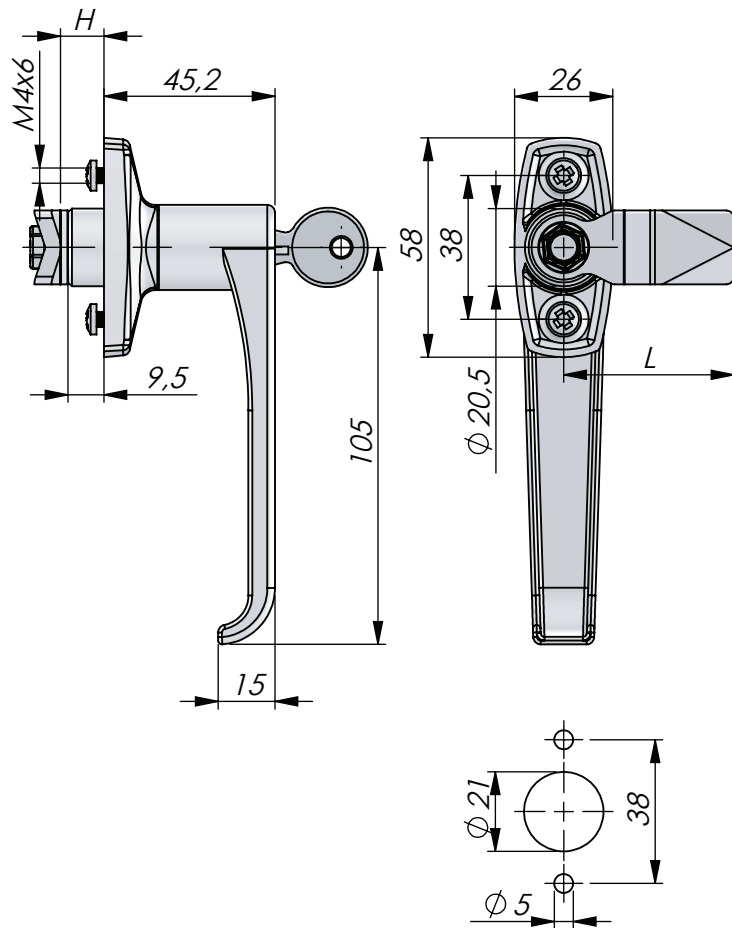


Material:

- Housing and handle: Zinc die-cast, chrome plated or black coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Screws, cam and nut: Steel, zinc plated.

References, Accessories:

- Cams: Page 2-481, 2-491 and 2-510.
- Rods: Page 2-540, 2-541 and 2-545.



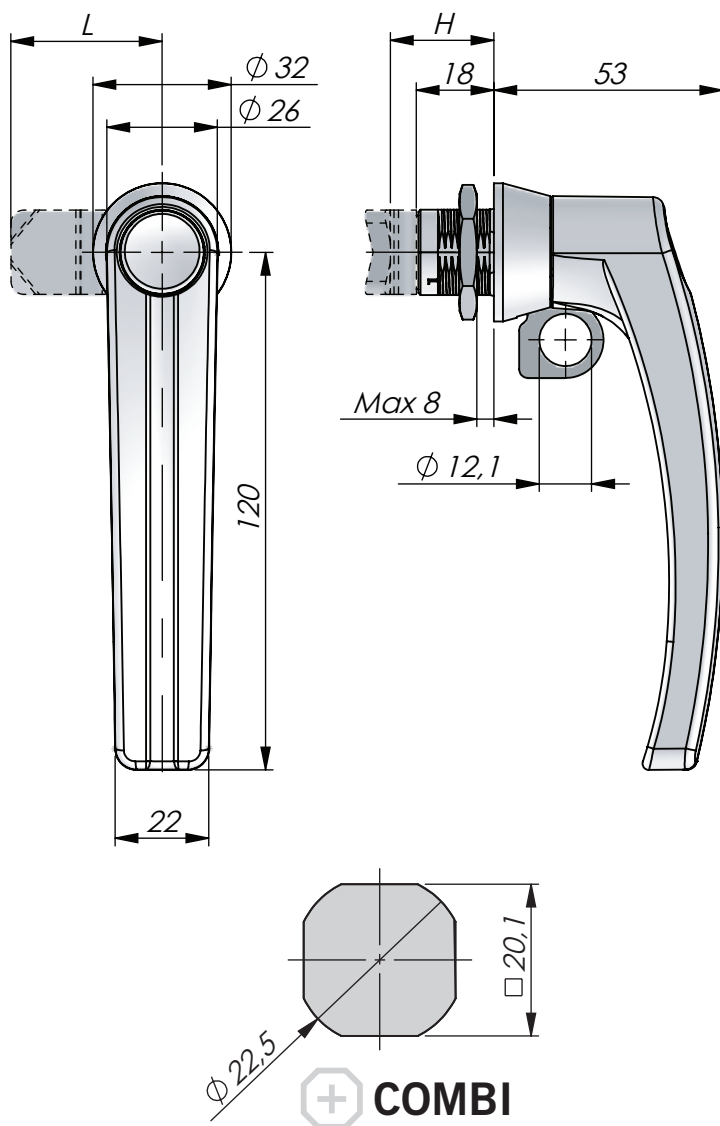
Quarter-turn L-handle in locking or non-locking version. Housing for assembly with screws from inside. Open by turning handle clockwise or counter-clockwise (see table). Supplied with screw, two mounting screws and two keys. Protection degree IP54. Key extraction: Open / closed. * Master key system on request.
RH = Right hinged door. **LH** = Left hinged door.

Quarter-Turn L-Handle (AAAAAA-B-HHLL)

| AAAAAA | Description - cylinder | Surface treatment | -B | Assembly | -HHLL | Cam size in mm |
|-----------|------------------------|-------------------|----|----------|---|---------------------|
| 261376-00 | Non-locking | Chrome | -0 | No cam | -0000 | No cam |
| 261376-04 | Non-locking | Chrome | -1 | RH | -HH45 | See page ref. above |
| 261576-00 | Non-locking | Black | -2 | LH | H between 4 - 50 mm in increments of 2 mm | |
| 261576-04 | Non-locking | Black | | | | |
| 261376-03 | Keyed alike IL101 | Chrome | | | | |
| 261376-07 | Keyed alike IL101 | Chrome | | | | |
| 261576-03 | Keyed alike IL101 | Black | | | | |
| 261576-07 | Keyed alike IL101 | Black | | | | |
| 261376-01 | Keyed alike IL0333 | Chrome | | | | |
| 261376-05 | Keyed alike IL0333 | Chrome | | | | |
| 261576-01 | Keyed alike IL0333 | Black | | | | |
| 261576-05 | Keyed alike IL0333 | Black | | | | |
| 261376-02 | Keyed to differ * | Chrome | | | | |
| 261376-06 | Keyed to differ * | Chrome | | | | |
| 261576-02 | Keyed to differ * | Black | | | | |
| 261576-06 | Keyed to differ * | Black | | | | |

LRP Push-Button Action Padlockable Quarter-Turn L-Handle - 18 mm

Latching



Material:

- Housing and handle: Zinc die-cast, black or silver texture powder coated.
- Padlock loop: Stainless steel (304).
- Nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

References, Accessories:

- Cams on page 2-481, 2-491, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.

Notes, Tests:

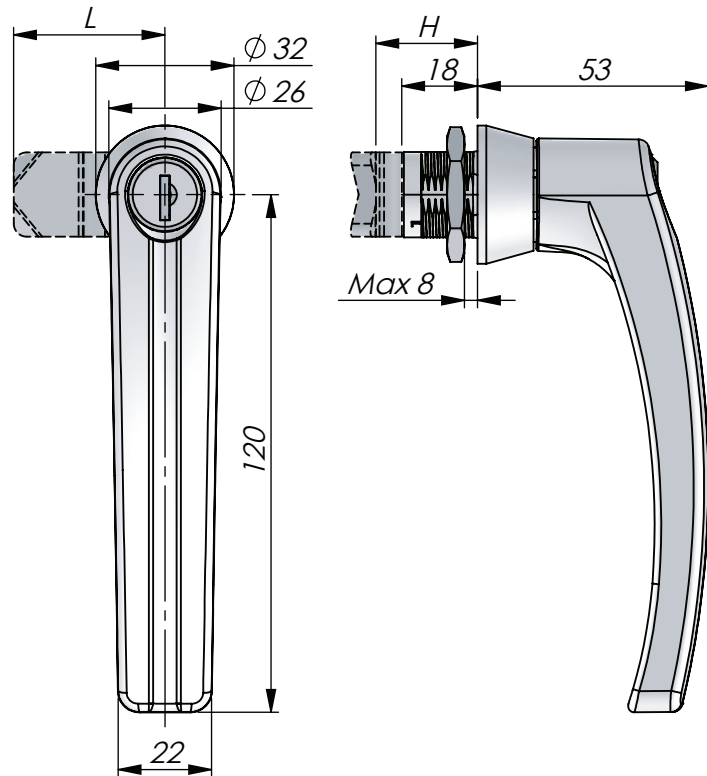
Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 261604-1-2445 is a black push-button handle for a right hinged door and with a cam having a H-measurement of **24** mm and standard length 45 mm.

L-handle with push-button controlled retractable padlock loop. Supplied with nut. Protection degree IP65.

The turning rotation may be programmed by setting the turning limiter in the bottom of the housing. This is however not needed when ordering this product assembled with cam.

LRP Push-Button Action Padlockable Quarter-Turn L-Handle - 18 mm (AAAAAA-B-HHLL)

| AAAAAA | Description - surface treatment | -B | Assembly | -HHLL | Cam size in mm |
|--------|---------------------------------|----|----------|-------|---|
| 261904 | Silver | -0 | No cam | -0000 | No cam |
| 261604 | Black | -1 | RH | -HH45 | See page ref. above. |
| | | -2 | LH | | H between 4 - 50 mm in increments of 2 mm |



Material:

- Housing and handle: Zinc die-cast, silver coated or black texture powder coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

References, Accessories:

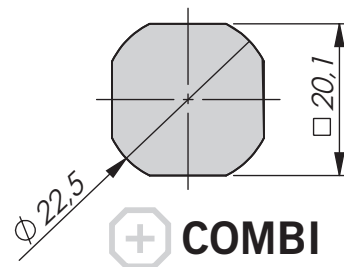
- Cams: Page 2-481, 2-491, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.

Notes, Tests:

Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 261906-1-3245 is a latch for a right hinged door with black handle with a cam having a H-measurement of 32 mm and a standard length of 45 mm. **RH** = Right hinged door. **LH** = Left hinged door.

* = Master key system on request.

**= Locks supplied with two keys.

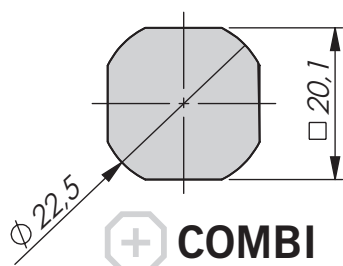
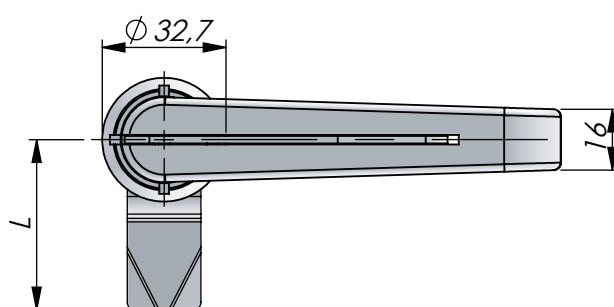
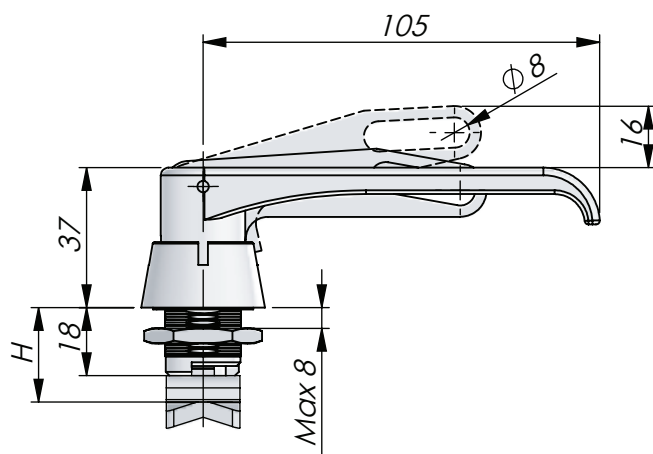


Quarter-turn L-handle in locking or non-locking version. Supplied with nut. Protection degree IP65.

The turning rotation may be programmed by setting the turning limiter in the bottom of the housing. This is however not needed when ordering this product assembled with cam.

LRP Quarter-Turn L-Handle - 18 mm (AAAAAA-B-HHLL)

| AAAAAA | Surface treatment | Description - cylinder | -B | Assembly | -HHLL | Cam size in mm |
|--------|-------------------|------------------------|----|----------|---|---------------------|
| 261905 | Silver | Non-locking | -0 | No cam | -0000 | No cam |
| 261605 | Black | Non-locking | -1 | RH | -HH45 | See page ref. above |
| 261906 | Silver | Keyed alike IL101 ** | -2 | LH | H between 4 - 50 mm in increments of 2 mm | |
| 261606 | Black | Keyed alike IL101 ** | | | | |
| 261907 | Silver | Keyed alike IL0333 ** | | | | |
| 261607 | Black | Keyed alike IL0333 ** | | | | |
| 261908 | Silver | Keyed to differ * | | | | |
| 261608 | Black | Keyed to differ * | | | | |



Material:

- Housing and handle: Zinc die-cast, chrome plated or black coated.
- Padlock loop: Steel, chrome plated or black coated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Screw and cam: Steel, zinc plated.

References, Accessories:

Other cams on page 2-480, 2-490, 2-510 and 2-520.
Rods: Page 2-540, 2-541 and 2-545.

Notes, Tests:

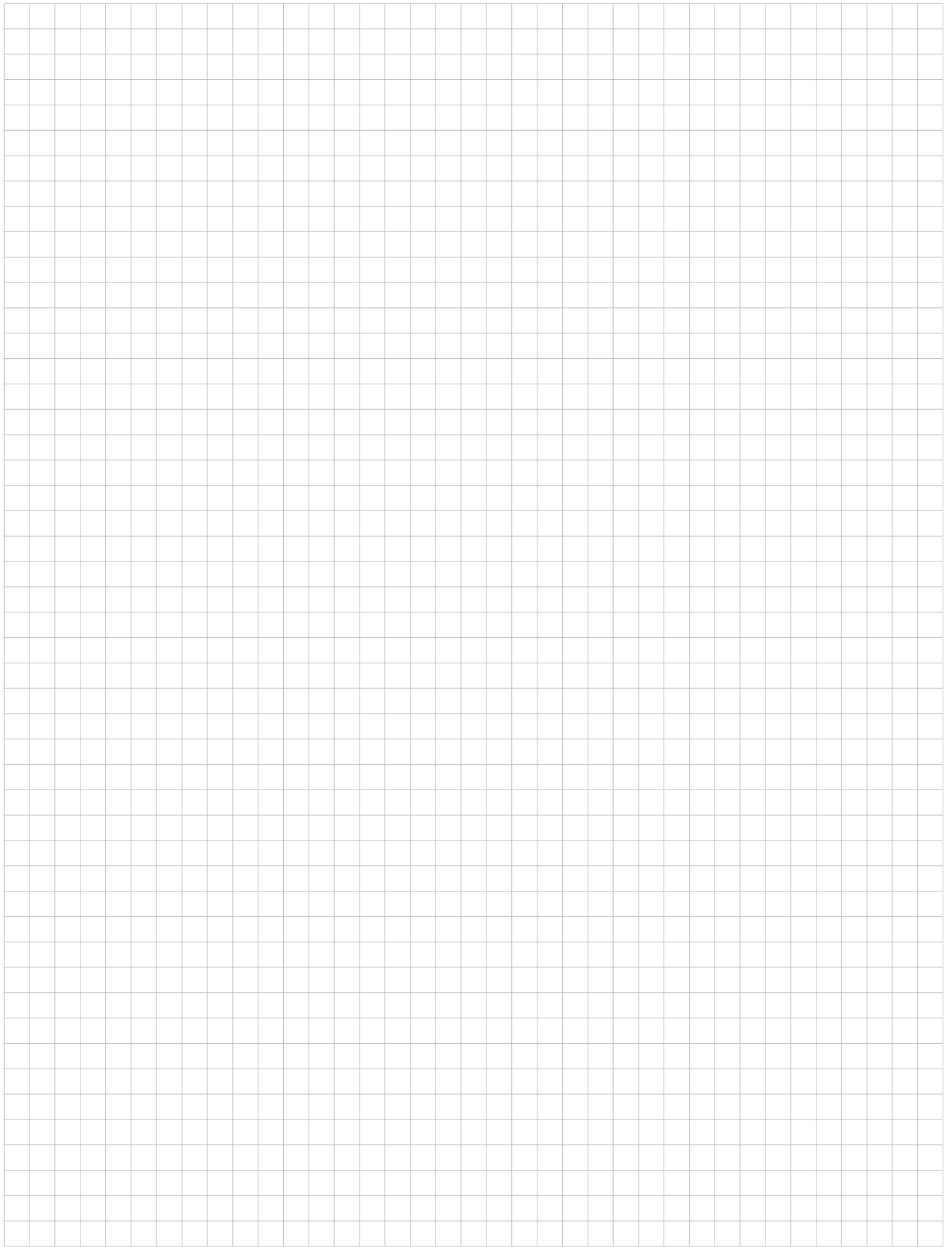
Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm).
Example: 261565-1-4045 is a black L-handle for a right hinged door with a standard fixation nut, and a cam having a H-measurement of 40 mm with standard length of 45 mm.

RH = Right hinged door.
LH = Left hinged door.

Quarter-turn L-handle for padlock, with spring loaded retractable padlock loop. Supplied with nut. Protection degree IP65, also classed "Waterproof according to NEMA 4".

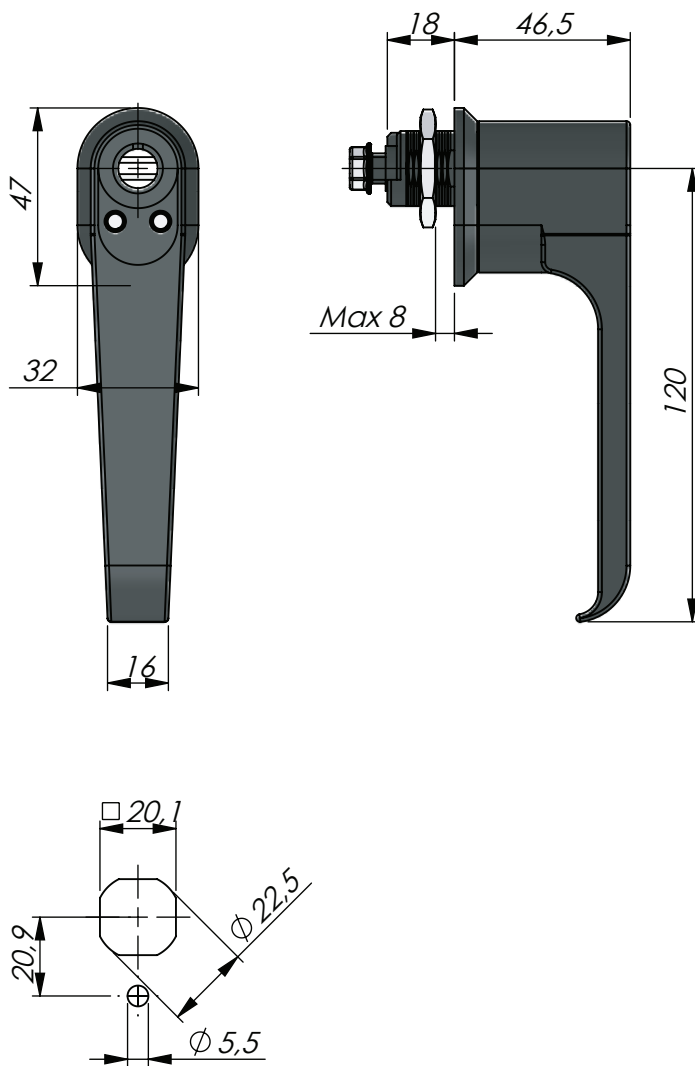
Padlockable Quarter-Turn L-Handle - 18 mm (AAAAAA-B-HHLL)

| AAAAAA | Description - surface treatment | Nut | -B | Assembly | -HHLL | Cam size in mm |
|--------|---------------------------------|--------------|----|----------|---|---------------------|
| 261364 | Chrome | Standard | -0 | No cam | -0000 | No cam |
| 261365 | Chrome | Earthing nut | -1 | RH | -HH45 | See page ref. above |
| 261564 | Black | Standard | -2 | LH | H between 4 - 50 mm in increments of 2 mm | |
| 261565 | Black | Earthing nut | | | | |



cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





IP54

Material:

- Housing and handle: Zinc die-cast, black powder coated.
- Nut: Zinc die-cast, zinc plated.
- Screw: Steel, zinc plated.

References, Accessories:

- Cams: Page 2-480, 2-490 and 2-510.
- Rods: Page 2-540, 2-541 and 2-545.

L-handle for Scandinavian oval cylinder. For right hinged door. Open by turning counter-clockwise. Supplied with nut. Combi cut-out, with an additional hole. Protection degree IP54.

L-Handle for Scandinavian Oval Cylinder

| P/N | Description - handle | P/N | Description - cylinders |
|--------|-----------------------------------|----------|--|
| 261572 | L-handle for 6- or 7-pin cylinder | 248801-3 | 6-pin cylinder - keyed alike IL 313526 |
| | | 248801-4 | 6-pin cylinder - keyed to differ |



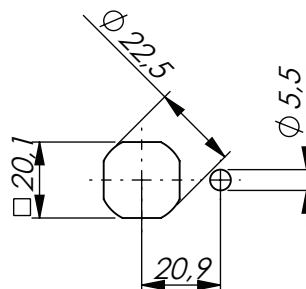
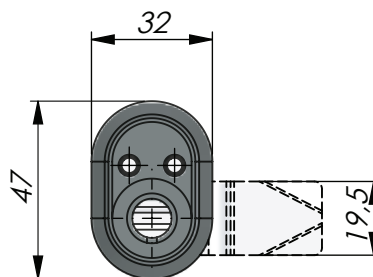
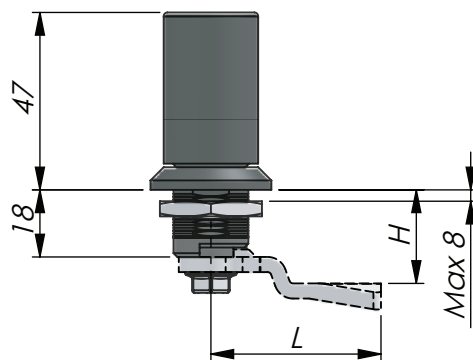
IP54

Material:

- Housing and casing: Zinc die-cast, black powder coated.
- Nut: Zinc, zinc plated.
- Screw: Steel, zinc plated.

References, Accessories:

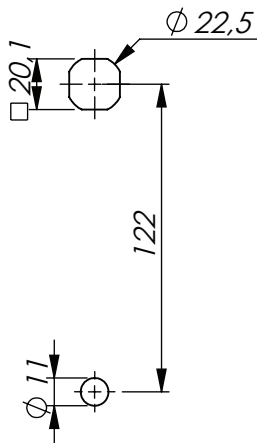
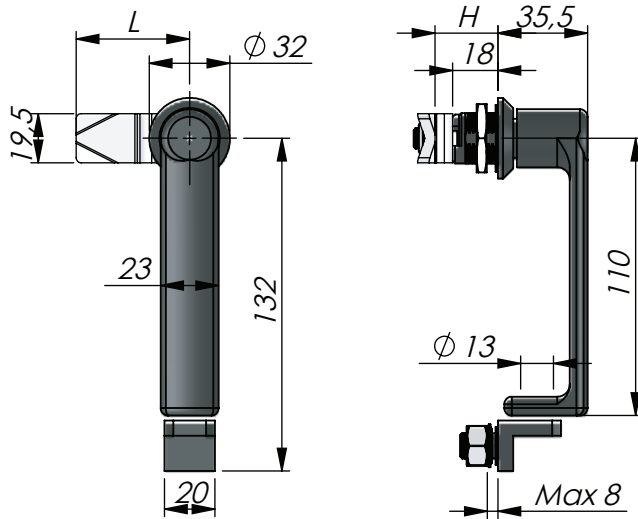
- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.



Lock knob for Scandinavian oval cylinder. For right hinged door. First, unlock the cylinder. Then open latch by turning the entire cylinder cover counter-clockwise. Supplied with nut. Combi cut-out, with an additional hole. Protection degree IP54.

Lock Knob for Scandinavian Oval Cylinder

| P/N | Product description | P/N | Product description |
|--------|------------------------------------|----------|--|
| 261573 | Lock knob for 6- or 7-pin cylinder | 248801-3 | 6-pin cylinder - keyed alike IL 313526 |
| | | 248801-4 | 6-pin cylinder - keyed to differ |



Material:

- Housing: Zinc die-cast, black coated.
- Handle and eyelet: Aluminium, black coated.
- Standard and Earthing nut: Zinc die-cast, zinc plated.
- Screw, nuts and cam: Steel, zinc plated.

References, Accessories:

- Stainless version: Page 6-170.
- Cams: 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.

Notes, Tests:

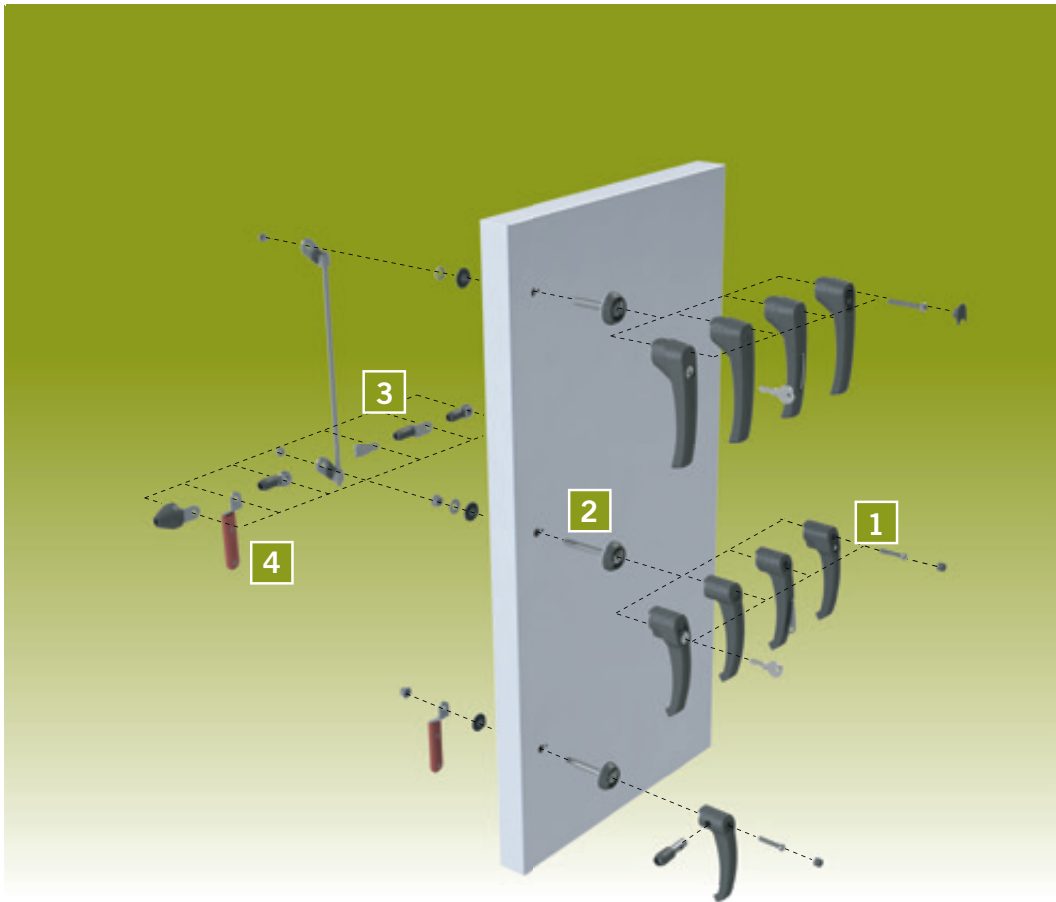
Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 264566-1-1645 is a padlockable handle for a right hinged door with a cam having a H-measurement of 16 mm.

RH=For right hinged door.
LH=For left hinged door.

Aluminium L-handle with eyelet for padlock. Supplied with nut. Protection degree IP65, also classed "Waterproof according to NEMA 4".

Padlockable Aluminium L-Handle - 18 mm (AAAAAA-B-HHLL)

| AAAAAA | Description - nut | -B | Assembly | -HHLL | Cam size in mm |
|--------|-------------------|----|----------|-------|---|
| 264566 | Standard | -0 | No cam | -0000 | No cam |
| 264567 | Earthing nut | -1 | RH | -HH45 | See page ref. above |
| | | -2 | LH | | H between 4 - 50 mm in increments of 2 mm |



Latching HVAC-applications with a modular system allows you to build your system according to need.



More information:
See page 2-310a-2-316a. More parts like hinges, sealing profiles, inspection windows and accessories: Chapter 3, 4 and 5.

K1 Latching system Klima-flex is developed for HVAC-applications. Thermal break between parts of metal and plastic. Sealing according to class L1 - L3 depending on model.

- 1** Handles with a variety of locking options.
- 2** Latching units.
- 3** Roller cams.
- 4** Optional components: rod link, safety catch and inside security handle.

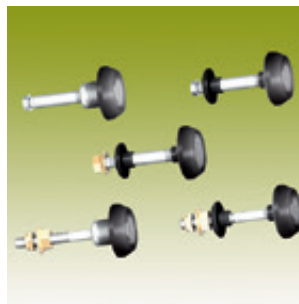
HVAC = Heating, Ventilation and Air Conditioning.

All handles for the K1-system fits doors that swing in or out. Models: non-locking, tool operated, padlockable or cylinder locking. Attaching the handles can wait until the HVAC-unit is shipped to its place of assembly. Read more: K1-handles with different locking versions: see page 2-310a/b.



Handle K1 with different locking functions. Catalogue page 2-310a/b.

The K1-latching units are available for two different hole patterns; Combi or K-flex. Read more: K1 latching units with shaft and collar, see pages 2-311a and 2-311b.



Latching units, K1 with axles. Catalogue page 2-311a/b.

The K1 roller cam reduces friction when opening and closing. It also increases compression of the sealing profile around the door. Roller cams are available in a variety of different shapes and dimensions. Read more: K1 roller cams, see page 2-312a and 2-312b.



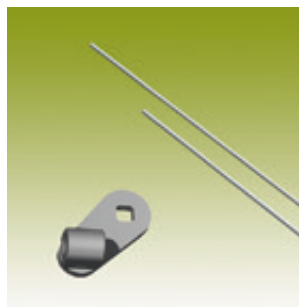
Roller cams for Klima-flex 1. Catalogue page 2-312b.

Inside options. On the inside, you can add several options to your roller cam according to your specific need. Rod link, safety catch - or inside security handle may be added as needed to the special roller cam equipped with a multi-grip fitting.



Inside handles. Catalogue page 2-312a/b.

Components for multi-point latching and inside emergency handles for walk-in applications (over 160 cm height). May be combined with other components.

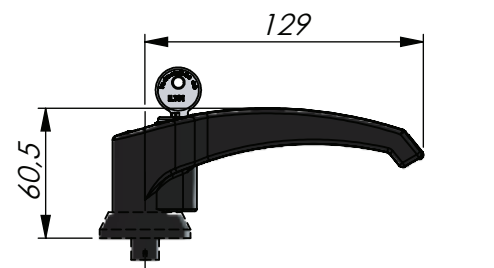


Rod latch system for multi-point latching. Catalogue page 2-313a/b.

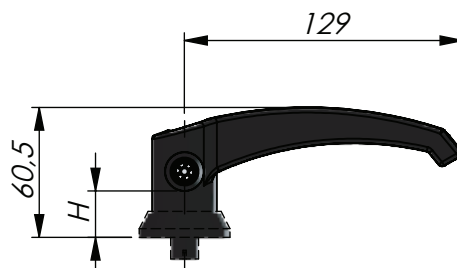
Surface mounted system for K1.



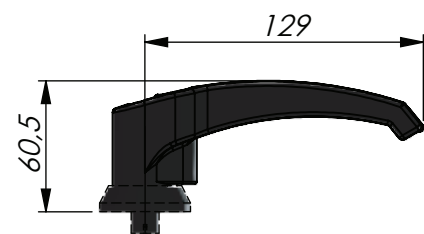
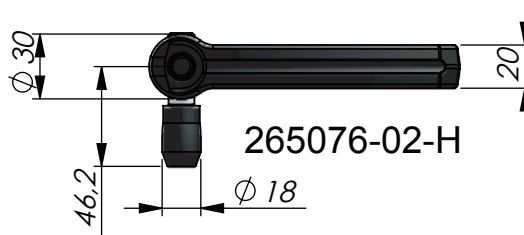
Surface mount K1 latching system for outswing doors. Catalogue page 2-316a.



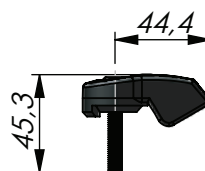
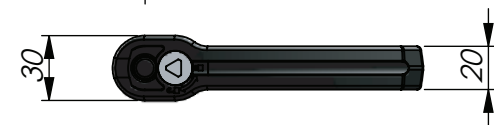
265076-10



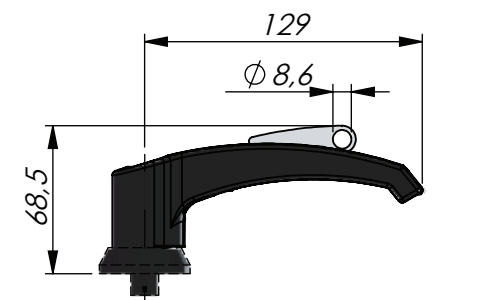
265076-02-H



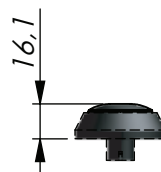
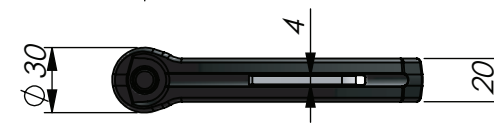
265076-3012



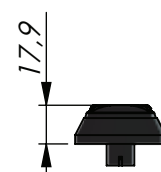
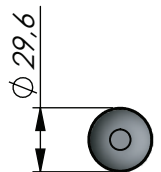
265077-00



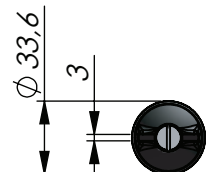
265076-60



265078-301



265076-302





HVAC handles - system Klima-flex is a latching system in locking or non-locking versions, for HVAC applications. The Klima-flex system is designed for quick and easy mounting of the handles on site. Handles for both inswing or outswing doors. Handles for inswing doors are supplied with customized roller cam. Locking versions use key extraction: Open/closed.

To build a complete unit:
 Latching units: Page 2-311a/b.
 Standard cams: page 2-481 and 2-491.
 Roller cams: Page 2-312a/b.
 Rod links and rods: Page 2-313a/b.
 Safety handles: Page 2-312b.
 Safety latches: Page 2-314.
 Keys: Page 2-370 and 2-372.

Material:

- Handle and roller: Glass fibre reinforced polyamide (PA6GF30), black.
- Insert: Zinc die-cast, black texture powder coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Padlock loop and cam shaft: Steel, zinc plated.

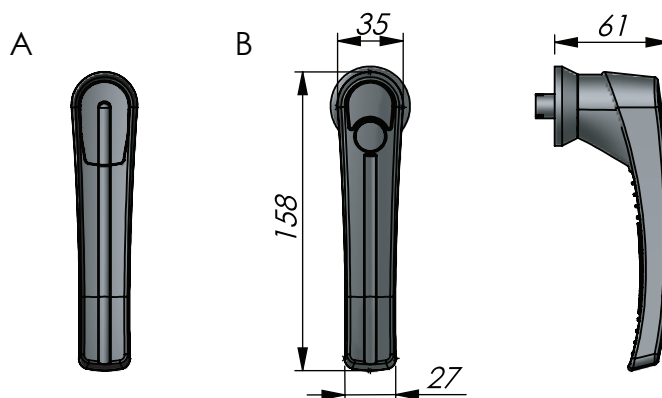
Notes, Tests:

1 = Customized cams (marked¹).
 Please provide us with the H-measurement.
 ** = Supplied with two keys.

HVAC Handles - System KLIMA-FLEX

| P/N | Description | Door | Outside roller cam included |
|------------------------------|---|----------|-----------------------------|
| 265076-00 | Non-locking | Outswing | - |
| 265076-02-H ¹ | Non-locking | Inswing | Yes |
| 265076-IL10-7-H ¹ | Keyed alike IL101 ** | Inswing | Yes |
| 265076-IL10 | Keyed alike IL101 ** | Outswing | - |
| 265076-10 | Keyed alike IL0333 ** | Outswing | - |
| 265076-12-H ¹ | Keyed alike IL0333 ** | Inswing | Yes |
| 265076-20 | Keyed to differ ** (master key system on request) | Outswing | - |
| 265076-22-H ¹ | Keyed to differ ** (master key system on request) | Inswing | Yes |
| 265076-62-H ¹ | Padlockable | Inswing | Yes |
| 265076-60 | Padlockable | Outswing | - |
| 265076-3009 | Insert Square 8 | Outswing | - |
| 265076-3209-H ¹ | Insert Square 8 | Inswing | Yes |
| 265076-3012 | Insert Triangle 7 | Outswing | - |
| 265076-3212-H ¹ | Insert Triangle 7 | Inswing | Yes |
| 265076-3023 | Insert Recessed hexagon 8 (5/16 inch) | Outswing | - |
| 265076-3223-H ¹ | Insert Recessed hexagon 8 (5/16 inch) | Inswing | Yes |
| 265077-00 | Knob | Outswing | - |
| 265078-301 | Cover plug for latching units | - | - |
| 265078-302 | Slotted cover plug for latching units | - | - |





Material:

- Handle: Glass fibre reinforced polyamide (PA6GF30), black.
- Torx T-30 screw: Steel, zinc plated.

References, Accessories:

- Keys: Page 2-370 and 2-372.

Notes, Tests:

Inside handle may only be used in combination with non-locking outside handle.

Red handles available on request.

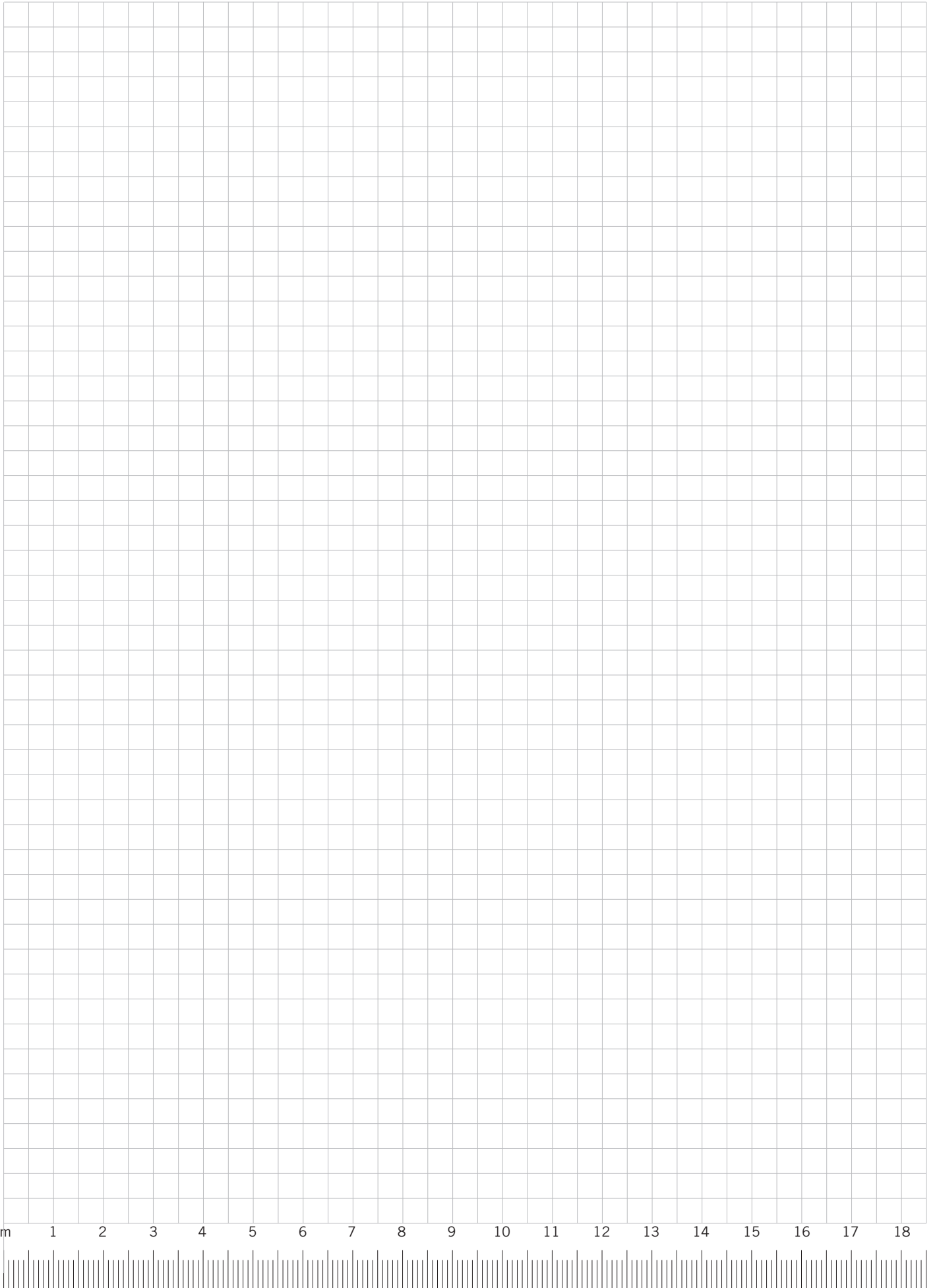
With these handles can your Klima-flex 1 (K1) latching unit be equipped with the next generation Klima-flex 2 (K2) handles. A large supply of handle combinations are available - tool operated, key locking, pad-locking and non-locking, depending on your application. System Klima-flex for HVAC applications is designed for extreme simplicity in mounting in your insulated (double skinned) door application. Handles may be used on either inside or outside of the door.

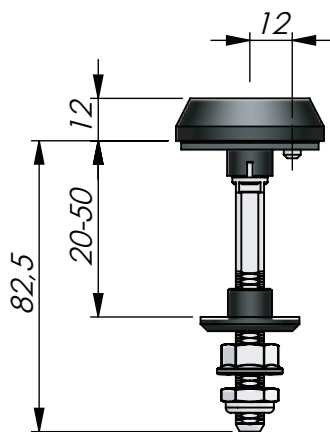
Key extraction: Open / closed.

Products marked with * are key-locking and are supplied with two keys.

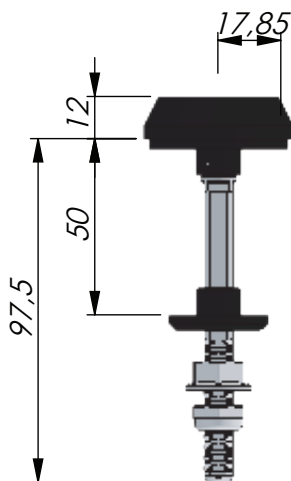
K2 Handles for K1 Latching Units

| P/N | Description | Latching type |
|-------------|--------------------------------------|--------------------------------|
| 2651-215400 | Without roller cam | Non-locking |
| 2651-215505 | Without roller cam | Square 8 |
| 2651-215514 | Without roller cam | Triangle 7 |
| 2651-215534 | Without roller cam | Recessed hexagon 8 (5/16 inch) |
| 2651-215680 | Without roller cam | IL101 * |
| 2651-215681 | Without roller cam | IL0333 * |
| 2651-215690 | Without roller cam | Keyed to differ * |
| 2651-235700 | One-piece handle. Without roller cam | Pad-lockable |
| 2651-235400 | One-piece handle. Without roller cam | Non-locking |

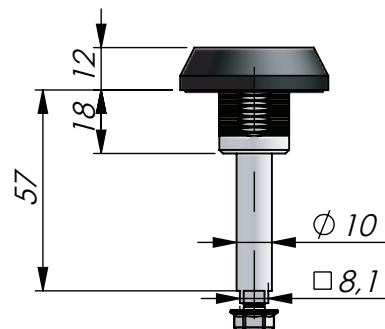




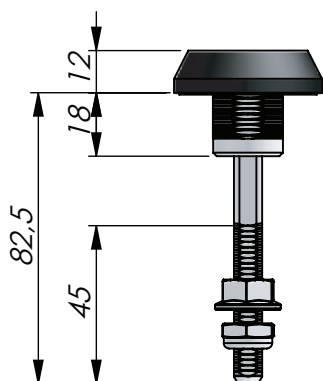
265078-S50



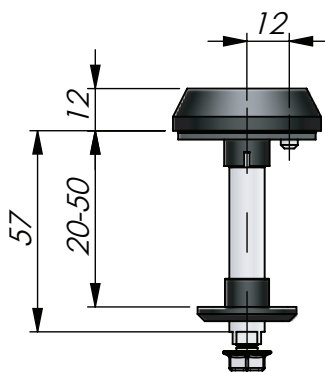
265078-S50-G40



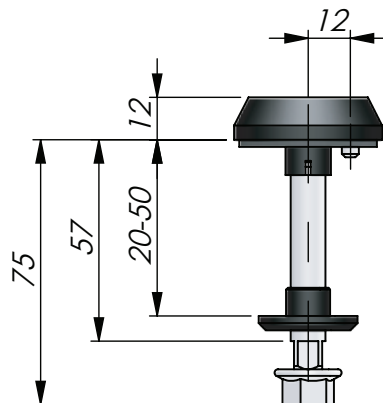
265078-GC50



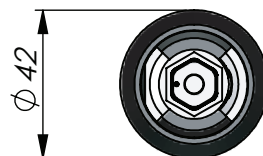
265078-SC50

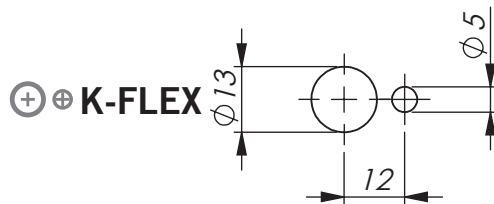
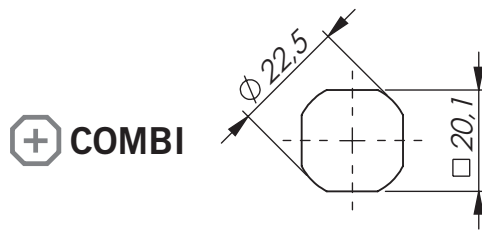


265078-G50



265078-M50





Material:

- Shaft: Zinc die-cast, zinc plated or steel, zinc plated.
- Housing: Zinc die-cast, zinc plated.
- Collar and washer: Glass fibre reinforced polyamide (PA6GF30).
- Nut: Zinc, zinc plated.
- Screw: Steel, zinc plated.

References, Accessories:

- Handles: Page 2-310 a/b/c.
- Roller cams: Page 2-312a/b.
- Standard cams: Page 2-481.
- Rod links and rods: Page 2-313a/b.
- Safety handles: Page 2-312b.
- Safety latches: Page 2-314.
- Spacer nuts: Page 2-410 (thread Y).

Notes, Tests:

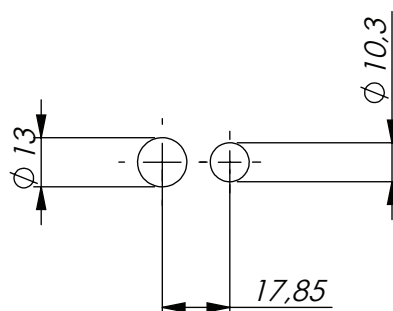
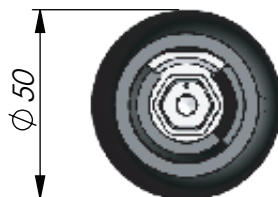
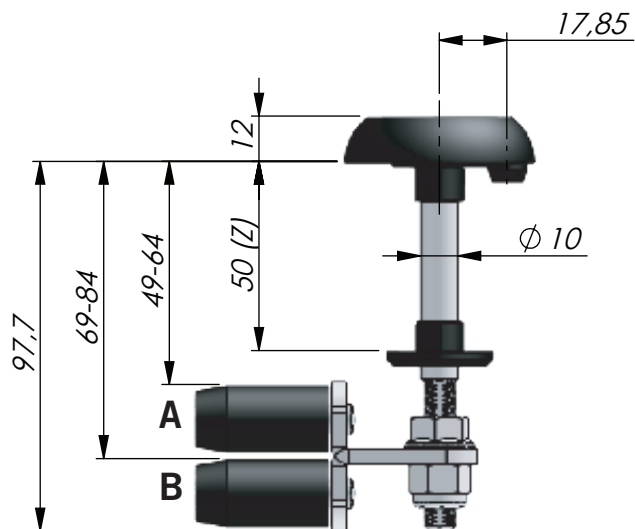
*HVAC = Heating, Ventilation and Air Conditioning.

Latching units - System Klima-flex for HVAC* applications. The Klima-flex system is designed for quick and easy mounting. Two different cut-out versions, Combi or K-Flex. Cut-out Combi is fixed with a spacer nut and cut-out K-Flex is fixed with either a cam, regular nut or a starlock washer.

Inside options: Unit S50, S100 and SC50 can accommodate all accessories. Unit M25, M50 and M60 accommodates a cam and can be complemented with an inside handle or a rod link. Unit G50 and GC50 can accommodate a cam only.

Latching Units - System KLIMA-FLEX

| P/N | Description | Shaft | Cam | Door thickness | Cut-out |
|----------------|----------------------------|-------|------------|----------------|---------|
| 265078-G50 | Round shaft | Zinc | Fixed | 50 mm | K-Flex |
| 265078-GC50 | Round shaft | Zinc | Fixed | 50 mm | Combi |
| 265078-M25 | Round shaft | Steel | Fixed | 25 mm | K-Flex |
| 265078-M50 | Round shaft | Steel | Fixed | 50 mm | K-Flex |
| 265078-M60 | Round shaft | Steel | Fixed | 60 mm | K-Flex |
| 265078-S50 | Threaded square 8 mm shaft | Steel | Adjustable | 50 mm | K-Flex |
| 265078-S100 | Threaded square 8 mm shaft | Steel | Adjustable | 100 mm | K-Flex |
| 265078-SC50 | Threaded square 8 mm shaft | Steel | Adjustable | 50 mm | Combi |
| 265078-S25-G40 | Threaded square 8 mm shaft | Steel | Adjustable | 25 mm | K-Flex |
| 265078-S50-G40 | Threaded square 8 mm shaft | Steel | Adjustable | 50 mm | K-Flex |
| 265078-S60-G40 | Threaded square 8 mm shaft | Steel | Adjustable | 60 mm | K-Flex |
| 265078-S75-G40 | Threaded square 8 mm shaft | Steel | Adjustable | 75 mm | K-Flex |





Material:

- Shaft: Stainless steel (303).
- Collar and washer: Glass fibre reinforced polyamide (PA6GF30), black.
- Nuts: Stainless steel (304).
- Cams 2330S07-R01 and

Stainless latching units - System Klima-flex 1 (K1) for HVAC applications. The Klima-flex system is designed for quick and easy mounting. The cam can be placed anywhere on the threaded area of the shaft using counter nuts. See drawing and table below for min/max positions of cams. The stainless version has a special cut out seen on the drawing.

The Klima-flex latching unit is fixed with a starlock washer.

* Grip range for cam in position A or B on page 2-311c.

Handles: Page 2-310 a/b/c.

Roller cams: Page 2-312d.

Rod links, rods and inside handles: Page 2-313a/b.

** See this combination of latching unit 263079-S50-G40 with roller cam 2330S07-R05 in the drawing on page 2-311c.

Inside options: All latching units can be completed with an inside handle, roller cam and a rod link.

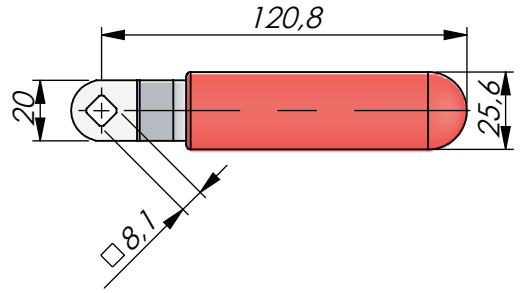
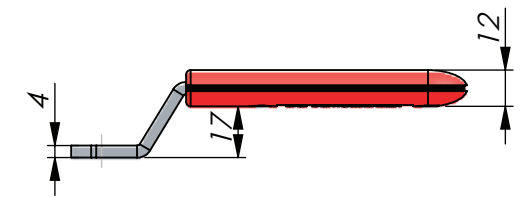
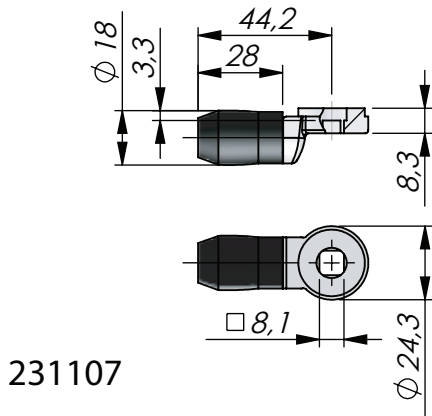
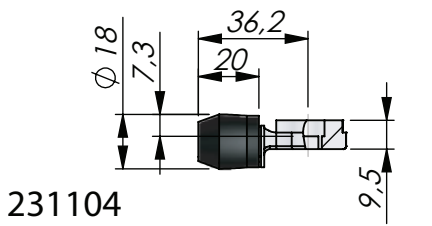
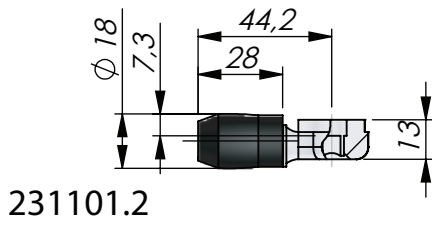
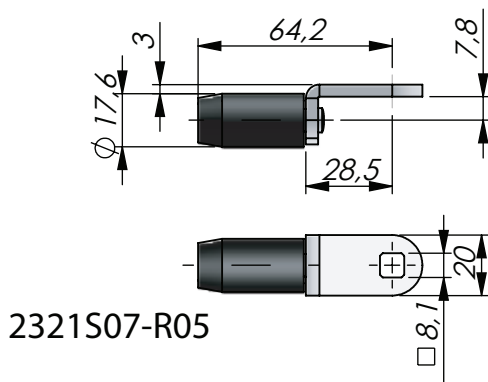
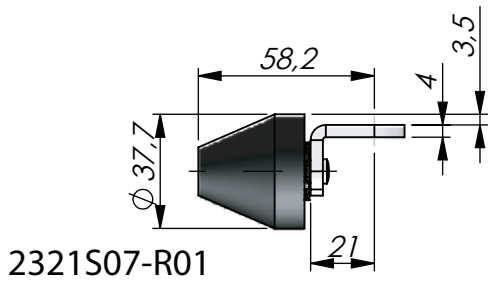
Latching Units - System KLIMA-FLEX

| P/N | Description | Shaft | Cam | Door thickness=T |
|----------------|-------------|-----------|------------|------------------|
| 263079-S25-G40 | Round shaft | Stainless | Adjustable | 25 mm |
| 263079-S30-G40 | Round shaft | Stainless | Adjustable | 30 mm |
| 263079-S50-G40 | Round shaft | Stainless | Adjustable | 50 mm |
| 263079-S60-G40 | Round shaft | Stainless | Adjustable | 60 mm |

Max/Min Measurements for Stainless Cams on Stainless Latching Units - System KLIMA-FLEX

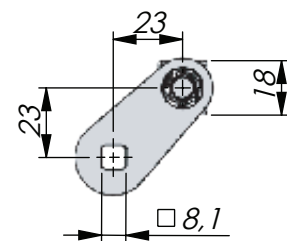
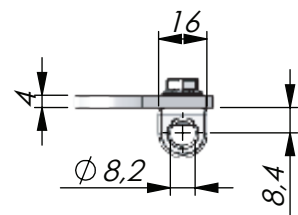
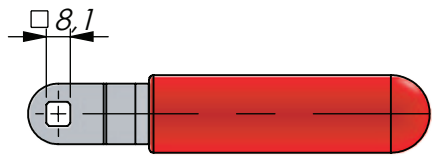
| Latching unit | Cam | Grip range * | Cam | Grip range * | Cam | Grip range * |
|-------------------|----------------|--------------------|-------------|--------------------|----------------------------------|--------------------|
| 263079-S25-G40 | 2330S07-R05 | A=22-38 B=42-58 | 2330S07-R08 | A=8-25 B=35-51 | 2330S07-R01 or 2330S07-R06 | A=1-17 B=43-59 |
| 263079-S30-G40 | 2330S07-R05 | A=27-43 B=47-63 | 2330S07-R08 | A=13-30 B=40-56 | 2330S07-R01 or 2330S07-R06 | A=6-22 B=48-64 |
| 263079-S50-G40 ** | 2330S07-R05 ** | A=47-63 B=67-83 | 2330S07-R08 | A=33-50 B=60-76 | 2330S07-R01 or 2330S07-R06 | A=26-42 B=68-84 |
| 263079-S60-G40 | 2330S07-R05 | A=57-73 B=77-93 | 2330S07-R08 | A=43-60 B=70-86 | 2330S07-R01 or 2330S07-R06 | A=36-52 B=78-94 |





265076-50

265076-52



265079-10



Material:

- Handle: Steel, zinc plated and glass fibre reinforced polyamide (PA6GF30), black or red.
- Roller cam: Zinc die-cast, zinc plated, steel, zinc plated and glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

- Interlink rods: Page 2-313a and 2-313b.

Notes, Tests:

*HVAC = Heating, Ventilation and Air Conditioning.

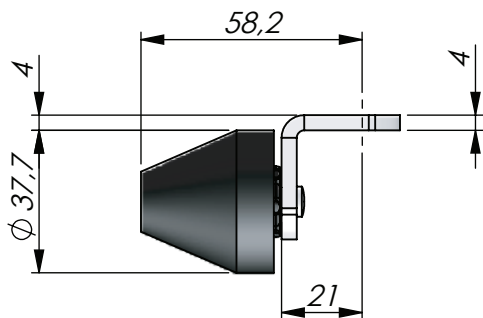
Inside handle is only approved in combination with non-locking outside handle.

Roller cams and inside handles - System Klima-flex for HVAC* applications. The Klima-flex system is designed for quick and easy mounting. Roller cams reduces the friction in the latching operation and increase the gasket compression.

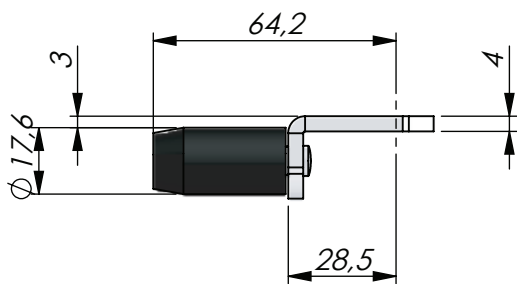
Roller Cams and Inside Handles - System KLIMA-FLEX

| P/N | Description | For locking unit | P/N | Description | For locking unit |
|-------------|---|------------------|-------------|---|------------------|
| 231101.1 | Roller cam | -G50, -GC50 | 231101.2 | Roller cam | All |
| 231104 | Roller cam, short version | All | 231107 | Roller cam | All |
| 2321S07-R01 | Roller cam - roller diameter 37,7 mm | All | 2321S07-R05 | Roller cam - roller diameter 17,6 mm | All |
| 265076-50 | Inside red handle, diagonal mounting | All | 265076-51 | Inside black handle, diagonal mounting | All |
| 265076-52 | Inside red handle, vertical/horizontal mounting | All | 265076-53 | Inside black handle, vertical/horizontal mounting | All |

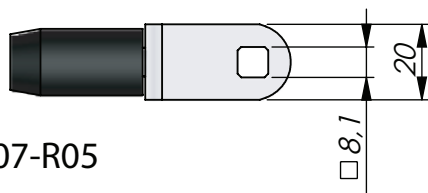




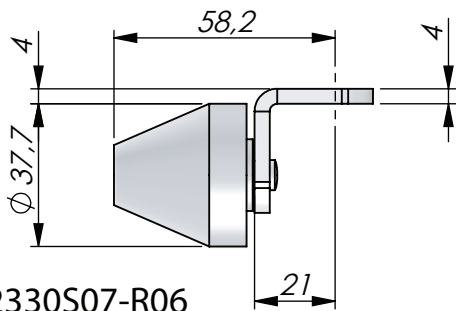
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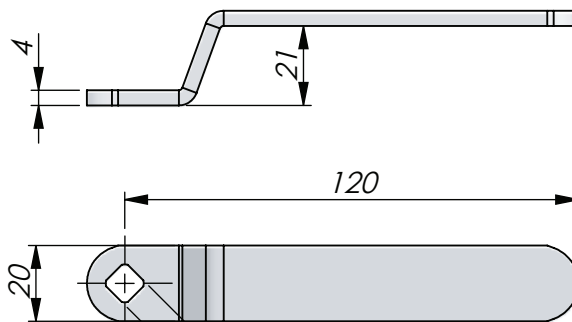
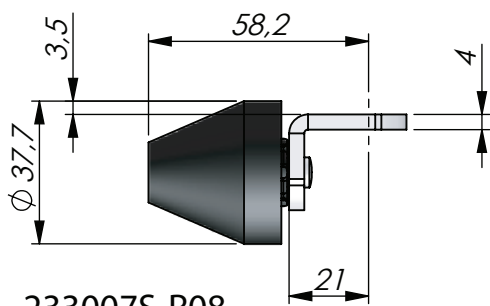
2330S07-R05



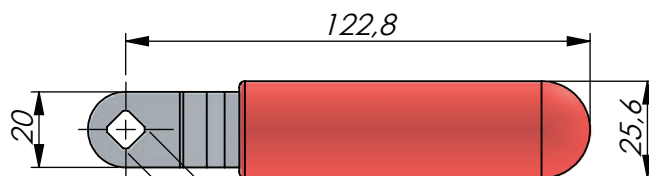
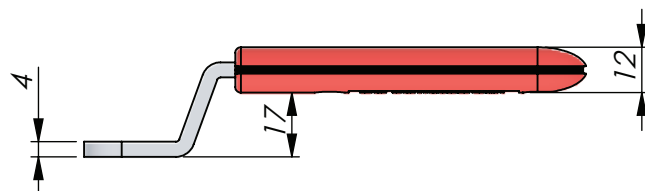
2330S07-R06



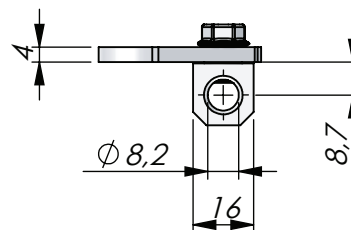
233007S-R08



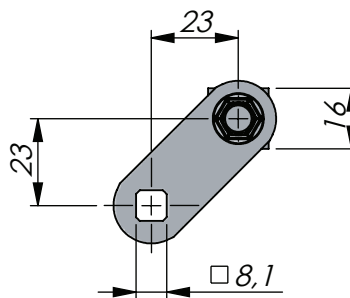
263076-54



263076-50



263079-10





Material:

- Roller cam: Stainless steel (304) and glass fibre reinforced polyamide (PA6GF30), black, or stainless steel.
- Inside handle: Stainless steel (304).
- Red cover: Plastic, screws in stainless steel (304).
- Interlink arm: Stainless steel (304).

References, Accessories:

Interlink rods: Page 2-313a and 2-313b.

Notes, Tests:

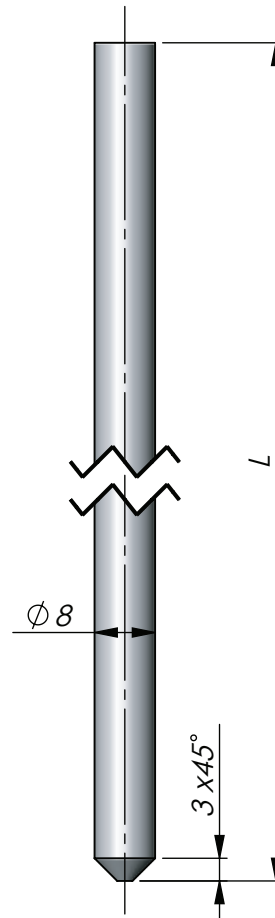
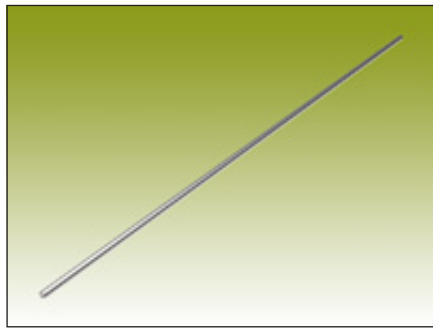
Note: Inside handle is only approved in combination with non-locking outside handle.

Stainless roller cams and inside handles - System Klima-flex 1 (K1) for HVAC* applications. The Klima-flex system is designed for quick and easy mounting. Roller cams reduces the friction in the latching operation and increase the gasket compression.
*HVAC = Heating, Ventilation and Air Conditioning.

Roller Cams, Rod Link and Inside Handle - System KLIMA-FLEX

| P/N | Description | For locking unit | P/N | Description | For locking unit |
|-------------|---|------------------|-------------|---------------------------|------------------|
| 2330S07-R01 | Roller cam, roller in PA6 | All | 2330S07-R05 | Roller cam, roller in PA6 | All |
| 2330S07-R06 | Roller cam, roller in stainless steel (303) | All | 2330S07-R08 | Roller cam, roller in PA6 | All |
| 263076-54 | Inside handle, untreated | All | 263076-50 | Inside handle - red cover | All |
| 263079-10 | Interlink arm for Ø 8 mm latching rod. | All | | | |





Material:

- Steel, zinc plated, or stainless steel (304).

References, Accessories:

- Rod link: Page 2-313b.

Notes, Tests:

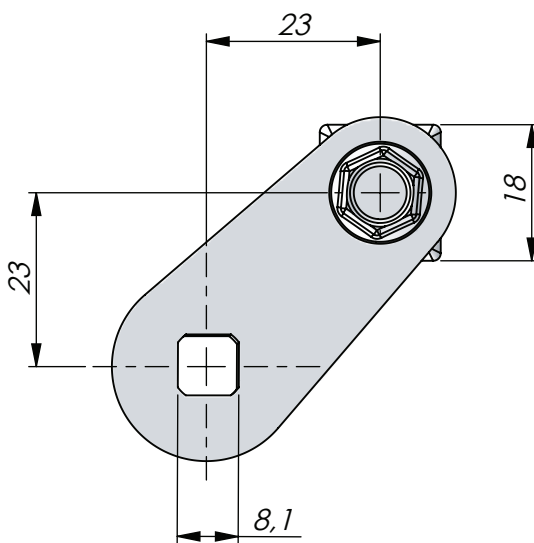
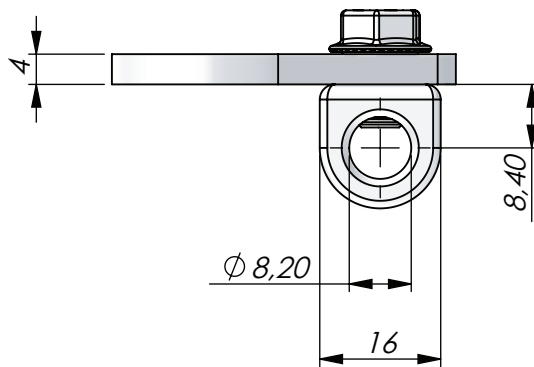
*HVAC = Heating, Ventilation and Air Conditioning.

Interlink rods - system Klima-flex for HVAC* applications. To operate two or more locking units with one handle, they can be connected with an interlink rod and rod links. The rod link clamps onto the interlink rod, enabling you to connect several latching units to one handle etc. Supplied in fixed lengths or custom lengths according to table.

Special rod-lengths (marked ¹) on request only.

Interlink Rods - System KLIMA-FLEX

| P/N, Steel | P/N, Stainless steel (304) | Description | P/N, Steel | P/N, Stainless steel (304) | Description |
|-------------|----------------------------|-------------|-----------------------|----------------------------|-----------------------------|
| 282150-900 | 283050-900 | L=900 mm | 282150-1000 | 283050-1000 | L=1000 mm |
| 282150-1100 | 283050-1100 | L=1100 mm | 282150-1200 | 283050-1200 | L=1200 mm |
| 282150-1300 | 283050-1300 | L=1300 mm | 282150-1400 | 283050-1400 | L=1400 mm |
| 282150-1500 | 283050-1500 | L=1500 mm | 282150-1600 | 283050-1600 | L=1600 mm |
| 282150-1700 | 283050-1700 | L=1700 mm | 282150-L ¹ | 283050-L ¹ | L = Custom rod length in mm |



Material:

- Link: Steel, zinc plated or stainless steel (304).
- Rod connection: Zinc die-cast, zinc plated or stainless steel (303).
- Screw: Steel, zinc plated or stainless steel (304).

References, Accessories:

- Interlink Rods: Page 2-313a.

Notes, Tests:

*HVAC = Heating, Ventilation and Air Conditioning.

Rod link - system Klima-flex for HVAC* applications. To operate two or more locking units with one handle, they can be connected with an interlink rod and rod links. The rod link clamps onto the interlink rod, enabling you to connect several latching units to one handle.

Rod Link - System KLIMA-FLEX

| P/N | Description | Material |
|-----------|-------------|--------------------|
| 265079-10 | Rod link | Steel, zinc plated |
| 263079-10 | Rod link | Stainless |


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Material:

- Locking unit: Zinc, zinc plated, steel, zinc plated and glass fibre reinforced polyamide (PA6GF30), black.
- Safety cam: Glass fibre reinforced polyamide (PA6GF30), black.
- Roller cam: Zinc, zinc plated and glass fibre reinforced polyamide (PA6GF30), black.

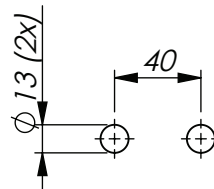
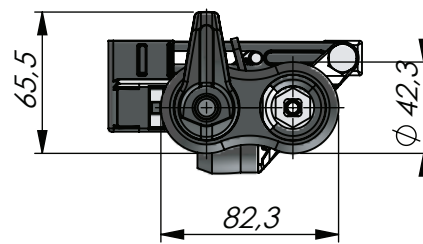
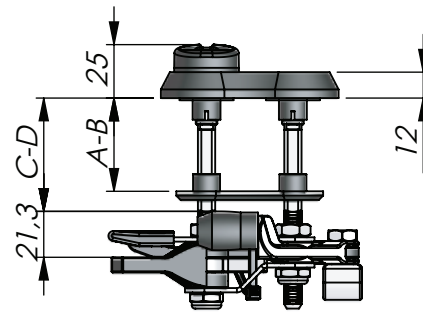
References, Accessories:

- Handle: Page 2-310a, 2-310b and 2-310c.

Notes, Tests:

Products are available on request only.

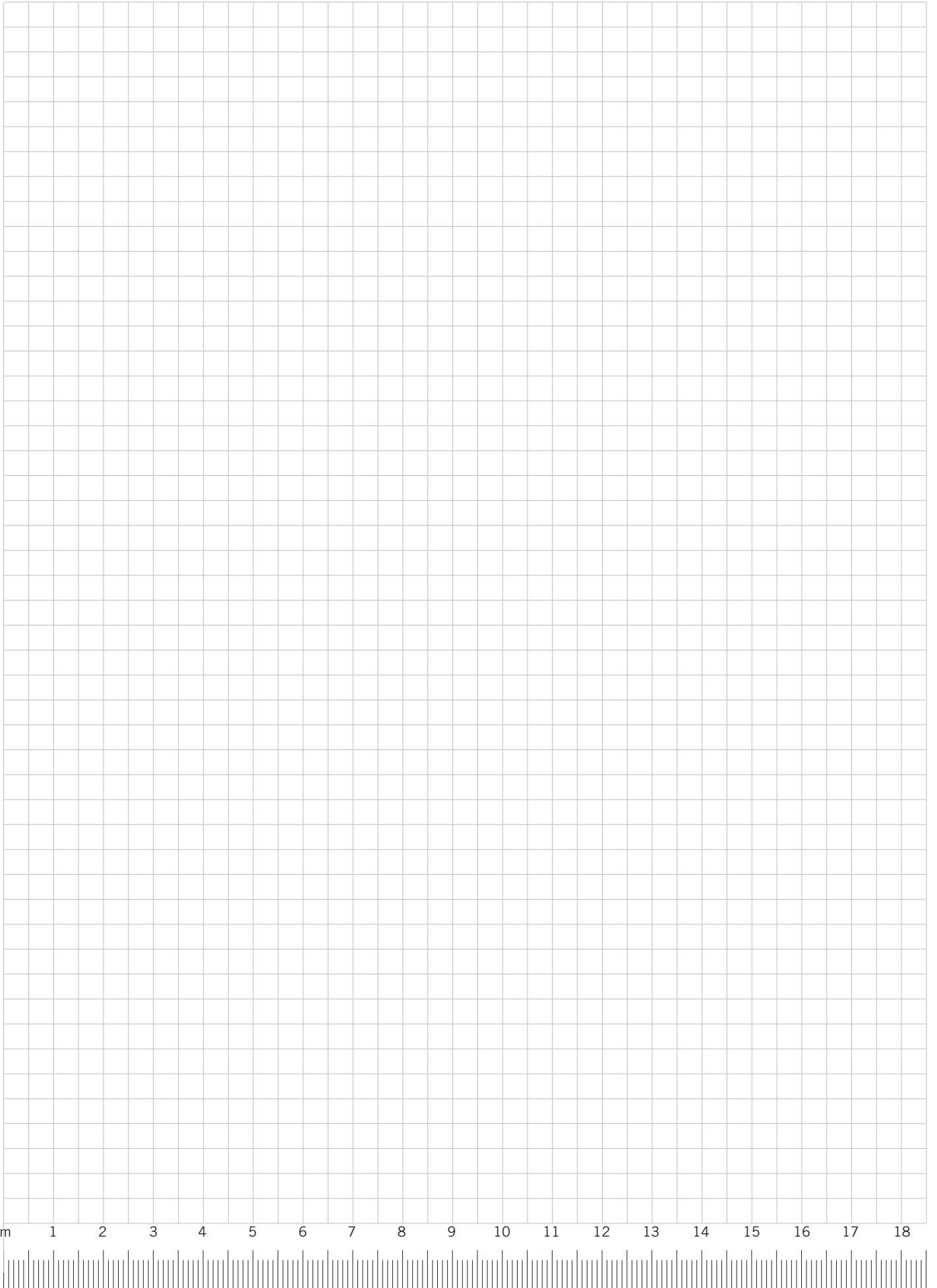
*HVAC = Heating, Ventilation and Air Conditioning.

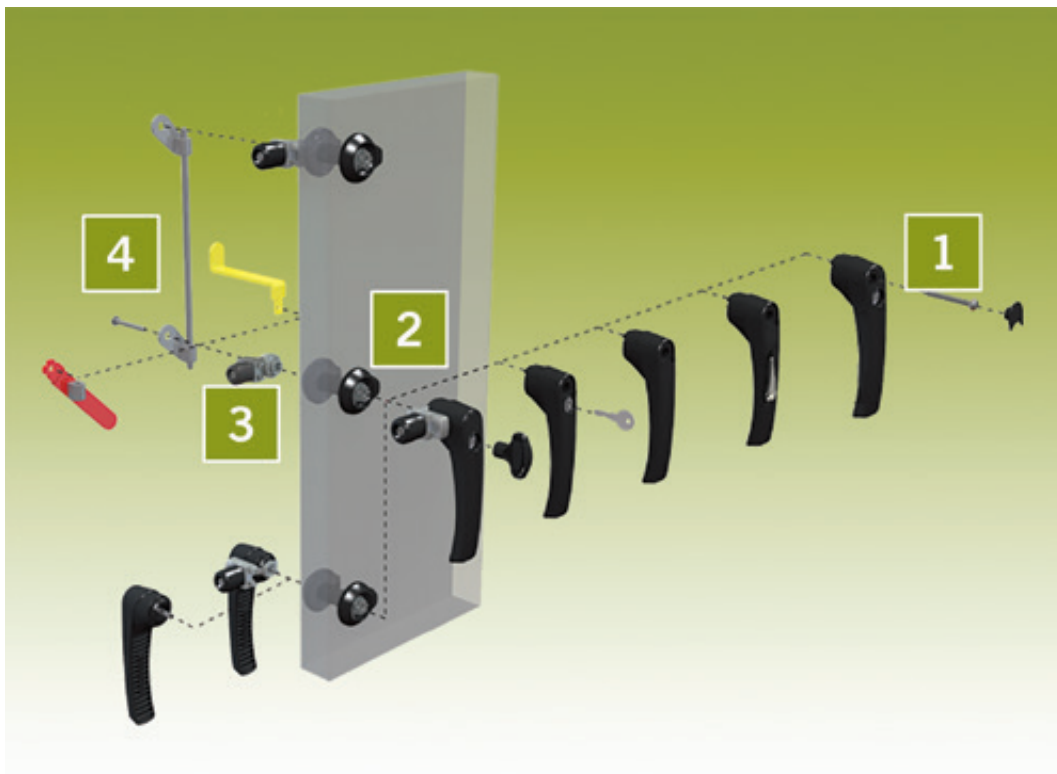


Safety catch - system Klima-flex for HVAC* applications is used for pressurized HVAC units. To prevent doors from opening up without control, the safety catch secondary cam catches the door while positive air pressure escapes. When the secondary knob is turned, the door is opened safely. When operating the latch during closing, the safety catch automatically resets. The safety catch is compatible with all handles in the Klima-flex 1 system (K1).

Safety Catch - System KLIMA-FLEX

| P/N | A-B Min | A-B Max | C-D Min | C-D Max | Description - version |
|-------------|---------|---------|---------|---------|-----------------------|
| 265078-T25H | 18 | 30 | 32 | 38 | Right |
| 265078-T25V | 18 | 30 | 32 | 38 | Left |
| 265078-T40H | 18 | 45 | 47 | 53 | Right |
| 265078-T40V | 18 | 45 | 47 | 53 | Left |
| 265078-T50H | 18 | 55 | 57 | 63 | Right |
| 265078-T50V | 18 | 55 | 57 | 63 | Left |
| 265078-T85H | 18 | 80 | 82 | 88 | Right |
| 265078-T85V | 18 | 80 | 82 | 88 | Left |





- | | |
|----------|---|
| 1 | Handles: Page 2-315d1 and 2-315d2. |
| 2 | Latching units: Page 2-315c1 and 2-315c2. |
| 3 | Roller cams: Page 2-315e. |
| 4 | Inside options: Page 2-315f. |

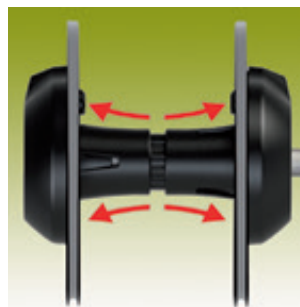
For out-swing door:

- 1) Choose a latching unit corresponding to the thickness of the door: Page 2-315c.
- 2) Choose handle: Page 2-315d.
- 3) Choose a roller cam: Page 2-315e
- 4) If needed, choose an inside option: See page 2-315f for rod link, safety catch or inside safety handle. See page 2-315d for regular inside handle.

In-swing door:

- 1) Choose a latching unit corresponding to the thickness of the door: Page 2-315c.
- 2) Choose handle: Page 2-315d.
- 3) If you need, choose an inside handle from see page 2-315d or an inside safety handle from page 2-315f.

Patented function clamps latch on to doors. The expanding spacers are engaged and affix themselves to the door skins from the inside of the door. This creates a stable unit with fixed door skins that do not move in relation to each other. The thin sheet metal door skins are firmly fixed in position with our patented dual door skin support.



Patented latching unit K2 with expanding "legs". Catalogue page 2-315c

Handle with different locking options. Handle may be locked with key, or with one of several tool inserts. It may also be supplied as a non-locking version making the handles very versatile in your application. The handles may also be interchanged after installation if your need changes after time. Designed for ease on installation in the factory or in the field, the handles are mounted with a single screw. Also - we can easily mould your logo right into the handle for added advertising benefit.



Handles K2 with various locking methods. Catalogue page 2-315d

Roller cam is adjustable. The Klima-flex-2 roller cam is mounted and adjustable with a Torx-bit. This function makes it possible to adjust the roller cam for a wide range of frame thicknesses and for the right compression. The roller cam reduces the friction during the latching operation. Set it so that the door closes smoothly and is kept securely closed.



Adjustable roller cam K2. Catalogue page 2-315e

Inside options. On the inside, you can add several options to your roller cam according to your specific need. Rod link, safety catch or inside security handle may be added as needed to the roller cam.



Safety catch. Catalogue page 2-315f

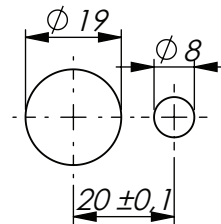
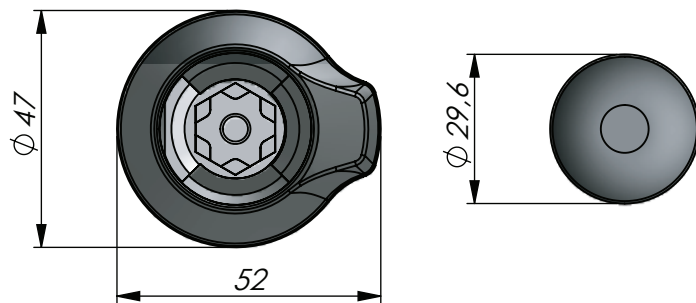
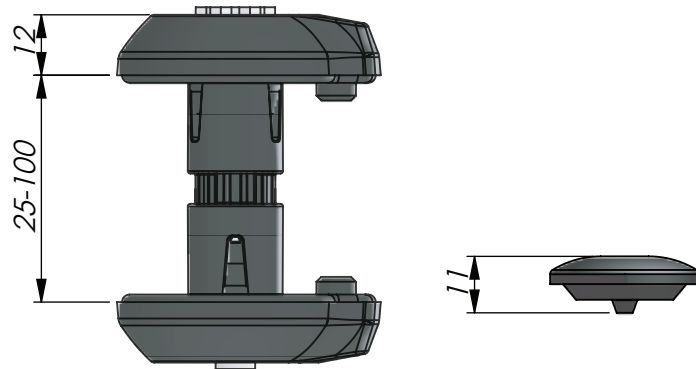
Emergency handle. Components for multi-point latching and inside emergency handles for walk-in applications. May be combined with other components.



Inside handle, multi-point latching. Catalogue page 2-315f

All screws on the system use only one tool. Torx bit T-30 is used all over the system and this makes it easy to both install the unit in a door, add handle and adjust the roller cam to perfection.





Small hole towards hinge side of door

Material:

- Latching unit: Zinc, zinc plated and glass fibre reinforced polyamide (PA6GF30), black.
- Screw: Steel, zinc plated.

References, Accessories:

- Interlink Rods: Page 2-313a.
- Rod links: Page 2-313b.
- Handles: Page 2-315d.
- Roller cam: Page 2-315e.
- Inside options: Page 2-315f.

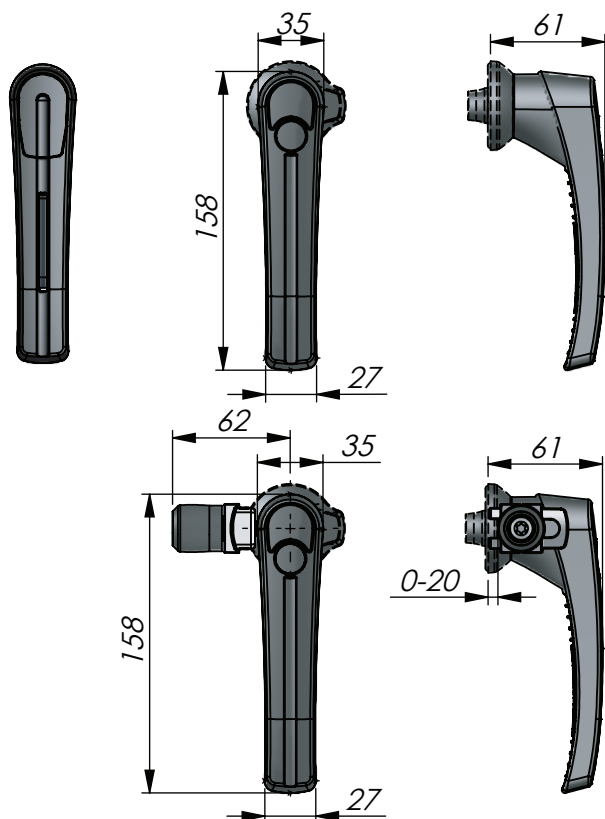
Notes, Tests:

Cover plug is used to cover latching point when handle is not used.
 *HVAC = Heating, Ventilation and Air Conditioning.

The patented K2-technology allows for quick mounting in HVAC*-units using double-skinned doors with the thicknesses described in the table below. When the screw is turned with a Torx-bit (not included) expanding "legs" are engaged and fix the door skins from the inside of the door. You can wait until the last minute adding the handle on the inside or outside - and you are free to add a rod link or safety catch with no changes to the latching unit. K2 - System Klima-flex 2 for HVAC* applications is designed for quick and easy mounting. Roller cams reduces the friction in the latching operation and increase the gasket compression.

KLIMA-FLEX 2 - Latching Units

| P/N | Description | For door thickness (Tolerance ± 2,5 mm) |
|-------------|------------------|---|
| 2651-101025 | K2 latching unit | 25 mm (1") |
| 2651-101030 | K2 latching unit | 30 mm (1,2") |
| 2651-101035 | K2 latching unit | 35 mm (1,4") |
| 2651-101043 | K2 latching unit | 43 mm (1,7") |
| 2651-101045 | K2 latching unit | 45 mm (1,75") |
| 2651-101050 | K2 latching unit | 50 mm (2") |
| 2651-101060 | K2 latching unit | 60 mm (2.4") |
| 2651-101070 | K2 latching unit | 70 mm (2.75") |
| 2651-101075 | K2 latching unit | 75 mm (3") |
| 2651-101095 | K2 latching unit | 95 mm (3.7") |
| 2651-101100 | K2 latching unit | 100 mm (4") |
| 265078-301 | Cover plug | - |



Material:

- Handle: Glass fibre reinforced polyamide (PA6GF30), black.
- Roller cam: Steel, glass fibre reinforced polyamide (PA6GF30).
- Screw: Steel, zinc plated.

References, Accessories:

Keys: Page 2-370 and 2-372.

Latching units: Page 2-315c.

Notes, Tests:

Products marked with * are key-locking and are supplied with two keys. Contact us for K2-handles with the roller cam pre-mounted on the right hand side.

Note: Inside handle is only approved in combination with non-locking outside handle.

Red handles available on request.

A large supply of handle combinations are available - tool operated, key locking and non-locking, depending on your application.

The handle design is registered. System K2 (Klima-flex 2) for HVAC-applications is designed for extreme simplicity in mounting in your insulated (double skinned) door application. Handles may be used on either inside or outside of the door.

The inswing handle has a built-in adjustable roller cam that reduces the friction in the latching operation and increase the gasket compression. The cam is normally placed on the left side of the handle (as per drawing above) but may be moved to the other side.

Key extraction: Open / closed.

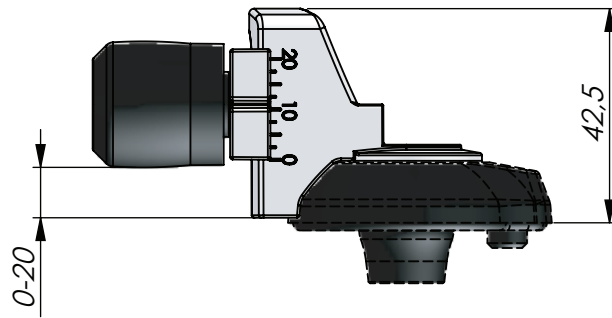
Inside and outside handles - system KLIMA-FLEX 2

| P/N | Description | Latching type | P/N | Description | Latching type |
|-------------|--------------------------------------|----------------------------------|-------------|--------------------------------------|----------------------------------|
| 2651-205000 | With roller cam | Non-locking | 2651-205400 | Without roller cam | Non-locking |
| 2651-205105 | With roller cam | Square 8 | 2651-205505 | Without roller cam | Square 8 |
| 2651-205114 | With roller cam | Triangle 7 | 2651-205514 | Without roller cam | Triangle 7 |
| 2651-205134 | With roller cam | Recessed hexagon 8 (5/16 inches) | 2651-205534 | Without roller cam | Recessed hexagon 8 (5/16 inches) |
| 2651-205280 | With roller cam | IL101 * | 2651-205680 | Without roller cam | IL101 * |
| 2651-205281 | With roller cam | IL0333 * | 2651-205681 | Without roller cam | IL0333 * |
| 2651-205290 | With roller cam | Keyed to differ * | 2651-205690 | Without roller cam | Keyed to differ * |
| 2651-225400 | One-piece handle. Without roller cam | Non-locking | 2651-225700 | One-piece handle. Without roller cam | Pad-lockable |





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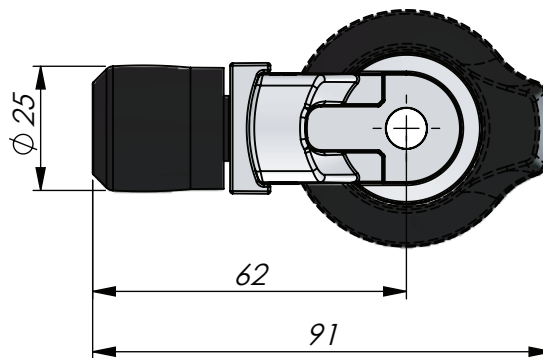


Material:

- Roller cam: Zinc die-cast, zinc plated, steel, zinc plated and glass fibre-reinforced polyamide (PA6GF30), black.

References, Accessories:

- See page 2-315f for rod link.
- Interlink rods, see page 2-313a.
- For handles, with or without built-in roller cam, see page 2-315d.

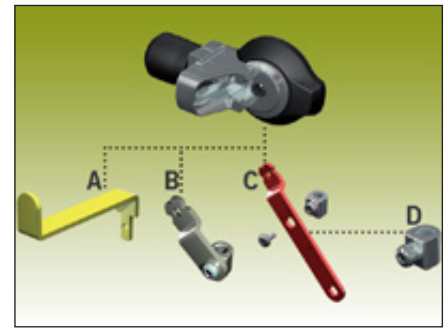
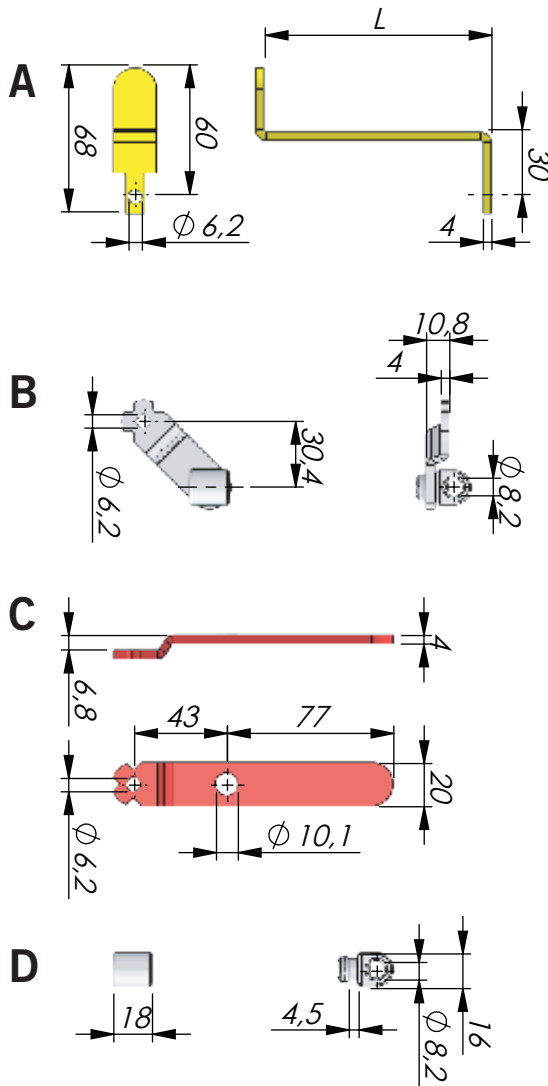


The K2 roller cam is easy to adjust according to your needs with a Torx-bit (T-30). Set it so that the door closes smoothly and is kept securely shut. The roller cams reduces the friction in the latching operation and increase the gasket compression.

You can connect several roller cams in series to be operated with only one handle.

Roller Cam for System KLIMA-FLEX 2

| P/N | Description | Ø of roller |
|------------------|-----------------------|-------------|
| 2651-305125-0062 | Adjustable roller cam | 25 mm |



VDI
6022

Material:

- Safety catch: Steel with yellow powder coat.
- Rod link: Steel, zinc plated. Zinc, zinc plated.
- Inside security handle: Steel with red powder coat.
- Inside security handle with rod link: Steel with red powder coat, zinc, zinc plated.

References, Accessories:

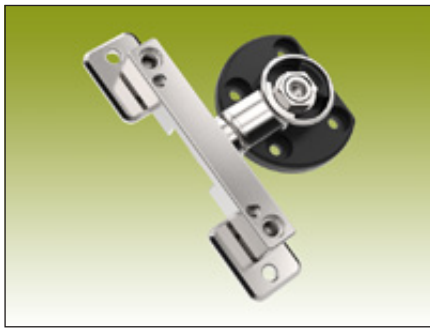
- * For round interlink rods, see page 2-313a.

In the Klima-flex 2-system you can combine the safety catch, rod link and/or inside security handle with the inside roller cam. Do not forget that the Klima-flex 2-system allows you to use a regular inside handle. See page 2-315d.

Inside Options, KLIMA-FLEX 2

| P/N | Description | Drawing |
|-------------|---|-----------|
| 2651-901025 | Safety catch for preventing the door from flying open in case of overpressure. For left- or right hinged door. "L" adapted to fit 25 mm (1 inch) door thickness. | A |
| 2651-901050 | Safety catch as above. For 50 mm (2 inch) door thickness. | A |
| 2651-901075 | Safety catch as above. For 75 mm (3 inch) door thickness. | A |
| 2651-901100 | Safety catch as above. For 100 mm (4 inch) door thickness. | A |
| 2651-902001 | Rod link. Interconnects latching point to other latching points. Allows operation of several latching points from one handle. * | B |
| 2651-903001 | Inside security handle with rod link. Allows for opening door from inside and can also interconnect latching points - just as the rod link above. * | C |
| 2651-903000 | Inside security handle without rod link. Allows for opening door from inside. | Not shown |
| 2651-903002 | Separate rod link part for mounting on inside security handle above (not included). Allows interlinking latching points with the use of inside security handle above. * | D |



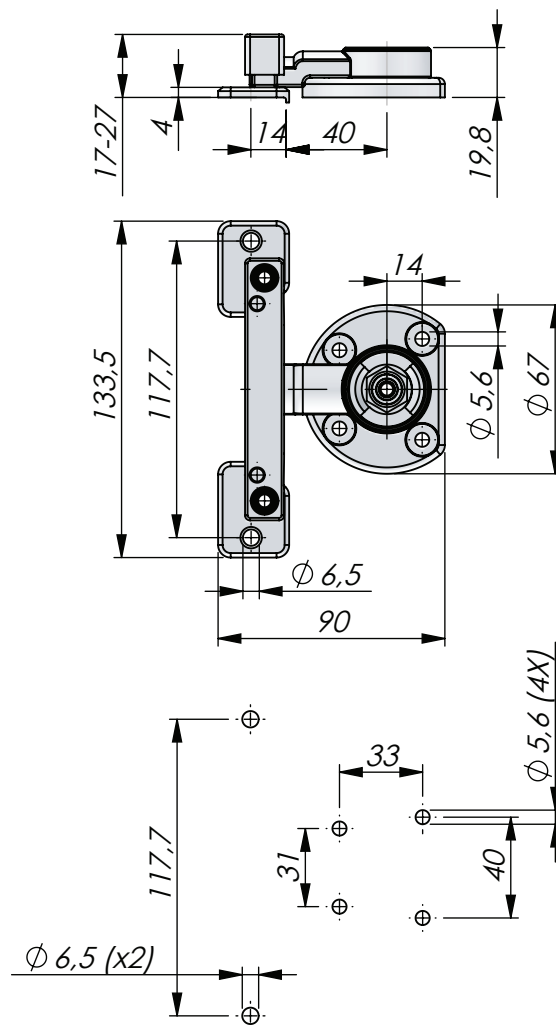


Material:

- Base plate: Glass fibre reinforced polyamide (PA6GF30), black or zinc, die cast, zinc plated.
- Cam, striker and striker plate: Zinc die-cast, zinc plated.

References, Accessories:

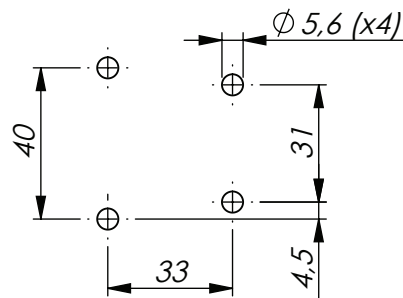
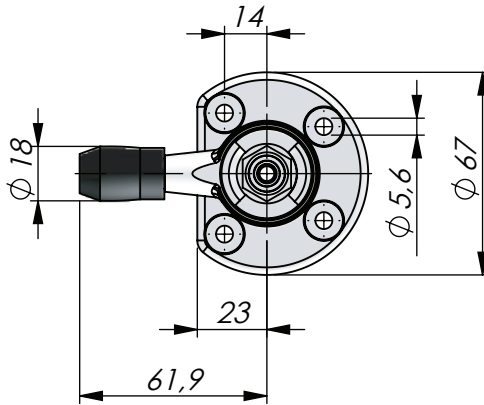
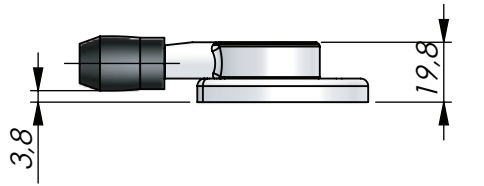
- Handles: Page 2-310a, 2-310b and 2-310c.



Latching unit for outswing doors - system Klima-flex for HVAC-applications. Supplied with or without a adjustable, surface mounted striker.

Surface Mounted Latching Unit for Out-Swing Doors - System KLIMA-FLEX

| P/N | Description | Base plate material |
|--------------|-------------------------|--|
| 265078-D01 | With adjustable striker | Glass fiber reinforced polyamide (PA6GF30) |
| 265078-D01-1 | Without striker | Glass fiber reinforced polyamide (PA6GF30) |
| 265078-D03 | With adjustable striker | Zinc, die-cast, zinc plated |



Material:

- Base plate: Zinc die-cast, zinc plated. Cam: Zinc die-cast, zinc plated.
- Roller: Glass fibre reinforced polyamide (PA6GF30), black.

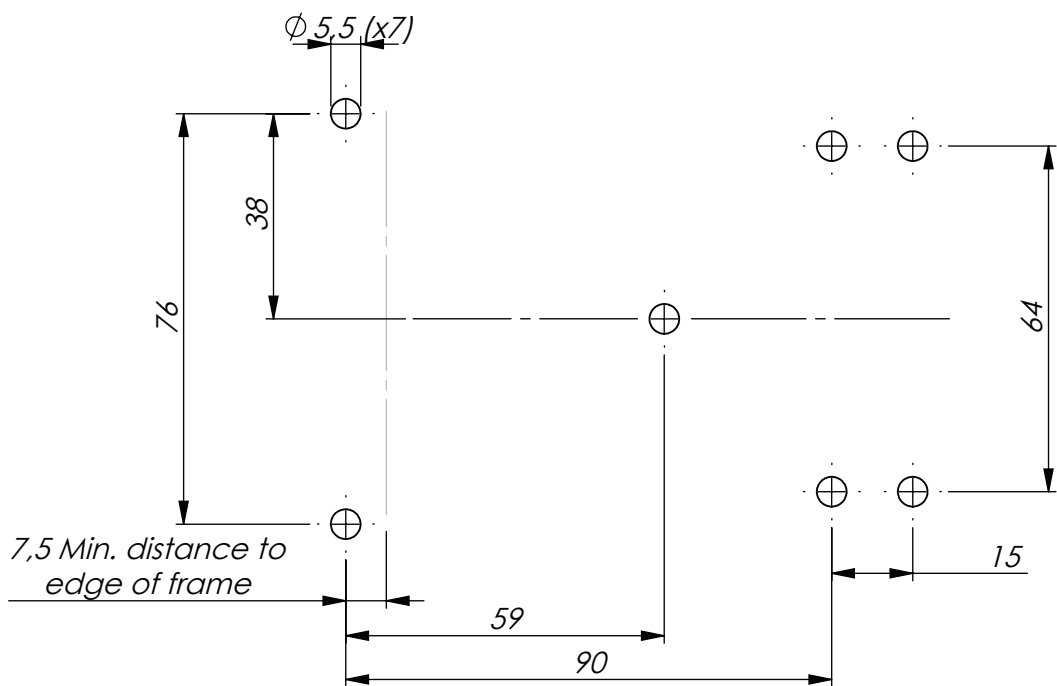
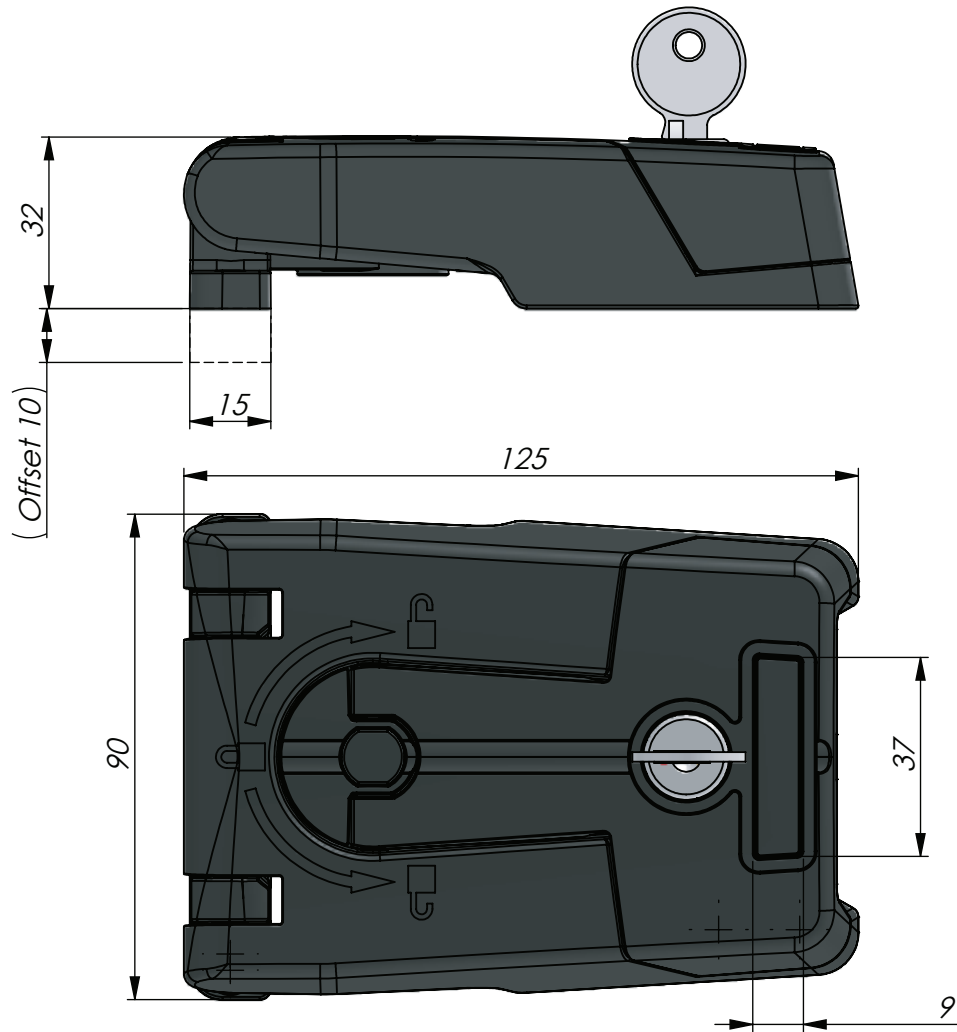
References, Accessories:

- Handles: Page: 2-310a, 2-310b and 2-310c.

Latching unit for in-swing doors - system Klima-flex for HVAC-applications. Mounted with screws or rivets.

Surface Mounted Latching Unit for In-Swing Doors - System KLIMA-FLEX

| P/N | Description |
|------------|-------------------|
| 265078-D02 | For inswing doors |



0



Material:

- Door part and handle: Glass fibre reinforced polyamide (PA6GF30).
- Frame part and latching cam: Zinc die cast, black powder coated.
- Hinge pin and assembly pins: Stainless steel.

References, Accessories:

- Keys for insert "Recessed Hexagon 10" are found on page 2-380.

Notes, Tests:

Same frame part is used in K2 hinge found at page 3-156. By mounting the frame parts symmetrical on left and right side of the frame and use K2 hinges on one side and latching hinges on the other side the end user can choose to have the door mounted either way, right- or left hinged.

Logotypes, other inserts, other colours and offsets from 0 – 25 mm offered upon request.

Products marked with * are key-locking and are supplied with two keys.

When mounted in a properly rated, suitable customer enclosure this handle meets the requirements for sealing level L1 regarding positive or negative air pressure according to DIN EN 1886.

180° Hinge-Latch, or latching hinge that may be used as hinge or latch according to need. Allows you to open door as left- or right hinged door, or to remove door completely. Universal left- and right assembly. Provides 6 mm compression and has a built-in safety catch for safe opening of pressurized doors. Patented with registered design.

Clicks into distinct open and closed position for tactile feedback.

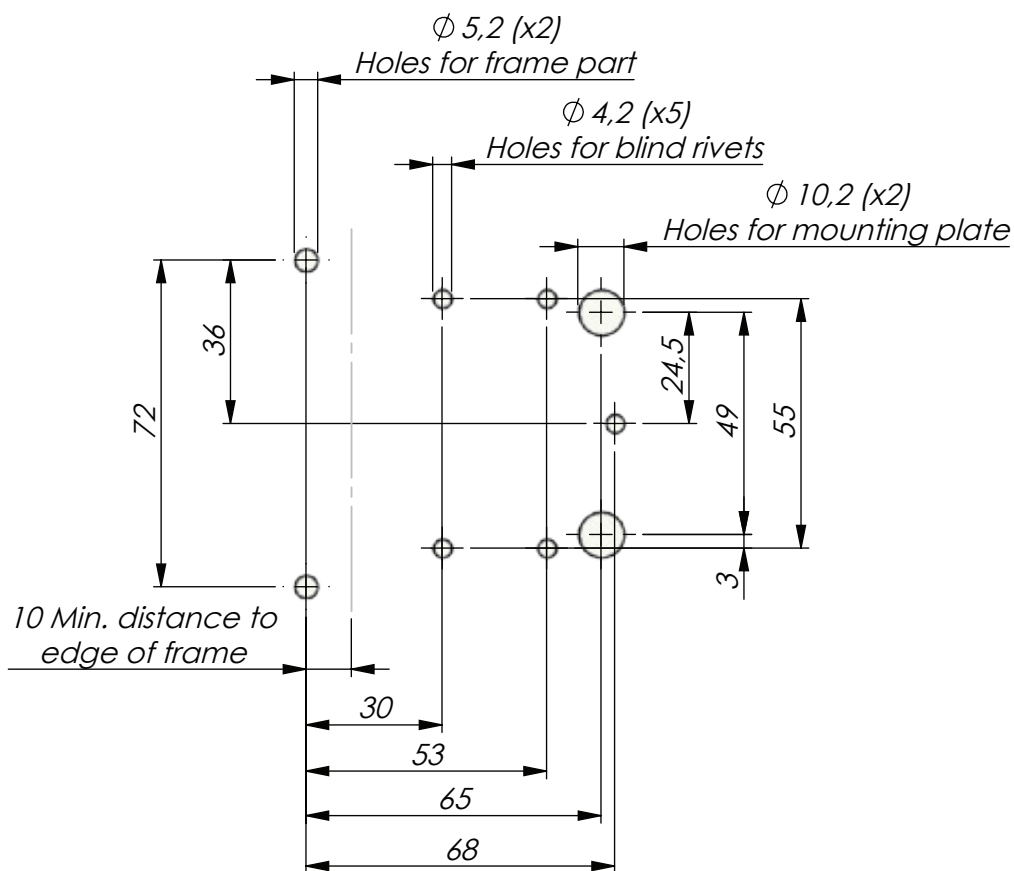
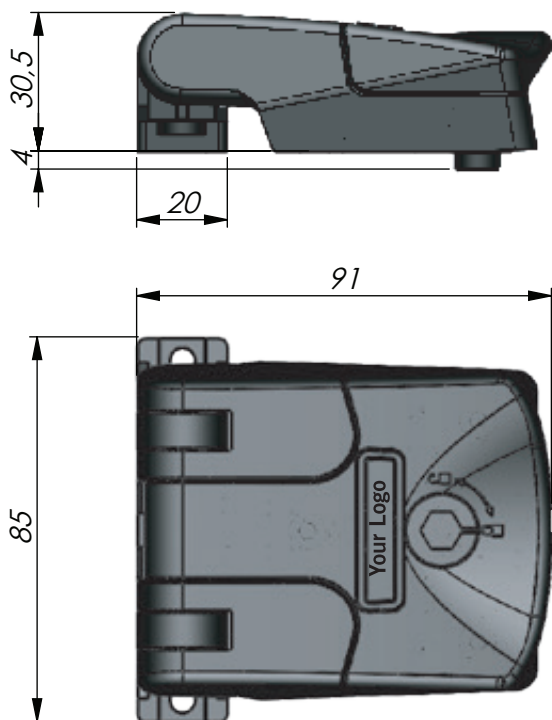
Vertical adjustability together with guidance between door and frame parts, makes it easier than ever to get the perfect sealed door. Available in non-locking, push-button, keyed and tool operated version. Also customizable with your logotype.

Note that a normal panel will need four units in order to operate as either left-open, right open, or completely removable. Mount the door part with blind rivets (pop-rivets). The frame part may be mounted with screws or blind rivets.

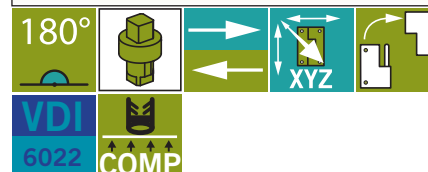
No problems with thermal break as units are surface-mounted on to door and frame parts, resulting in no parts intruding through the double skinned doors.

Compression Latching Hinge with Safety Catch - System KLIMA-FLEX

| P/N | Description | Offset |
|-------------|---------------------|--------|
| 2651-400000 | Non-locking | 0 mm |
| 2651-400080 | Keyed IL101 * | 0 mm |
| 2651-400035 | Recessed Hexagon 10 | 0 mm |
| 2651-400070 | Push-button | 0 mm |
| 2651-401000 | Non-locking | 10 mm |
| 2651-401035 | Recessed Hexagon 10 | 10 mm |
| 2651-401080 | Keyed IL101 * | 10 mm |
| 2651-401070 | Push-button | 10 mm |



0



Material:

- Door part, handle, frame part, mounting bracket, insert, safety catch and adjustable off-set device: Glass fibre reinforced polyamide (PA6GF30).
- Spring for safety catch: Spring steel EN 1.4310.

References, Accessories:

- Keys found on page 2-370 and 2-372 (Use key for "Recessed Hexagon 8 with 3 mm pin").

Patent pending compact 180° Latching Hinge that may be used as hinge or latch according to need. Allows you to open door as left- or right hinged door, or to remove door completely. Universal left- and right assembly. Available with a built-in safety catch for safe opening of pressurized doors. In addition to the 3 mm compression that always applies, the Hinge Latch can easily be adjusted between offset 0 mm, 1,5 mm or 3,0 mm to put more pressure on the gasket and ensure a tight and sealed door. This adjusting is done by lifting the cover and turning the adjustment screw using a "Torx 20"-bit. Door part mounts on a mounting bracket (included) which stabilize the door in the Latching Hinge area and provide further adjustability. The Latching Hinge can be adjusted 3 mm in all three directions. Clicks into distinct open and closed position for tactile feedback and equipped with insert "Recessed hexagon 8 mm". Supplied with open and close indication for insert position.

Also customizable with your logotype (logotype area prepared). Frame part mounts with screws or blind rivets. Mounting bracket for the door mounts with Ø 4 mm blind rivets (pop-rivets). Mounting hardware not included.

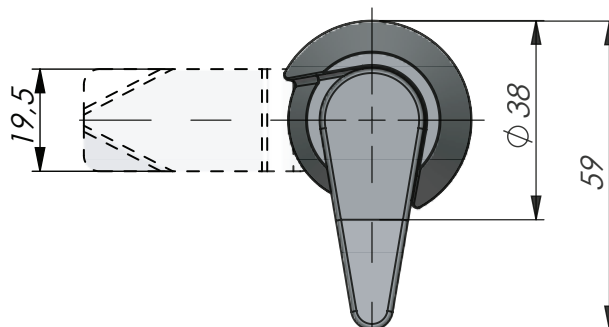
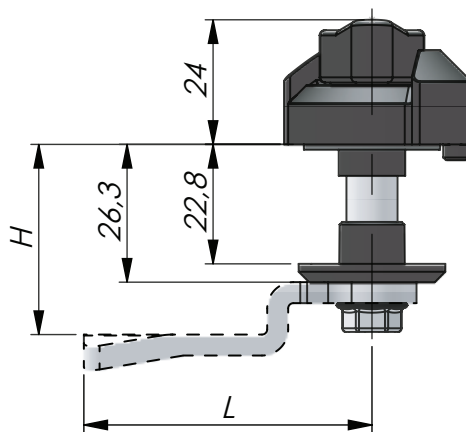
Note that a normal panel will need four units in order to operate as either left-open, right open, or completely removable.

When mounted in a properly rated, suitable enclosure this handle meets the requirements for sealing level L1 regarding positive or negative air pressure according to DIN EN 1886.

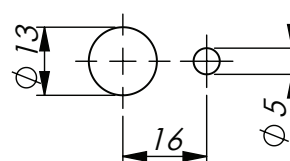
No problems with thermal break as units are surface-mounted on to door and frame parts, resulting in no parts intruding through the double skinned doors.

Compact Hinge-Latch with Safety Catch - System KLIMA-FLEX

| P/N | Description |
|-------------|-------------------------------------|
| 2651-420034 | Latching hinge with safety catch |
| 2651-430034 | Latching hinge without safety catch |



Small hole towards hinge side of door



Material:

- Knob, housing, washer: Glass fibre reinforced polyamide (PA6GF30), black.
- Shaft: Zinc, die-cast, zinc plated.
- Screw: Steel, zinc plated.

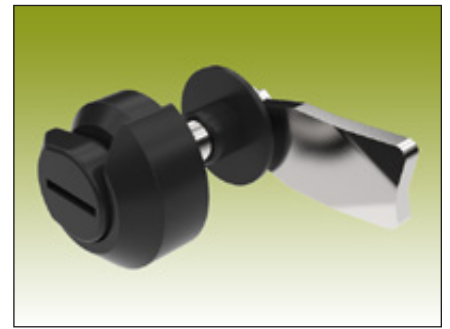
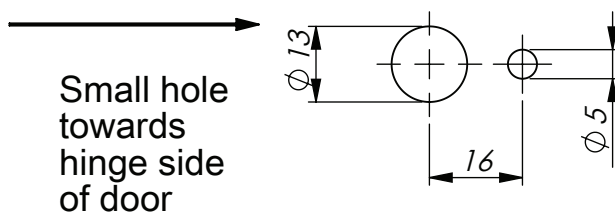
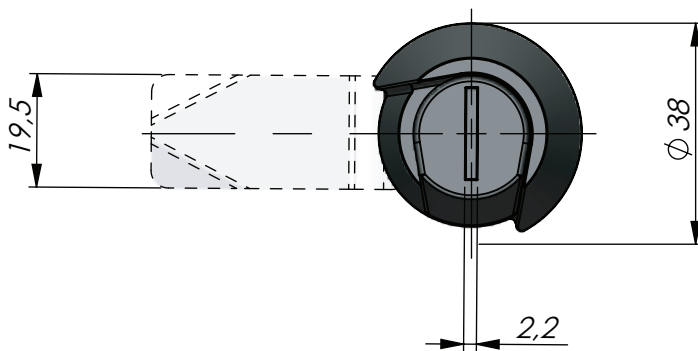
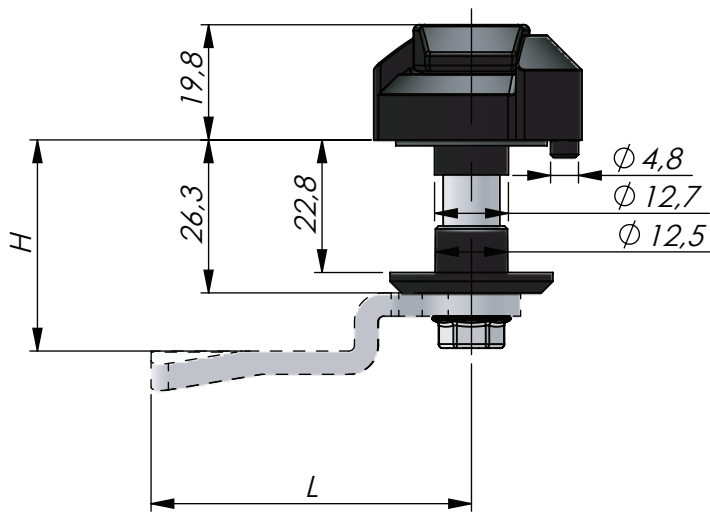
References, Accessories:

- Cams: Page 2-481.

Latching unit with a compact, drop-shaped knob handle rotation 90° to open / close. For door thickness 23-25 mm.

Drop-Shaped Knob Latch - for Insulated Doors

| P/N | Description |
|--------|------------------------|
| 245020 | Drop-shaped knob latch |



Material:

- Insert, housing, washer: Glass fibre reinforced polyamide (PA6GF30), black.
- Shaft: Zinc, die-cast, zinc plated.

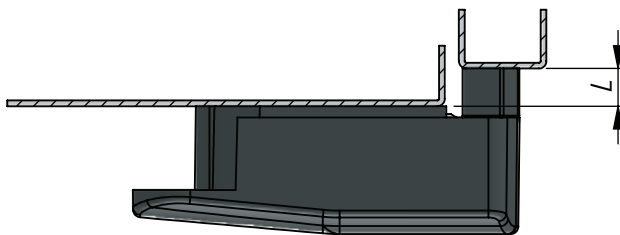
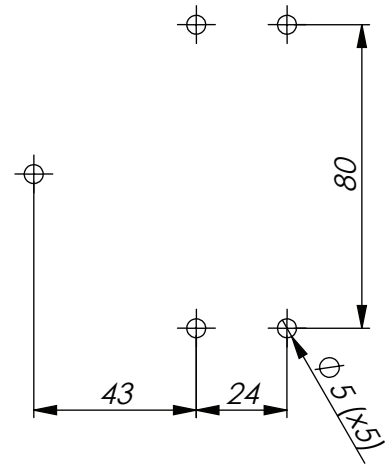
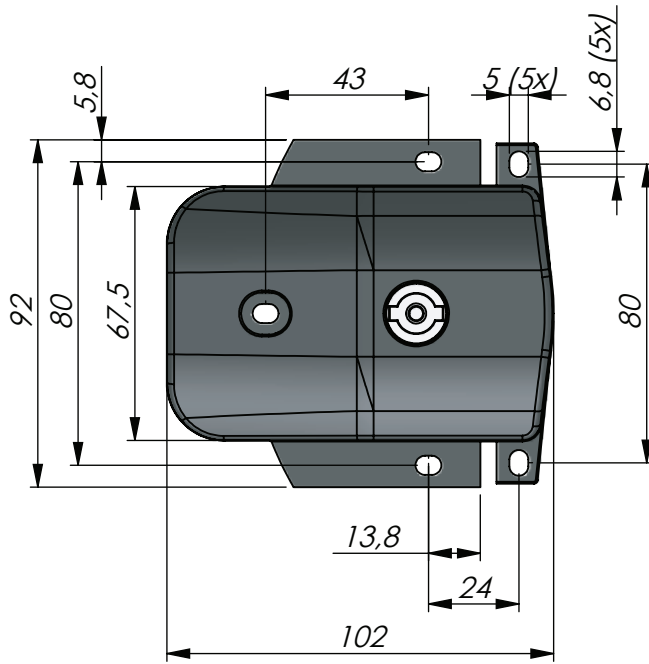
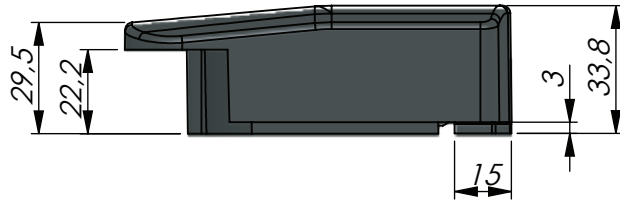
References, Accessories:

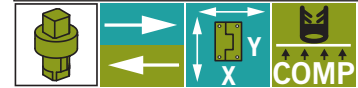
- Cams: Page 2-481.

Latching unit with slotted insert. Rotation 90° to open / close. For door thickness 23-25 mm.

Slotted Latch - for Insulated Doors

| P/N | Description |
|--------|---------------------------|
| 245021 | Latch with slotted insert |





Material:

- Housing and frame part: Zinc die-cast, black coated. Insert: Zinc die cast, chrome plated.
- Cam: Zinc die-cast.

References, Accessories:

- Keys: Page 2-370, 2-372 and 2-380.

Surface mounted compression latch in solid design with all parts in metal. 10 mm compression by turning the insert from open to closed position.

The cover on the door part protects the latching parts on both door and frame side in closed position. The frame part is available in three different offsets (0, 10 and 20 mm), see P/N in the table. The door part is equipped with three oval mounting holes and frame part with two oval mounting holes. This creates the possibility to adjust the latch 1,8 mm both vertically and horizontally.

Available as tool operated versions with different inserts, see part numbers in the table.

No problems with thermal break as units are surface-mounted on to door and frame parts, resulting in no parts intruding through the double skinned doors.

Surface Mounted Compression Latch

| P/N when L=0 | P/N when L=10 | P/N when L=20 | Description - insert |
|--------------|---------------|---------------|----------------------|
| 265026-0003 | 265026-1003 | 265026-2003 | Square 7 |
| 265026-0005 | 265026-1005 | 265026-2005 | Square 8 |
| 265026-0014 | 265026-1014 | 265026-2014 | Triangle 7 |
| 265026-0015 | 265026-1015 | 265026-2015 | Triangle 8 |
| 265026-0022 | 265026-1022 | 265026-2022 | DIN 3 |
| 265026-0024 | 265026-1024 | 265026-2024 | DIN 5 |



Material:

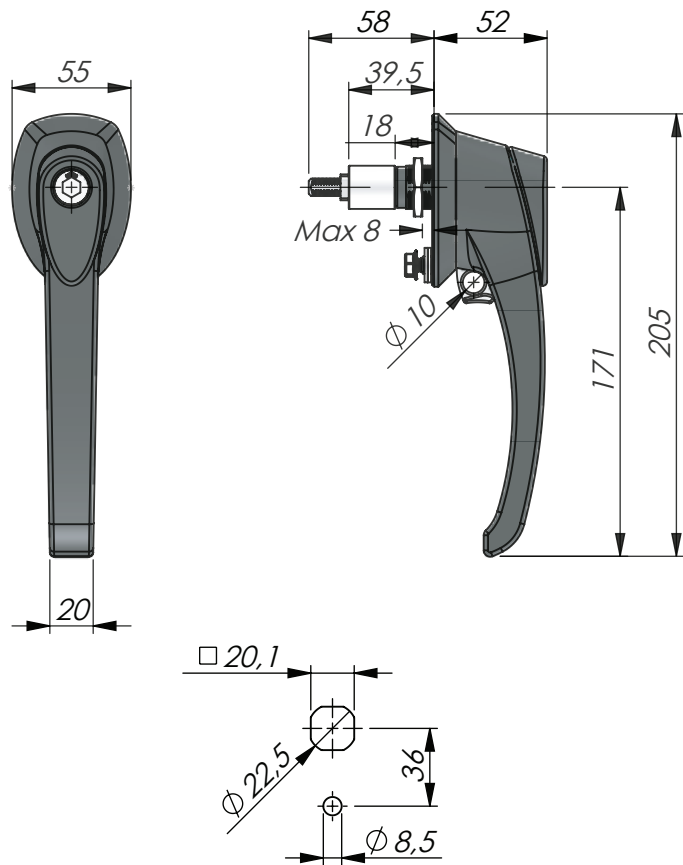
- Handle: Zinc die-cast, black texture powder coated. Insert and padlock trigger: Zinc die-cast, chrome plated.
- Nut: Zinc die-cast, zinc plated.
- Screws: Steel, zinc plated.
- Cast-in shaft: Hardened steel, zinc plated.
- Gaskets: TPE and NBR.

References, Accessories:

- Stainless compact defeater handle: Page 6-210.
- Rods: Page 2-540, 2-541 and 2-545.
- Keys: Page 2-370 and 2-372.

Notes, Tests:

Cams: 12 mm square cut-out, supplied on request.



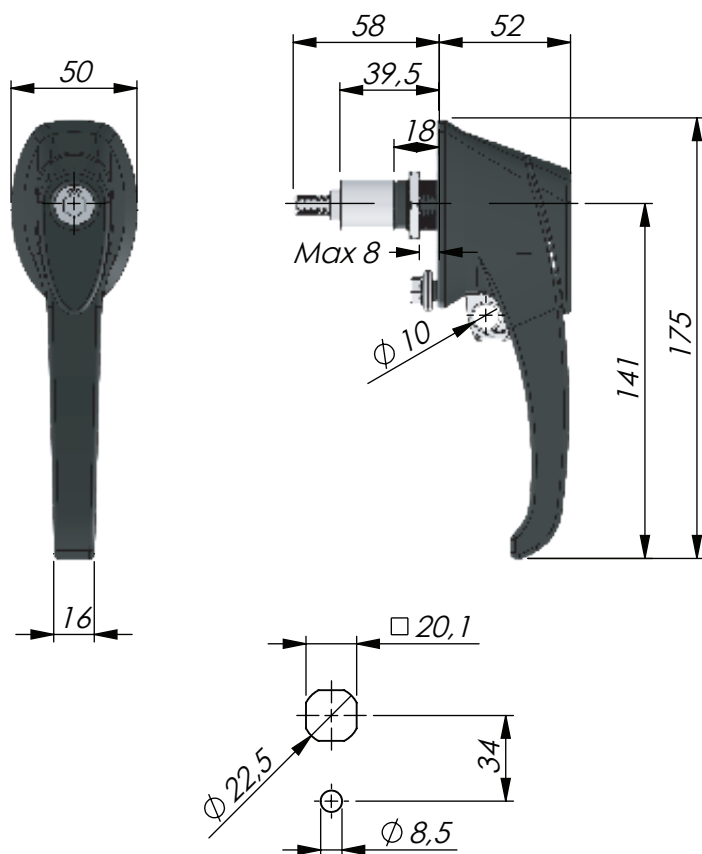
Padlockable defeater handle equipped with a built-in spring loaded insert, providing a defeater function making the handle compliant with two-handed safety operations requirements. Also equipped with a padlock loop (with Ø 10 mm hole) for optional locking. To operate the handle, turn the insert, push the padlock loop and turn the handle. The cast-in threaded steel shaft allows simple cam adjustment. Removable stop for clockwise or counter-clockwise operation. Supplied with nut, screws and gasket. Protection degree IP65, also classed "Waterproof according to NEMA 4".. Cut-out is "Combi"-style, with an additional Ø 8,5 mm hole.

Products marked with * are key-locking and are supplied with two keys.

Key extraction: Closed.

Padlockable Defeater Handle - 58 mm

| P/N | Description - insert | P/N | Description - insert |
|-----------|----------------------|-----------|--|
| 261601-01 | Hexagon 11 | 261601-20 | Slotted |
| 261601-07 | Square 6 | 261601-21 | Recessed hexagon 10 |
| 261601-08 | Square 7 | 261601-22 | Recessed hexagon 8 |
| 261601-09 | Square 8 | 261601-23 | Hexagon 8,5 |
| 261601-10 | Square 8 /slotted | 261601-24 | ES3 |
| 261601-11 | Square 8 / M6 | 261601-28 | Triangle 10 / M5 |
| 261601-12 | Triangle 7 | 261601-41 | Slotted recessed |
| 261601-13 | Triangle 8 | 261601-47 | Recessed hexagon 8 / 3 mm pin |
| 261601-14 | Triangle 10 | 261601-48 | Recessed square 8. |
| 261601-15 | Triangle 10 / M6 | 261601-49 | Slotted 3 mm |
| 261601-16 | Double Bit 3 | 261602-10 | Cylinder lock keyed alike (IL101) * |
| 261601-17 | Double Bit 5 | 261602-20 | Cylinder lock keyed to differ * |
| 261601-18 | Daimler Benz | 261603 | Solid plug. No defeater - only padlock trigger |
| 261601-19 | Triangle 10 / SEN | | |



Material:

- Handle: Zinc die-cast, black texture powder coated. Insert and padlock loop: Zinc die-cast, chrome plated. Nut: Zinc die-cast, zinc plated.
- Screws: Steel, zinc plated.
- Cast-in shaft: Hardened steel, zinc plated.
- Gaskets: TPE and NBR.

References, Accessories:

- Key extraction: Closed. Stainless compact defeater handle: Page 6-210.
- Rods: Page 2-540, 2-541 and 2-545.
- Keys: Page 2-370 and 2-372.

Notes, Tests:

Cams: 12 mm square cut-out, supplied on request.

Padlockable compact defeater handle equipped with a built-in spring loaded insert, providing a defeater function making the handle compliant with two-handed safety operations requirements. Also equipped with a padlock loop (with Ø 10 mm hole) for optional locking. To operate the handle, turn the insert, push the padlock loop and turn the handle. The cast-in threaded steel shaft allows simple cam adjustment. Removable stop for clockwise or counter-clockwise operation. Supplied with nut, screws and gasket. Protection degree IP65, also classed "Waterproof according to NEMA 4". Cut-out is "Combi" style, with an additional Ø 8,5 mm hole.

Products marked with * are key-locking and are supplied with two keys.

Key extraction: Closed.

Padlockable Compact Defeater Handle - 58 mm

| P/N | Description - insert | P/N | Description - insert |
|-----------|----------------------|-----------|--|
| 261611-01 | Hexagon 11 | 261611-20 | Slotted |
| 261611-07 | Square 6 | 261611-21 | Recessed hexagon 10 |
| 261611-08 | Square 7 | 261611-22 | Recessed hexagon 8 |
| 261611-09 | Square 8 | 261611-23 | Hexagon 8.5 |
| 261611-10 | Square 8 / slotted | 261611-24 | ES3 |
| 261611-11 | Square 8 / M6 | 261611-28 | Triangle 10 / M5 |
| 261611-12 | Triangle 7 | 261611-41 | Slotted recessed |
| 261611-13 | Triangle 8 | 261611-47 | Recessed hexagon 8 / 3 mm pin |
| 261611-14 | Triangle 10 | 261611-48 | Recessed square 8. |
| 261611-15 | Triangle 10/M6 | 261611-49 | Slotted 3 mm |
| 261611-16 | Double Bit 3 | 261612-10 | Cylinder lock keyed alike (IL101) * |
| 261611-17 | Double Bit 5 | 261612-20 | Cylinder lock keyed to differ. * |
| 261611-18 | Daimler Benz | 261613 | Solid plug. No defeater - only padlock trigger |
| 261611-19 | Triangle 10 / SEN | | |

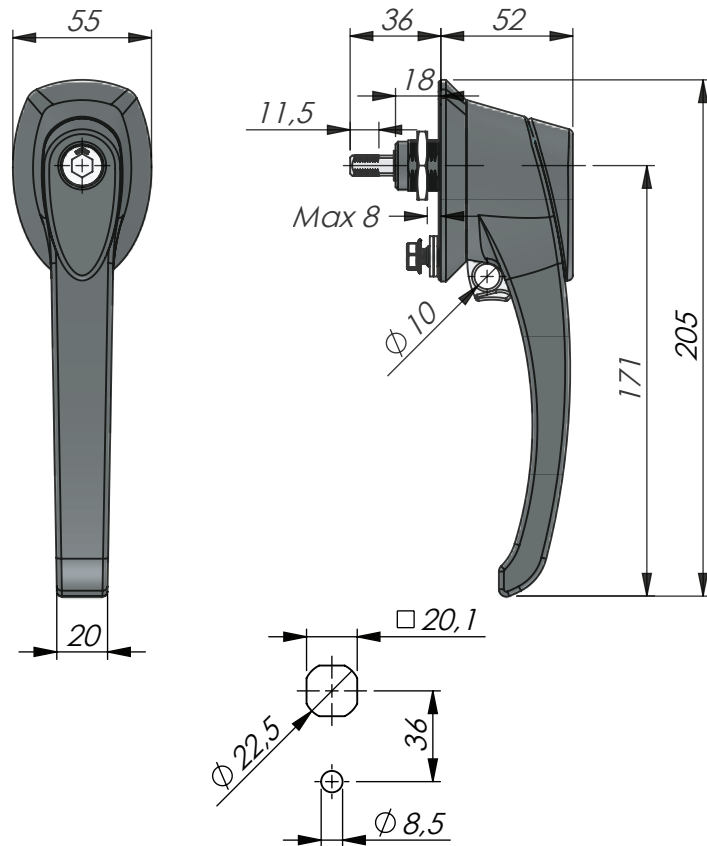


Material:

- Handle: Zinc die-cast, black texture powder coated. Insert and padlock loop: Zinc die-cast, chrome plated.
- Nut: Zinc die-cast, zinc plated.
- Screws: Steel, zinc plated.
- Cast-in shaft: Hardened steel, zinc plated.
- Gaskets: TPE and NBR.

References, Accessories:

- Stainless compact defeater handle: Page 6-210.
- Cams: See page 2-481 and 2-491.
- Rods: Page 2-540, 2-541 and 2-545.
- Keys: Page 2-370 and 2-372.



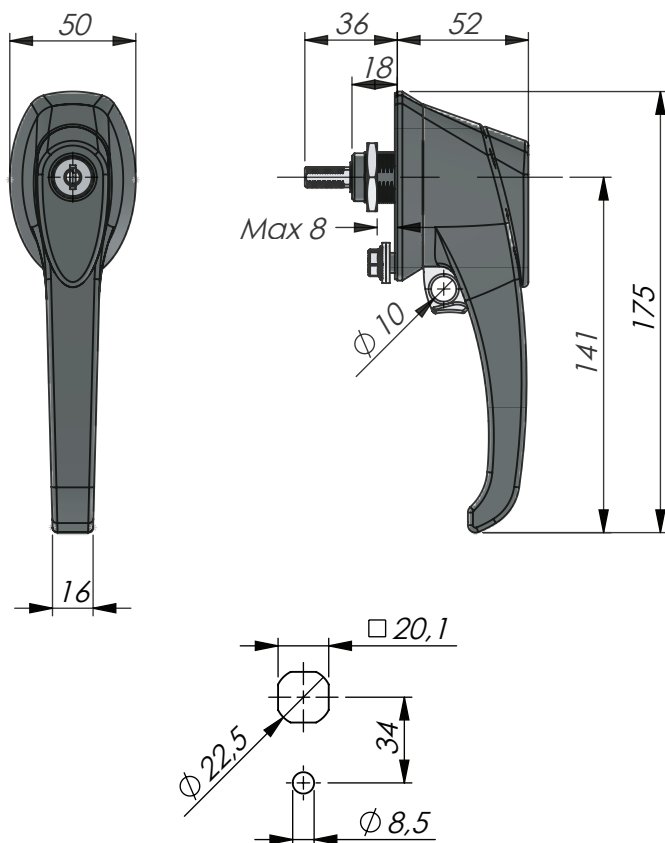
Padlockable defeater handle equipped with a built-in spring loaded insert, providing a defeater function making the handle compliant with two-handed safety operations requirements. Also equipped with a padlock loop (with \varnothing 10 mm hole) for optional locking. To operate the handle, turn the insert, push the padlock loop and turn the handle. The cast-in threaded steel shaft allows simple cam adjustment. Removable stop for clockwise or counter-clockwise operation. Supplied with nut, screws and gasket. Protection degree IP65, also classed "Waterproof according to NEMA 4". Cut-out is "Combi"-style, with an additional \varnothing 8,5 mm hole.

Products marked with * are key-locking and are supplied with two keys.

Key extraction: Closed.

Padlockable Defeater Handle - 36 mm

| P/N | Description - insert | P/N | Description - insert |
|-----------|----------------------|-----------|--|
| 261621-01 | Hexagon 11 | 261621-20 | Slotted |
| 261621-07 | Square 6 | 261621-21 | Recessed hexagon 10 |
| 261621-08 | Square 7 | 261621-22 | Recessed hexagon 8 |
| 261621-09 | Square 8 | 261621-23 | Hexagon 8.5 |
| 261621-10 | Square 8 / slotted | 261621-24 | ES3 |
| 261621-11 | Square 8 / M6 | 261621-28 | Triangle 10 / M5 |
| 261621-12 | Triangle 7 | 261621-41 | Slotted, recessed |
| 261621-13 | Triangle 8 | 261621-47 | Recessed hexagon 8 / 3 mm pin |
| 261621-14 | Triangle 10 | 261621-48 | Recessed square 8. |
| 261621-15 | Triangle 10 / M6 | 261621-49 | Slotted 3 mm |
| 261621-16 | Double Bit 3 | 261622-10 | Cylinder lock keyed alike (IL101) * |
| 261621-17 | Double Bit 5 | 261622-20 | Cylinder lock keyed to differ * |
| 261621-18 | Daimler Benz | 261623 | Solid plug. No defeater - only padlock trigger |
| 261621-19 | Triangle 10 / SEN | | |



Material:

- Handle: Zinc die-cast, black texture powder coated. Insert and padlock loop: Zinc die-cast, chrome plated.
- Nut: Zinc die-cast, zinc plated.
- Screws: Steel, zinc plated.
- Cast-in shaft: Hardened steel, zinc plated.
- Gaskets: TPE and NBR.

References, Accessories:

- Stainless, compact version: Page 6-210.
- Cams: Page 2-481 and 2-491.
- Rods: Page 2-540, 2-541 and 2-545.
- Keys: Page 2-370 and 2-372.

Padlockable compact defeater handle equipped with a built-in spring loaded insert, providing a defeater function making the handle compliant with two-handed safety operations requirements. Also equipped with a padlock loop (with Ø 10 mm hole) for optional locking. To operate the handle, turn the insert, push the padlock loop and turn the handle. The cast-in threaded steel shaft allows simple cam adjustment. Removable stop for clockwise or counter-clockwise operation. Supplied with nut, screws and gasket. Protection degree IP65, also classed "Waterproof according to NEMA 4". Cut-out "Combi"-style, with an additional Ø 8,5 mm hole.

Products marked with * are key-locking and are supplied with two keys.

Key extraction: Closed.

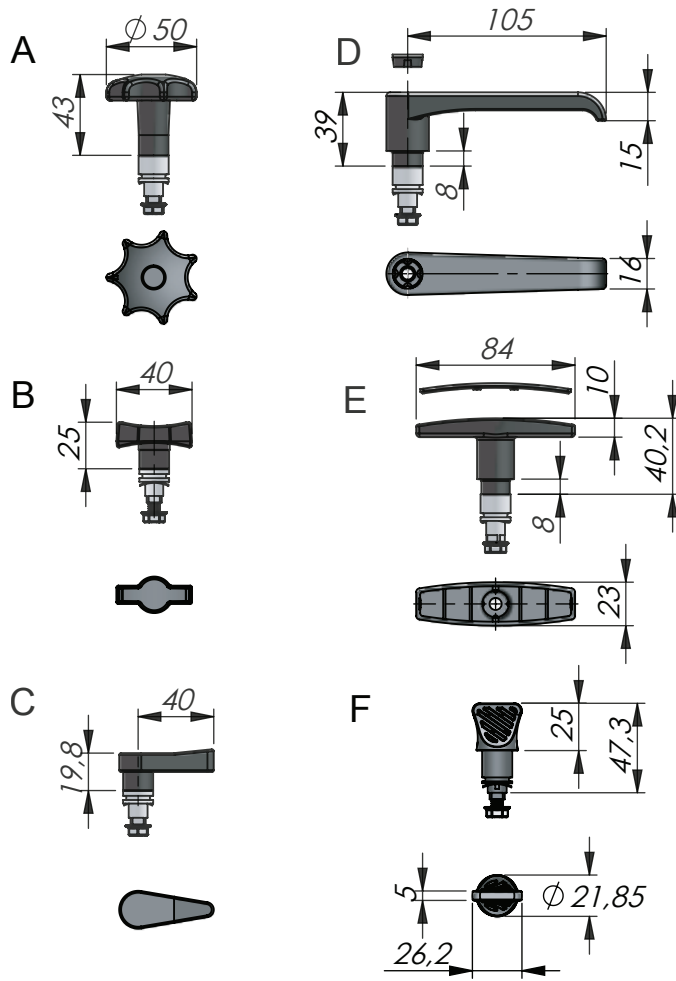
Padlockable Compact Defeater Handle - 36 mm

| P/N | Description - insert | P/N | Description - insert |
|-----------|----------------------|-----------|--|
| 261631-01 | Hexagon 11 | 261631-20 | Slotted |
| 261631-07 | Square 6 | 261631-21 | Recessed hexagon 10 |
| 261631-08 | Square 7 | 261631-22 | Recessed hexagon 8 |
| 261631-09 | Square 8 | 261631-23 | Hexagon 8.5 |
| 261631-10 | Square 8 slotted | 261631-24 | ES3 |
| 261631-11 | Square 8 / M6 | 261631-28 | Triangle 10 / M5 |
| 261631-12 | Triangle 7 | 261631-41 | Slotted, recessed |
| 261631-13 | Triangle 8 | 261631-47 | Recessed hexagon 8 / 3 mm pin |
| 261631-14 | Triangle 10 | 261631-48 | 8 mm recessed square. |
| 261631-15 | Triangle 10 / M6 | 261631-49 | Slotted 3 mm |
| 261631-16 | Double Bit 3 | 261632-10 | Cylinder lock keyed alike (IL101) * |
| 261631-17 | Double Bit 5 | 261632-20 | Cylinder lock keyed to differ * |
| 261631-18 | Daimler Benz | 261633 | Solid plug. No defeater - only padlock trigger |
| 261631-19 | Triangle 10 / SEN | | |



Material:

- Handles, knobs and covers: Zinc die-cast and/or glass fibre reinforced polyamide (PA6GF30).
- Screw: Steel, zinc plated.
- Washer: Steel, zinc plated or stainless steel (304).



Handles and knobs for quarter turn latches in two versions:

For standard insert: The handles can be mounted afterwards, parts do not protrude during transportation. Supplied with screw and screw cover.

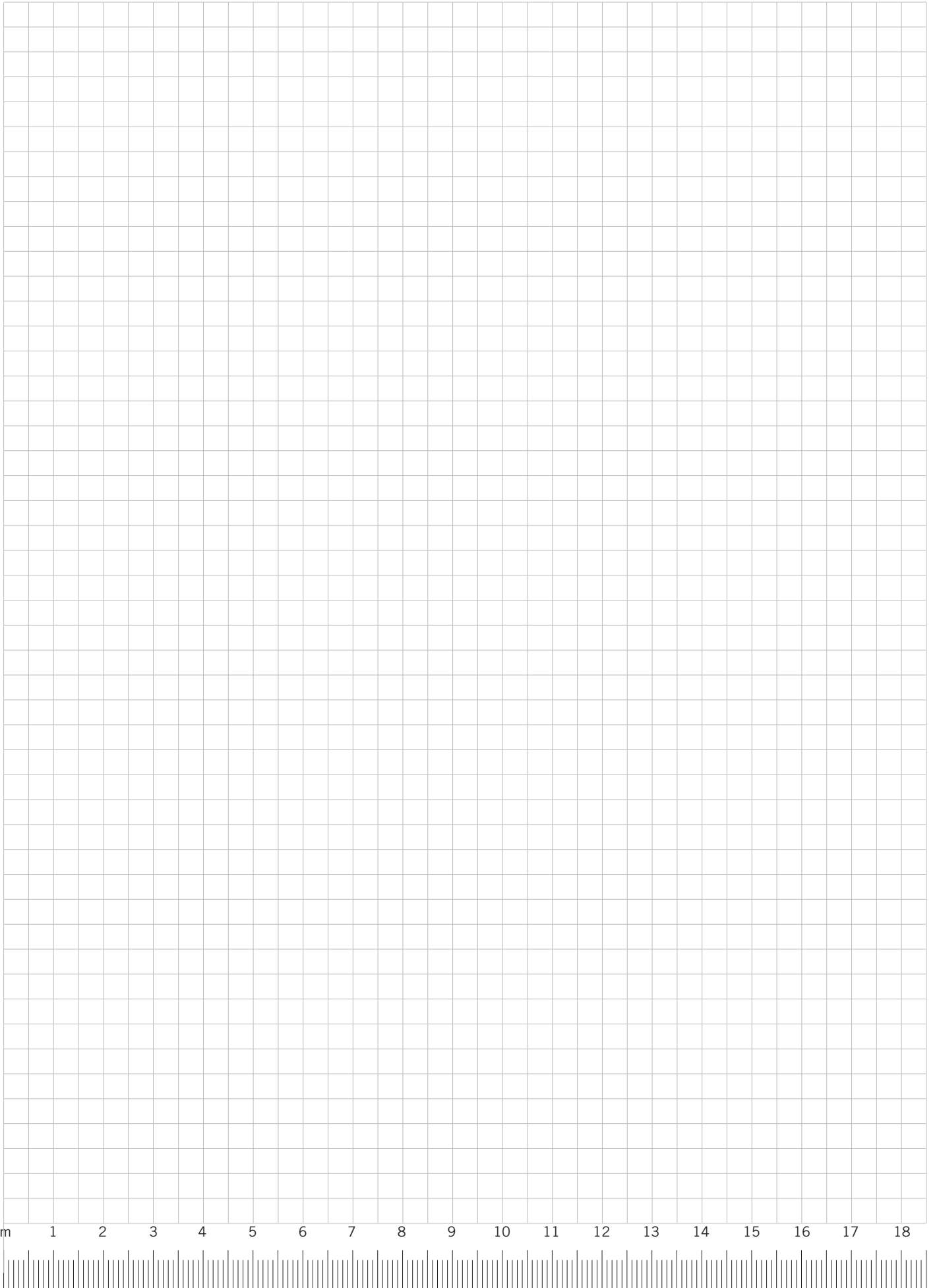
Cast-in insert: Any application requiring a permanently fitted handle.

Handles and Knobs for Standard Insert

| P/N | Description | For insert | Drawing |
|-----------|--------------------------|------------------------|---------|
| 295068 | Wing knob | Square 8 / M6 | B |
| 295069 | Wing knob | Triangle 10 / M6 | B |
| 295068-RF | Wing knob for SS (304) | Square 8 / M6 SS (304) | B |
| 295070 | Star knob | Square 8 / M6 | A |
| 295071 | Star knob | Triangle 10 / M6 | A |
| 295070-RF | Star knob for SS (304) | Square 8 / M6 SS (304) | A |
| 295072 | Star knob "Open - Close" | Square 8 / M6 | A |
| 295073 | Star knob "Open - Close" | Triangle 10 / M6 | A |
| 255069 | T-handle | Square 8 / M6 | E |
| 265056 | L-handle | Square 8 / M6 | D |

Handles and Knobs with Cast-In Insert

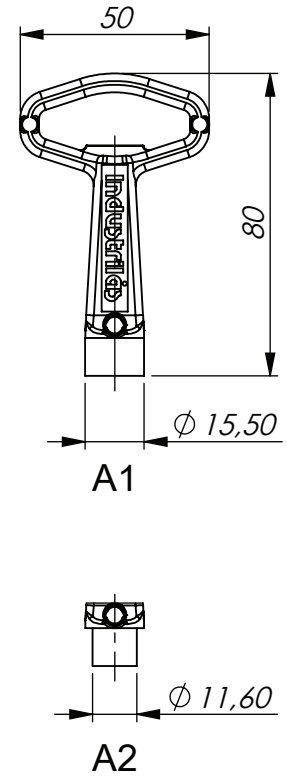
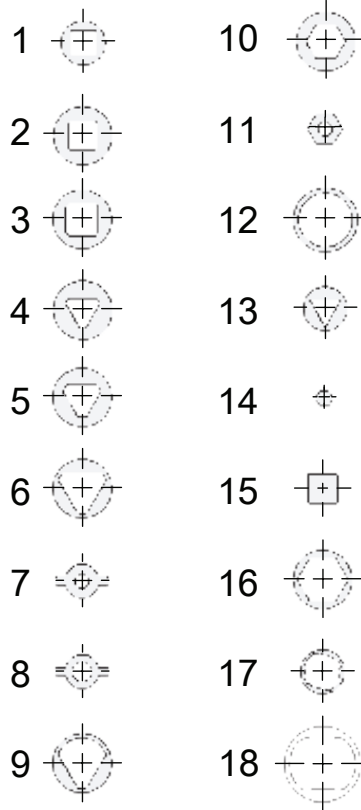
| P/N | Description | For Housing | Drawing |
|-------------|--------------------|-------------|---------|
| 295074 | Wing knob | 18 mm | B |
| 295074-IB | Wing knob | 18 mm - IB | B |
| 295075 | Star knob | 18 mm | A |
| 295078 | Drop-shaped handle | 18 mm | C |
| 295082-12IB | Wing knob | 12 mm - IB | F |





Material:

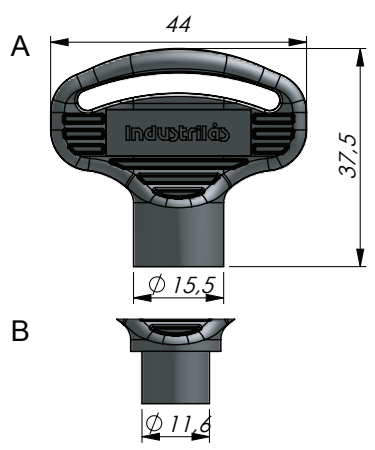
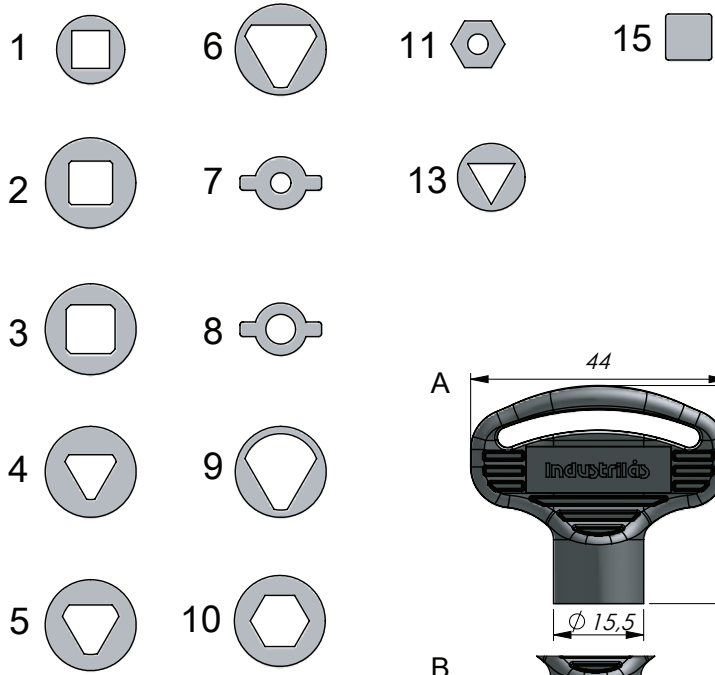
- Zinc die-cast, zinc plated. Other surface treatments on request.



All key types can be produced with your company logotype on one or both sides.

Keys for Quarter-Turn Latches

| P/N | Long key for the following insert: | Drawing | Shape |
|-----------|-------------------------------------|---------|-------|
| 291101 | Square 6 | 1 | A2 |
| 291102 | Square 7 | 2 | A1 |
| 291103 | Square 8 | 3 | A1 |
| 291104 | Triangle 7 | 4 | A1 |
| 291105 | Triangle 8 | 5 | A1 |
| 291106 | Triangle 10 | 6 | A1 |
| 291107 | Double Bit 3 | 7 | A1 |
| 291108 | Double Bit 5 | 8 | A1 |
| 291122 | Triangle 10 mm radius | 9 | A1 |
| 291125 | Hexagon 8.5 mm | 10 | A1 |
| 291136-A8 | Recessed hexagon 8 / 3 mm pin | 11 | A1 |
| 291140 | Stockholm Energy (Key length 90 mm) | 12 | A1 |
| 291141 | Recessed square 8 | 15 | A1 |
| 291143 | Hexagon 11 | 16 | A1 |
| 291156 | Tubular Asymmetric | 17 | A2 |
| 291151 | Hygiene latch (Key length 90 mm) | 18 | A1 |



Material:

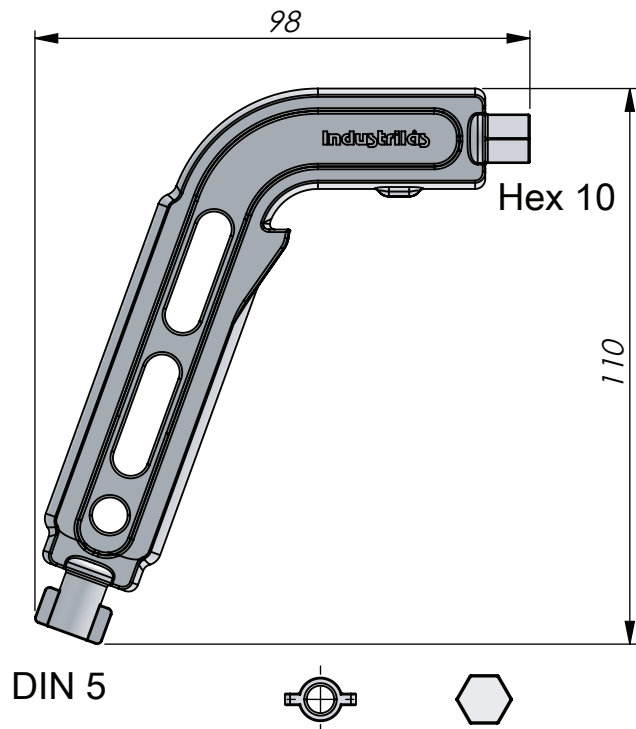
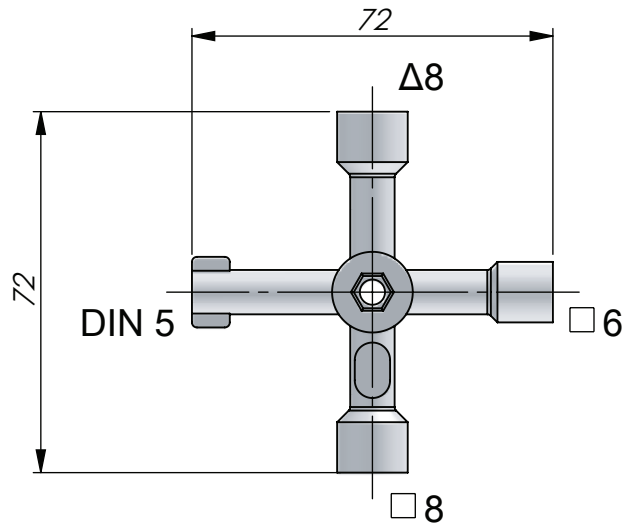
- Glass fibre reinforced polyamide (PA6GF30), black. Other colours on request.

Provided with slot for a key ring. The key can be produced with your company logotype upon request.
 Key shape "A" used with standard quarter-turn latches.
 Key shape "B" may be used with either standard or compact quarter-turn latches.

Polyamide Key for Quarter-Turn Latches

| P/N | For insert | Drawing | Shape | P/N | For insert | Drawing | Shape |
|----------|--------------|---------|-------|----------|-------------------------------|---------|-------|
| 29501001 | Square 6 | 1 | B | 29501008 | Double Bit 3 | 7 | A |
| 29501002 | Square 7 | 2 | B | 29501009 | Double Bit 5 | 8 | A |
| 29501003 | Square 8 | 3 | B | 29501010 | Hexagon 8,5 | 10 | A |
| 29501004 | Triangle 6,5 | 13 | B | 29501011 | Triangle 10 radius | 9 | A |
| 29501005 | Triangle 7 | 4 | A | 29501012 | Recessed hexagon 8 / 3 mm pin | 11 | B |
| 29501006 | Triangle 8 | 5 | A | 29501013 | Recessed square 8 | 15 | A |
| 29501007 | Triangle 10 | 6 | A | | | | |





Material:

- Zinc die-cast, zinc plated.

Notes, Tests:

On request, key 291153/-57 can be made with a combination of other inserts and / or customer logotype.

Other colours on request.

"DIN 5" also known as "Double Bit 5"

Three different multi-keys:

Top drawing: Multi-key with four key grips: "Triangular 8", "Square 6", "Square 8" and "DIN 5". The hexagon opening in the centre of the key works as a bit holder for a standard screwdriver-styled bit.

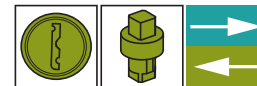
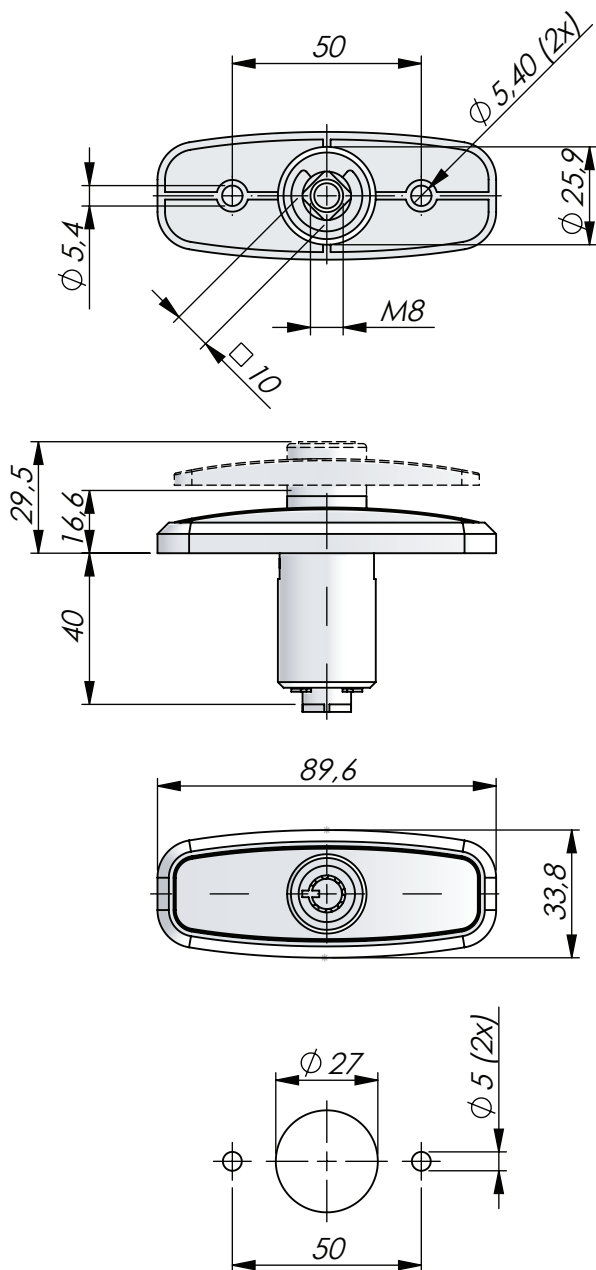
Bottom drawing: Multi-key with two key grips are available in two different versions:

Version A) "DIN 5" and "Hex 10" (shown).

Version B) "DIN 5" and "Deutsche Bahn" (also known as "DB").

Multi-Key for Quarter-Turn Latches

| P/N | Description |
|--------|---|
| 291135 | Four-way multi-key with bit holder. (Top drawing) |
| 291153 | Two-way multi-key with bits Hex 10 and DIN 5. (Bottom drawing). |
| 291157 | Two-way multi-key with bits Deutsche Bahn and DIN 5. (Not shown). |



Material:

- Handle, cylinder and housing: Zinc die-cast, chrome plated or black coated.
- Cylinder: Steel, zinc plated.

Notes, Tests:

Cam: Supplied on request.

T-handle with tubular lock cylinder. When the cylinder is opened, the handle pops out and can be turned. To lock the handle, push it back. Mounted with countersunk screws (not included). Master key system available upon request.

Supplied with two keys. Key extraction: Open / closed.

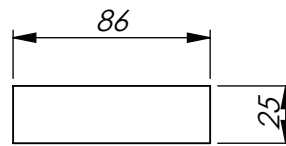
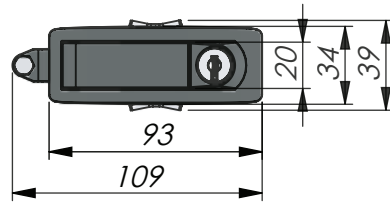
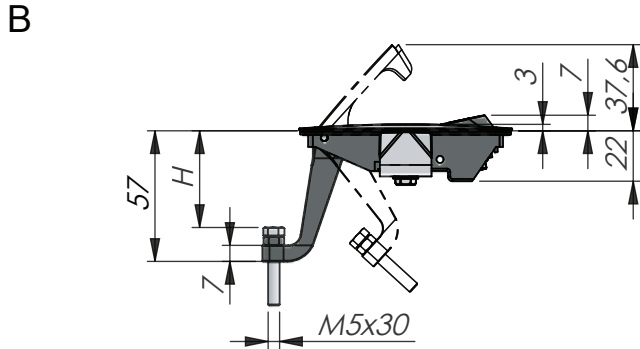
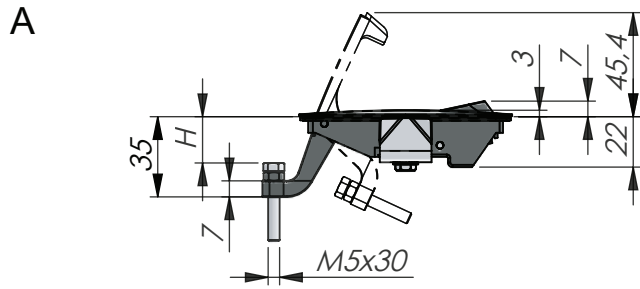
Lockable Flush Pop-Out T-Handle

| P/N | Description - cylinder | Surface treatment |
|----------|------------------------|-------------------|
| 251380 | Keyed alike | Chrome |
| 251580 | Keyed alike | Black |
| 251380-1 | Keyed to differ | Chrome |
| 251580-1 | Keyed to differ | Black |



Material:

- Housing, handle and trigger: Zinc die-cast, black powder coated.
- Mounting bracket and screws: Steel, zinc plated.

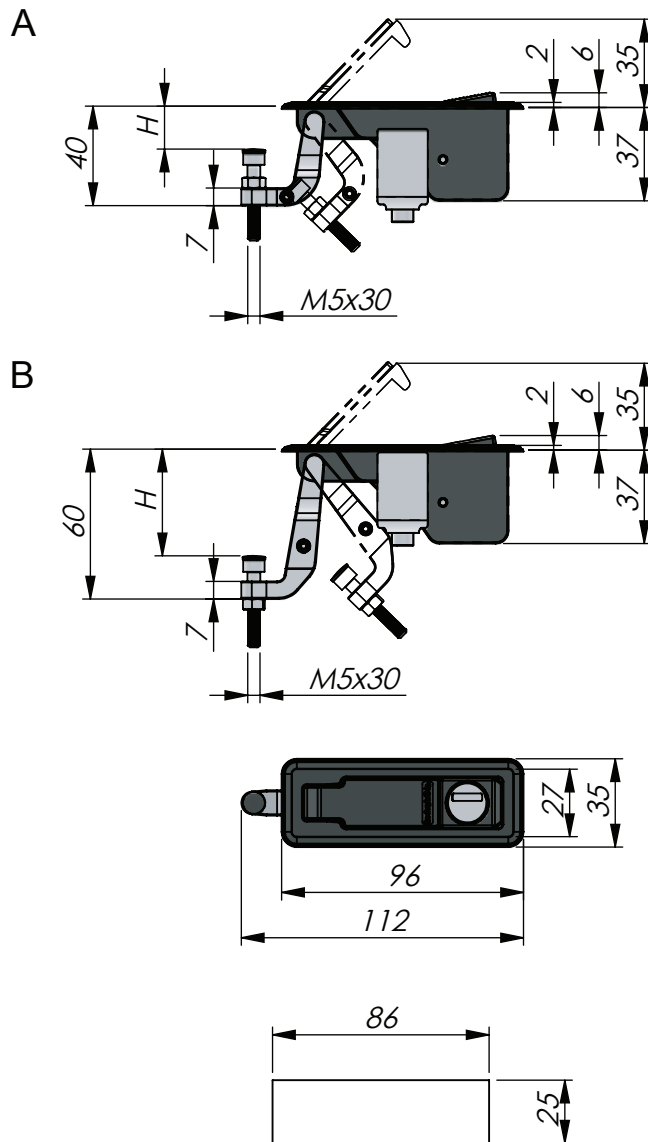


Flush compression latch with push button and adjustable grip range. Available in locking or non-locking version. Locking version supplied with two keys.

Key extraction: Open / closed.

Lockable Flush Compression Latch

| P/N | Description | H= | Drawing |
|------------------|-------------------|-------------|---------|
| 2814-030009-0124 | Non-locking | 1,0 - 24,0 | A |
| 2814-030009-2346 | Non-locking | 23,0 - 46,0 | B |
| 2814-030609-0124 | Key locking CH751 | 1,0 - 24,0 | A |
| 2814-030609-2346 | Key locking CH751 | 23,0 - 46,0 | B |



Material:

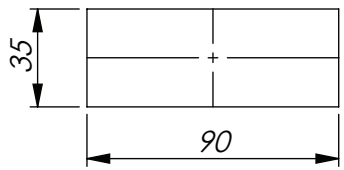
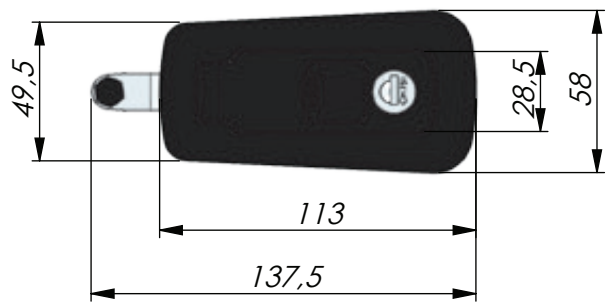
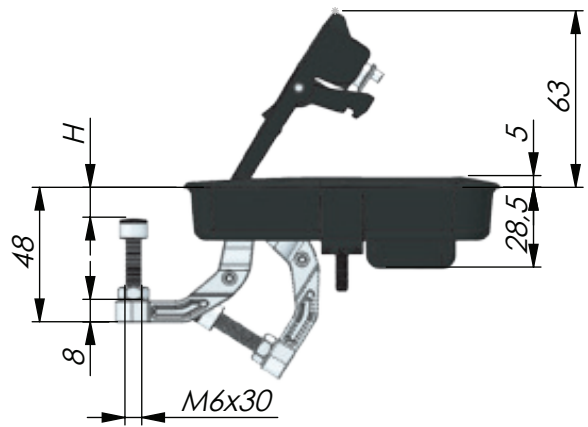
- Housing, handle and trigger: Zinc die-cast, black powder coated.
- Latching arm, inside sealed area: Zinc, zinc plated.
- Mounting bracket, screws and nut: Stainless steel.
- Spring: Stainless spring steel.
- O-rings: NBR.
- Gasket: TPE, black.

Compression latch sealed against water and dust. With raised push button and adjustable grip range. Suitable for a door thickness of 1-12 mm. Available in locking or non-locking version. Locking version supplied with two keys. The latch is supplied with mounting bracket, screws and a TPE-gasket. Prepared area for your logotype at front. Another area at the back of the latch suitable for your part number or similar.

Key extraction: Open / closed.

Lockable Flush Compression Latch

| P/N | Description - cylinder | H= | Drawing |
|------------------|------------------------|-------------|---------|
| 2814-037059-0324 | Non-locking | 2,0 - 25 mm | A |
| 2814-037059-2246 | Non-locking | 22 - 45 mm | B |
| 2814-037159-0324 | Key locking 8111 | 2,0 - 25 mm | A |
| 2814-037159-2246 | Key locking 8111 | 22 - 45 mm | B |



Material:

- Housing, push-button and mounting bracket: Glass fibre reinforced polyamide (PA6GF30)
- Latching arms, inside sealed area: Zinc die cast, zinc plated.
- Handle: Zinc die cast, black texture powder coated.
- Screw and locking nut, inside sealed area: Steel, zinc plated.
- Pin for push-button: Stainless steel (303).
- O-rings: NBR.
- Flat gasket: EPDM.

Notes, Tests:

Optional 3 mm flat gasket for mounting on latch on structured surfaces, such as "diamond plate" etc.

Flush mounted compression latch sealed against water and dust. Adjustable grip range 11-28 mm. Suitable for a door thickness up to 7 mm. Available with keyed to differ or keyed alike cylinders.

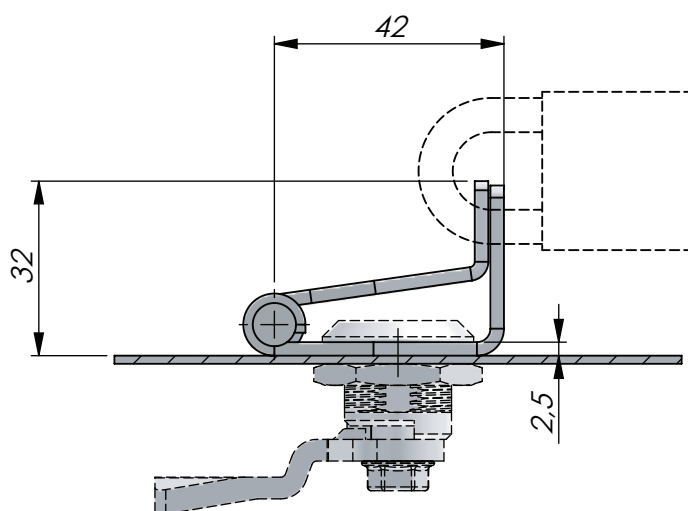
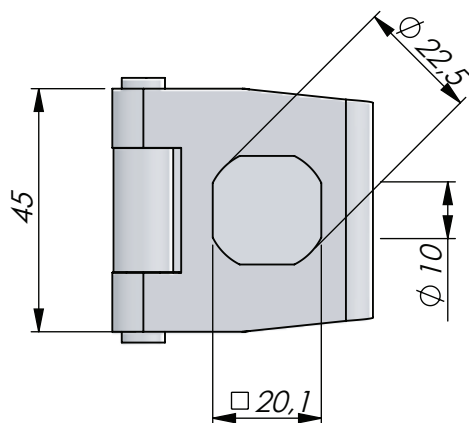
Key codes for keyed to differ and key code CH751 is stamped on the dust cap on the cylinder barrel. The other key codes doesn't show the key number on the front of the latch, only on the inside.

Supplied with two keys, which can be extracted in both open and closed position (180° turning). The latch is supplied with mounting bracket for quick and easy assembling into the door. Latch uses only one M5 locking nut (included). PUR-gasket and O-rings ensure IP65 water and dust protection. The adjustable latching screw is equipped with a PA6 cover to avoid scratches on the frame.

Key extraction: Open / closed.

Flush Compression Latch

| P/N | Description |
|------------------|---|
| 2815-505014-1128 | CH751 |
| 2815-505024-1128 | CH752 |
| 2815-505034-1128 | Keyed to differ |
| 2815-505044-1128 | IL753 |
| 2815-505054-1128 | IL754 |
| 2815-505064-1128 | IL755 |
| 2815-505074-1128 | IL756 |
| 281570-007000 | Optional flat gasket in EPDM. 3 mm thickness. |



Material:

- Stainless steel (304), polished.

Notes, Tests:

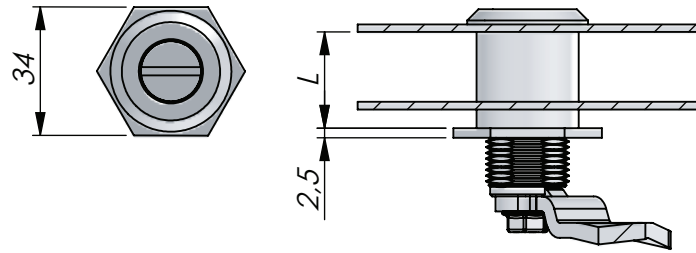
Add 2,5 mm to the H-dimension of the cam, to compensate for plate thickness of the adapter.

This adapter allows use of a padlock in combination with any quarter-turn latch using the "Combi" cut-out.

This adapter allows use of a padlock in combination with any quarter-turn latch using the "Combi" cut-out. To achieve IP65 add additional flat gasket 297006.

Padlock Adapter for Quarter-Turn Latches

| P/N | Description |
|--------|----------------------|
| 293025 | Padlock adapter |
| 297006 | Optional flat gasket |

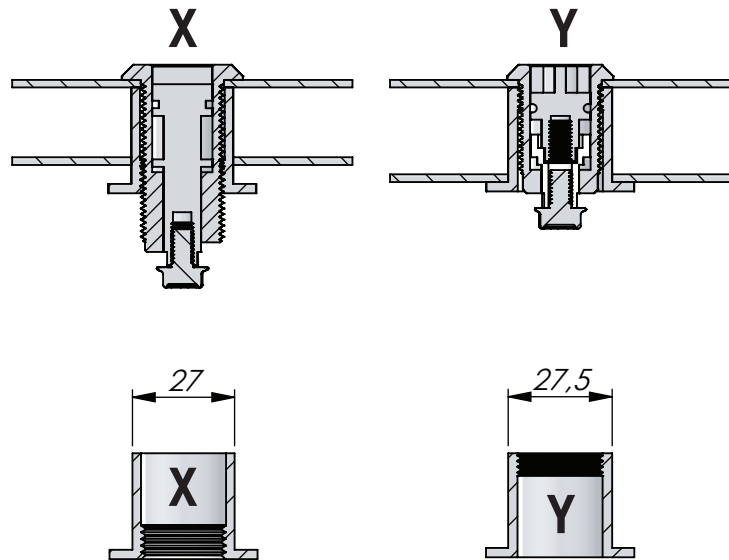


Material:

- Zinc die-cast, zinc plated or stainless steel (304).

Notes, Tests:

Stainless versions and other dimensions on request.



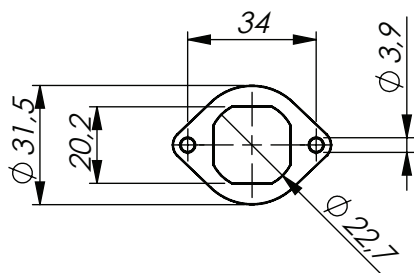
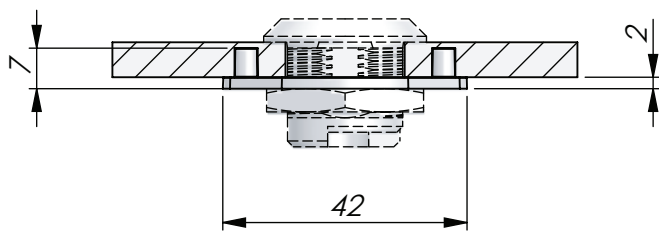
Spacer nut for installing latches in insulated or laminated doors. The nut is used in combination with housing of corresponding length. The nut is supplied in two versions:
 X: The threaded area located at the flange-end (see drawing). Use on long housings to speed up mounting. Clamps on to front panel only.
 Y: The threaded part located at the open end (see drawing). Use on thick doors, insulated doors or similar. Clamps on to both sides of the double-sided door.

Spacer Nut for Quarter-Turn Latches - Zinc, Die-Cast

| P/N | Description - thread Y | P/N | Description - thread X |
|--------|------------------------|--------|------------------------|
| 291118 | L=15,0 mm | 291134 | L=22,5 mm |
| 291132 | L=21,0 mm | 291120 | L=25,5 mm |
| 291119 | L=23,5 mm | 291133 | L=37,5 mm |
| 291129 | L=25,0 mm | 291130 | L=48,0 mm |
| 291127 | L=38,0 mm | 291121 | L=50,0 mm |
| 291131 | L=44,0 mm | | |
| 291128 | L=48,0 mm | | |

Spacer Nut for Quarter-Turn Latches - Stainless Steel (304)

| P/N | Description - thread Y | P/N | Description - thread X |
|--------|------------------------|--------|------------------------|
| 293028 | L=50,0 mm - SS 304 | 293001 | L=29,0 mm - SS 304 |



Material:

- Zinc die-cast, zinc plated or black coated.

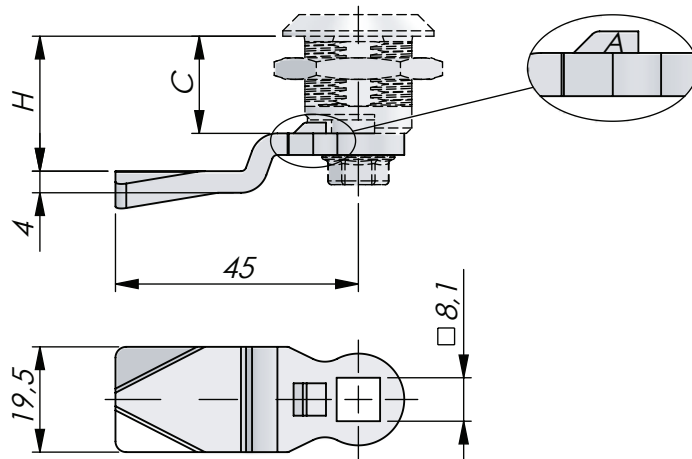
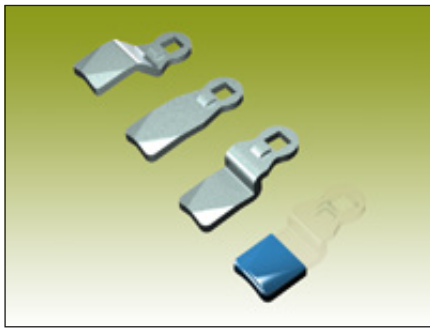
Notes, Tests:

For use of quarter-turn latch with Combi cut-out, in circular holes, for mounting in wood and glass fibre etc.

For use of quarter-turn latch with Combi cut-out, in circular holes, for mounting in wood and glass fibre etc.

Anti-Rotation Bracket for Quarter-Turn Latches

| P/N | Description | P/N | Description |
|--------|-------------|--------|--------------|
| 271102 | Zinc plated | 271502 | Black coated |



Material:

- Steel, zinc plated or stainless steel (304) or acid-proof stainless steel (316).
- Protective cap: PVC.

Notes, Tests:

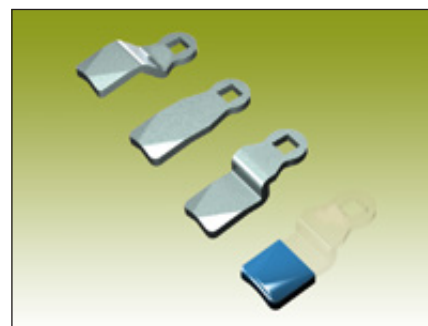
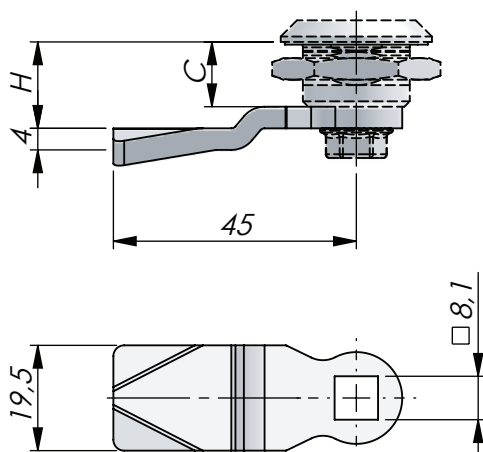
Other lengths and versions available on request.

Single-point cams for use with housings with external limitation of rotation. 096001 is a protective plastic cap for cams. The cap fits on the end of the cam and will prevent scratching of coated surfaces, prevent rattling and make cams operate smoother.

* Straight cam
 A shows the projection.
 C = Housing length.
 H = Outside face to engagement point of cam.

Single-Point Cam with Projection

| P/N Steel | P/N SS (304) | P/N SS (316) | H-measurement of cam below. | | | | | | | |
|-----------|---------------------------------|--------------|-----------------------------|------|------|------|------|------|------|------|
| | | | C=12 | C=18 | C=30 | C=40 | C=45 | C=50 | C=56 | C=60 |
| 232101 | 233001 | 239001 | -- | 4 | 16 | 26 | 31 | 36 | 42 | 46 |
| 232102 | 233002 | 239002 | -- | 6 | 18 | 28 | 33 | 38 | 44 | 48 |
| 232103 | 233003 | 239003 | 2 | 8 | 20 | 30 | 35 | 40 | 46 | 50 |
| 232104 | 233004 | 239004 | 4 | 10 | 22 | 32 | 37 | 42 | 48 | 52 |
| 232105 | 233005 | 239005 | 6 | 12 | 24 | 34 | 39 | 44 | 50 | 54 |
| 232107 | 233007 | 239007 | 8 | 14 | 26 | 36 | 41 | 46 | 52 | 56 |
| 232108 | 233008 | 239008 | 10 | 16 | 28 | 38 | 43 | 48 | 54 | 58 |
| 232109 * | 233009 * | 239009 * | 12 | 18 | 30 | 40 | 45 | 50 | 56 | 60 |
| 232110 | 233010 | 239010 | 14 | 20 | 32 | 42 | 47 | 52 | 58 | 62 |
| 232111 | 233011 | 239011 | 16 | 22 | 34 | 44 | 49 | 54 | 60 | 64 |
| 232112 | 233012 | 239012 | 18 | 24 | 36 | 46 | 51 | 56 | 62 | 66 |
| 232114 | 233014 | 239014 | 20 | 26 | 38 | 48 | 53 | 58 | 64 | 68 |
| 232115 | 233015 | 239015 | 22 | 28 | 40 | 50 | 55 | 60 | 66 | 70 |
| 232116 | 233016 | 239016 | 24 | 30 | 42 | 52 | 57 | 62 | 68 | 72 |
| 232117 | 233017 | 239017 | 26 | 32 | 44 | 54 | 59 | 64 | 70 | 74 |
| 232118 | 233018 | 239018 | 28 | 34 | 46 | 56 | 61 | 66 | 72 | 76 |
| 232120 | 233020 | 239020 | 30 | 36 | 48 | 58 | 63 | 68 | 74 | 78 |
| 232121 | 233021 | 239021 | 32 | 38 | 50 | 60 | 65 | 70 | 76 | 80 |
| 232122 | 233022 | 239022 | 34 | 40 | 52 | 62 | 67 | 72 | 78 | 82 |
| 232123 | 233023 | 239023 | 36 | 42 | 54 | 64 | 69 | 74 | 80 | 84 |
| 232124 | 233024 | 239024 | 38 | 44 | 56 | 66 | 71 | 76 | 82 | 86 |
| 232131 | 233031 | 239031 | 40 | 46 | 58 | 68 | 73 | 78 | 84 | 88 |
| 232172 | 233072 | 239072 | 42 | 48 | 60 | 70 | 75 | 80 | 86 | 90 |
| 232127 | 233027 | 239027 | 44 | 50 | 62 | 72 | 77 | 82 | 88 | 92 |
| 096001 | Protective plastic cap for cams | | | | | | | | | |



Material:

- Steel, zinc plated or stainless steel (304) or acid-proof stainless steel (316).
- Protective cap: PVC.

Notes, Tests:

Other lengths and versions available on request.

Single-point cams for use with housings with internal limitation of rotation. 096001 is a protective plastic cap for cams. The cap fits on the end of the cam and will prevent scratching of coated surfaces, prevent rattling and make cams operate smoother.

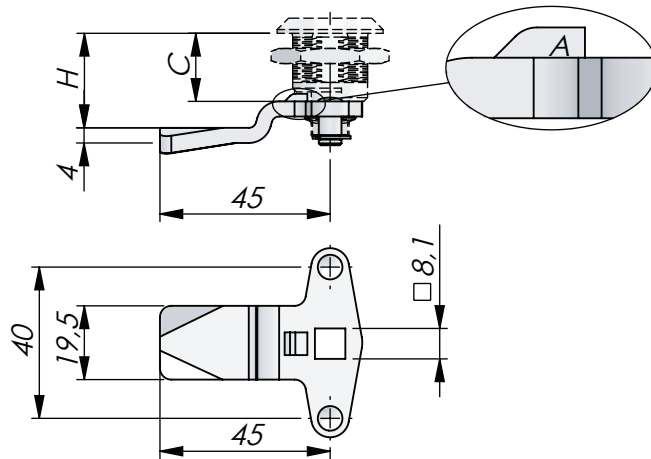
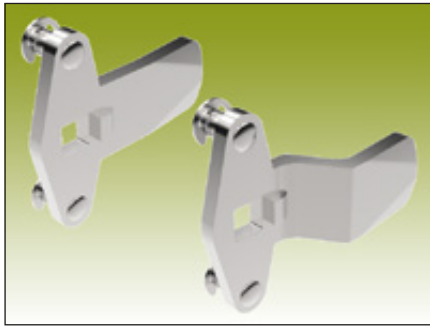
* Straight cam

C = Housing length.

H = Outside face to engagement point of cam.

Single-Point Cam without Projection

| P/N Steel | P/N SS (304) | P/N SS (316) | H-measurement of cam below. | | | | | |
|------------|---------------------------------|--------------|-----------------------------|------|------|------|------|------|
| | | | C=12 | C=18 | C=30 | C=35 | C=45 | C=56 |
| 232101-U | 233001-U | 239001-U | -- | 4 | 16 | 21 | 31 | 42 |
| 232102-U | 233002-U | 239002-U | -- | 6 | 18 | 23 | 33 | 44 |
| 232103-U | 233003-U | 239003-U | 2 | 8 | 20 | 25 | 35 | 46 |
| 232104-U | 233004-U | 239004-U | 4 | 10 | 22 | 27 | 37 | 48 |
| 232105-U | 233005-U | 239005-U | 6 | 12 | 24 | 29 | 39 | 50 |
| 232107-U | 233007-U | 239007-U | 8 | 14 | 26 | 31 | 41 | 52 |
| 232108-U | 233008-U | 239008-U | 10 | 16 | 28 | 33 | 43 | 54 |
| 232109-U * | 233009-U * | 239009-U * | 12 | 18 | 30 | 35 | 45 | 56 |
| 232110-U | 233010-U | 239010-U | 14 | 20 | 32 | 37 | 47 | 58 |
| 232111-U | 233011-U | 239011-U | 16 | 22 | 34 | 39 | 49 | 60 |
| 232112-U | 233012-U | 239012-U | 18 | 24 | 36 | 41 | 51 | 62 |
| 232114-U | 233014-U | 239014-U | 20 | 26 | 38 | 43 | 53 | 64 |
| 232115-U | 233015-U | 239015-U | 22 | 28 | 40 | 45 | 55 | 66 |
| 232116-U | 233016-U | 239016-U | 24 | 30 | 42 | 47 | 57 | 68 |
| 232117-U | 233017-U | 239017-U | 26 | 32 | 44 | 49 | 59 | 70 |
| 232118-U | 233018-U | 239018-U | 28 | 34 | 46 | 51 | 61 | 72 |
| 232120-U | 233020-U | 239020-U | 30 | 36 | 48 | 53 | 63 | 74 |
| 232121-U | 233021-U | 239021-U | 32 | 38 | 50 | 55 | 65 | 76 |
| 232122-U | 233022-U | 239022-U | 34 | 40 | 52 | 57 | 67 | 78 |
| 232123-U | 233023-U | 239023-U | 36 | 42 | 54 | 59 | 69 | 80 |
| 232124-U | 233024-U | 239024-U | 38 | 44 | 56 | 61 | 71 | 82 |
| 232131-U | 233031-U | 239031-U | 40 | 46 | 58 | 63 | 73 | 84 |
| 232172-U | 233072-U | 239072-U | 42 | 48 | 60 | 65 | 75 | 86 |
| 232127-U | 233027-U | 239027-U | 44 | 50 | 62 | 67 | 77 | 88 |
| 096001 | Protective plastic cap for cams | | | | | | | |



Material:

- Steel, zinc plated or stainless steel (304).
- Protective cap: PVC.

References, Accessories:

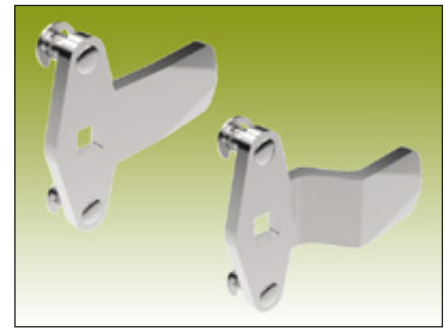
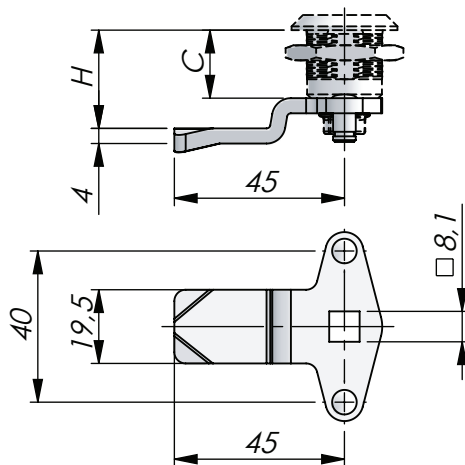
- Rods: Page 2-540, 2-541 and 2-545.

Three-point cams for use with housings with external limitation of rotation. Stroke: 20 mm. Supplied with E-clips. 096001 is a protective plastic cap for cams. The cap fits on the end of the cam and will prevent scratching of coated surfaces, prevent rattling and make cams operate smoother. Other lengths and versions available on request.
 *=Straight cam

A shows the projection. C = Housing length.
 H = Outside face to engagement point of cam.

Three-Point Cam with Projection

| P/N Steel | P/N SS 304 | H in mm when C= | | | | | | | |
|-----------|---------------------------------|-----------------|------|------|------|------|------|------|------|
| | | C=12 | C=18 | C=30 | C=40 | C=45 | C=50 | C=56 | C=60 |
| 2321S01 | 2330S01 | -- | 4 | 16 | 26 | 31 | 36 | 42 | 46 |
| 2321S02 | 2330S02 | -- | 6 | 18 | 28 | 33 | 38 | 44 | 48 |
| 2321S03 | 2330S03 | 2 | 8 | 20 | 30 | 35 | 40 | 46 | 50 |
| 2321S04 | 2330S04 | 4 | 10 | 22 | 32 | 37 | 42 | 48 | 52 |
| 2321S05 | 2330S05 | 6 | 12 | 24 | 34 | 39 | 44 | 50 | 54 |
| 2321S07 | 2330S07 | 8 | 14 | 26 | 36 | 41 | 46 | 52 | 56 |
| 2321S08 | 2330S08 | 10 | 16 | 28 | 38 | 43 | 48 | 54 | 58 |
| 2321S09 * | 2330S09 * | 12 | 18 | 30 | 40 | 45 | 50 | 56 | 60 |
| 2321S10 | 2330S10 | 14 | 20 | 32 | 42 | 47 | 52 | 58 | 62 |
| 2321S11 | 2330S11 | 16 | 22 | 34 | 44 | 49 | 54 | 60 | 64 |
| 2321S12 | 2330S12 | 18 | 24 | 36 | 46 | 51 | 56 | 62 | 66 |
| 2321S14 | 2330S14 | 20 | 26 | 38 | 48 | 53 | 58 | 64 | 68 |
| 2321S15 | 2330S15 | 22 | 28 | 40 | 50 | 55 | 60 | 66 | 70 |
| 2321S16 | 2330S16 | 24 | 30 | 42 | 52 | 57 | 62 | 68 | 72 |
| 2321S17 | 2330S17 | 26 | 32 | 44 | 54 | 59 | 64 | 70 | 74 |
| 2321S18 | 2330S18 | 28 | 34 | 46 | 56 | 61 | 66 | 72 | 76 |
| 2321S20 | 2330S20 | 30 | 36 | 48 | 58 | 63 | 68 | 74 | 78 |
| 2321S21 | 2330S21 | 32 | 38 | 50 | 60 | 65 | 70 | 76 | 80 |
| 2321S22 | 2330S22 | 34 | 40 | 52 | 62 | 67 | 72 | 78 | 82 |
| 2321S23 | 2330S23 | 36 | 42 | 54 | 64 | 69 | 74 | 80 | 84 |
| 2321S24 | 2330S24 | 38 | 44 | 56 | 66 | 71 | 76 | 82 | 86 |
| 2321S29 | 2330S29 | 40 | 46 | 58 | 68 | 73 | 78 | 84 | 88 |
| 2321S28 | 2330S28 | 42 | 48 | 60 | 70 | 75 | 80 | 86 | 90 |
| 2321S27 | 2330S27 | 44 | 50 | 62 | 72 | 77 | 82 | 88 | 92 |
| 096001 | Protective plastic cap for cams | | | | | | | | |



Material:

- Steel, zinc plated or stainless steel (304).
- Protective cap: PVC.

References, Accessories:

- Rods: Page 2-540, 2-541 and 2-545.

Three-point cams for use with housings with internal limitation of rotation. Stroke: 20 mm. Supplied with E-clips. 096001 is a protective plastic cap for cams. The cap fits on the end of the cam and will prevent scratching of coated surfaces, prevent rattling and make cams operate smoother.

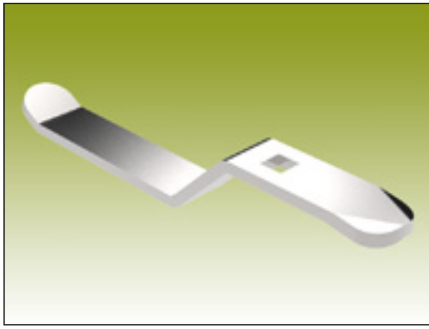
*=Straight cam. Other lengths and versions available on request.

C = Housing length.

H = Outside face to engagement point of cam.

Three-Point Cam Without Projection

| P/N Steel | P/N SS (304) | H-measurement of cam below. | | | | |
|-------------|---------------------------------|-----------------------------|------|------|------|------|
| | | C=12 | C=18 | C=30 | C=45 | C=56 |
| 2321S01-U | 2330S01-U | -- | 4 | 16 | 31 | 42 |
| 2321S02-U | 2330S02-U | -- | 6 | 18 | 33 | 44 |
| 2321S03-U | 2330S03-U | 2 | 8 | 20 | 35 | 46 |
| 2321S04-U | 2330S04-U | 4 | 10 | 22 | 37 | 48 |
| 2321S05-U | 2330S05-U | 6 | 12 | 24 | 39 | 50 |
| 2321S07-U | 2330S07-U | 8 | 14 | 26 | 41 | 52 |
| 2321S08-U | 2330S08-U | 10 | 16 | 28 | 43 | 54 |
| 2321S09-U * | 2330S09-U * | 12 | 18 | 30 | 45 | 56 |
| 2321S10-U | 2330S10-U | 14 | 20 | 32 | 47 | 58 |
| 2321S11-U | 2330S11-U | 16 | 22 | 34 | 49 | 60 |
| 2321S12-U | 2330S12-U | 18 | 24 | 36 | 51 | 62 |
| 2321S14-U | 2330S14-U | 20 | 26 | 38 | 53 | 64 |
| 2321S15-U | 2330S15-U | 22 | 28 | 40 | 55 | 66 |
| 2321S16-U | 2330S16-U | 24 | 30 | 42 | 57 | 68 |
| 2321S17-U | 2330S17-U | 26 | 32 | 44 | 59 | 70 |
| 2321S18-U | 2330S18-U | 28 | 34 | 46 | 61 | 72 |
| 2321S20-U | 2330S20-U | 30 | 36 | 48 | 63 | 74 |
| 2321S21-U | 2330S21-U | 32 | 38 | 50 | 65 | 76 |
| 2321S22-U | 2330S22-U | 34 | 40 | 52 | 67 | 78 |
| 2321S23-U | 2330S23-U | 36 | 42 | 54 | 69 | 80 |
| 2321S24-U | 2330S24-U | 38 | 44 | 56 | 71 | 82 |
| 2321S29-U | 2330S29-U | 40 | 46 | 58 | 73 | 84 |
| 2321S28-U | 2330S28-U | 42 | 48 | 60 | 75 | 86 |
| 2321S27-U | 2330S27-U | 44 | 50 | 62 | 77 | 88 |
| 096001 | Protective plastic cap for cams | | | | | |



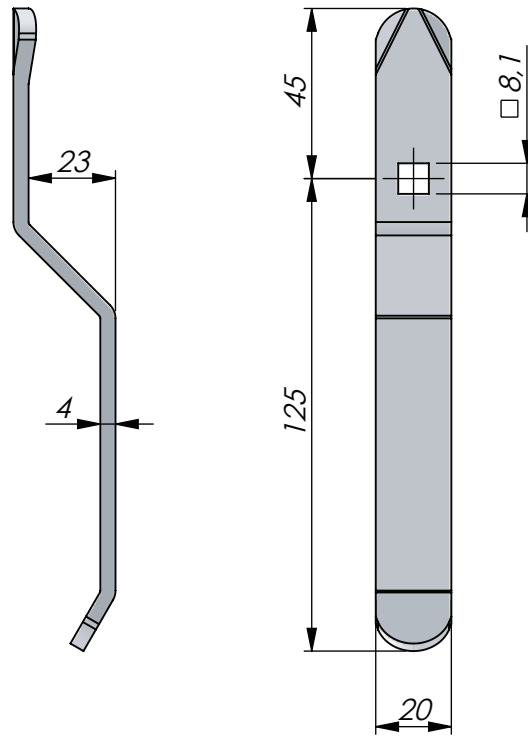
Material:

- Steel, zinc plated, or stainless steel (304).

References, Accessories:

This handle fits products with internal limitation. Please see suitable products on the following pages:

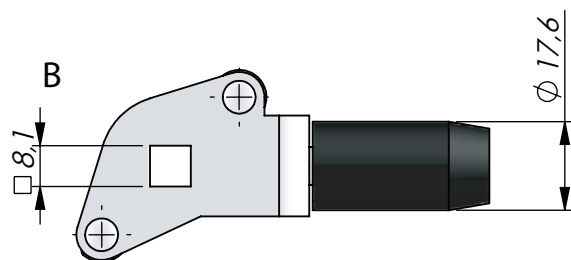
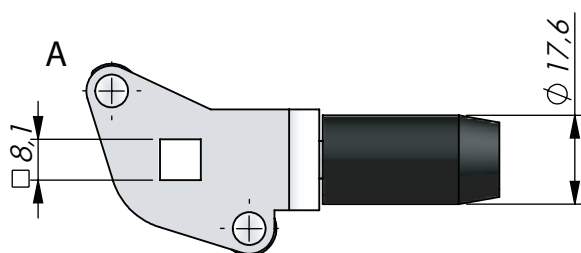
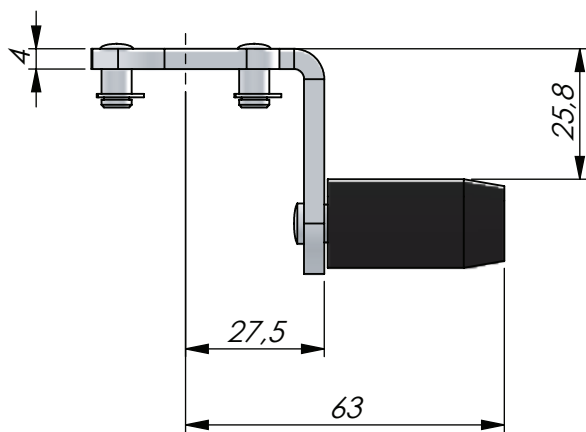
- Vibration resistant quarter-turns, 18 mm: 2-020.
- Quick mounting quarter-turns: 2-030.
- Vibration resistant quarter-turns, 12 mm: 2-040.
- Vibration resistant quarter-turns, 18 mm: 2-120.
- Quarter-turn wing knob, 18 mm: 2-252.
- Quarter-turn T-handle, 18 mm: 2-271.
- Acid-proof quarter-turns, 6-155.



Cam without projection, with integrated inside handle. For use together with non-locking products and housings with internal limitation of rotation.

Cam with Inside Handle

| P/N | Description | P/N | Description |
|----------|-------------|----------|-------------|
| 26210009 | Steel | 26300009 | SS (304) |



Material:

- Cam: Steel, passivated.
- Shaft and E-clip: Steel, zinc plated.
- Roller: Glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

- Rods: Page 2-540, 2-541 and 2-545.

Roller cam for three-point latching systems with rods. Can remotely operate additional roller cams from a single handle or quarter-turn latch. Supplied with E-clips.

Version "A" without projection is shown in the drawing above.

Three-point Roller Cam

| P/N | Description | Image |
|------------|--------------------|-------|
| 2327S24-R | With projection | A |
| 2327S25-R | With projection | B |
| 2327S24-UR | Without projection | A |
| 2327S25-UR | Without projection | B |

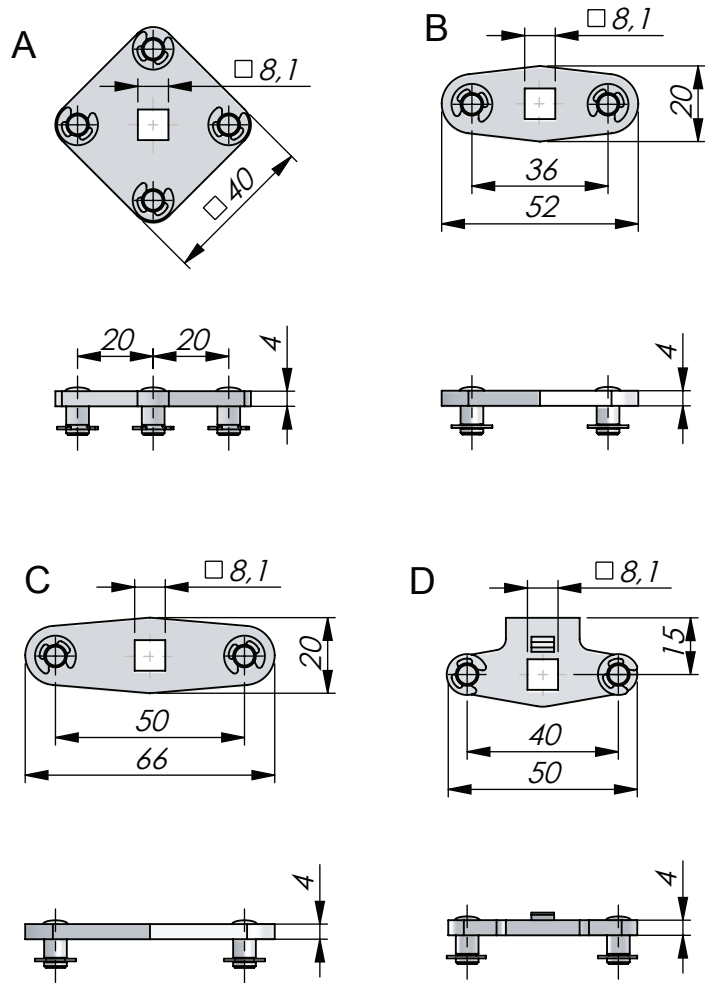


Material:

- Steel, zinc plated or stainless steel (304).

References, Accessories:

- Rods: Page 2-540, 2-541 and 2-545.



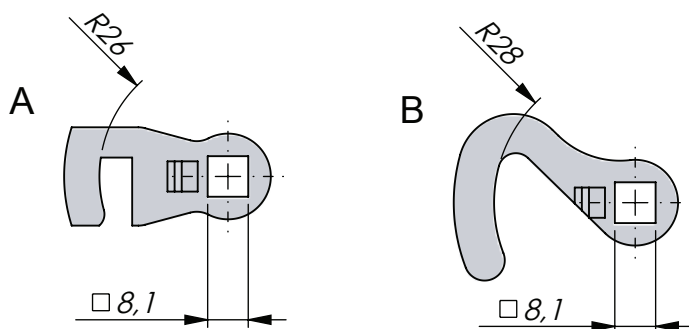
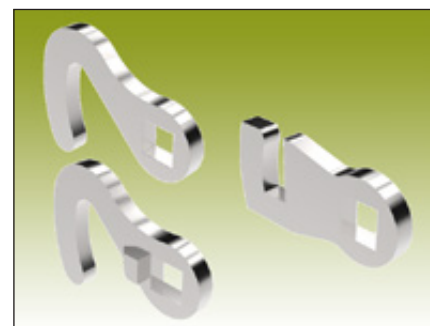
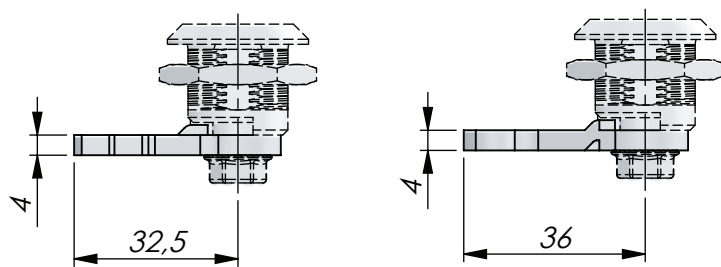
Two- and four-point cams for rod systems. Supplied with E-clips.

Multi-Point Cam with Projection

| P/N | Description | Material | Drawing | Stroke |
|-------------|---------------|-----------------|---------|--------|
| 2321S09-00M | Two-point cam | Steel | D | 20 |
| 2330S09-00M | Two-point cam | Stainless steel | D | 20 |

Multi-Point Cam without Projection

| P/N | Description | Material | Drawing | Stroke |
|----------------|----------------|-----------------|---------|--------|
| 2321S09-004U | Four-point cam | Steel | A | 20 |
| 2321S09-00U | Two-point cam | Steel | D | 20 |
| 2321S09-00U-36 | Two-point cam | Steel | B | 18 |
| 2321S09-00U-50 | Two-point cam | Steel | C | 25 |
| 2330S09-00U | Two-point cam | Stainless steel | D | 20 |



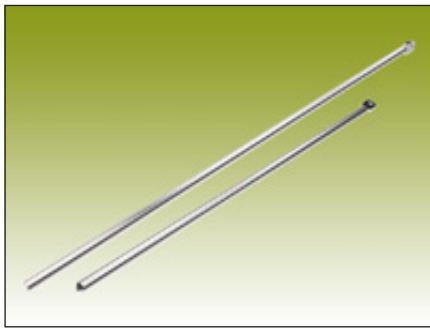
Material:

- Steel, zinc plated.

Hooked cams for quarter-turn latches, locks and handles. With projection for housings with external limitation of rotation, and without projection for housings with internal limitation of rotation.

Hooked Cam for Quarter-Turn Latches

| P/N | Type | Projection | Description |
|----------|------|------------|---------------|
| 232183-U | A | No | Universal |
| 232180-U | B | No | Universal |
| 232183-1 | A | Yes | Right (shown) |
| 232180-1 | B | Yes | Right (shown) |
| 232183-2 | A | Yes | Left |
| 232180-2 | B | Yes | Left |

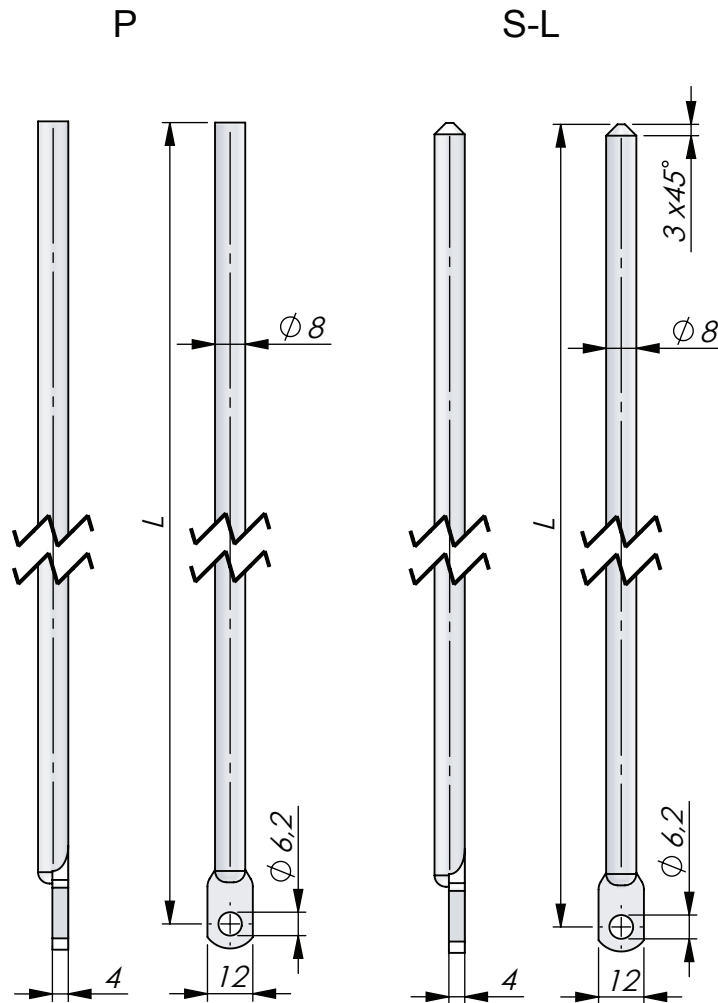


Material:

- Steel, zinc plated or stainless steel (304).

References, Accessories:

Swing handles: Chapter 1.
 Cams: Page 2-490, 2-491, 2-500b and 2-510.
 Rod guides: Page 2-560 and 2-570.

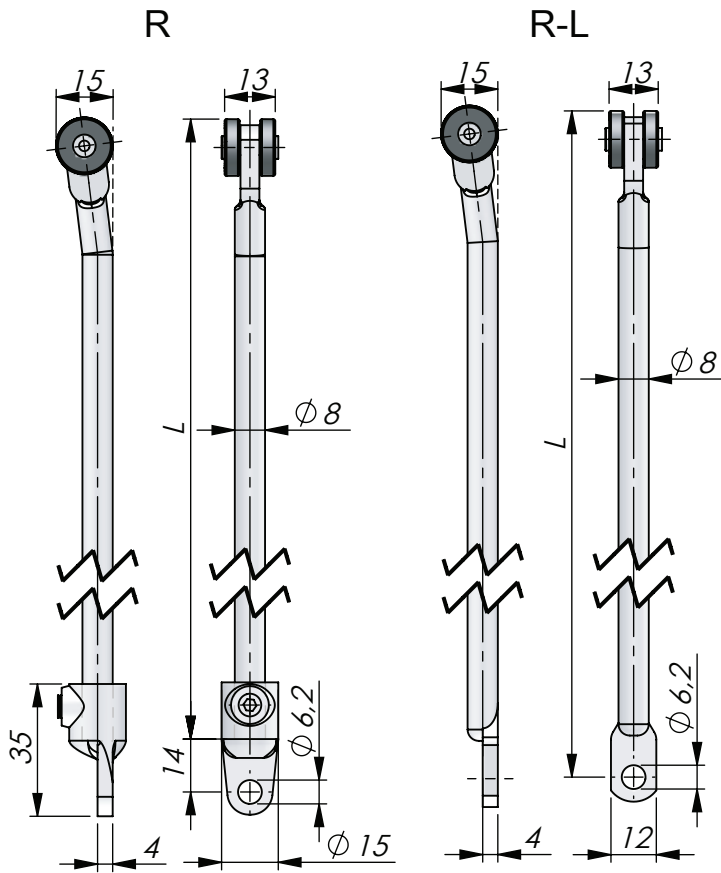


Round Ø 8 mm rod with stamped, flat end and eye. For handles and latches with multi-point cams. The length L is the total length from the center of the eye to the end of the rod.

Custom products marked with * are available on request only.

Round Rod for Latching System

| P/N steel | P/N SS (304) | Description | Length in mm |
|--------------|--------------|-------------|--------------------------|
| 282101 | 283001 | Rod P | L=400 mm |
| 282102 | 283002 | Rod P | L=500 mm |
| 282103 | 283003 | Rod P | L=600 mm |
| 282104 | 283004 | Rod P | L=700 mm |
| 282105 | 283005 | Rod P | L=800 mm |
| 282106 | 283006 | Rod P | L=900 mm |
| 282107 | 283007 | Rod P | L=1000 mm |
| 282108 | 283008 | Rod P | L=1100 mm |
| 282109 | 283009 | Rod P | L=1200 mm |
| 282110-LLLL* | 283010-LLLL* | Rod S-L | LLLL=Custom length in mm |



Material:

- Rod and rivet: Steel, zinc plated or stainless steel (304).
- Adapter: Zinc die cast, zinc plated or stainless steel (304).
- Roller: Glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

- Swing handles: Chapter 1.
- Cams: Page 2-490, 2-491 2-500b and 2-510.
- Rod guides: Page 2-560 and 2-570.

Notes, Tests:

Custom lengths marked with * are available on request only.

Round Ø 8 mm rod with 15 mm roller, for handles and latches with multi-point cams. Rod model R is used with a rod adapter. The length L is the total length to the end of the roller. The adapter adds 14 mm to the total length (see drawing). Rod model R-L has a stamped, flat end with an eye. The length L is the total length from the center of the eye to the end of the roller.

Rod Adapter

| P/N | For rod | Material | P/N | For rod | Material |
|----------|---------|----------|-----------|---------|----------|
| 282119-6 | 6 mm | Zinc | 282119-10 | 10 mm | Zinc |
| 282119 | 8 mm | Zinc | 283019 | 8 mm | SS (304) |

Round Rod (Ø 8 mm) for Latching System - 15 mm Rollers

| P/N steel | P/N SS (304) | Type | Length in mm |
|--------------|--------------|---------|-------------------|
| 282111 | 283011 | Rod R | L=400 |
| 282112 | 283012 | Rod R | L=500 |
| 282113 | 283013 | Rod R | L=600 |
| 282121 | 283021 | Rod R | L=700 |
| 282114 | 283014 | Rod R | L=800 |
| 282115 | 283015 | Rod R | L=900 |
| 282116 | 283016 | Rod R | L=1000 |
| 282117 | 283017 | Rod R | L=1100 |
| 282118 | 283018 | Rod R | L=1200 |
| 282120-LLLL* | 283020-LLLL* | Rod R-L | LLLL=Length in mm |





Material:

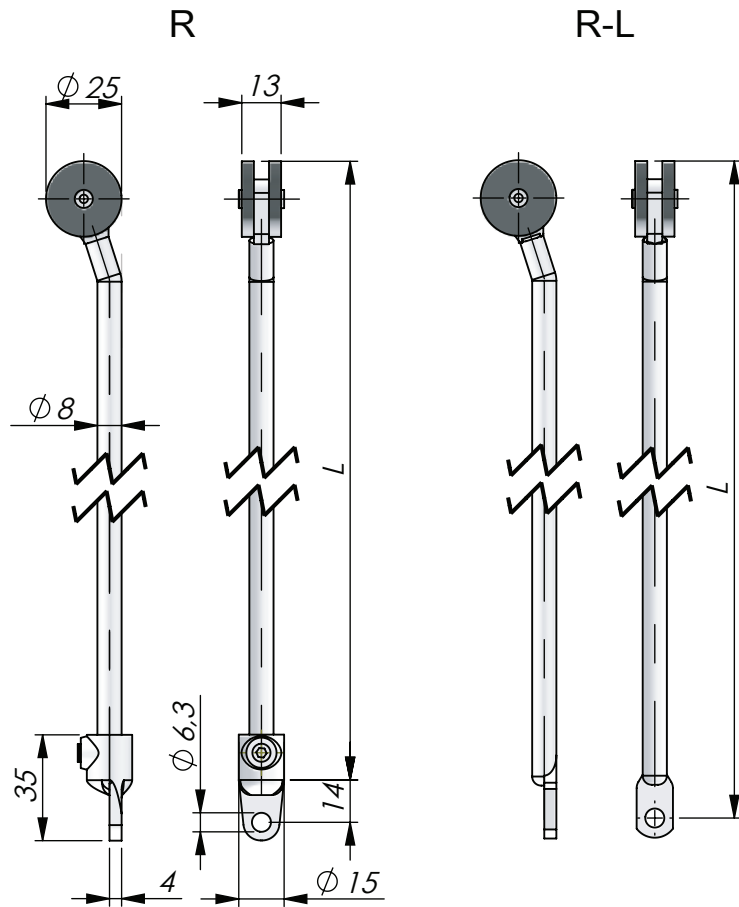
- Rod and rivet: Steel, zinc plated or stainless steel (304).
- Adapter: Zinc die cast, zinc plated or stainless steel (304).
- Roller: Glass fibre reinforced polyamide (PA6GF30), black.

References, Accessories:

- Swing handles: Chapter 1.
- Cams: Page 2-490, 2-491, 2-500b and 2-510.
- Rod guides: Page 2-560 and 2-570.

Notes, Tests:

Custom lengths marked with * are available on request only.



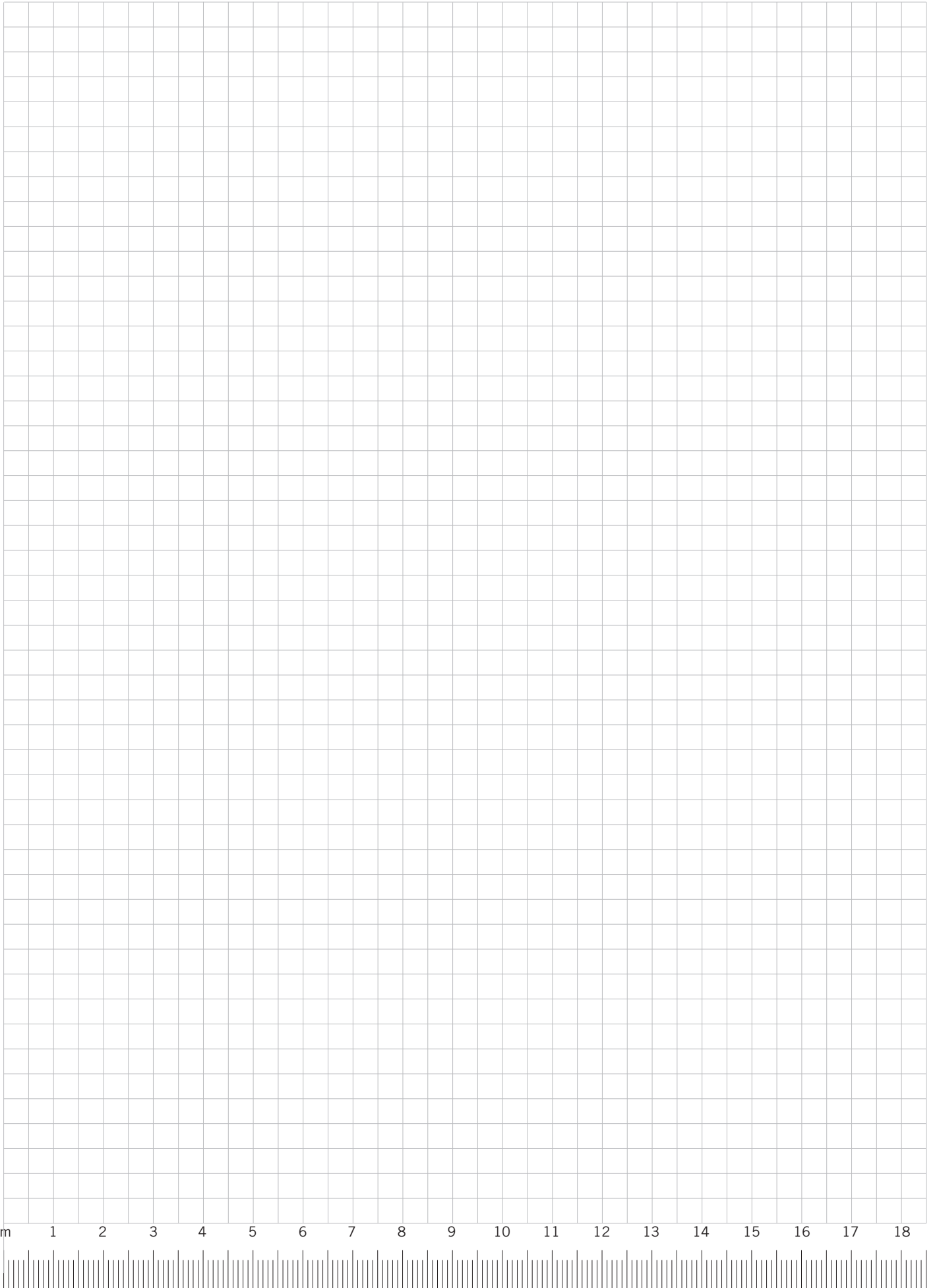
Round Ø 8 mm rod with 25 mm roller, for handles and latches with multi-point cams. Rod model R is used with a rod adapter. The length L is the total length to the end of the roller. The adapter adds 14 mm to the total length (see drawing). Rod model R-L has a stamped, flat end with an eye. The length L is the total length from the center of the eye to the end of the roller.

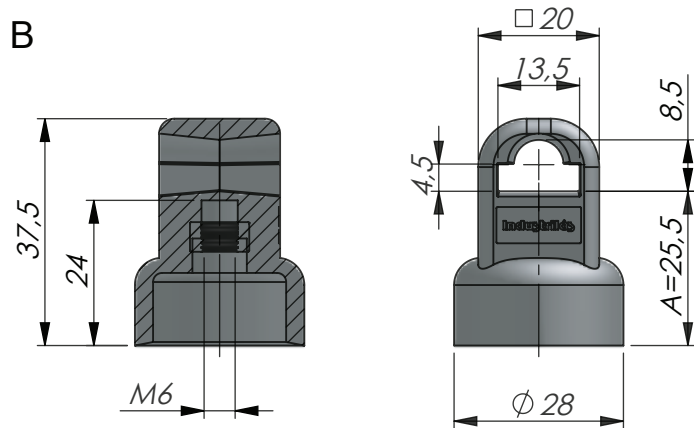
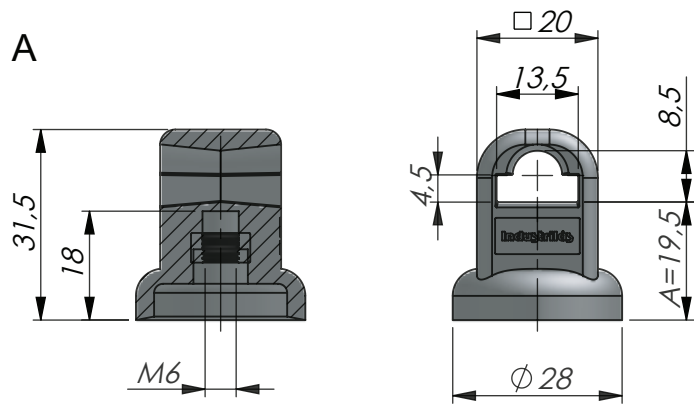
Rod Adapter

| P/N | For rod | Material | P/N | For rod | Material |
|----------|---------|----------|-----------|---------|----------|
| 282119-6 | 6 mm | Zinc | 282119-10 | 10 mm | Zinc |
| 282119 | 8 mm | Zinc | 283019 | 8 mm | SS (304) |

Round Rod (Ø 8 mm) for Latching System - 25 mm Rollers

| P/N steel | P/N SS (304) | Type | Length in mm |
|--------------|--------------|---------|-------------------|
| 282151 | 283051 | Rod R | L=400 |
| 282152 | 283052 | Rod R | L=500 |
| 282153 | 283053 | Rod R | L=600 |
| 282161 | 283061 | Rod R | L=700 |
| 282154 | 283054 | Rod R | L=800 |
| 282155 | 283055 | Rod R | L=900 |
| 282156 | 283056 | Rod R | L=1000 |
| 282157 | 283057 | Rod R | L=1100 |
| 282158 | 283058 | Rod R | L=1200 |
| 282160-LLLL* | 283060-LLLL* | Rod R-L | LLLL=Length in mm |





Material:

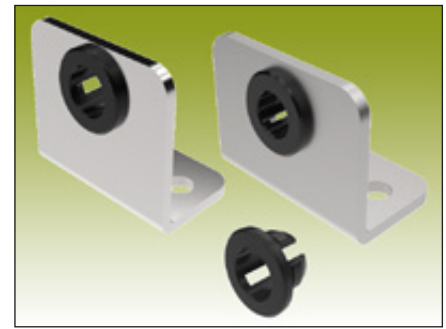
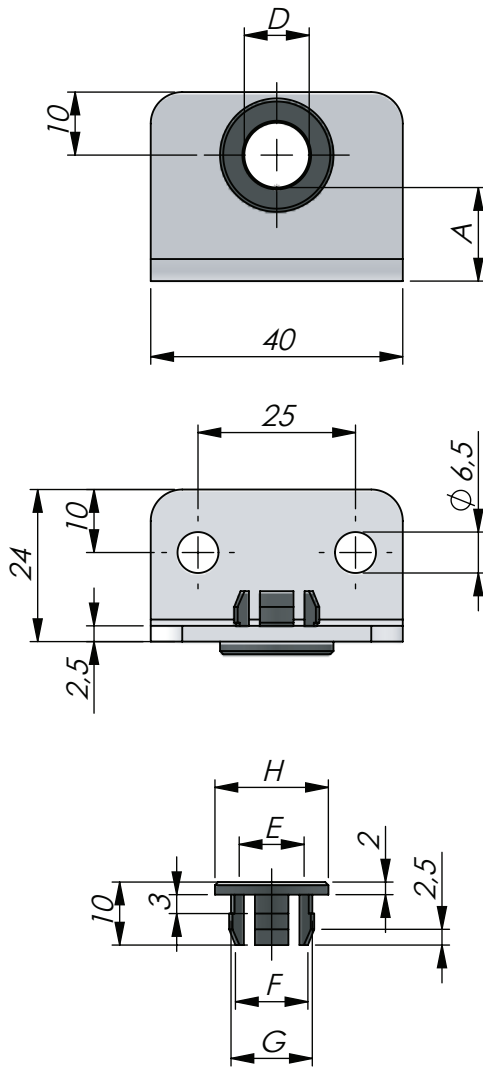
- Glass fibre reinforced polyamide (PA6GF30), black.
- Nut: Steel, zinc plated.

0

Rod guides with moulded-in M6 nut, for round Ø 8 mm rod. For weld-on stud or screw. The opening allows the flat end through the rod guide.

Polyamide Rod Guides

| P/N | Description - A in mm | Drawing |
|--------|-----------------------|---------|
| 285024 | 20 | A |
| 285023 | 26 | B |



Material:

- Bracket: Steel, zinc plated.
- Bushing: Glass fibre reinforced polyamide (PA6GF30), black.

Notes, Tests:

Custom lengths marked with * are available on request only.
A is the distance between the inside face of the door and the rod.

Rod guide supplied with polyamide bushing, for Ø 8 or Ø 10 mm round rods. For screw-/or weld-on mounting. Polyamide bushing for low friction and silent movement of the rod.

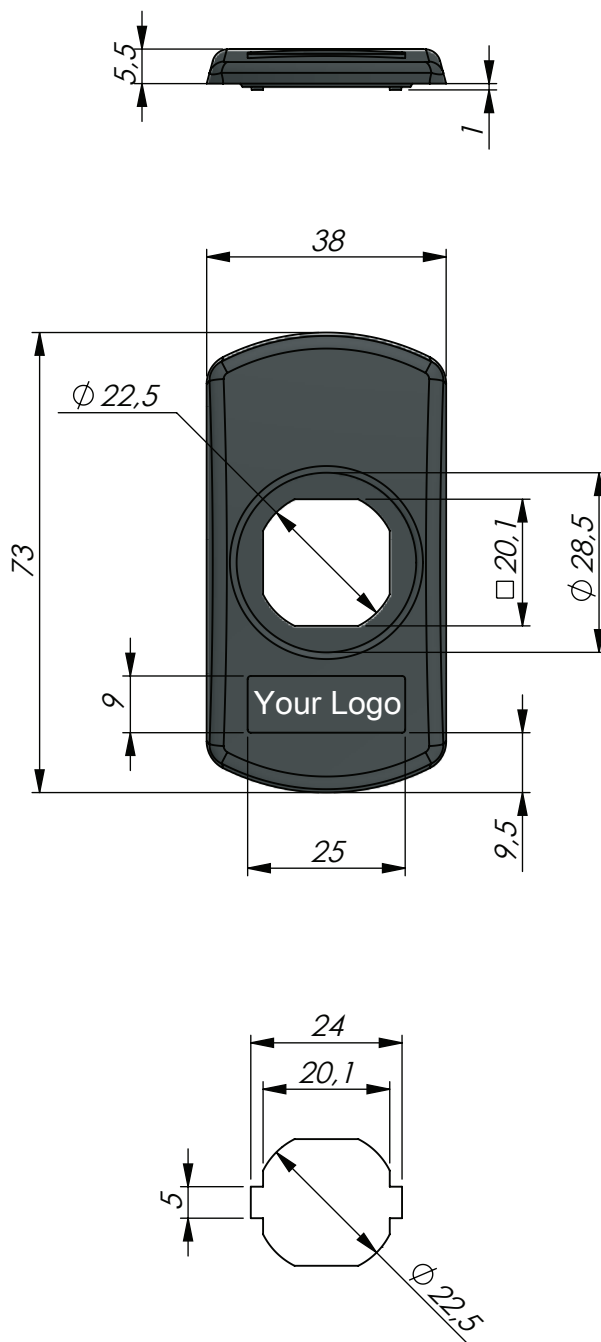
Rod Guide

| P/N | Description | D | A |
|------------|----------------------|----|-----------------|
| 282123 | Rod guide | 8 | 16 |
| 282124 | Rod guide | 8 | 22 |
| 282125 | Rod guide | 10 | 15 |
| 282126 | Rod guide | 10 | 19 |
| 282127-AA* | Customized rod guide | 8 | AA (min. 12 mm) |
| 282128-AA* | Customized rod guide | 10 | AA (min. 12 mm) |

Separate Bushing

| P/N | Description | Cut-out | E | F | G | H |
|----------|-------------------------|---------|------|------|------|----|
| 28212302 | Bushing for Ø 8 mm rod | Ø 11 mm | 8,4 | 9,5 | 11 | 16 |
| 28212502 | Bushing for Ø 10 mm rod | Ø 13 mm | 10,3 | 11,5 | 12,9 | 18 |





Material:

- Glass fibre reinforced polyamide (PA6GF30), black.

Notes, Tests:

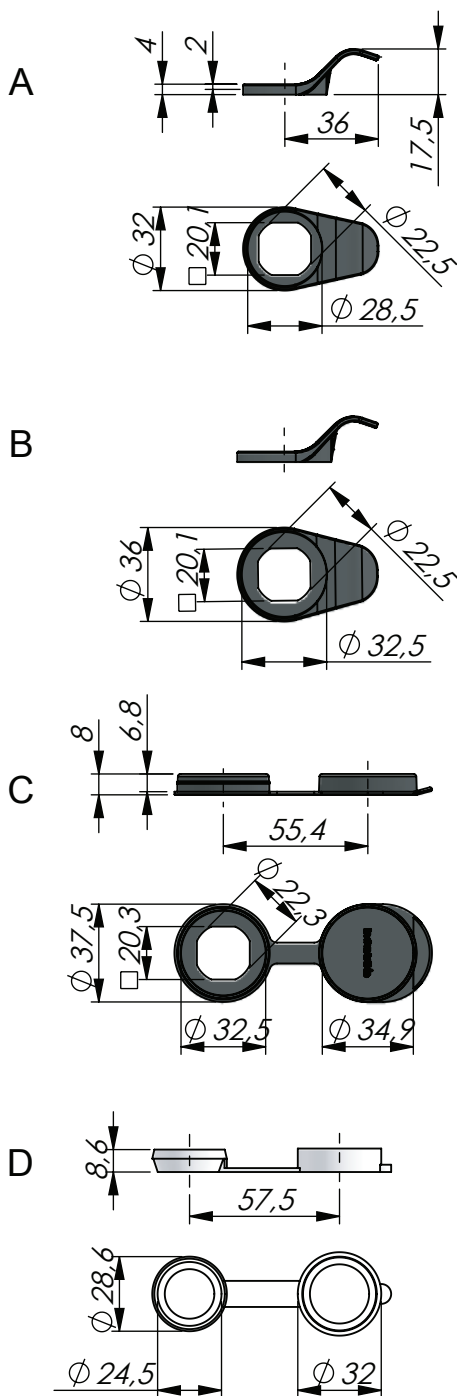
Special cut-out (see drawing) and add 4 mm to the H-dimension of the cam, to compensate for plate thickness.

If a IP65 product is used with the logo plate, you need to order a separate flat gasket 297006 to maintain IP65.

Logo plate for all latches and handles with cut-out "Combi". On request, the plate can be supplied in any colour and with your company logotype.

Logo Plate

| P/N | Description |
|--------|--|
| 295007 | Logo-plate |
| 297006 | Additional flat gasket for maintaining IP65 in such applications |



Material:

- Finger pull: Glass fibre reinforced polyamide (PA6GF30), black.
- Dust cover, black: TPE.
- Dust cover, white: Polyethene.

Notes, Tests:

Add 2 mm to the H-dimension to compensate for plate thickness.

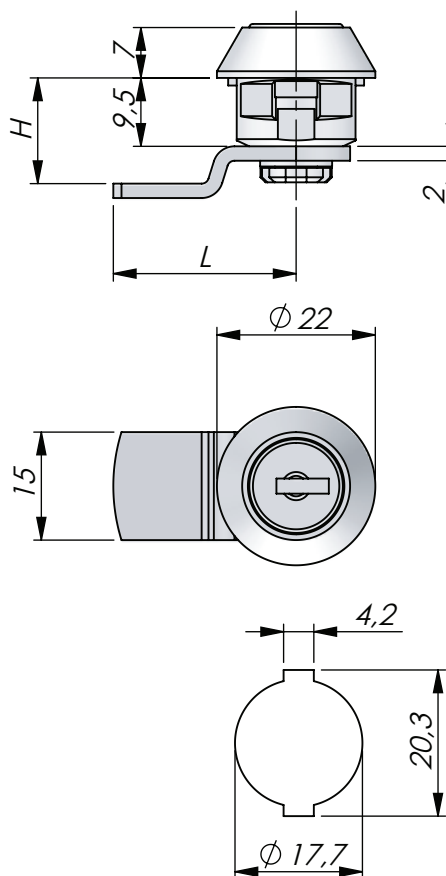
If a IP65-product is used with finger pull or dust cover, you need to order a separate flat gasket 297006 to maintain IP65. (See table).

Finger pull (black) and protective dust cover (black) for standard quarter-turn latches with a collar diameter of 28 or 32 mm (see table).

The white protective dust covers (marked with an *) for quarter-turn latches using an modified circular cut-out of 16 x 19 mm. These latches are found on pages 2-620 and 2-655.

Finger Pull and Dust Cover

| P/N | Description | Collar Ø mm | Drawing |
|--------|--|-------------|---------|
| 295005 | Finger pull, black | 28 | A |
| 295006 | Finger pull, black | 32 | B |
| 275018 | Dust cover, black | 28-32 | C |
| 276001 | Dust cover, white for "16 x 19 mm" cut-out | 24 | D |
| 297006 | Additional flat gasket for maintaining IP65 in such applications | | |

**Material:**

- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap.
- Cam and clip: Steel, zinc plated.

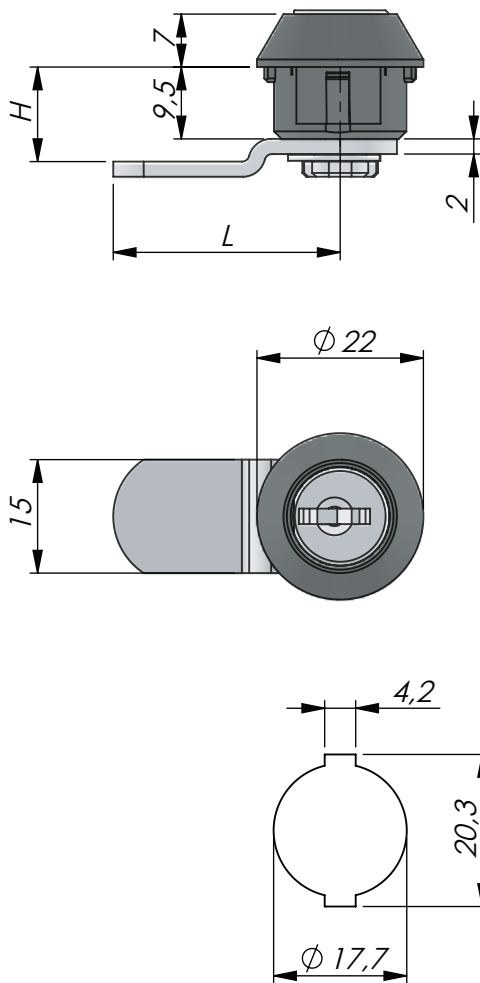
Notes, Tests:

Products are available on request only.

Cylinder lock with clip-in mounting. The P/N is individual for each specific application. Refer to lock type **4900**, attach a drawing of H-measurement, mounting context and requirements, for defining the unique complete lock / cam P/N. Supplied with two keys. Master key system available.

Cylinder Lock - Type 4900

| Lock type | Key combinations | Opening rotation | Key extraction | T= | Cam fixation |
|-----------|------------------|-----------------------|----------------|-----------|--------------|
| 4900-01 | 200 | 180° | Open / Closed | 0,8 - 1,5 | C-clip |
| 4900-02 | 200 | 180° | Open / Closed | 1,6 - 2,3 | C-clip |
| 4900-03 | 200 | 90° clockwise | Closed | 0,8 - 1,5 | C-clip |
| 4900-07 | 200 | 180° | Open / Closed | 0,8 - 1,5 | Rivet |
| 4900-08 | 200 | 180° | Open / Closed | 1,6 - 2,3 | Rivet |
| 4900-09 | 200 | 90° clockwise | Closed | 0,8 - 1,5 | Rivet |
| 4900-13 | 200 | 90° clockwise | Open / Closed | 0,8 - 1,5 | C-clip |
| 4900-14 | 200 | 90° clockwise | Open / Closed | 1,6 - 2,3 | C-clip |
| 4900-15 | 200 | 90° counter-clockwise | Open / Closed | 0,8 - 1,5 | C-clip |
| 4900-17 | 200 | 90° clockwise | Open / Closed | 0,8 - 1,5 | Rivet |
| 4900-19 | 200 | 90° counter-clockwise | Open / Closed | 0,8 - 1,5 | Rivet |
| 4900-20 | 200 | 90° counter-clockwise | Open / Closed | 1,6 - 2,3 | Rivet |
| 4900-47 | 500 | 180° | Open / Closed | 0,8 - 1,5 | C-clip |
| 4900-48 | 500 | 180° | Open / Closed | 1,6 - 2,3 | C-clip |



Material:

- Housing: Glass fibre reinforced polyamide (PA6GF30), black.
- Cylinder: Zinc die-cast, stainless steel (304) cap.
- Cam: Steel, zinc plated.

Notes, Tests:

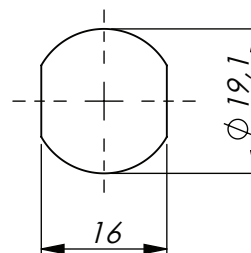
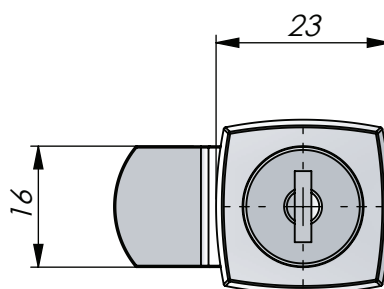
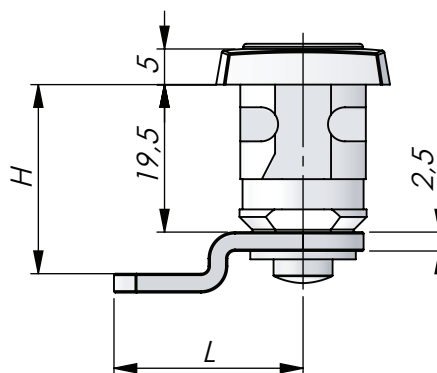
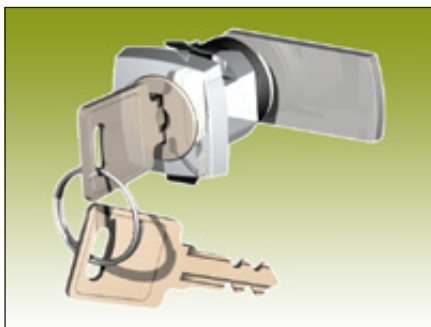
Products are available on request only.

Cylinder lock with plastic housing for clip-in mounting. The P/N is individual for each specific application. Refer to lock type **4970**, attach a drawing of H-measurement, mounting context and requirements, for defining the unique complete lock / cam P/N. Supplied with two keys. Master key system available.

Cylinder Lock - Type 4970

| Lock type | Key combinations | Opening rotation | Key extractions | T= | Cam fixation |
|-----------|------------------|-----------------------|-----------------|-----------|--------------|
| 4970-01 | 500 | 180° | Open / Closed | 1,0 - 1,2 | Clip |
| 4970-01/1 | 200 | 180° | Open / Closed | 1,0 - 1,2 | Clip |
| 4970-02 | 500 | 90° clockwise | Closed | 0,6 - 0,9 | Clip |
| 4970-03 | 500 | 90° counter-clockwise | Open / Closed | 1,0 - 1,2 | Clip |
| 4970-04 | 500 | 90° counter-clockwise | Open / Closed | 0,6 - 0,9 | Clip |
| 4970-04/1 | 200 | 90° counter-clockwise | Open / Closed | 0,6 - 0,9 | Rivet |
| 4970-05 | 500 | 180° | Open / Closed | 0,6 - 0,9 | Clip |





Material:

- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap.
- Cam and clip: Steel, zinc plated.

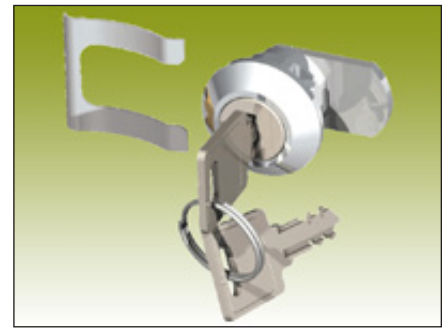
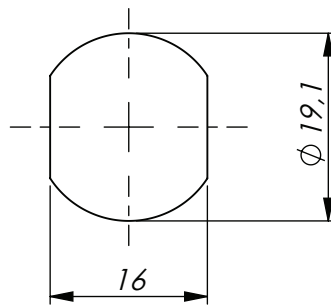
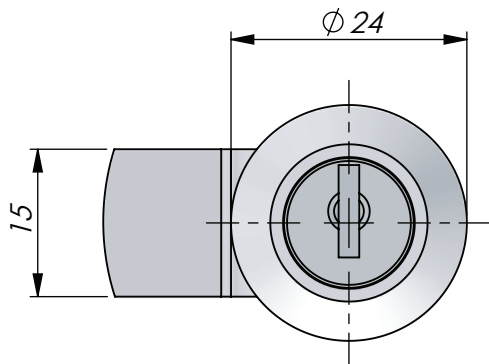
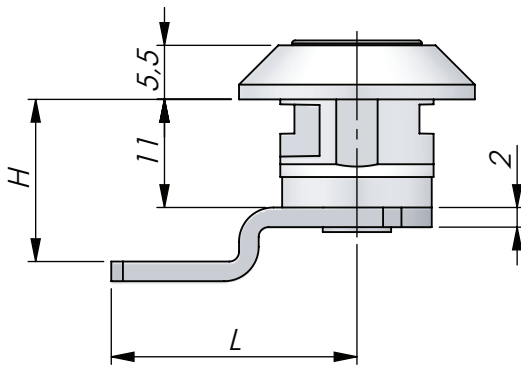
Notes, Tests:

Products are available on request only.

Cylinder lock with clip-in mounting. The P/N is individual for each specific application. Refer to lock type **12900**, attach a drawing of H-measurement, mounting context and requirements, for defining the unique complete lock / cam P/N. Clip-in fits for three different plate thicknesses. Supplied with two keys. Master key system available.

Cylinder Lock - Type 12900

| Lock type | Key combinations | Opening rotation | Key extractions | T1= | T2= | T3= |
|-----------|------------------|-----------------------|-----------------|---------|---------|---------|
| 12900-01 | 200 | 180° | Open / Closed | 0,6-1,2 | 1,4-2,0 | 3,2-3,8 |
| 12900-02 | 200 | 90° clockwise | Closed | 0,6-1,2 | 1,4-2,0 | 3,2-3,8 |
| 12900-03 | 200 | 90° counter-clockwise | Closed | 0,6-1,2 | 1,4-2,0 | 3,2-3,8 |
| 12900-04 | 200 | 90° clockwise | Open / Closed | 0,6-1,2 | 1,4-2,0 | 3,2-3,8 |



Material:

- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Cam and clip: Steel, zinc plated.

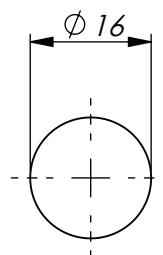
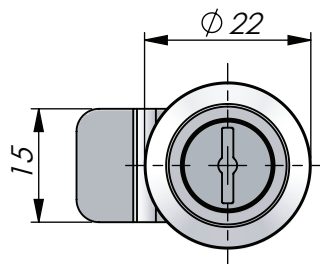
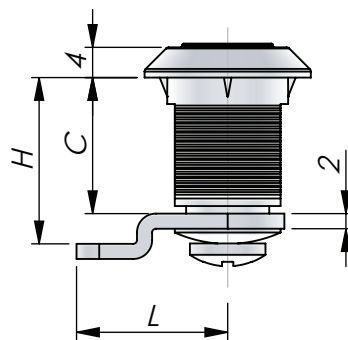
Notes, Tests:

Products are available on request only.

Cylinder lock with clip-in mounting. The P/N is individual for each specific application. Refer to lock type **14700**, attach a drawing of H-measurement, mounting context and requirements, for defining the unique complete lock / cam P/N. Supplied with two keys. Master key system available.

Cylinder Lock - Type 14700

| Lock type | Key combinations | Opening rotation | Key extractions | T= | Cam fixation | Dust shutter |
|-----------|------------------|------------------|-----------------|---------|--------------|--------------|
| 14700-01 | 200 | 180° | Open / Closed | 0,8-3,0 | Clip | No |
| 14700-02 | 200 | 90° clockwise | Closed | 0,8-3,0 | Clip | No |
| 14700-05 | 200 | 90° clockwise | Open / Closed | 0,8-3,0 | Rivet | No |
| 14700-07 | 200 | 180° | Open / Closed | 0,8-3,0 | Clip | Yes |



Material:

- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap.
- Cam and nut: Steel, zinc plated.

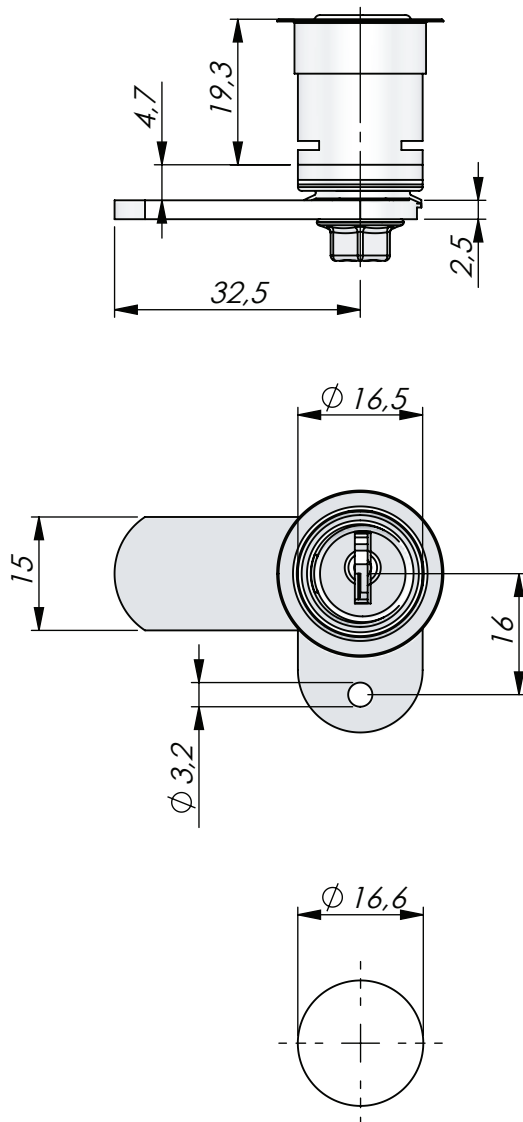
Notes, Tests:

Products are available on request only.

Cylinder lock with nut for mounting in round cut-out, especially for use in wood or plastic. The P/N is individual for each specific application. Refer to lock type **2800**, attach a drawing of H-measurement, mounting context and requirements, for defining the unique complete lock / cam P/N. Supplied with two keys. Master key system available.

Cylinder Lock - Type 2800 - for Wood or Plastic

| Lock type | C= | Key combinations | Opening rotation | Key extractions | T= | Cam fixation |
|-----------|----|------------------|------------------|-----------------|----------|--------------|
| 2800-01 | 18 | 200 | 180° | Open / Closed | 0,5-11,0 | Screw |
| 2800-03 | 27 | 200 | 180° | Open / Closed | 0,5-20,0 | Screw |



Material:

- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap.
- Cam: Steel, zinc plated.
- Front collar: Steel, chrome plated.

Notes, Tests:

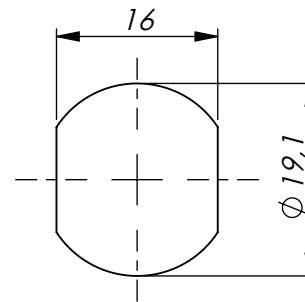
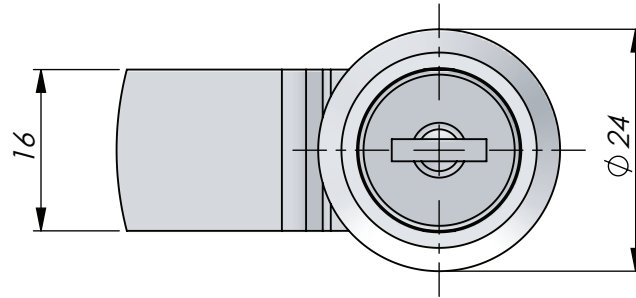
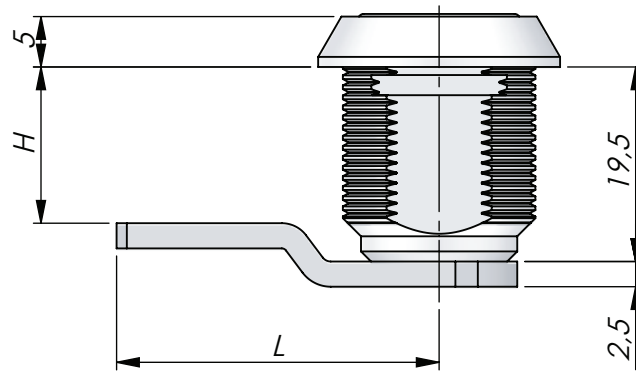
Products are available on request only.

Cylinder lock for mounting in wooden doors and panels. The P/N is individual for each specific application. Refer to lock type **32300**, attach a drawing of the application, mounting context and requirements, for defining the unique complete lock / cam P/N. Supplied with front collar. Supplied with two keys. Master key system available.

Cylinder Lock - Type 32300 - for Wood

| Lock type | Key combinations | Opening rotation | Key extraction | T= | Cam fixation |
|-----------|------------------|------------------|----------------|----------|--------------|
| 32300-02 | 200 | 180° | Open / Closed | 0,5-20,0 | Screw |
| 32300-04 | 200 | 90° clockwise | Open / Closed | 0,5-20,0 | Screw |





Material:

- Housing: Zinc die-cast, chrome plated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Cam, clip and nut: Steel, zinc plated.

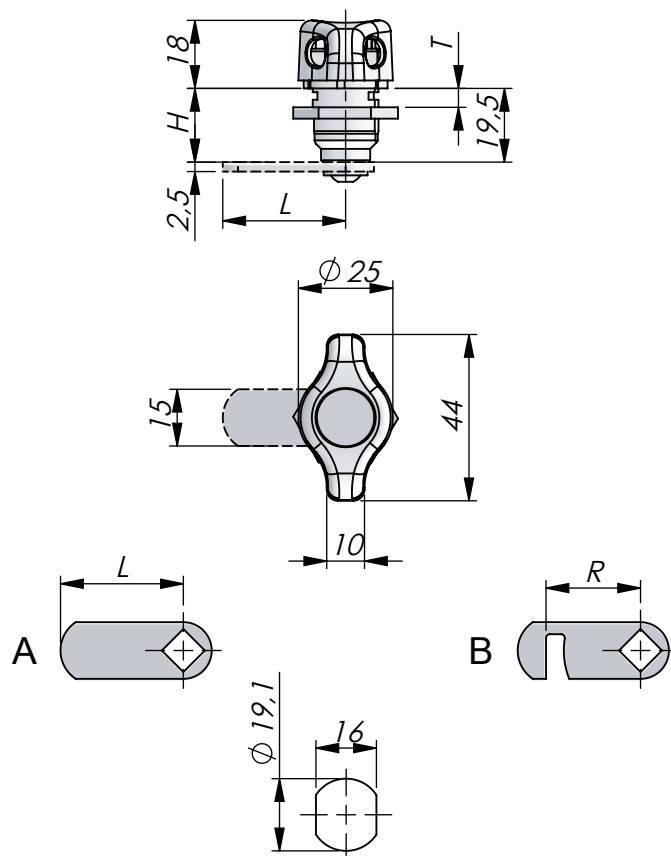
Notes, Tests:

Products are available on request only.

Cylinder lock with clip mounting up to 1,0 mm or nut mounting up to 10 mm. The P/N is individual for each specific application. Refer to lock type **25300**, attach a drawing of H-measurement, mounting context and requirements, for defining the unique complete lock / cam P/N. Supplied with two keys. Master key system available.

Cylinder Lock - Type 25300

| Lock type | Key combinations | Opening rotation | Key extraction | T= | Cam fixation | Dust shutter |
|-----------|------------------|-----------------------|----------------|------|--------------|--------------|
| 25300-01 | 200 | 90° clockwise | Closed | 0-10 | Screw | No |
| 25300-02 | 200 | 90° clockwise | Open / Closed | 0-10 | Screw | No |
| 25300-03 | 200 | 90° counter-clockwise | Open / Closed | 0-10 | Screw | No |
| 25300-10 | 200 | 180° | Open / Closed | 0-10 | Screw | No |
| 25300-20 | 200 | 180° | Open / Closed | 0-10 | Screw | Yes |
| 25300-25 | 200 | 90° counter-clockwise | Closed | 0-10 | Screw | No |
| 25300-27 | 200 | 90° counter-clockwise | Closed | 0-10 | Screw | Yes |



Material:

- Wing knob and housing: Zinc die-cast, frosted chrome plated finish.
- Cam and screw: Steel, zinc plated.

Notes, Tests:

Other cams available. Contact us describing your application for further information.

* = Straight cam.

Padlockable wing knob with nut. The P/N is individual for each specific application. Refer to lock type **22500**, attach a drawing of the mounting context and requirements, for defining the unique lock P/N.

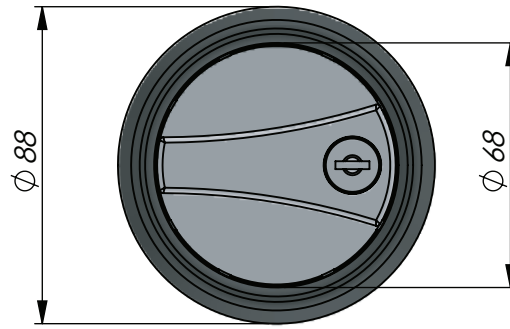
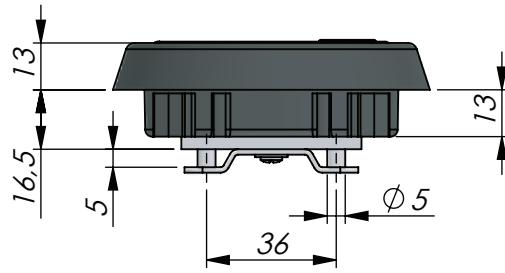
Cams for Padlockable Wing Knob

| P/N | H / L | Drawing |
|-----------|-------------|-------------------|
| 715929-89 | 2 / 20 | - |
| 715929-68 | 7 / 35 | - |
| 715929-07 | 10 / 38 | - |
| 715929-28 | 15,5 / 32 | - |
| 715929-25 | 19,5 / 30 * | Drawing A |
| 715929-86 | 19,5 / 65 * | Drawing A |
| 715929-36 | 19,5 / 47 * | Drawing A |
| 715929-85 | 19,5 / 42 * | Drawing A |
| 715929-28 | 23,5 / 32 | - |
| 715929-07 | 29 / 38 | - |
| 715929-68 | 32 / 35 | - |
| 715929-89 | 37 / 20 | - |
| 715929-35 | R=30 | Hooked, Drawing B |

Padlockable Wing Knob - Type 22500

| P/N | Opening rotation | T= | Cam fixation |
|----------|-----------------------|-------------|--------------|
| 22500-05 | 90° clockwise | 0,5-10,0 mm | Screw |
| 22500-06 | 90° counter-clockwise | 0,5-10,0 mm | Screw |





Material:

- Housing: Glass fibre reinforced polyamide (PA6GF30), black.
- Handle: Zinc die-cast, silver-grey coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Cam and clip: Steel, zinc plated.

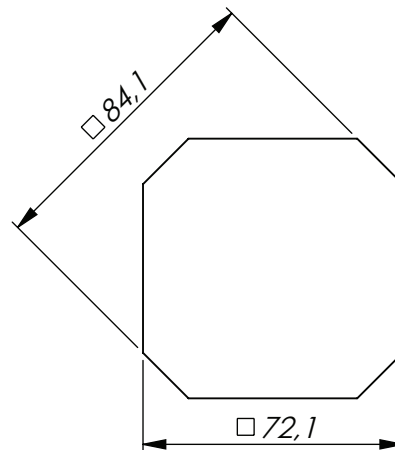
References, Accessories:

- Rods: Page 2-540 and 2-541.
- Rod guides: Page 2-560 and 2-570.

Notes, Tests:

Master key system available on request.

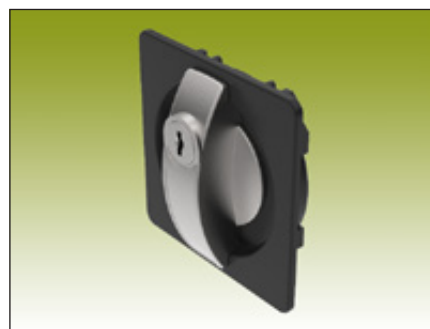
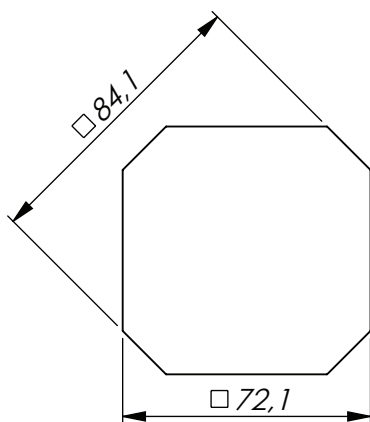
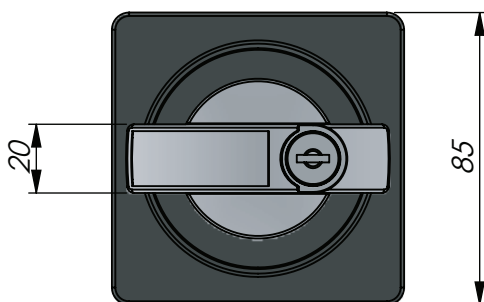
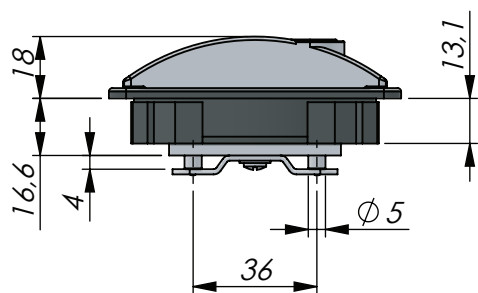
The two-point cam has a stroke of 18 mm and H=13 mm. The three-point cam has a stroke of 18 mm with L=60 mm and H=13 mm.



Circular latch for clip-in mounting and rod latches. Quick rod attachment. Cam rotation is 90° clockwise or counter-clockwise. Universal right and left mounting in a door thickness of 0,8 - 1,0 mm. The cylinder has 1000 key combinations. Supplied with two keys. Key extraction: Open / closed.

Circular Latch for Clip-In Mounting

| P/N | Description | Cam |
|-------------|-----------------|-------------------------|
| 723101032 | Keyed to differ | Two-point (shown above) |
| 723101032-1 | Keyed alike | Two-point (shown above) |
| 723101080 | Keyed to differ | Three-point |
| 723101080-1 | Keyed alike | Three-point |



Material:

- Housing: Glass fibre reinforced polyamide (PA6GF30), black.
- Handle: Zinc die-cast, silver-grey coated.
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.
- Cam and clip: Steel, zinc plated.

References, Accessories:

- Rods: Page 2-540 and 2-541.
- Rod guides: Page 2-560 and 2-570.

Notes, Tests:

Master key system available on request.

Square latch for clip-in mounting and rod latches. Quick rod attachment. Cam rotation is 90° clockwise or counter-clockwise. Universal right and left mounting in a door thickness of 0,8 - 1,0 mm. The cylinder has 1000 key combinations. Supplied with two keys. Key extraction: Open / closed.

Square Latch for Clip-In Mounting

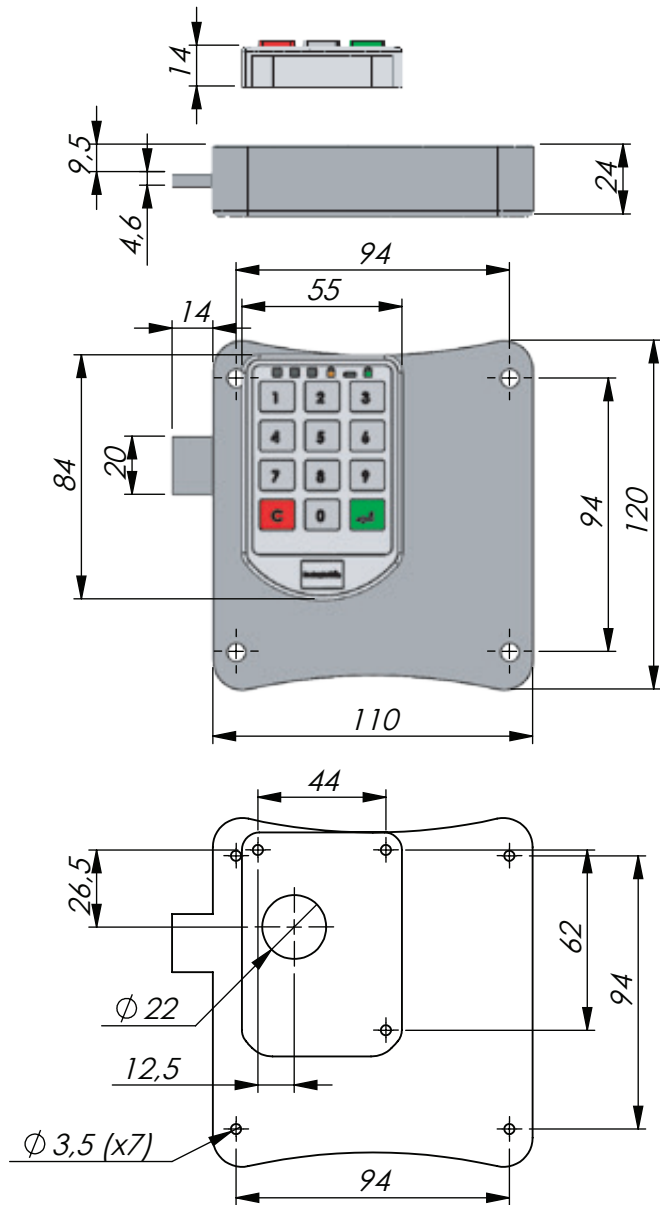
| P/N | Description | P/N | Description |
|------------|-------------|------------|-----------------|
| 72350001-1 | Keyed alike | 72350001-2 | Keyed to differ |



Notes, Tests:

Needs 4 pcs AA-batteries (supplied with the lock) that normally last for a year. Temperature range: 0 to +60°C. Protection degree IP65. Code lock with only one, fixed, combination is available.

Products are available on request only.



Digital code lock for shopping centers, libraries, lockers in changing rooms and similar facilities where large numbers of people are passing.

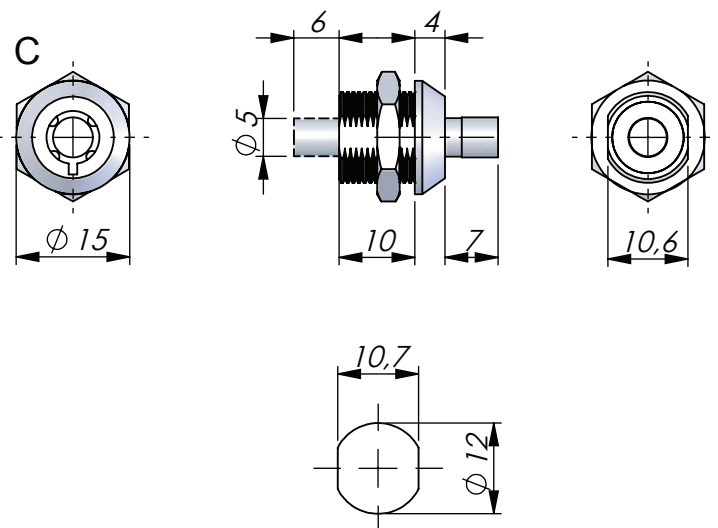
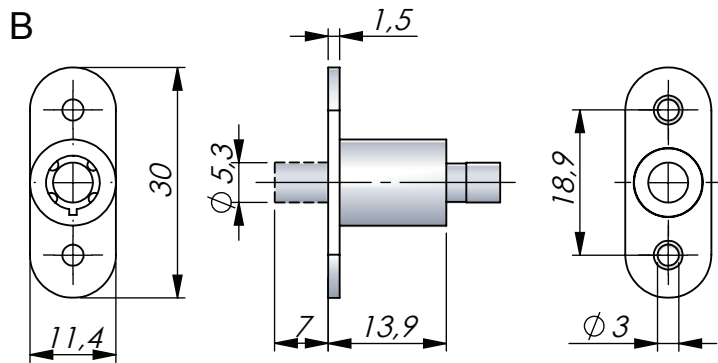
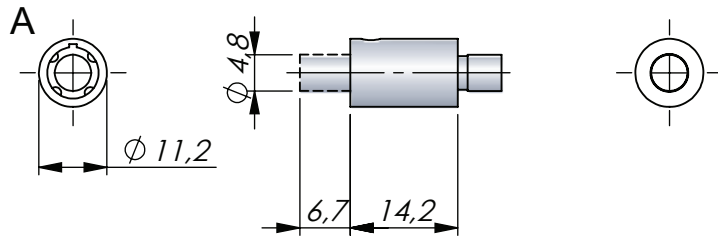
Also suitable where several persons must have access to the same area, like tool cabinets and equipment needed for shift workers etc. No need to worry about lost mechanical keys. The user himself chooses a personal 4-digit code when locking the door. As the door is opened, this code is reset, and a new code must be chosen by the new user.

Several safety features are built into the unit, like inspection code, master code etc. Extra accessories are available, for instance a separate battery pack if you want to change completely discharged batteries. Also available is a protective key-screen to prevent people peeking at the code being entered on the keypad.

The unit will remind you when the batteries need to be replaced and gives a clear indication if it is open or locked. Simple and intuitive to use.

Electronic Code Lock

| P/N | Description |
|-------------|--|
| 78700010001 | Code lock, basic version, IP 65 |
| 78700011001 | Keyboard cover - preventing others watching you entering your code |
| 78700011002 | Extra battery pack for changing completely discharged batteries. |



Material:

- Housing: Zinc die-cast, chrome plated.
- Centre spindle: Brass, chrome plated.
- Nut: Brass, zinc plated.

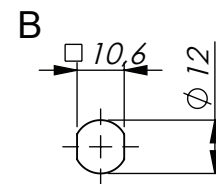
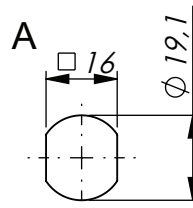
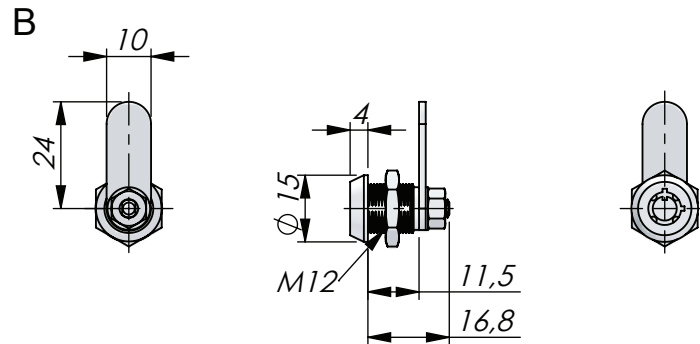
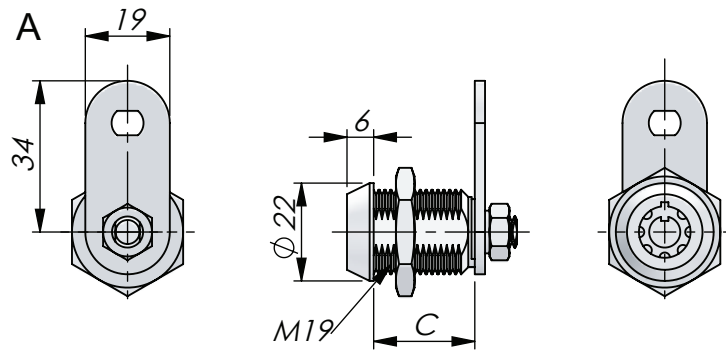
Miniature 4-pin tubular push-button lock suitable for sliding doors etc. Patented technology. Supplied with two keys. Key extraction: Open / closed. "Keyed to differ" available on request.

Unlocking with key activates pin on back that springs into latch - and pushbutton on front springs out.

To latch: push front button.

4-Pin Miniature Tubular Push-Button Lock

| P/N | Description | Mounting | Drawing |
|---------------|-------------|----------------|---------|
| 241300-1101.1 | Keyed alike | Screw | A |
| 241300-1102.1 | Keyed alike | Screw / rivet | B |
| 241300-1103.1 | Keyed alike | Nut (included) | C |



Material:

- Housing: Zinc die-cast, chrome plated.
- Centre spindle: Brass, chrome plated.
- Nut: Brass, zinc plated.
- Cam: Steel, zinc plated.

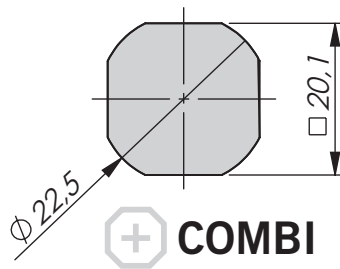
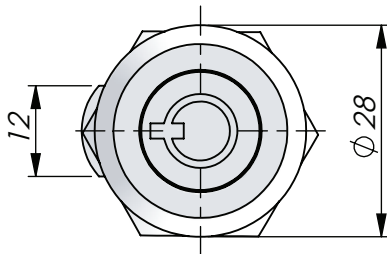
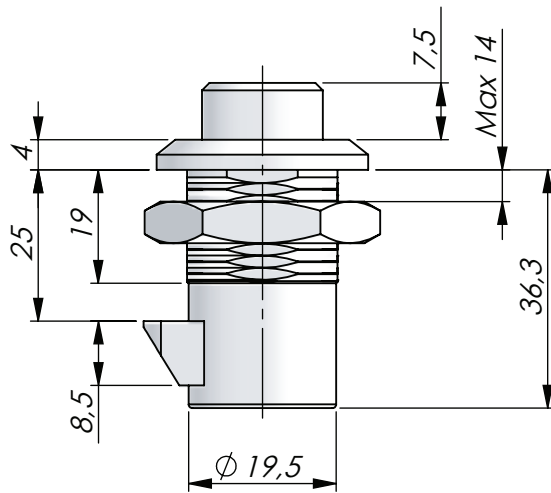
7-pin tubular cam lock with excellent anti-pick capability. Supplied with two keys. Key extraction: Closed.

Supplied with nut and straight cam. Other cams on request.

"Keyed to differ" on request.

7-Pin Tubular Cam Lock

| P/N | Description - lock type | Cylinder | C = mm | Drawing |
|---------------|-------------------------|-------------|--------|---------|
| 241300-2501.1 | Cam lock, 7-pin | Keyed alike | 12,0 | A |
| 241300-2502.1 | Cam lock, 7-pin | Keyed alike | 16,0 | A |
| 241300-2503.1 | Cam lock, 7-pin | Keyed alike | 22,0 | A |
| 241300-2602.1 | Cam lock, 7-pin | Keyed alike | 11,5 | B |



Material:

- Housing, nut and cam: Zinc die-cast, chrome.

7-pin tubular cam-lock with "slam-latch"-action. The spring loaded cam is operated by the lockable push button.

Key extraction: Open / closed. Supplied with two keys and mounting nut.

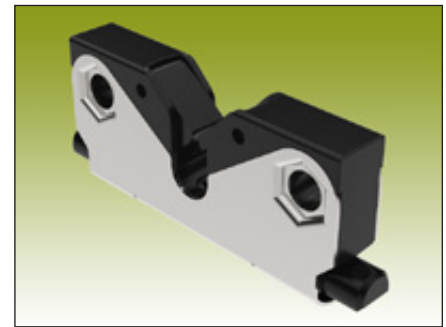
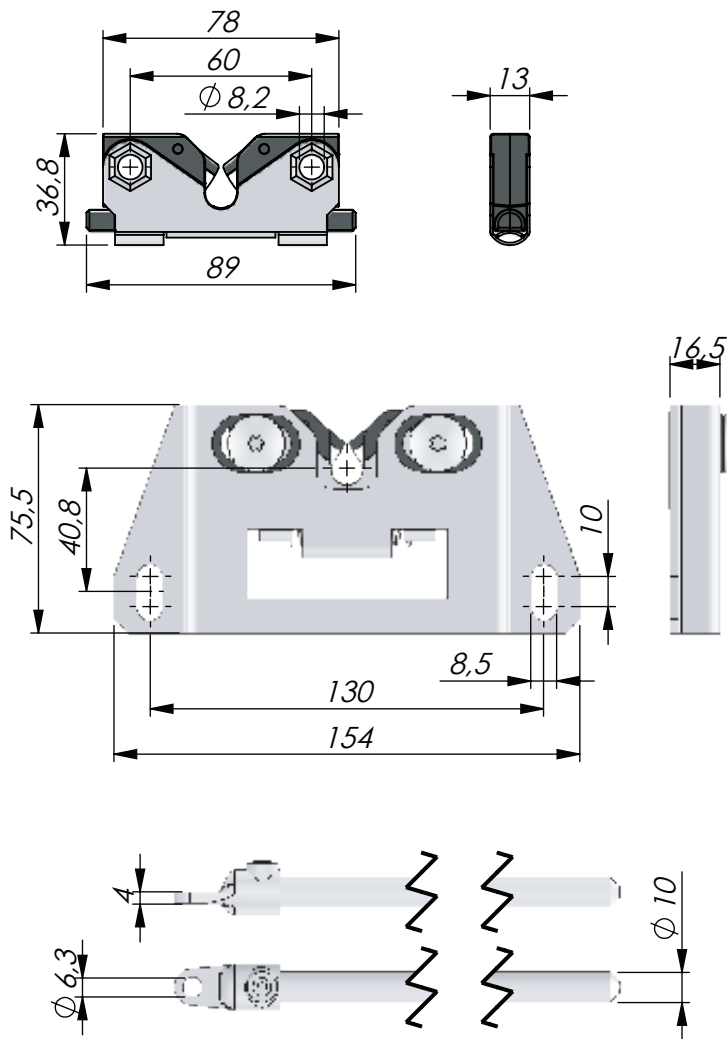
7-Pin "Slam-Latch" Tubular Push Button Cam Lock

| P/N | Description |
|------------------|--------------------|
| 2698-209740-2515 | Keyed alike IL0205 |
| 2698-209840-2515 | Keyed to differ |



cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





Material:

- Housing: Stainless steel (304).
- Jaws and housing: Glass fibre reinforced polyamide (PA6GF30) black.
- Jaw-rollers: Brass.
- Optional fixing plate: Steel, zinc plated.
- Optional threaded inserts male/female: Steel, zinc plated.
- Rod: Steel, zinc plated.
- Rod adapter: Zinc, zinc plated.

References, Accessories:

- Rod guide: Page 2-570.
- Two- or three-point cam (for use with standard T-, or L-handles): Page 2-510.
- Suggested handles are found in the Vision Series, (p. 1-002.01 and onward). Vector Series (page 2-810b, 2-820b, 2-830b, 2-831b, 2-832b or 2-834b.) or in the Defeater Series (page 2-340, 2-350, 2-351 and 2-352.)

Contact us for further suggestions for other handles in your particular application.

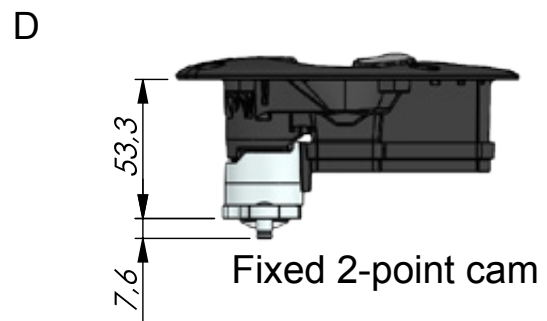
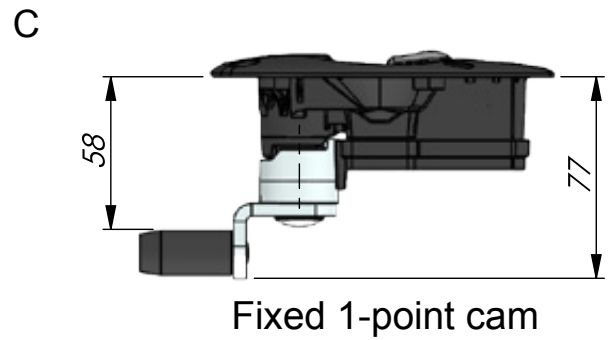
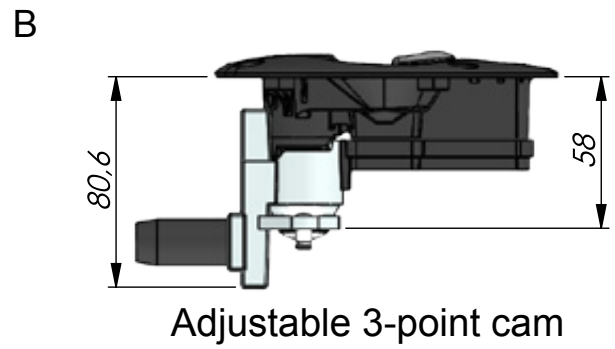
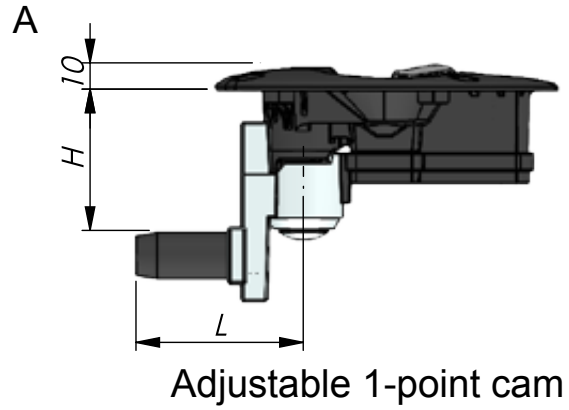
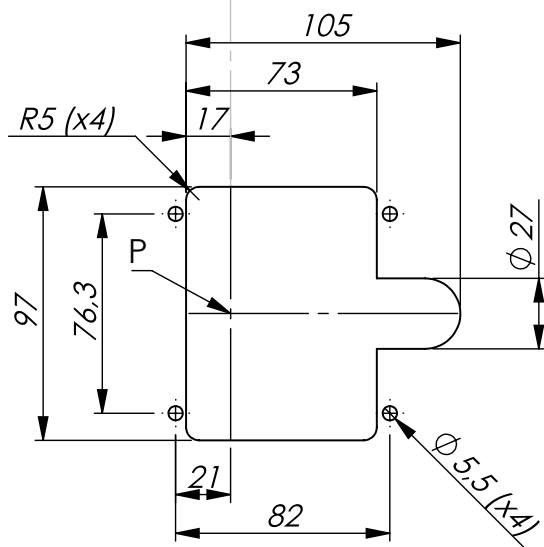
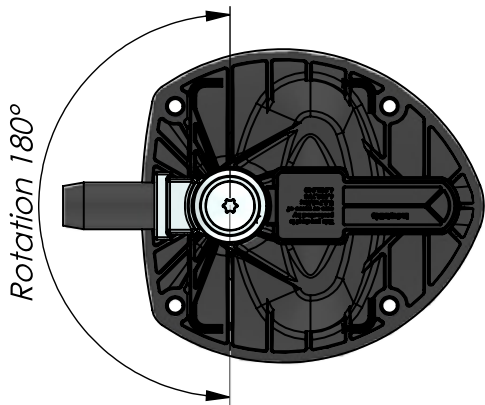
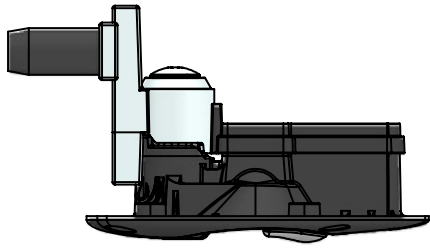
A heavy duty catch with slam-latch-action. Commonly used hidden in vehicle doors and similar as it will firmly grip a rod inserted radially through it's jaws. These are equipped with miniature brass rollers to allow for slight movement. The jaws will only open to let the rod in. To remove rod, it must therefore be pulled out lengthwise from the jaws. This action is simplified with the brass rollers.

The catch engages easily, latching the rod inside the unit. For large vehicles, the latch may be ordered pre-mounted in the optional spring-loaded fixation plate to compensate for sideways movements of panels and doors. This spring-loaded combination (B) will also prevent wear on the latching rod as the latching point will smoothly flex in the application. Use Torx "T-30" bit for mounting version B.

The latch will accommodate a Ø 10 mm latching rod P/N 282130-LLLL that is supplied on request in custom lengths (-LLLL in the part number is specified as the custom length in mm) and is used together with a 10 mm rod adapter with ear: 282119-10. The adapter adds 14 mm to the total length (see drawing).

Slam Catch and Accessories

| P/N | Description | Drawing |
|-------------|--|---------|
| 282135-01 | Slam catch - basic version | A |
| 282135 | Slam catch with spring-loaded fixation plate | B |
| 282119-10 | Adapter, for Ø 10 mm rod | C |
| 282130-LLLL | Round rod, Ø 10 mm. LLLL = Custom rod length in mm | C |





Flush T-handle with 4 mm compression stroke, in zinc or stainless version. Mounting with screws or rivets. The Vector T-handle features two independent locking systems: key-locking cylinder and retractable padlock loop (Ø 8 mm) which prevents the handle from being lifted or turned. Handle rotation 90° right, 90° left or 180°. Five different cam versions available. Optional handle-shaped flat gasket: P/N 275020-31 can be ordered separately and will improve sealing against door and increase seal. Locking handle supplied with two keys. Key extraction: Open / closed.

On request the handle can be supplied with a separate, unassembled cylinder. This will simplify handling and enable smooth adaptation to different key combinations for various needs.

Example: Handle in zinc die-cast, black, keyed to differ, 90° clockwise rotation and adjustable three-point cam = P/N 275021-02HS.

Material:

- Body and roller: Glass fibre reinforced polyamide (PA6GF30), black.
- Handle: Zinc die-cast, chrome plated, black texture powder coated or stainless steel (304), plain or black texture powder coated.
- Fixed cam: Steel, zinc plated.
- Adjustable cam: Zinc die-cast, passivated.
- Shaft: Steel, zinc plated, zinc, zinc plated or stainless steel (304).
- Padlock loop: Stainless steel (304).
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.

References, Accessories:

- For rods that fit the two- and three-point cams, see pages 2-540 to 2-545.

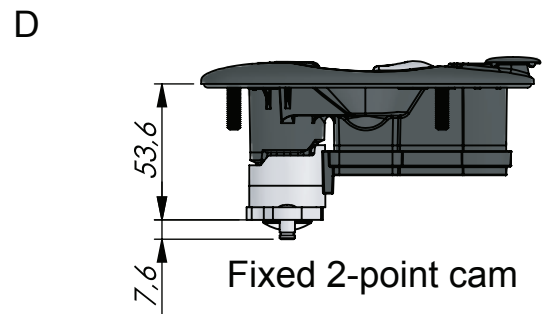
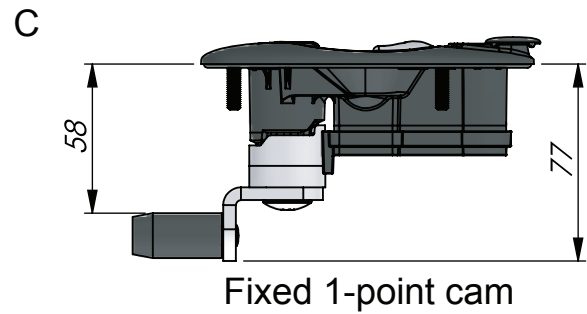
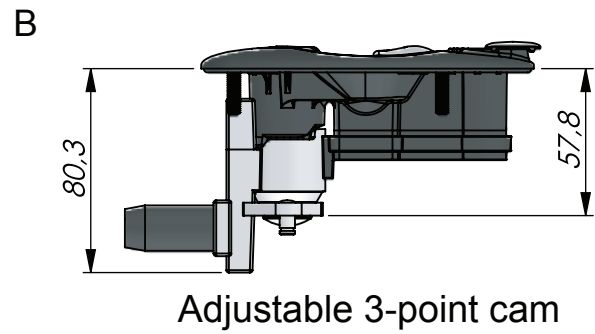
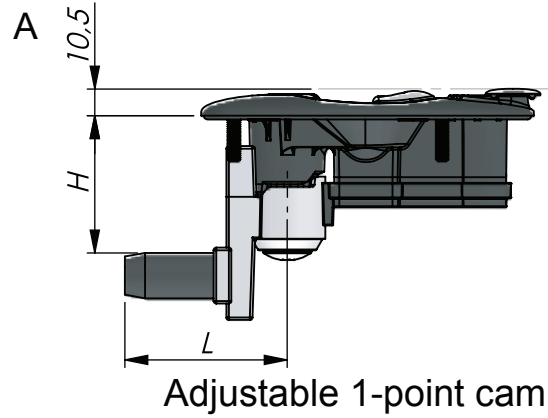
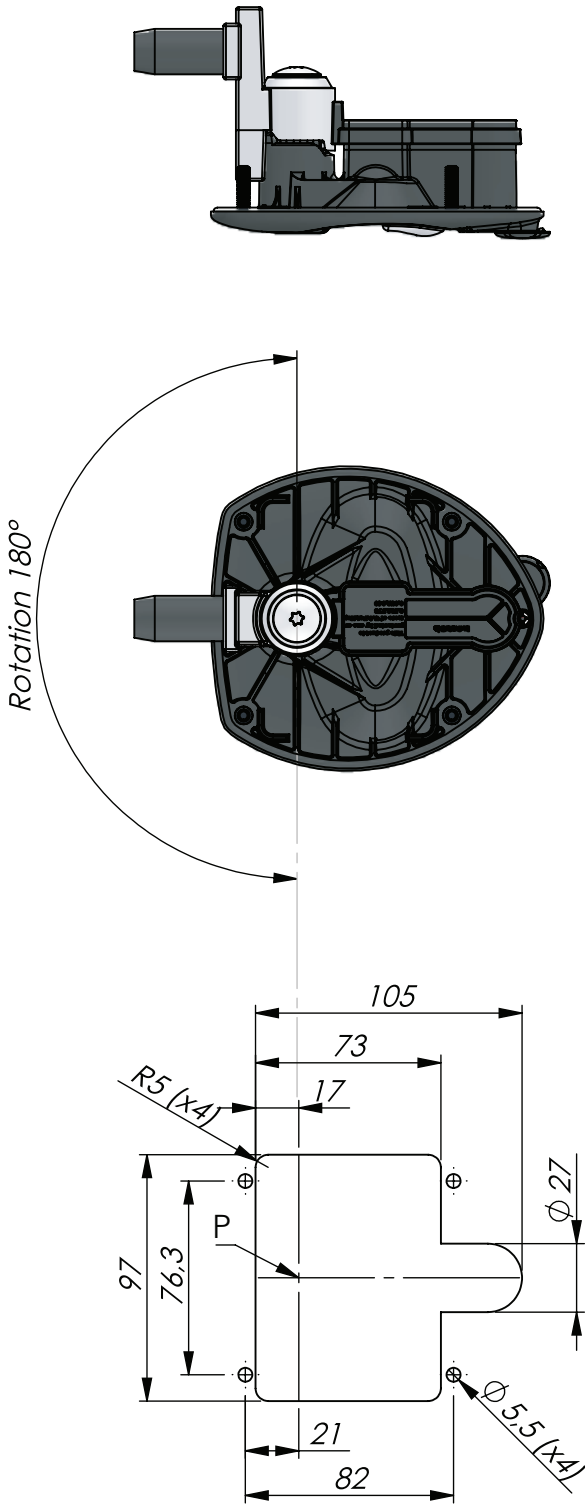
Notes, Tests:

* Other dimensions on request.

VECTOR T-Handle (AAAAAA-BBCDDDDD)

| AAAAAA- | Handle/ Shaft | Handle | BB | Cylinder | C | Opening rotation | DDDDD | Cam | H = | L = | Drawing |
|---------|------------------|--------|----|-------------------|---|-----------------------|-------|------------------------------------|-------|-----|-----------|
| 272021- | Zinc / Steel | Black | 00 | Non-locking | H | 90° clockwise | 5861 | * Fixed roller cam | 58 | 61 | C |
| 272321- | Zinc / Steel | Chrome | 02 | Keyed to differ | V | 90° counter-clockwise | S5400 | Two-point cam | - | - | D |
| 273021- | SS (304) / (303) | Black | 06 | Keyed alike (751) | - | 180° | S6685 | * Fixed three-point roller cam | 66 | 85 | Not shown |
| 273921- | SS (304) / (303) | Plain | | | | | S | Adjustable three-point roller cam | 10-60 | 61 | B |
| | | | | | | | S1 | Adjustable single point roller cam | 10-60 | 61 | A |







Material:

- Body and roller: Glass fibre reinforced polyamide (PA6GF30), black.
- Handle: Zinc die-cast, chrome plated, black texture powder coated or stainless steel (304), plain or black texture powder coated.
- Fixed cam and cast-in bolts: Steel, zinc plated. Adjustable cam: Zinc die-cast, passivated.
- Shaft: Zinc, zinc plated, steel, zinc plated or stainless steel (304).
- Padlock loop: Stainless steel (304).
- Cylinder: Zinc die-cast, stainless steel (304) cap and dust shutter.

References, Accessories:

- For rods that fit the two- and three-point cams, see pages 2-540 to 2-545.

Notes, Tests:

* Other dimensions on request.

Flush T-handle with a 4 mm compression stroke, in zinc or stainless version. Bolts are moulded into the dish for mounting with nuts on the inside. (Maximum tightening torque 2,2 Nm). The Vector T-handle features two independent locking systems: key-locking cylinder and retractable padlock loop (Ø 8 mm) which prevents the handle to be lifted or turned. Handle rotation 90° right, 90° left or 180°. Five different cam versions available. Supplied with cylinder dust-cover. Locking handle supplied with two keys. Key extraction: Open / closed. Protection degree IP65.

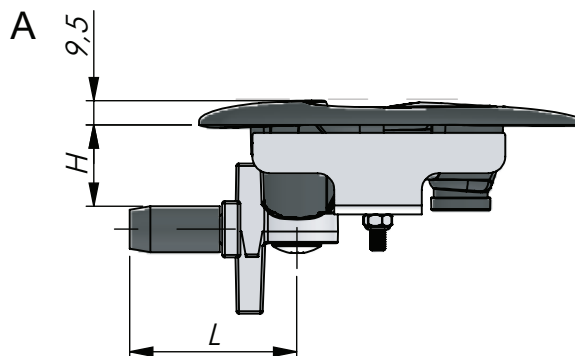
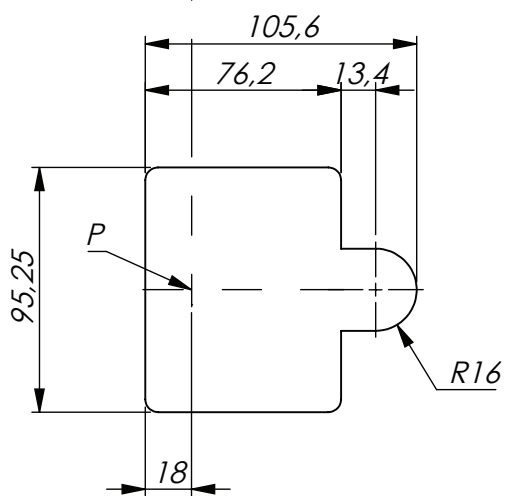
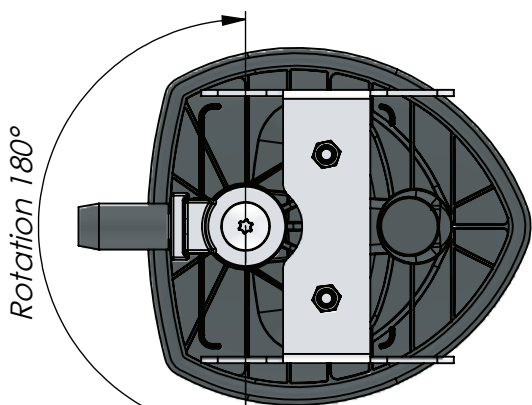
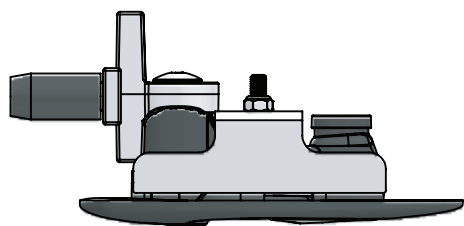
On request the handle can be supplied with a separate, unassembled cylinder. This will simplify handling and enable smooth adaptation to different key combinations for various needs.

Example: Handle in zinc die-cast, black, keyed alike, 90° counter-clockwise rotation and fixed roller cam = P/N: 275063-68V5861.

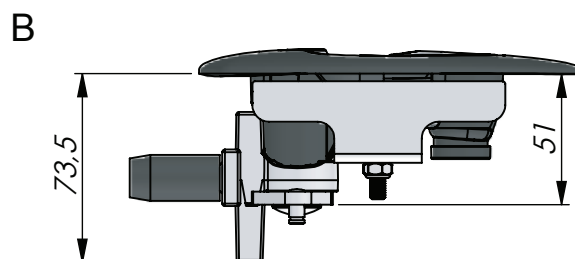
VECTOR T-Handle (AAAAAA-BBCDDDDD)

| AAAAAA- | Handle/ shaft | Handle | BB | Cylinder | C | Opening rotation | DDDDD | Cam | H = | L = | Drawing |
|---------|--------------------|--------|----|-------------------|---|-----------------------|-------|--------------------------------|-------|-----|-----------|
| 272063- | Zinc/steel | Black | 52 | Keyed to differ | H | 90° clockwise | 5861 | * Fixed roller cam | 58 | 61 | C |
| 272363- | Zinc/steel | Chrome | 68 | Keyed alike (805) | V | 90° counter-clockwise | S5400 | Two-point cam | - | - | D |
| 273063- | SS (304)/ (303) | Black | | | - | 180° | S6685 | * Fixed three-point roller cam | 66 | 85 | Not shown |
| 273963- | SS (304)/ (303) | Plain | | | | | S | Adjustable three-point cam | 10-60 | 61 | B |
| | | | | | | | S1 | Adjustable single point cam | 10-60 | 61 | A |

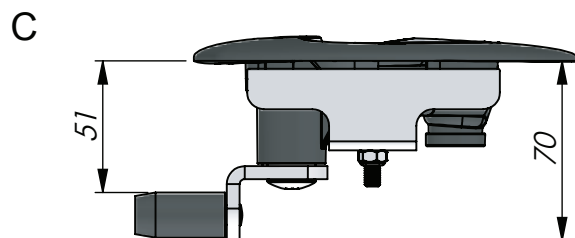




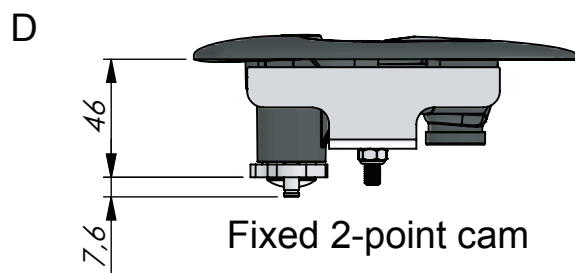
Adjustable 1-point cam



Adjustable 3-point cam

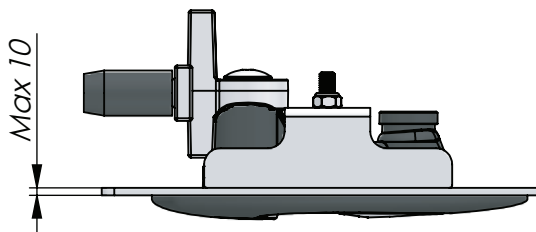
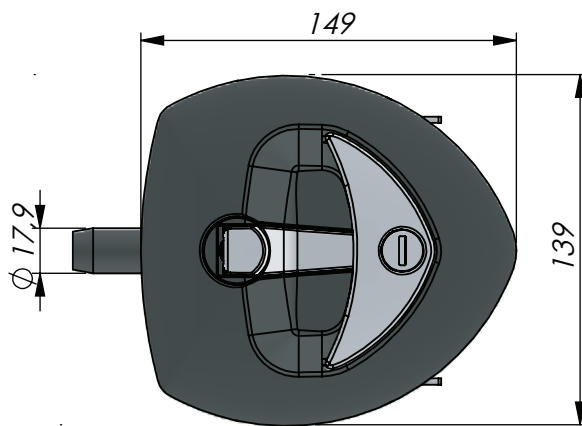


Fixed 1-point cam



Fixed 2-point cam

0



Material:

- Body and roller cam: Glass fibre reinforced polyamide (PA6GF30), black.
- T-shaped handle: Zinc die cast, chrome plated or black texture powder coated.
- Adjustable cam: Zinc die cast, passivated.
- Mounting bracket, fixed cam, cast-in bolts and assembly hardware used inside sealed area: Steel, zinc plated.
- Cylinder: Zinc die cast with stainless steel (304) cap and dust shutter.
- Nuts (2 pcs) supplied with mounting bracket: Steel, zinc plated.

References, Accessories:

- For rods that fit the 2- and 3-point cams, see pages 2-540 to 2-545.

Heavy duty Vector 2, T-handle with mounting bracket provides a blind mounting. Flush T-handle with a 4 mm compression. Available with fixed cam or adjustable cam with selectable grip range 17 - 52 mm. Both fixed and adjustable cam options are available as 2- or 3-point latching system. Comes with a keyed alike locking-cylinder with folding stainless steel dust shutter. Cylinder is replaceable when T-handle is open. This heavy duty Vector 2 T-handle is designed to be used on flat sheet metal. Equipped with integrated PUR-gasket, protection degree IP65. Can be open and closed clockwise and counter-clockwise (180° handle rotation). Unique design of T-handle for best possible grip.

On request the handle can be supplied with a separate, unassembled cylinder to simplify handling and enable smooth adaptation to different key combinations for various needs. The tightening torque of the two nuts for the bracket is 3 Nm.

* = Other cam dimensions and other key locking cylinders on request.

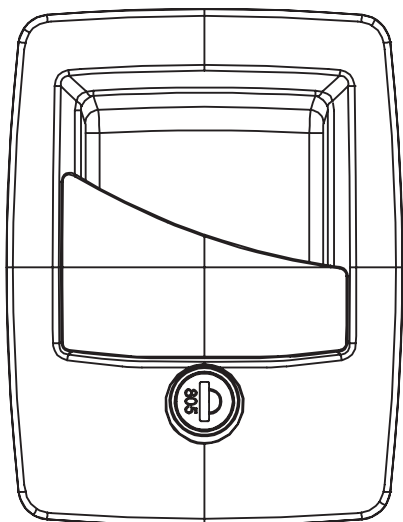
VECTOR 2, T-Handle (AAAA-BBBCC-DDDDD)

| AAAA- | Type | BBB | Handle material/finish | CC- | Insert/Cylinder | DDDDD | Cam | H= | L = | Drawing |
|-------|----------|-----|--------------------------|-----|----------------------|-------|----------------------------|-------|-----|---------|
| 2751- | VECTOR 2 | 102 | Zinc/chrome | 82- | Keyed alike cylinder | 1861 | Fixed one-point cam | 18 | 61 | C |
| | | 106 | Zinc/black powder coated | | | 2361 | Fixed one-point cam | 23 | 61 | C |
| | | | | | | 4661 | Fixed one-point cam | 46 | 61 | C |
| | | | | | | 4861 | Fixed one-point cam | 48 | 61 | C |
| | | | | | | 5361 | Fixed one-point cam | 53 | 61 | C |
| | | | | | | S4600 | Two-point cam | - | - | D |
| | | | | | | S | Adjustable three-point cam | 17-52 | 65 | B |
| | | | | | | S1 | Adjustable one-point cam | 17-52 | 65 | A |

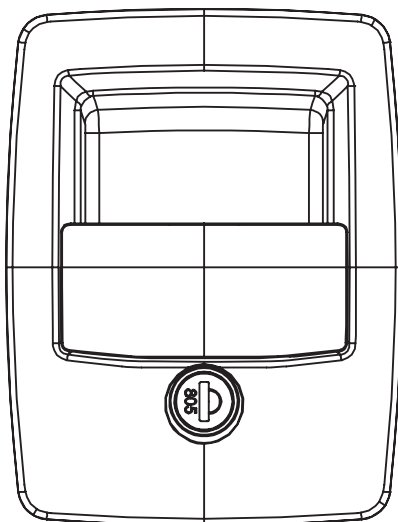




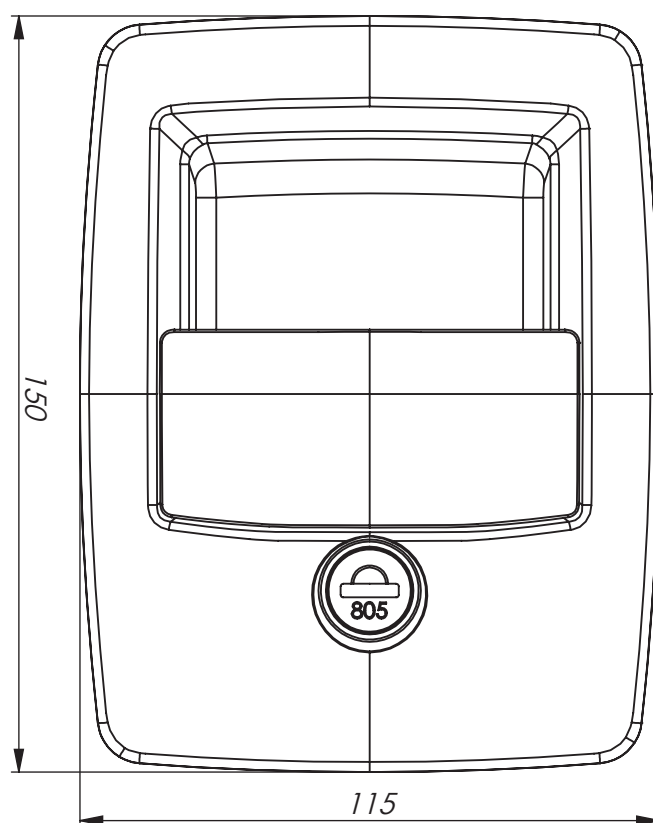
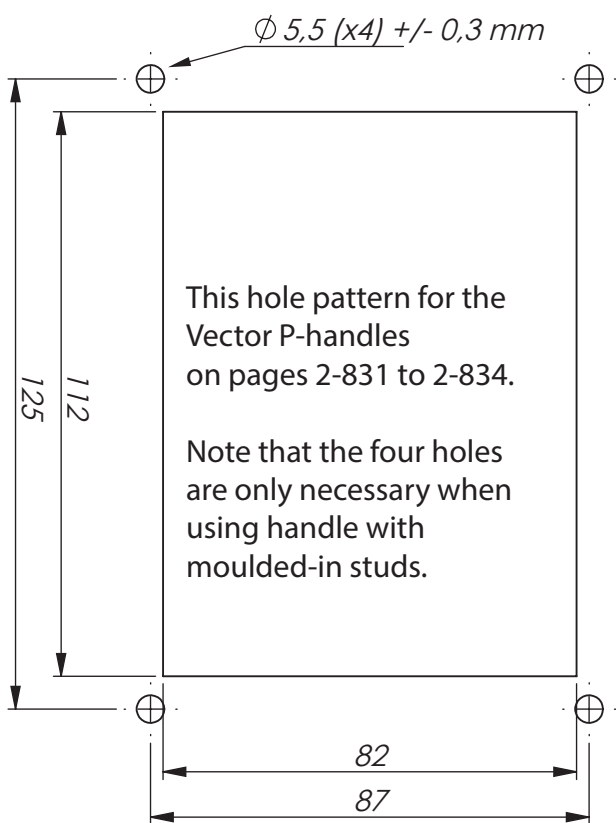
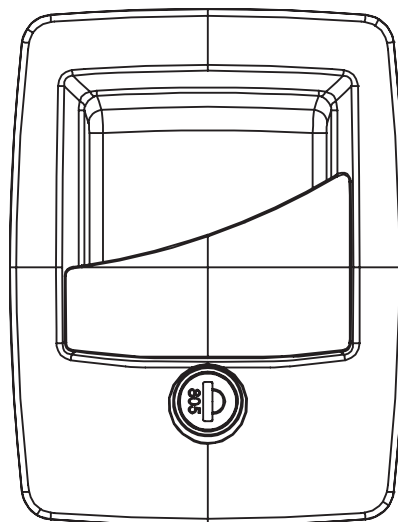
Left



Universal



Right





Wherever a slam action paddle latch is required Industrilás offers a unique solution. Our brand new system Vector P is available with three different latching mechanisms to meet exactly your requirements. Patented latching solution and a registered design.

Vector P product line is developed for heavy duty use in tough environments, for on- and off-road applications. Smart choices of material in every single component create products with less weight which are more cost effective compared to traditional all stainless steel paddle latches. Unique contemporary design with great ergonomic characteristics is just a bonus on all our Vector P handles.

Common characteristics and advantages for all three latching versions (Learn more about the advantages of the different latching solutions on pages 2-831 to 2-834).



A

Vector P - slam action paddle latch - hooked cam. Learn more on pages 2-831a and 2-831b

B

Vector P - slam action paddle latch - 2-point latch. Learn more on pages 2-832a and 2-832b

C

Vector P - slam action paddle latch - integrated rotary latch. Learn more on pages 2-834a and 2-834b



Protection degree

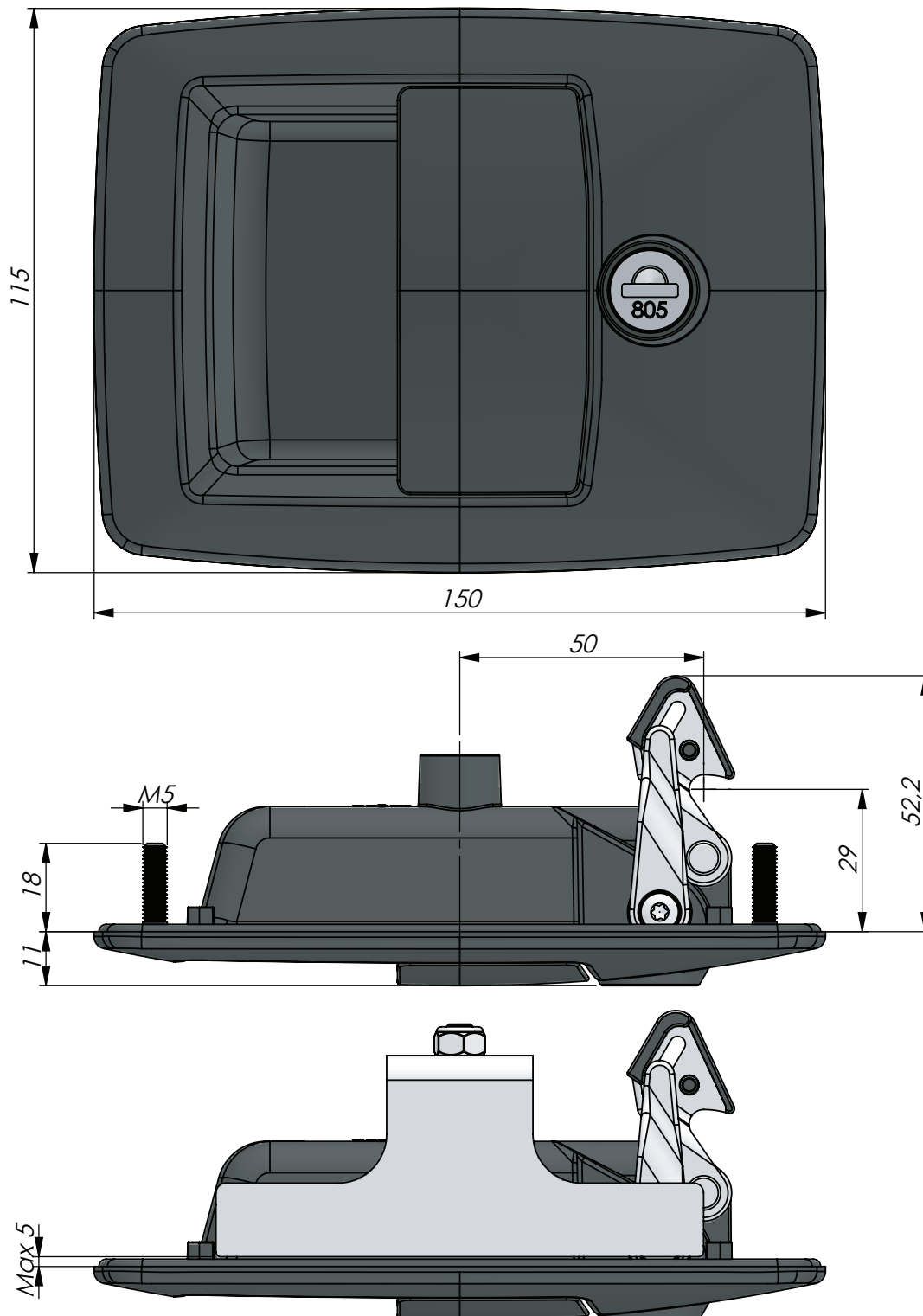
Universal LH / RH

Cylinder locking

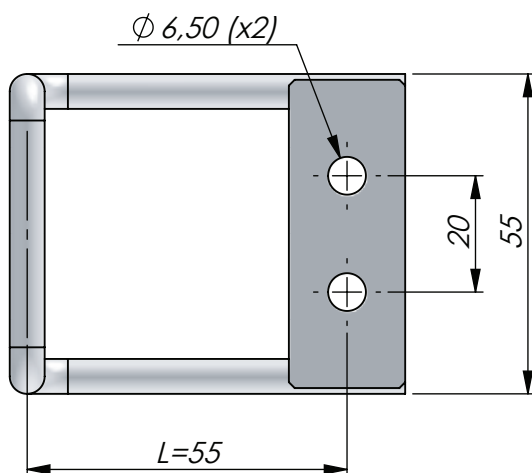
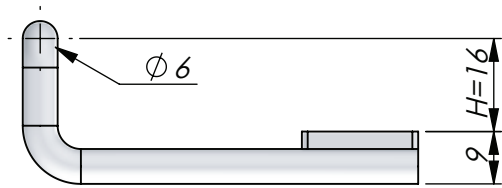
PUR-gasket

- All Vector P can be chosen either with mounting bracket or four moulded-in screws. Both options provide an aesthetic blind mount not visible from the outside.
- Available as left, universal or right version for best ergonomics and for design possibilities, see page 2-830a.
- Same rectangular cut out for all Vector P latches, see page 2-830a.
- Supplied with cylinder 805 with stainless steel (304) cap and dust shutter. Two keys included. Other cylinders upon request.
- Obtains IP65 with PUR-in-place gasket.
- Can be ordered with or without striker.
- The light weight glass fibre reinforced polyamide used for tray and handle provide a robust handle with excellent corrosion resistance.





0



Material:

- Body, grip handle, cam and adapter for cylinder (internal component): Glass fibre reinforced polyamide (PA6GF30), black.
- Manoeuver arms: Zinc die cast, zinc plated.
- Mounting bracket, mould-in bolts and striker used inside sealed area: Steel, zinc plated.
- Cylinder: Zinc die cast with stainless steel (304) cap and dust shutter.
- O-rings: NBR.
- Gasket: Polyurethane.
- Nuts (2 pcs) supplied with mounting bracket version: Steel, zinc plated.

Notes, Tests:

The tightening torque of the two nuts for the mounting bracket is 3,0 Nm. The tightening torque of the four nuts for the mould-in bolts is 2,2 Nm. It is important that the four holes made in the cut out for the mould-in bolts are within tolerance, to avoid damage when tightening the M5 nuts.

Patented heavy duty Vector paddle latch with registered design. Flush handle that assembles into your door with either a mounting bracket or with four mould-in bolts. Both alternatives provide a completely blind mount assembly.

Unique design with grip handle available as left, right or universal handle. The left and right handle provide not only a unique aesthetic appearance, but also provides the best possible grip in every situation, especially when mounted low or high in your application. Handles are available as "left", "universal" and "right". See drawing on page 2-830a for description, cut-out drawing and exterior dimensions.

The latching mechanism securely latch the cam behind the striker in challenging conditions. The more force that is placed on the cam - the harder it will engage with the striker.

Available in two versions; "fixed cam" or "inside release". "Fixed cam" means that the spring loaded cam cannot be moved to open position accidentally (shifting goods etc) when the lock is in locked position. "Inside release" version provides a securely closed cam in normal use but can manually be open from the inside even when the lock is in locked position. This is a safety feature useful for times where maintenance people may be working inside the application.

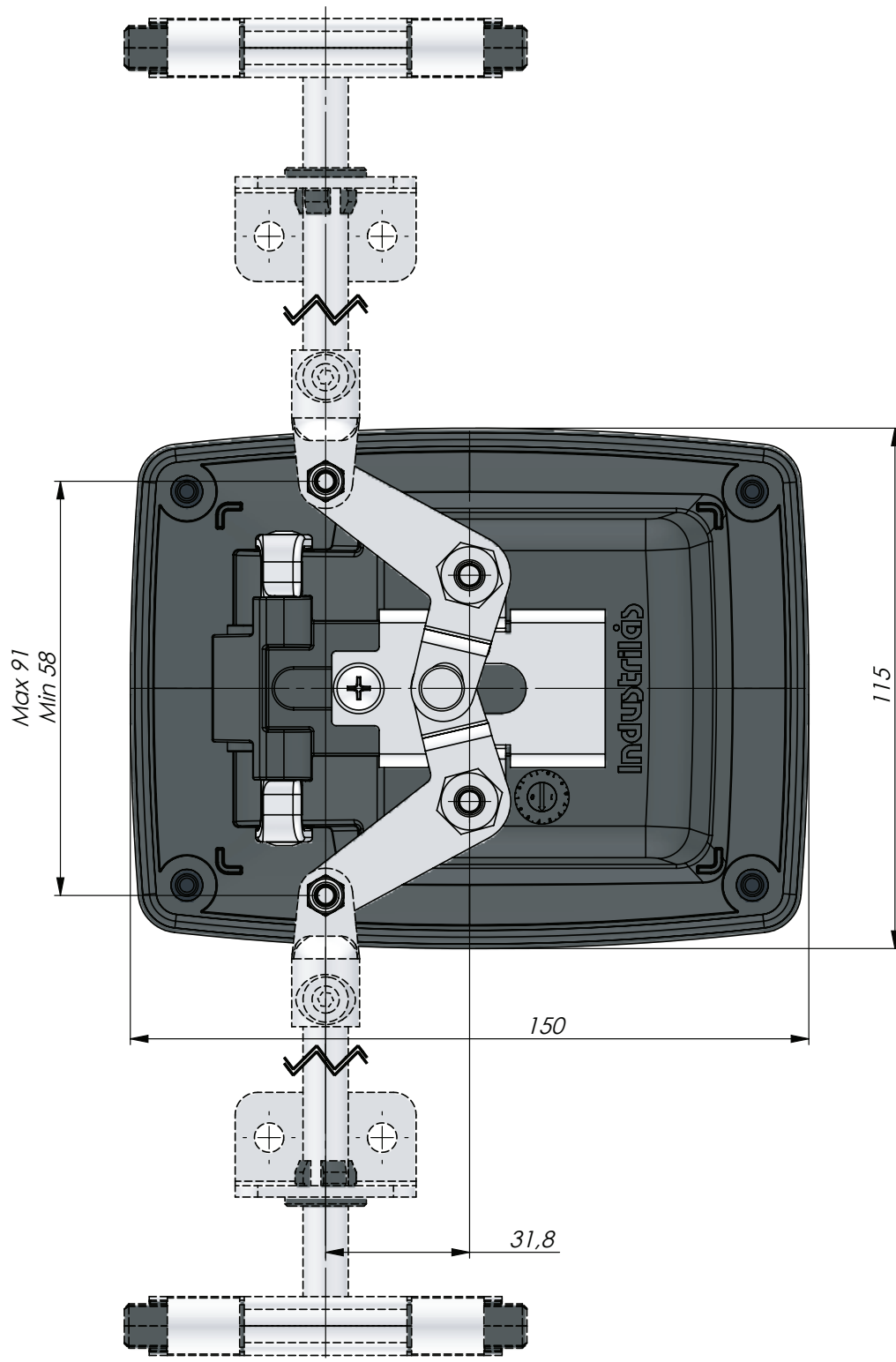
PUR-gasket from polyurethane and O-rings from NBR ensure a water- and dust tight sealing according to IP65.

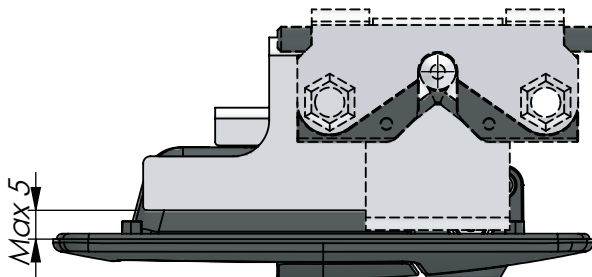
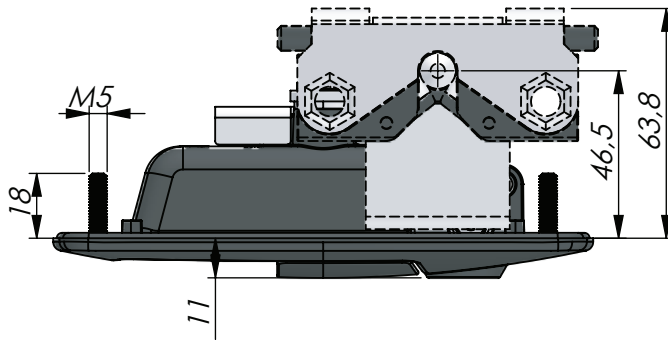
The handle is equipped with keyed alike 805-cylinder as standard and it is supplied with two keys. Key extraction in both open and closed position. Cylinders with other key codes offered upon request.

VECTOR P – Slam Action Paddle Latch - Hooked Cam (AAAA-BBCCDDE-FFGG)

| AAAA- Description | BB Handle | CC Mounting | DD Cam | E Type | -FF Cylinder type | GG Striker | H | L |
|-----------------------|-------------|---------------------|--|------------|-------------------|------------|----|----|
| 2800- VECTOR - Paddle | 0 Universal | 01 Mould-in bolts | 02 Fixed cam - prevents inside opening | 0 Standard | -01 805 | 00 No | - | - |
| | 1 Left | 02 Mounting bracket | 03 Cam with "inside safety release" | | | 01 Yes | 16 | 55 |
| | 2 Right | | | | | | | |







Material:

- Body, grip handle, sliding cam and adapter for cylinder (internal component): Glass fibre reinforced polyamide (PA6GF30), black.
- Maneuver arms: Zinc die cast, zinc plated.
- Mounting bracket, mould-in bolts, maneuver mechanism and striker used inside sealed area: Steel, zinc plated.
- Cylinder: Zinc die cast with stainless steel (304) cap and dust shutter.
- O-rings: NBR.
- PUR-Gasket: Polyurethane.
- Nuts (2 pcs) supplied with mounting bracket version: Steel, zinc plated.

References, Accessories:

- Slam catch and Ø 10 mm rod: Page 2-770.

Notes, Tests:

The tightening torque of the two nuts for the mounting bracket is 3,0 Nm. The tightening torque of the four nuts for the mould-in bolts is 2,2 Nm. It is important that the four holes made in the cut out for the mould-in bolts are within tolerance, to avoid damage when tightening the M5 nuts.

Horizontal mounting of latching rods is recommended in vehicles and very vibrating applications.

Heavy duty Vector paddle latch. Flush handle that assembles into your door with either a mounting bracket or with four mould-in bolts. Both alternatives provide a completely blind mount assembly.

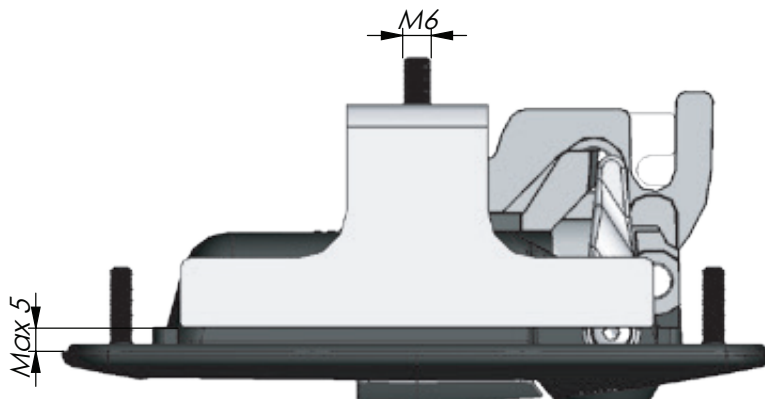
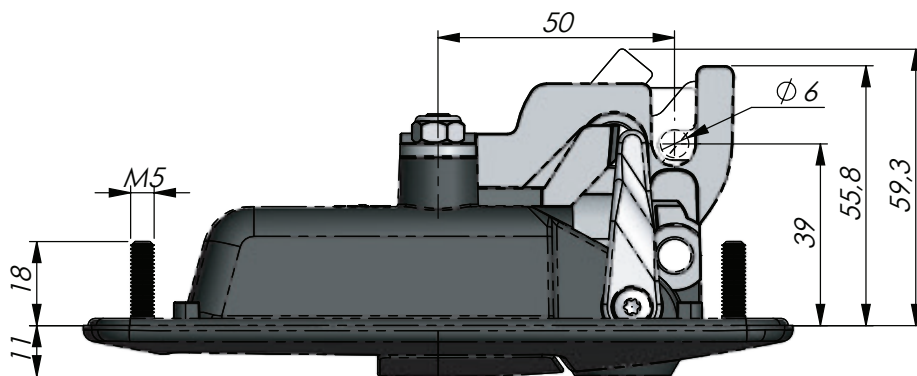
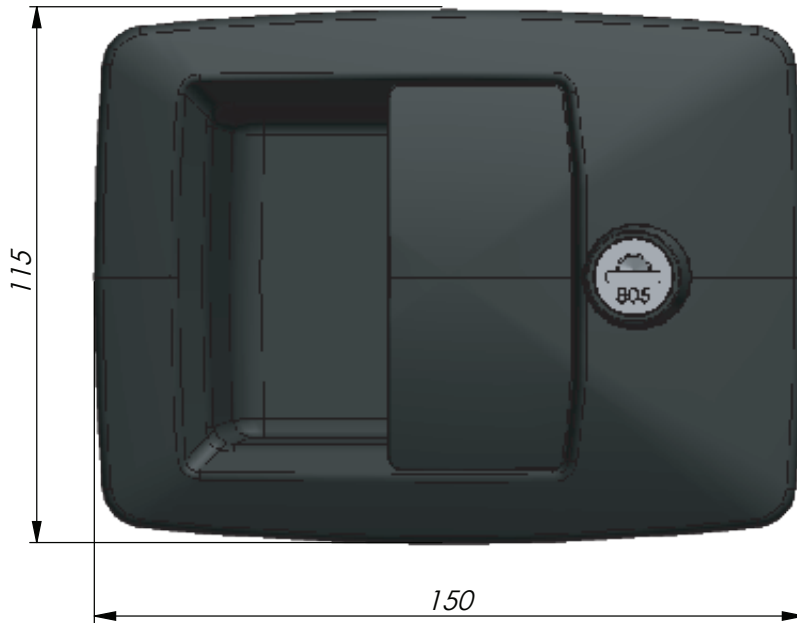
Unique design with grip handle available as left, right or universal handle. The left and right handle provide not only a unique aesthetic appearance, but also provides the best possible grip in every situation, especially when mounted low or high in your application. Handles are available as "left", "universal" and "right". See drawing on page 2-830a for description, cut-out drawing and exterior dimensions.

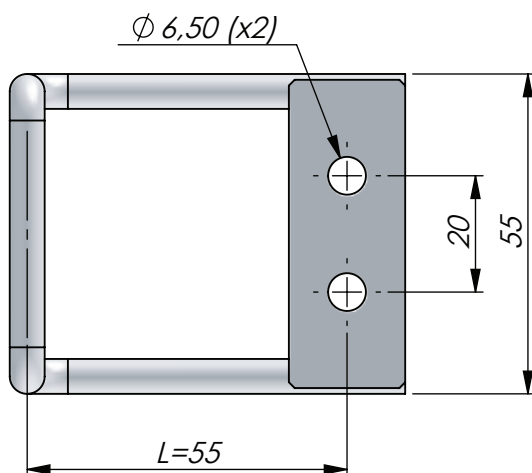
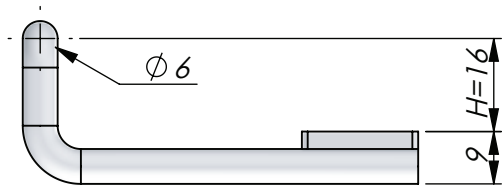
This handle is used together with slam catch (page 2-770) and round 10 mm rods. This combination provides a slam action Paddle latch with two latching points, top-bottom, instead of one centered latching point. The system is designed to work great in applications where door and frame can move relative to each other and create a misalignment, e.g. moving trucks or construction equipment vehicles.

PUR-gasket from polyurethane and O-rings from NBR ensure a water- and dust tight sealing according to IP65. The handle is equipped with keyed alike 805-cylinder as standard and it is supplied with two keys. Key extraction in both open and closed position. Cylinders with other key codes offered upon request.

VECTOR P – Slam Action Paddle Latch - 2-Point Latch (AAAA-BBCCDDE-FFGG)

| AAAA- | Description | BB | Handle | CC | Mounting | DD | Cam | E | Type | -FF | Cylinder type | GG | Striker |
|-------|-----------------|----|-----------|----|------------------|----|---------------|---|----------|-----|---------------|----|---------|
| 2800- | VECTOR - Paddle | 0 | Universal | 01 | Mould-in bolts | 04 | 2-point latch | 0 | Standard | -01 | 805 | 00 | No |
| | | 1 | Left | 02 | Mounting bracket | | | | | | | | |
| | | 2 | Right | | | | | | | | | | |





Material:

- Body, grip handle and adapter for cylinder (internal component): Glass fibre reinforced polyamide (PA6GF30), black.
- Maneuver arms: Zinc die cast, zinc plated.
- Mounting bracket, cam, mould-in bolts and striker used inside sealed area: Steel, zinc plated.
- Cylinder: Zinc die cast with stainless steel (304) cap and dust shutter.
- O-rings: NBR.
- PUR-Gasket: Polyurethane.
- Nuts (2 pcs) supplied with mounting bracket version: Steel, zinc plated.

Notes, Tests:

The tightening torque of the two nuts for the mounting bracket is 3,0 Nm. The tightening torque of the four nuts for the mould-in bolts is 2,2 Nm. It is important that the four holes made in the cut out for the mould-in bolts are within tolerance, to avoid damage when tightening the M5 nuts.

Patented, heavy duty Vector paddle latch with registered design. Flush handle that assembles into your door with either a mounting bracket or with four mould-in bolts. Both alternatives provide a completely blind mount assembly.

Unique design with grip handle available as left, right or universal handle. The left and right handle provide not only a unique aesthetic appearance, but also provide the best possible grip in every situation, especially when mounted low or high in your application. Handles are available as "left", "universal" and "right". See drawing on page 2-830a for description, cut-out drawing and exterior dimensions.

The rotary latching mechanism engage with the striker in two steps for extra safety, typically used in vehicles. Designed for on- and off-road vehicle applications. PUR-gasket from polyurethane and O-rings from NBR ensure a water- and dust tight sealing according to IP65. The handle is equipped with keyed alike 805-cylinder as standard and it is supplied with two keys. Key extraction in both open and closed position. Cylinders with other key codes offered upon request.

VECTOR P – Slam Action Paddle Latch – Rotary (AAAA-BBCCDDE-FFGG)

| AAAA- | Description | BB | Handle | CC | Mounting | DD | Cam | E | Type | -FF | Cylinder type | GG | Striker | H | L |
|-------|-----------------|----|-----------|----|------------------|----|--------|---|----------|-----|---------------|----|---------|----|----|
| 2800- | VECTOR - Paddle | 0 | Universal | 01 | Mould-in bolts | 05 | Rotary | 0 | Standard | -01 | 805 | 00 | No | - | - |
| | | 1 | Left | 02 | Mounting bracket | | | | | | | 01 | Yes | 16 | 55 |
| | | 2 | Right | | | | | | | | | | | | |



HINGES

Concealed hinges 100° - 120° opening angle



3-010 – 3-096

Vision Click hinges for quick assembly - 120° opening angle



3-094 – 3-095

External lift-off hinges - 180° opening angle



3-120 – 3-130,
3-413, 3-500, 3-570

Klima-flex Latching hinges designed for insulated doors / HVAC



3-155 – 3-156

Klima-flex hinges designed for insulated doors / HVAC



3-160 – 3-175

Corner hinges - 180° opening angle



3-180 – 3-195

Hinge with integrated grounding of door - 180° opening angle



3-310

External hinges for flush mounted doors - 180° opening angle



3-328 – 3-461

External friction hinge - 180° opening angle



3-475

External bolt-on hinges and profile hinges - 180° opening angle



3-505 – 3-560

External aluminium hinges (optional spring-loaded) - 180° opening angle



3-580

Weld-on hinges



3-592 – 3-660

Heavy-Duty hinges - 180° opening angle



3-675 – 3-687

Butt hinges - 180° opening angle



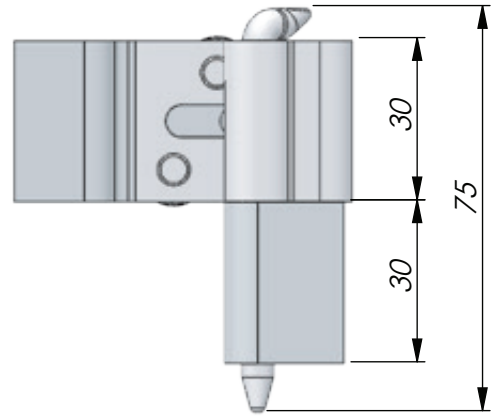
3-731 – 3-741

Continuous (piano) hinges - 180° opening angle



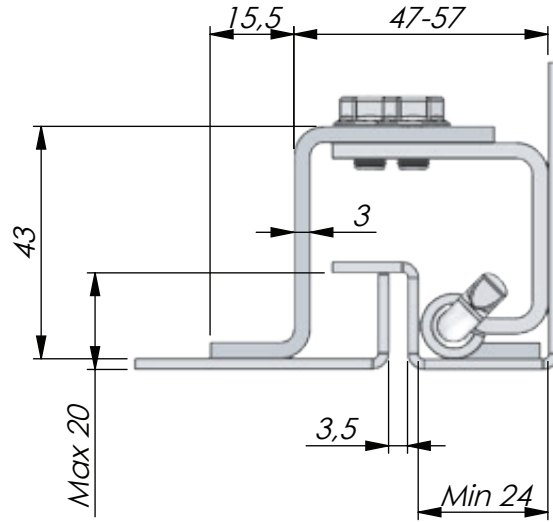
3-810 – 3-830

3



Material:

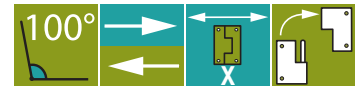
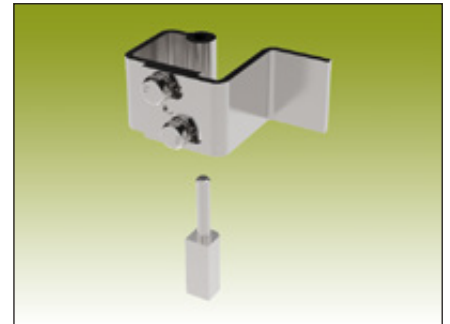
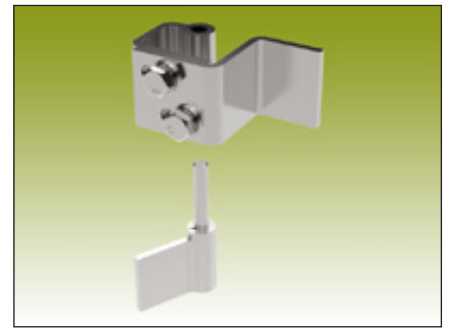
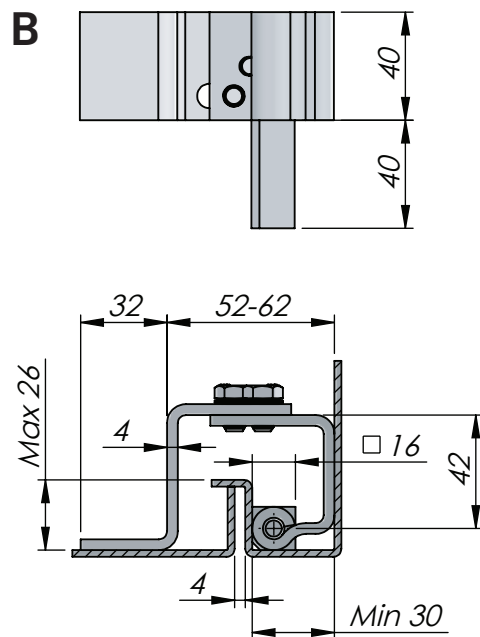
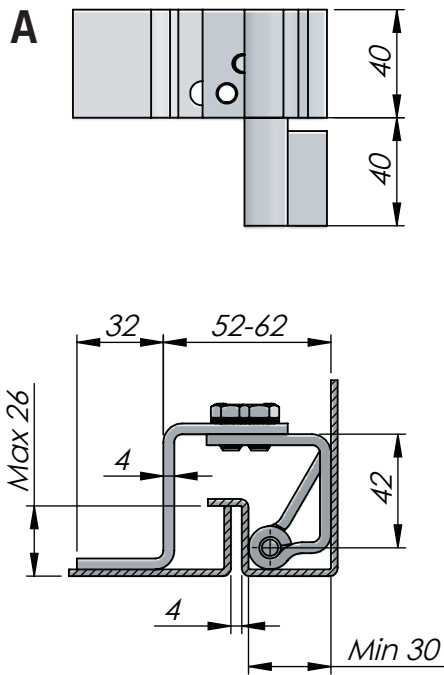
- Door-part, Z-shaped: Steel, unplated, (for welding).
- Door part, rolled: Steel, zinc plated.
- Frame part: Steel, unplated (for welding).
- Screw, nut and pin: Steel, zinc plated.



Adjustable concealed hinge for weld-on mounting. Universal left and right mounting. Opening angle 100°. Door part adjustable 10 mm horizontally.

Adjustable Concealed Hinge - 100° Opening Angle

| P/N | Description |
|--------|-------------------------|
| 312101 | Concealed hinge - steel |



Material:

- Door-part, Z-shaped: Steel, unplated (for welding).
- Door part, rolled: Steel, zinc plated.
- Frame part and pin: Steel, unplated (for welding).
- Screws and nuts: Steel, zinc plated.

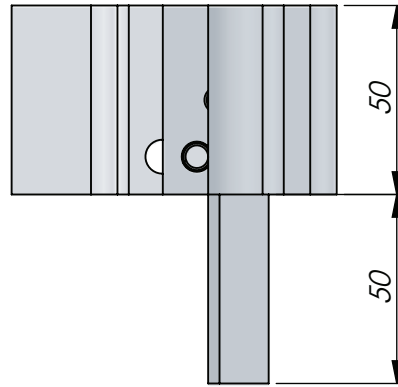
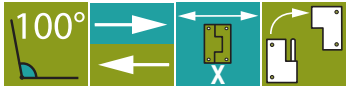
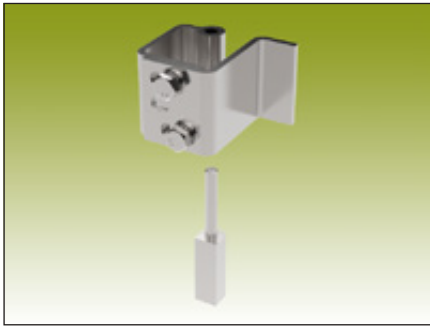
References, Accessories:

- Stainless version: Page 6-300.

Adjustable concealed hinge for weld-on mounting. Universal left and right mounting. Opening angle 100°. Door part adjustable 6 mm horizontally. Frame part may be supplied as either a flag (A) or a square pin (B).

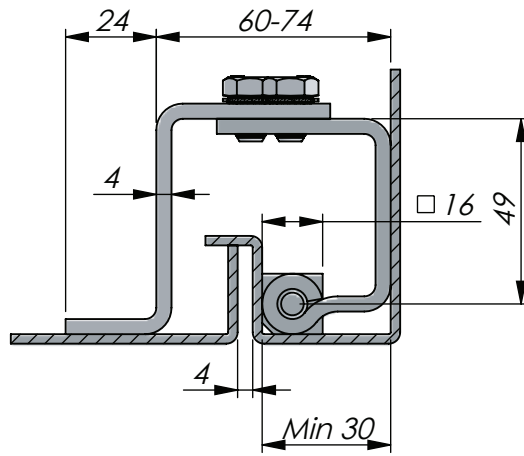
Adjustable Concealed Hinge - 100° Opening Angle

| P/N | Description - frame part | Drawing |
|--------|--------------------------|---------|
| 312102 | Flag | A |
| 312103 | Square pin | B |



Material:

- Door-part, Z-shaped: Steel, unplated (for welding).
- Door part, rolled, Steel, zinc plated.
- Frame part and pin: Steel, unplated (for welding).
- Screw and nut: Steel, zinc plated.

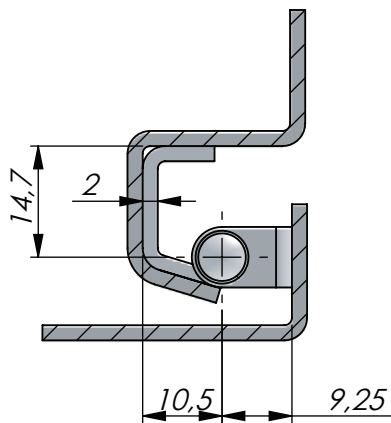
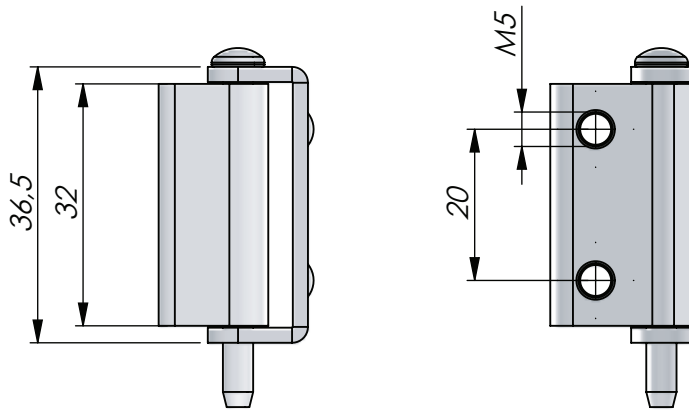


Adjustable concealed hinge for weld-on mounting. Universal left and right mounting. Opening angle 100°. Door part adjustable 10 mm horizontally.

Frame part shaped as a square pin.

Adjustable Concealed Hinge - 100° Opening Angle

| P/N | Description - material |
|--------|-------------------------|
| 312105 | Concealed hinge - steel |



Material:

- Frame part and pin: Steel, zinc plated.
- Door part: Stainless steel (304).

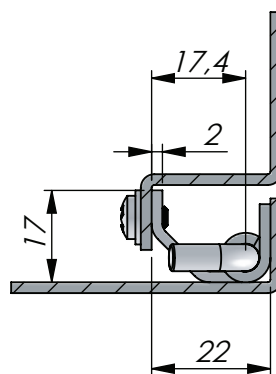
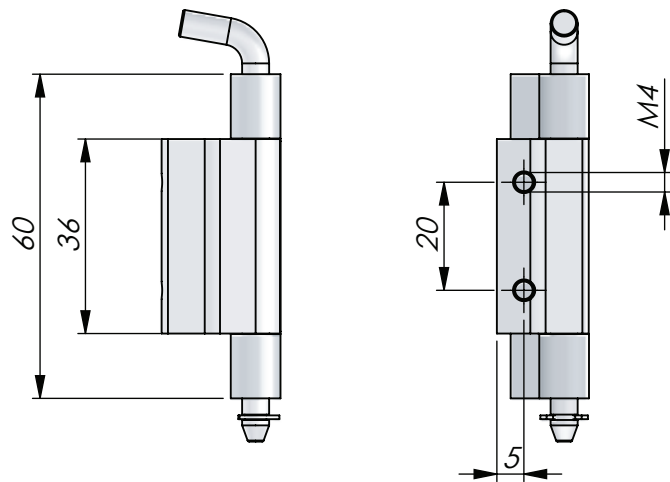
References, Accessories:

- Stainless version: Page 6-308.

Concealed hinge. Opening angle 120°. Universal left and right mounting.

Concealed Hinge - 120° Opening Angle

| P/N | Description |
|--------|-----------------|
| 312118 | Concealed hinge |



Material:

- Frame part: Steel, zinc plated.or untreated.
- Door part: Steel, unplated.
- Pin: Steel, zinc plated.

References, Accessories:

- Stainless version: Page 6-310.

Notes, Tests:

Product is supplied with E-clip.

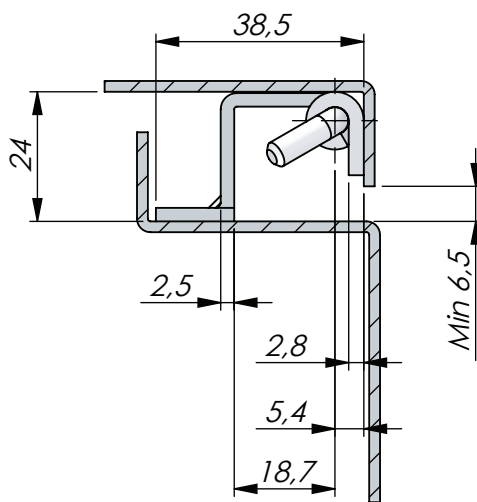
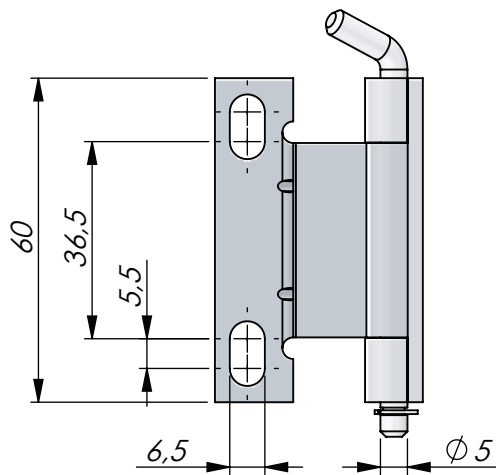
* = Unplated.

Concealed hinge for mounting inside externally mounted doors. Universal left and right mounting. Opening angle 100°.

Weld-on and screw-on mounting in combinations according to table.

Concealed Hinge - 100° Opening Angle

| P/N | Description | Material | Door part | Frame part |
|--------|-----------------|----------|-----------|------------|
| 312106 | Concealed hinge | Steel | Weld-on * | Weld-on * |
| 312107 | Concealed hinge | Steel | Weld-on * | Screw-on |



Material:

- Frame part, pin and E-clip: Steel, zinc plated.
- Door part: Steel unplated.

References, Accessories:

- Stainless version: Page 6-320.

Notes, Tests:

Supplied with E-clip.

* Unplated.

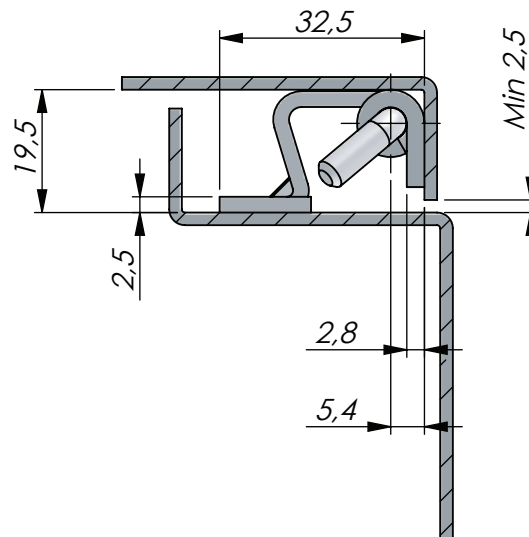
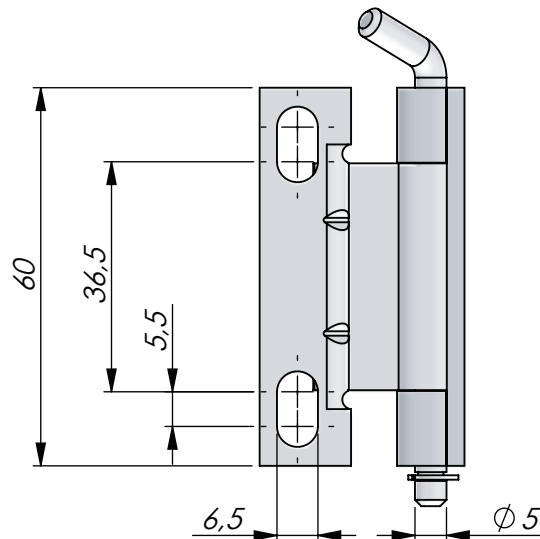
Concealed hinge for mounting inside externally mounted doors.

Universal left and right mounting. Opening angle 120°. The hinge can be adjusted 5,5 mm vertically.

Weld-on and screw-on mounting.

Concealed Hinge - 120° Opening Angle

| P/N | Description - material | Door part | Frame part |
|--------|------------------------|-----------|------------|
| 312109 | Concealed hinge | Weld-on * | Screw-on |



Material:

- Frame part, pin and E-clip: Steel, zinc plated.
- Door part: Steel unplated.

References, Accessories:

- Stainless version: Page 6-330.

Notes, Tests:

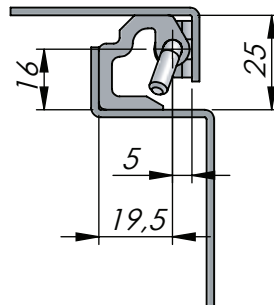
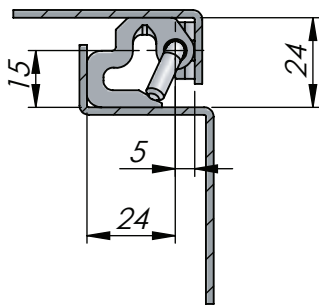
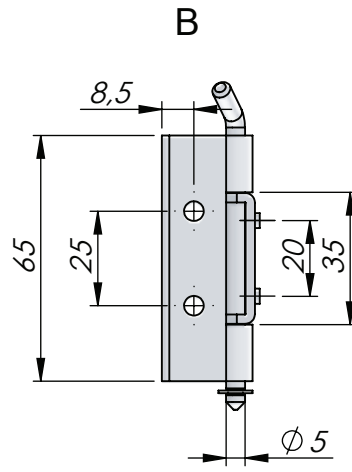
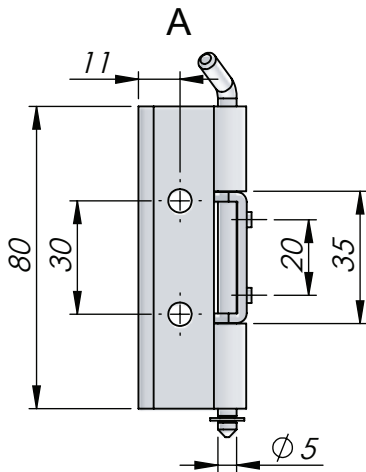
Supplied with E-clip.

* = Unplated

Concealed hinge for mounting inside externally mounted doors. Universal left and right mounting. Opening angle 120°. Adjustable 5,5 mm vertically. Weld-on and screw-on mounting.

Adjustable Concealed Hinge - 120° Opening Angle

| P/N | Description - material | Door part | Frame part |
|--------|------------------------|-----------|------------|
| 312111 | Steel | Weld-on * | Screw-on |



Material:

- Frame part: Zinc die-cast, zinc plated.
- Door part and pin: Stainless steel (304).
- E-clip: Acid-proof stainless steel (316).

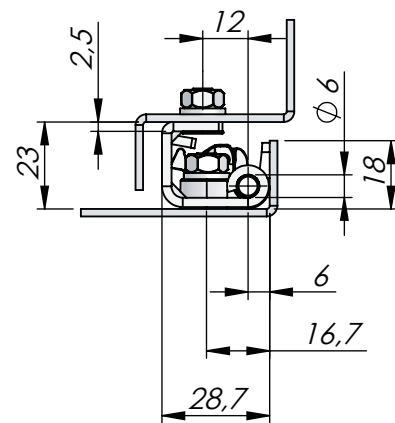
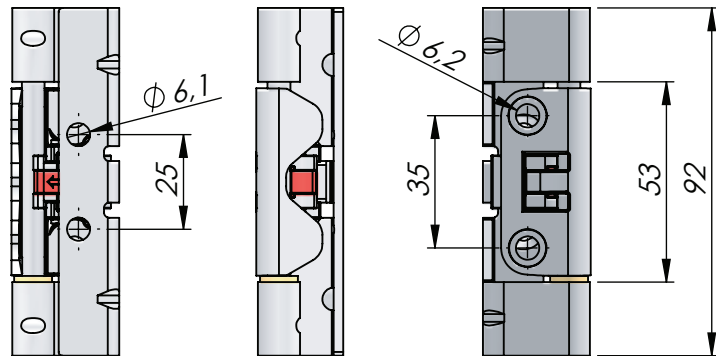
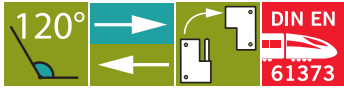
Notes, Tests:

Supplied with E-clip.

Concealed hinge for internal mounting, version A and B. Universal left and right mounting. Opening angle 120°. Frame part mounted with screws, door part provided with warts for press welding.

Concealed Hinge - 120° Opening Angle

| P/N | Description | Drawing |
|--------|-----------------|---------|
| 311116 | Concealed hinge | A |
| 311115 | Concealed hinge | B |



Material:

Standard design:

- Frame part: Steel, zinc plated.
- Pin: Stainless steel (303).
- Washer: Brass.
- Door part: Zinc die-cast, zinc plated.
- Red safety catch: Glass fibre reinforced polyamide (PA6GF30), red.

Highlander design:

- Frame part and pin: Stainless steel (303).
- Washer: Brass.
- Door part: Zinc die-cast, special surface treatment.
- Red safety catch: Glass fibre reinforced polyamide (PA6GF30), red.

References, Accessories:

- Vision system components: Chapter 1.
- 40 mm hole spacing: Page 3-095.
- Vision hinge 180° for adjacent doors: Page 3-310

Concealed hinge with a patented function that enables the door part to be engaged to, or separated from, the frame part with a "click".

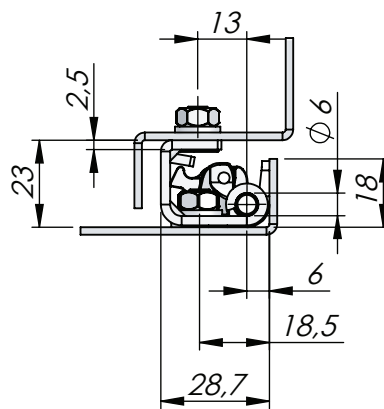
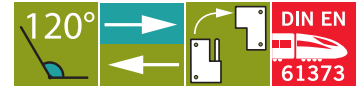
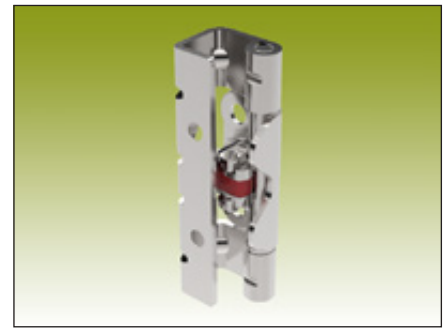
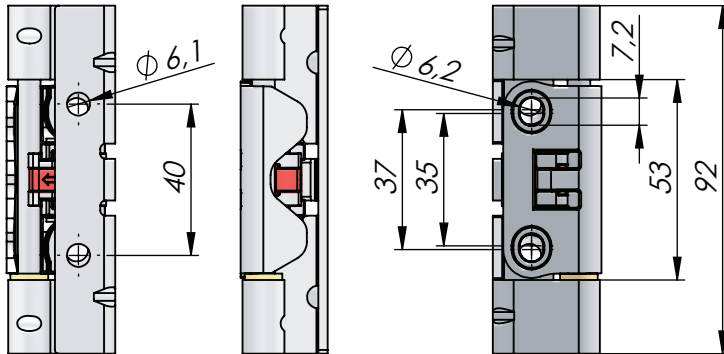
Easy door assembly by placing the door in the frame parts and close. The door part and frame part snap together. Secure the hinge by activating the red safety catch.

Screw mounted frame part. The door part is mounted on weld-on studs. Universal right and left mounting. Opening angle 120°.

VISION Concealed Click-Hinge - 25 mm Hole Spacing

| P/N Standard | P/N Highlander |
|--------------|----------------|
| 312121 | 313021 |

VISION Concealed Hinge - 120° Opening Angle with Click Function and 40 mm Hole Spacing



Material:

Standard design:

- Frame part: Steel, zinc plated.
- Pin: Stainless steel (303).
- Washer: Brass.
- Door part: Zinc die-cast, zinc plated.
- Red safety catch: Glass fibre reinforced polyamide (PA6GF30), red.

Highlander design:

- Frame part and pin: Stainless steel (303).
- Washer: Brass.
- Door part: Zinc die-cast, special surface treatment.
- Red safety catch: Glass fibre reinforced polyamide (PA6GF30), red.

References, Accessories:

- Vision system components: Chapter 1.
- 25 mm hole spacing: Page 3-094.
- Vision hinge 180° for adjacent doors: Page 3-310

Concealed hinge with a patented function that enables the door part to be engaged to, or separated from the frame part with a "click".

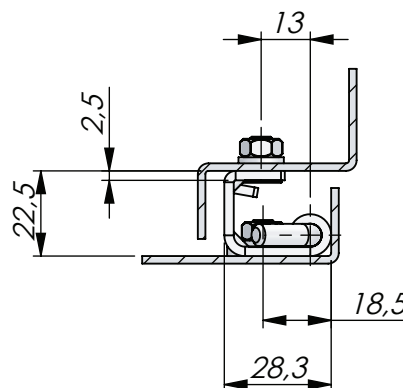
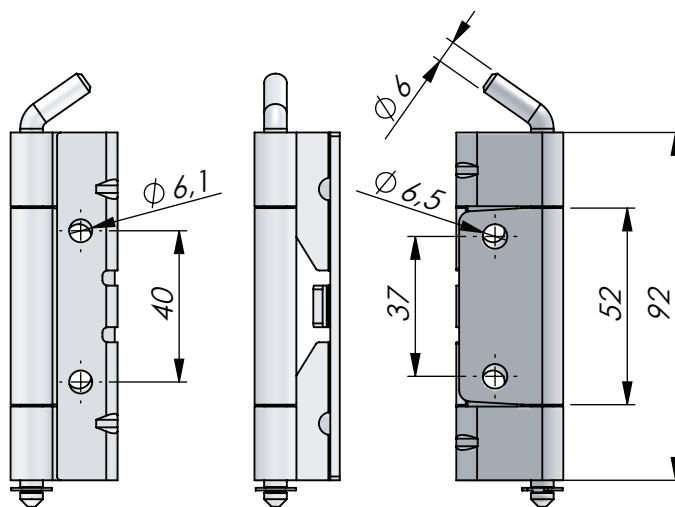
Easy door assembly by placing the door in the frame parts and close. The door part and frame part snap together. Secure the hinge by activating the red safety catch.

Screw mounted frame part. The door part is mounted on weld-on studs.

Universal right and left mounting. Opening angle 120°.

VISION Concealed Click-hinge - 40 mm Hole Spacing

| P/N Standard | P/N Highlander |
|--------------|----------------|
| 311117 | 311417 |



Material:

- Hinge, pin and E-clip: Steel, zinc plated.

References, Accessories:

- Vision system components: Chapter 1.

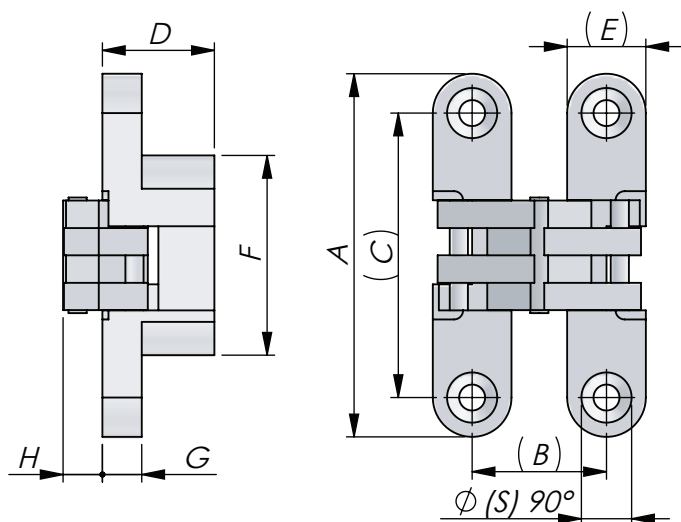
Notes, Tests:

Supplied with E-clip.

Screw mounted frame part, door part mounted on weld-on studs. Universal right and left mounting. Opening angle 120°.

Concealed Hinge - 120° Opening Angle

| P/N | Description |
|--------|-----------------|
| 312119 | Concealed hinge |



Material:

- Door- and frame part: Zinc die cast, chrome plated.
- Links: Stainless steel (304).

Concealed hinge for mounting inside the door. For recessed/inset doors, folding tables etc. Universal left and right mounting with 180° opening angle. The hinge is supplied fully assembled. The door- and frame part are mounted with screws in the countersunk holes. Screws are not included.

The hinge is completely concealed inside the door, when this is closed.

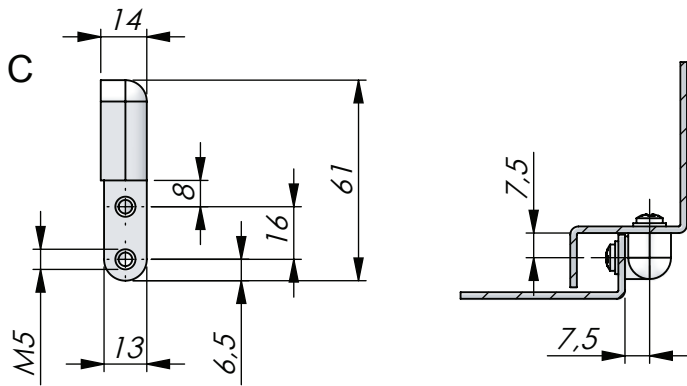
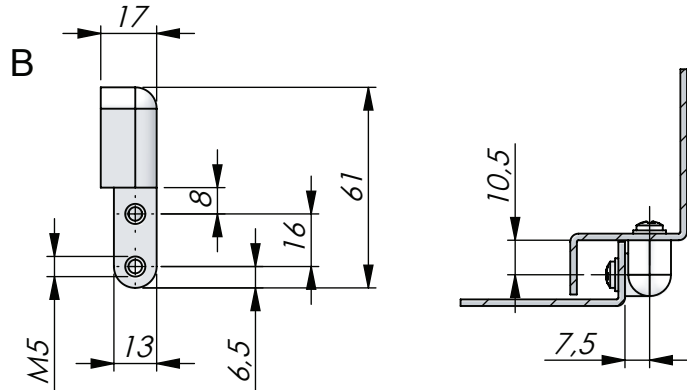
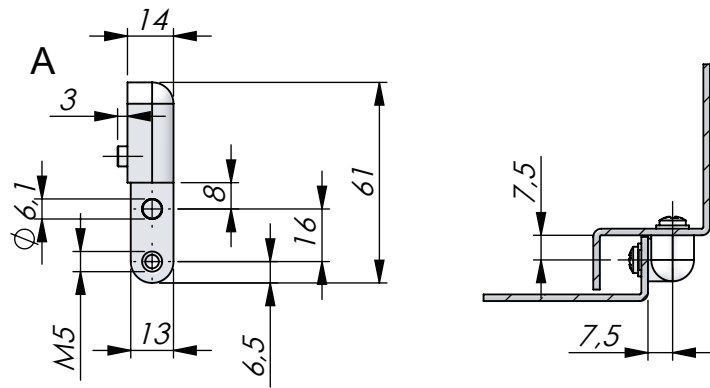
Multi-Link Concealed Hinge - 180° Opening Angle

| P/N | Description | | | | | | | | | | |
|-----------|-------------|------|----|------|------|----|-----|-----|-----|----------------|-----|
| | A | B | C | D | E | F | G | H | S | X | Y |
| 311322-01 | 45 | 22,7 | 32 | 18,5 | 13 | 19 | 5 | 6 | 3,5 | 3 mm or less | 0,8 |
| 311322-02 | 60 | 22,2 | 47 | 18,5 | 13 | 33 | 6,5 | 6,5 | 4,3 | 3 mm or less | 1 |
| 311322-03 | 70 | 26,6 | 53 | 23 | 16,1 | 5 | 7 | 9 | 4,6 | 3,5 mm or less | 1,2 |
| 311322-04 | 100 | 33,2 | 80 | 27,5 | 20 | 52 | 9,5 | 9,5 | 5,3 | 4,8 mm or less | 1,8 |



Material:

- Hinge: Zinc die-cast, chrome plated or black coated.

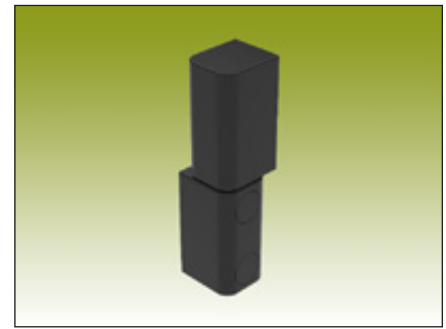
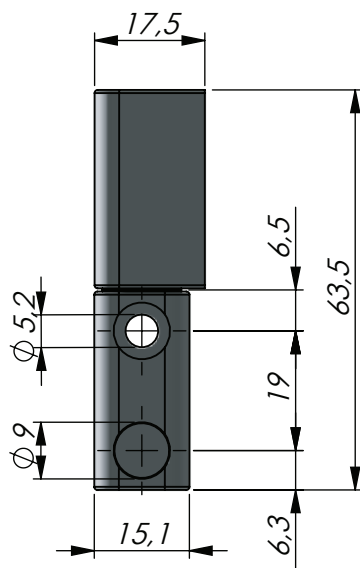
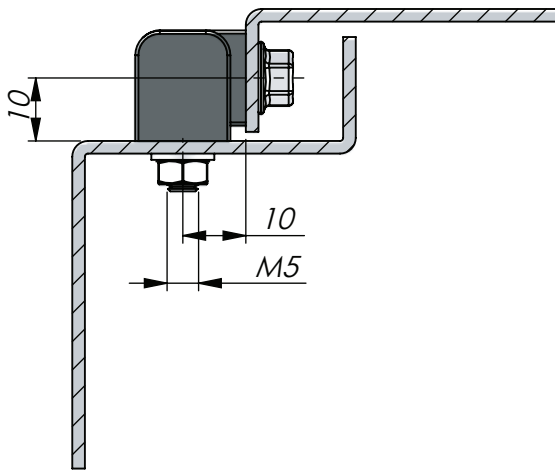


Lift-off hinge for external mounting on cabinets with surface mounted doors. Concealed mounting from the inside, using two screws and two studs - or four screws. Opening angle 180°. Universal right and left mounting.

External Lift-Off Hinge - 180° Opening Angle

| P/N | Size | Description - surface treatment | Screws | Drawing |
|--------|------------|---------------------------------|--------|---------|
| 321332 | 7,5 / 7,5 | Chrome | 2 x | A |
| 321532 | 7,5 / 7,5 | Black | 2 x | A |
| 321331 | 7,5 / 10,5 | Chrome | 4 x | B |
| 321531 | 7,5 / 10,5 | Black | 4 x | B |
| 321330 | 7,5 / 7,5 | Chrome | 4 x | C |
| 321530 | 7,5 / 7,5 | Black | 4 x | C |

External Lift-Off Hinge for Surface Mounted Door - 180° Opening Angle



Material:

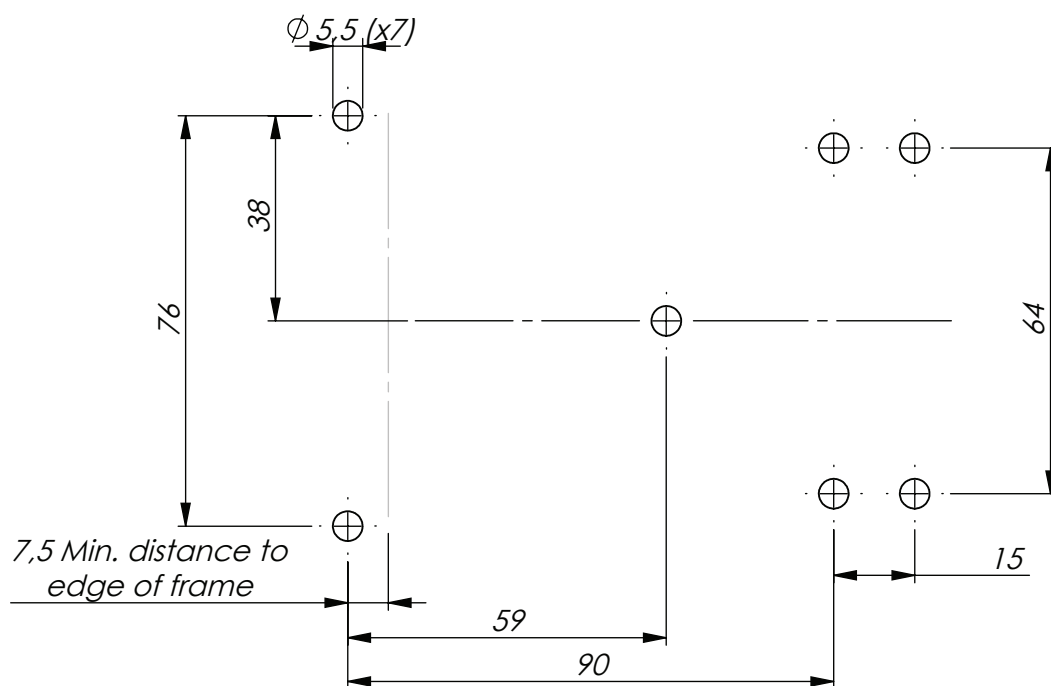
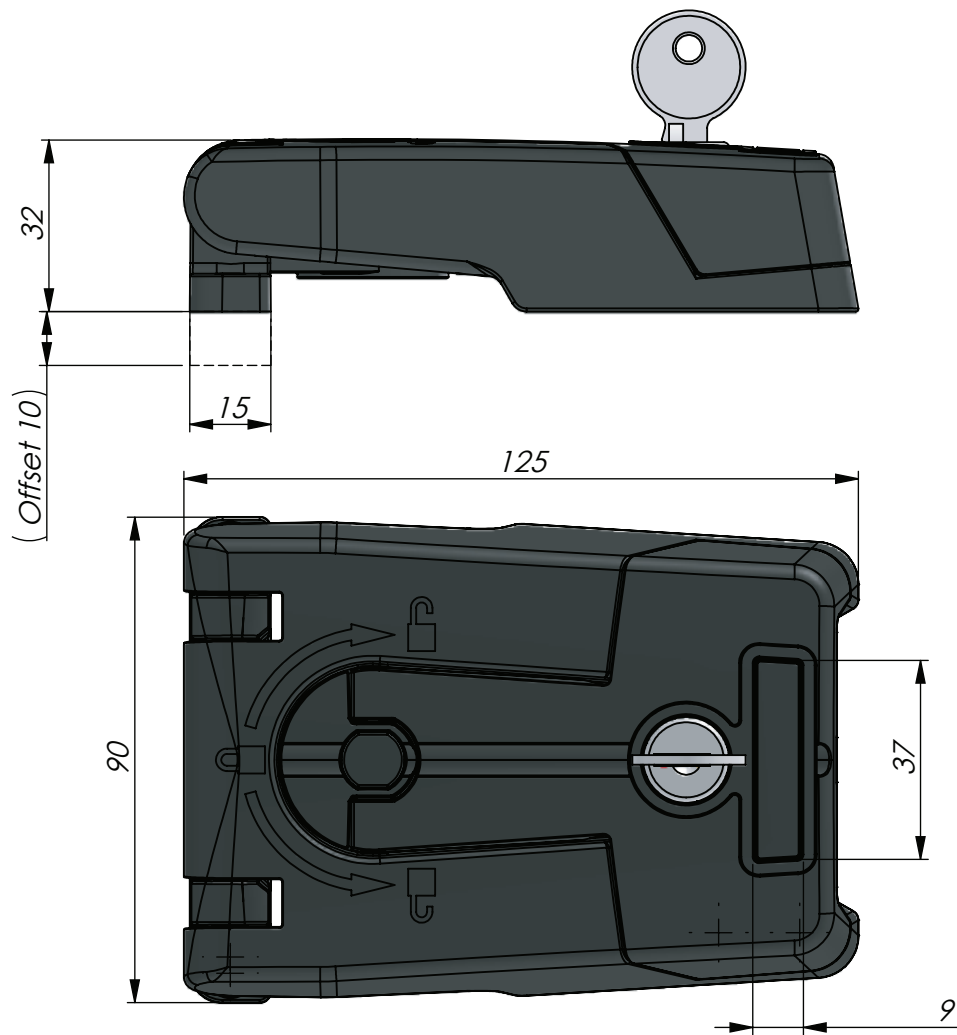
- Hinge: Zinc die-cast, black powder coated.

Other surface treatments on request.

Lift-off hinge for external mounting for surface mounted doors. Concealed screws on the door part mounted from the inside - and screws on the frame part mounted from the front. Supplied with plastic covers for recessed hexagon M5-screw according to DIN 912. Opening angle 180°. Universal right and left mounting.

External Lift-Off Hinge for Surface Mounted Door -180° Opening Angle

| P/N | Description - material |
|--------|------------------------|
| 321536 | Zinc |



0



Material:

- Door part and handle: Glass fibre reinforced polyamide (PA6GF30).
- Frame part and latching cam: Zinc die cast, black powder coated.
- Hinge pin and assembly pins: Stainless steel.

References, Accessories:

- Keys for insert "Recessed Hexagon 10" are found on page 2-380.

Notes, Tests:

Same frame part is used in K2 hinge found at page 3-156. By mounting the frame parts symmetrical on left and right side of the frame and use K2 hinges on one side and latching hinges on the other side the end user can choose to have the door mounted either way, right- or left hinged. When mounted in a properly rated, suitable enclosure this handle meets the requirements for sealing level L1 regarding positive or negative air pressure according to DIN EN 1886. Key extraction: Open/closed.

* Supplied with two keys.

180° Hinge-Latch, or latching hinge that may be used as hinge or latch according to need. Allows you to open door as left- or right hinged door, or to remove door completely. Universal left- and right assembly.

Provides 6 mm compression and has a built-in safety catch for safe opening of pressurized doors. Patented and registered design.

Clicks into distinct open and closed position for tactile feedback.

Vertical adjustability together with guidance between door and frame parts, makes it easier than ever to get the perfect sealed door. Available in non-locking, push-button, keyed and tool operated version. Also customizable with your logotype.

Note that a normal panel will need four units in order to operate as either left-open, right open, or completely removable.

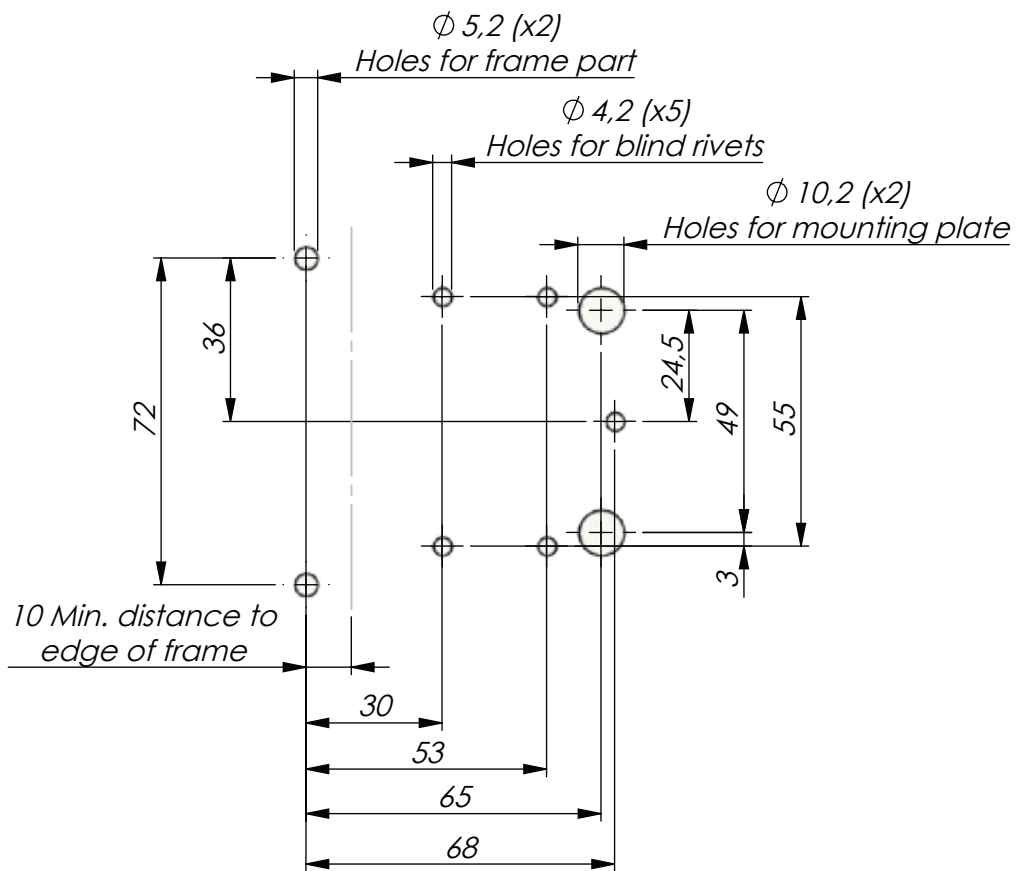
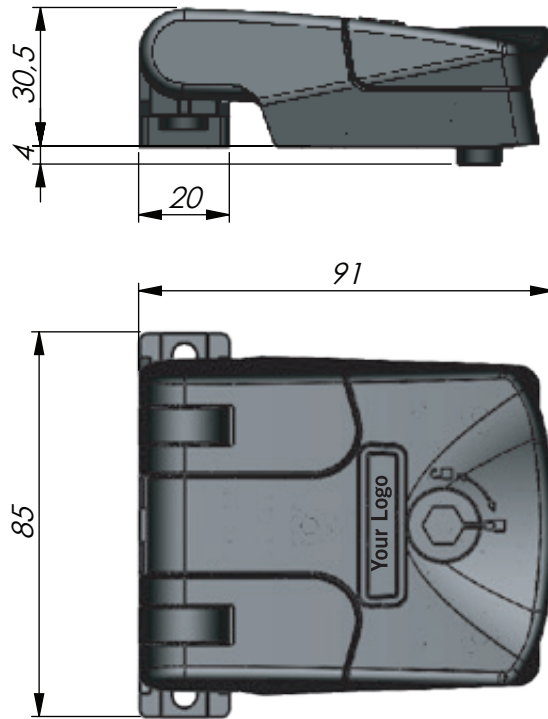
Mount the door part with blind rivets (pop-rivets). The frame part may be mounted with screws or blind rivets.

No problems with thermal break as units are surface-mounted on to door and frame parts, resulting in no parts intruding through the double skinned doors.

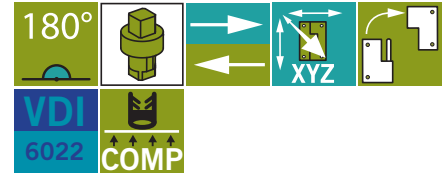
Compression Latching Hinge with Safety Catch - System KLIMA-FLEX

| P/N | Description | Offset |
|-------------|---------------------|--------|
| 2651-400000 | Non-locking | 0 mm |
| 2651-400080 | Keyed IL101 * | 0 mm |
| 2651-400035 | Recessed Hexagon 10 | 0 mm |
| 2651-400070 | Push-button | 0 mm |
| 2651-401000 | Non-locking | 10 mm |
| 2651-401035 | Recessed Hexagon 10 | 10 mm |
| 2651-401080 | Keyed IL101 * | 10 mm |
| 2651-401070 | Push-button | 10 mm |





0



Material:

- Door part, handle, frame part, mounting bracket, insert, safety catch and adjustable off-set device: Glass fibre reinforced polyamide (PA6GF30).
- Spring for safety catch: Spring steel EN 1.4310.

References, Accessories:

- Keys for insert Recessed hexagon 8 mm found on page 2-370 and 2-372 (Use key for Recessed Hexagon 8 / 3 mm pin).

Patent pending compact 180° Latching Hinge that may be used as hinge or latch according to need. Allows you to open door as left- or right hinged door, or to remove door completely. Universal left- and right assembly. Available with a built-in safety catch for safe opening of pressurized doors. In addition to the 3 mm compression that always applies, the Hinge Latch can easily be adjusted between offset 0 mm, 1,5 mm or 3,0 mm to put more pressure on the gasket and ensure a tight and sealed door. This adjusting is done by lifting the cover and turning the adjustment screw using a "Torx 20"-bit. Door part mounts on a mounting bracket (included) which stabilize the door in the Latching Hinge area and provide further adjustability. The Latching Hinge can be adjusted 3 mm in all three directions. Clicks into distinct open and closed position for tactile feedback and equipped with insert "Recessed hexagon 8 mm". Supplied with open and close indication for insert position.

Also customizable with your logotype (logotype area prepared). Frame part mounts with screws or blind rivets. Mounting bracket for the door mounts with Ø 4 mm blind rivets (pop-rivets). Mounting hardware not included.

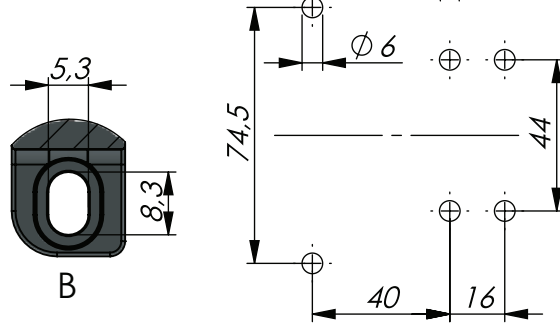
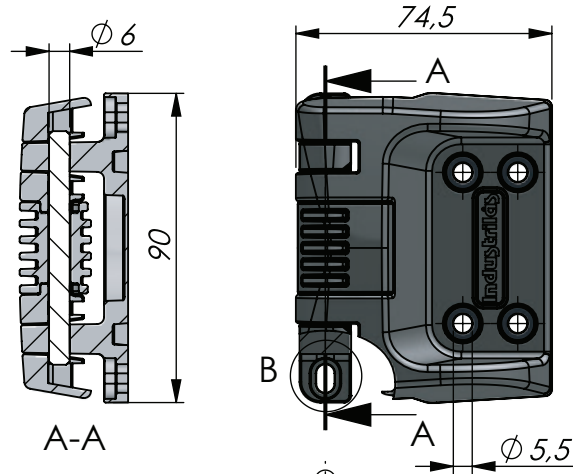
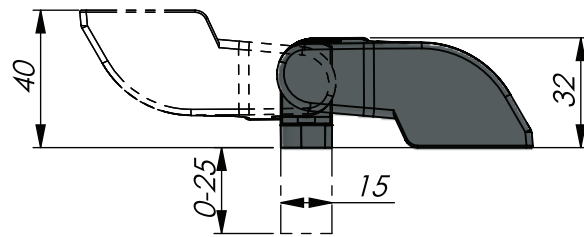
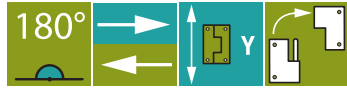
Note that a normal panel will need four units in order to operate as either left-open, right open, or completely removable.

When mounted in a properly rated, suitable enclosure this handle meets the requirements for sealing level L1 regarding positive or negative air pressure according to DIN EN 1886.

No problems with thermal break as units are surface-mounted on to door and frame parts, resulting in no parts intruding through the double skinned doors.

Compression Hinge-Latch with Safety Catch - 3D Adjustable - System KLIMA-FLEX

| P/N | Description |
|-------------|-------------------------------------|
| 2651-420034 | 3D Hinge latch with safety catch |
| 2651-430034 | 3D Hinge latch without safety catch |



Material:

- Door part: Glass fibre reinforced polyamide (PA6GF30), black.
- Frame part: Zinc die cast, black structure powder coated.
- Hinge pin: Stainless steel (303).
- Reinforcement bushings: brass, black zinc plated.

References, Accessories:

- Compression Latching Hinge with same frame part: Page 3-155a and 3-155b.

Notes, Tests:

The frame part is the same as for the "Compression Latching Hinge" (page 3-155a/b). This makes it possible whenever needed to switch from a left hinged door to a right hinged door, and vice versa, when this hinge is used in combination with the "Compression Latching Hinge" (page 3-155a/b). With this setup the door can also be removed completely.

Hinge designed for use on insulated doors in HVAC units. With door in open position, the smart quick-release function allows for complete door removal and door attachment, without the need for any tool.

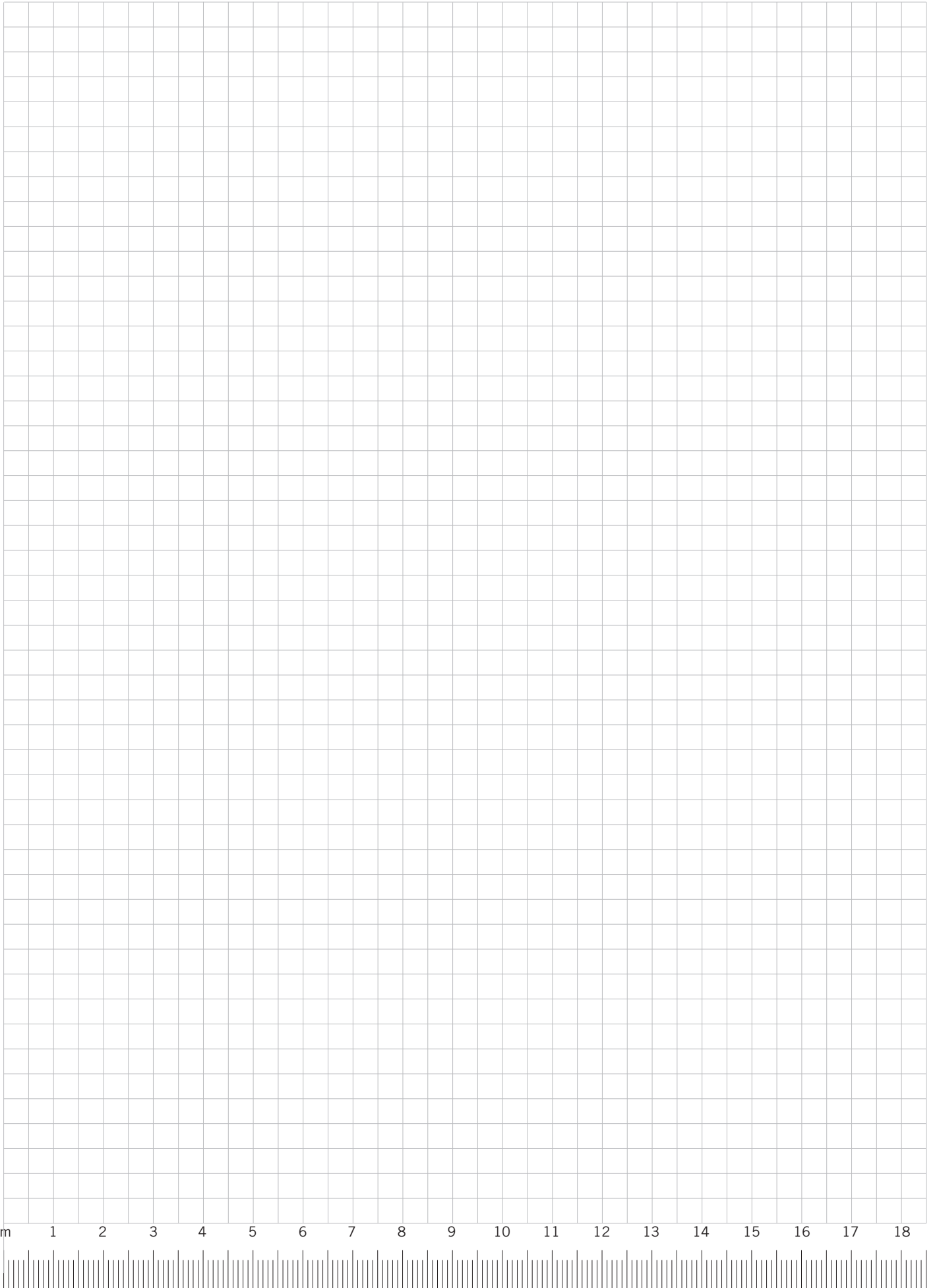
Universal right and left mounting with 180° opening angle. Surface mounted on frame and door with rivets or screws.

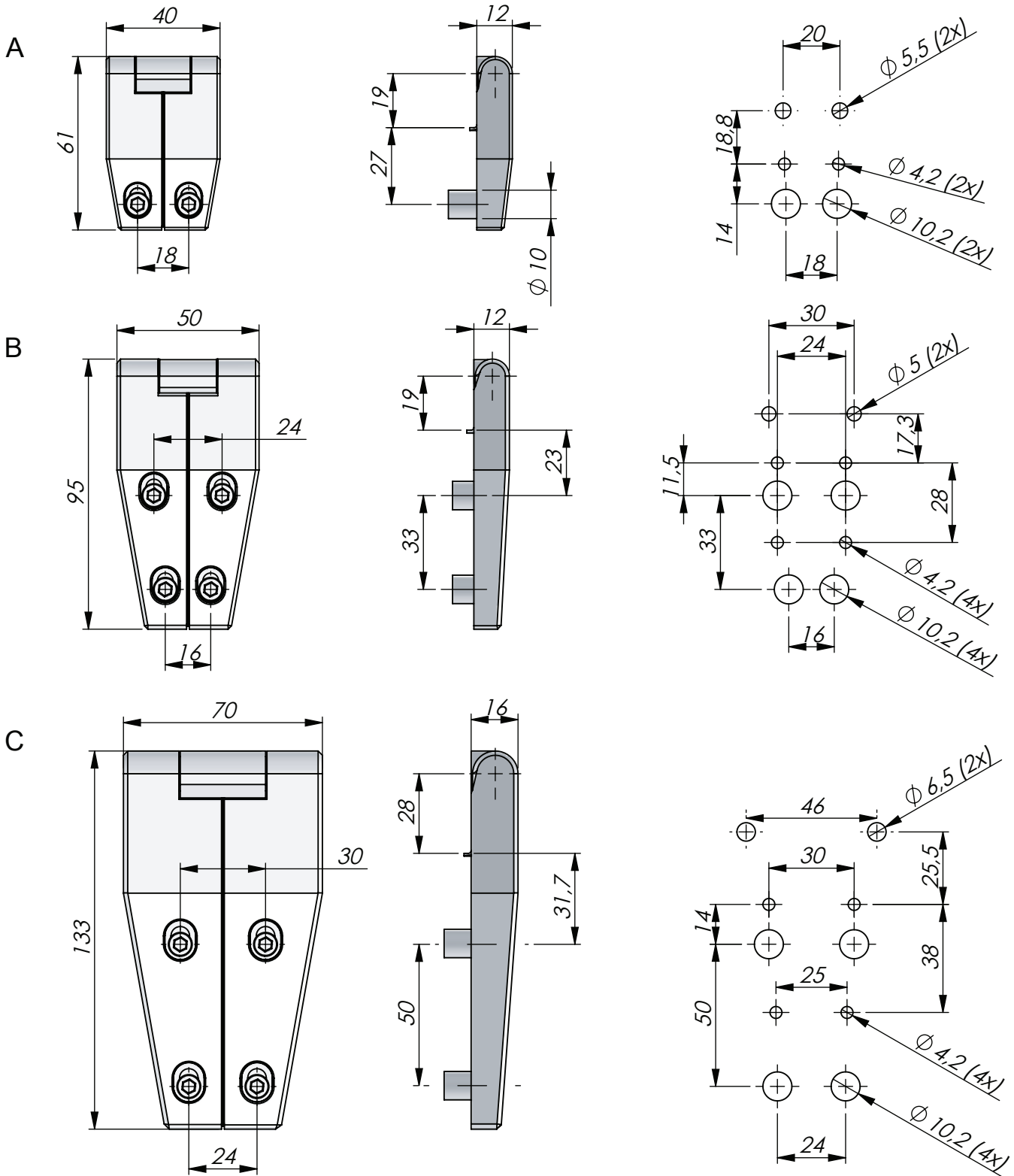
Upon request, we can quote you a tool change so that the frame part can be supplied with other widths and offsets between 0-25 mm. The door part is prepared to display your logotype with a simple change in the moulding tool.

Note that the quick door-removal function only is possible when the door is in the "open" position.

180° Hinge for Insulated Door - System KLIMA-FLEX

| P/N | Description | Offset |
|-------------|---------------------------|------------------|
| 2651-510050 | Hinge for insulated doors | No offset (0 mm) |
| 2651-511050 | Hinge for insulated doors | 10 mm offset |







Material:

- Hinge: Zinc die-cast, zinc plated or black texture powder coated.
- Mounting plate: Zinc die-cast, zinc plated.
- Pin: Steel, zinc plated.

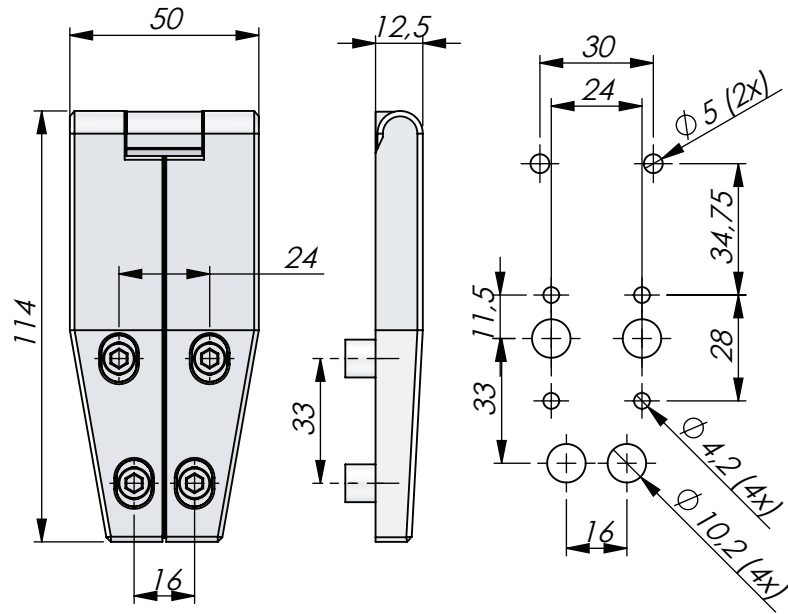
References, Accessories:

- Stainless version: Page 6-355.

Specifically designed hinges to simplify mounting on insulated doors. Adjustable in the X- and Y-axis by 3 mm. Lift-off feature when lower hinge part is removed, Opening angle 180°. Supplied with mounting plate.

Adjustable Hinge for Insulated Doors - System KLIMA-FLEX - 180° Opening Angle

| P/N zinc | P/N black | Width | Length | Drawing on page 3-160a |
|----------|-----------|-------|--------|------------------------|
| 321150 | 321650 | 40 | 61 | A |
| 321151 | 321651 | 50 | 95 | B |
| 321152 | 321652 | 70 | 133 | C |



Material:

- Door part and frame part: Zinc, zinc plated or black texture powder coated.
- Fastening plate: Zinc, zinc plated.
- Hinge pin and screws: Steel, zinc plated.
- Washers: Steel, nickel plated.

Surface mounted hinge, especially designed for insulated doors. Comes with a mounting plate for thin door skins. Lift-off feature when lower hinge part is removed. Opening angle 180°. Adjustable 3 mm vertically and horizontally.

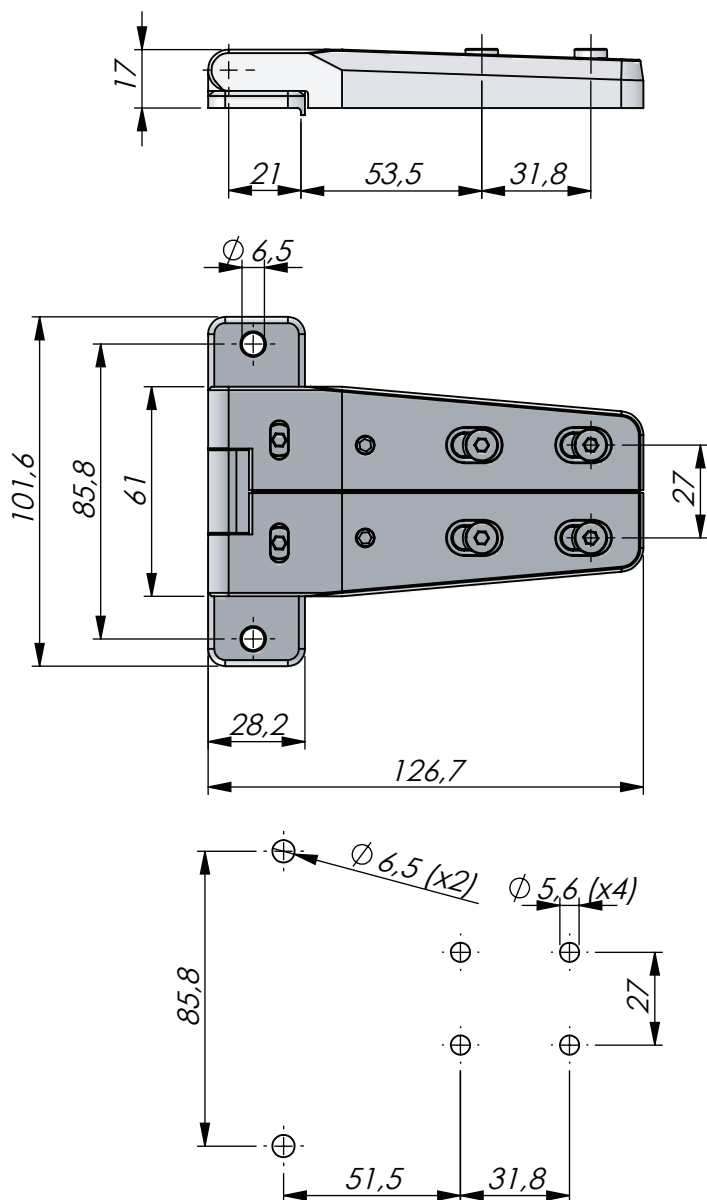
Adjustable Hinge for Insulated Doors - System KLIMA-FLEX - 180° Opening Angle

P/N Zinc Plated

P/N Black

321185

321685



Material:

- Door part and frame part: Zinc, zinc plated or black texture powder coated.
- Fastening plate: Zinc, zinc plated.
- Hinge pin and hexagon screws (UNC-thread): Steel, zinc plated.
- Washers: Brass, nickel plated.

Surface mounted heavy-duty hinge, especially designed for insulated doors. Adjustability in all three dimensions ensure perfect alignment of your door. Adjustable in X- and Y-axes with 6 mm and in Z-axis with 3 mm. Comes with a fastening plate for thin door skins. Lift-off feature when lower hinge part is removed in first step. Opening angle 180°. Available in zinc plated or powder coated zinc.

Supplied with adjustment screws and fastening plate.

Adjustable 3D-Hinge System KLIMA-FLEX - 180° Opening Angle

P/N Zinc plated

321158

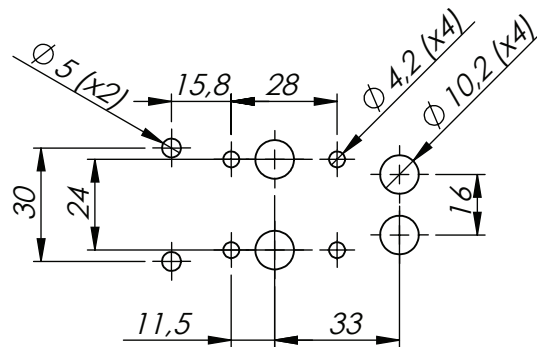
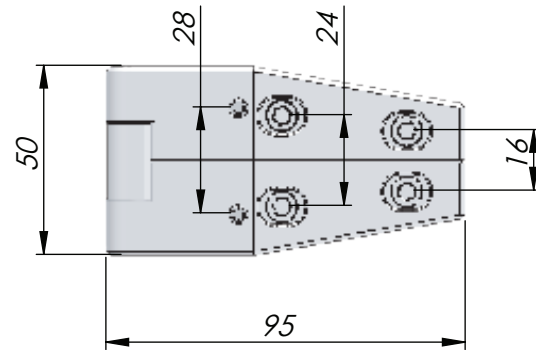
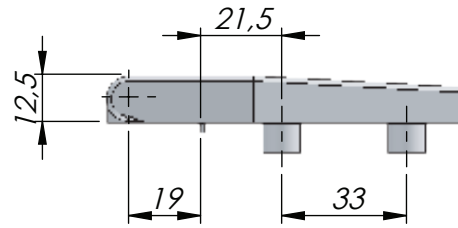
P/N Black

321658



Material:

- Hinge: Zinc die-cast, zinc plated or black texture powder coated.
- Mounting plate: Zinc die-cast, zinc plated.
- Pin: Steel, zinc plated.



Specifically designed hinge to simplify mounting on insulated doors. Adjustable in the X-, Y- and Z-axis by 3 mm. Opening angle 180°. Supplied with adjustment screws and fastening plate.

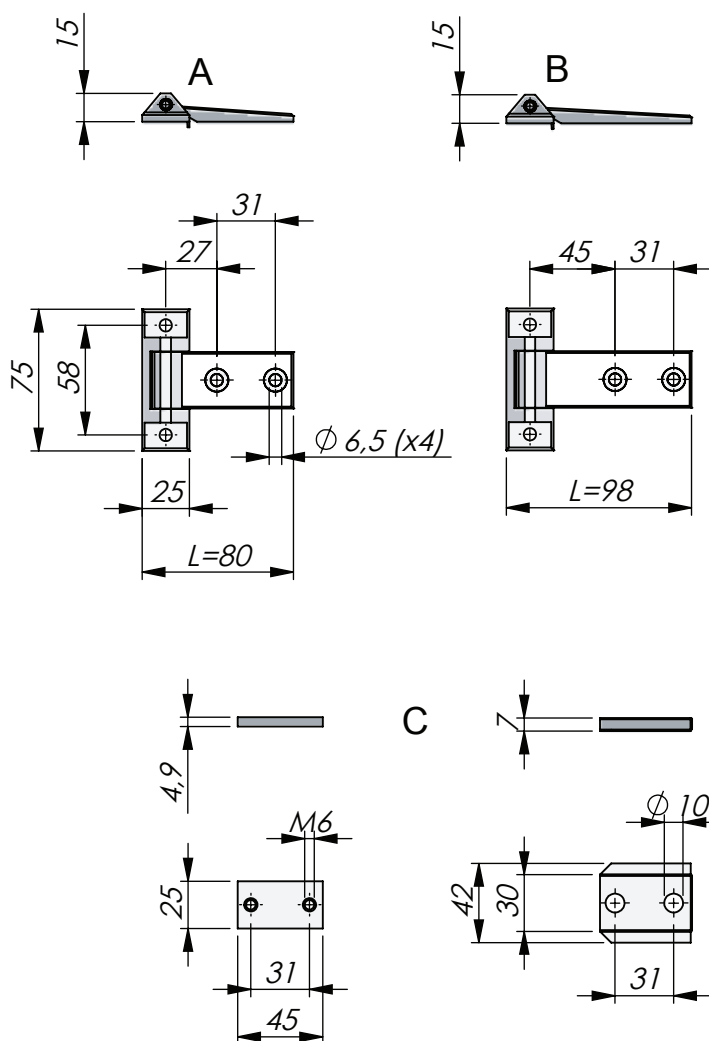
Adjustable 3D-Hinge System KLIMA-FLEX - 180° Opening Angle

P/N Zinc plated

P/N Black

321151-3D

321651-3D



Material:

- Hinge: Zinc die-cast, zinc plated, black texture powder coated or chrome plated.
- Threaded plate: Zinc die-cast, zinc plated.
- Bracket and pin: Steel, zinc plated.

Adjustable in the X- and Y-axis if used with adjustment parts and oversized mounting holes in the door. The hinge is mounted to a threaded plate previously attached to the inside of the door with a mounting bracket, temporarily taped to the door skin. The hinge can also be used without the adjustment parts, by using self-tapping screws. Universal right or left mounting. Opening angle: 180°.

Adjustment parts = Threaded plate with bracket (drawing C).

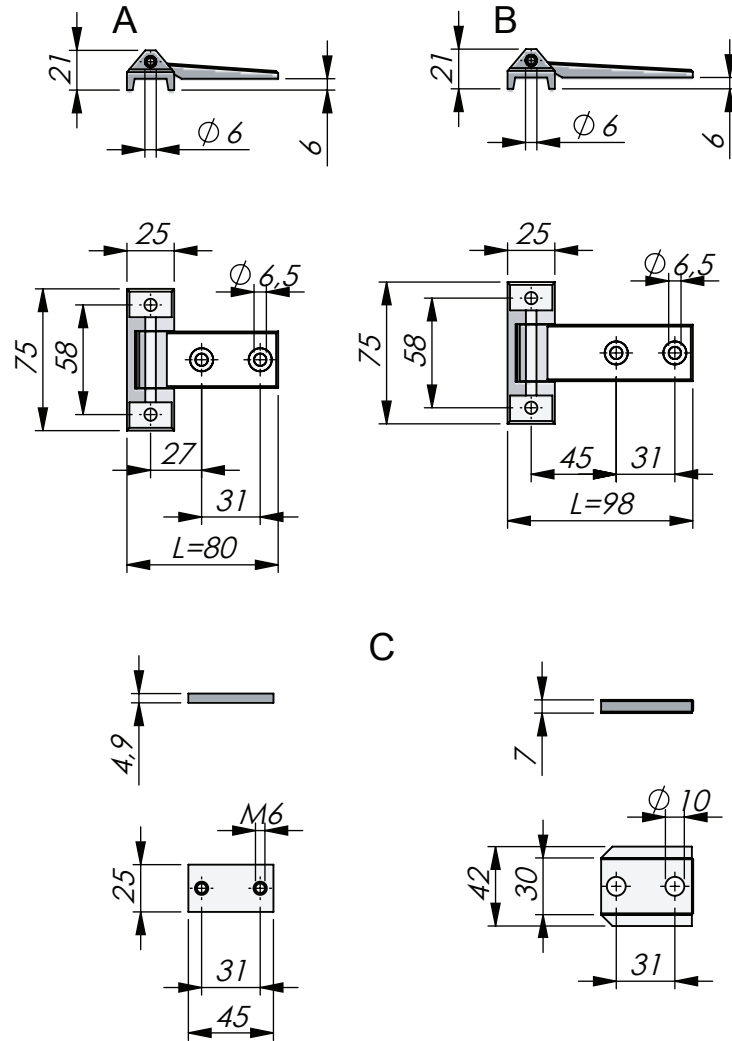
Adjustable Hinge for Insulated Doors - 180° Opening Angle

| P/N Zinc | P/N Black | P/N Chrome | L= | Description - Adjustment Parts (C) | Drawing |
|----------|-----------|------------|----|------------------------------------|---------|
| 321129 | 321629 | 321329 | 80 | Included | A+C |
| 32112901 | 32162901 | 32132901 | 80 | Not included | A |
| 321130 | 321633 | 321930 | 98 | Included | B+C |
| 32113001 | 32163301 | 32193001 | 98 | Not included | B |



Material:

- Hinge: Zinc die-cast, zinc plated, black texture powder coated or chrome plated.
- Threaded plate: Zinc die-cast, zinc plated.
- Bracket: Steel, zinc plated.
- Pin: Steel, zinc plated.

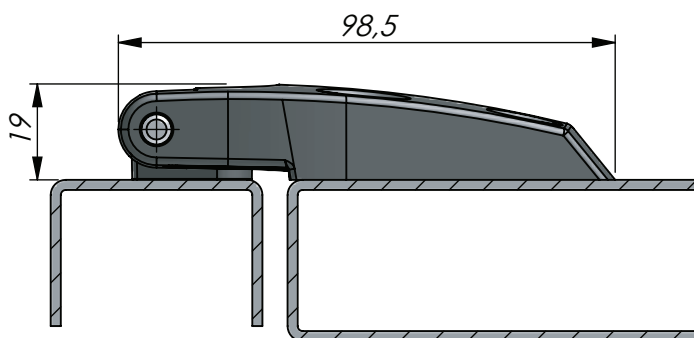
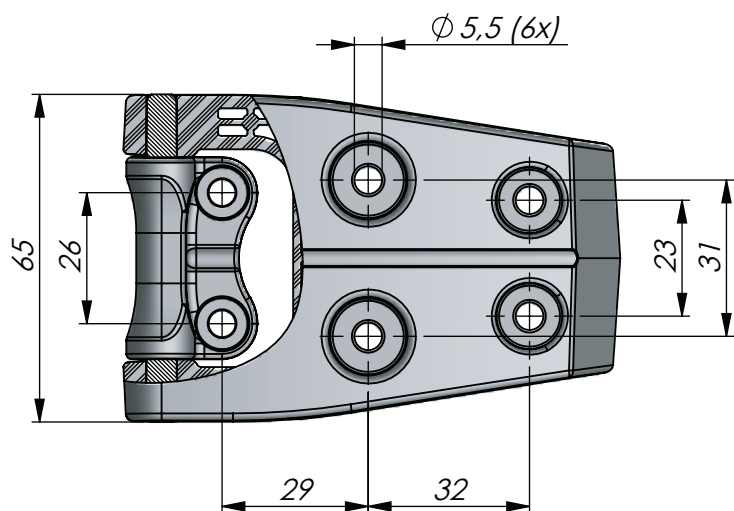


Adjustable in the X- and Y-axis if used with adjustment parts and oversized mounting holes in the door. The hinge is mounted to a threaded plate previously attached to the inside of the door with a mounting bracket, temporarily taped to the door skin. The hinge can also be used without the adjustment parts. Universal right or left mounting. Opening angle: 180°.

Adjustment parts = Threaded plate with bracket (drawing C).

Adjustable Hinge for Insulated Doors - 180° Opening Angle

| P/N Zinc | P/N Black | P/N Chrome | L= | Description - adjustment parts (C) | Drawing |
|----------|-----------|------------|----|------------------------------------|---------|
| 321179 | 321679 | 321379 | 80 | Included | A+C |
| 32117901 | 32167901 | 32137901 | 80 | Not included | A |
| 321180 | 321680 | 321380 | 98 | Included | B+C |
| 32118001 | 32168001 | 32138001 | 98 | Not included | B |



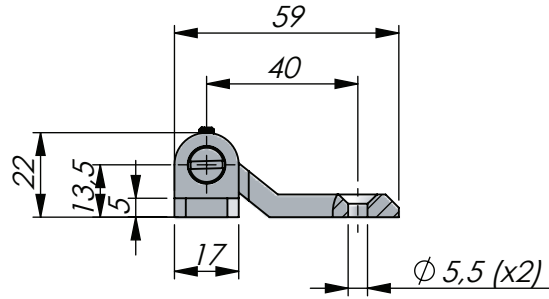
Material:

- Door and frame part: Glass fibre reinforced polyamide (PA6GF30), black.
- Pin: Stainless steel (303).

Polyamide hinge for insulated doors. Opening angle 180°. Universal right or left mounting. Rivet or screw mounting.

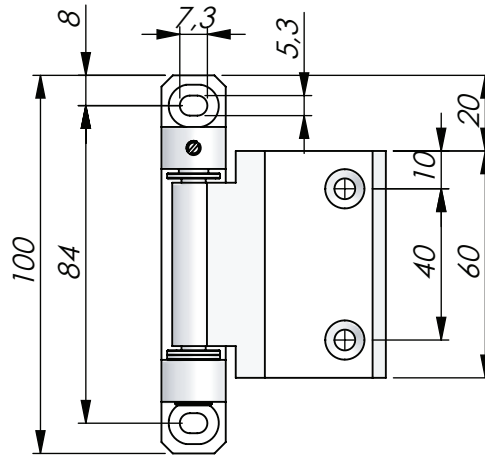
Polyamide Hinge for Insulated Doors - System KLIMA-FLEX - 180° Opening Angle

| P/N | Description - material |
|--------|------------------------|
| 325070 | Polyamide hinge |



Material:

- Door and frame part: Zinc die-cast, black coated or chrome plated.
- Pin: Steel, zinc plated.
- Washers: Polyamide.



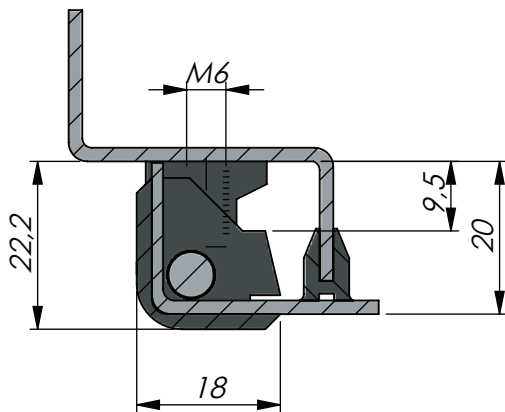
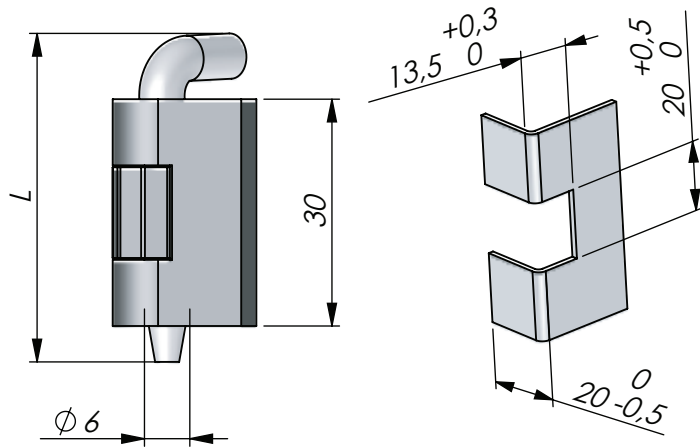
Adjustable hinge for insulated doors. Opening angle 180°. The hinge pin is created like a screw that provides the possibility to adjust the door 2 mm vertically, simply by turning the screw. A set screw in frame part locks the chosen setting. Oval holes in frame part provide an additional 2 mm horizontal adjustment.

Hinge is delivered as separate parts. The assembly of frame and door part will define left or right version of the hinge.

Hinges with stainless steel hinge pins upon request.

Hinge for Insulated Doors - 180° Opening Angle

| P/N | Description - surface treatment |
|--------|---------------------------------|
| 321686 | Black coated |
| 321386 | Chrome plated |



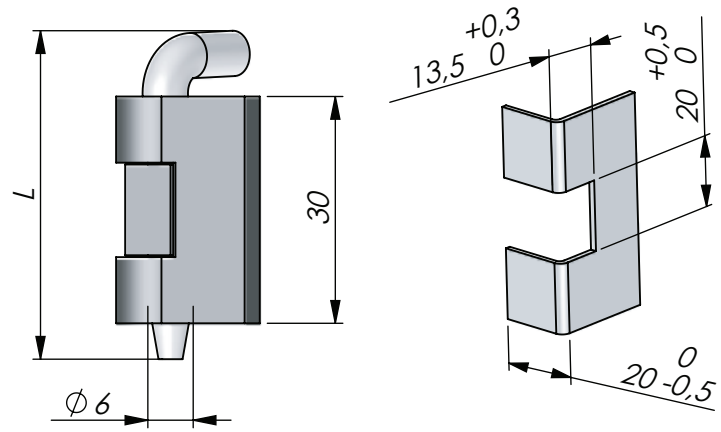
Material:

- Hinge: Zinc die-cast, chrome plated, black texture powder coated or black chromated.
- Pin: Steel, zinc plated.

Corner hinge for surface mounted doors. Frame part is mounted, using one screw from the inside. The door part is attached to the door and the pin is inserted into the hinge. Universal left and right mounting. Opening angle 180°. For plate thickness 1,8 - 2,25 mm.

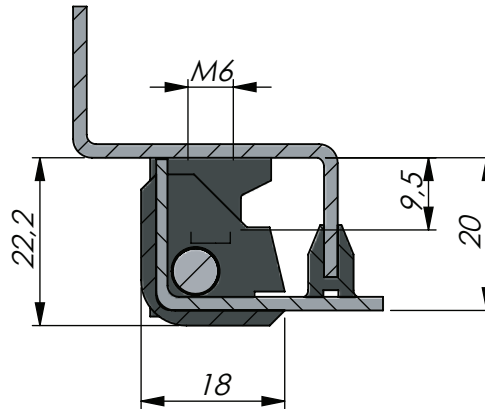
Corner Hinge - 180° Opening Angle

| P/N | Description - surface treatment | Pin L = mm |
|--------|---------------------------------|------------|
| 321335 | Chrome | 43 |
| 321635 | Black powder coated | 43 |
| 321235 | Black chromated | 43 |
| 321334 | Chrome | 70 |
| 321634 | Black powder coated | 70 |
| 321234 | Black chromated | 70 |



Material:

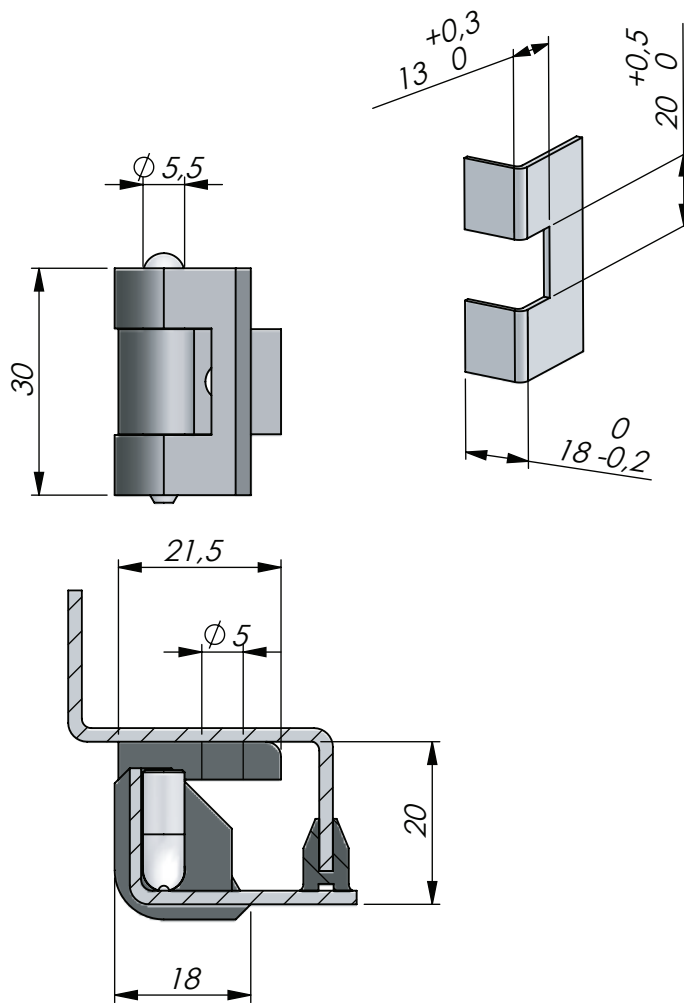
- Hinge: Zinc die-cast, chrome plated, black texture powder coated or black chromated.
- Pin: Steel, zinc plated.



Corner hinge for surface mounted doors. Frame part is mounted using one screw from the inside. The door part is attached to the door and the pin is inserted into the hinge. Universal left and right mounting. Opening angle 90°. For plate thickness 1,8 - 2,25 mm.

Corner Hinge - 90° Opening Angle

| P/N | Description | Pin L=mm |
|--------|---------------------|----------|
| 321266 | Black chromated | 43 |
| 321366 | Chrome plated | 43 |
| 321666 | Black powder coated | 43 |
| 321259 | Black chromated | 70 |
| 321359 | Chrome plated | 70 |
| 321659 | Black powder coated | 70 |



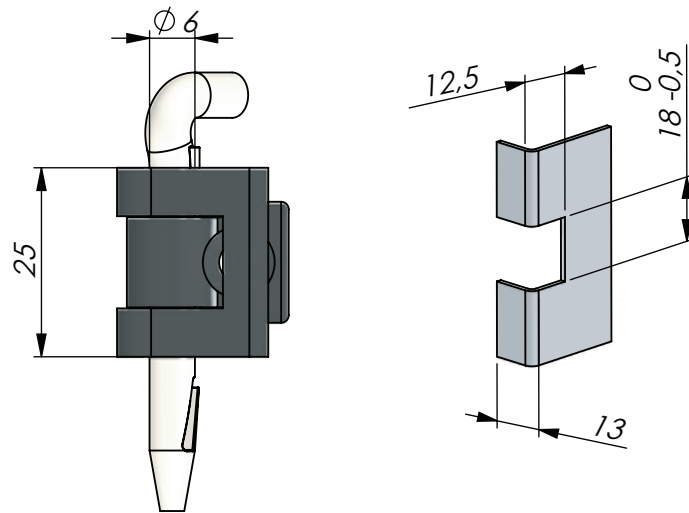
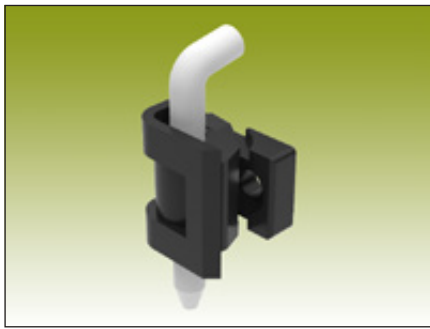
Material:

- Hinge: Zinc die-cast, chrome plated, black texture powdercoated or black chromated.
- Pin: Hardened steel.

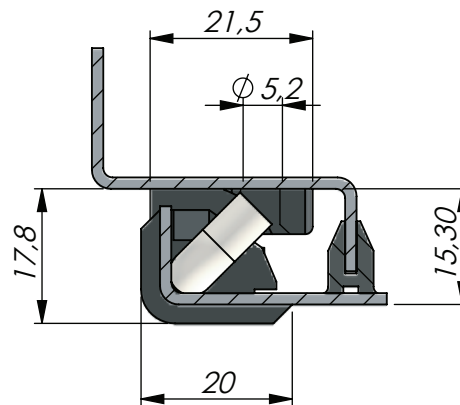
Corner hinge for surface mounted doors. Frame part is mounted using one screw from the inside. The door part is attached to the door and the pin is inserted into the hinge. Universal left and right mounting. Opening angle 180°. For plate thickness 1,0 - 1,5 mm. Supplied with special pin for grounding.

Corner Hinge - 180° Opening Angle

| P/N | Description - Surface treatment |
|--------|---------------------------------|
| 321328 | Chrome |
| 321627 | Black texture powder coated |
| 321227 | Black chromated |

**Material:**

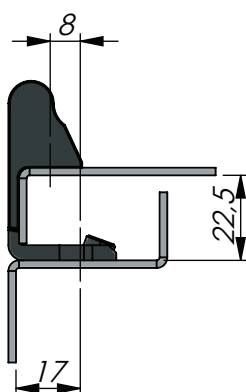
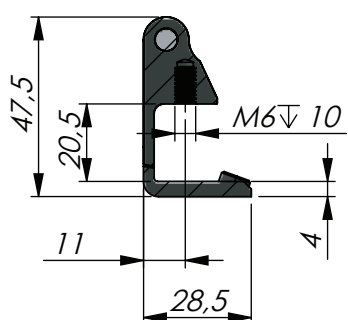
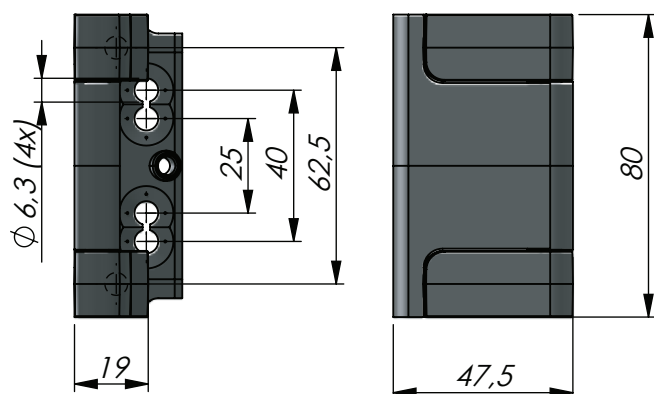
- Door and frame part: Glass fibre reinforced polyamide (PA6GF30), black.
- Pin: Delrin.



Polyamide corner hinge for surface mounted doors. Frame part is mounted using one screw and nut from the inside. The door part is attached to the door and the pin is inserted into the hinge. Universal left and right mounting. Opening angle 180°. For plate thickness 1,2 - 1,5 mm.

Polyamide Corner Hinge - 180° Opening Angle

| P/N | Description - material |
|--------|------------------------|
| 325006 | Polyamide corner hinge |



Material:

Hinge:

- Zinc die cast, black textured powder coated.
- Hinge pin: Stainless (304).

Earthing kit:

- Washers: Steel, zinc plated.
- Screws: Stainless (304).

Notes, Tests:

In combination with earthing kit 321676-11 the hinge 321676-01 is certified for direct earthing/grounding between frame and door without need for separate wiring, according to DIN EN 61439-2:2010 and DIN EN 62208 (VDE 0660-511):2005. The electric resistance through the hinge is 28 MΩ.

Hinge for adjacent doors. Mounted with screws on the inside. Mounting the door is simplified with a lift-off function when the lower screws of the hinge is removed. Opening angle 180°. The frame part can be mounted in holes of either 25 mm c/c or 40 mm c/c.

The earthing kit contains two screws and two serrated washers for mounting the door part, and a special pointed set screw for grounding the frame part.

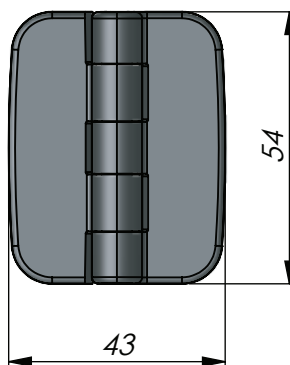
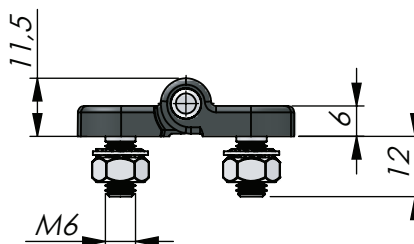
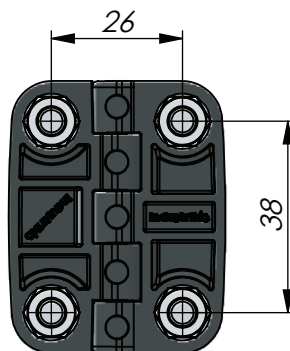
Hinge for Adjacent Door 180° Opening Angle. For Earthing / Grounding of Door.

| P/N | Description |
|-----------|---|
| 321676-01 | 180° hinge, black texture powder coated |
| 321676-11 | Earthing kit (grounding kit) |



Material:

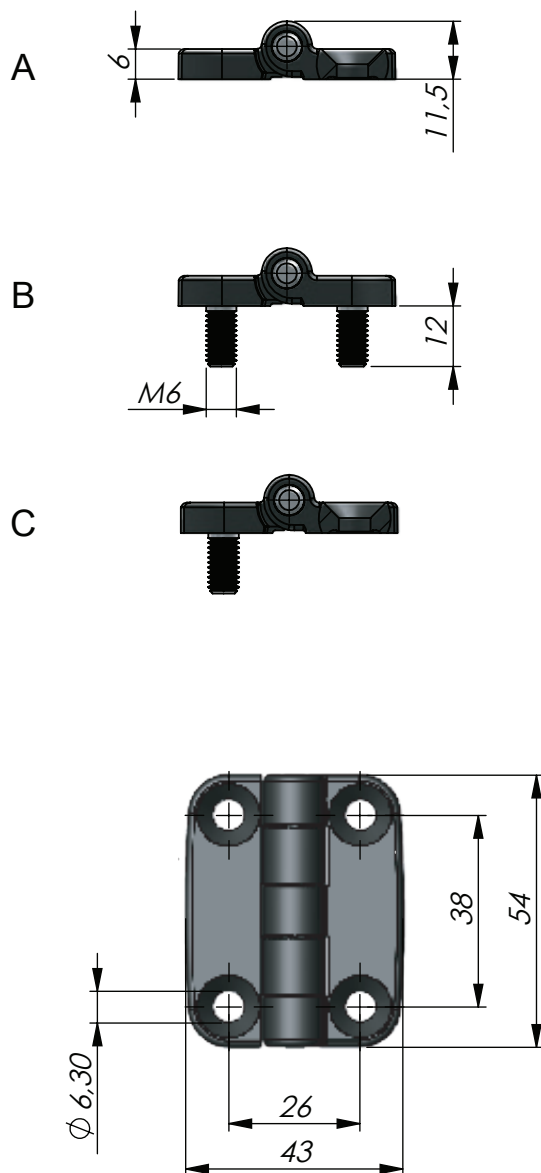
- Hinge: Zinc die-cast, black texture powder coated.
- Hinge pin, nuts and washers: Steel, zinc plated.
- Cast-in bolts: Steel.



External hinge with cast-in steel bolts. Universal left and right mounting. Opening angle 180°. Supplied with nuts and washers.

External Hinge 54 x 43 mm - 180° Opening Angle

| P/N, Black | Description |
|----------------|---------------------------|
| 3216-610544-21 | External hinge 54 x 43 mm |



Material:

- Hinge: Zinc die-cast, black coated.
- Cast-in bolts and hinge pin: Stainless steel (303).
- Nut and locking washer: Steel, zinc plated.

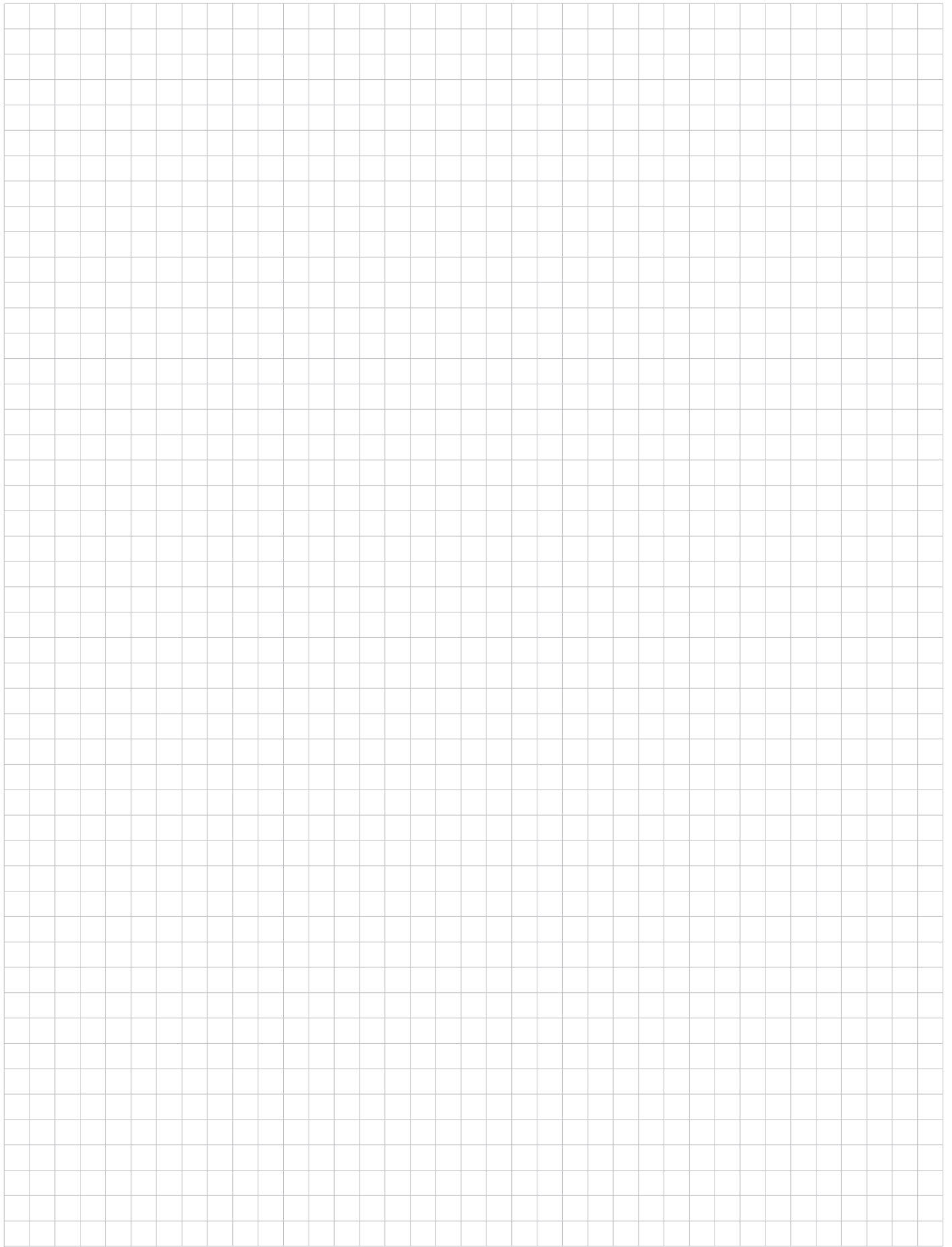
Accessories (steel):

- P/N: 022141, M6-nut.
- P/N: 032155, M6 serrated washer.

Hinge for mounting with cast-in stainless steel bolts and/or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "Accessories" on this page).

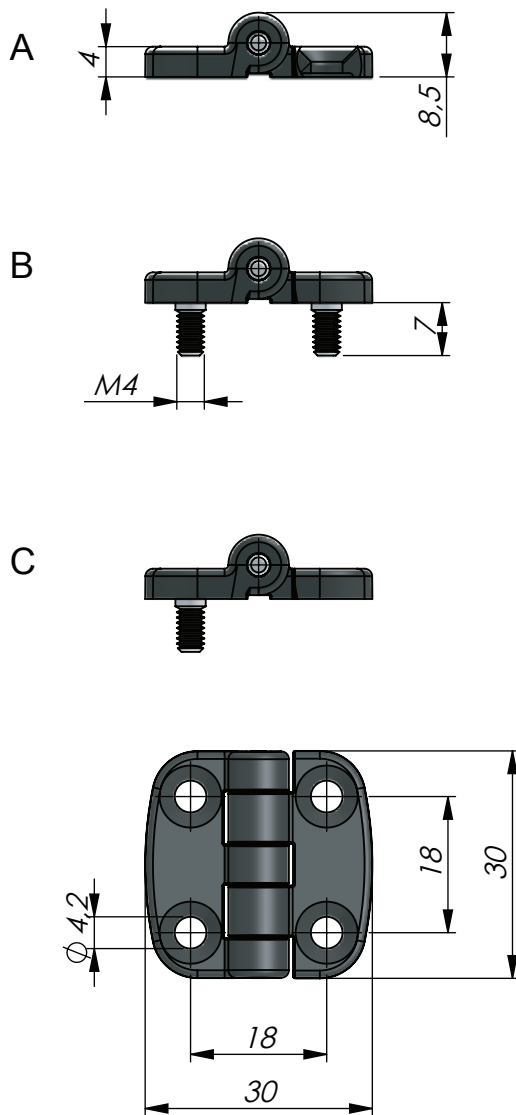
External Hinge 54 x 43 mm - 180° Opening Angle

| P/N Black | Holes | Bolts | Drawing |
|----------------|-----------|--------|---------|
| 3216-600544-30 | 4 x Ø 6,3 | - | A |
| 3216-610544-30 | - | 4 x M6 | B |
| 3216-620544-30 | 2 x Ø 6,3 | 2 x M6 | C |



cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





Material:

- Hinge parts: Zinc die-cast black texture powder coated.
- Hinge pin and bolts: Stainless steel (303).
- Nut and serrated washer: Steel, zinc plated.

References, Accessories:

- P/N: 022137: Nut for M4.
- P/N: 032155-4: Serrated washer for M4.

Hinge for mounting with cast-in bolts and / or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Hinge 30 x 30 mm - 180° Opening Angle

| P/N Black | Holes | Bolts | Drawing |
|----------------|-----------|--------|---------|
| 3216-600304-30 | 4 x Ø 4,2 | - | A |
| 3216-610304-30 | - | 4 x M4 | B |
| 3216-620304-30 | 2 x Ø 4,2 | 2 x M4 | C |

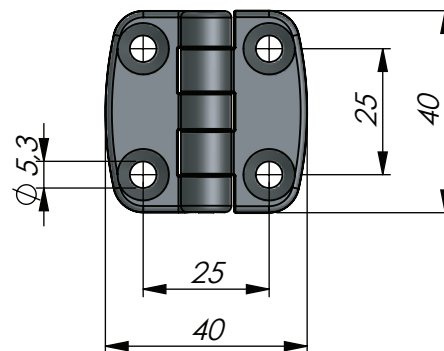
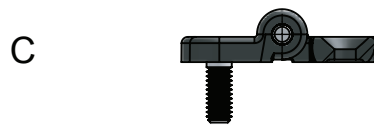
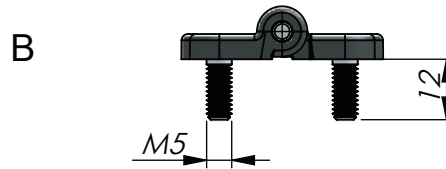
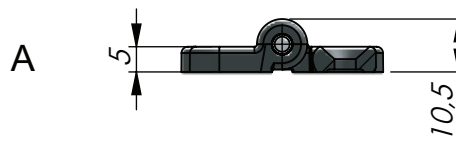


Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Hinge pin and bolts: Stainless steel (303).
- Nut and locking washer: Steel, zinc plated.

References, Accessories:

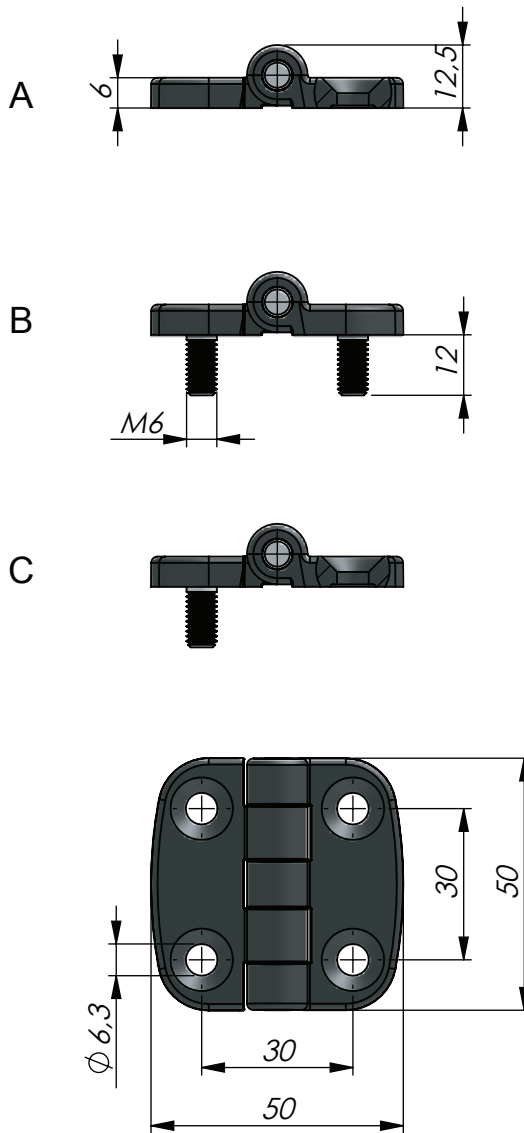
- P/N: 022138: Nut for M5.
- P/N: 032155-5, Serrated washer for M5.
- Stainless hinge version: Page 6-385.



Hinge with cast-in bolts and / or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Hinge 40 x 40 mm - 180° Opening Angle

| P/N black | Holes | Bolts | Drawing |
|----------------|-----------|--------|---------|
| 3216-600404-30 | 4 x Ø 5,3 | - | A |
| 3216-610404-30 | - | 4 x M5 | B |
| 3216-620404-30 | 2 x Ø 5,3 | 2 x M5 | C |



Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Hinge pin and bolts: Stainless steel (303).
- Nut and serrated washer: Steel, zinc plated.

References, Accessories:

- P/N: 022141, Nut for M6.
- P/N: 032155, Locking washer for M6.
- Stainless hinge version: Page 6-385.

Hinge with cast-in bolts and / or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Hinge 50 x 50 mm - 180° Opening Angle

| P/N Black | Holes | Bolts | Drawing |
|----------------|-----------|--------|---------|
| 3216-600504-30 | 4 x Ø 6,3 | - | A |
| 3216-610504-30 | - | 4 x M6 | B |
| 3216-620504-30 | 2 x Ø 6,3 | 2 x M6 | C |

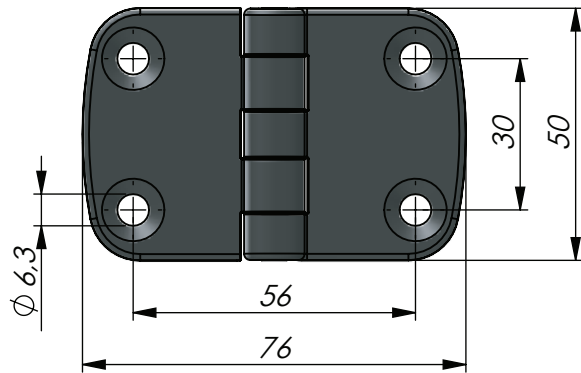
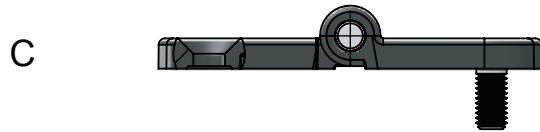
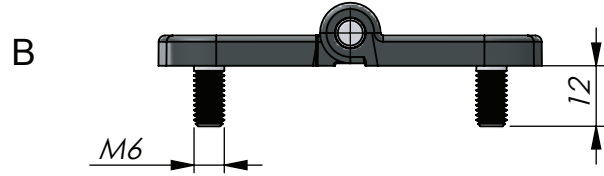
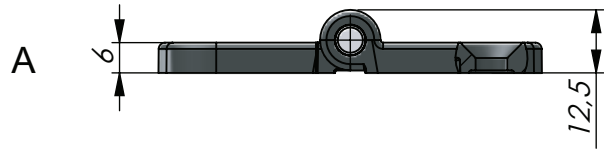


Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Hinge pin and bolts: Stainless steel (303).
- Nut and serrated washer: Steel, zinc plated.

References, Accessories:

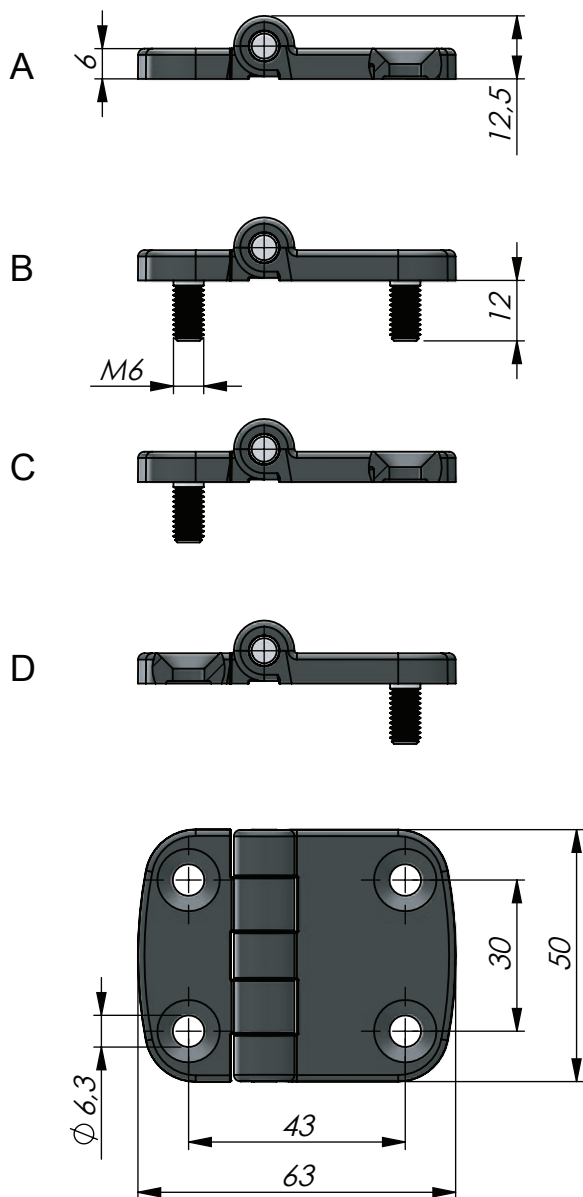
- P/N: 022141, Nut for M6.
- P/N: 032155, Serrated washer for M6.
- Stainless hinge version: Page 6-385.



Hinge with cast-in bolts and / or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Hinge 50 x 76 mm - 180° Opening Angle

| P/N black | Holes | Bolts | Drawing |
|----------------|-----------|--------|---------|
| 3216-600764-30 | 4 x Ø 6,3 | - | A |
| 3216-610764-30 | - | 4 x M6 | B |
| 3216-620764-30 | 2 x Ø 6,3 | 2 x M6 | C |



Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Hinge pin and bolts: Stainless steel (303).
- Nut and serrated washer: Steel, zinc plated.

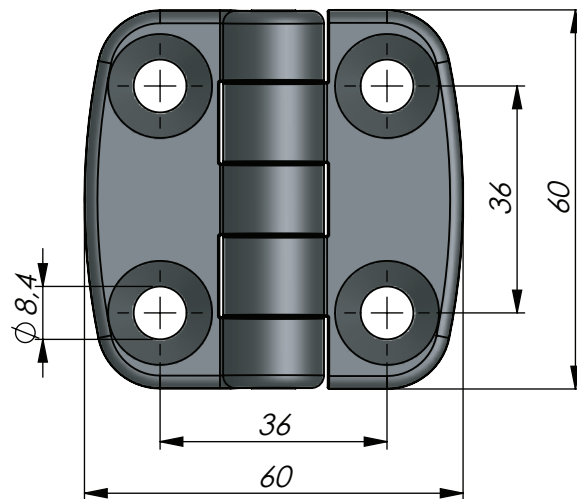
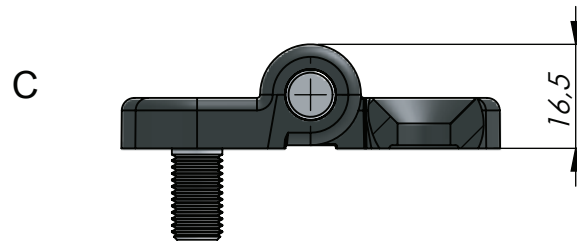
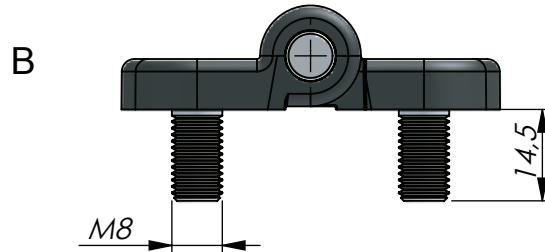
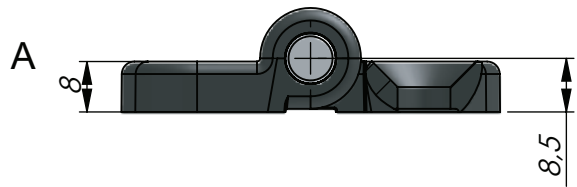
References, Accessories:

- P/N: 022141, Nut for M6.
- P/N: 032155, Serrated washer for M6.
- Stainless hinge version: Page 6-385.

Hinge with cast-in bolts and/or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Hinge 50 x 63 mm - 180° Opening Angle

| P/N Black | Narrow part | Wide part | Drawing |
|----------------|-----------------|-----------------|---------|
| 3216-600634-30 | 2 x Ø 6,3 holes | 2 x Ø 6,3 holes | A |
| 3216-610634-30 | 2 x M6 bolts | 2 x M6 bolts | B |
| 3216-620634-30 | 2 x M6 bolts | 2 x Ø 6,3 holes | C |
| 3216-630634-30 | 2 x Ø 6,3 holes | 2 x M6 bolt | D |



Material:

- Hinge parts: Zinc die-cast, black texture powder coated. Hinge pin and bolts: Stainless steel (303).
- Nut and Serrated washer: Steel, zinc plated.

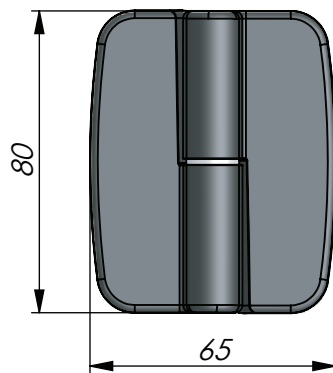
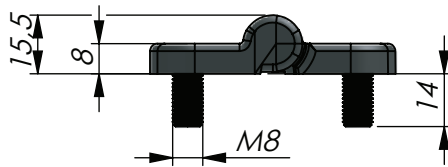
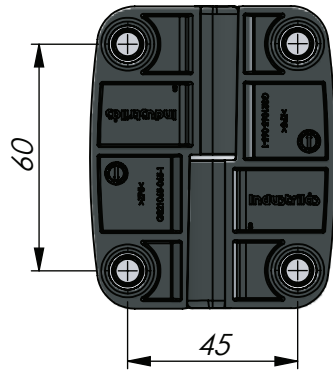
References, Accessories:

- P/N: 022142, Nut for M8.
- P/N: 032156, Serrated washer for M8.
- Stainless hinge version: Page 6-385.

Hinge with cast-in bolts and/or countersunk holes. Universal left and right mounting. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Hinge 60 x 60 mm - 180° Opening Angle

| P/N Black | Holes | Bolts | Drawing |
|----------------|-----------|--------|---------|
| 3216-600604-30 | 4 x Ø 8,4 | - | A |
| 3216-610604-30 | - | 4 x M8 | B |
| 3216-620604-30 | 2 x Ø 8,4 | 2 x M8 | C |



Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Hinge pin and bolts: Stainless steel (303).
- Nut and serrated washer: Steel, zinc plated.

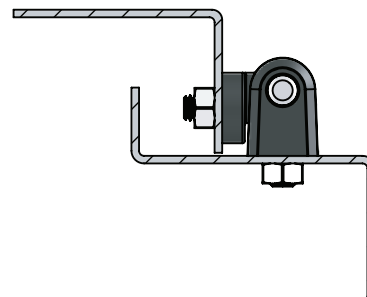
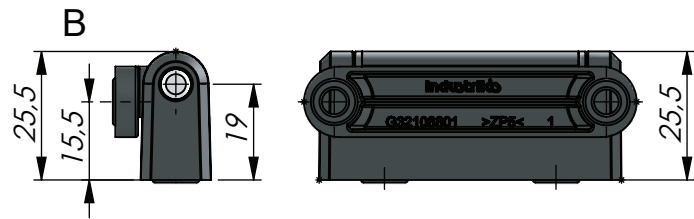
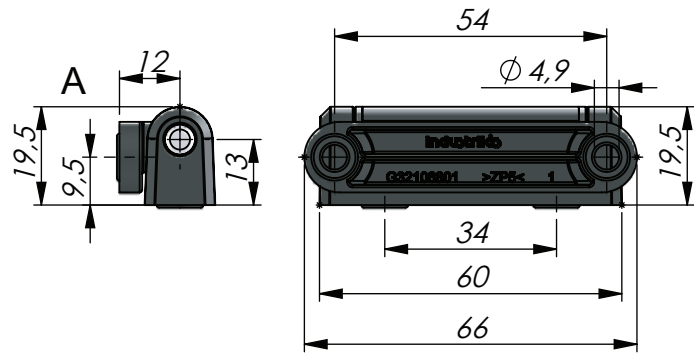
References, Accessories:

- P/N: 022142, Nut for M8.
- P/N: 032156, Serrated washer for M8.

External lift-off hinge with cast-in M8-bolts. Available in left and right hinged version. Version for left hinged door is shown in the drawing. Opening angle 180°. Nuts or washers are not supplied with the hinge, but may be ordered separately (see part numbers under "References, Accessories" on this page).

External Lift-Off Hinge - 180° Opening Angle

| P/N | Description |
|------------|---|
| 321664-065 | For right hinged door (RH) |
| 321665-065 | For left hinged door (LH) (shown above) |



Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Pin: Stainless steel (303).
- Bushings and clip: Glass fibre reinforced polyamide, (PA6GF30), black.

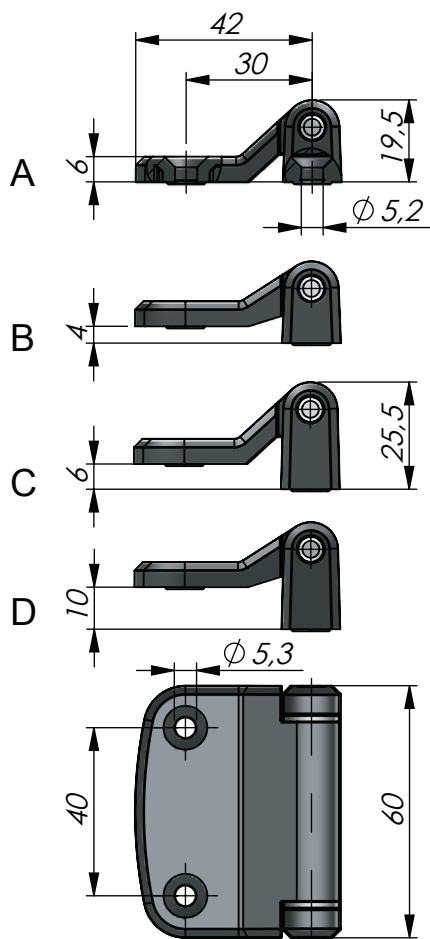
Notes, Tests:

Supplied unassembled.

Hinge for surface mounted doors. Holes for countersunk M5-screws and bushings to reduce friction when opening / closing. Door part and frame part are mounted separately, and the pin is locked by pushing it in place and fixing it in position with a polyamide clip to secure the assembly. Universal left and right mounting.

External Hinge - 180° Opening Angle

| P/N black | Description - frame part height | Drawing |
|-----------|---------------------------------|---------|
| 321668-0 | 13 mm | A |
| 321669-0 | 19 mm | B |



Material:

- Hinge parts: Zinc die-cast, black texture powder coated.
- Pin: Stainless steel (303).
- Bushings and clip: Glass fibre reinforced polyamide, (PA6GF30), black.

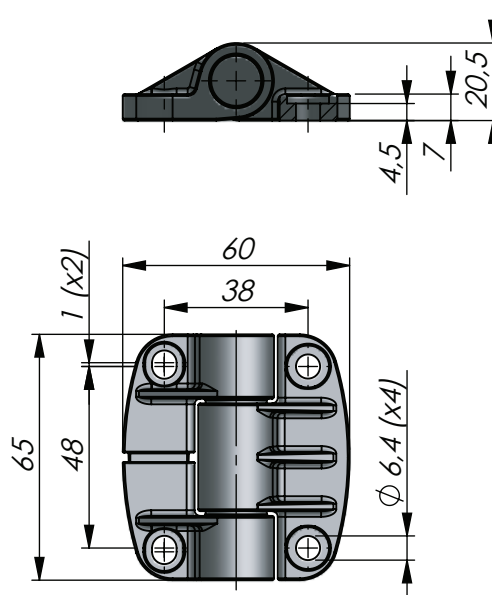
Notes, Tests:

Supplied unassembled.

Flush mounted hinge for door that are level with the frame - or higher than the frame (use offset specified in table). Screw-mounted using countersunk M5-screws (not included). Equipped with bushings to reduce friction when opening / closing. Door part and frame part are mounted separately, and the pin is locked by pushing it in place and fixing it in position with a polyamide clip to secure the assembly. Universal left and right mounting.

External Flush Hinge - 180° Opening Angle

| P/N Black | Frame part height mm | Door part offset mm | Drawing |
|-------------|----------------------|---------------------|---------|
| 321667-00-0 | 19,5 | 0 mm | A |
| 321667-04-0 | 19,5 | 4,0 | B |
| 321667-06-0 | 25,5 | 6,0 | C |
| 321667-10-0 | 25,5 | 10,0 | D |



Material:

- Hinge and protective end caps: Glass fibre reinforced polyamide (PA6GF30), black.
- Pin and nut: Steel, zinc plated.

Notes, Tests:

After capping torque-setting screw with plastic protective end caps (supplied), these are not removable.

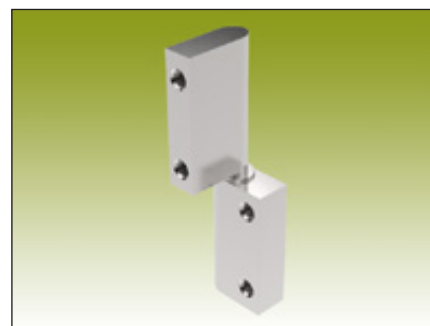
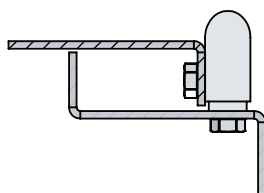
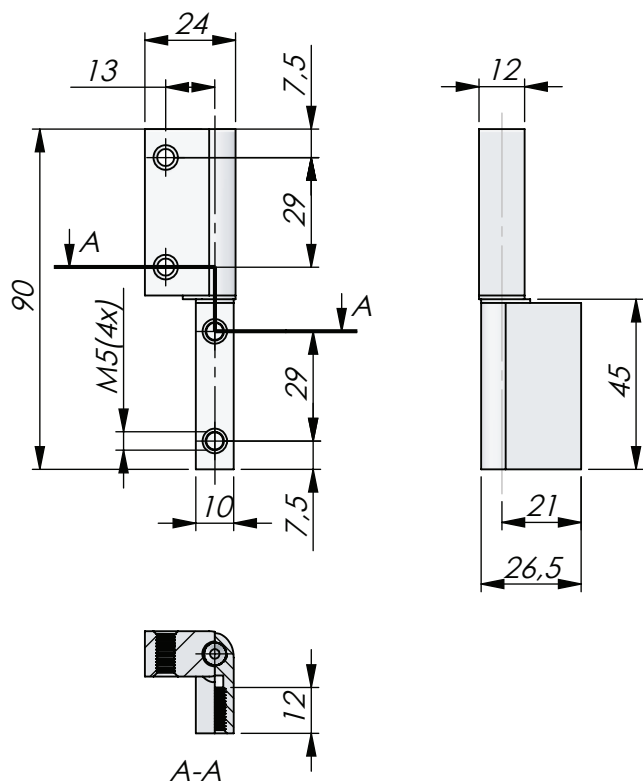
Tighten the torque-setting screw for optimal friction using a 6 mm hexagon key (Allen key).

Screw mounted friction hinge. Universal left and right mounting (above drawing, right side mounted on frame and left side mounted on door). Opening angle 180°. This hinge has been designed for applications where the force to open or close a door needs to be controlled and adjusted, facilitating the possibility to keep the door open, partially open or closed.

To adjust the friction force, simply turn the screw on the hinge body, clockwise to increase the friction and counter-clockwise to reduce it. By setting the screw to torque 0-4 Nm the resistance of opening and closing the friction of the hinge is adjusted between 0-5,5 Nm. Do not exceed the torque or rotation angle limits as not to affect the mechanical performance of the hinge.

Adjustable Friction Hinge

| P/N | Description |
|------------------|---------------------------|
| 3250-502000-6560 | Adjustable friction hinge |



Material:

- Hinge: Zinc die-cast, zinc plated or black coated.
- Pin: Stainless steel (303).

Notes, Tests:

Screws are not included.

Lift-off hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Concealed mounting with screws from the inside.

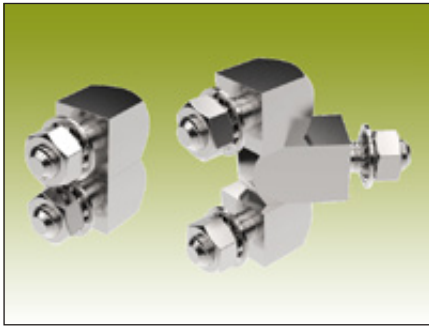
External Lift-Off Hinge - 180° Opening Angle

P/N Zinc plated

321142

P/N Black coated

321542

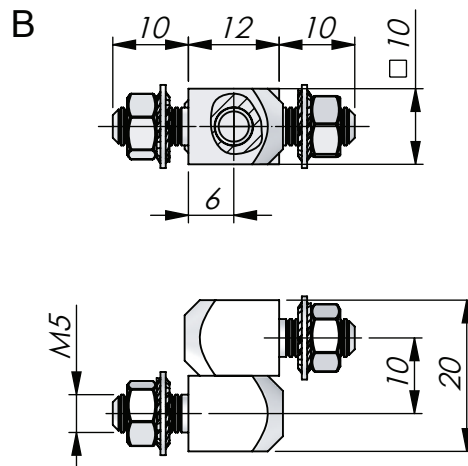
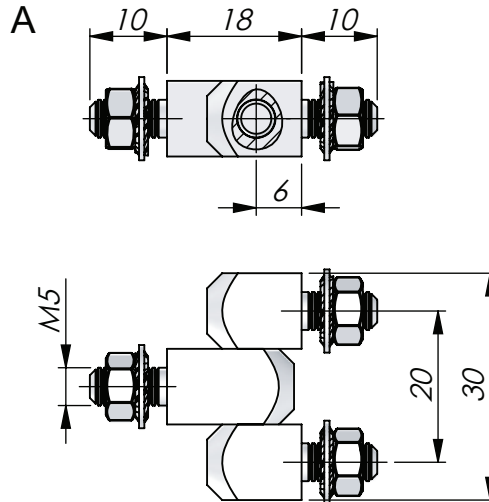


Material:

- Hinge and nut: Steel, zinc plated.
- Pin and washer: Brass, nickel plated.

Notes, Tests:

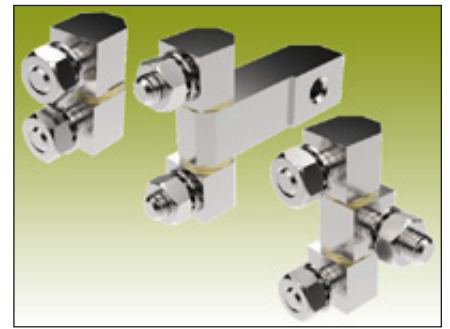
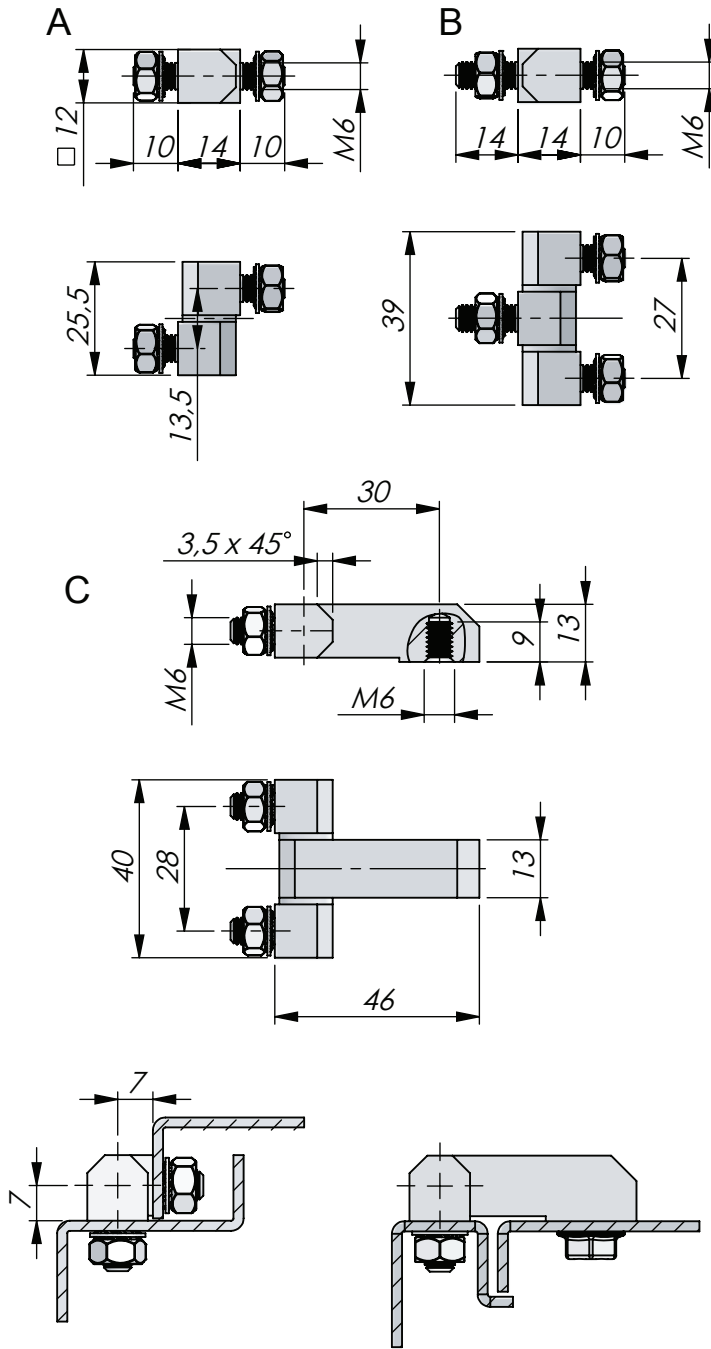
Supplied unassembled, with nuts and washers.



External bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Two-part version in lift-off design, and three-part version in fixed design.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Description | Version | Drawing |
|--------|------------------|----------|---------|
| 322110 | Three-part hinge | Fixed | A |
| 322109 | Two-part hinge | Lift-off | B |



Material:

- Hinge and nut: Steel, zinc plated.
- Pin and washer: Brass, nickel plated.

References, Accessories:

- Stainless version: Page 6-400.

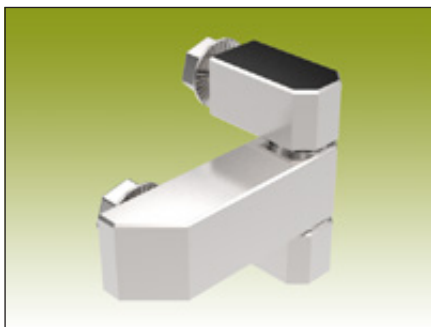
Notes, Tests:

Supplied unassembled, with nuts and washers.

External bolt-on hinge for surface mounted or flush mounted doors. Universal left and right mounting. Opening angle 180°. Two-part version in lift-off design, and three-part versions in fixed design. Three-part version (drawing C) with elongated center for flush mounted doors.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Description | Version | Material | Surface treatment | Drawing |
|-----------|------------------|-------------------|----------|-------------------|---------|
| 322112 | Two-part hinge | Lift-off | Steel | Zinc plated | A |
| 322113 | Three-part hinge | Fixed | Steel | Zinc plated | B |
| 322113-30 | Three-part hinge | Elongated / Fixed | Steel | Zinc plated | C |

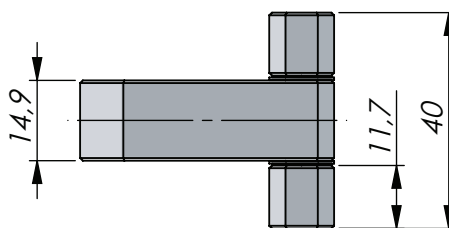
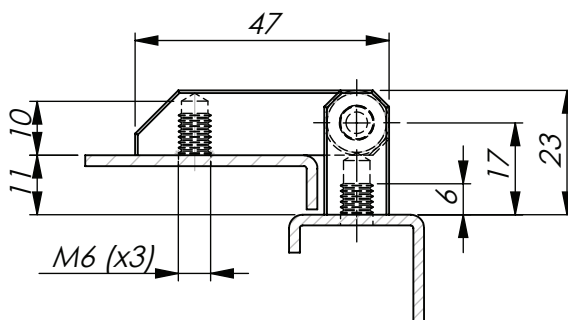
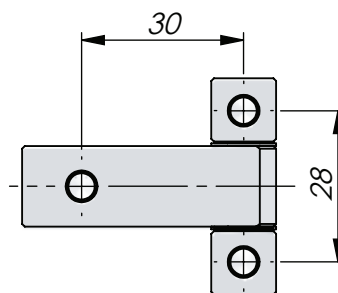


Material:

- Hinge: Zinc die-cast, zinc plated or black texture powder coated.
- Pin and screw: Steel, zinc plated.
- Washer: Brass, nickel plated.

Notes, Tests:

Each hinge is supplied assembled and with three mounting screws M6 x 6 mm.



External bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Offset between frame part and door part is 11 mm.

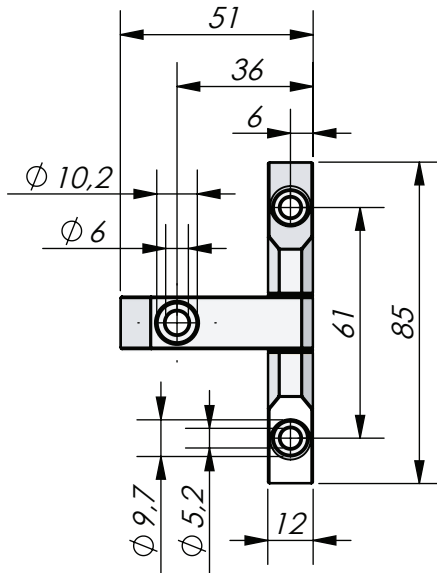
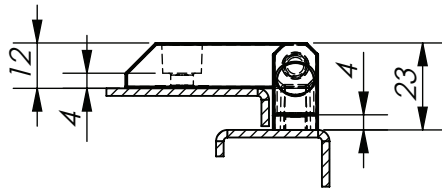
External Bolt-On Hinge - 180° Opening Angle

P/N Zinc plated

321110

P/N Black powder coated

321610



Material:

- Hinge part: Zinc die-cast, zinc plated, chrome plated or black texture powder coated.
- Pin and washer: Brass, nickel plated.

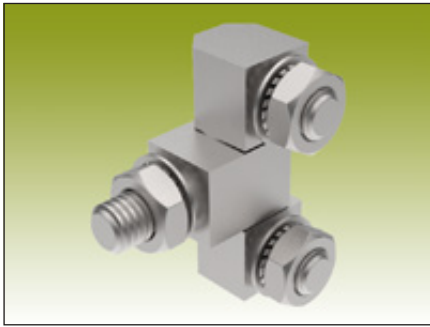
Notes, Tests:

Supplied assembled.

Bolt-on hinge for surface mounted doors with recessed holes for outside mounting. Universal left and right mounting. Opening angle 180°.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Description - Surface treatment |
|--------|---------------------------------|
| 321111 | Zinc plated |
| 321311 | Chrome |
| 321611 | Black powder coated |



Material:

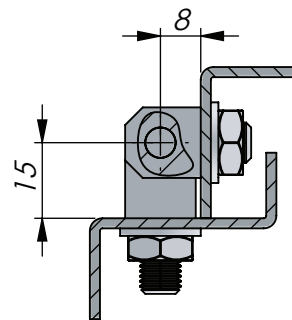
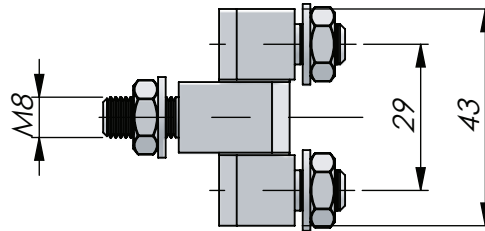
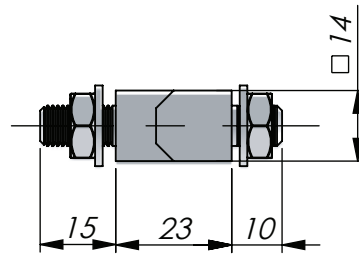
- Hinge and nut: Steel, zinc plated.
- Pin and washer: Brass, nickel plated.

References, Accessories:

- Stainless version: Page 6-410.

Notes, Tests:

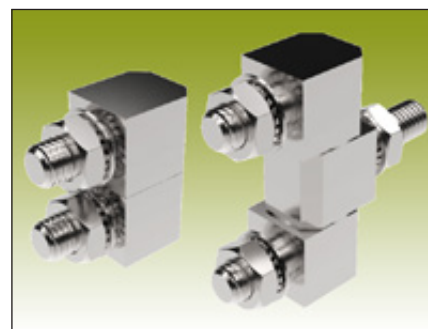
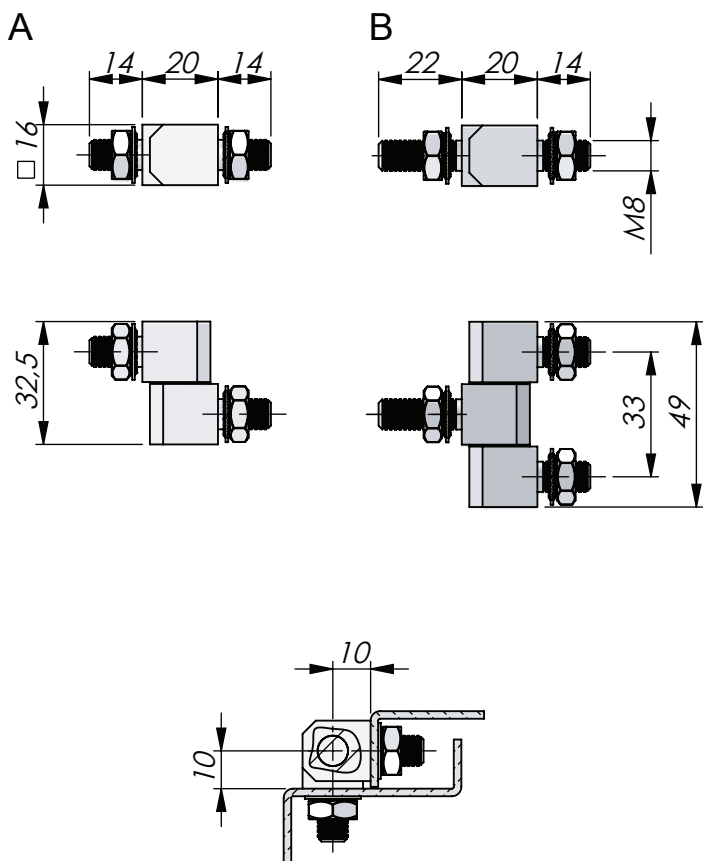
Supplied unassembled, with nuts and washers.



External bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°.

External Bolt-On Hinge - 180° Opening Angle

| P/N Steel | Description |
|-----------|---------------|
| 322115 | Bolt-on hinge |



Material:

- Hinge and nut: Steel, zinc plated.
- Pin and washer: Brass, nickel plated.

References, Accessories:

- Stainless version: Page 6-420.

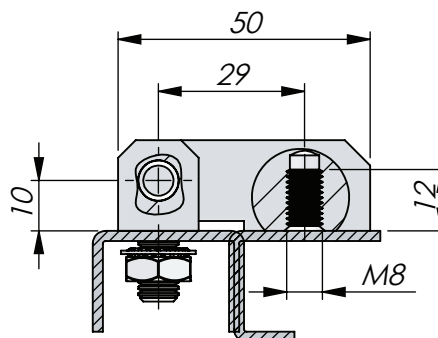
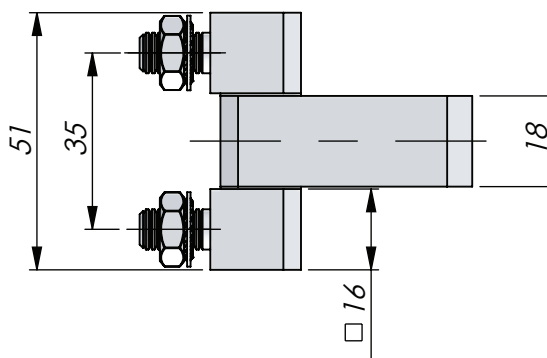
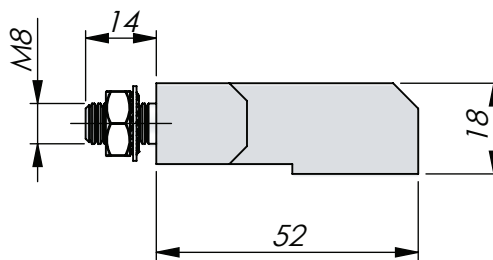
Notes, Tests:

Supplied unassembled, with nuts and washers.

External bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Two-part version in lift-off design, and three-part version in fixed design.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Description | Material | Surface treatment | Version | Drawing |
|--------|------------------|----------|-------------------|----------|---------|
| 322116 | Two-part hinge | Steel | Zinc plated | Lift-off | A |
| 322117 | Three-part hinge | Steel | Zinc plated | Fixed | B |



Material:

- Hinge and nut: Steel, zinc plated.
- Pin and washer: Brass, nickel plated.

References, Accessories:

- Stainless version: Page 6-430.

Notes, Tests:

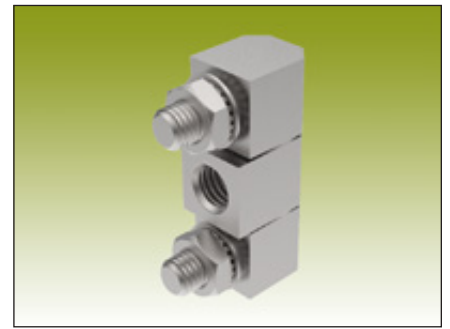
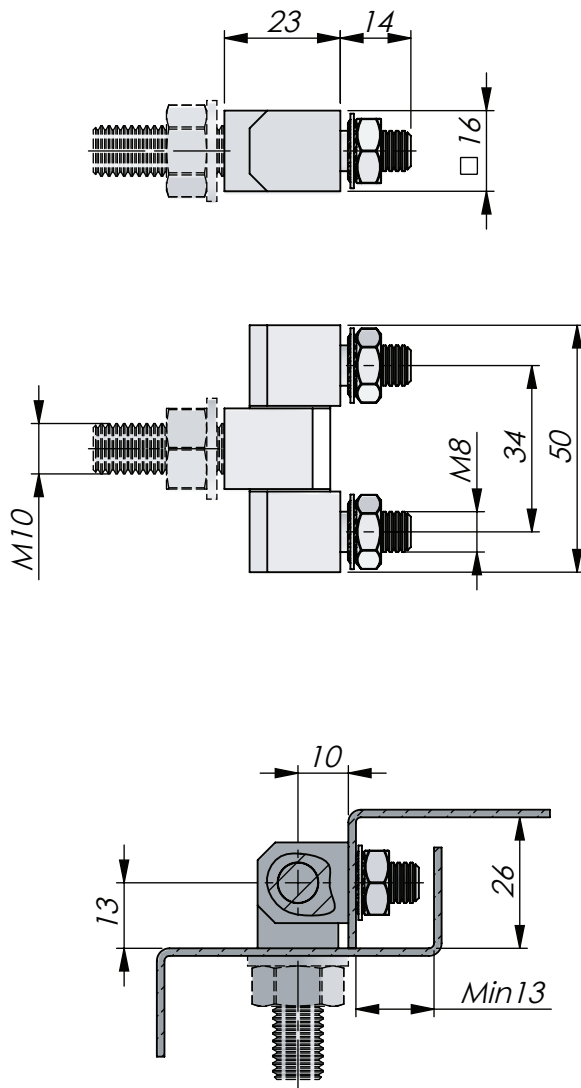
Supplied with washers, nuts and un-assembled. Stud or bolt for door part is not included.

External bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°.

External Bolt-On Hinge - 180° Opening Angle

P/N Steel Description

322119 Bolt-on hinge



Material:

- Hinge and nut: Steel, zinc plated.
- Pin and washer: Brass, nickel plated.

References, Accessories:

- Stainless version: Page 6-440.

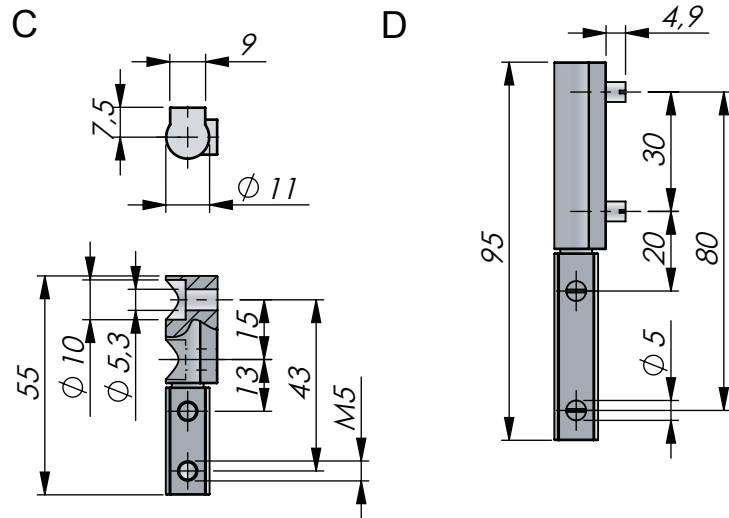
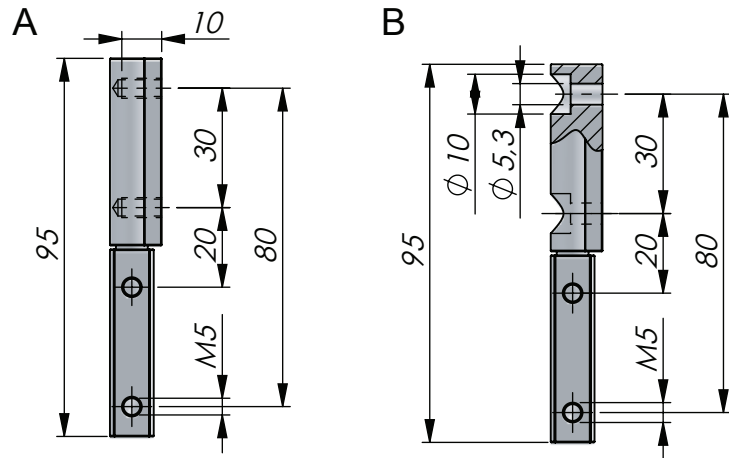
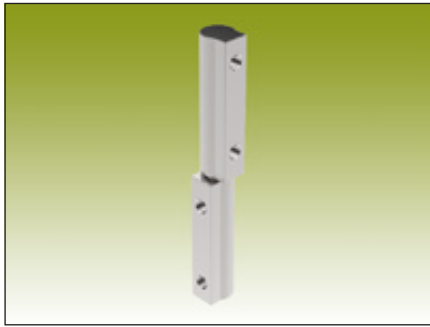
Notes, Tests:

Supplied with washers, nuts and un-assembled. Stud or bolt for door part is not included.

External bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°.

External Bolt-On Hinge - 180° Opening Hingle

| P/N Steel | Description |
|-----------|---------------|
| 322120 | Bolt-on hinge |



Material:

- Hinge, pin and screw: Steel, zinc plated.
- Screw cover: Stainless steel (304).
- Washer: Brass, zinc plated.

References, Accessories:

- Stainless version: Page 6-450.

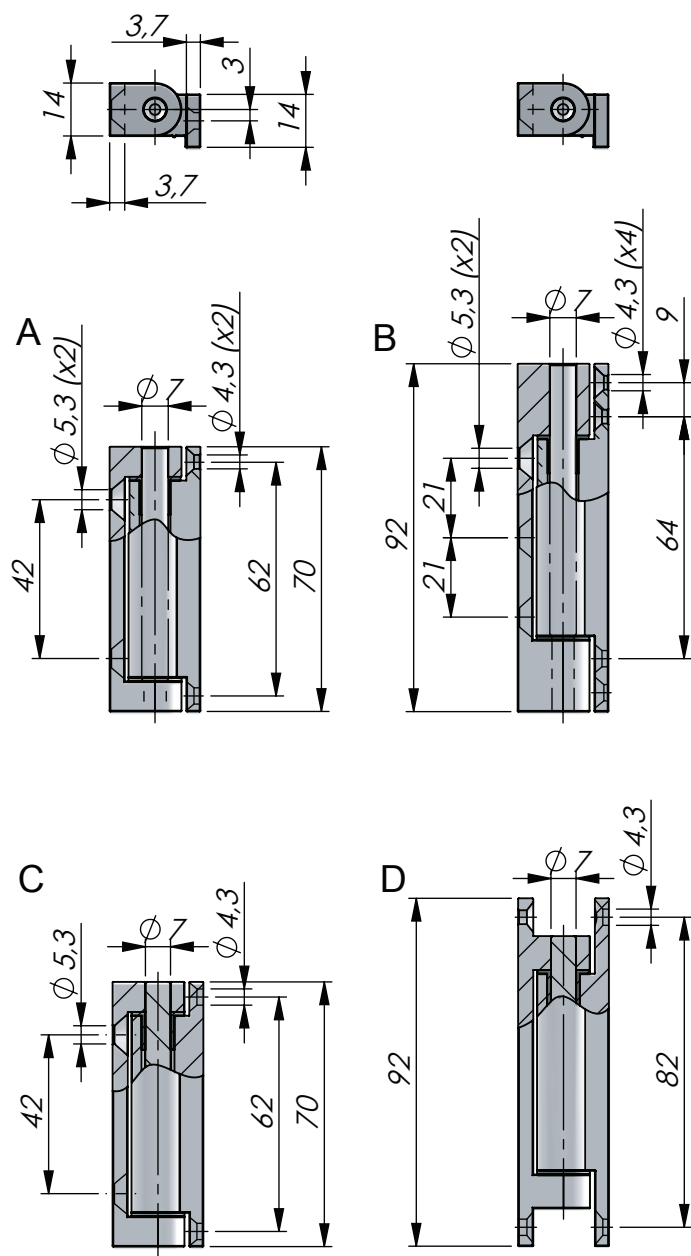
Notes, Tests:

Screw-on version is supplied with screws, screw covers and washers. Weld-on version equipped with studs to simplify positioning. The combination of weld-on and screw-on mounting may be supplied on request.

Profile hinge for external mounting on surface mounted doors. Universal left and right mounting. Opening angle 180°. Screw-on or weld-on mounting options.

External Profile Hinge - 180° Opening Angle

| P/N | Height mm | Description - mounting | Drawing |
|--------|-----------|------------------------|---------|
| 322121 | 95 | Screw-on | A |
| 322123 | 95 | Screw-on | B |
| 322124 | 55 | Screw-on | C |
| 322122 | 95 | Weld-on | D |



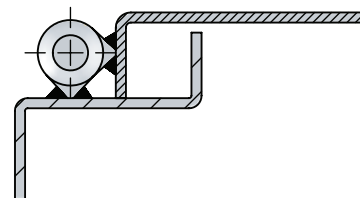
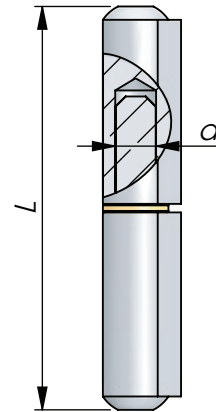
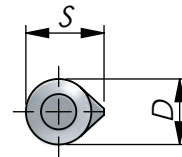
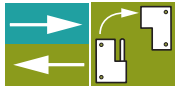
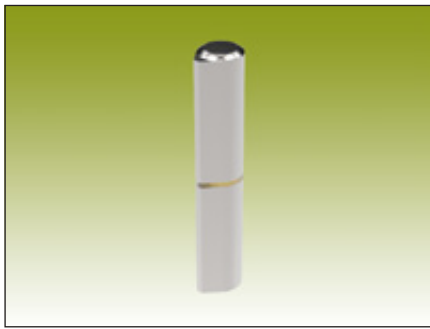
Material:

- Hinge: Aluminium profile, matt anodized.
- Pin: Stainless steel (303).
- Bushings: Polyamide (PA6GF30).

External aluminium hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Standard and spring loaded door-closing version. Supplied unassembled.

External Aluminium Hinge - 180° Opening Angle

| P/N | Length mm | Description | Drawing |
|-----------|-----------|---------------|---------|
| 324625 | 70 | Standard | A |
| 324626 | 92 | Standard | B |
| 324625-SL | 70 | Spring loaded | C |
| 324626-SL | 92 | Spring loaded | D |



Material:

- Hinge body: Extruded steel profile.
- Pin: Steel or brass (see table).
- Washer: Brass.

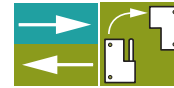
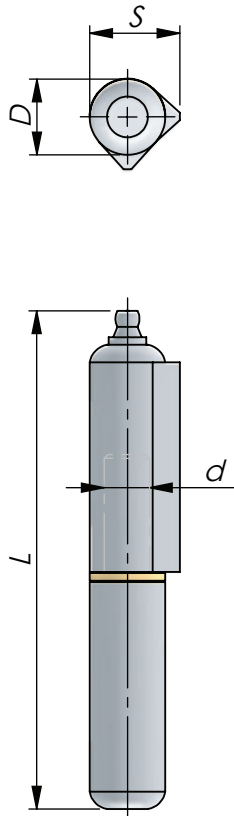
References, Accessories:

- Stainless version: Page 6-460.

Weld-on hinge with fixed pin. Universal left and right mounting.

Weld-On Hinge - 40 - 200 mm

| P/N, steel pin | P/N, brass pin | L | d | D | S |
|----------------|----------------|-----|------|------|------|
| 332000-A040 | 338000-A040 | 40 | 5,0 | 8,0 | 10,0 |
| 332000-A050 | 338000-A050 | 50 | 5,0 | 8,0 | 10,0 |
| 332000-A060 | 338000-A060 | 60 | 6,0 | 10,0 | 12,0 |
| 332000-A070 | 338000-A070 | 70 | 6,0 | 11,5 | 13,5 |
| 332000-A080 | 338000-A080 | 80 | 8,0 | 13,0 | 16,0 |
| 332000-A100 | 338000-A100 | 100 | 10,0 | 16,0 | 20,0 |
| 332000-A120 | 338000-A120 | 120 | 10,0 | 16,0 | 20,0 |
| 332000-A135 | 338000-A135 | 135 | 12,0 | 18,0 | 22,0 |
| 332000-A150 | 338000-A150 | 150 | 13,0 | 20,0 | 25,0 |
| 332000-A180 | 338000-A180 | 180 | 14,0 | 20,0 | 25,0 |
| 332000-A200 | 338000-A200 | 200 | 16,0 | 23,0 | 29,0 |



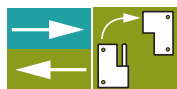
Material:

- Hinge body: Extruded steel profile.
- Pin and washer: Brass.

Weld-on hinge with grease nipple. Universal left and right mounting.

Weld-On Hinge With Grease Nipple - 80 - 200 mm

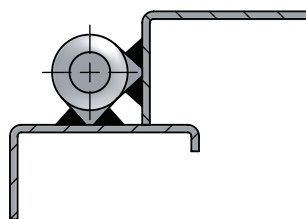
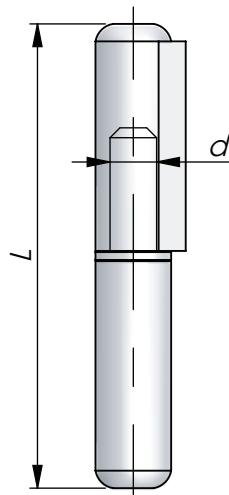
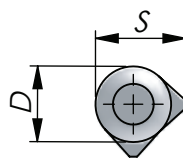
| P/N | L | d | D | S |
|-------------|-----|------|------|------|
| 338005-A080 | 80 | 8,0 | 13,0 | 16,0 |
| 338005-A100 | 100 | 10,0 | 16,0 | 20,0 |
| 338005-A120 | 120 | 10,0 | 16,0 | 20,0 |
| 338005-A135 | 135 | 12,0 | 18,0 | 22,0 |
| 338005-A150 | 150 | 13,0 | 20,0 | 25,0 |
| 338005-A180 | 180 | 14,0 | 20,0 | 25,0 |
| 338005-A200 | 200 | 16,0 | 23,0 | 29,0 |

**Material:**

- Hinge body: Extruded aluminium profile.
- Pin and washer: Stainless steel (303).

References, Accessories:

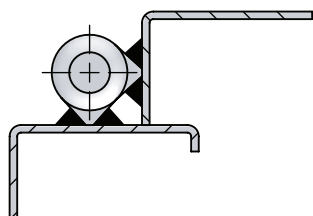
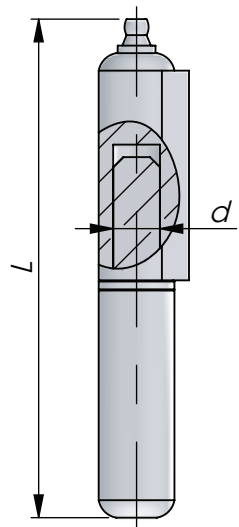
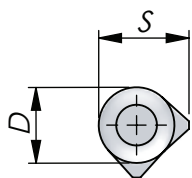
- Stainless version: Page 6-460.



Aluminium weld-on hinge. Universal left and right mounting.

Aluminium Weld-On Hinge - 60 - 180 mm

| P/N | L | d | D | S |
|-------------|-----|------|------|------|
| 334000-A060 | 60 | 6,0 | 10,0 | 12,0 |
| 334000-A070 | 70 | 6,0 | 11,5 | 13,5 |
| 334000-A080 | 80 | 8,0 | 13,0 | 16,0 |
| 334000-A100 | 100 | 10,0 | 16,0 | 20,0 |
| 334000-A120 | 120 | 10,0 | 16,0 | 20,0 |
| 334000-A150 | 150 | 13,0 | 20,0 | 25,0 |
| 334000-A180 | 180 | 14,0 | 20,0 | 25,0 |



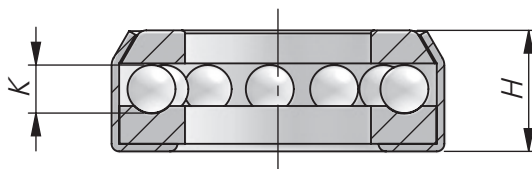
Material:

- Hinge body: Extruded aluminium profile.
- Pin and washer: Stainless steel (303).

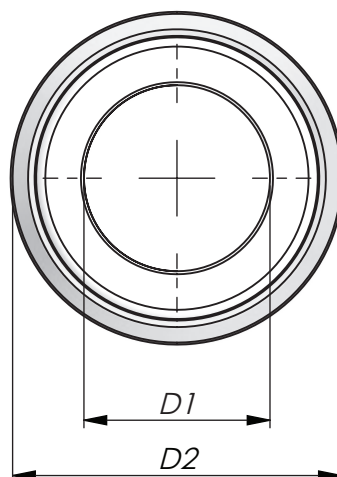
Aluminium weld-on hinge, with grease nipple. Universal left and right mounting.

Aluminium Weld-On Hinge With Grease Nipple - 100 - 150 mm

| P/N | L | d | D | S |
|-------------|-----|------|------|------|
| 334005-A100 | 100 | 10,0 | 16,0 | 20,0 |
| 334005-A150 | 150 | 13,0 | 20,0 | 25,0 |

**Material:**

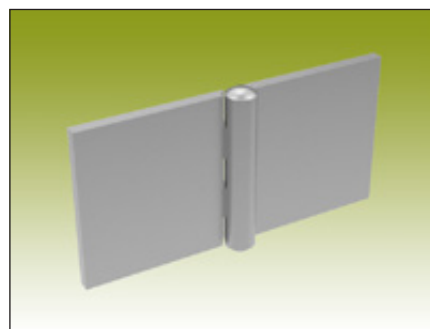
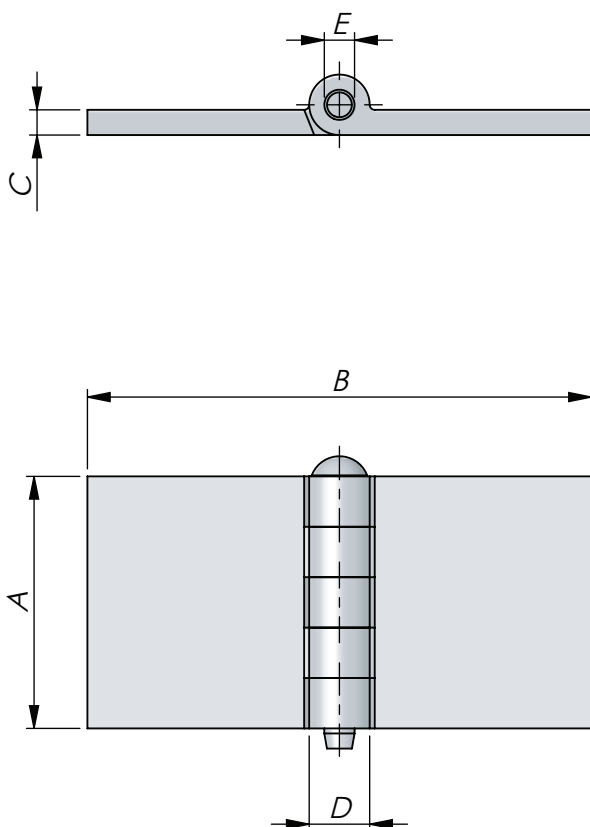
- Brass cage with hardened steel ball bearings.



Ball bearing for use with all our weld-on hinges.

Ball Bearing for Weld-On Hinges

| P/N | D1 | D2 | H | K |
|-----------|------|------|-----|-------|
| 390001-02 | 10,4 | 17,5 | 6,0 | 2,5 |
| 390001-03 | 11,3 | 20,0 | 7,0 | 2,5 |
| 390001-04 | 12,3 | 22,0 | 8,0 | 3,175 |
| 390001-05 | 13,3 | 22,0 | 8,0 | 3,175 |
| 390001-06 | 14,4 | 25,0 | 8,5 | 3,175 |
| 390001-07 | 16,4 | 27,0 | 9,0 | 3,175 |



Material:

- Forged profile steel, unplated.

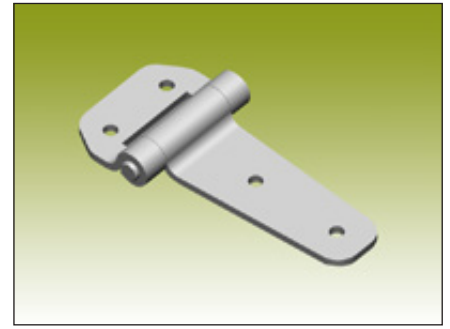
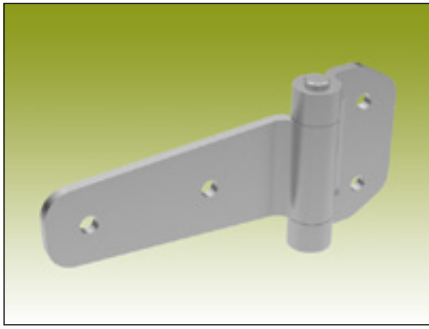
Notes, Tests:

Other sizes and versions are available on request.
Also available with grease nipple.

Weld-on hinge made from forged profile steel. Specially designed for train- and automotive applications. Universal left and right mounting.

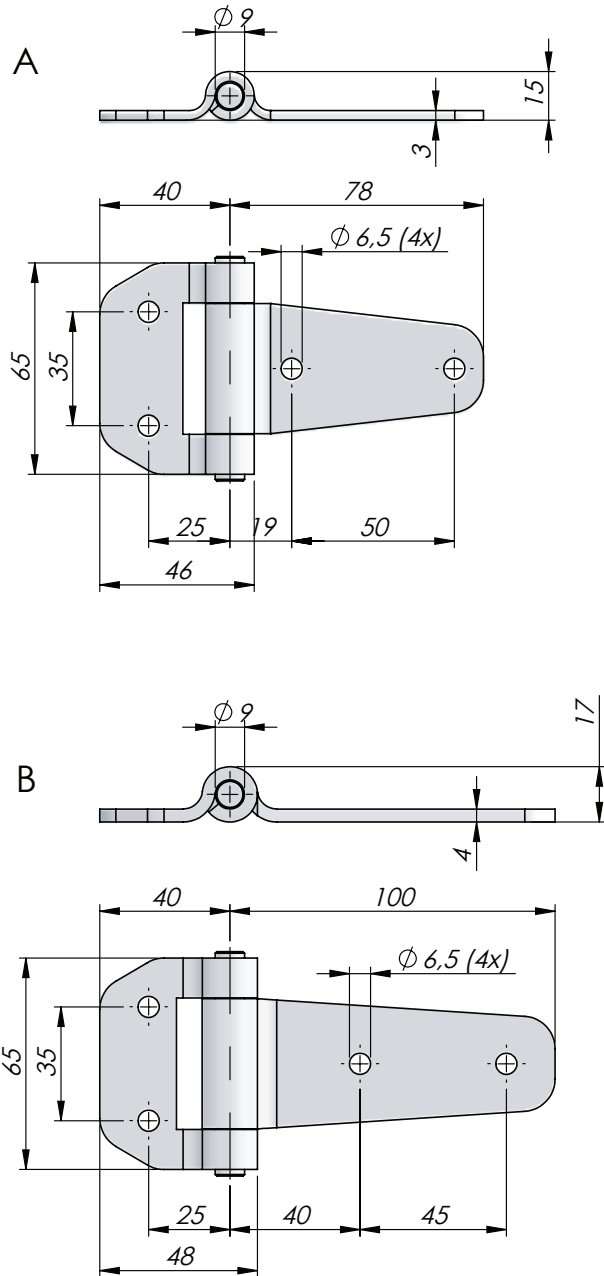
Heavy-Duty Weld-On Hinge

| P/N | A | B | C | D | E |
|------------------|----|-----|---|----|---|
| 3420-2030-004060 | 40 | 60 | 5 | 12 | 6 |
| 3420-2030-040120 | 40 | 120 | 5 | 12 | 6 |
| 3420-2030-040200 | 40 | 200 | 5 | 12 | 6 |
| 3420-2030-050120 | 50 | 120 | 5 | 12 | 6 |
| 3420-2030-050200 | 50 | 200 | 5 | 12 | 6 |
| 3420-2030-080160 | 80 | 160 | 6 | 15 | 8 |
| 3420-2030-080200 | 80 | 200 | 6 | 15 | 8 |



Material:

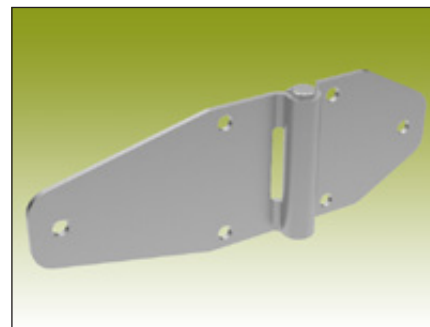
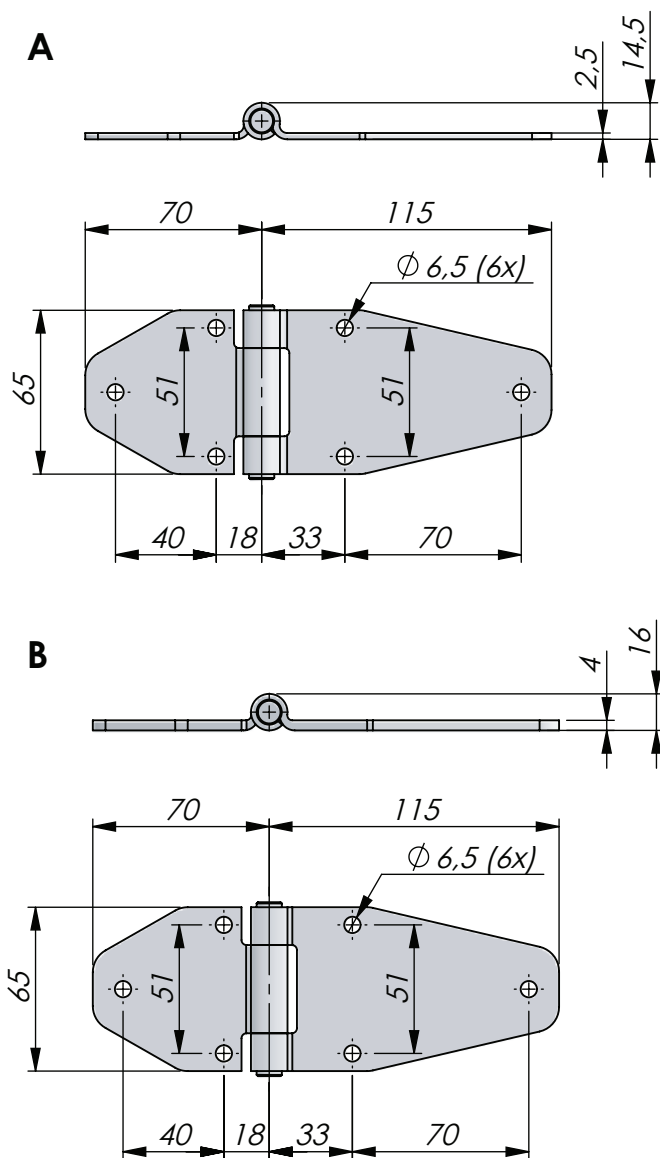
- Steel, zinc plated or stainless steel (304).



Heavy-duty rolled hinge for mounting with screws or rivets. Ideal for vehicles. The hinge-leaves are folded, designed for a flat surface mounting. Opening angle 180°. The four holes have a hole diameter of $\phi 6,5$ mm. The hinge pin is fixed.

Heavy-Duty Hinge - 180° Opening Angle

| P/N Stainless steel (304) | P/N Steel, zinc plated | Drawing |
|---------------------------|------------------------|---------|
| 323081-01 | 322181-01 | A |
| 323081-02 | 322181-02 | B |



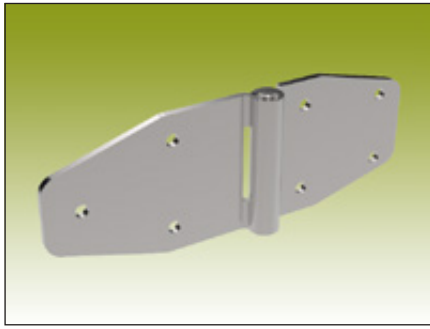
Material:

- Steel, zinc plated or stainless steel (304).

Heavy-duty rolled hinge for mounting with screws or rivets. Ideal for vehicles. The hinge-leaves are folded, allowing a flat surface for mounting. Opening angle 180°. The hinge-leaves are folded, designed for a flat surface mounting and the mounting holes have a diameter of \varnothing 6,5 mm. The hinge pin is fixed.

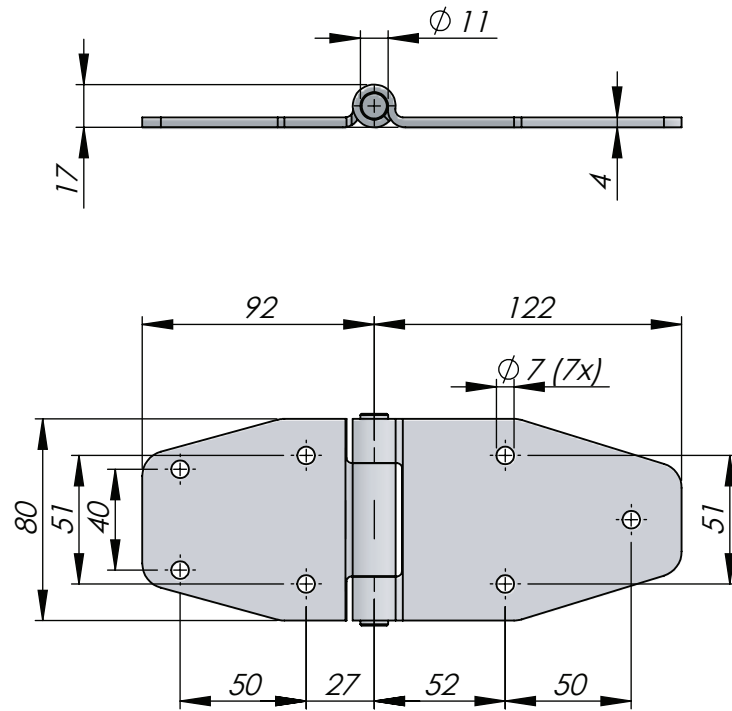
Heavy-Duty Hinge - 180° Opening Angle

| P/N | Description | Drawing |
|-----------|-----------------------|---------|
| 323082-01 | Stainless steel (304) | A |
| 322182-02 | Steel, zinc plated | B |



Material:

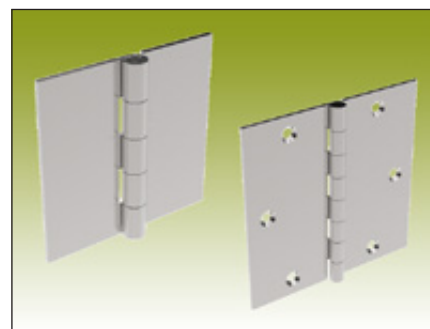
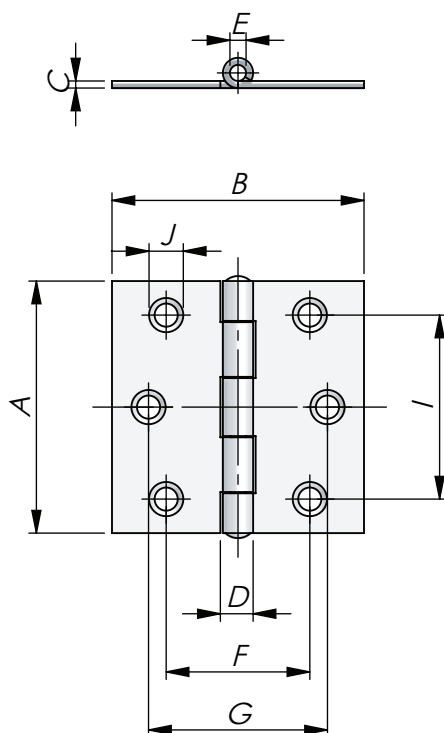
- Steel, zinc plated or stainless steel (304).



Heavy-duty rolled hinge for mounting with screws or rivets. Ideal for vehicles. The hinge-leaves are folded, allowing for a flat surface when mounting. Opening angle 180°. The seven mounting holes have a hole diameter of $\phi 7,0$ mm. The hinge pin is fixed.

Heavy-Duty Hinge - 180° Opening Angle

| P/N | Description |
|-----------|-----------------------|
| 322183-01 | Steel, zinc plated |
| 323083-01 | Stainless steel (304) |

**Material:**

- Hinge and pin: Steel, zinc plated or untreated.

References, Accessories:

- Stainless version: Page 6-496.

Notes, Tests:

Please note that the J-measurement describes the largest diameter of the countersunk - and not the diameter of the hole.

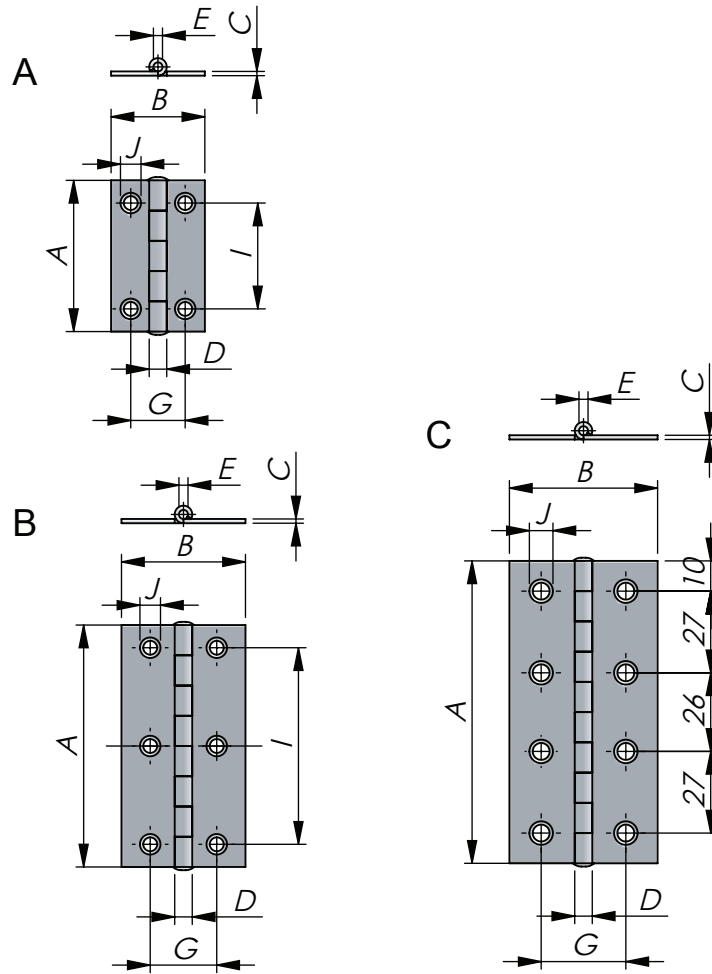
For the holed hinges, we recommend any of the following screws for mounting:

- Countersunk screws against DIN EN ISO 2009.
- Screws with raised countersunk head against DIN EN ISO 2010.
- Countersunk screws against DIN EN ISO 7046-1.
- Screws with raised countersunk head against DIN EN ISO 7047.

Cold rolled butt hinge in steel with or without countersunk holes. Universal left and right mounting.

Butt Hinges

| P/N | Description - surface treatment | A | B | C | D | E | F | G | I | J | Holes |
|------------------|---------------------------------|----|----|-----|-----|-----|------|------|------|-----|-------|
| 3420-202000-5050 | Untreated | 50 | 50 | 1,4 | 6,2 | 3,0 | - | - | - | - | - |
| 3420-202000-6060 | Untreated | 60 | 60 | 1,4 | 6,2 | 3,0 | - | - | - | - | - |
| 3420-202000-8080 | Untreated | 80 | 80 | 1,4 | 6,2 | 3,0 | - | - | - | - | - |
| 3421-212001-5050 | Zinc plated | 50 | 50 | 1,4 | 6,2 | 3,0 | 18,0 | 35,0 | 35,0 | 5,8 | 6 x |
| 3421-212001-6060 | Zinc plated | 60 | 60 | 1,4 | 6,2 | 3,0 | 18,0 | 45,0 | 45,0 | 5,8 | 6 x |
| 3421-212001-7070 | Zinc plated | 70 | 70 | 1,4 | 6,2 | 3,0 | 41,0 | 54,0 | 55,0 | 6,8 | 6 x |
| 3421-212001-8080 | Zinc plated | 80 | 80 | 1,4 | 6,2 | 3,0 | 41,0 | 65,0 | 65,0 | 6,8 | 6 x |



Material:

- Hinge and pin: Steel, zinc plated.

References, Accessories:

- Stainless version: Page 6-501.

Notes, Tests:

Please note that the J-measurement describes the largest diameter of the countersunk - and not the diameter of the hole.

We recommend any of the following screws for mounting:

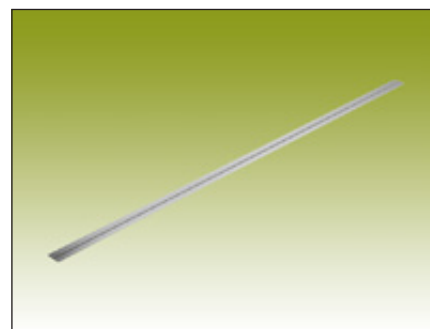
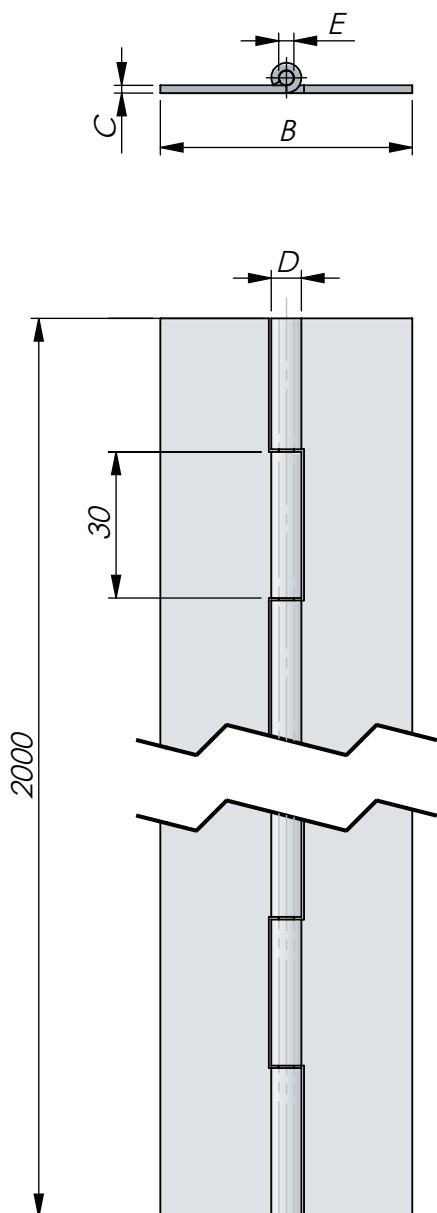
- Countersunk screws against DIN EN ISO 2009.
- Screws with raised countersunk head against DIN EN ISO 2010.
- Countersunk screws against DIN EN ISO 7046-1.
- Screws with raised countersunk head against DIN EN ISO 7047.

Cold rolled butt hinge in steel with countersunk holes. Universal left and right mounting.

0

Butt Hinges

| P/N | A | B | C | D | E | G | I | J | Holes | Drawing |
|------------------|-----|----|-----|-----|-----|------|------|-----|-------|---------|
| 3421-212001-5031 | 50 | 31 | 1,4 | 6,2 | 3,0 | 18,0 | 35,0 | 5,8 | 4 x | A |
| 3421-212001-6034 | 60 | 34 | 1,4 | 6,2 | 3,0 | 18,0 | 45,0 | 5,8 | 6 x | B |
| 3421-212001-7038 | 70 | 38 | 1,4 | 6,2 | 3,0 | 22,0 | 55,0 | 5,8 | 6 x | B |
| 3421-212001-8041 | 80 | 41 | 1,4 | 6,2 | 3,0 | 22,0 | 65,0 | 6,8 | 6 x | B |
| 3421-212001-0049 | 100 | 49 | 1,4 | 6,2 | 3,0 | 28,0 | 80,0 | 7,8 | 8 x | C |



Material:

- Steel, unplated with steel pin.

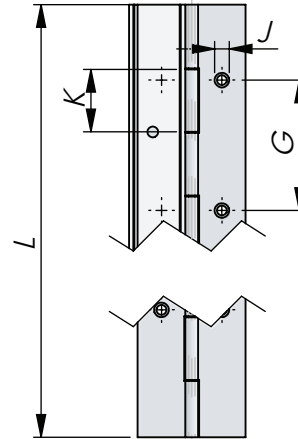
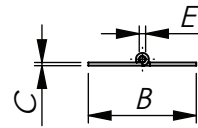
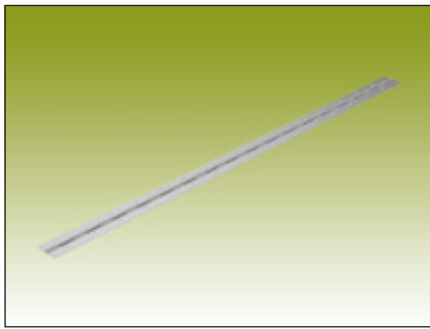
References, Accessories:

- Stainless version: Page 6-540.

Continuous hinge - or piano hinge. Universal left and right mounting. Other dimensions on request.

Continuous Hinge Without Holes - for Weld-On Mounting

| P/N | B | C | D | E |
|------------|----|-----|-----|-----|
| 352031-032 | 32 | 1,5 | 6,3 | 3,0 |
| 352031-040 | 40 | 1,5 | 6,3 | 3,0 |
| 352031-050 | 50 | 1,5 | 6,3 | 3,0 |
| 352031-060 | 60 | 1,5 | 6,3 | 3,0 |



Material:

- Steel, zinc plated, with steel pin.

References, Accessories:

- Version without holes, for weld-on mounting, see page 3-830.
- Stainless version: See page 6-550.

Notes, Tests:

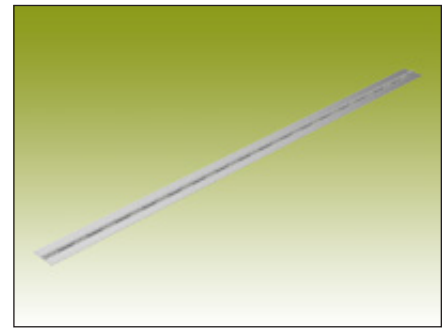
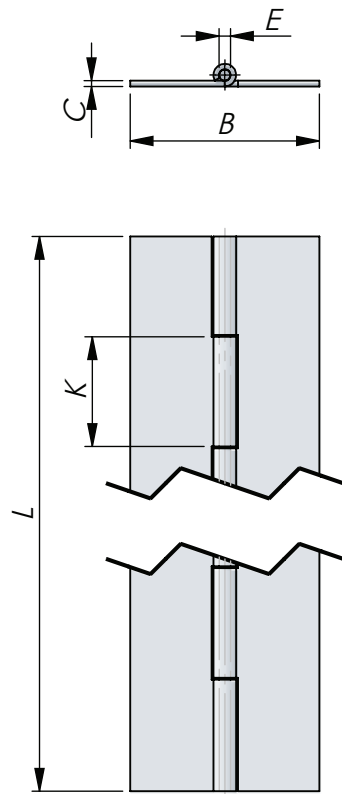
The J-measurement describes the largest diameter of the countersunk and not the diameter of the hole.

Continuous hinge (piano hinge) with recessed holes for screw-on mounting. Universal left and right mounting. Supplied in custom cut lengths where this measurement (L) is stated in millimeters and inserted instead of -LLLL at the end of the part number. For example: P/N 3520-110720-0852 is supplied in lengths of 852 mm. Minimum order quantities applies on custom cut lengths.

Also available in standard length of 3500 mm.

Continuous Hinge With Holes - for Screw-On Mounting

| B= | J= | C=0,7 mm E=1,75 mm G=60,4 mm K=15 mm | C=1,0 mm E=1,75 mm G=60,5 mm K=15 mm | C=1,25 mm E=2,5 mm G=90 mm K=30 mm | C=1,5 mm E=3,0 mm G=90 mm K=30 mm | C=2,0 mm E=6,0 mm G=90 mm K=30 mm | C=3,0 mm E=6,0 mm G=90 mm K=30 mm |
|-----|-----|---|---|---|--|--|--|
| 20 | 3,5 | 3520-110720- LLLL | - | - | - | - | - |
| 25 | 3,5 | 3520-110725- LLLL | 3520-111025- LLLL | - | - | - | - |
| 28 | 4,0 | 3520-110728- LLLL | 3520-111028- LLLL | - | - | - | - |
| 32 | 4,5 | 3520-110732- LLLL | 3520-111032- LLLL | 3520-121232- LLLL | 3520-131532- LLLL | - | - |
| 40 | 5,4 | 3520-110740- LLLL | 3520-111040- LLLL | 3520-121240- LLLL | 3520-131540- LLLL | 3520-162040- LLLL | - |
| 50 | 6,0 | 3520-110750- LLLL | 3520-111050- LLLL | 3520-121250- LLLL | 3520-131550- LLLL | 3520-162050- LLLL | 3520-163050- LLLL |
| 60 | 6,5 | - | - | 3520-121260- LLLL | 3520-131560- LLLL | 3520-162060- LLLL | 3520-163060- LLLL |
| 70 | 6,8 | - | - | - | - | 3520-162070- LLLL | 3520-163070- LLLL |
| 80 | 7,0 | - | - | - | - | 3520-162080- LLLL | 3520-163080- LLLL |
| 100 | 7,5 | - | - | - | - | 3520-162010- LLLL | 3520-163010- LLLL |



Material:

- Steel, unplated. With steel pin.

References, Accessories:

- Stainless version: Page 6-560.
- Steel version with holes: Page 3-820.

Continuous hinge (piano hinge) without holes, for weld-on mounting. Universal left and right mounting. Supplied in custom cut lengths where this measurement (L) is stated in millimeters and inserted instead of -LLLL at the end of the part number. For example: P/N 3520-010720-0852 is supplied in lengths of 852 mm. Minimum order quantities applies on custom cut lengths.





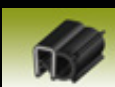






Also available in standard length of 3500 mm.

Continuous Hinge Without Holes - for Weld-On Mounting

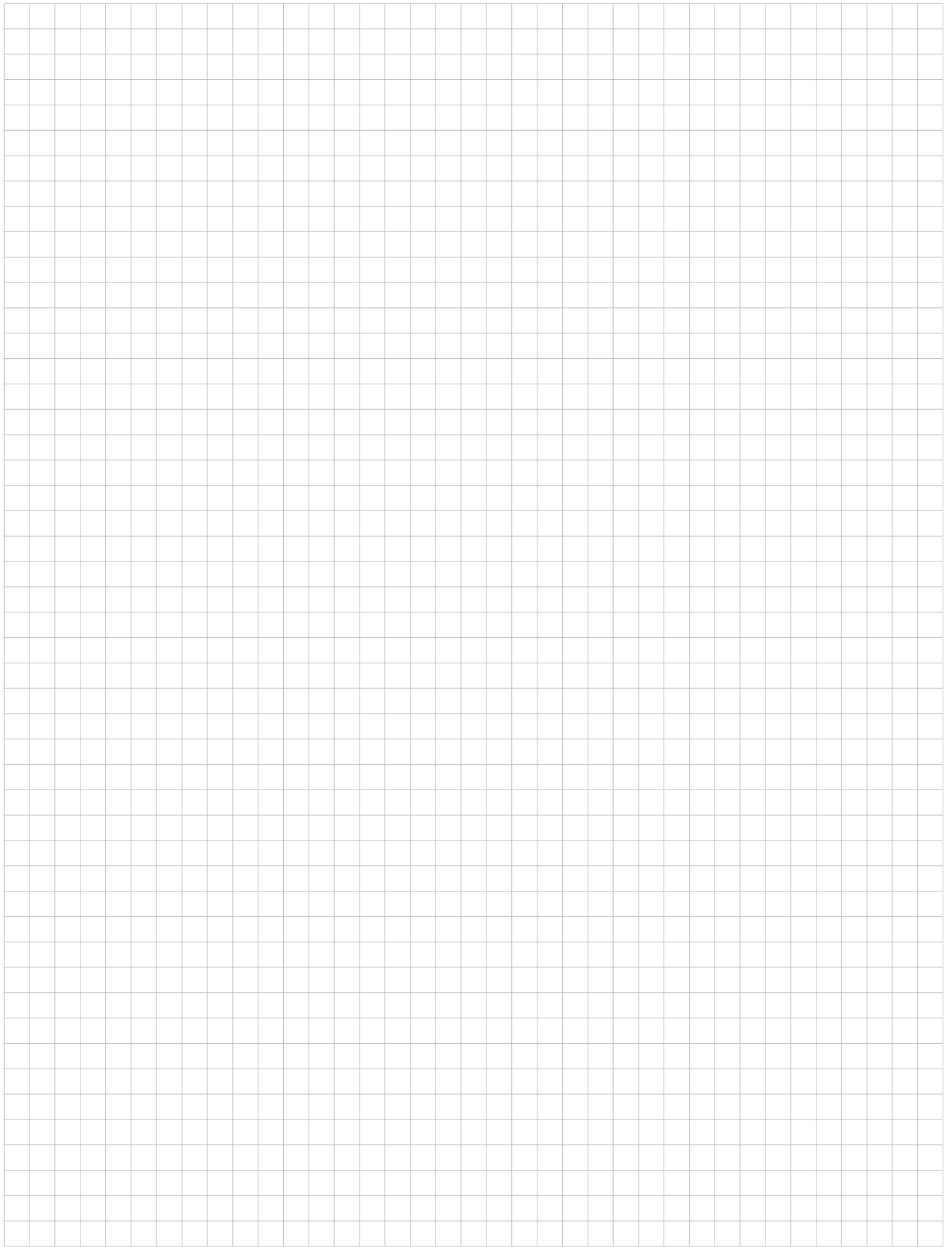
| B= | C=0,7 mm E=1,75 mm K=15 mm | C=1,0 mm E=1,75 mm K=15 mm | C=1,25 mm E=2,5 mm K=30 mm | C=1,5 mm E=3,0 mm K=30 mm | C=2,0 mm E=6,0 mm K=30 mm | C=3,0 mm E=6,0 mm K=30 mm |
|-----|----------------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 20 | 3520-010720- LLLL | 3520-011020- LLLL | - | - | - | - |
| 25 | 3520-010725- LLLL | 3520-011025- LLLL | - | - | - | - |
| 28 | 3520-010728- LLLL | 3520-011028- LLLL | - | - | - | - |
| 32 | 3520-010732- LLLL | 3520-011032- LLLL | 3520-021232- LLLL | 3520-031532- LLLL | - | - |
| 40 | 3520-010740- LLLL | 3520-011040- LLLL | 3520-021240- LLLL | 3520-031540- LLLL | 3520-062040- LLLL | 3520-063040- LLLL |
| 50 | 3520-010750- LLLL | 3520-011050- LLLL | 3520-021250- LLLL | 3520-031550- LLLL | 3520-062050- LLLL | 3520-063050- LLLL |
| 60 | - | - | 3520-021260- LLLL | 3520-031560- LLLL | 3520-062060- LLLL | 3520-063060- LLLL |
| 70 | - | - | 3520-021270- LLLL | 3520-031570- LLLL | 3520-062070- LLLL | 3520-063070- LLLL |
| 80 | - | - | - | 3520-031580- LLLL | 3520-062080- LLLL | 3520-063080- LLLL |
| 100 | - | - | - | - | 3520-062010- LLLL | 3520-063010- LLLL |



EDGE PROTECTION AND SEALING PROFILES

| | | |
|---|---|---------------|
| Properties of rubber and carriers |  | 4-010 – 4-012 |
| Customized sealing profiles |  | 4-020 |
| Profiles approved to VDI 6022 |  | 4-022 |
| Edge protection profiles |  | 4-040 – 4-050 |
| Self gripping Sealing profiles |  | 4-060 – 4-145 |
| Sealing profiles for channels |  | 4-150 |
| EMI- and RFI-protection |  | 4-160 |
| Sealing profiles for various purposes |  | 4-180 |
| Glazing profiles, filler profiles and tool kits |  | 4-190 – 4-200 |
| Self adhesive E-profiles and M-profiles |  | 4-300 |
| Self adhesive D-profiles, O-profiles and P-Profiles |  | 4-330 |

4



cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



A: Due to the great number of existing chemicals, possible temperatures and times of exposure, the stated qualities can vary from case to case.

B: The qualities of the rubber become worse at relatively high or low temperatures.

C: The stated ranges are accurate under normal circumstances. Extreme strains or environments will make the actual ranges smaller.

- ++ = Perfect or very good.
- + = Good.
- 0 = Average qualities.
- = Poor qualities.

Types of Rubber

| Material | Natural rubber | Styrene butadiene rubber (Buna™) | Nitrile rubber (Perbunan™) | Chloroprene rubber (Neoprene™) | Ethylene propylene-diene rubber (EPDM™) | Fluorine rubber (Viton™) | Methyl silicone rubber (Silopren™) | Polyvinyl chloride (Vestalit™, Vestolit™) |
|--|----------------|----------------------------------|----------------------------|--------------------------------|---|--------------------------|------------------------------------|---|
| Abbreviations according to ASTM D 1418 | NR | SBR | NBR | CR | EPDM | FKM | MQ/MVQ | PVC |
| Hardening (Shore A) (±5) | 40-90 | 45-90 | 45-90 | 40-90 | 40-90 | 65-90 | 30-80 | 55-95 |
| Resistance to tearing (N/mm ²) (B) | 4-15 | 4-15 | 4-14 | 4-15 | 6-13 | 0 | 0 | 0 |
| Spring-back elasticity at 20°C | ++ | + | 0 | + | + | 0 | 0 | |
| Abrasion resistance (B) | ++ | ++ | + | + | + | 0 | 0 | 0 |
| Chemical resistance (A) | + | + | 0 | + | ++ | ++ | + | ++ |
| Oil resistance (A) | - | - | ++ | + | - | ++ | + | + |
| Fuel resistance (A) | none | - | + | - | - | ++ | - | - |
| Solvent resistance (A) | - | - | + | + | 0 | 0 | + | 0 |
| Temperature resistance in °C(C) | -40 to +80 | -30 to +80 | -30 to +100 | -25 to +100 | -40 to +120 | -20 to +200 | -50 to +180 | -25 to +60 |
| Ozone resistance | 0 | 0 | 0 | ++ | ++ | ++ | ++ | 0 |
| Weather exposure resistance | + | + | + | ++ | ++ | ++ | ++ | + |
| Gas penetration resistance | 0 | 0 | + | + | 0 | 0 | + | |
| Resistance to permanent deformation (B) | ++ | + | + | + | + | 0 | 0 | 0 |
| Binding to metal | ++ | ++ | 0 | + | 0 | 0 | 0 | |
| Dielectric qualities | ++ | + | - | 0 | ++ | + | + | 0 |

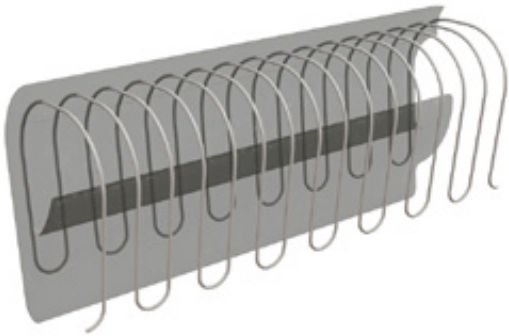


Our sealing profiles and edge protections have a core (called "carrier") of metal to improve the grip on the material the product is attached to. The carrier may be one of three kinds:

- Wire carrier. This type of carrier is a thin wire moulded into the profile. This results in a profile that is soft and is relatively easy to bend in all directions. The grip (clamping effect) is softer than the next two options.
- Steel carrier - unbroken. Here, a thin, unbroken, metal strip is moulded into the profile resulting in a better grip (clamping effect) when the profile is attached to the door. The steel carrier makes the profile less flexible, and is more suitable for straight applications or curves with a large radius.

- Steel carrier - broken. In this version, the thin metal strip is moulded into the sealing profile, but it is broken up in many small parts - resembling a long row of small metal clips. The result is a profile with a good grip - and with a better flexibility than with a solid carrier. In this application, the profile may result in a slightly uneven strand over time. This version should be used if you need a profile with a good grip and if it will be used in an application with curved areas.

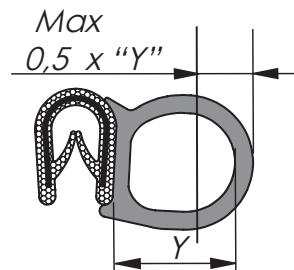
The choice of either a steel or wire carrier largely depends on the application and the desired appearance. Therefore, practical tests are required in your particular application.



Profile with wire carrier results in a soft, relatively flexible and pliable profile with increased gripping force thanks to the "springy" nature of the wire, holding the edge.

Profile with metal carrier unbroken (top) as a great grip on straight materials but is difficult to bend in curved areas as all clips are connected and made from one piece of metal. A profile with broken carrier (bottom) is easier to bend around curves as the clamps are "separated".

To assist you, we have in many cases included the estimated bending radius values for the profiles in question. These values are only an approximation based on practical tests and should serve as guidelines for you. The profiles can also be installed in narrower radii, but then the hose or the lip will deform significantly.

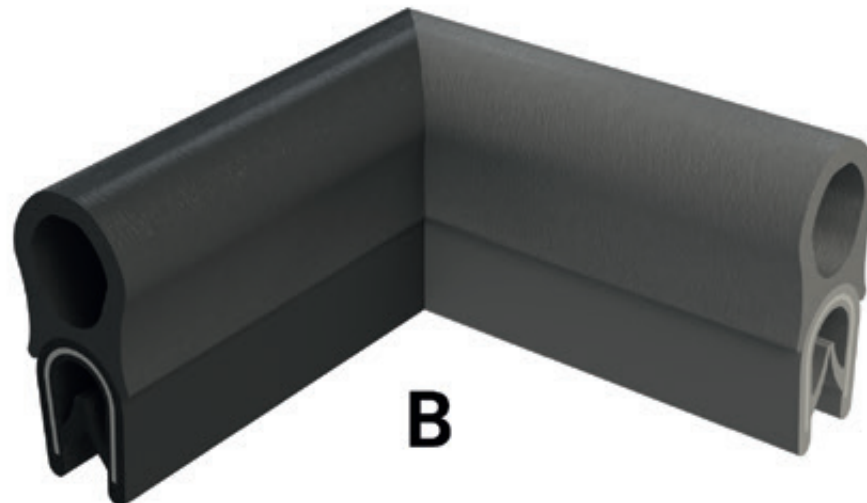
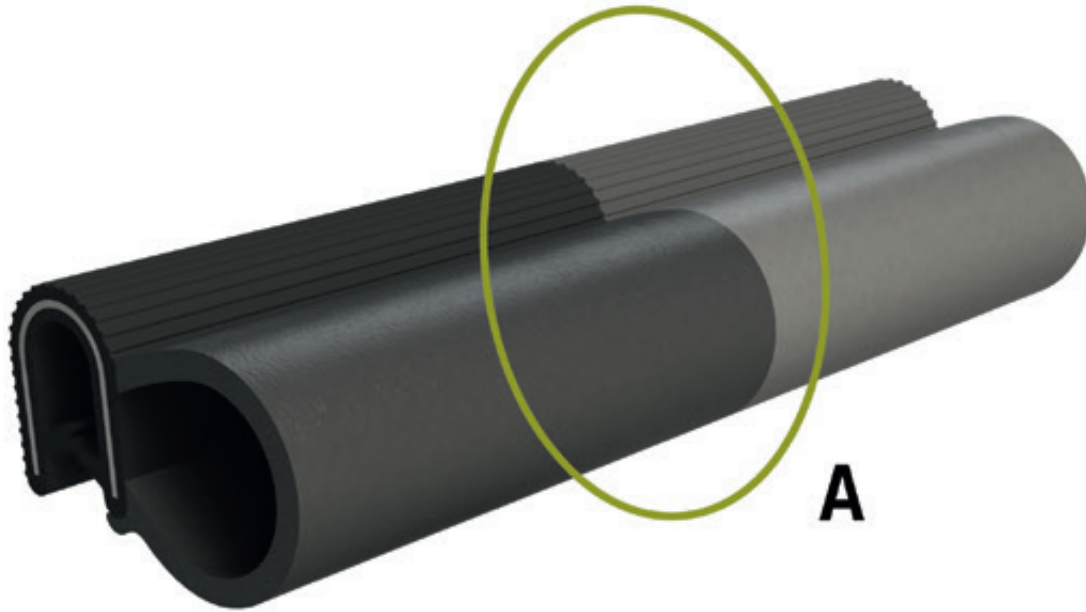


Maximum recommended amount of compression of the sealing profile "bubble" for optimum sealing function.

Compression for sealing edge protection profiles

The compression of our sealing edge protection profiles should be at maximum 50% of the "bubble". In practice, the profile should be compressed 30-40% in order to creating the best possible tension in the "bubble", for the best seal possible.

0



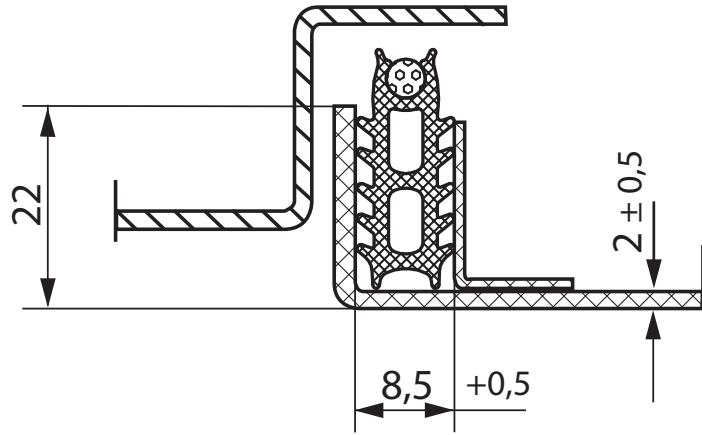
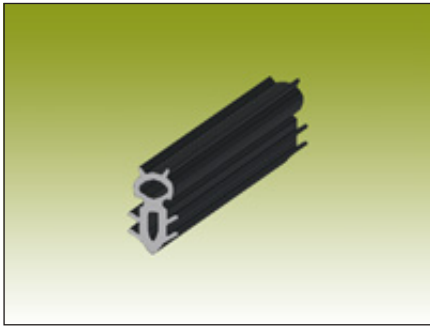
On request we can vulcanize, glue and weld rubber profiles to create shapes like circles and ovals (image A) or rectangles and corners (image B). This, however, is only economically feasible in larger quantities.

We can also supply you with profiles in pre-cut lengths of your choice. We can also supply you with sealing profiles with these functions:

- Low-friction coating ("slip-coat"). Simplifies opening/closing and prevents the door sticking to the seal in sub-zero applications.
- Butyl-filled profile for increased protection against water leakage and increased adhesion (grip) on the edges. Butyl is non-hardening and elastic and creates an excellent seal under harsh conditions.

- Fire proof and flame proof profiles.
- Hygiene profiles - for applications when manufacturing food, pharmaceuticals, biotechnics, cosmetics and similar. Manufactured according to VDI 6022.

If you do not find the profile you need within our standard range, please consult us for custom solutions. Generally speaking it is always possible to alter the grip range of a specific profile or edge protector without the need for retooling expenses. Please contact us and specify the material thickness which the profile needs to grip, and we will help you. For material information, please see information on page 4-010.



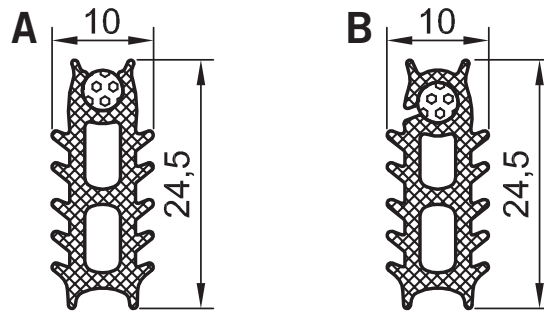
Material:

Sealing profile: EPDM. black.
Expanding cord: Graphite (PROMASEAL®-LX)

Notes, Tests:

Available in the following formats:
A) The expanding cord is inserted into the top of the sealing profile after the extrusion process.
B) The expanding cord is inserted into the side of the sealing profile after the extrusion process.

Other versions and sizes are available on request.



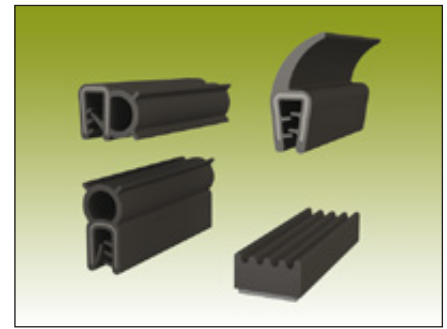
Sealing profiles for channels. Made from EPDM according to EN 45545-2 with an embedded Ø 4 mm round cord made from a graphite material (PROMASEAL®-LX). This sealing system reaches EN 45545-2 as the cord expands under heat creating the smoke sealing that is necessary.

Typical uses for the product is in railway industry where doors or panels may be sealed in such a way that if a fire would start, the expanding profiles would effectively seal off the enclosure from the train, preventing noxious fumes and smoke to enter the area where people are present inside the train compartment. Also, the goal is to smother the existing fire by preventing oxygen to enter the enclosure.

The cord insert expands up to 22 times it's original size when exposed to heat over 190° and creates a thermally stable "foam" that insulates and seals against the hot gases from the fire.

Sealing Profiles for Channels - with Expanding Cord Insert

| Channel width | Channel height | P/N | Material | Drawing | Coil size |
|---------------|----------------|------------|---------------|---------|------------|
| 8,5 mm | 20 mm | On request | EPDM/Graphite | A | On request |
| 8,5 mm | 20 mm | On request | EPDM/Graphite | B | On request |



VDI
6022

Material:

EPDM-rubber according to VDI 6022.

Most sealing profiles on pages 4-110 through 4-145 and 4-300 can be delivered as certified according to VDI 6022. These profiles are then hygienically accepted and manufactured from a soft solid EPDM compound, which minimize the microbacterial growth. This aspect is important especially in heating, ventilation and cooling equipment.

For EPDM self-adhesive E-profiles in VDI 6022-quality, see table below. These profiles are available in a variety of sizes. Contact us with your questions and requirements and we will help you!

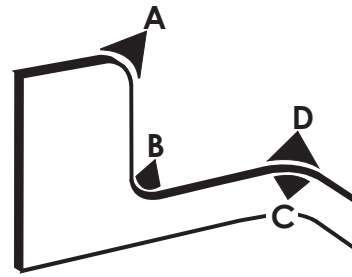
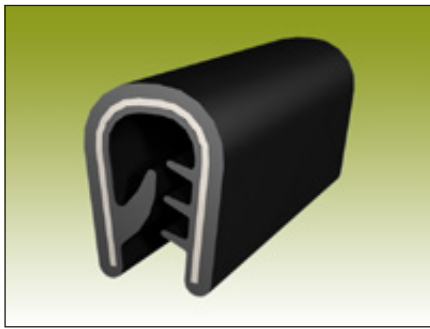
Sealing Profiles Approved to VDI 6022

| | |
|----------------------|-----------------------|
| Material: | Solid EPDM |
| Hardness: | Shore 50A - Shore 60A |
| Color: | Black |
| Temperature range: | -40°C to +100°C |
| Ozone resistance: | Very good |
| Weather resistance: | Very good |
| Chemical resistance: | Very good |

Profiles References According to VDI 6022

| P/N | Description | Colour | Dim. W x H | Coil size | Length / carton |
|-----------|-------------|--------|------------|-----------|-----------------|
| 4504121-0 | E-profile | Black | 15 x 4 mm | 100 m | 600 m |
| 4504151-0 | E-profile | Black | 20 x 4 mm | 50 m | 300 m |



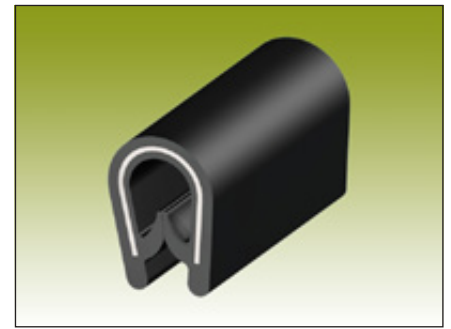
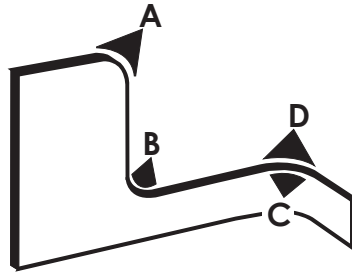


Self-gripping edge protection profile made of black PVC.
 Integrated steel strip core.
 Other colours are available on request.
 Products marked with * are available on request only.

Bending radius values are approximations and profile should be tested in your application.

| | |
|---|--|
| | 416002 Clamping range 1,0 - 2,0 Bending radius in mm A=15, B=15, C=10, D=10 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416004 Clamping range 0,8 - 1,5 Bending radius in mm A=10, B=10, C=10, D=10 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416005 Clamping range 1,0 - 2,0 Bending radius in mm A=10, B=10, C=10, D=10 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416022 Clamping range 1,0 - 3,0 Bending radius in mm A=30, B=30, C=25, D=25 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |

| | |
|---|---|
| | 416023 Clamping range 1,0 - 4,0 Bending radius in mm A=40, B=30, C=30, D=30 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416008 Clamping range 2,0 - 5,0 Bending radius in mm A=40, B=40, C=20, D=20 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416009-02 Clamping range 1,0 - 2,5 Bending radius in mm A=20, B=20, C=15, D=15 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416010* Clamping range 1,0 - 2,5 Bending radius in mm A=20, B=20, C=15, D=15 |
| <ul style="list-style-type: none"> Wire carrier Coil size 4 x 50 m | |



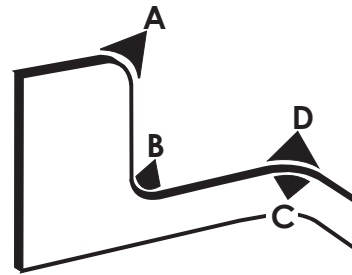
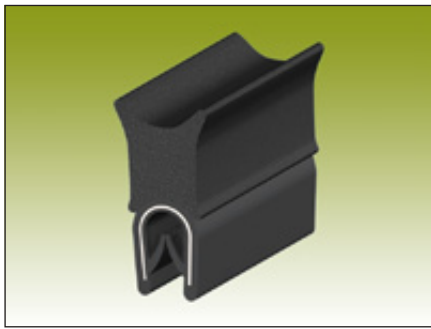
Self-gripping edge protection profile made of black PVC. Integrated steel strip core. Other colours are available on request.

* Products marked with * are available on request only.

Bending radius values are approximations and should be tested in your application.

| | |
|---|---|
| | 416001 |
| | Clamping range in mm 1,0 - 4,0 Bending radius in mm A=30, B=20, C=20, D=20 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416017 |
| | Clamping range in mm 2,0 - 5,0 Bending radius in mm A=50, B=50, C=30, D=30 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416003-02* |
| | Clamping range in mm 1,0 - 2,5 Bending radius in mm A=50, B=40, C=30, D=30 |
| | 416003-04 |
| | Clamping range in mm 2,0 - 4,0 Bending radius in mm A=50, B=40, C=30, D=30 |
| | 416003-06 |
| | Clamping range in mm 4,0 - 6,0 Bending radius in mm A=50, B=40, C=30, D=30 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |

| | |
|---|---|
| | 416006 |
| | Clamping range in mm 1,0 - 4,0 Bending radius in mm A=40, B=30, C=20, D=20 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416013 |
| | Clamping range in mm 4,0 - 6,0 Bending radius in mm A=50, B=50, C=40, D=40 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416007 |
| | Clamping range in mm 6,0 - 8,0 Bending radius in mm A=50, B=50, C=50, D=50 |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |
| | 416020 |
| | Clamping range in mm 10 - 12 Bending radius in mm - |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 100 m | |

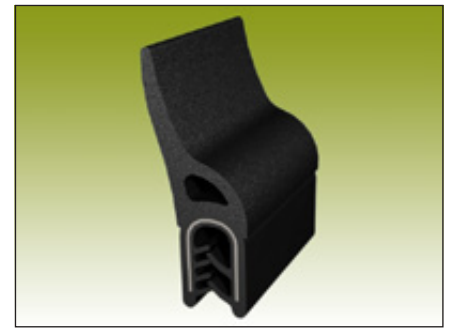
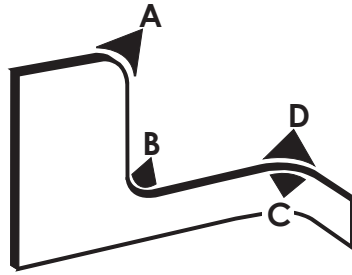


Self-gripping profile made with a black PVC carrier with sealing lip or sealing tube from EPDM. Integrated steel carrier.

Other colours are available on request. Bending radius values are guides and the profile should be tested in your application.

| | |
|---|--|
| | <p>426010</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 100 m | <p>Clamping range 1,0 - 2,0</p> <p>Bending radius in mm A=20, B=40, C=10, D=10</p> |
| | <p>426023</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | <p>Clamping range 1,0 - 4,0</p> <p>Bending radius in mm A=50, B=150, C=50, D=50</p> |
| | <p>426021</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | <p>Clamping range 1,0 - 4,0</p> <p>Bending radius in mm A=70, B=80, C=15, D=15</p> |
| | <p>426031</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 25 m | <p>Clamping range 2,0 - 4,0</p> <p>Bending radius in mm A=110, B=170, C=50, D=50</p> |

| | |
|---|---|
| | <p>426034</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 200 m | <p>Clamping range 1,0 - 2,0</p> <p>Bending radius in mm A=30, B=50, C=20, D=20</p> |
| | <p>426024</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | <p>Clamping range 1,0 - 4,0</p> <p>Bending radius in mm A=50, B=150, C=50, D=50</p> |
| | <p>426011</p> |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | <p>Clamping range 1,0 - 4,0</p> <p>Bending radius in mm A=60, B=80, C=20, D=20</p> |

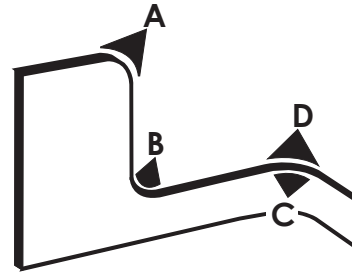


Self-gripping sealing profile made with a black PVC carrier with sealing lip or sealing tube from EPDM. Integrated steel strip core. Products marked with * are available on request only.

Other colours are available on request. Bending radius values are approximations and profile should be tested in your application.

| | |
|---|--|
| | 426002 |
| | Clamping range 2,5 - 4,0 |
| | Bending radius in mm A=90, B=170, C=130, D=130 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 25 m | |
| | 426030 |
| | Clamping range 1,5 - 3,5 |
| | Bending radius in mm A=80, B=150, C=30, D=30 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | |
| | 426012 |
| | Clamping range 1,0 - 2,0 |
| | Bending radius in mm A=20, B=15, C=30, D=30 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 100 m | |

| | |
|--|--|
| | 426022-02 |
| | Clamping range 1,0 - 2,5 |
| | Bending radius in mm A=80, B=100, C=20, D=20 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | |
| | 426022-04 |
| | Clamping range 2,0 - 4,0 |
| | Bending radius in mm A=80, B=100, C=20, D=20 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | |
| | 426013 |
| | Clamping range 1,0 - 4,0 |
| | Bending radius in mm A=50, B=40, C=60, D=120 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | |
| | 426003 |
| | Clamping range 4,0 - 6,0 |
| | Bending radius in mm A=80, B=100, C=20, D=20 |
| | |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ Coil size 50 m | |



Self-gripping sealing profile made with a black PVC carrier with sealing tube from EPDM. Integrated steel strip core. Products marked with * are available on request only.

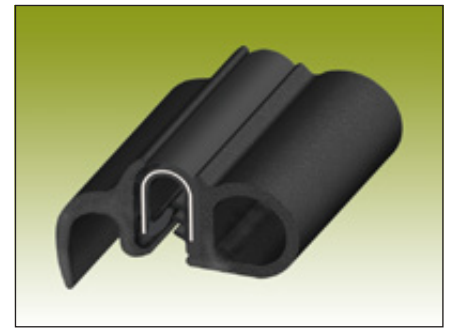
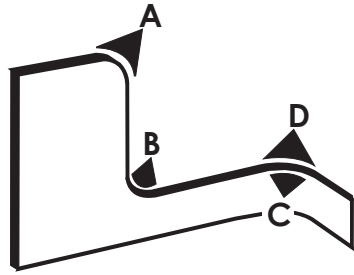
Other colours available on request. Bending radius values are approximations and profile should be tested in your application.

| | | |
|--|----------------|-----------|
| | 426001 | |
| | Clamping range | 1,0 - 4,0 |
| | 426018 | |
| | Clamping range | 1,0 - 4,0 |
| | 426009 | |
| | Clamping range | 1,0 - 4,0 |
| | 426014 | |
| | Clamping range | 2,0 - 5,0 |

- Steel carrier - broken
- Coil size 50 m

| | | |
|--|----------------|-----------|
| | 426015-02* | |
| | Clamping range | 1,0 - 2,5 |
| | 426015-04* | |
| | Clamping range | 2,5 - 4,0 |
| | 426015-06* | |
| | Clamping range | 4,0 - 6,0 |
| | 426004 | |
| | Clamping range | 1,0 - 4,0 |

- Steel carrier - broken
- Coil size 50 m

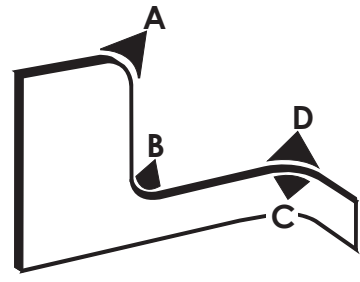


Self-gripping sealing profile made with a black PVC carrier and EPDM sealing lip and / or -tube. Integrated steel strip core. Products marked with * are available on request only.

Other colours are available on request. Bending radius values are approximations and profile should be tested in your application.

| | |
|--|--|
| | 426005 |
| | Clamping range 1,0 - 3,5 |
| | Bending radius in mm A=40, B=40, C=150, D=150 |
| | <ul style="list-style-type: none"> Steel carrier - broken Coil size 50 m |
| | 426017-02 |
| | Clamping range 1,0 - 2,5 |
| | Bending radius in mm A=80, B=80, C=140, D=140 |
| | 426017-04 |
| | Clamping range 2,5 - 4,0 |
| | Bending radius in mm A=80, B=80, C=140, D=140 |
| | 426017-06 * |
| | Clamping range 4,0 - 6,0 |
| | Bending radius in mm A=80, B=80, C=140, D=140 Min 1000 m/ order |
| | <ul style="list-style-type: none"> Steel carrier - broken Coil size 50 m |

| | |
|--|--|
| | 426027 |
| | Clamping range 4,0 - 6,0 |
| | Bending radius in mm A=80, B=80, C=140, D=140 |
| | <ul style="list-style-type: none"> Steel carrier - broken Coil size 50 m |
| | 426028 |
| | Clamping range 1,0 - 4,0 |
| | Bending radius in mm A=40, B=40, C=150, D=150 |
| | <ul style="list-style-type: none"> Steel carrier - broken Coil size 50 m |
| | 426029 |
| | Clamping range 1,5 - 2,0 |
| | Bending radius in mm A=60, B=50, C=120, D=150 |
| | <ul style="list-style-type: none"> Steel carrier - broken Coil size 50 m |



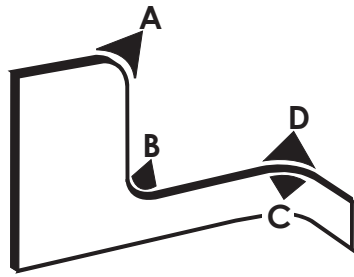
Self-gripping sealing profile made with a black PVC carrier with sealing lip or sealing tube from EPDM. Integrated steel strip core - or steel wire core - according to table.

Other colours available on request. Bending radius values are approximations and profile should be tested in your application.

| | | | | | |
|--|-----------|----------------|-----------|----------------------|-------------------------|
| | 426019-02 | Clamping range | 1,0 - 2,5 | Bending radius in mm | A=80, B=-, C=120, D=120 |
| | 426019-04 | Clamping range | 2,5 - 4,0 | Bending radius in mm | A=80, B=-, C=120, D=120 |
| | 426019-06 | Clamping range | 4,0 - 6,0 | Bending radius in mm | A=80, B=-, C=120, D=120 |

- Steel carrier - broken
- Coil size 25 m

| | | | | | |
|--|--|----------------|-----------|----------------------|-------------------------|
| | 426020 | Clamping range | 1,0 - 2,5 | Bending radius in mm | A=80, B=-, C=120, D=120 |
| | <ul style="list-style-type: none"> Wire carrier Coil size 25 m | | | | |

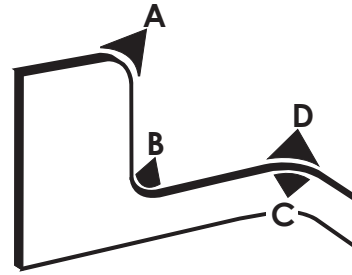
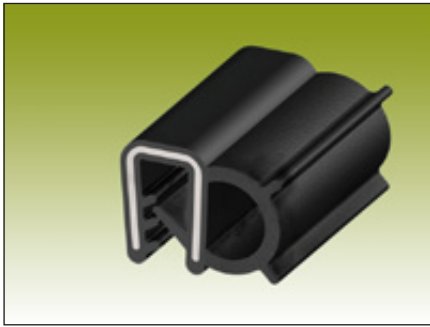


Self-gripping sealing profile with a black EPDM rubber carrier and a sealing lip and / or sealing tube from EPDM sponge-rubber. Integrated steel strip core or steel wire core (see table). P/N 427009-NBR is made of nitrile rubber.

PLEASE NOTE: Most sealing profiles on this page can be delivered as certified according to VDI 6022 or to DIN EN 45545-2. Bending radius values are approximations and profile should be tested in your application.

| | | | |
|--|---------------------|----------------------|-----------------------------|
| | 427009 | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 1,0-3,0 |
| | | Bending radius in mm | A=50, B=180, C=30, D=30 |
| | | 427009-NBR | |
| | | Certification | - |
| | | Clamping range | 1,0 - 3,0 |
| | | Bending radius in mm | A=50, B=180, C=30, D=30 |
| | 427009-45545 | | |
| | | Certification | DIN EN 45545-2 |
| | | Clamping range | 1,0 - 3,0 |
| | | Bending radius in mm | A=50, B=180, C=30, D=30 |
| <ul style="list-style-type: none"> ▪ Wire carrier ▪ Coil size 2 x 50 m | | | |
| | 427021 | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 0,5 - 1,5 |
| | | Bending radius in mm | A=50, B=80, C=25, D=25 |
| | | 427029-02 | |
| | | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 1,0 - 2,5 |
| | | Bending radius in mm | A=100, B=180, C=25, D=25 |
| | 427029-04 | | |
| | | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 2,5 - 4,0 |
| | | Bending radius in mm | A=100, B=180, C=25, D=25 |
| <ul style="list-style-type: none"> ▪ Wire carrier ▪ Coil size 2 x 50 m | | | |

| | | | |
|---|--------------------|----------------------|----------------------------|
| | 427030 | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 1,0 - 2,5 |
| | | Bending radius in mm | A=60, B=120, C=25, D=25 |
| | | 427040 | |
| | | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 1,0 - 2,0 |
| | | Bending radius in mm | A=50, B=60, C=20, D=20 |
| | 427040-4555 | | |
| | | Certification | DIN EN 45545-2 |
| | | Clamping range | 1,0 - 2,0 |
| | | Bending radius in mm | A=50, B=60, C=20, D=20 |
| <ul style="list-style-type: none"> ▪ Steel carrier - unbroken ▪ Coil size 100 m | | | |
| | 427043 | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 1,0 - 3,0 |
| | | Bending radius in mm | A=50, B=200, C=25, D=25 |
| | | 427040 | |
| | | Certification | UL50, UL50 E UL94 HB |
| | | Clamping range | 1,0 - 2,0 |
| | | Bending radius in mm | A=50, B=60, C=20, D=20 |
| | 427040-4555 | | |
| | | Certification | DIN EN 45545-2 |
| | | Clamping range | 1,0 - 2,0 |
| | | Bending radius in mm | A=50, B=60, C=20, D=20 |
| <ul style="list-style-type: none"> ▪ Wire carrier ▪ Coil size 2 x 50 m | | | |

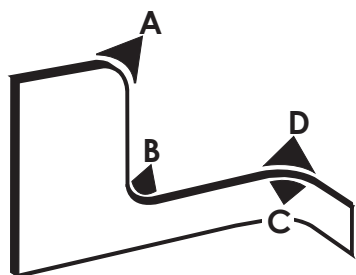


Self-gripping profile with EPDM-rubber carrier and sealing lip and / or sealing tube from EPDM sponge-rubber. Integrated steel wire core.

PLEASE NOTE: Most sealing profiles on this page can be delivered as certified according to VDI 6022 or to DIN EN 45545-2. Bending radius values are approximations and profile should be tested in your application.

| | | | | |
|--|--|----------------------------|-------------------------|-------------------------|
| | 427008 | Certification | UL50, UL50 E UL94 HB | |
| | Clamping range | 2,0 | | |
| | Bending radius in mm | A=50, B=20, C=120, D=40 | | |
| | 427008-NBR | Certification | - | |
| | Clamping range | 2,0 | | |
| | Bending radius in mm | A=50, B=20, C=120, D=40 | | |
| | 427008-45545 | Certification | DIN EN 45545-2 | |
| | Clamping range | 1,0 - 3,0 | | |
| | Bending radius in mm | A=50, B=180, C=30, D=30 | | |
| | <ul style="list-style-type: none"> Wire carrier Coil size 2 x 50 m | | | |
| | 427026 | Certification | UL50, UL50 E UL94 HB | |
| | Clamping range | 1,0-2,5 | | |
| | Bending radius in mm | A=20, B=50, C=20, D=60 | | |
| | <ul style="list-style-type: none"> Wire carrier Coil size 100 m | | | |
| | | 427031 | Certification | UL50, UL50 E UL94 HB |
| Clamping range | | 0,8-2,5 | | |
| Bending radius in mm | | A=40, B=40, C=100, D=60 | | |
| <ul style="list-style-type: none"> Wire carrier Coil size 2 x 50 m | | | | |

| | | | | | |
|---|---------------------------|--|------------------------------|-----------------------|-----|
| | 427052 | Certification | UL50, UL50 E UL94 HB | | |
| | Clamping range | 1,0 - 2,0 | | | |
| | Bending radius in mm | A=100, B=200, C=100, D=40 | | | |
| | 427052-45545 | Certification | DIN EN 45545-2 | | |
| | Clamping range | 1,0- 2,0 | | | |
| <ul style="list-style-type: none"> Wire carrier Coil size 100 m | | 427032 | Certification | UL50, UL50EUL94 HB | |
| | | Clamping range | 2,0 | | |
| | | Bending radius in mm | A=100, B=200, C=100, D=60 | | |
| | | <ul style="list-style-type: none"> Wire carrier Coil size 2 x 50 m | | | |
| | | | 427007 | Clamping range | 2,0 |
| Bending radius in mm | A=20, B=50, C=20, D=60 | | | | |
| <ul style="list-style-type: none"> Wire carrier Coil size 50 m | | | | | |

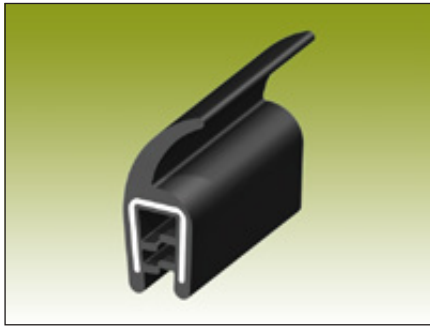


Self-gripping profile with EPDM-rubber carrier and sealing lip and / or sealing tube from EPDM sponge-rubber. Integrated steel strip core or steel wire core (see table).

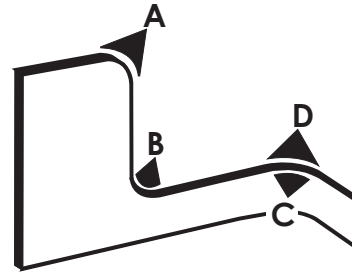
PLEASE NOTE: Most sealing profiles on this page can be delivered as certified according to VDI 6022 or to DIN EN 45545-2. Bending radius values are approximations and profile should be tested in your application.

| | | | |
|--|----------------------|---------------------------------|-------------------------|
| | 427010 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 1,0-3,5 | |
| <ul style="list-style-type: none"> Steel carrier - unbroken Coil size 50 m | Bending radius in mm | A=200, B=80, C=200, D=200 | |
| | 427020-04 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 2,0-4,0 | |
| | Bending radius in mm | A=80, B=80, C=-, D=- | |
| <ul style="list-style-type: none"> Steel carrier - unbroken Coil size 75 m | 427020-06 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 5,0-6,0 | |
| | 427045 | Certification | - |
| | Clamping range | 1,5 - 3,0 | |
| <ul style="list-style-type: none"> Wire carrier Coil size 2 x 50 m | Bending radius in mm | A=50, B=40, C=190, D=50 | |
| | 427033 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 1,0 - 3,0 | |
| | Bending radius in mm | A=80, B=40, C= 200, D=180 | |
| <ul style="list-style-type: none"> Wire carrier Coil size 3 x 50 m | | | |

| | | | |
|--|----------------------|---------------------------------|-------------------------|
| | 427042 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 1,5 - 3,0 | |
| <ul style="list-style-type: none"> Wire carrier Coil size 4 x 25 m | Bending radius in mm | A=80, B=60, C= 200, D=180 | |
| | 427038-04 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 2,0 - 4,0 | |
| | Bending radius in mm | A=80, B=120, C=-, D=- | |
| <ul style="list-style-type: none"> Steel carrier - unbroken Coil size 3 x 25 m | 427038-06 | Certification | UL50, UL50 E UL94 HB |
| | Clamping range | 4,0 - 6,0 | |
| | 427068 | Certification | - |
| | Clamping range | 3,0 - 5,0 | |
| <ul style="list-style-type: none"> Steel carrier - broken Coil size 75 m | Bending radius in mm | - | |



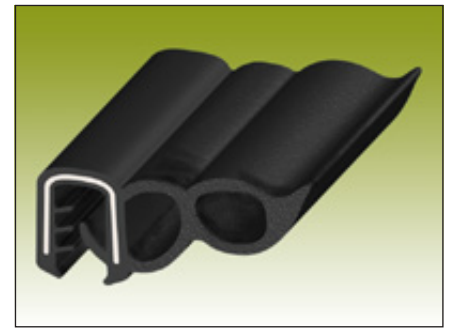
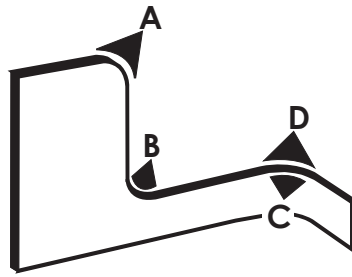
Self-gripping sealing profile with EPDM-rubber carrier and sealing tube or sealing lip from EPDM sponge-rubber. Integrated steel wire core.



PLEASE NOTE: Most sealing profiles on this page can be delivered as certified according to VDI 6022 or to DIN EN 45545-2. Bending radius values are approximations and profile should be tested in your application.

| | | | |
|--|--|----------------------|---------------------------|
| | 427011 | Certification | UL50 UL50 E UL94 HB |
| | | Clamping range | 1,0-2,5 |
| | | Bending radius in mm | A=150, B=250, C=20, D=20 |
| | <ul style="list-style-type: none"> Wire carrier Coil size 50 m | | |
| | 427022 | Certification | UL50 UL50 E UL94 HB |
| | | Clamping range | 1,0-2,5 |
| | | Bending radius in mm | A=60, B=250, C=25, D=70 |
| | <ul style="list-style-type: none"> Wire carrier Coil size 3 x 50 m | | |
| | 427034 | Certification | UL50 UL50 E UL94 HB |
| | | Clamping range | 1,0-2,0 |
| | | Bending radius in mm | A=60, B=200, C=20, D=20 |
| | <ul style="list-style-type: none"> Wire carrier Coil size 2 x 50 m | | |

| | | | |
|--|--|----------------------|---------------------------|
| | 427044 | Certification | UL50 UL50 E UL94 HB |
| | | Clamping range | 1,5 - 3,5 |
| | | Bending radius in mm | A=40, B=30, C=180, D=40 |
| | <ul style="list-style-type: none"> Wire carrier Coil size 50 m | | |
| | 427061 | Certification | UL50 UL50 E UL94 HB |
| | | Clamping range | 1,0 - 3,0 |
| | | Bending radius in mm | A=80, B=250, C=25, D=60 |
| | <ul style="list-style-type: none"> Wire carrier Coil size 2 x 50 m | | |
| | 427081 | Certification | - |
| | | Clamping range | 1,0 - 2,5 |
| | | Bending radius in mm | A=100, B=-, C=120, D=120 |
| | <ul style="list-style-type: none"> Steel carrier - unbroken Coil size 25 m | | |



Self-gripping sealing profiles with EPDM-rubber carrier and sealing lip and / or sealing tube from EPDM sponge-rubber. Integrated steel wire core. Products marked with * are available on request only.

PLEASE NOTE: Most sealing profiles on this page can be delivered as certified according to VDI 6022 or DIN EN 45545-2. Bending radius values are approximations and profile should be tested in your application.

| | | |
|---|----------------------|----------------------------------|
| | 427051 * | |
| | Certification | UL50 UL50 E UL94 HB |
| | Clamping range | 1,5 |
| | Bending radius in mm | A=60, B=50, C=100, D=80 |
| <ul style="list-style-type: none"> ▪ Wire carrier ▪ Coil size 100 m | | |

| | | |
|--|----------------------|-----------|
| | 427064 * | |
| | Certification | - |
| | Clamping range | 4,0 - 6,0 |
| | Bending radius in mm | - |
| <ul style="list-style-type: none"> ▪ Steel carrier - unbroken ▪ Coil size 50 m | | |

| | | |
|--|----------------------|-----------|
| | 427065 * | |
| | Certification | - |
| | Clamping range | 5,0 - 6,0 |
| | Bending radius in mm | - |
| <ul style="list-style-type: none"> ▪ Steel carrier - unbroken ▪ Coil size 75 m | | |

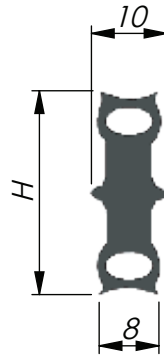
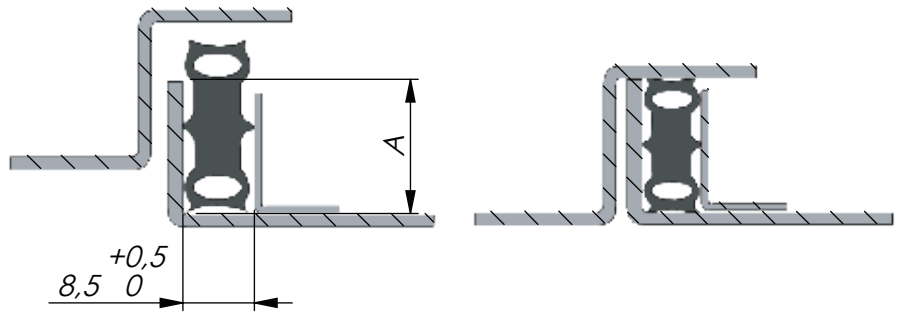
| | | |
|---|----------------------|-----------------------------------|
| | 427085 | |
| | Certification | - |
| | Clamping range | 5,0 - 6,0 |
| | Bending radius in mm | A=50, B=50, C=180, D=100 |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ With butyle sealant ▪ Coil size 50 m | | |

| | | |
|---|----------------------|-----------------------------------|
| | 427084 | |
| | Certification | - |
| | Clamping range | 4,0 - 5,0 |
| | Bending radius in mm | A=50, B=50, C=180, D=100 |
| <ul style="list-style-type: none"> ▪ Wire carrier ▪ Coil size 2 x 25 m ▪ With butyle sealant ▪ With "slip coat" | | |

| | | |
|--|----------------------|-----------|
| | 427066 | |
| | Certification | - |
| | Clamping range | 5,0 - 6,0 |
| | Bending radius in mm | - |
| <ul style="list-style-type: none"> ▪ Steel carrier - unbroken ▪ Coil size 50 m | | |

| | | |
|--|----------------------|---------------|
| | 427067 | |
| | Certification | - |
| | Clamping range | 3,0 |
| | Bending radius in mm | A=60, B=60 |
| <ul style="list-style-type: none"> ▪ Wire carrier ▪ Coil size 50 m | | |

| | | |
|---|----------------------|-----------------------------------|
| | 427073 | |
| | Certification | - |
| | Clamping range | 6,0 - 7,2 |
| | Bending radius in mm | A=50, B=50, C=220, D=140 |
| <ul style="list-style-type: none"> ▪ Steel carrier - broken ▪ With butyle sealant ▪ Coil size 50 m | | |



Material:

Manufactured from black EPDM. Coil size: 40 m / roll.

Notes, Tests:

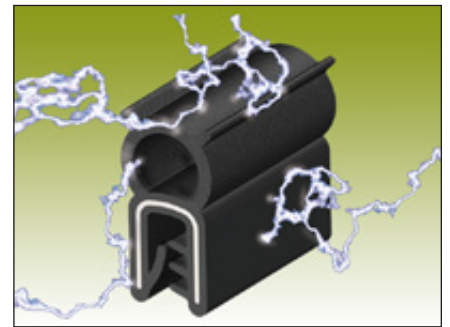
Recommended compression of the profile is 1-2 mm. Recommended channel width is 8,5 mm.

Sealing profile for use with doors and panels. A small compression is enough to compensate for large tolerances. The special shape creates a balanced seal between frame and seal - and between seal and door. The side of the profile is equipped with "lips" allowing for movement and ensuring that the seals stays in the channel when the door is opened. This ensures an even pressure along the seal.

The symmetric design prevents mistakes during mounting. The profiles work just as well during positive or negative pressure and can be used in 90° corners without the need for cutting.

Sealing Profiles for Channels

| P/N | H-dimension | Compressed length (A) |
|----------------|-------------|-----------------------|
| 4300-0500-1810 | 18 mm | 16-17 mm |
| 4300-0500-2010 | 20 mm | 18-19 mm |
| 4300-0500-2210 | 22 mm | 20-21 mm |
| 4300-0500-2410 | 24 mm | 22-23 mm |
| 4300-0500-2610 | 26 mm | 24-25 mm |
| 4300-0500-2810 | 28 mm | 26-27 mm |



Conductive film over sealing profile



Notes, Tests:

Contact us with your questions and requirements and we will help you!

Most edge protections and sealing profiles on pages 4-040 through 4-145 can be equipped, fully or in part, with a film protecting against EMI and RFI (Electromagnetic Interference and Radio Frequency Interference).

EMI/RFI-film data

| | |
|-----------------------------|---|
| EMI-coating: | Copper/Tin-coated non-woven (Cu/Sn -PBN-II) |
| Dampening: | Average of 90 dB from 30 MHz to 1 GHz |
| Abrasion resistance: | 1,000,000 cycles |
| Temperature range: | -30° C to 90° |
| Film thickness: | 0,25 mm - 0,40 mm |
| Colour: | Black |
| Type of adhesive: | Acrylic base |

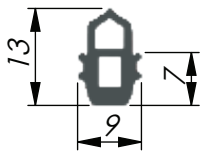




Clamping profiles for grooves, metal U-profiles and similar.

427012

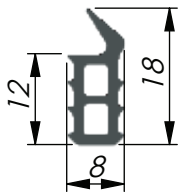
Material EPDM



- Coil size 200 m

427013

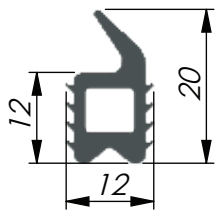
Material EPDM



- Coil size 100 m

427015

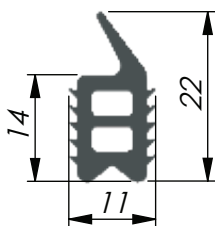
Material PVC



- Coil size 140 m

427016

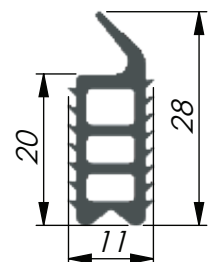
Material PVC



- Coil size 140 m

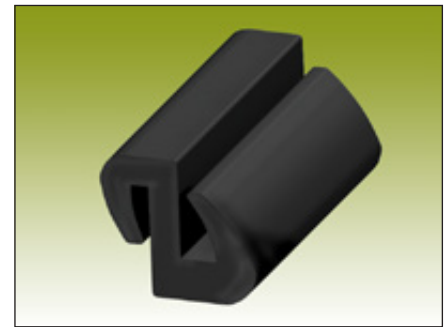
427017

Material PVC



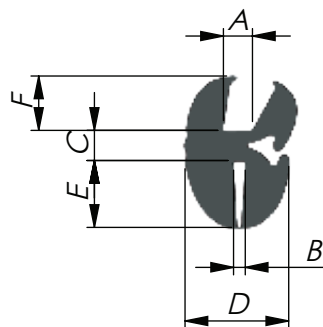
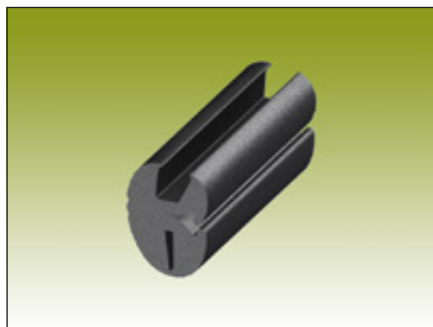
- Coil size 100 m

0



Profiles from EPDM made for various purposes according to description in the table.
 Products that are UL-recognized are indicated in the UL-column below.
 * Products marked with * are available on request only.

| | | | | | | | | | |
|---------------------------|---|---------|--|---------------|----|----------------|------------------|-------------|---|
| | <table border="1"> <tr><td colspan="2">427018*</td></tr> <tr><td>Certification</td><td>UL</td></tr> <tr><td>Clamping range</td><td>Frame max 2,4 mm</td></tr> <tr><td>Application</td><td>Window seal</td></tr> </table> | 427018* | | Certification | UL | Clamping range | Frame max 2,4 mm | Application | Window seal |
| 427018* | | | | | | | | | |
| Certification | UL | | | | | | | | |
| Clamping range | Frame max 2,4 mm | | | | | | | | |
| Application | Window seal | | | | | | | | |
| <p>Coil size 100 m</p> | | | | | | | | | |
| | <table border="1"> <tr><td colspan="2">427019*</td></tr> <tr><td>Certification</td><td>UL</td></tr> <tr><td>Clamping range</td><td>Frame max 2,4 mm</td></tr> <tr><td>Application</td><td>Window seal</td></tr> </table> | 427019* | | Certification | UL | Clamping range | Frame max 2,4 mm | Application | Window seal |
| 427019* | | | | | | | | | |
| Certification | UL | | | | | | | | |
| Clamping range | Frame max 2,4 mm | | | | | | | | |
| Application | Window seal | | | | | | | | |
| <p>Coil size 4 x 20 m</p> | | | | | | | | | |
| | <table border="1"> <tr><td colspan="2">427023*</td></tr> <tr><td>Certification</td><td>UL</td></tr> <tr><td>Clamping range</td><td>1,0 - 2,0</td></tr> <tr><td>Application</td><td>Sealing profile - self gripping or for gluing</td></tr> </table> | 427023* | | Certification | UL | Clamping range | 1,0 - 2,0 | Application | Sealing profile - self gripping or for gluing |
| 427023* | | | | | | | | | |
| Certification | UL | | | | | | | | |
| Clamping range | 1,0 - 2,0 | | | | | | | | |
| Application | Sealing profile - self gripping or for gluing | | | | | | | | |
| <p>Coil size 50 m</p> | | | | | | | | | |
| | <table border="1"> <tr><td colspan="2">427024*</td></tr> <tr><td>Certification</td><td>UL</td></tr> <tr><td>Clamping range</td><td>1,5 - 2,0</td></tr> <tr><td>Application</td><td>Sealing profile - self gripping or for gluing</td></tr> </table> | 427024* | | Certification | UL | Clamping range | 1,5 - 2,0 | Application | Sealing profile - self gripping or for gluing |
| 427024* | | | | | | | | | |
| Certification | UL | | | | | | | | |
| Clamping range | 1,5 - 2,0 | | | | | | | | |
| Application | Sealing profile - self gripping or for gluing | | | | | | | | |
| <p>Coil size 50 m</p> | | | | | | | | | |



Glazing profile from black EPDM for easy and firm mounting of windows, panels, etc. Use together with filler profile on page 4-200. This glass sealing profile is shown with the glass-groove (A) facing upwards and the frame-groove (B) facing downwards.

The stated bending radius is the minimum practical bending radius.

The values in columns A to F are stated in millimeters (mm).

Glazing profiles

| P/N | Bending radius in mm | Weight / m | Size | Coil size | A | B | C | D | E | F |
|--------|----------------------|------------|----------------------|-----------|-----|-----|-----|------|------|------|
| 437018 | 35 | 165 g | For filler profile 2 | 25 m | 4 | 1,5 | 4 | 13,6 | 5 | 6 |
| 437020 | 80 | 230 g | For filler profile 3 | 20 m | 4 | 3 | 7 | 16 | 7 | 7 |
| 437022 | 100 | 350 g | For filler profile 3 | 50 m | 5 | 2 | 5 | 15 | 6 | 6 |
| 437023 | 80 | 300 g | For filler profile 3 | 15 m | 2,5 | 1,5 | 7 | 16 | 7 | 7 |
| 437024 | 100 | 340 g | For filler profile 3 | 32 m | 2,5 | 4,5 | 7 | 17,8 | 10,5 | 11,5 |
| 437025 | 20 | 95 g | For filler profile 1 | 50 m | 3 | 2 | 4 | 10,2 | 3 | 3 |
| 437026 | 35 | 145 g | For filler profile 2 | 20 m | 3 | 1 | 4 | 11,6 | 4,5 | 6 |
| 437028 | 80 | 270 g | For filler profile 3 | 20 m | 4 | 1,5 | 7 | 16 | 7 | 7 |
| 437029 | 100 | 405 g | For filler profile 3 | 15 m | 4 | 2 | 7,3 | 18 | 11 | 8,7 |
| 437030 | 35 | 150 g | For filler profile 2 | 25 m | 4 | 3 | 4 | 12,6 | 5 | 6 |
| 437032 | 80 | 300 g | For filler profile 3 | 25 m | 4,5 | 5 | 7 | 16 | 7 | 7 |
| 437033 | 100 | 410 g | For filler profile 3 | 15 m | 5 | 2 | 7,5 | 19 | 12,5 | 9,5 |
| 437035 | 90 | 345 g | For filler profile 3 | 20 m | 5 | 3 | 7 | 19 | 8 | 8 |
| 437036 | 100 | 460 g | For filler profile 3 | 15 m | 5 | 3 | 7,5 | 19 | 12,5 | 9,5 |
| 437037 | 90 | 360 g | For filler profile 3 | 20 m | 5 | 5 | 7 | 18,4 | 9 | 8 |
| 437038 | 100 | 400 g | For filler profile 3 | 15 m | 5,5 | 2 | 7,3 | 19 | 11 | 8,7 |
| 437039 | 100 | 400 g | For filler profile 3 | 15 m | 6 | 1,5 | 7,5 | 19 | 12,5 | 9,5 |
| 437040 | 90 | 350 g | For filler profile 3 | 20 m | 6 | 2,5 | 7 | 19 | 8 | 8 |
| 437041 | 100 | 410 g | For filler profile 3 | 15 m | 6 | 3 | 7,5 | 19 | 12,5 | 9,5 |
| 437042 | 100 | 390 g | For filler profile 3 | 15 m | 6 | 4 | 7,5 | 19 | 12,5 | 9,5 |
| 437043 | 100 | 435 g | For filler profile 3 | 15 m | 6 | 6 | 8,5 | 19 | 9,5 | 9 |
| 437046 | 120 | 600 g | For filler profile 3 | 15 m | 8 | 3 | 7,5 | 22 | 12,5 | 9,5 |
| 437047 | 100 | 620 g | For filler profile 3 | 15 m | 8 | 4 | 8,5 | 25 | 12,5 | 10 |
| 437048 | 120 | 600 g | For filler profile 3 | 15 m | 10 | 3 | 7,5 | 23 | 12,5 | 9,5 |
| 437049 | 100 | 570 g | For filler profile 3 | 15 m | 10 | 6 | 7,5 | 24 | 12,5 | 9,5 |



References, Accessories:

The filler profiles are used together with the glazing profiles on page 4-190. Choose matching sizes for a proper fit.

Filler profile for glazing profiles and tools for cutting and mounting our profiles and seals. The Fitting tool kit (Photo A) contains everything you need for fast and reliable mounting of the glass seals listed below.

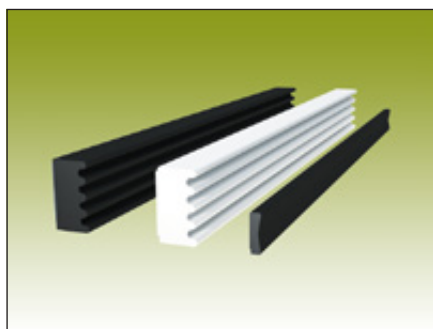
The Fitting tool (B) for attaching the filler profile can also be bought separately. The Mitering scissors (C) have visual guides in increments of 15° to simplify cutting sealing profiles. The hardened steel blades enables you to cut regular seals as well as sealing profiles with steel wire cores - or steel strip cores.

Filler Profiles and Cutting Tools

| Drawing | P/N | Description | Colour | Material | Weight gram / m | Size | Coil size | B in mm | H in mm |
|---------|--------|-------------|--------|----------|-----------------|------|-----------|---------|---------|
| | 437019 | Filler | Black | EPDM | 28 g | 2 | 50 m | 6,0 | 7,0 |
| | 437021 | Filler | Black | EPDM | 50 g | 3 | 50 m | 7,5 | 9,5 |
| | 437080 | Filler | Black | EPDM | 18 g | 1 | 50 m | 4,5 | 5,5 |
| | 437085 | Filler | Black | PVC | 40 g | 3 | 100 m | 7,5 | 9,5 |
| | 437086 | Filler | Ivory | PVC | 40 g | 3 | 100 m | 7,5 | 9,5 |
| | 437087 | Filler | Silver | PVC | 40 g | 3 | 100 m | 7,5 | 9,5 |
| | 437088 | Filler | Red | PVC | 40 g | 3 | 100 m | 7,5 | 9,5 |
| | 437089 | Filler | White | PVC | 40 g | 3 | 100 m | 7,5 | 9,5 |

Tools for Mounting Profiles

| Image | P/N | Description |
|--------|--------|---|
| Kit A | 4H1000 | Complete fitting tool for mounting glass seals. |
| Tool B | 4H1001 | Fitting tool for attaching filler profiles |
| Tool C | 4H1010 | Mitering scissors for profile cutting |

**Material:**

Self-adhesive profile made of EPDM cellular rubber with closed cells.

Notes, Tests:

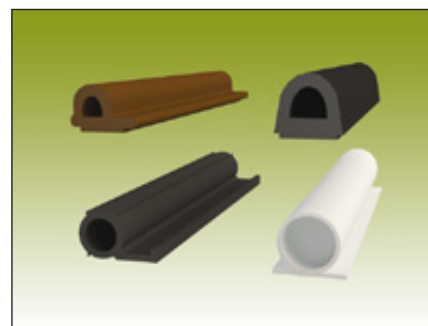
"MTK 9024" indicates that the product is approved for use when mounting insulated glass.

EPDM self-adhesive E-profiles in VDI 6022-quality are also available in the table below. Products marked with * are available on request only.

The adhesive is intended as an assembling aid. The profile should be kept under mechanical pressure between door and frame to stay in position. The sealing profiles are available with permanent adhesive upon request.

E-Profiles and M-Profiles

| Drawing | P/N | Description | Approval | Colour | Dim. W X H | Coil size | Length / carton |
|-----------|------------|-----------------|----------|-----------|------------|-----------|-----------------|
| | 4504011 | M-profile, flat | MTK 9024 | Black | 8 x 2 mm | 200 m | 1200 m |
| | 4504022 | M-profile, flat | MTK 9024 | White | 8 x 2 mm | 200 m | 1200 m |
| | 4504031 | E-profile | MTK 9024 | Black | 9 x 3 mm | 150 m | 900 m |
| | 4504042 | E-profile | MTK 9024 | White | 9 x 3 mm | 150 m | 900 m |
| | 4504051 | E-profile | MTK 9024 | Black | 9 x 4 mm | 125 m | 750 m |
| | 4504062 | E-profile | MTK 9024 | White | 9 x 4 mm | 125 m | 750 m |
| | 4504071 | E-profile | MTK 9024 | Black | 10 x 4 mm | 100 m | 600 m |
| | 4504081 | E-profile | MTK 9024 | Black | 10 x 5 mm | 100 m | 600 m |
| | 4504092 | E-profile | MTK 9024 | White | 10 x 5 mm | 100 m | 600 m |
| | 4504101 | E-profile | - | Black | 15 x 8 mm | 50 m | 300 m |
| | 4504111 | E-profile | MTK 9024 | Black | 10 x 6 mm | 100 m | 600 m |
| | 4504121 | E-profile | MTK 9024 | Black | 15 x 4 mm | 100 m | 600 m |
| | 4504132 | E-profile | MTK 9024 | White | 15 x 4 mm | 100 m | 600 m |
| | 4504142 | E-profile | - | White | 15 x 8 mm | 50 m | 300 m |
| | 4504151 | E-profile* | MTK 9024 | Black | 20 x 4 mm | 50 m | 300 m |
| | 4504121-0 | E-profile* | VDI 6022 | Black | 15 x 4 mm | 100 m | 600 m |
| 4504151-0 | E-profile* | VDI 6022 | Black | 20 x 4 mm | 50 m | 300 m | |



Notes, Tests:







The profiles should be kept under mechanical pressure between door and frame to stay in position. The sealing profiles are available with permanent adhesive upon request.

Products marked with * are available on request only.

Sealing profile of EPDM foam with self-adhesive backing. This type of profile is available as P- and D-profile. The EPDM P-profile is also available for stapling to wooden frames (see table).

We can also offer P, O, and Omega-profiles from silicone, suitable for demanding environments as it has a lifespan of more than 10 years. The silicone profile is glued using glass silicone. The dust profile from polyurethane is self-adhesive and suitable for double glazed windows.

Sealing profiles

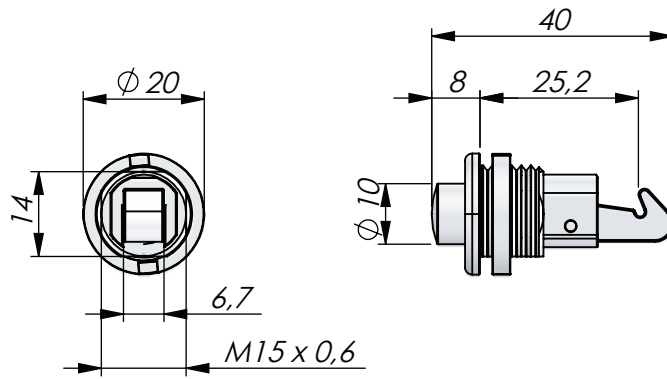
| Drawing | P/N | Description | Colour | Material | Dim. W x H | Length / roll | Length / Carton |
|---|-----------|--------------------------|--------|--------------|--------------|---------------|-----------------|
|  | 4501104 | P-profile, self-adhesive | Brown | EPDM | 9,5 x 5,5 mm | 100 m | 600 m |
| | 4505012 | P-profile, self-adhesive | White | EPDM | 9,5 x 5,5 mm | 100 m | 600 m |
|  | 4505112 | D-profile, self-adhesive | White | EPDM | 9 x 7,5 mm | 100 m | 600 m |
| | 4505121 | D-profile, self-adhesive | Black | EPDM | 9 x 7,5 mm | 100 m | 600 m |
| | 4505181 | D-profile, self-adhesive | Black | EPDM | 12 x 10 mm | 100 m | 600 m |
| | 4505141 | D-profile, self-adhesive | Black | EPDM | 14 x 12 mm | 50 m | 200 m |
|  | 4505021 | P-profile for stapling | Black | EPDM | 12 x 7,5 mm | 400 m | - |
| | 4505031 | P-profile for stapling | Black | EPDM | 10 x 5,5 mm | 500 m | - |
| | 4505052 * | P-profile for gluing | White | Silicone | 12 x 7 mm | 100 m | 600 m |
|  | 4505062 * | P-profile for gluing | White | Silicone | 10 x 5,5 mm | 100 m | 600 m |
| | 4505072 | O-profile for gluing | White | Silicone | Ø 7 mm | 100 m | 600 m |
|  | 4505182 * | O-profile for gluing | White | Silicone | Ø 5 mm | 100 m | 600 m |
| | 4505042 | Omega for gluing | White | Silicone | Ø 7 mm | 100 m | 600 m |
|  | 4505102 | Dust profile | White | Polyurethane | 9 x 6 mm | 240 m | 1 440 m |



ACCESSORIES, MISCELLANEOUS

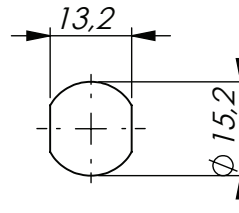
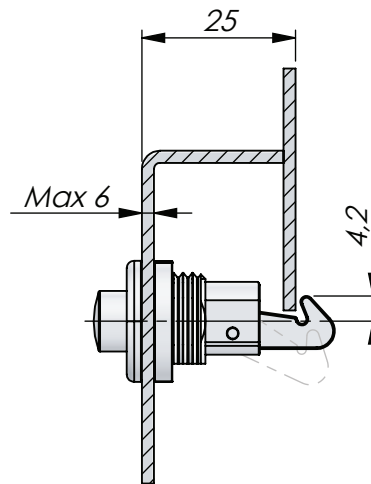
| | | |
|---------------------------------|---|---------------|
| Spring-loaded push button latch |  | 5-020 |
| Spring-loaded slam latches |  | 5-030 – 5-061 |
| Telescopic cover support |  | 5-080 |
| Cover stay |  | 5-090 |
| Door retainer |  | 5-100 |
| Grab handles |  | 5-160 – 5-181 |
| Flush grab handles |  | 5-190 – 5-191 |
| Spring-loaded handle |  | 5-195 |
| Grab handle / Handrail |  | 5-200 |
| Bridge clamps |  | 5-212 – 5-213 |
| Drawing pocket |  | 5-220 |
| Inspection windows (VDI 6022) |  | 5-252 – 5-256 |
| Pull-down catches and strikers |  | 5-285 – 5-340 |
| 3D-Intelliclamps™ |  | 5-400 – 5-401 |

5



Material:

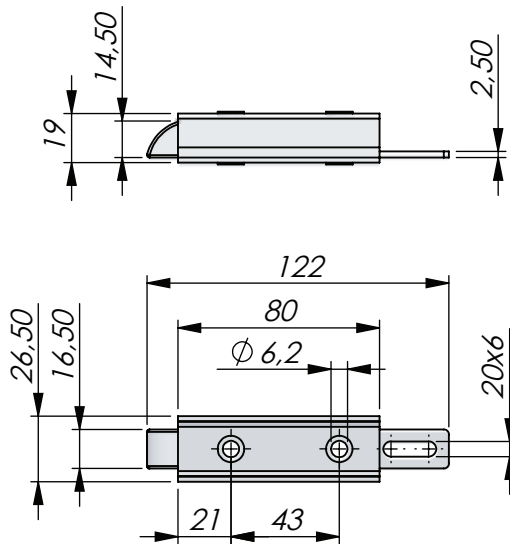
- Latch: Zinc die-cast, chrome plated.
- Spring: Stainless steel.



Spring loaded push button latch. Open by pushing the button, slam-latch action to close. Supplied with nut.

Spring Loaded Push Button Latch

| P/N | Description |
|--------|-------------------|
| 521301 | Push button latch |



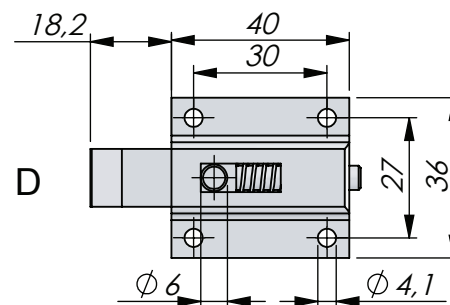
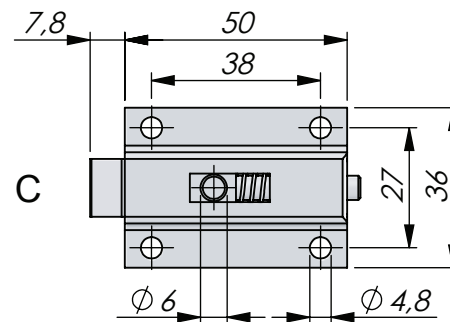
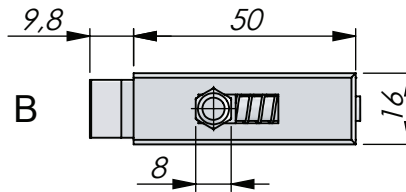
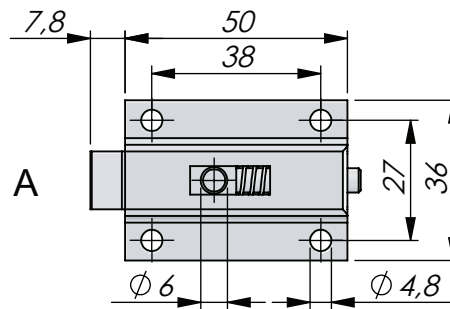
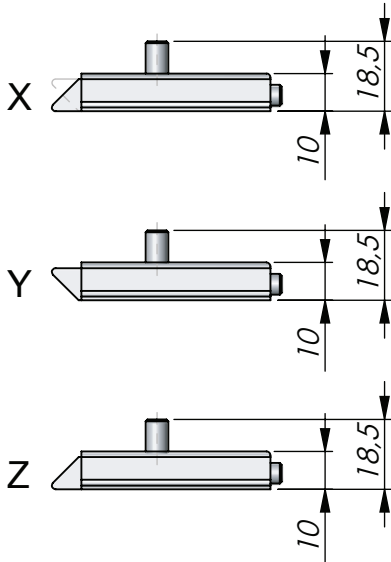
Material:

- Steel, zinc plated.

Spring loaded cam allows slam-latch action. For use with rod latch systems. Stroke 12,5 mm. Screw mounted.

Spring Loaded Slam-Latch

| P/N | Description |
|--------|--------------------------|
| 522002 | Spring loaded slam latch |



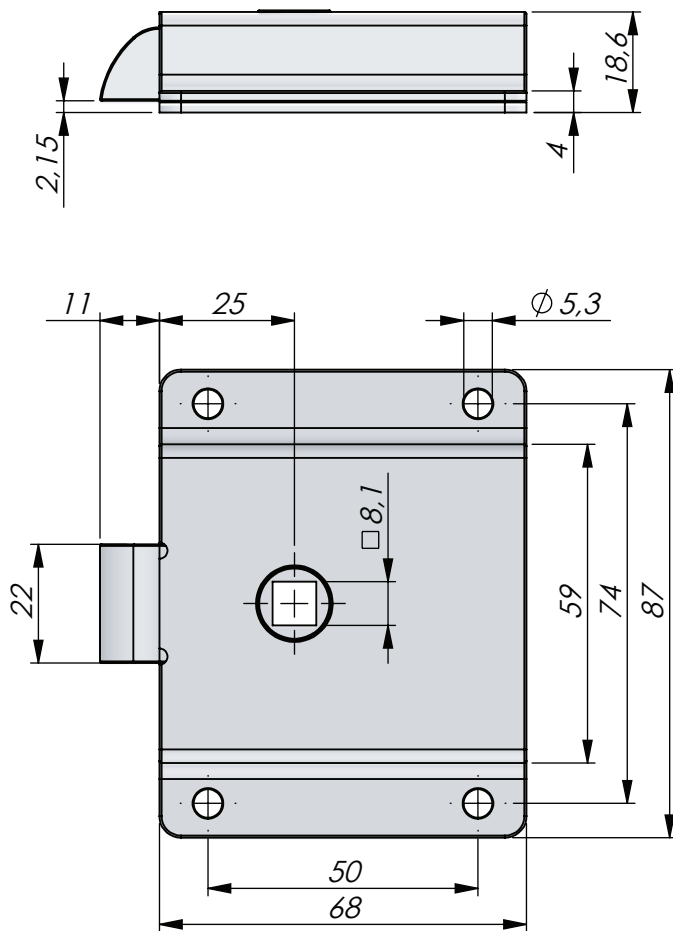
Material:

- Housing: Steel, zinc plated or unplated.
- Cam: Zinc die-cast or steel, zinc plated.

Spring loaded cam for manual operation, allows slam-latch action. Fixed (Y or Z) or turnable (X) cam. Stroke 7,8 - 12 mm. Screw or weld-on mounting.
 * = Weld-on version supplied unplated.

Spring Loaded Slam-Latch

| P/N | Cam | Description - mounting | Stroke | Cam type | Cam length | Drawing |
|--------|-------|------------------------|--------|----------|------------|---------|
| 522101 | Zinc | Screw | 7,8 mm | Z | 7,8 mm | A |
| 522102 | Zinc | Screw | 7,8 mm | Y | 7,8 mm | A |
| 522103 | Zinc | Weld-on * | 9,8 mm | X | 9,8 mm | B |
| 522105 | Steel | Weld-on * | 9,8 mm | X | 9,8 mm | B |
| 522106 | Steel | Screw | 7,8 mm | X | 7,8 mm | C |
| 522107 | Zinc | Screw | 7,8 mm | Z | 18,2 mm | C |
| 522108 | Zinc | Screw | 12 mm | Y | 18,2 mm | D |



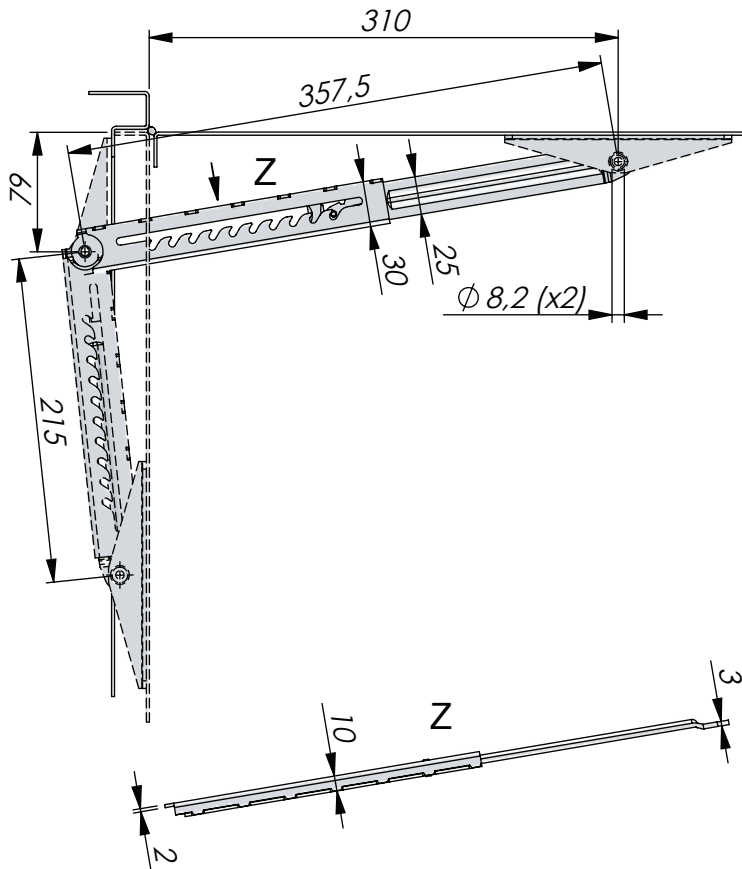
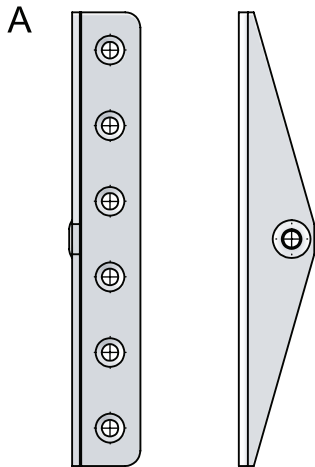
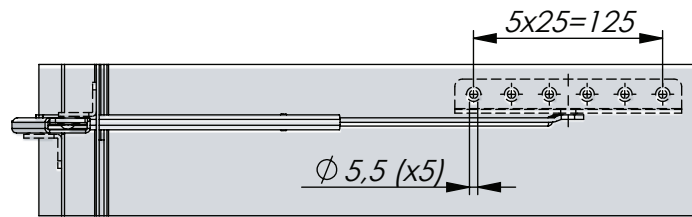
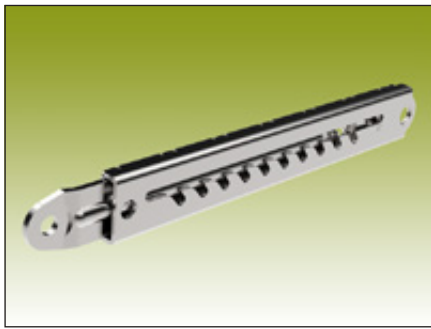
Material:

- Housing: Steel, zinc plated.
- Cam: Zinc die-cast, zinc plated.

Spring loaded slam-latch for doors and panels. Can be opened with an axle 8 mm square or using the key in the table.

Spring Loaded Slam-Latch

| P/N | Description |
|--------|-------------|
| 522112 | Slam-latch |
| 291141 | Key |



Material:

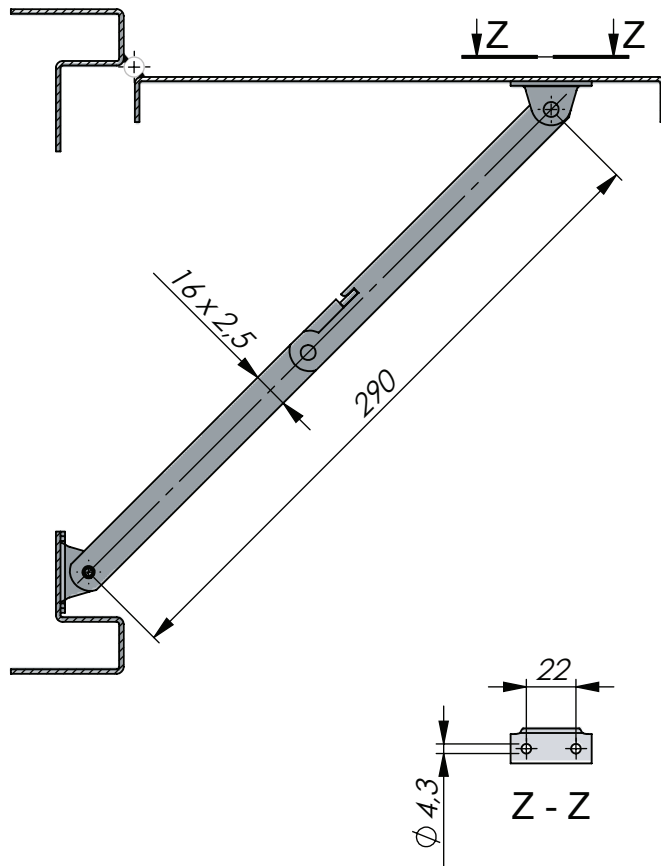
- Cover support, mounting bracket and bushings: Steel, zinc plated.

Telescopic cover support. The cover support keeps the door open at several positions. To close the door or panel, simply open it to its maximum open position and the cover support will unlock and slide back to the closed position. Universal left and right mounting.

Optional items are mounting bracket (drawing A) and bushing (drawing B) and must be ordered separately. The bushings are placed in the two mounting holes and will reduce friction and prevent wear on the cover support. The bushings may be used with or without the mounting bracket.

Telescopic Cover Support

| P/N | Description |
|----------|--|
| 552304 | Cover support |
| 55230401 | Mounting bracket (Drawing A) |
| 552304-1 | Bushing (Drawing B). Order two pcs per Cover Support |



Material:

- Steel, nickel plated.

Cover stay in left or right version. Screw-on or weld-on mounting. Other lengths can be supplied on request. Supplied with mounting brackets.

Cover Stay

| P/N | Description |
|--------|-----------------------|
| 552802 | Right version (shown) |
| 552803 | Left version |

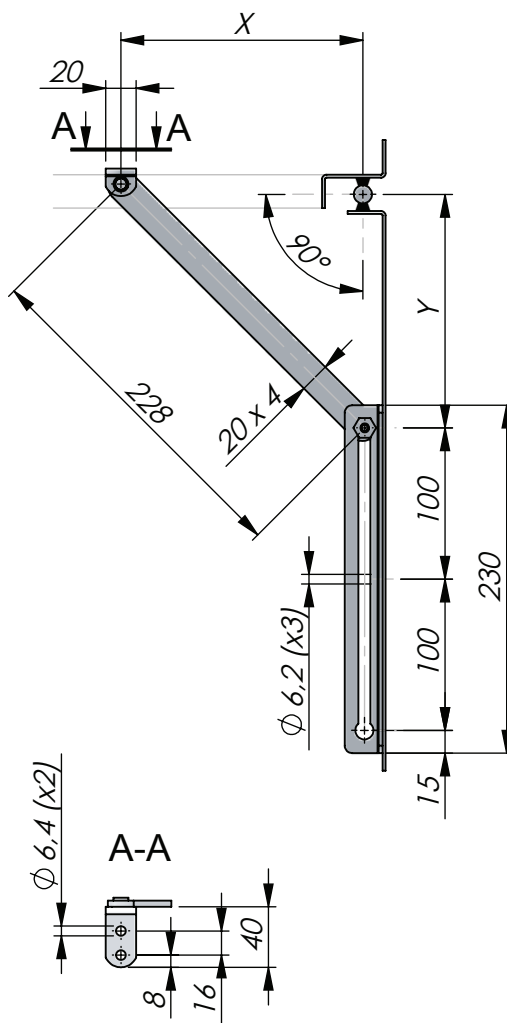


Material:

- Steel, zinc plated or black coated.

References, Accessories:

Stainless version: Page 6-600.



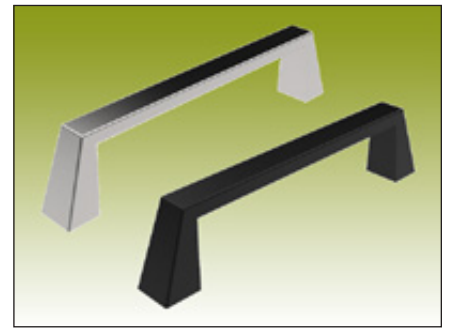
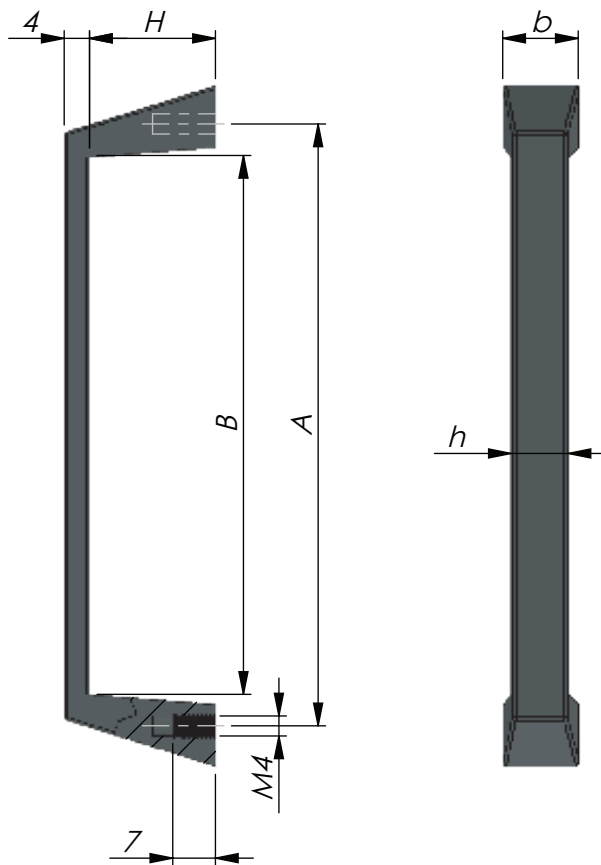
Heavy-duty door retainer. Automatically locks the door in the wide open position. Universal left or right mounting. Screw-on mounting.

Specifications

| Description - opening angle | X=mm | Y=mm | Min. door width |
|-----------------------------|------|------|-----------------|
| 90° | 140 | 180 | 403 mm |
| 105° | 120 | 166 | 389 mm |
| 120° | 110 | 150 | 373 mm |
| 135° | 100 | 146 | 369 mm |

Door Retainer

| P/N | Description - material | Surface treatment |
|--------|------------------------|-------------------|
| 542104 | Steel | Zinc plated |
| 542504 | Steel | Black |



Material:

- Zinc die-cast, chrome plated or black coated.

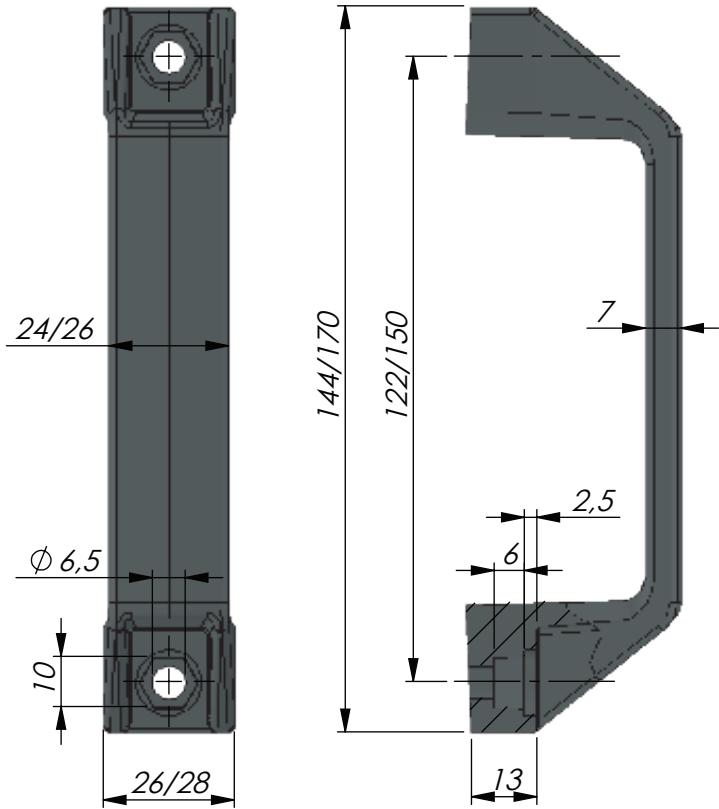
Notes, Tests:

Supplied without M4 mounting screws.

Grab handle for screw mounting from the inside. Supplied without M4 mounting screws.

Grab Handle

| P/N | Description - Surface treatment | A | B | b | H | h |
|--------|---------------------------------|------|------|------|------|-----|
| 571301 | Chrome | 95,5 | 85,0 | 12,0 | 20,0 | 8,5 |
| 571302 | Chrome | 81,0 | 72,0 | 11,0 | 18,0 | 8,0 |
| 571501 | Black | 95,5 | 85,0 | 12,0 | 20,0 | 8,5 |
| 571502 | Black | 81,0 | 72,0 | 11,0 | 18,0 | 8,0 |



Material:

- Glass fibre reinforced polyamide (PA6GF30), black.

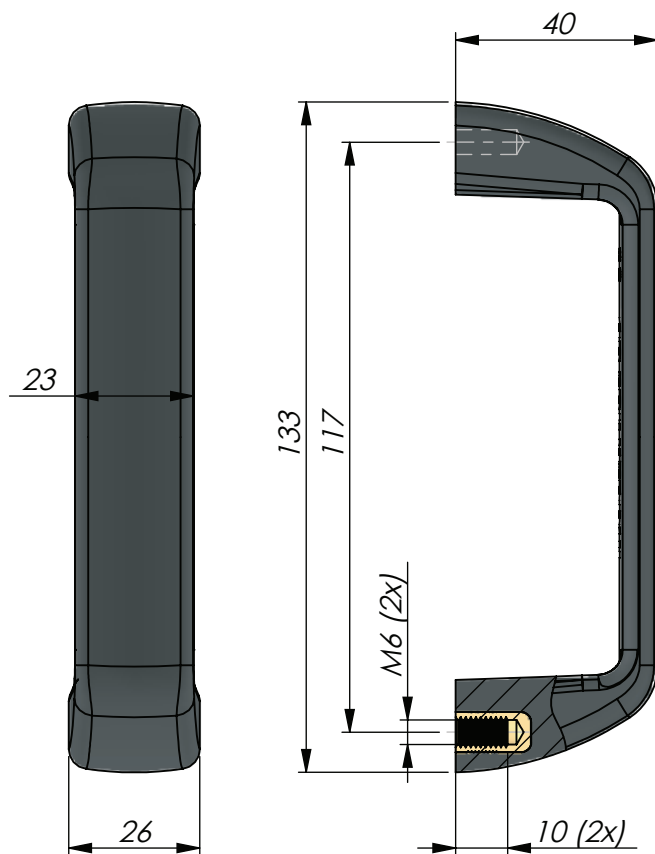
Notes, Tests:

Supplied without screws and nuts.
Cover plugs to be ordered separately.
Other colours on request.

Grab handle to be mounted from the outside by using screws, or mounted from the inside by using screws and hexagon nuts in the recessed holes in the handle.

Grab Handle

| P/N | Description | C/C |
|-----------|--------------------|-----|
| 575033 | Grab handle | 122 |
| 575035 | Grab handle | 150 |
| 575033-01 | Cover plug (black) | - |



Material:

- Handle: Glass fibre reinforced Polyamide (PA6GF30), black.
- Insert: Brass.

Notes, Tests:

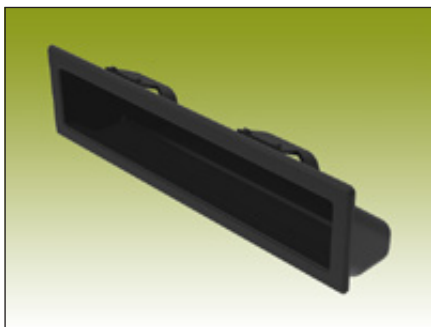
Supplied without M6-mounting screws.

Other colours on request.

Grab handle with cast-in brass M6-inserts for screw mounting from the inside.

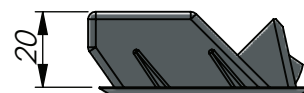
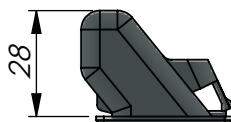
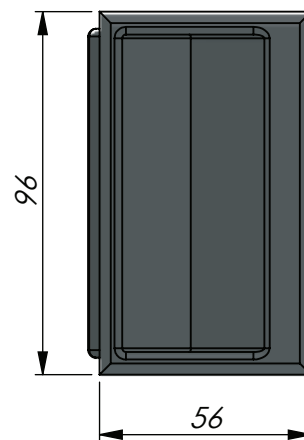
Grab Handle

| P/N | Description | C/C |
|--------|-------------|-----|
| 575037 | Grab handle | 117 |



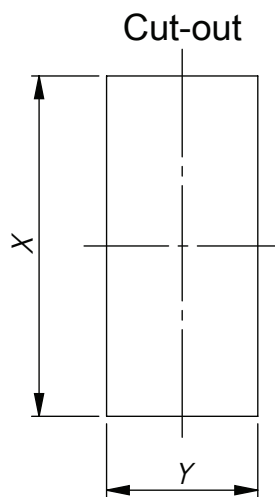
Material:

- Glass fibre reinforced polyamide (PA6GF30), black.



576050

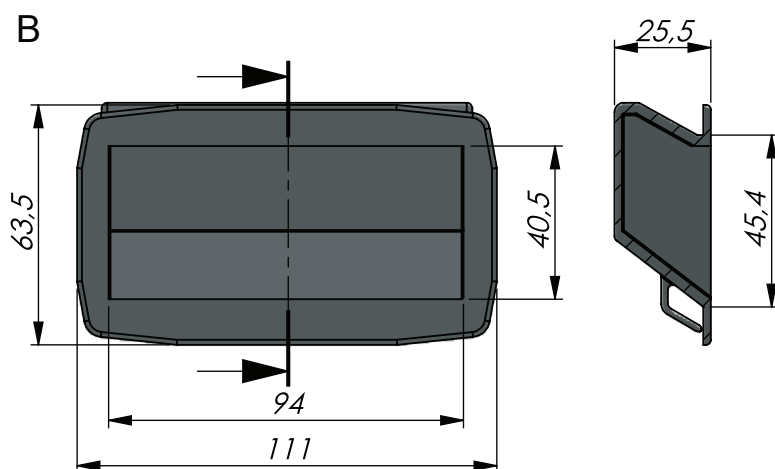
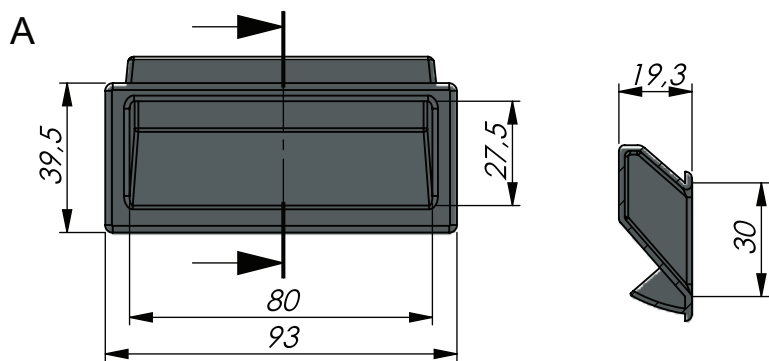
576051



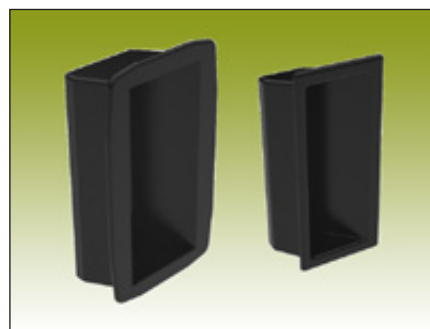
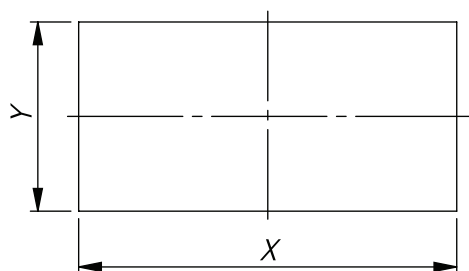
Grab handle for clip-in mounting.
T = Door thickness in millimeters.

Flush Grab Handle

| P/N | Description | T | X | Y |
|--------|-------------------|---------|-----|------|
| 576050 | Flush grab handle | 0,8-1,2 | 132 | 30,7 |
| | | 1,2-1,5 | 132 | 31,7 |
| 576051 | Flush grab handle | 1,0 | 90 | 49,5 |



Cut-out



Material:

- Glass fibre reinforced polyamide (PA6GF30), black.

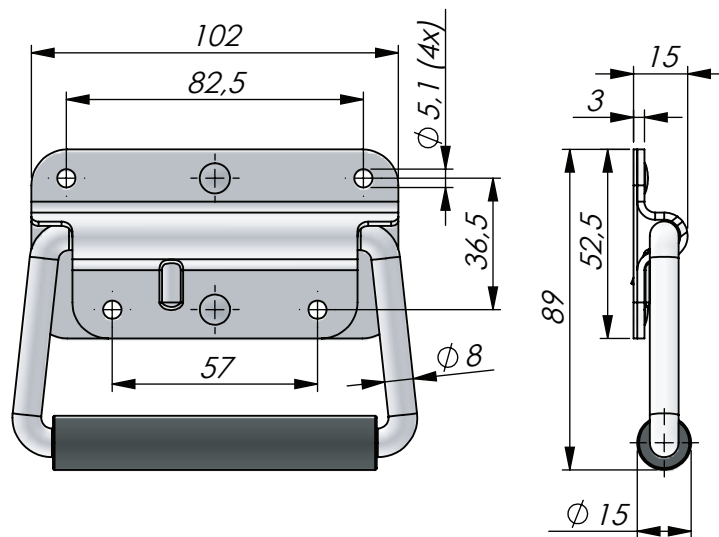
Notes, Tests:

Other colors upon request.

Grab handles for clip-in mounting.
T = Door thickness in millimeters.

Flush Grab Handle

| P/N | Description | T | X | Y | Drawing |
|-----------|---------------------------------|--------------|----|-----|---------|
| 575004 | Flush grab handle - rectangular | 0,8 - 1,6 mm | 36 | 85 | A |
| 575005-01 | Flush grab handle - rounded | 0,8 - 1,2 mm | 50 | 100 | B |
| 575005-02 | Flush grab handle - rounded | 1,2 - 1,6 mm | 50 | 100 | B |

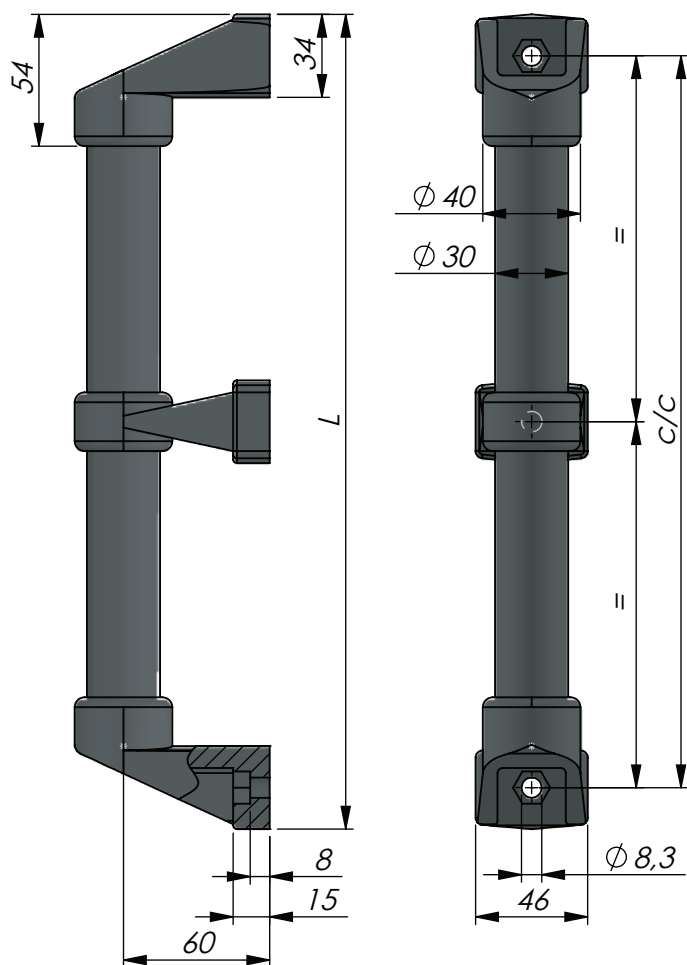
**Material:**

- Inner plate: Stainless steel.
- Outer plate and handle: Steel, zinc plated.
- Grip: PVC.

Spring loaded surface mounted handle. Folds out during use and it will spring back to flush position when released. Handle part is covered with durable PVC.

Spring Loaded Handle

| P/N | Description |
|--------|----------------------|
| 572103 | Spring loaded handle |



Material:

- Tube Ø 30 x 1,5 mm: Steel with PVC-coating, black.
- End piece and center support: Polyamide (PA6GF30) black.

Can be used as a handrail or a grab handle. Various lengths are available. Two end pieces and one steel tube is used to create a complete unit. Steel tube lengths from 466 mm or longer should also have one or more center support(s). The center- and end pieces can be fastened in a variety of ways using hexagonal socket head cap screws, hexagonal screws or countersunk screws.

Grab Handle / Handrail

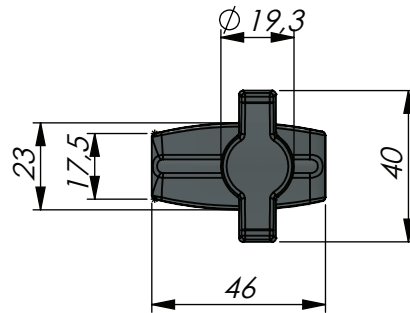
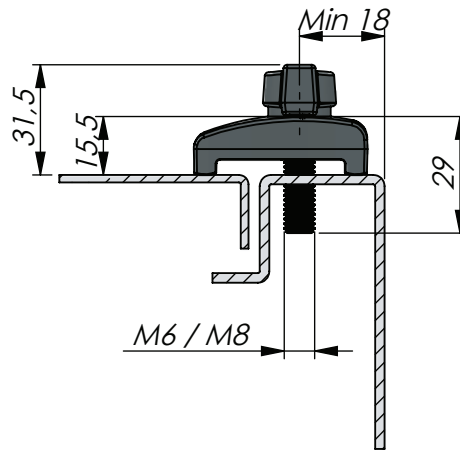
| P/N | Description | Hole distance (C / C) in mm | Total Length L in mm |
|----------|----------------|-----------------------------|----------------------|
| 575040 | End piece | - | - |
| 575043 | Center support | - | - |
| 575040-1 | Steel tube | 300 | 334 |
| 575040-2 | Steel tube | 400 | 434 |
| 575040-3 | Steel tube | 500 | 534 |
| 575040-4 | Steel tube | 600 | 634 |
| 575040-5 | Steel tube | 700 | 734 |
| 575040-6 | Steel tube | 800 | 834 |
| 57504001 | Steel tube | - | 2568 |





Material:

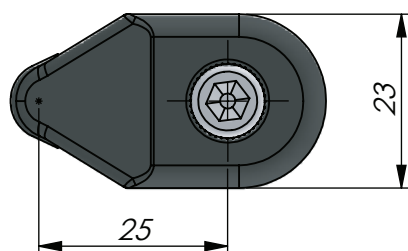
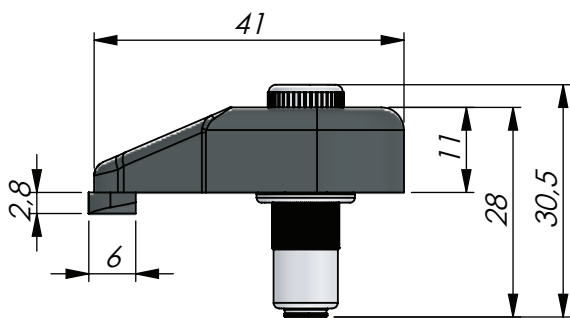
- Bridge clamp: Glass fibre reinforced polyamide (PA6GF30), black.
- Wing knob: Polyamide (PA6GF30), black and steel, zinc plated.



Bridge clamp for closing doors and panels. Available in two versions: with M8- or M6-threaded wing knob (see table).

Bridge Clamp with Wing Knob

| P/N | Description |
|----------|----------------------------|
| 595000-6 | Bridge clamp with M6 screw |
| 595000-8 | Bridge clamp with M8 screw |



Material:

- Bridge clamp: Glass fibre reinforced polyamide (PA6GF30), black.
- Mounting hardware: Steel, zinc plated.

Bridge clamp for closing doors and panels. Tighten the screw using a 5 mm hexagon key (Allen key). The key is not included.

The supplied press nut (also called "blind nut" or "pop nut") fits in a 9 mm hole in max 3 mm sheet metal thickness. It is fixed in position with a standard blind nut rivet tool.

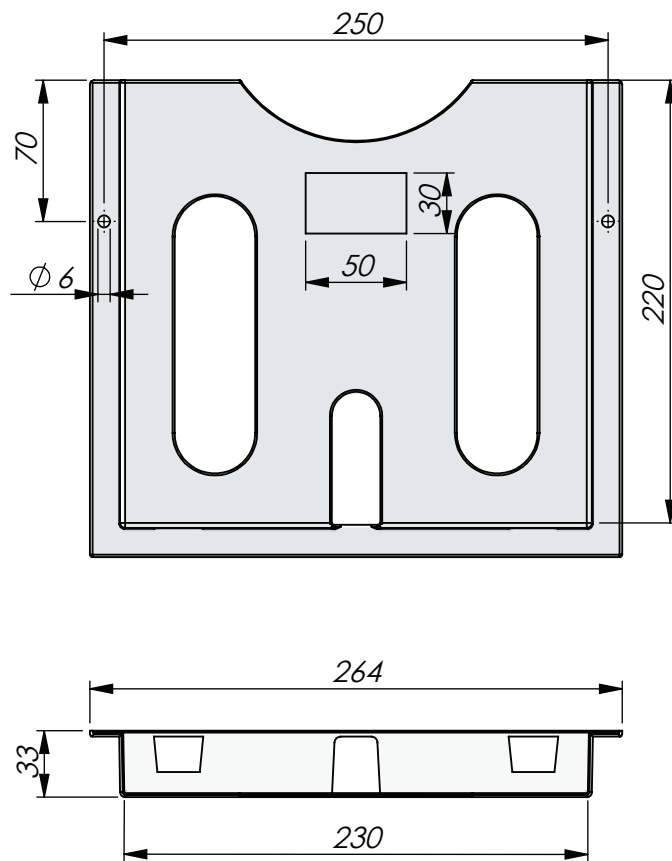
Bridge Clamp

| P/N | Description |
|--------|---|
| 595001 | Bridge clamp with hexagon screw for 5 mm hexagon key. |



cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





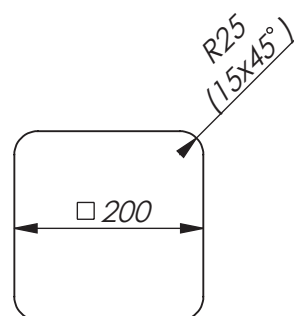
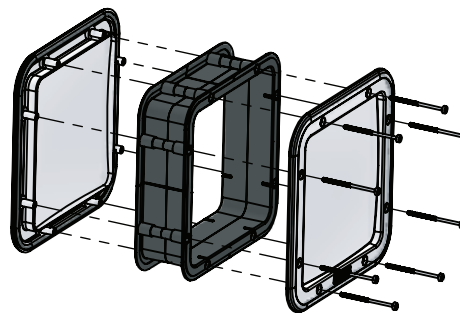
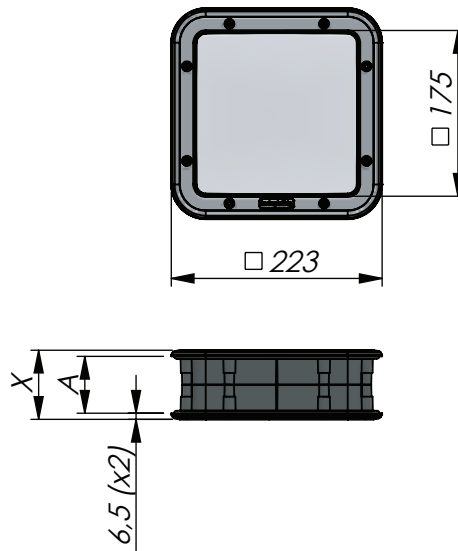
Material:

- Polystyrene, grey.

Drawing pocket for A4-documents. Self-adhesive - or mounted with screws through 6 mm holes. Made from impact resistant plastic. Standard colour is grey. Imprinted company logotype, as well as other colours, are available on request.

Drawing Pocket

| P/N | Description |
|--------|----------------|
| 566005 | Drawing pocket |



Material:

- Windows: Polycarbonate/Macrolone 6555, crystal clear and impact resistant. Approved according to VDI 6022, sheet 1 (04/2006) for microbiologically inert material. UL94V resistant.
- Spacer: Black ABS.
- Sealing: Foam rubber, EPDM.
- Screws: Stainless steel (304).

Notes, Tests:

Sealed according to L1 DIN EN 1886.

Inspection windows for other door thicknesses upon request.

Customer logo may be included upon request.

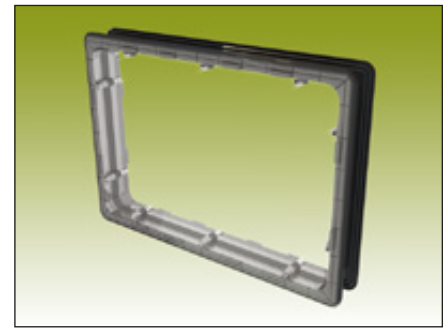
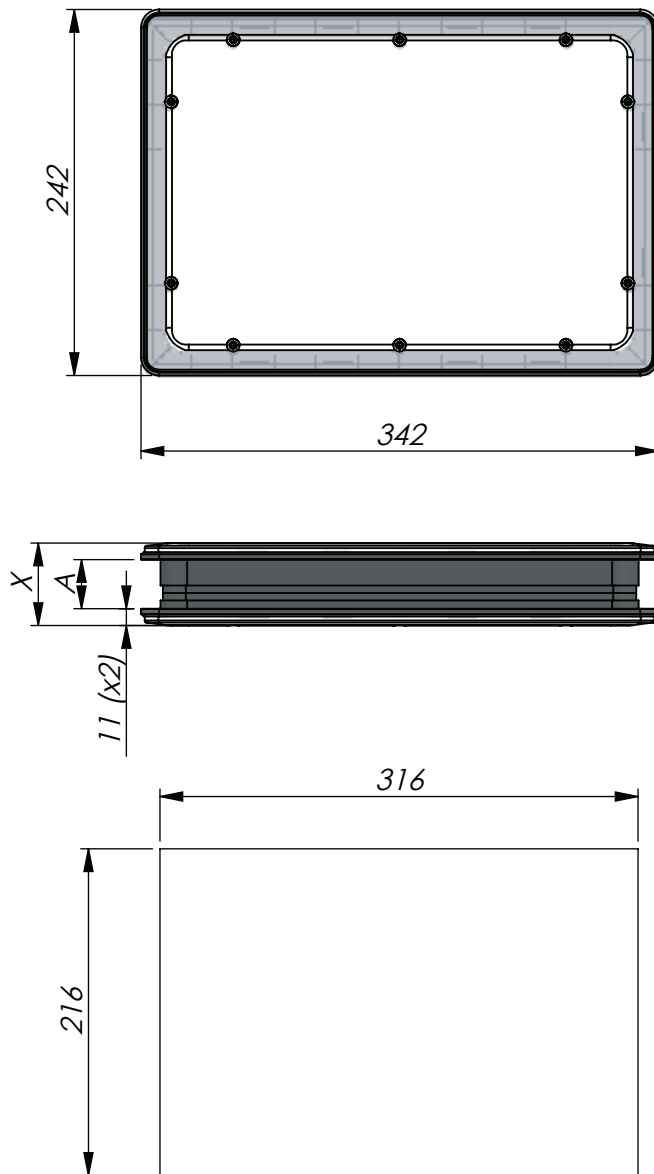
Door thickness tolerance: ± 2 mm.

Square inspection window in transparent, impact-resistant polycarbonate. Intended for HVAC-applications using insulated or double-skinned doors. Used for visual control of processes while the unit is in full operation. The window is equipped with an integrated gasket and is suitable for units with positive or negative pressure. Simple mounting using eight self-tapping stainless screws from one side only.

No fastening hardware on the inside ensure perfect thermal breakage. Mounting screws are included.

Square Inspection Window

| P/N | Description - measurements | Door thickness A in mm | X in mm |
|-----------|----------------------------|------------------------|---------|
| 506002-40 | 223 x 223 mm | 40 mm \pm 2 mm | 53 mm |
| 506002-50 | 223 x 223 mm | 50 mm \pm 2 mm | 63 mm |
| 506002-60 | 223 x 223 mm | 60 mm \pm 2 mm | 73 mm |



Material:

- Windows: Polycarbonate.
- Spacer: Polystyrene.
- Sealing: PVC.
- Screws: Steel, zinc plated.

Notes, Tests:

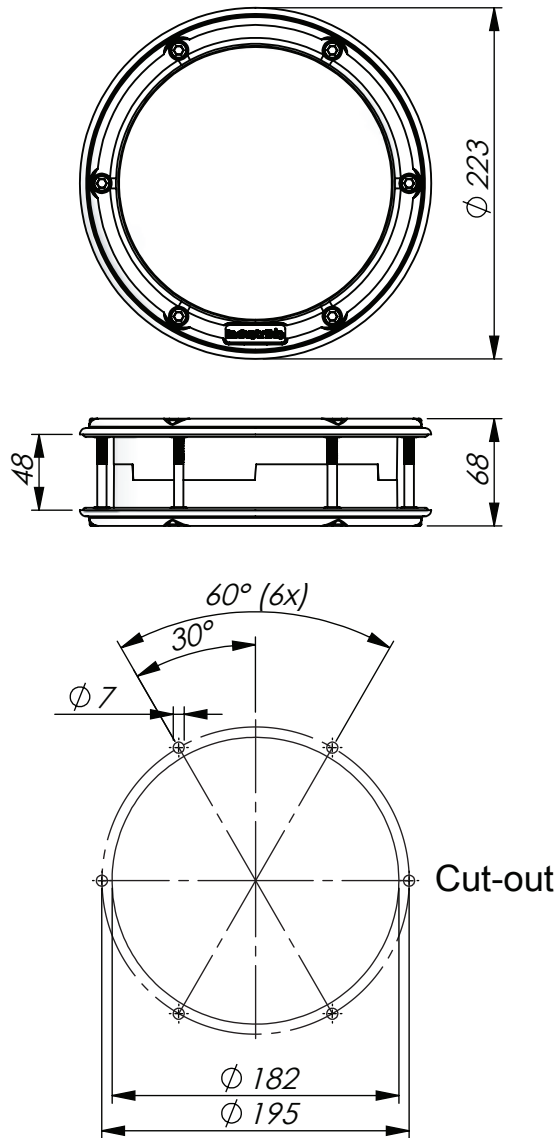
Inspection windows for other door thickness upon request.

Tolerance for door thickness: $\pm 2,5$ mm.

Rectangular inspection window in transparent polycarbonate. Intended for HVAC-applications using insulated doors. Used for visual control of processes while the unit is in full operation. The window is equipped with gaskets on both sides and is suitable for units with positive or negative pressure. Simple mounting using ten self-tapping screws from one side only. Mounting screws are included with the product.

Rectangular Inspection Window

| P/N | Description - size in mm | Door thickness A in mm | X in mm |
|-----------|--------------------------|------------------------|---------|
| 505005-30 | 242 x 342 | 30 \pm 2,5 | 52 |
| 505005-40 | 242 x 342 | 40 \pm 2,5 | 62 |
| 505005-50 | 242 x 342 | 50 \pm 2,5 | 72 |
| 505005-60 | 242 x 342 | 60 \pm 2,5 | 82 |



Material:

- Windows: Polycarbonate/Macrolone 6555, crystal clear and impact resistant. Approved according to VDI 6022, sheet 1 (04/2006) for microbiologically inert material.
- Sealing: Foamed PUR-gasket (polyurethane).
- Screws and nuts: Stainless steel (304).

Notes, Tests:

Customer logo may be included upon request.

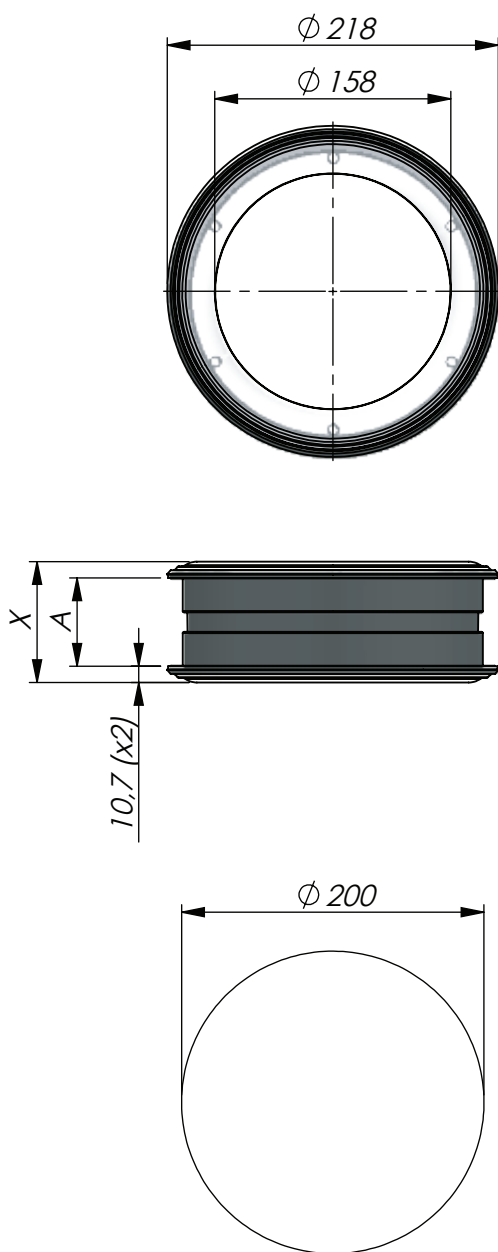
Door thickness tolerance: ± 2 mm.

Circular inspection window in transparent, impact-resistant polycarbonate. Intended for HVAC-applications using insulated doors. Used for visual control of processes while the unit is in full operation. The window is equipped with an integrated PUR-gasket and is suitable for units with positive or negative pressure. The circular window is supplied as two halves that are assembled in a door with a 182 mm diameter round hole. Simple mounting using 6 pcs M6 x 60 mm stainless bolts from one side, and corresponding nuts firmly attached in the other half. Nuts and bolts are included with the product.

Diameter for circular placement of mounting holes: 195 mm.

Circular Inspection Window

| P/N | Description | For door thickness A in mm | X in mm |
|-----------|-------------|----------------------------|---------|
| 506001-48 | Ø 223 mm | 48 ± 2 | 68 |



Material:

- Windows: Polycarbonate.
- Spacer: Polystyrene.
- Sealing: PVC.
- Screws: Steel, zinc plated.

Notes, Tests:

Inspection windows for other door thicknesses upon request.

Tolerance for door thickness: $\pm 2,5$ mm.

Circular inspection window in transparent polycarbonate. Intended for HVAC-applications using insulated doors. Used for visual control of processes while the unit is in full operation. The window is equipped with gaskets on both sides and is suitable for units with positive or negative pressure. Simple mounting using six self-tapping screws from one side only.

Mounting screws are included with the product.

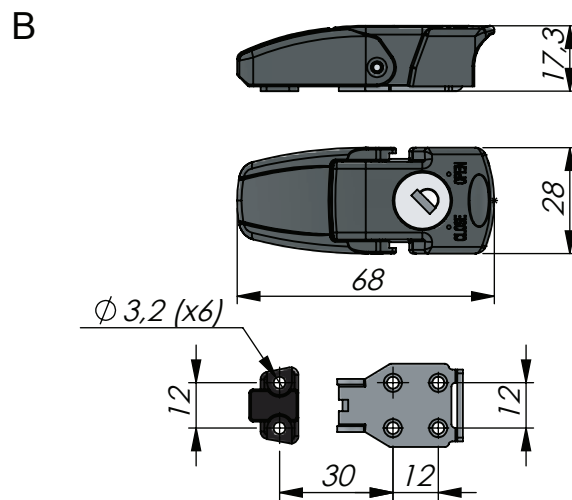
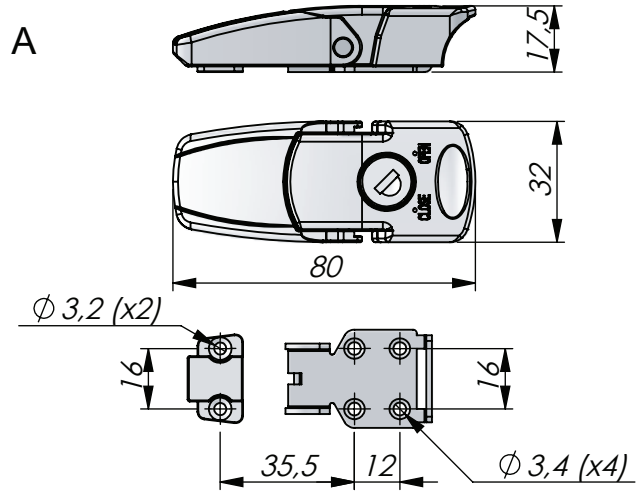
Circular Inspection Window

| P/N | Description | For door thickness A in mm | X in mm |
|-----------|-------------|----------------------------|---------|
| 505006-30 | Ø 218 mm | 30 ± 2,5 mm | 51,4 |
| 505006-40 | Ø 218 mm | 40 ± 2,5 mm | 61,4 |
| 505006-50 | Ø 218 mm | 50 ± 2,5 mm | 71,4 |
| 505006-60 | Ø 218 mm | 60 ± 2,5 mm | 81,4 |



Material:

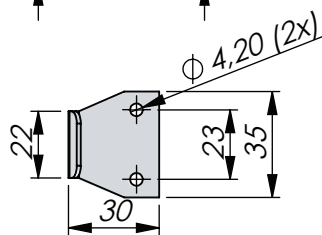
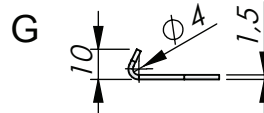
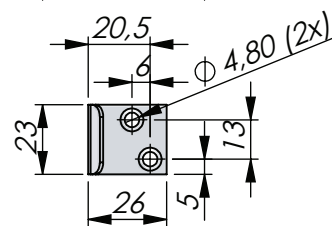
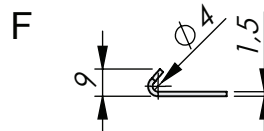
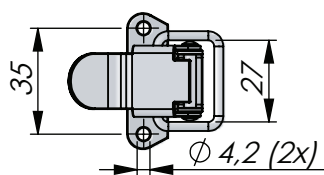
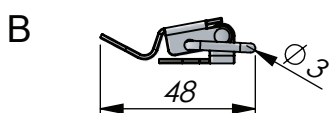
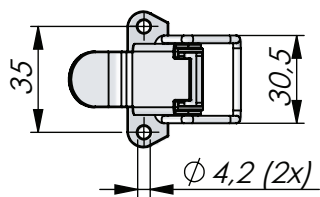
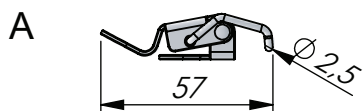
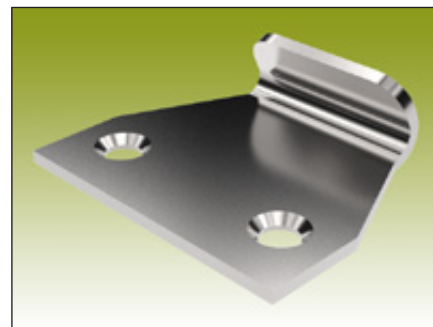
- Pull down catch and striker: Zinc, black powder coated or satin chrome.
- Mounting plate, rivets and spring: Stainless steel.



Pull-down catch with disc tumbler lock. Supplied complete with two keys and one striker. Key rotation 90°. Key extraction: Open/closed.

Pull-Down Catch with Cylinder

| P/N | Description | Locking | Drawing |
|--------|-----------------------------|----------------------------|---------|
| 581301 | Black, small | Keyed alike, cylinder D200 | B |
| 581302 | Black, large | Keyed alike, cylinder D200 | A |
| 581303 | Silver, small, satin chrome | Keyed alike, cylinder D200 | B |
| 581304 | Silver, large, satin chrome | Keyed alike, cylinder D200 | A |



Material:

- Steel, unplated or zinc plated. (See table.)

References, Accessories:

Stainless version: Page 6-700.

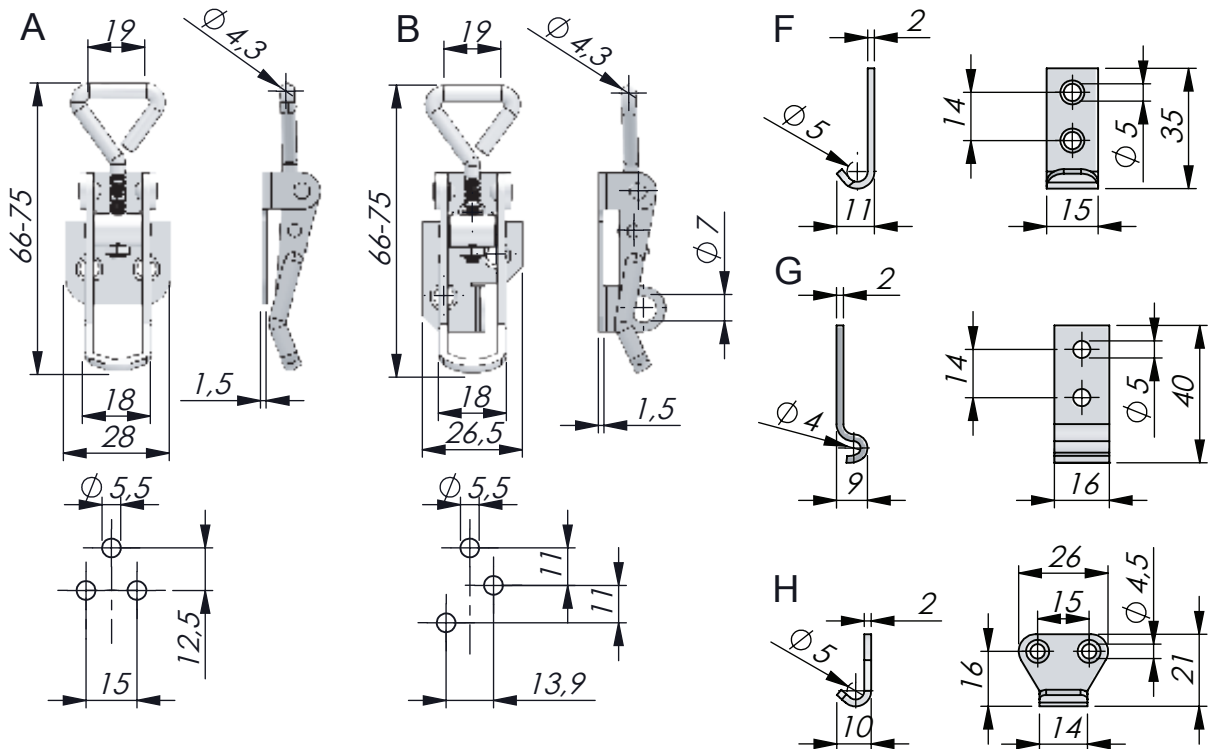
Type A with folded, spring-action catch in stainless steel.
Type B with straight catch in steel.

Pull-Down Catch

| P/N | Description | Surface treatment | Hole pattern | Type |
|--------|-------------|-------------------|--------------|------|
| 580882 | Steel | Zinc plated | 2 x Ø 4,2 | A |
| 580892 | Steel | Zinc plated | 2 x Ø 4,2 | B |

Striker

| P/N | Description | Surface treatment | Hole pattern | Type |
|--------|-------------|-------------------|--------------|------|
| 580011 | Steel | Unplated | - | F |
| 580012 | Steel | Zinc plated | 2 x Ø 4,0 | F |
| 580022 | Steel | Zinc plated | 2 x Ø 4,2 | G |



Material:

- Steel, unplated or zinc plated. (See table.)

References, Accessories:

Stainless version: Page 6-710.

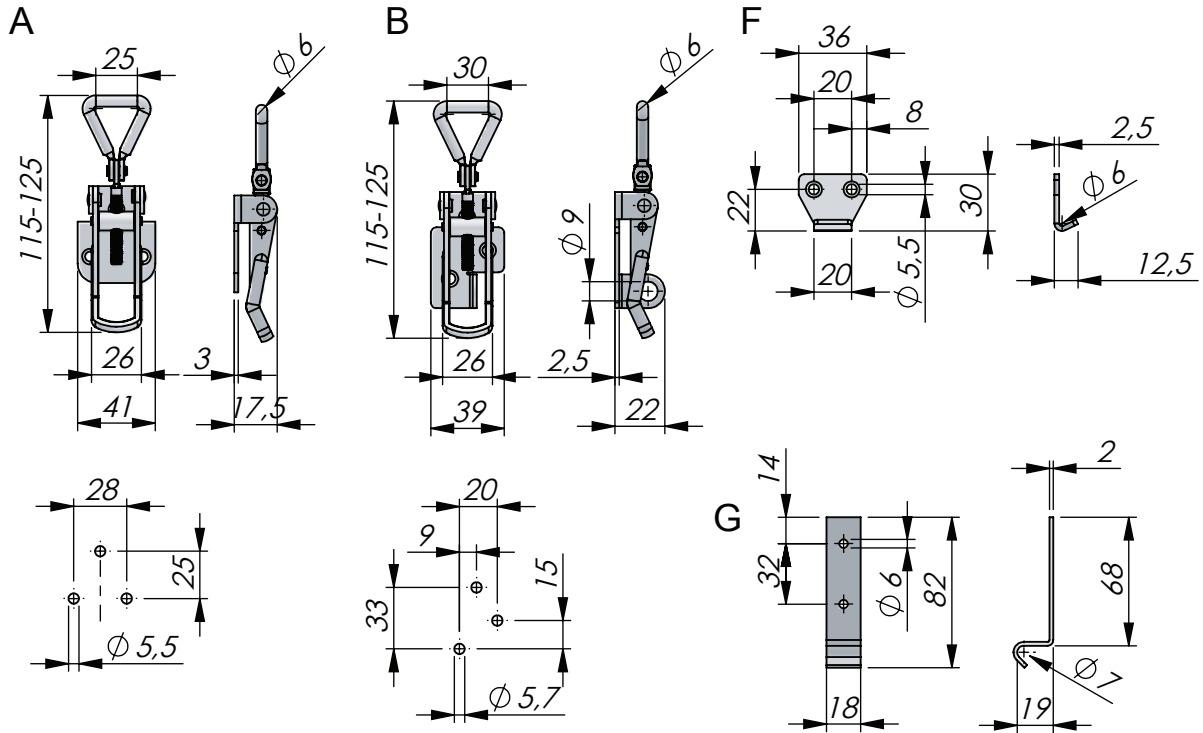
Adjustable catch with M5-thread. Type B is equipped with a padlock eyelet.

Adjustable Pull-Down Catch

| P/N | Material | Surface treatment | Hole pattern | Type |
|--------|----------|-------------------|--------------|------|
| 580901 | Steel | Unplated | - | A |
| 580902 | Steel | Zinc plated | 3 x Ø 5,5 | A |
| 580911 | Steel | Unplated | - | B |
| 580912 | Steel | Zinc plated | 3 x Ø 5,5 | B |

Striker

| P/N | Material | Surface treatment | Hole pattern | Type |
|--------|----------|-------------------|--------------|------|
| 580101 | Steel | Unplated | - | H |
| 580102 | Steel | Zinc plated | 2 x Ø 4,2 | H |
| 580181 | Steel | Unplated | - | F |
| 580182 | Steel | Zinc plated | 2 x Ø 5,0 | F |
| 580192 | Steel | Zinc plated | 2 x Ø 5,0 | G |



Material:

- Steel, unplated or zinc plated.

References, Accessories:

Stainless version: Page 6-720.

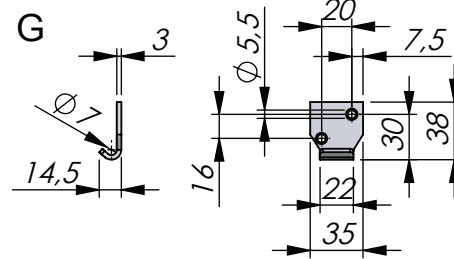
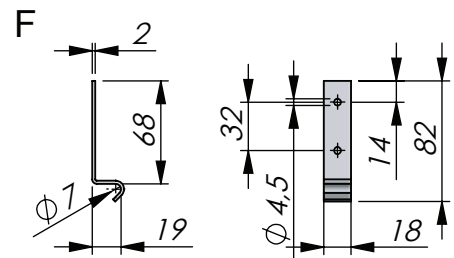
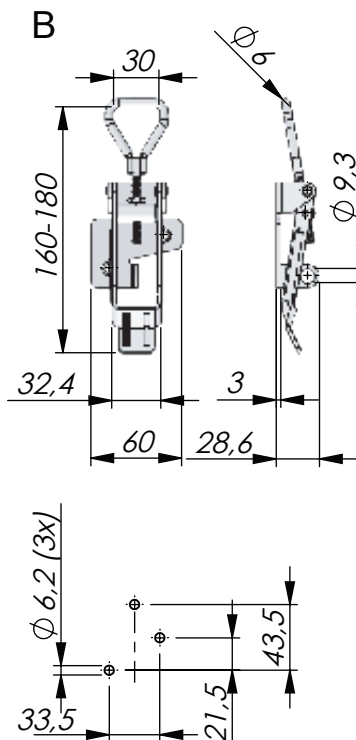
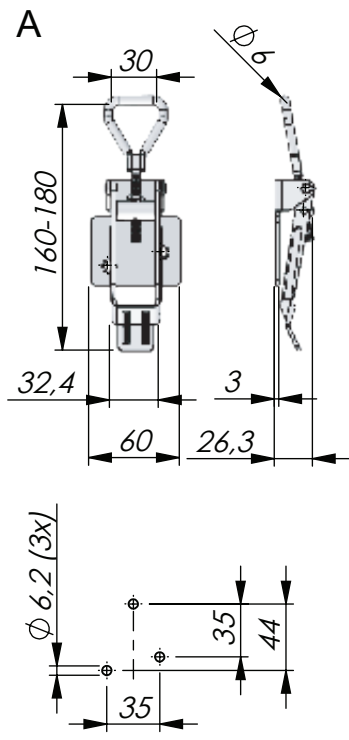
Adjustable catch with M6-thread. Type B is equipped with a padlock eyelet.

Adjustable Pull-Down Catch

| P/N | Material | Surface treatment | Hole pattern | Type |
|--------|----------|-------------------|--------------|------|
| 581042 | Steel | Zinc plated | 3 x Ø 5,5 | A |
| 581051 | Steel | Unplated | - | B |
| 581052 | Steel | Zinc plated | 3 x Ø 5,5 | B |

Striker

| P/N | Material | Surface treatment | Hole pattern | Type |
|--------|----------|-------------------|--------------|------|
| 580112 | Steel | Zinc plated | 2 x Ø 4,5 | G |
| 580391 | Steel | Unplated | - | F |
| 580395 | Steel | Zinc plated | 2 x Ø 5,5 | F |



Material:

- Steel, unplated or zinc plated.

References, Accessories:

Stainless version: Page 6-730.

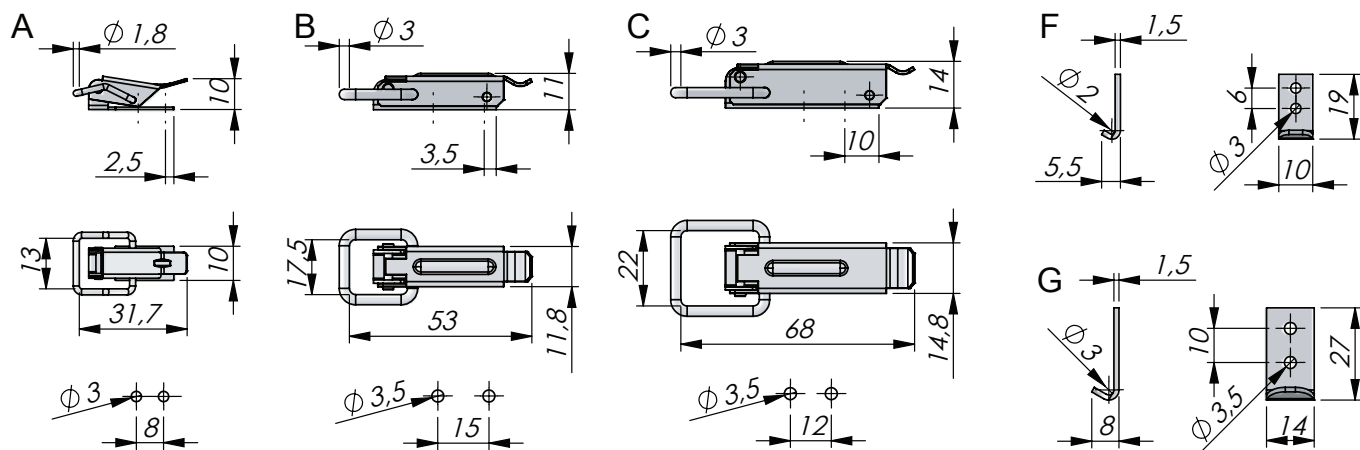
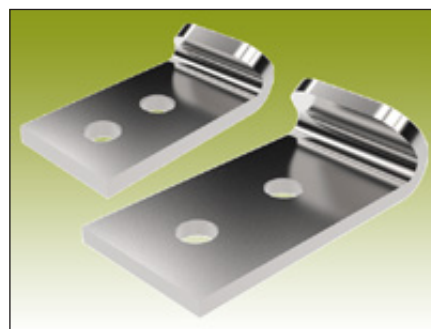
Adjustable catch with M8-thread. Type B is equipped with a padlock eyelet.

Adjustable Pull-Down Catch

| P/N | Material | Surface treatment | Hole pattern | Type |
|--------|----------|-------------------|--------------|------|
| 581062 | Steel | Zinc plated | 3 x Ø 7,0 | A |
| 581071 | Steel | Unplated | - | B |
| 581072 | Steel | Zinc plated | 3 x Ø 7,0 | B |

Striker

| P/N | Material | Surface treatment | Hole pattern | Type |
|--------|----------|-------------------|--------------|------|
| 580112 | Steel | Zinc plated | 2 x Ø 4,5 | F |
| 580141 | Steel | Unplated | - | G |
| 580142 | Steel | Zinc plated | 2 x Ø 5,5 | G |



Material:

- Steel, zinc plated.

References, Accessories:

Stainless version: Page 6-740.

Type A with folded spring-action and catch in hardened steel.
 Type B and C with a straight catch in steel and a $\phi 3$ mm hole for a locking pin.

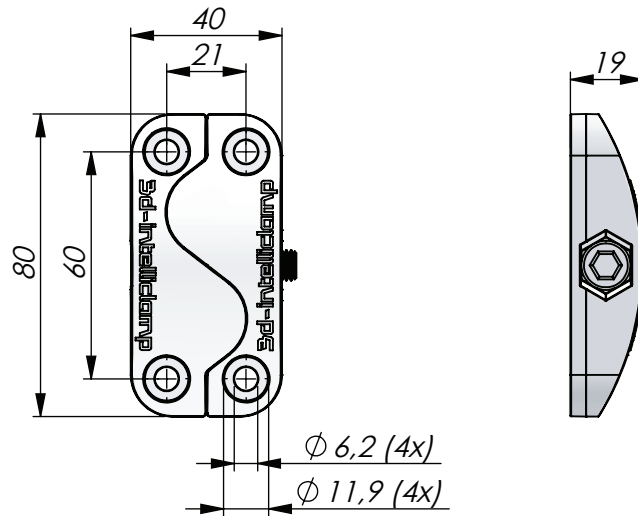
Pull-Down Catch

| P/N | Description - material | Hole pattern | Type |
|--------|------------------------|----------------|------|
| 581192 | Steel | 2 x $\phi 3,0$ | A |
| 581202 | Steel | 2 x $\phi 3,5$ | B |
| 581212 | Steel | 2 x $\phi 3,5$ | C |

Striker

| P/N | Description - material | Hole pattern | Type |
|--------|------------------------|----------------|------|
| 580302 | Steel | 2 x $\phi 3,0$ | F |
| 580312 | Steel | 2 x $\phi 3,5$ | G |



**Material:**

- Interlocking parts: Zinc die-cast, black texture powder coated or zinc plated.
- Through-bolt and nut (M8): Steel, zinc plated.

Notes, Tests:

Tighten the through-bolt using a 6 mm hexagon key (Allen key).

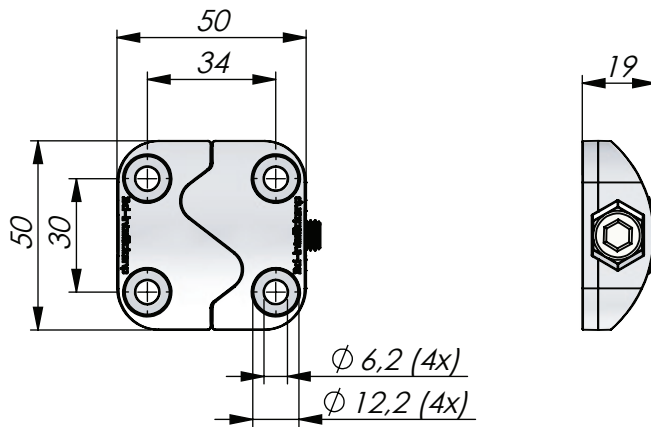
Screws, bolts or rivets for mounting are not included

3D-Intelliclamp™ for connection of sections or units. The 3D-Intelliclamp™ will align separate units in X-, Y- and Z-axis as the through-bolt is tightened. Provides a solid connection with perfect alignment of surfaces. Mounting with rivets or screws.

Each 3D-Intelliclamp™ consists of two interlocking halves, through-bolt and nut.

3D-Intelliclamp™ - Unit Connection System

| P/N | Description | Surface treatment |
|-----------|-----------------------------|-------------------|
| 275015-01 | 3D-Intelliclamp™ 40 x 80 mm | Black coated |
| 275015-02 | 3D-Intelliclamp™ 40 x 80 mm | Zinc plated |



Material:

- Interlocking parts: Zinc die-cast, black texture powder coated or zinc plated.
- Through-bolt and nut (M8): Steel, zinc plated.

Notes, Tests:

Tighten the through-bolt using a 6 mm hexagon key (Allen key).

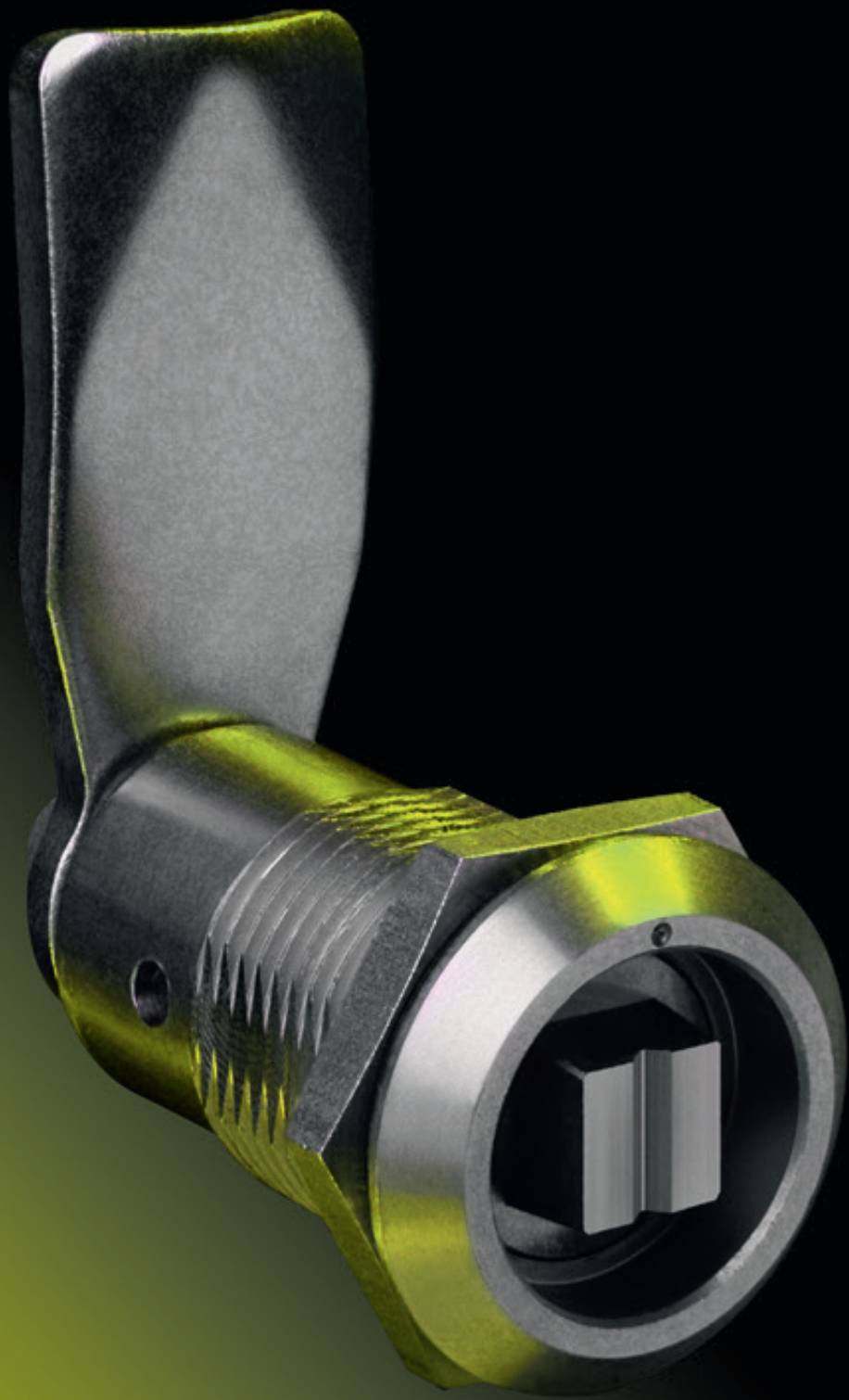
Screws, bolts or rivets for mounting are not included.

3D-Intelliclamp™ for connection of sections or units. The 3D-Intelliclamp™ will align separate units in X-, Y- and Z-axis as the through-bolt is tightened. Provides a solid connection with perfect alignment of surfaces. Mounting with rivets or screws.















Each 3D-Intelliclamp™ consists of two interlocking halves, through-bolt and nut.

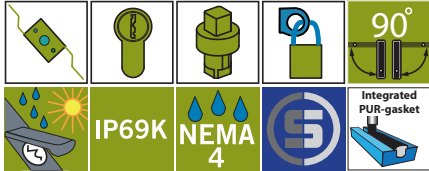
3D-Intelliclamp™ - Unit Connection System

| P/N | Description | Surface treatment |
|-----------|-----------------------------|-------------------|
| 271634-01 | 3D-Intelliclamp™ 50 x 50 mm | Black coated |
| 271134-01 | 3D-Intelliclamp™ 50 x 50 mm | Zinc plated |



STAINLESS STEEL PRODUCT RANGE

| | | |
|---|---|--------------------------------|
| Vision swing handles |  | 6-010 – 6-020 |
| Quarter-turn latches - 18 mm housing |  | 6-110 |
| Vibration Resistent Quarter-turn latches - 18 mm housing |  | 6-115 |
| Quarter-turn latches for insulated doors - 30 / 56 mm housing |  | 6-120 |
| COMPACT Quarter-turn latches - 13,5 mm housing |  | 6-130 – 6-131 |
| Vibration Resistant latches for Railway |  | 6-134 – 6-141 |
| Compression latches and compression T- and L-handles |  | 6-135 – 6-141, 6-152, 6-162 |
| Quarter-turn latch HD Hygienic Design - 18 mm housing |  | 6-147 |
| Wing knobs and T- and L-Handles - 18 mm housing |  | 6-148 – 6-175 |
| Defeater handles padlockable |  | 6-210 |
| Concealed hinges - 100° - 120° opening angle |  | 6-300 – 6-330 |
| Klima-flex adjustable hinges for insulated doors - 180° opening angle |  | 6-355 |
| External hinges - 180° opening angle |  | 6-385 – 6-450 |
| External block hinges |  | 6-400 – 6-440 |
| Weld-on hinges |  | 6-460 |
| Heavy-Duty hinges - 180° opening angle |  | 6-465 – 6-470 |
| Butt hinges and continous (piano) hinges |  | 6-496 – 6-560 |



Material:

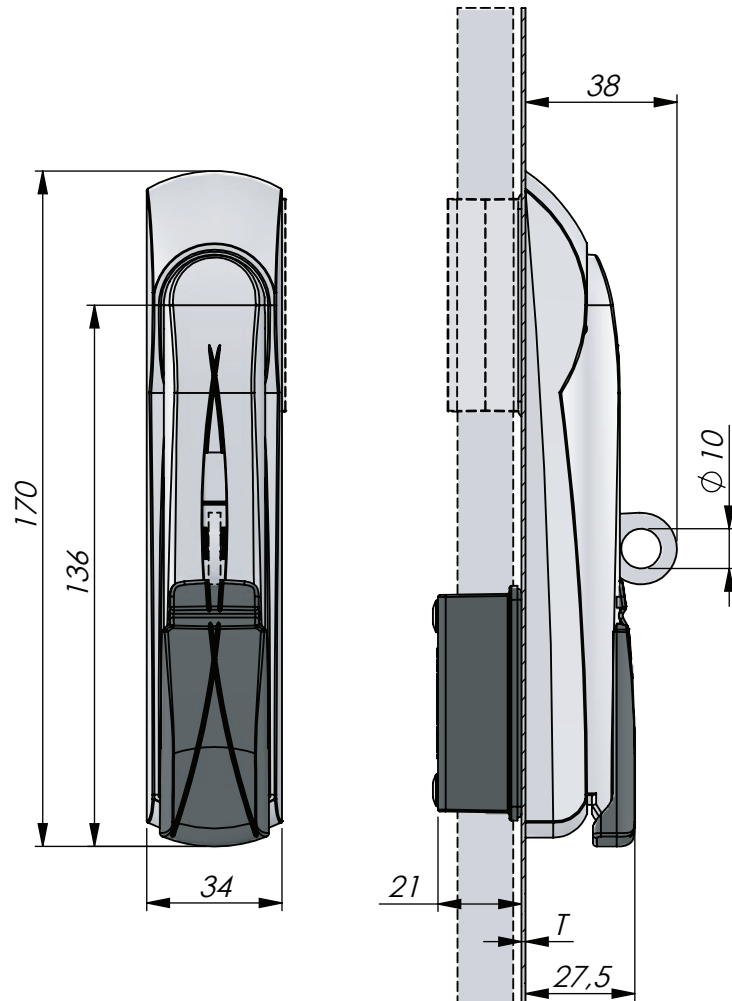
- Acid-proof stainless steel (316).

References, Accessories:

- Zinc and polyamide versions: Chapter 1.
- Profile cylinders: Page 1-210.
- Keys: Page 2-370 and 2-372.
- Rod Latch Systems: Page 1-008.00 to 1-008.57.
- Vision Hinge: Page 3-094, 3-095 and 3-096.

Notes, Tests:

Cut-out, version C: Page 1-001.01.



Acid-proof stainless low profile swing handle for 40 mm profile cylinder / tool operated and control mechanism.

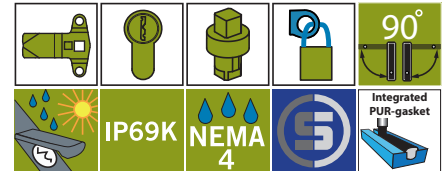
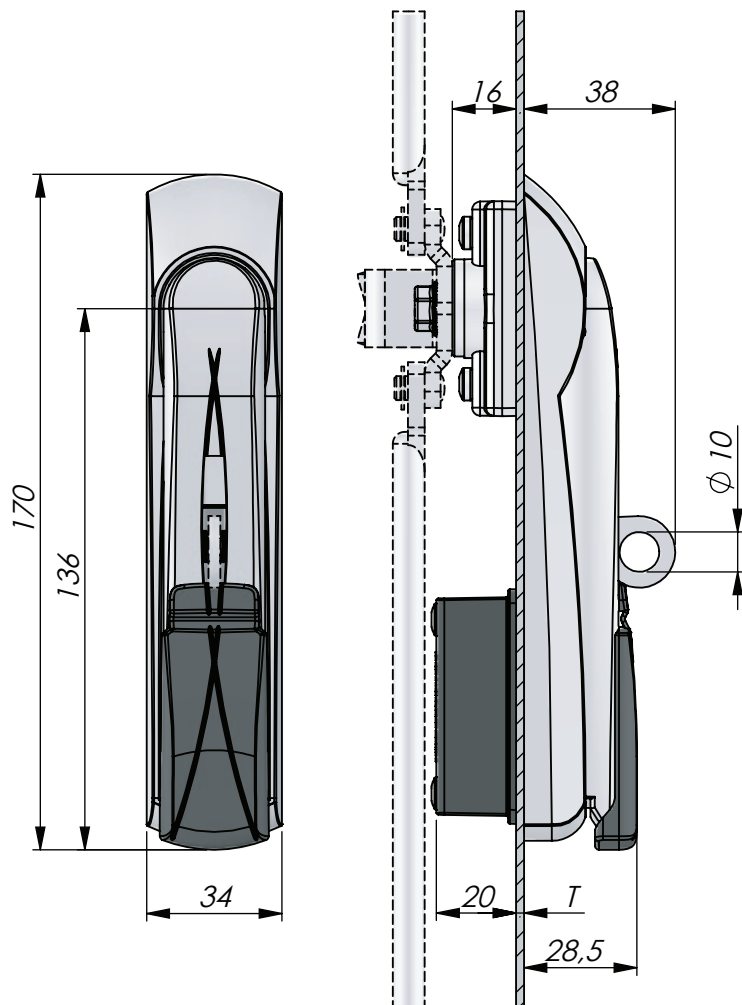
MODEL: Turn-to-latch = The door is locked by turning the key.

T = For door thickness: 1,6-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle for Profile Cylinder / Tool operated - Acid-Proof (AAAAAABC-DDDD)

| AAAAAA | Description - material | B | T= | C | PDL | -DDD | Insert / cylinder | D | Dust cover |
|---------|------------------------|---|---------|---|-----|------|-------------------------------|---|------------|
| 1230318 | SS (316) | 2 | 1,6-2,5 | 0 | No | -C01 | Hexagon 11 | U | No |
| | | 3 | 2,6-3,5 | 1 | Yes | -C47 | Recessed hexagon 8 / 3 mm pin | D | Yes |
| | | | | | | -C49 | Recessed slot | | |
| | | | | | | -C60 | Profile cylinder | | |



Material:

- Acid-proof stainless steel (316).

References, Accessories:

- Zinc or polyamide versions: Chapter 1.
- Profile cylinders: Page 1-210.
- Keys: Page 2-370 and 2-372.
- **Rod Latch System:** Vision Classic: Page 1-008.51, 1-008.52 and 1-008.53.

Notes, Tests:

Cut-out, version C: Page 1-001.01.

Acid-proof stainless low profile swing handle for 40 mm profile cylinder / tool operated and cam.

MODEL: Turn-to-latch = The door is locked by turning the key.

T = For door thickness: 0,8-3,5 mm.

PDL = Spring loaded padlock loop retracts when handle is released.

VISION Swing Handle for Profile Cylinder / Tool operated - Acid-Proof (AAAAAABCD-EEEE)

| AAAAAA | Description - material | B | Opening rotation | C | T= | D | PDL | -EEE | Insert/cylinder | E | Dust cover |
|--------|------------------------|---|------------------------------------|---|---------|---|-----|------|-------------------------------|---|------------|
| 123031 | SS (316) | 1 | 90° clockwise or counter-clockwise | 1 | 0,8-1,5 | 0 | No | -C01 | Hexagon 11 | U | No |
| | | 2 | 90° counter-clockwise | 2 | 1,6-2,5 | 1 | Yes | -C47 | Recessed hexagon 8 / 3 mm pin | D | Yes |
| | | 3 | 90° clockwise | 3 | 2,6-3,5 | | | -C41 | Recessed slot | | |
| | | | | | | | | -C60 | Profile cylinder | | |



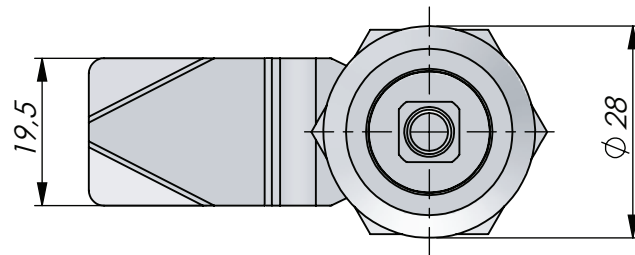
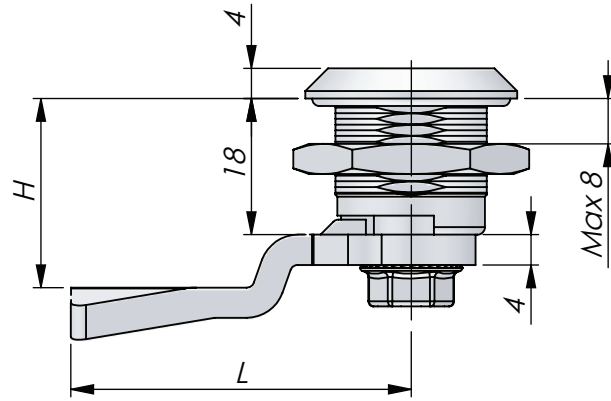


Material:

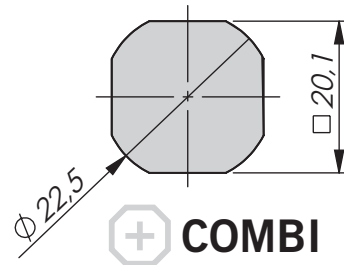
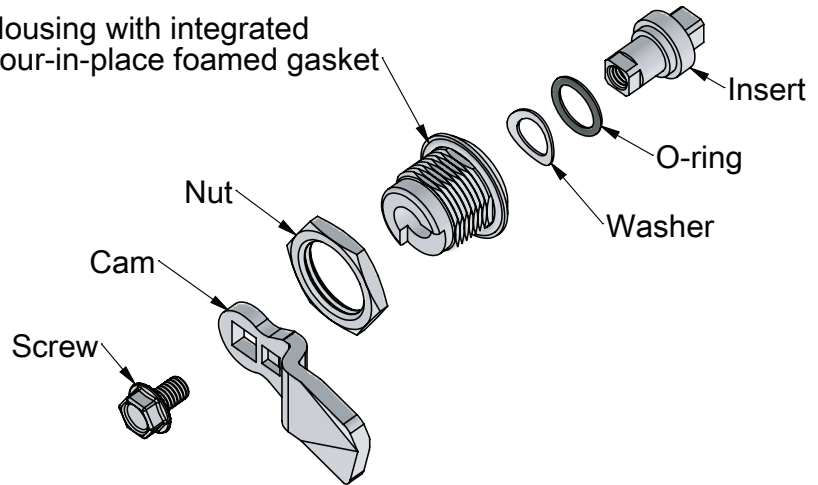
- Housing, insert and nut: Stainless steel (303) or acid-proof stainless steel (316).
- Cam: Stainless steel (304) or acid-proof stainless steel (316).

Notes, Tests:

* = also classed "Waterproof according to NEMA 4"



Housing with integrated pour-in-place foamed gasket



A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65 *, an O-ring and pour-in-place foamed polyurethane gasket is applied. The latch can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

References, Accessories:

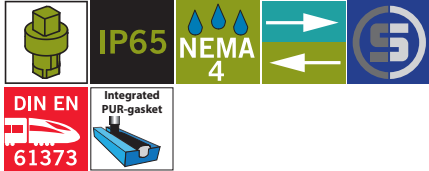
- Housings: Page 6-111.
- Inserts: Page 6-112.
- Knobs and handles: Page 2-360.
- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Keys: Page 2-370 and 2-372.

Example: Housing - stainless (303) nut - stainless, insert square 8, stainless, IP65-assembled, cam - stainless H=22 mm L= 45 mm = P/N: 2313-305353-2245.
Protection degree IP65 is achieved by an O-ring on the insert and a pour-in-place foamed polyurethane gasket on the housing.

Quarter-Turn Latch - 18 mm. Acid-Proof. (AAAA-BCCDEF-GGGG)

| AAAA- | Description - housing | B | Nut | CC | Insert | D | Material | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|-----------------------|---|----------|----|---------------------|---|----------|---|----------------------|---|----------|-------|-----------|
| 2313- | SS (303) | 3 | SS (303) | 01 | Square 6 | 3 | SS (303) | 0 | IP54 - not assembled | 3 | SS (304) | -0000 | No cam |
| 2319- | SS (316) | 9 | SS (316) | 03 | Square 7 | 9 | SS (316) | 1 | IP65 - not assembled | 9 | SS (316) | -0445 | 4/45 |
| | | | | 05 | Square 8 | | | 2 | IP54 - cam enclosed | | | -0645 | 6/45 |
| | | | | 07 | Square 8, slotted | | | 3 | IP65 - cam enclosed | | | -0845 | 8/45 |
| | | | | 08 | Square 8 / M6 | | | 4 | IP54 - assembled | | | -1045 | 10/45 |
| | | | | 11 | Square 8 - recessed | | | 5 | IP65 - assembled | | | -1245 | 12/45 |
| | | | | 14 | Triangle 7 | | | | | | | -1445 | 14/45 |
| | | | | 15 | Triangle 8 | | | | | | | -1645 | 16/45 |
| | | | | 16 | Triangle 10 | | | | | | | -1845 | 18/45 |
| | | | | 22 | Double Bit 3 | | | | | | | -2045 | 20/45 |
| | | | | 24 | Double Bit 5 | | | | | | | -2245 | 22/45 |
| | | | | 26 | Slotted | | | | | | | -2445 | 24/45 |
| | | | | 41 | Slotted recessed | | | | | | | -2645 | 26/45 |
| | | | | | | | | | | | | -2845 | 28/45 |
| | | | | | | | | | | | | -3045 | 30/45 |
| | | | | | | | | | | | | -3245 | 32/45 |
| | | | | | | | | | | | | -3445 | 34/45 |
| | | | | | | | | | | | | -3645 | 36/45 |
| | | | | | | | | | | | | -3845 | 38/45 |
| | | | | | | | | | | | | -4045 | 40/45 |
| | | | | | | | | | | | | -4245 | 42/45 |
| | | | | | | | | | | | | -4445 | 44/45 |
| | | | | | | | | | | | | -4645 | 46/45 |
| | | | | | | | | | | | | -4845 | 48/45 |
| | | | | | | | | | | | | -5045 | 50/45 |



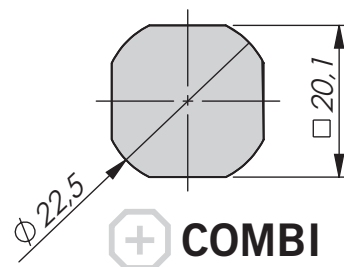
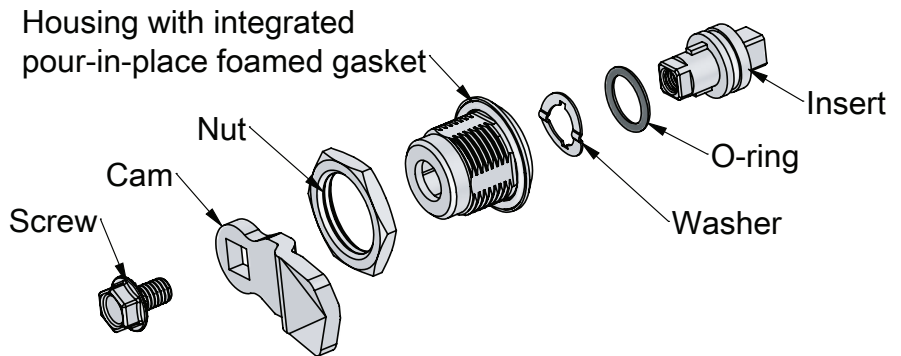
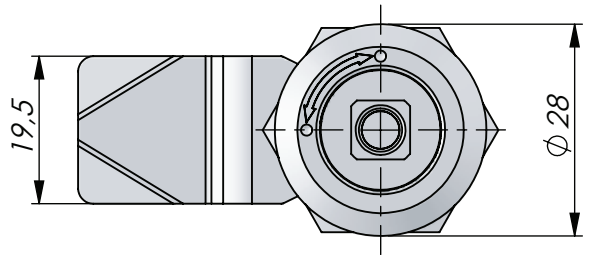
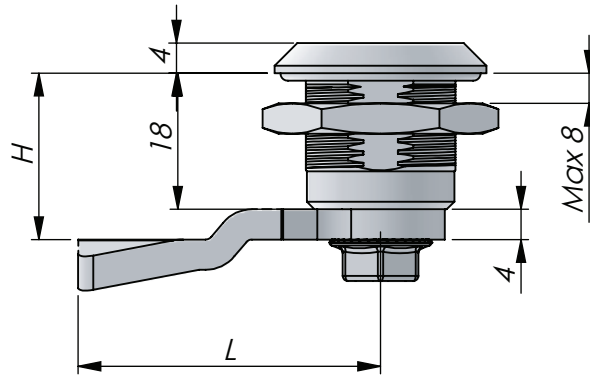


Material:

- Housing and insert: Stainless steel (316).
- Nut: Stainless steel (316 or 303, see table).
- Cam: Stainless steel (316 or 304, see table).
- Washer, screw: Stainless steel (304).

Notes, Tests:

*=also classed "Waterproof according to NEMA 4".



A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65 *, an O-ring and pour-in-place foamed polyurethane gasket is applied. The latch can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

References, Accessories:

- Zinc version: Page 2-020a.
- Knobs and handles: Page 2-360.
- Cams: Page 2-481, 2-491, 2-510 and 2-520.
- Keys: Page 2-370, 2-372 and 2-380.
- Quarter-turn for railway applications: Page 6-134a.

Notes, Tests:

Latch is supplied with screw with mechanical thread lock.

Example: Housing - stainless (316) nut - stainless, insert square 8, stainless (316), IP65-assembled, cam - stainless (316) H=22 mm L= 45 mm = P/N: 2419-905953-2245.

Vibration resistant quarter-turn latch with acid-proof AISI 316 components. Protection degree IP65 is achieved by an O-ring on the insert and PUR-gasket on the housing.

Vibration-Resistant Quarter-Turn Latch - 18 mm. Acid-proof. (AAAA-BCCDEF-GGGG)

| AAAA- | Description - housing | B | Nut | CC | Insert | D | Material | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|-----------------------|---|----------|----|------------------|---|----------|---|----------------------|---|----------|-------|-----------|
| 2419- | SS (316) | 3 | SS (303) | 01 | Square 6 | 9 | SS (316) | 1 | IP65 - not assembled | 3 | SS (304) | -0000 | No cam |
| | | 9 | SS (316) | 03 | Square 7 | | | 3 | IP65 - cam enclosed | 9 | SS (316) | -0445 | 4/45 |
| | | | | 05 | Square 8 | | | 5 | IP65 - assembled | | | -0645 | 6/45 |
| | | | | 08 | Square 8 / M6 | | | | | | | -0845 | 8/45 |
| | | | | 14 | Triangle 7 | | | | | | | -1045 | 10/45 |
| | | | | 15 | Triangle 8 | | | | | | | -1245 | 12/45 |
| | | | | 16 | Triangle 10 | | | | | | | -1445 | 14/45 |
| | | | | 17 | Triangle 10 / M5 | | | | | | | -1645 | 16/45 |
| | | | | 22 | Double Bit 3 | | | | | | | -1845 | 18/45 |
| | | | | 24 | Double Bit 5 | | | | | | | -2045 | 20/45 |
| | | | | 26 | Slotted | | | | | | | -2245 | 22/45 |
| | | | | | | | | | | | | -2445 | 24/45 |
| | | | | | | | | | | | | -2645 | 26/45 |
| | | | | | | | | | | | | -2845 | 28/45 |
| | | | | | | | | | | | | -3045 | 30/45 |
| | | | | | | | | | | | | -3245 | 32/45 |
| | | | | | | | | | | | | -3445 | 34/45 |
| | | | | | | | | | | | | -3645 | 36/45 |
| | | | | | | | | | | | | -3845 | 38/45 |
| | | | | | | | | | | | | -4045 | 40/45 |
| | | | | | | | | | | | | -4245 | 42/45 |
| | | | | | | | | | | | | -4445 | 44/45 |
| | | | | | | | | | | | | -4645 | 46/45 |
| | | | | | | | | | | | | -4845 | 48/45 |
| | | | | | | | | | | | | -5045 | 50/45 |



Material:

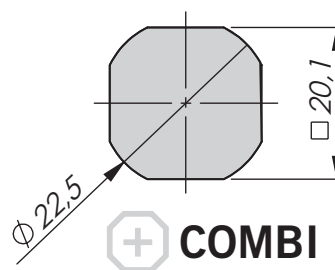
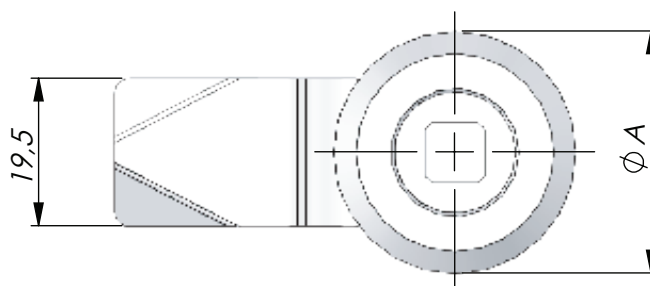
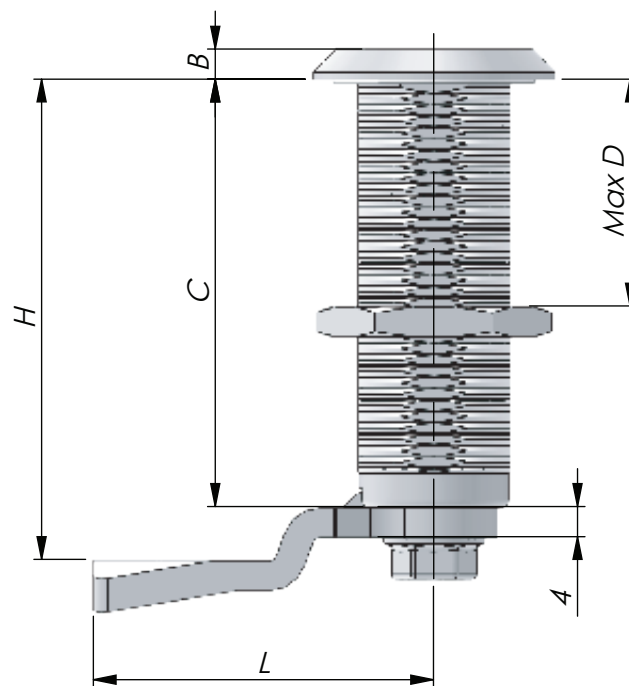
- Housing: Stainless steel (303).
- Cam: Stainless steel (304) or acid-proof stainless steel (316).
- Nut and insert: Stainless steel (303) or acid-proof stainless steel (316).

References, Accessories:

- Knobs and handles: Page 2-360.
- Other cams on page 2-510 and 2-520.
- Keys: Page 2-370 and 2-372.

Notes, Tests:

Protection degree IP65 is achieved by an O-ring on the insert and a flat gasket on the housing.



Example: Housing - stainless (303) nut - stainless, insert square 8 / M6, stainless, IP65-assembled, cam - stainless H=22 mm L= 45 mm = P/N: 2333-303353-2245.

References, Accessories:

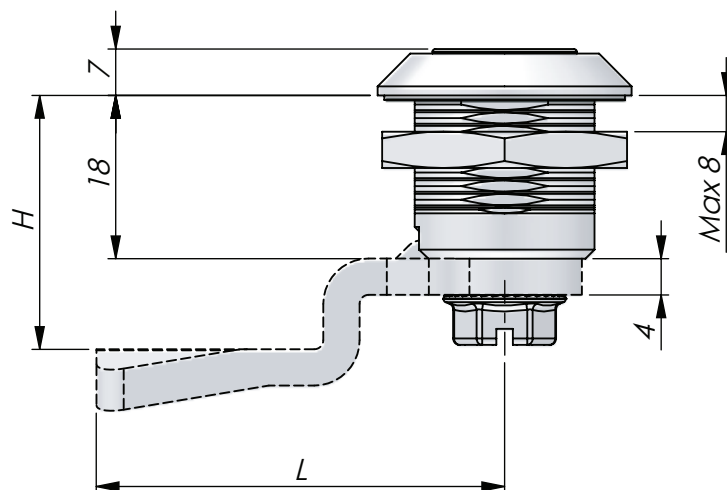
- Knobs and handles: Page 2-360.
- Other cams on page 2-510 and 2-520.
- Keys: Page 2-370 and 2-372.

Example: Housing 30 mm stainless (303), nut - stainless (303), insert square 8 stainless (303), IP65-assembled, cam stainless (304) H=22 mm L= 45 mm = P/N: 2330-301353-2245.

Protection degree IP65 is achieved by an O-ring on the insert and a pour-in-place foamed polyurethane gasket on the housing.

Quarter-Turn Latch - 30 and 56,5 mm. Stainless. (AAAA-BCCDEF-HHLL)

| AAAA- | Description - housing | B | Nut | CC | Insert | D | Material | E | Assembly | F | Cam | -HHLL | H/L in mm |
|-------|-------------------------|---|----------|----|---------------|---|----------|---|----------------------|---|----------|-------|-----------|
| 2330- | A=28, B=3, C=30, D=21 | 3 | SS (303) | 01 | Square 8 | 3 | SS (303) | 0 | IP54 - not assembled | 3 | SS (304) | -0000 | No cam |
| 2356- | A=32, B=4, C=56,5, D=50 | 9 | SS (316) | 03 | Square 8 / M6 | 9 | SS (316) | 1 | IP65 - not assembled | 9 | SS (316) | -0445 | 4/45 |
| | | | | | | | | 2 | IP54 - cam enclosed | | | -0645 | 6/45 |
| | | | | | | | | 3 | IP65 - cam enclosed | | | -0845 | 8/45 |
| | | | | | | | | 4 | IP54 - assembled | | | -1045 | 10/45 |
| | | | | | | | | 5 | IP65 - assembled | | | -1245 | 12/45 |
| | | | | | | | | | | | | -1445 | 14/45 |
| | | | | | | | | | | | | -1645 | 16/45 |
| | | | | | | | | | | | | -1845 | 18/45 |
| | | | | | | | | | | | | -2045 | 20/45 |
| | | | | | | | | | | | | -2245 | 22/45 |
| | | | | | | | | | | | | -2445 | 24/45 |
| | | | | | | | | | | | | -2645 | 26/45 |
| | | | | | | | | | | | | -2845 | 28/45 |
| | | | | | | | | | | | | -3045 | 30/45 |
| | | | | | | | | | | | | -3245 | 32/45 |
| | | | | | | | | | | | | -3445 | 34/45 |
| | | | | | | | | | | | | -3645 | 36/45 |
| | | | | | | | | | | | | -3845 | 38/45 |
| | | | | | | | | | | | | -4045 | 40/45 |
| | | | | | | | | | | | | -4245 | 42/45 |
| | | | | | | | | | | | | -4445 | 44/45 |
| | | | | | | | | | | | | -4645 | 46/45 |
| | | | | | | | | | | | | -4845 | 48/45 |
| | | | | | | | | | | | | -5045 | 50/45 |

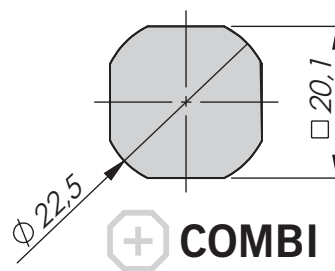
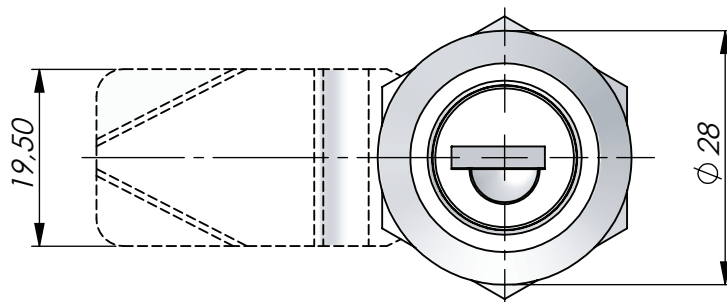


Material:

- Stainless steel (316). Brushed surface finish.
- Cylinder: Zinc die-cast, with stainless steel cap and dust shutter.

References, Accessories:

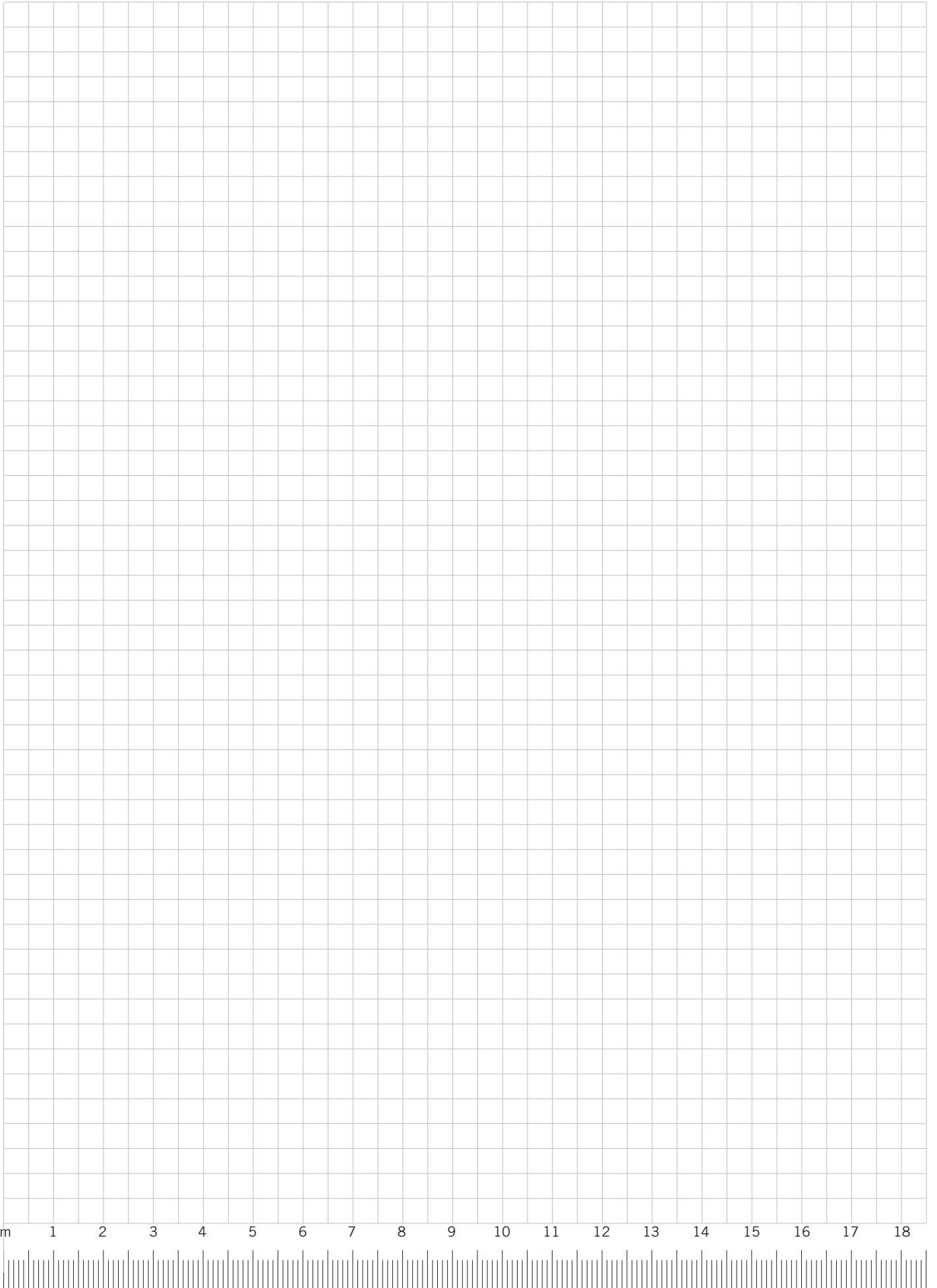
Acid-proof / stainless cams with projection: 2-480.

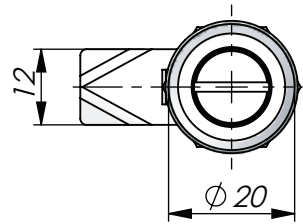
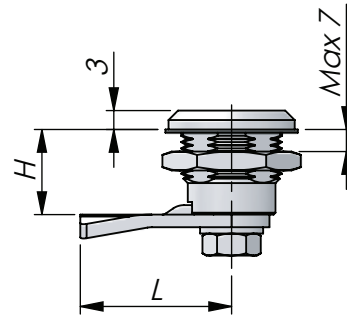
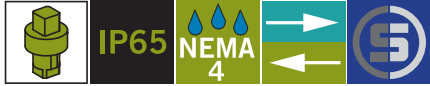


Quarter-turn cylinder lock fabricated in acid-proof 316 material. Universal clockwise or counter-clockwise rotation when opening / closing. Cam rotates 90° and the key can be removed in both open and locked position. Supplied with nut and two keys.

Cylinder Lock - 18 mm. Acid-Proof.

| P/N | Description |
|--------|--------------------|
| 249014 | Keyed alike IL0333 |



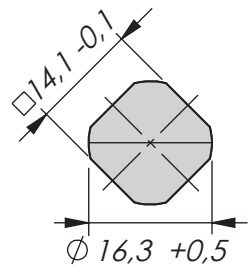
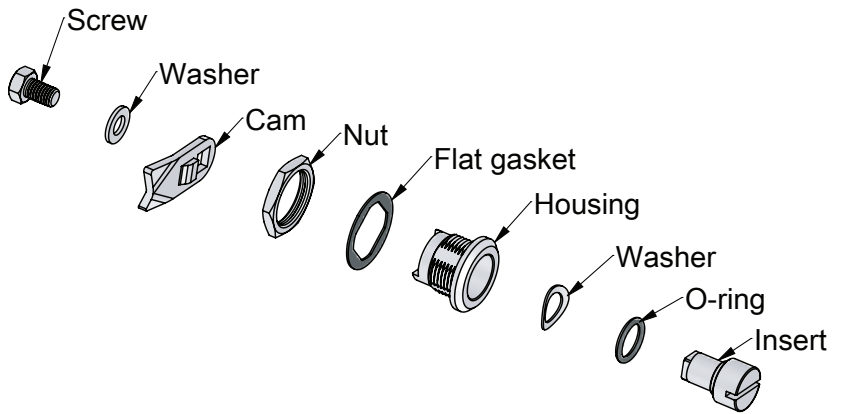


Material:

- Housing, insert and nut: Stainless steel (303).
- Cam: Stainless steel (304).

Notes, Tests:

* = also classed "Waterproof according to NEMA 4".



COMPACT

A complete latch consists of housing, nut, insert, washer, screw and cam. To achieve protection degree IP65*, an O-ring and a flat gasket is applied. Can be supplied un-assembled, pre-assembled with enclosed cam or completely assembled.

References, Accessories:

- Keys: Page 2-370 and 2-372.
- Knobs: Page 6-131.

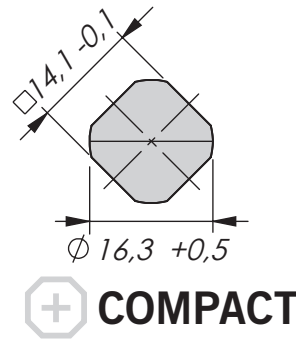
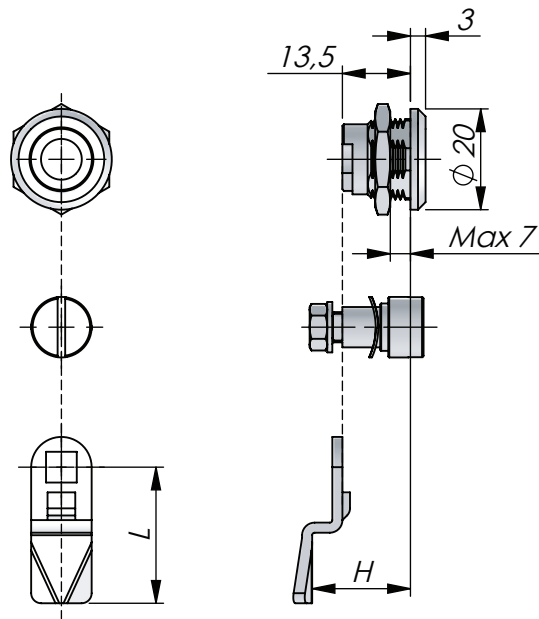
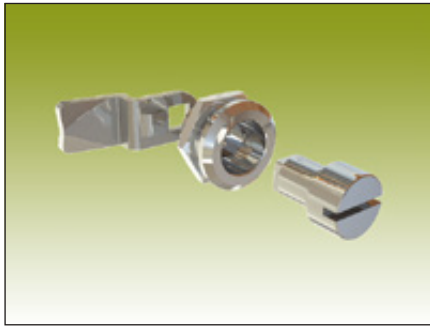
Example: Housing - stainless, A=20 B=3, nut - stainless, insert Square 6 - stainless, IP65-assembly and cam - stainless for H=16,5 L= 27 mm = P/N: 2383-301353-1627.

IP65 is achieved by an O-ring on the insert and a flat gasket on the housing.

Quarter-Turn Compact Latch - 13,5 mm. (AAAA-BCCDEF-GGGG)

| AAAA- | Description - housing | B | Nut | CC | Insert | D | Material | E | Assembly | F | Cam | -GGGG | H/L in mm |
|-------|-----------------------|---|----------|----|---------------|---|----------|---|----------------------|---|----------|-------|-----------|
| 2383- | SS (303) | 3 | SS (303) | 01 | Square 6 | 3 | SS (303) | 0 | IP54 - not assembled | 3 | SS (304) | -0000 | No cam |
| | | | | 02 | Square 6 / M3 | | | 1 | IP65 - not assembled | | | -0724 | 7,5/24 |
| | | | | 13 | Triangle 6,5 | | | 2 | IP54 - cam enclosed | | | -0727 | 7,5/27 |
| | | | | 26 | Slotted | | | 3 | IP65 - cam enclosed | | | -0730 | 7,5/30 |
| | | | | | | | | 4 | IP54 - assembled | | | -0934 | 9/34 |
| | | | | | | | | 5 | IP65 - assembled | | | -1027 | 10,5/27 |
| | | | | | | | | | | | | -1324 | 13,5/24 |
| | | | | | | | | | | | | -1327 | 13,5/27 |
| | | | | | | | | | | | | -1627 | 16,5/27 |
| | | | | | | | | | | | | -1834 | 18/34 |
| | | | | | | | | | | | | -1924 | 19,5/24 |
| | | | | | | | | | | | | -1927 | 19,5/27 |
| | | | | | | | | | | | | -2824 | 28/24 |





Material:

- Housing, insert and nut: Stainless steel (303).
- Cam: Stainless steel (304).
- Knob: Glass fibre reinforced polyamide (PA6GF30).
- Screw, steel, zinc plated.

References, Accessories:

- Keys ("Square 6" and "Triangle 6,5"), see page 2-370.

These components are made for compact latches in stainless steel. A complete latch consists of a housing, insert and cam.

Stainless Housing

| P/N | Description |
|--------|---|
| 213076 | Compact housing in stainless steel. Nut included. |

Stainless Inserts (303)

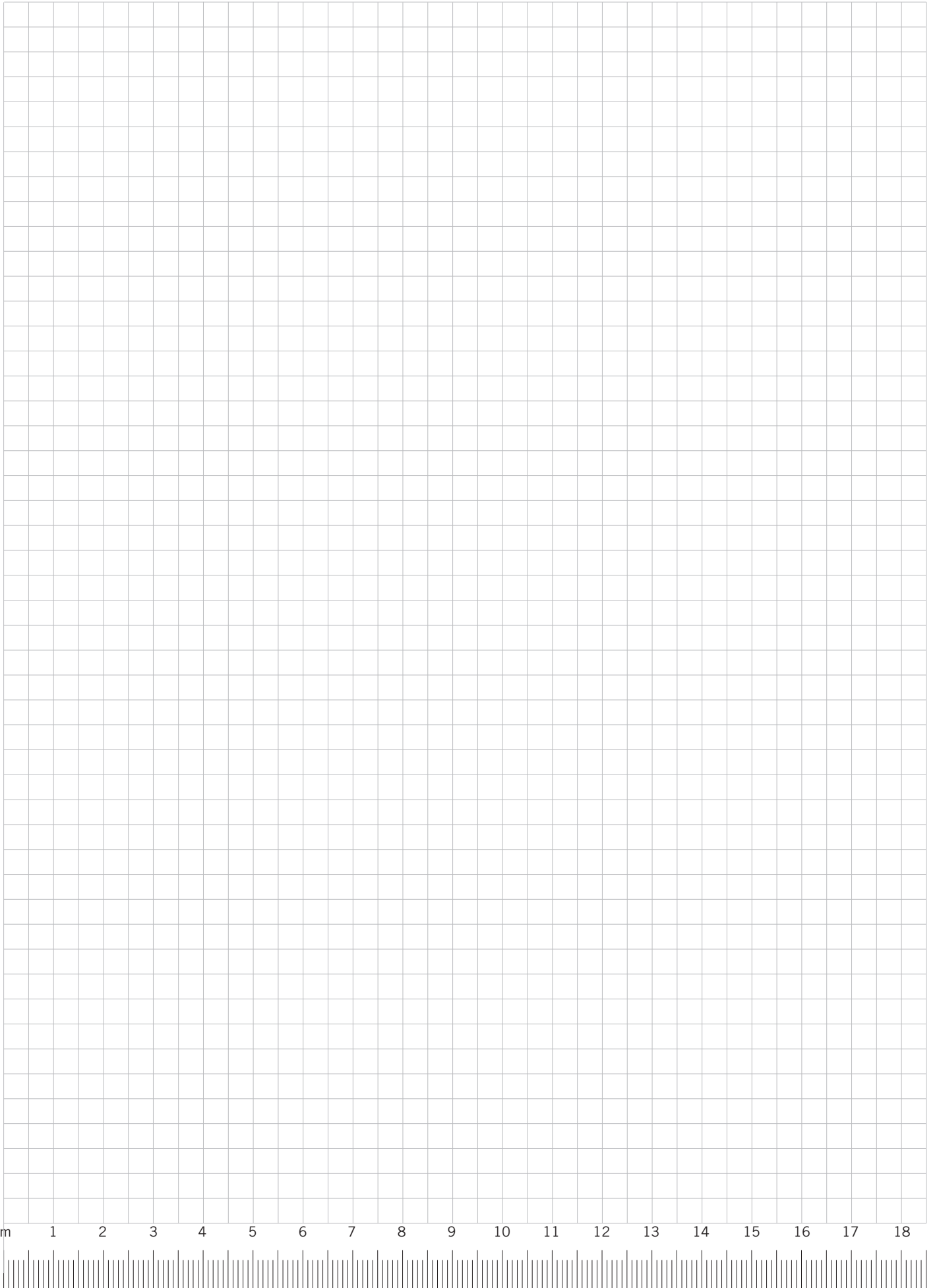
| P/N | Description | P/N | Description |
|--------|-------------|--------|--------------|
| 223078 | Square 6 | 223079 | Triangle 6,5 |
| 223080 | Slotted | 223081 | Square 6/M3 |

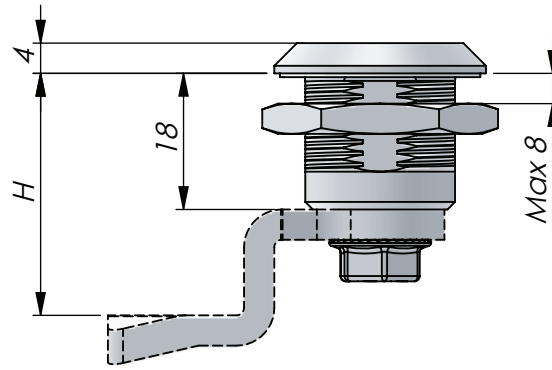
Stainless Accessories

| P/N | Description |
|--------|--|
| 295011 | Knob R250 with screw. To be used with insert Square 6 / M3 |
| 297004 | Flat gasket |
| 297003 | O-ring |

Stainless Cam

| P/N | H/L in mm |
|--------|----------------------|
| 233055 | 7,5 / 24 |
| 233056 | 7,5 / 27 |
| 233057 | 7,5 / 30 |
| 233058 | 9 / 34 |
| 233059 | 10,5 / 27 |
| 233060 | 13,5 / 24 (Straight) |
| 233061 | 13,5 / 27 (Straight) |
| 233062 | 16,5 / 27 |
| 233063 | 18 / 34 |
| 233064 | 19,5 / 24 |
| 233065 | 19,5 / 27 |
| 233066 | 28 / 24 |
| 233067 | 35 / 24 |





Material:

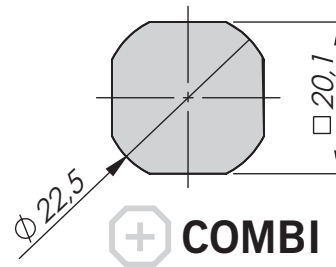
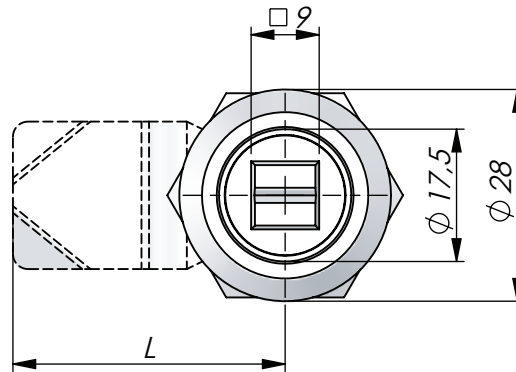
- Housing and insert: Stainless, acid-proof steel (316).
- Nut: Stainless steel (316 or 303, see table).
- Cam: Stainless steel (316 or 304, see table).
- Washer, screw: Stainless steel (304).

References, Accessories:

- Version in zinc: Page 2-120.
- Cams: Page 2-481 and 2-491, 2-510 and 2-520.
- Similar latches with other inserts: Page 6-134b.

Notes, Tests:

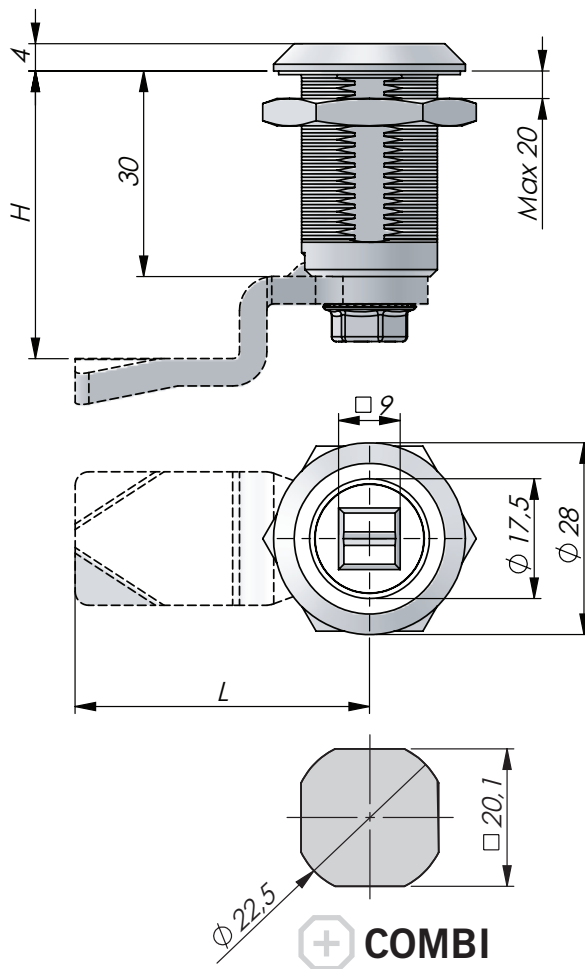
Latches supplied with screw with mechanical thread lock.



Vibration-resistant quarter-turn latch for use with railway applications with insert DB standard (train industry). The latch is vibration-resistant to prevent unintentional opening. Universal clockwise or counter-clockwise rotation when opening / closing. Protection degree IP65, also classed as "Waterproof according to NEMA 4".

Quarter-Turn Latch - 18 mm. Acid-Proof. (AAAA-BCCDEF-HHLL)

| AAAA- | Description - housing | B | Nut | CC | Insert | D | Material | E | Assembly | F | Cam | -HHLL | H/L in mm |
|-------|-----------------------|---|----------|----|--------------------|---|----------|---|----------------------|---|----------|-------|---|
| 2419- | SS (316) | 3 | SS (303) | 30 | DB (Deutsche Bahn) | 3 | SS (303) | 1 | IP65 - not assembled | 3 | SS (304) | -0000 | No cam |
| | | 9 | SS (316) | | | 9 | SS (316) | 3 | IP65 - cam enclosed | 9 | SS (316) | -HH45 | Page 2-481 |
| | | | | | | | | 5 | IP65 - assembled | | | | H between 4 - 50 mm in increments of 2 mm |



Material:

- Housing, insert and nut: Stainless steel (303).
- Cams: Stainless steel (304) or (316).
- O-ring and gasket: NBR.

References, Accessories:

- Cams: Page 2-480 and 2-490, 2-510 and 2-520.
- Latch with insert for rail: Page 6-134a

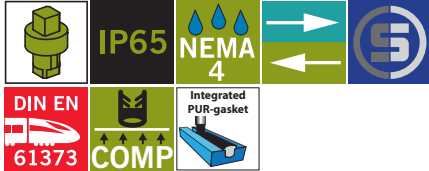
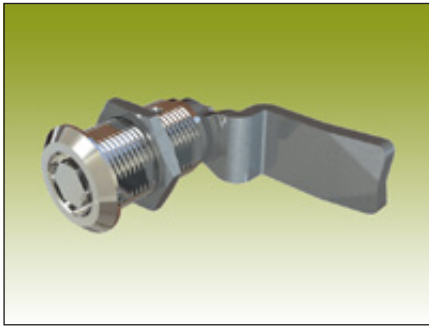
Notes, Tests:

Latch is supplied with screw with mechanical thread lock.

Quarter-turn latch for use with railway applications with insert DB standard (train industry). Universal clockwise or counter-clockwise rotation when opening / closing. Protection degree IP65, also classed as "Waterproof according to NEMA 4".

Quarter-Turn Latch - 18 mm (AAAA-BCCDEF-HHLL)

| AAAA- | Description - housing | B | Nut | CC | Insert | D | Material | E | Assembly | F | Cam | -HHLL | H/L in mm |
|-------|-----------------------|---|----------|----|---------------------|---|----------|---|----------------------|---|----------|-------|---|
| 2373- | SS (303) | 3 | SS (303) | 01 | Square 6 | 3 | SS (303) | 0 | IP54 - not assembled | 3 | SS (304) | -0000 | No cam |
| | | 9 | SS (316) | 03 | Square 7 | 9 | SS (316) | 1 | IP65 - not assembled | 9 | SS (316) | -HH45 | Page 2-480 |
| | | | | 05 | Square 8 | | | 2 | IP54 - cam enclosed | | | | H between 4 - 50 mm in increments of 2 mm |
| | | | | 07 | Square 8, slotted | | | 3 | IP65 - cam enclosed | | | | |
| | | | | 08 | Square 8 / M6 | | | 4 | IP54 - assembled | | | | |
| | | | | 11 | Square 8 - recessed | | | 5 | IP65 - assembled | | | | |
| | | | | 14 | Triangle 7 | | | | | | | | |
| | | | | 15 | Triangle 8 | | | | | | | | |
| | | | | 16 | Triangle 10 | | | | | | | | |
| | | | | 22 | Double Bit 3 | | | | | | | | |
| | | | | 24 | Double Bit 5 | | | | | | | | |
| | | | | 26 | Slotted | | | | | | | | |
| | | | | 41 | Slotted recessed | | | | | | | | |



Material:

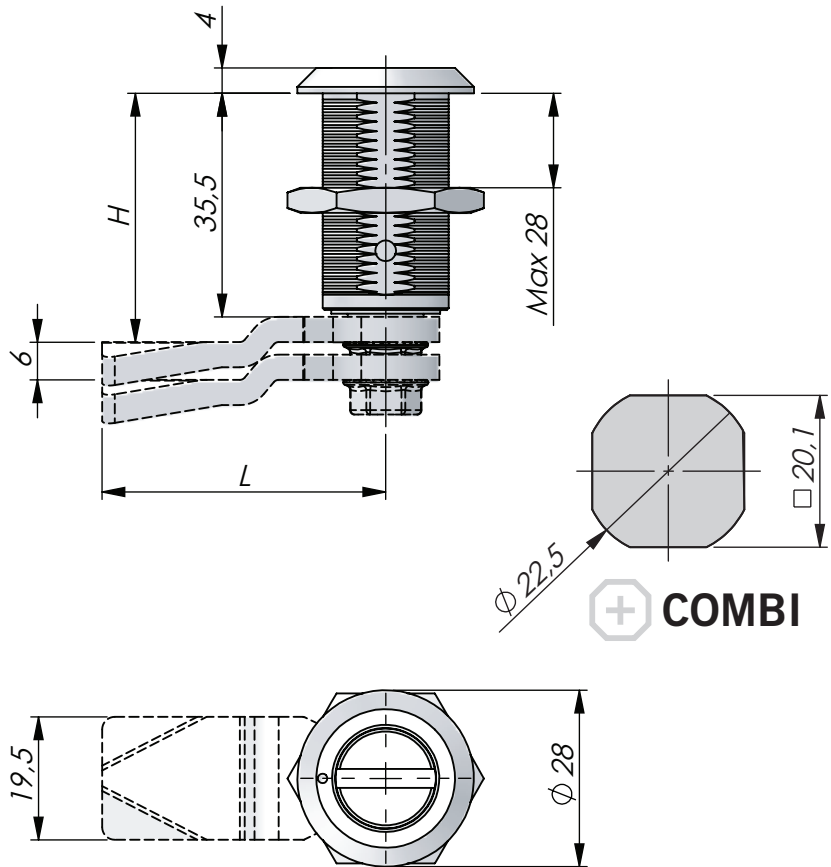
- Housing: Stainless steel (304).
- Insert and nut: Stainless steel (303).

References, Accessories:

- Zinc version: Page 2-135.
- Keys: Page 2-370 and 2-372.
- *Handles and knobs: Page 2-360.

Notes, Tests:

Use stainless cams with H-measurement between H=21 mm and H=67 mm in increments of 2 mm (21, 23... up to 67 mm). Example: 243087-14-2945 is a stainless compression latch with insert Triangle 10 with a cam having H-measurement of 29 mm and a standard length of 45 mm.



Quarter-turn compression latch. Close and tighten with a single continuous half-turn motion. First 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm. The latch is supplied assembled, cam to be ordered separately. Protection degree IP65, also classed "Waterproof according to NEMA 4". Latch is supplied with screw with mechanical thread lock.

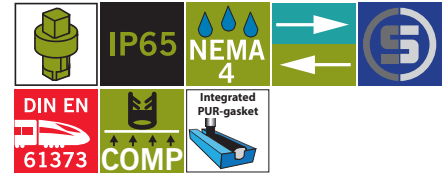
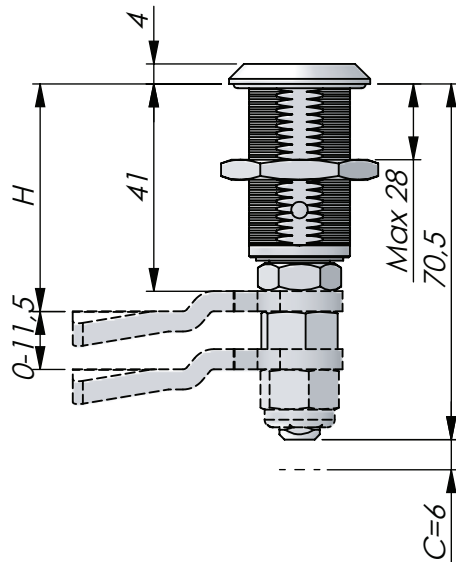
Other inserts on request.

Compression Latch - 35 mm (AAAAAA-AA-HHLL)

| AAAAAA-AA | Description - insert | -HHLL | Cam H/L in mm |
|-----------|----------------------|-------|--|
| 243087-01 | Hexagon 11 | -0000 | No cam |
| 243087-07 | Square 6 | -HH45 | See page ref. above |
| 243087-08 | Square 7 | | H between 21 - 67 mm in increments of 2 mm |
| 243087-09 | Square 8 | | |
| 243087-11 | Square 8/M6 * | | |
| 243087-12 | Triangle 7 | | |
| 243087-13 | Triangle 8 | | |
| 243087-14 | Triangle 10 | | |
| 243087-15 | Triangle 10 / M6 * | | |
| 243087-16 | Double Bit 3 | | |
| 243087-17 | Double Bit 5 | | |
| 243087-18 | DB (Deutsche Bahn) | | |
| 243087-20 | Slotted | | |
| 243087-28 | Triangle 10/M5 | | |
| 243087-48 | Recessed square 8 | | |
| 243087-79 | Triangle 6,5 | | |

Compression Latch, Adjustable on Extended Shaft - 35 mm

Stainless steel



Material:

- Housing: Stainless steel (304).
- Insert and nut: Stainless steel (303).
- Counter-nuts (two): Stainless steel (303). One nut equipped with Nyloc™ thread lock.

References, Accessories:

- Cams: Page 2-481.
- Keys: Page 2-370 and 2-372.
- *Handles and knobs: Page 2-360.
- Zinc version: Page 2-136.

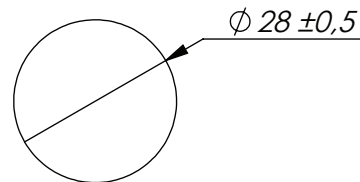
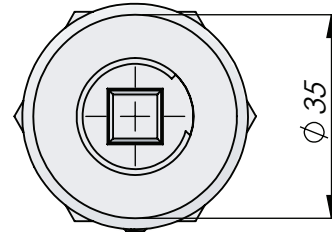
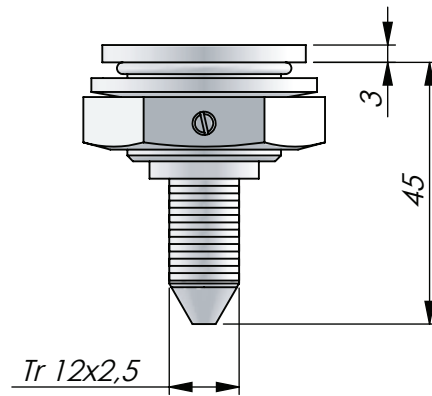
Quarter-turn compression latch. Close and tighten with a single continuous half-turn motion. The first 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm. This compression is shown as "C" in the drawing above.

The extended, threaded shaft allows you to place the cam along its entire length, resulting in a long distance for adjusting (a total of 11,5 mm). Fix the cam with counter-nuts. The total length (L) of the shaft varies from 41 mm in the open position, to 35 mm in the closed (compressed) position. The latch is supplied assembled, cam to be ordered separately. Protection degree IP65 (also classed "Waterproof according to NEMA 4".)

Other inserts on request.

Compression Latch, Adjustable on Extended Shaft - 35 mm

| P/N Stainless | Description - insert |
|---------------|----------------------|
| 243089-01 | Hexagon 11 |
| 243089-07 | Square 6 |
| 243089-08 | Square 7 |
| 243089-09 | Square 8 with arrow |
| 243089-11 | Square 8/M6 * |
| 243089-12 | Triangle 7 |
| 243089-13 | Triangle 8 |
| 243089-14 | Triangle 10 |
| 243089-15 | Triangle 10 / M6 * |
| 243089-16 | Double Bit 3 |
| 243089-17 | Double Bit 5 |
| 243089-18 | DB (Deutsche Bahn). |
| 243089-20 | Slotted |
| 243089-28 | Triangle 10 / M5 |
| 243089-48 | Recessed Square 8 |
| 243089-79 | Triangle 6,5 |

**Material:**

- Housing, insert and nut: Stainless steel (303).
- Set-screw, washer, and retaining ring: Stainless steel (304).

References, Accessories:

- Long version (67,5 mm): 6-138.
- Matching (stainless) female part with embedded trapezoidal thread - ordered separately on page 6-139.

Stainless steel compression latch. The trapezoidal thread (Tr 12 x 2,5mm) provides a tight engagement in applications with high pressure at the door. Especially developed for the train industry.

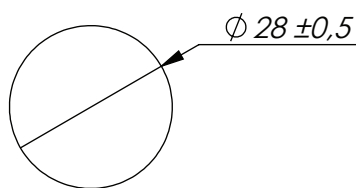
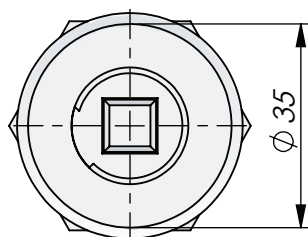
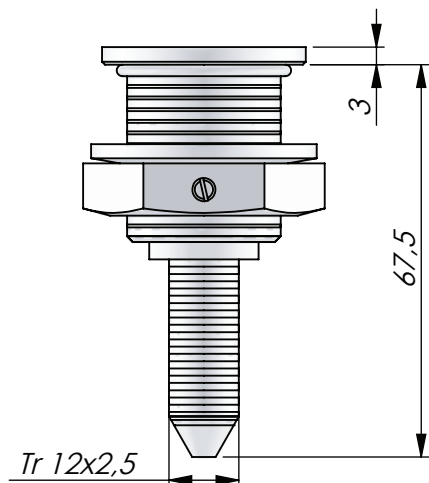
Set-screw in the nut secures the latch in vibrating environments. Left or right universal mounting. Equipped with DB ("Deutsche Bahn") insert, with other inserts upon request.

Compression Latch with Trapezoidal Thread - 45 mm

| P/N | Description - insert |
|-----------|----------------------|
| 243092-01 | DB (Deutsche Bahn) |

Compression Latch with Trapezoidal Thread - 67,5 mm

Stainless steel



Material:

- Housing, insert and nut: Stainless steel (303).
- Set-screw, washer, and retaining ring: Stainless steel (304).

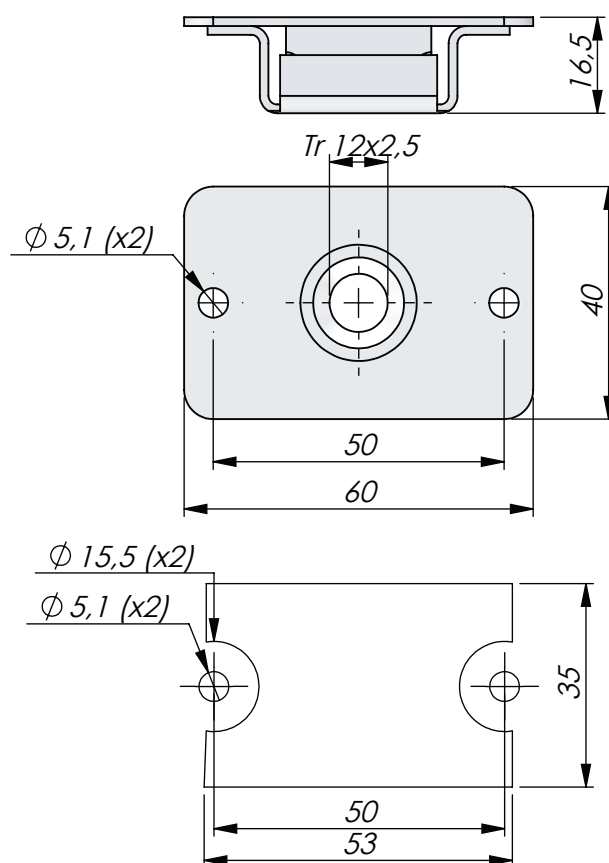
References, Accessories:

- Matching (stainless) female part with embedded trapezoidal thread - ordered separately on page 6-139.
- Short version (45 mm): Page 6-138.

Stainless steel compression latch. The trapezoidal thread (Tr 12 x 2,5mm) provides a tight engagement in applications with high pressure at the door. Especially developed for the train industry. Set-screw in the nut secures the latch in vibrating environments. Left or right universal mounting. Equipped with DB ("Deutsche Bahn") insert, with other inserts upon request.

Compression Latch with Trapezoidal Thread - 67,5 mm

| P/N | Description - insert |
|-----------|----------------------|
| 243092-02 | DB (Deutsche Bahn) |

**Material:**

- Mounting device: Stainless steel (303).
- Counter nut: Stainless steel (304).

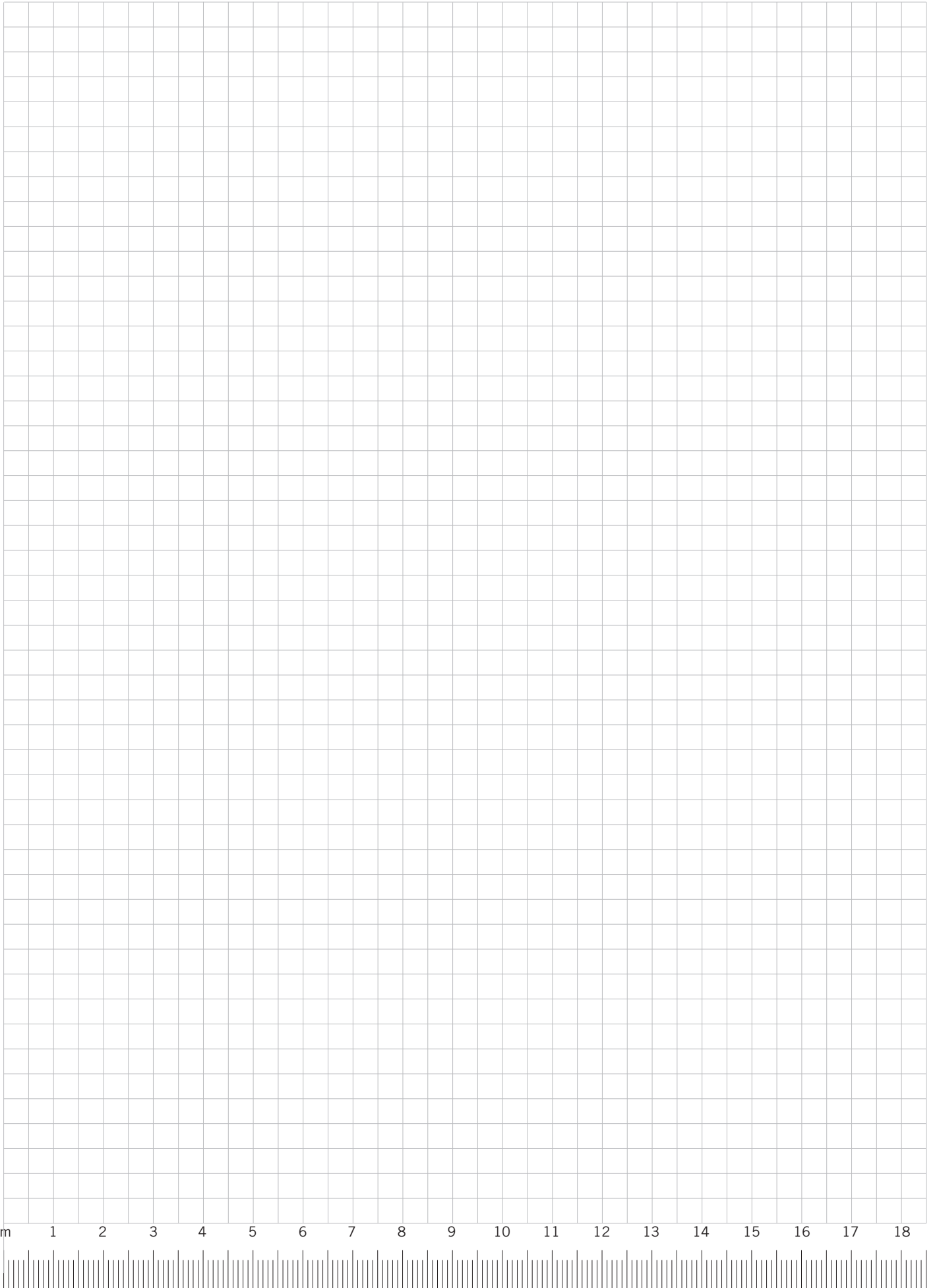
References, Accessories:

- Compression latches 243092-01 and 243092-02 on pages 6-137 and 6-138.

Mounting device with embedded counter nut equipped with trapezoidal thread (Tr 12 x 2,5mm). Left or right universal mounting.

Counter Nut with Trapezoidal Thread

| P/N | Description - Insert |
|-----------|----------------------|
| 243092-03 | Counter nut |



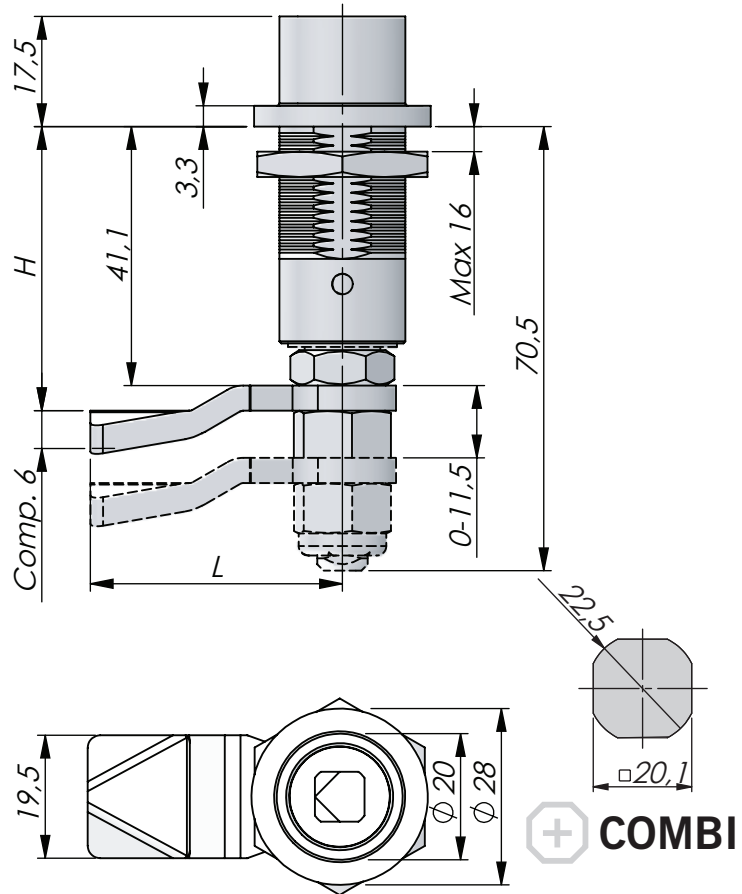


Material:

- Housing: Stainless steel (304).
- Insert and nut: Stainless steel (303).

References, Accessories:

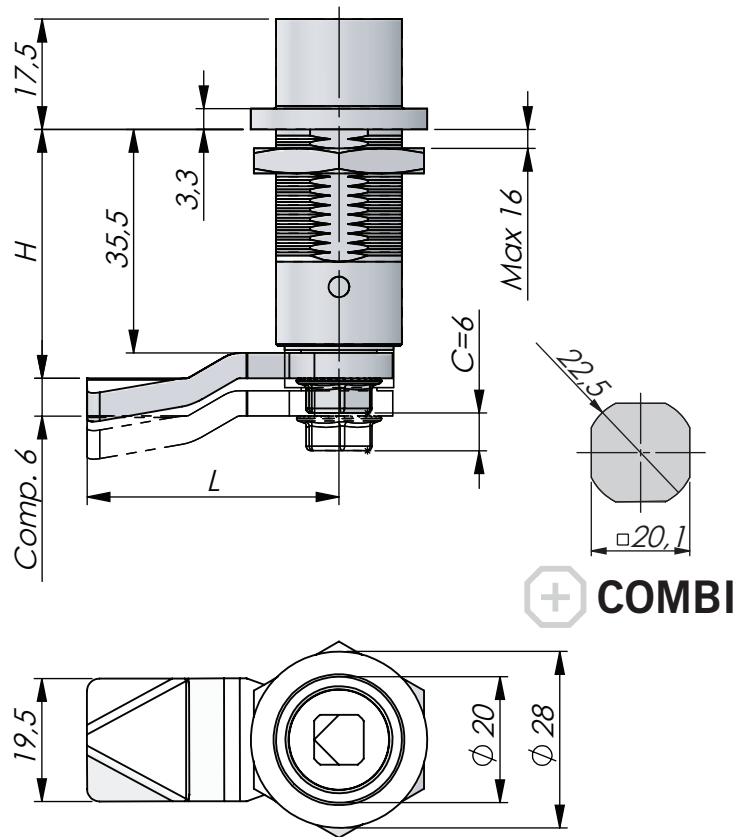
- Other inserts on request.
- Cams: Page 2-481.
- Keys: Page 2-370 and 2-372.
- * Handles and knobs: Page 2-360.



Quarter-turn compression latch with an extended collar making the latch suitable for thick panels. Close and tighten with a single continuous half-turn motion. First 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm. This compression is shown as "C" in the drawing above. The latch is supplied assembled, cam to be ordered separately. Protection degree IP65, also classed "Waterproof according to NEMA 4".

Compression Latch - 35 mm

| P/N | Description - insert |
|-----------|----------------------|
| 243095-01 | Hexagon 11 |
| 243095-07 | Square 6 |
| 243095-08 | Square 7 |
| 243095-09 | Square 8 |
| 243095-11 | Square 8/M6 * |
| 243095-12 | Triangle 7 |
| 243095-13 | Triangle 8 |
| 243095-14 | Triangle 10 |
| 243095-15 | Triangle 10 / M6 * |
| 243095-16 | Double Bit 3 |
| 243095-17 | Double Bit 5 |
| 243095-18 | DB (Deutsche Bahn) |
| 243095-20 | Slotted |
| 243095-28 | Triangle 10/M5 |
| 243095-48 | Recessed square 8 |
| 243095-79 | Triangle 6,5 |



Material:

- Housing: Stainless steel (304).
- Insert and nuts: Stainless steel (303).
- Counter-nuts (two): Stainless steel (303).

References, Accessories:

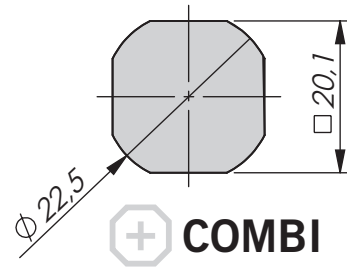
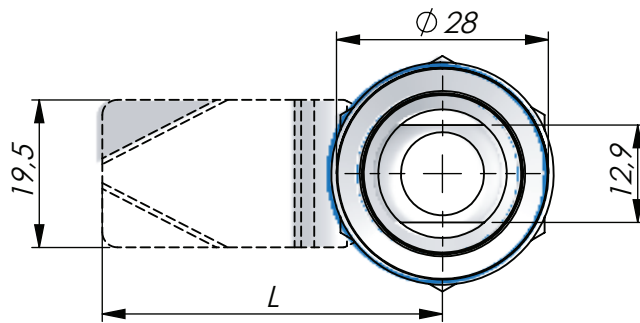
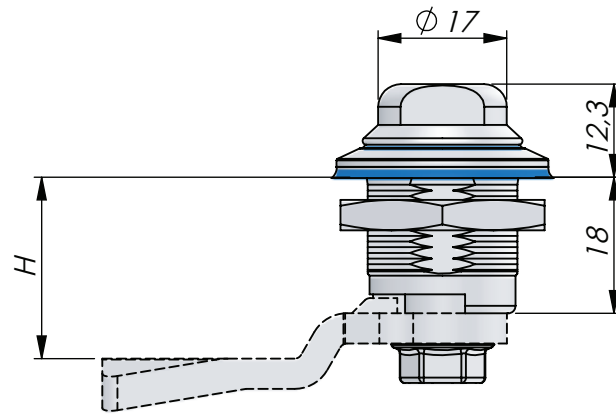
- Other inserts on request.
- Cams: Page 2-481.
- Keys: Page 2-370 and 2-372.
- * Handles and knobs: Page 2-360.

Quarter-turn compression latch with an extended collar making the latch suitable for thick panels. Close and tighten with a single continuous half-turn motion. The first 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm. This compression is shown as "C" in the drawing above.

The extended, threaded shaft allows you to place the cam along its entire length, resulting in a long distance for adjusting (a total of 11,5 mm). Fix the cam with counter-nuts. The total length (L) of the shaft varies from 41 mm in the open position, to 35 mm in the closed (compressed) position. The latch is supplied assembled, cam to be ordered separately.

Compression Latch, Adjustable on Extended Shaft - 35 mm

| P/N Stainless | Description - insert |
|---------------|----------------------|
| 243096-01 | Hexagon 11 |
| 243096-07 | Square 6 |
| 243096-08 | Square 7 |
| 243096-09 | Square 8 with arrow |
| 243096-11 | Square 8/M6 * |
| 243096-12 | Triangle 7 |
| 243096-13 | Triangle 8 |
| 243096-14 | Triangle 10 |
| 243096-15 | Triangle 10 / M6 * |
| 243096-16 | Double Bit 3 |
| 243096-17 | Double Bit 5 |
| 243096-18 | DB (Deutsche Bahn). |
| 243096-20 | Slotted |
| 243096-28 | Triangle 10 / M5 |
| 243096-48 | Recessed Square 8 |
| 243096-79 | Triangle 6,5 |



Material:

- Housing and insert: According to choice (303 or 316).
- Cam: According to choice (304 or 316).
- Nut: Stainless steel (303).
- Sealing: INDUPUR 95A, RAL 5002
- Key: Zinc/steel, zinc plated.

References, Accessories:

- Cams with projection: page 2-480
- Key: P/N 291151

Notes, Tests:

- According to DIN EN ISO 14159.
- According to EN 1672-2:2005
- Sealing INDUPUR classified UL50E; FDA compliant.
- Classified IP69K./ NEMA 4

Please note:

Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm).

Example how to order:

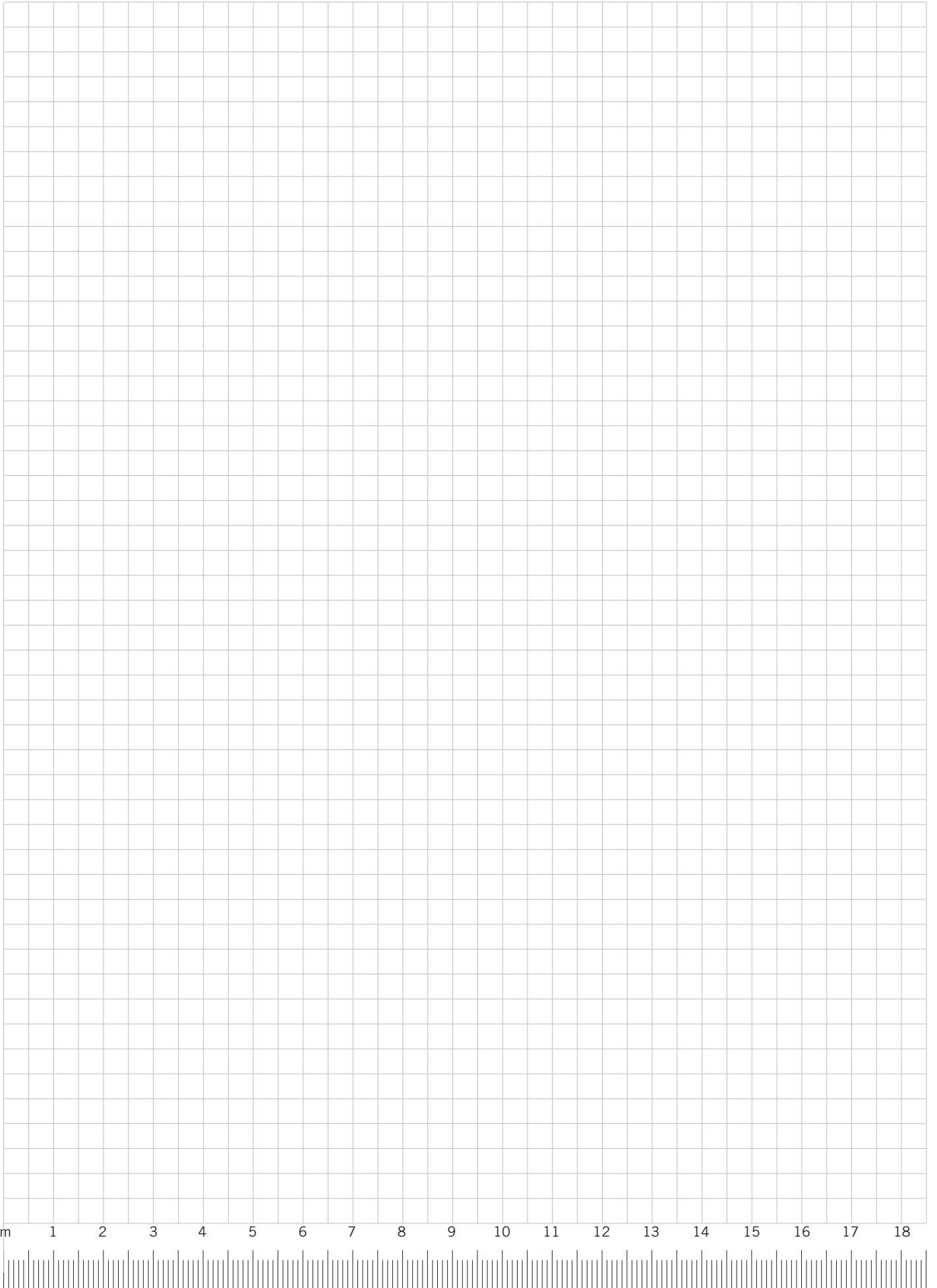
2029-901959-2845 is a latch for hygiene applications where the latch is made from acid-proof steel with a matching cam having a H-measurement of 28 mm and a standard length of 45 mm.

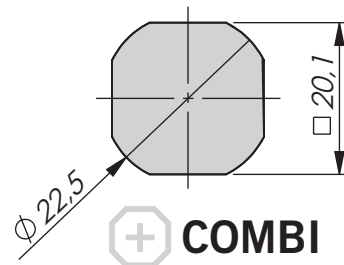
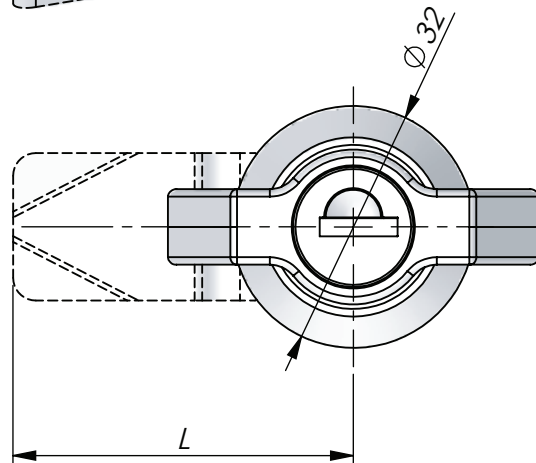
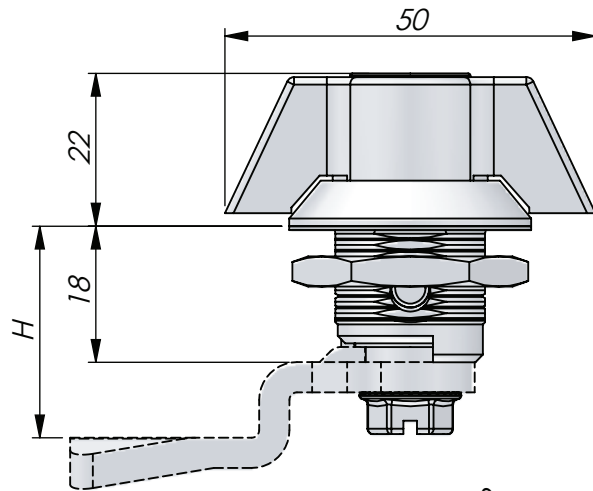
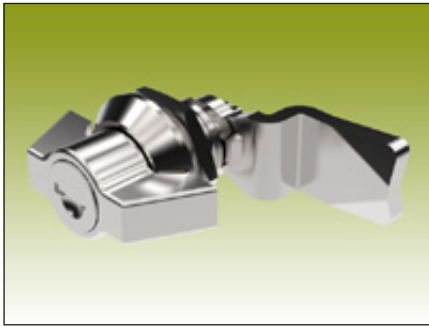
Quarter-turn latch manufactured to conform to hygiene requirements according to ISO 14159. Universal left and right mounting.

The latch is designed with smooth, curved surfaces, is corrosion resistant and is manufactured from non-absorbent materials to simplify cleaning and disinfecting. It may thus be used in clean room environments or applications in industries that process food, pharmaceuticals, biotechnology, cosmetics and similar. Sealed to IP69K, also classed "Waterproof according to NEMA 4".

Quarter-Turn Latch for Hygienic Applications. Acid-proof. (AAAA-AAAAA-HHLL)

| AAAA-AAAAA | Description | -HHLL | Cam |
|-------------|---|-------|---|
| 2023-301353 | Quarter-turn latch from stainless steel (303). | -0000 | No cam |
| 2029-901959 | Quarter-turn latch from Acid-proof steel (316). | -HH45 | Page 2-480 |
| | | | H between 4 - 50 mm in increments of 2 mm |



**Material:**

- Stainless steel (316). Brushed surface finish.
- Cylinder: Zinc die-cast, with stainless steel cap and dust shutter.

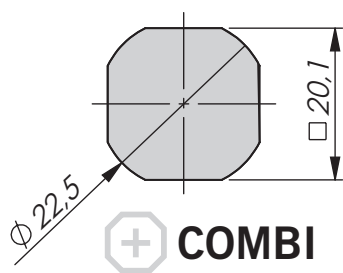
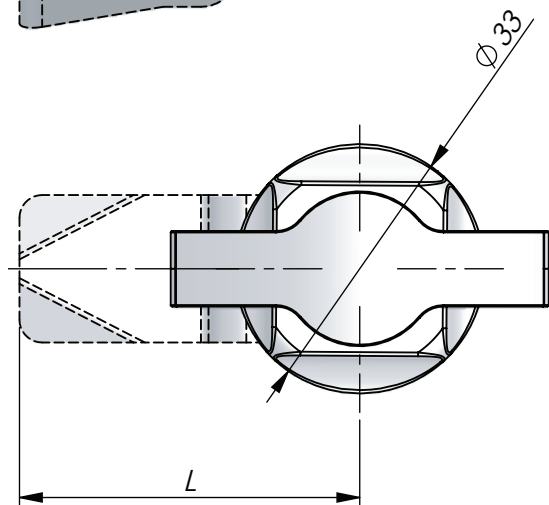
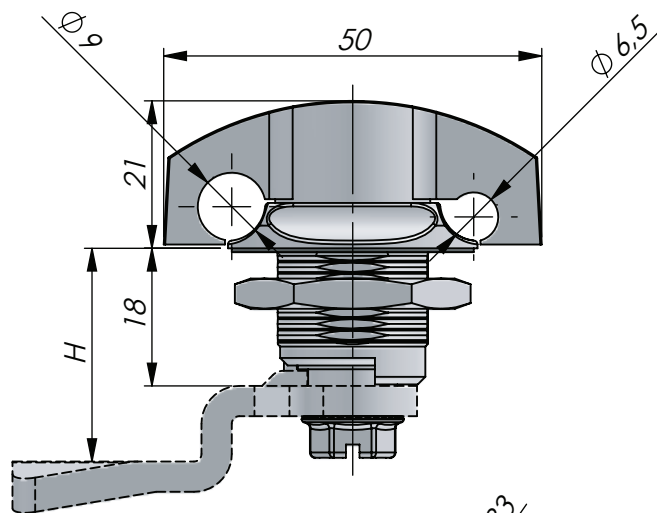
References, Accessories:

- Cams: See pages 2-480 and 2-490.

Quarter-turn wing knob in locking or non-locking version fabricated in acid proof 316 material. Universal clockwise or counter-clockwise rotation when opening / closing. Key extraction: Open/closed. Supplied with nut and two keys. Non-locking version sealed to protection degree IP65.

Wing knob - 18 mm. Acid-Proof.

| P/N | Description |
|----------|--------------------|
| 249042-0 | Non-locking |
| 249042-8 | Keyed alike IL0333 |



Material:

- Acid-proof stainless steel (316).
Brushed surface finish.

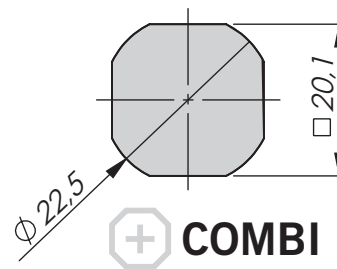
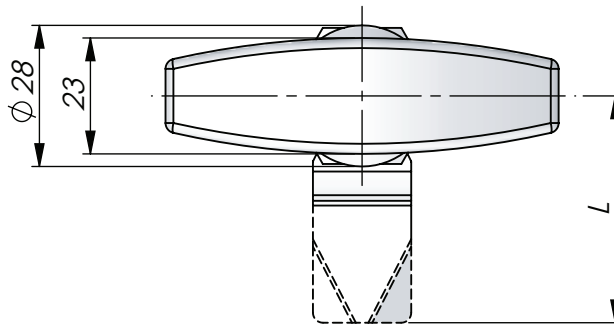
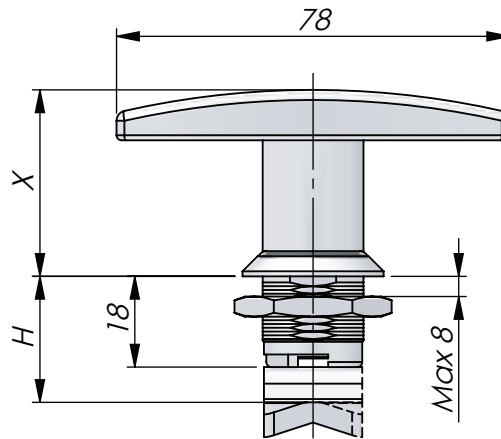
References, Accessories:

- Cams: See page 2-480 and 2-490.

Padlockable quarter-turn wing knob fabricated in acid proof, stainless steel 316 material. The rotation of the wing knob can be blocked with a padlock. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP65.

Padlockable Wing Knob - 18 mm - Acid-Proof

| P/N | Description |
|--------|-----------------------|
| 249085 | Padlockable wing knob |



Material:

- Stainless steel (304) or acid-proof stainless steel (316).

References, Accessories:

- Zinc version: Page 2-271.
- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.
- Rod guides: Page 2-560 and 2-570.

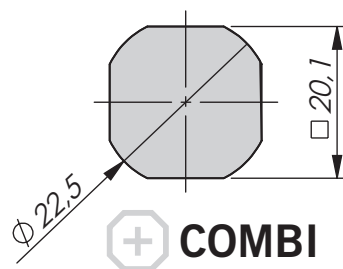
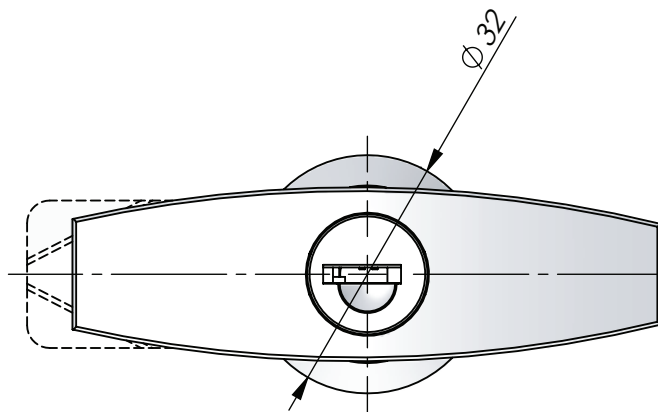
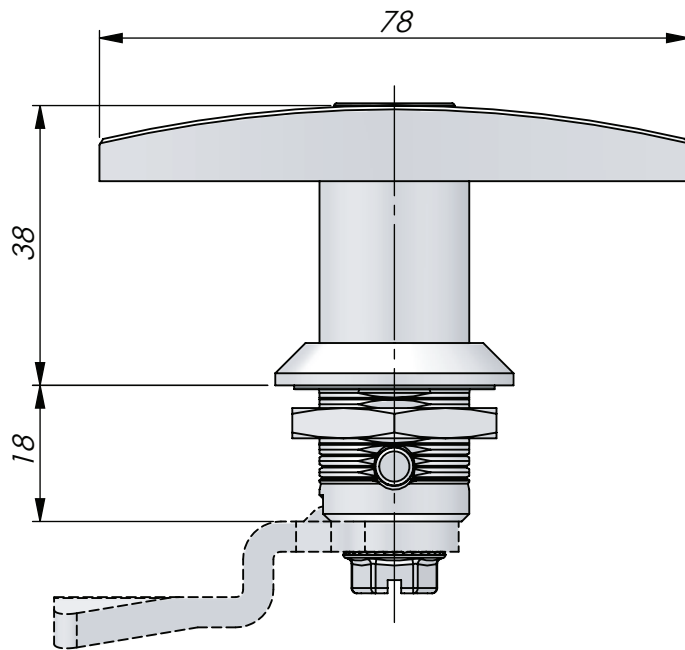
Notes, Tests:

Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 253067-1245 is a stainless handle in steel SS (304), with an uncoated surface, handle height (X=) 47 mm equipped with a cam having a H-measurement of 12 mm and a standard length of 45 mm.

Quarter-turn T-handle in non-locking version. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP65, also classed "Waterproof according to NEMA 4".

T-Handle - 18 mm - Acid-Proof (AAAAAA-HHLL)

| AAAAAA | Description - material | Surface treatment on handle | X= | -HHLL | Cam size in mm |
|--------|------------------------|-----------------------------|----|-------|---|
| 253050 | SS (304) | - | 37 | -0000 | No cam |
| 253067 | SS (304) | - | 47 | -HH45 | See cam ref. above |
| 253550 | SS (304) | Black | 37 | | H between 4 - 50 mm in increments of 2 mm |
| 259050 | SS (316) | - | 37 | | |



Material:

- Acid-proof stainless steel (316). Brushed surface finish.
- Cylinder: Zinc die-cast, with stainless steel cap and dust shutter.

References, Accessories:

Cams: See page 2-480, 2-490, 2-510 and 2-520.

Quarter-turn locking T-handle in acid-proof stainless steel 316 material. Universal clockwise or counter-clockwise rotation when opening / closing.

Supplied with nut and two keys.

T-Handle - 18 mm - Acid-Proof

| P/N | Description |
|--------|--------------------|
| 259005 | Keyed alike IL0333 |



Material:

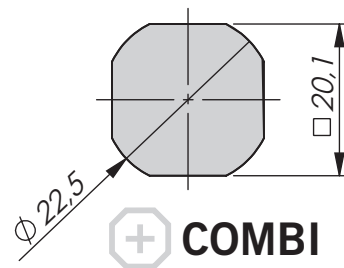
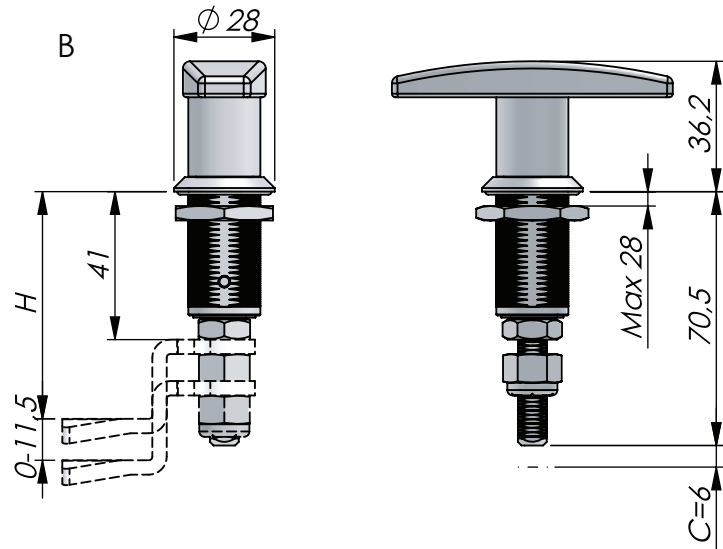
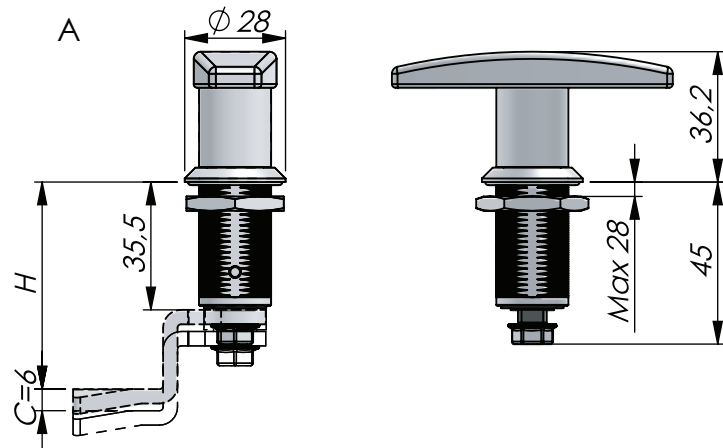
- T-handle, housing and counter nuts: Stainless steel (304).
- Nut M22, internal components: Stainless steel (303).

References, Accessories:

- Cams: Page 2-481, 2-491, 2-510 and 2-520.

Notes, Tests:

Protection degree IP69K and classed as "Waterproof according to NEMA 4".



Compression T-handle. Close and tighten with a single continuous half-turn motion. The first 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm.

Two latch types are available:

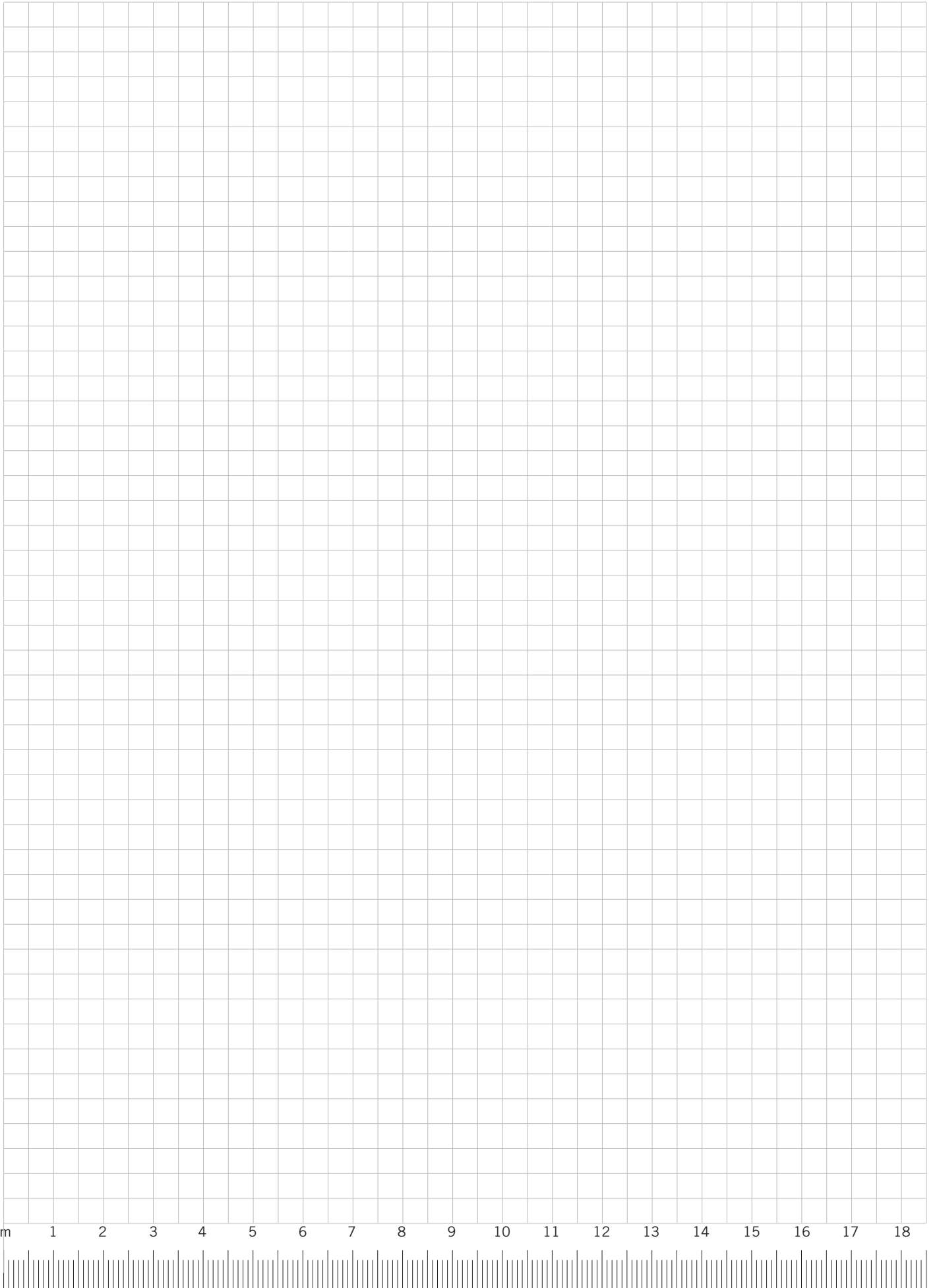
- A) Cam mounted at fixed position.
- B) Cam mounted at an adjustable position.

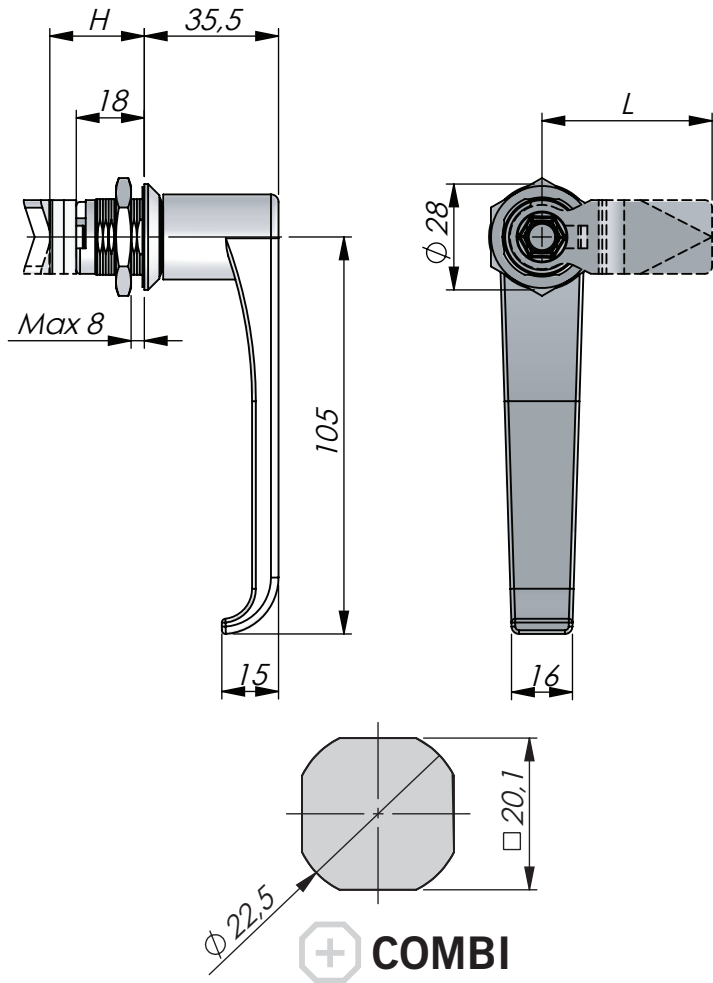
Latch (B) offers an extended, threaded shaft which allows you to place the cam along its entire length, resulting in a long distance for adjusting. The cam is fixed with counter-nuts (included).

Both latch types are supplied without cams. These have to be ordered separately according to pages under "References" on this page.

Compression T-Handle

| P/N | Description | Drawing |
|------------|-------------|---------|
| 243087-500 | Fixed | A |
| 243089-500 | Adjustable | B |





Material:

- Stainless steel (304) or acid-proof stainless steel (316).

References, Accessories:

- Zinc version: Page 2-290.
- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.
- Rod guides: Page 2-560 and 2-570.

Notes, Tests:

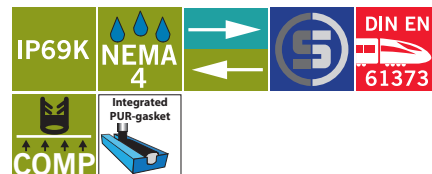
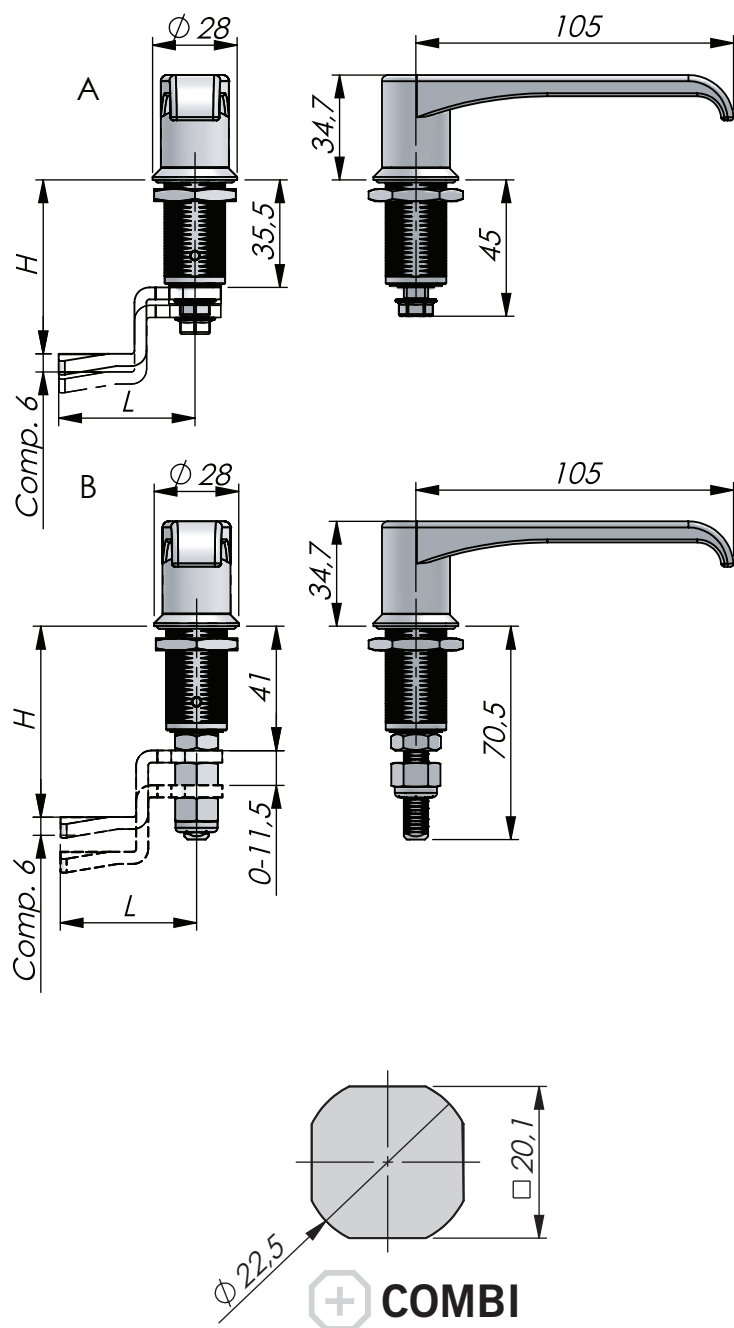
Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 269001-1-3845 is an acid-proof right hinged L-handle with a latch equipped with a cam having a H-measurement of 38 mm and a standard length of 45 mm.

RH = Right hinged door.
LH = Left hinged door.

Quarter-turn L-handle in non locking version. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP65, also classed "Waterproof according to NEMA 4".

L-Handle - 18 mm - Acid-Proof (AAAAA-B-HHLL)

| AAAAA | Description - material | -B | Assembly | -HHLL | Cam size in mm |
|--------|----------------------------|----|----------|-------|---|
| 263901 | Stainless steel, SS (304) | -0 | No cam | -0000 | No cam |
| 269001 | Acid-proof steel, SS (316) | -1 | RH | -HH45 | See cam ref. above |
| | | -2 | LH | | H between 4 - 50 mm in increments of 2 mm |



Material:

- T-handle, housing and counter nuts: Stainless steel (304).
- Nut M22, internal components: Stainless steel (303).

References, Accessories:

- Cams: Page 2-481, 2-491, 2-510 and 2-520.

Compression L-handle. Close and tighten with a single continuous half-turn motion. The first 90° turn moves the cam 90°, the second 90° turn retracts the cam 6 mm.

Two latch types are available:

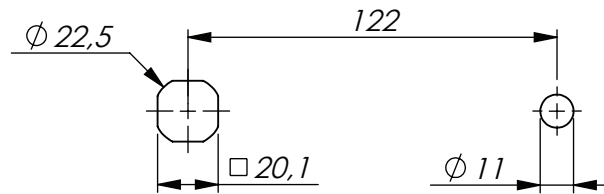
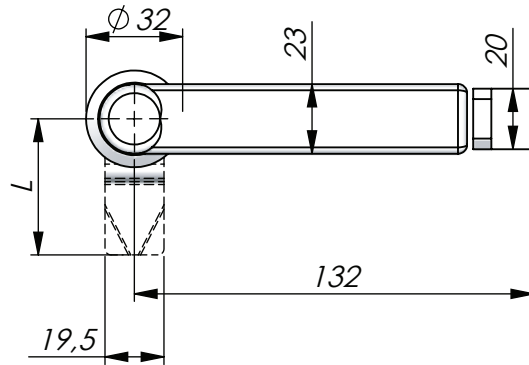
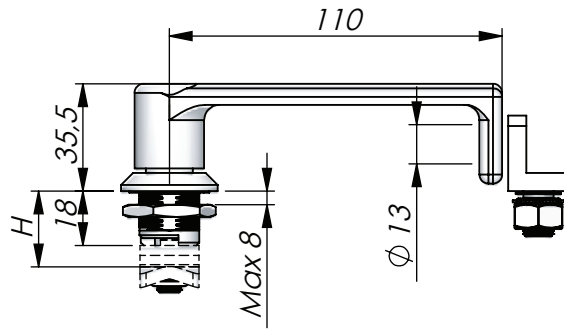
- A) Cam mounted at fixed position.
- B) Cam mounted at an adjustable position.

Latch (B) offers an extended, threaded shaft which allows you to place the cam along its entire length, resulting in a long distance for adjusting. The cam is fixed with counter-nuts (included). Protection degree IP69K and classed as "Waterproof according to NEMA 4".

Both latch types are supplied without cams. These have to be ordered separately according to pages under "References" on this page.

Compression L-Handle - 18 mm

| P/N | Description | Drawing |
|------------|-------------|---------|
| 243087-600 | Fixed | A |
| 243089-600 | Adjustable | B |



Material:

- Stainless steel (304) or acid-proof stainless steel (316). Brushed surface finish.

References, Accessories:

- Aluminium version: Page 2-305.
- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.
- Rod guides: 2-560, 2-570 and 2-580.

Notes, Tests:

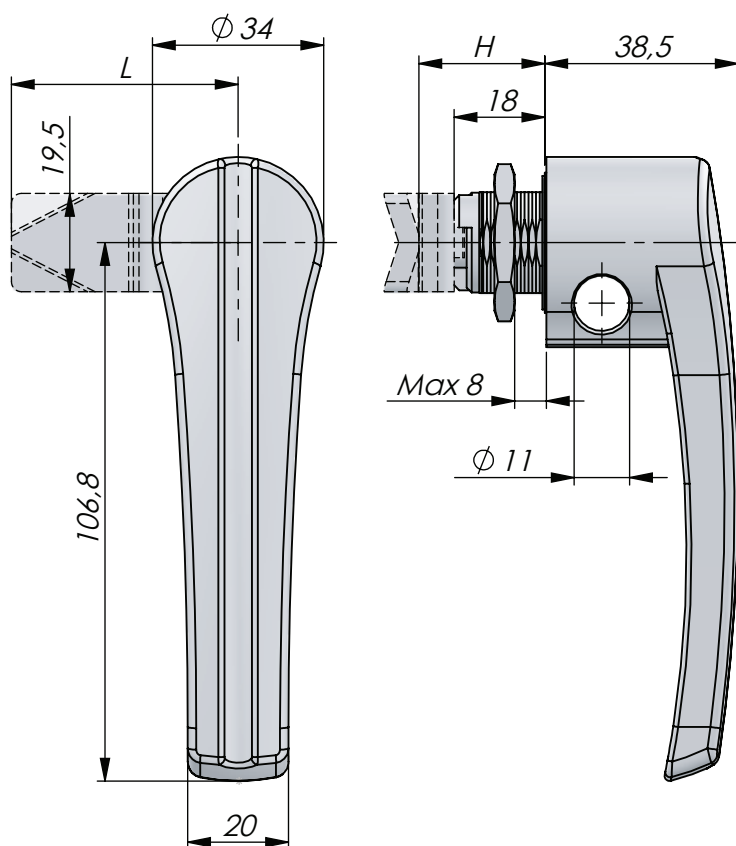
Matching cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 263901-1-2645 is a right hinged stainless steel handle (SS 304) on a latch equipped with a cam having a H-measurement of 26 mm and standard length 45 mm.

RH = Right hinged door.
LH = Left hinged door.

Stainless or acid-proof padlockable L-handle. Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP65.

Padlockable L-Handle - 18 mm - Acid-Proof (AAAAAA-B-HHLL)

| AAAAAA | Description - material | -B | Assembly | -HHLL | Cam size in mm |
|--------|--------------------------------------|----|----------|-------|---|
| 263966 | Stainless steel, SS (304) | -0 | No cam | -0000 | No cam |
| 269966 | Acid-proof stainless steel, SS (316) | -1 | RH | -HH45 | See cam ref. above |
| | | -2 | LH | | H between 4 - 50 mm in increments of 2 mm |



Material:

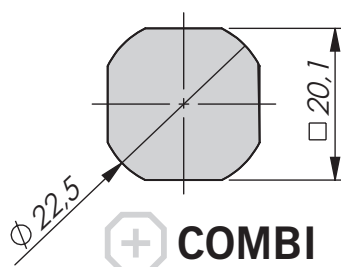
- Stainless steel (304). Brushed surface finish.

References, Accessories:

- Cams: Page 2-480, 2-490, 2-510 and 2-520.
- Rods: Page 2-540, 2-541 and 2-545.
- Rod guides: Page 2-560, 2-570 and 2-580.

Notes, Tests:

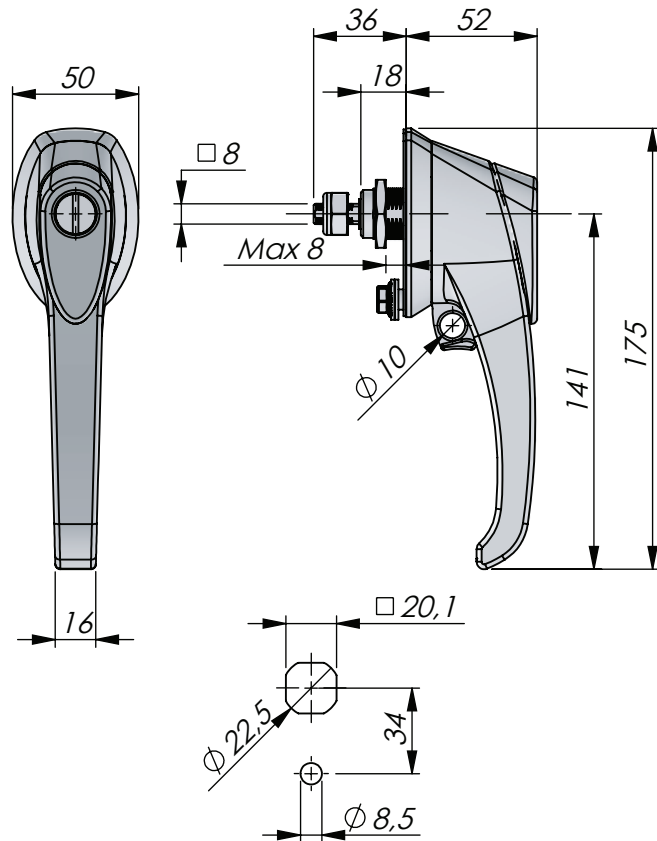
Cams may be chosen with H-measurement between H=04 mm and H=50 mm in increments of 2 mm (4, 6, 8, 10, 12...up to 50 mm). Example: 263064-1-2445 is a right hinged padlockable L-handle on a latch equipped with a cam having a H-measurement of 24 mm and standard length 45 mm.



Padlockable L-handle in stainless steel (304). Universal clockwise or counter-clockwise rotation when opening / closing. Supplied with nut. Protection degree IP65.

Padlockable L-Handle - 18 mm (AAAAAA-B-HHLL)

| AAAAAA | Description - material | -B | Assembly | -HHLL | Cam size in mm |
|--------|---------------------------|----|----------|-------|---|
| 263064 | Stainless steel, SS (304) | -0 | No cam | -0000 | No cam |
| | | -1 | RH | -HH45 | See cam ref. above |
| | | -2 | LH | | H between 4 - 50 mm in increments of 2 mm |



Material:

- Handle: Brushed stainless steel (304).

References, Accessories:

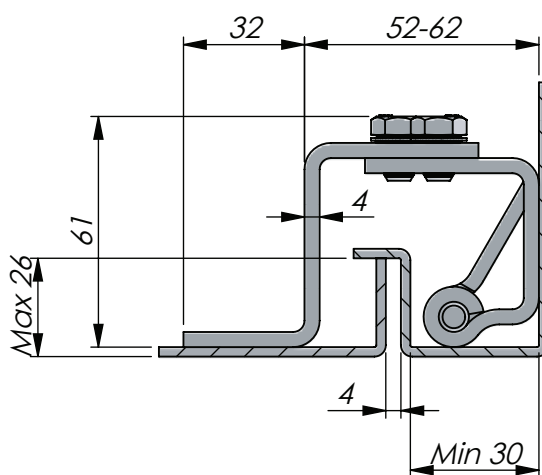
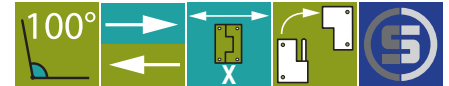
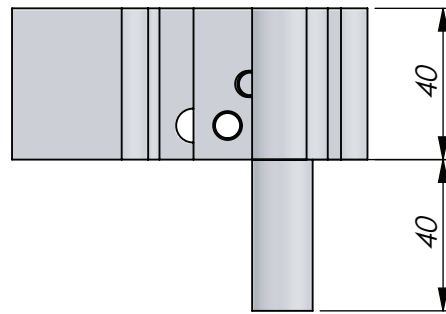
- Zinc version: Page 2-352.
- Cams: With 12 mm square cut-out, supplied on request.
- Rods: Page 2-540, 2-541 and 2-545.
- Rod guides: Page: 2-560 and 2-570.
- Keys: Page 2-370 and 2-372.

Stainless padlockable compact defeater handle equipped with a built-in spring loaded insert, providing a defeater function making the handle compliant with two-handed safety operations requirements. Also equipped with a padlock loop (with $\Phi 10$ mm hole) for optional locking.

To operate the handle, first remove the padlock from the trigger/padlock loop. With one hand, turn the insert. With the other hand, push the trigger/padlock loop and then turn the handle. The cast-in threaded steel shaft allows simple cam adjustment. Removable stop for clockwise or counter-clockwise operation. Supplied with nut, screw and gasket. Protection degree IP65.

Padlockable Compact Defeater Handle - 36 mm

| P/N | Description - insert |
|-----------|--|
| 263031-41 | Defeater handle with insert "Slotted, recessed" |
| 263031-47 | Defeater handle with insert "Recessed hexagon 8 with 3 mm pin" |
| 263033 | Handle with insert "Solid plug". No defeater - only one-handed trigger |

**Material:**

- Stainless steel (304).

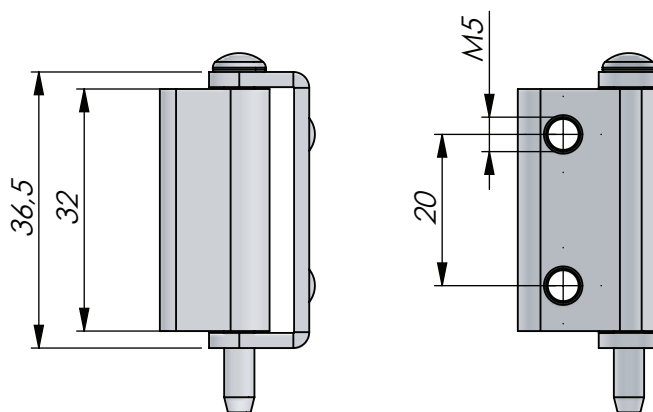
References, Accessories:

- Steel version: Page 3-020.

Stainless adjustable concealed hinge for weld-on mounting. Universal left and right mounting. Opening angle 100°. Door part adjustable 6 mm horizontally. Frame part shaped as a flag.

Adjustable Concealed Hinge - 100° Opening Angle

| P/N | Description |
|--------|--------------------------------------|
| 313003 | Stainless adjustable concealed hinge |

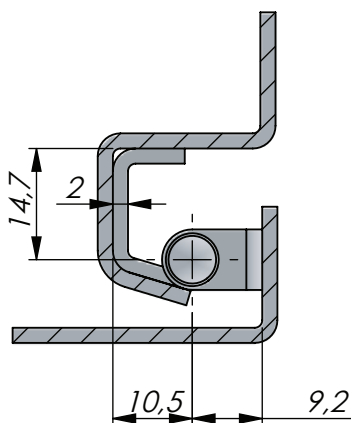


Material:

- Stainless steel (304).

References, Accessories:

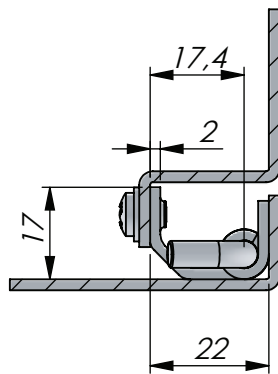
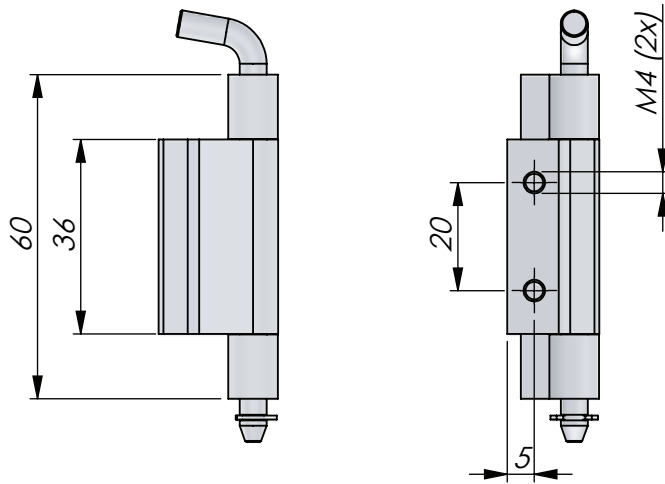
- Steel version: Page 3-045.



Stainless concealed hinge. Frame part for screws or weld-on mounting. Door part with welding warts for press welding. Opening angle 120°. Universal left and right mounting.

Concealed Hinge - 120° Opening Angle

| P/N | Description |
|--------|---------------------------|
| 313018 | Stainless concealed hinge |



Material:

- Hinge and E-clip: Stainless steel (304).
- Axle: Stainless steel (303).

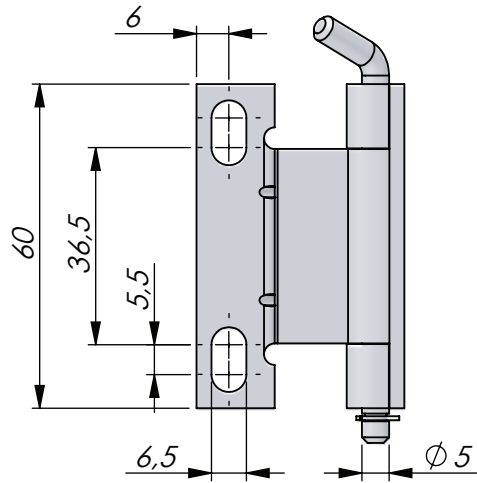
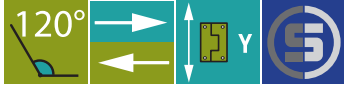
References, Accessories:

- Steel version: Page 3-050.

Stainless concealed hinge for mounting inside externally mounted doors. Universal left and right mounting. Opening angle 120°. Weld-on and / or screw mounting. Hinge supplied with E-clip.

Concealed Hinge - 120° Opening Angle

| P/N | Description | Door part | Frame part |
|--------|--|------------------|-------------------|
| 313008 | Stainless concealed hinge, including E-clip. | Weld-on mounting | Screw-on mounting |

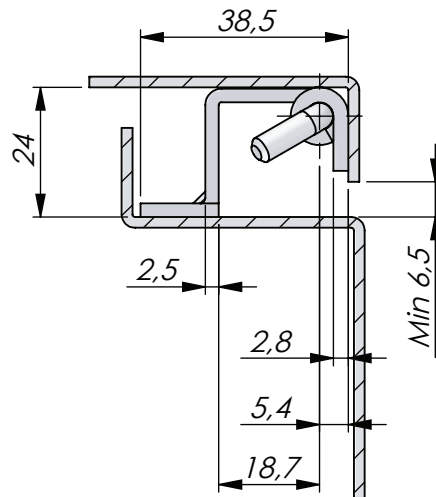


Material:

- Hinge, axle and E-clip: Stainless steel (303).

References, Accessories:

- Steel version: Page 3-060.



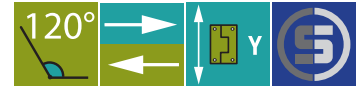
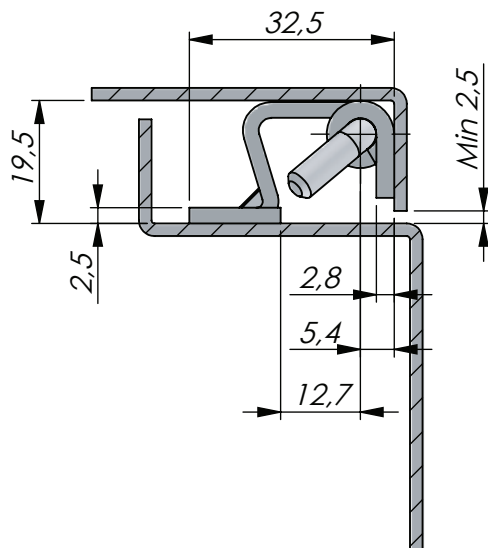
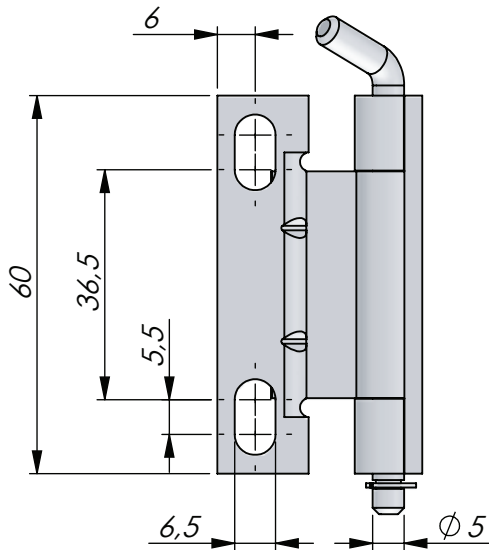
Stainless adjustable adjustable concealed hinge for surface mounted doors. Opening angle 120°. Universal left and right mounting. For weld-on and screw mounting. The hinge can be adjusted 5,5 mm vertically. Supplied with E-clip.

Adjustable Stainless Concealed Hinge - 120° Opening Angle

| P/N | Description - material | Door part | Frame part |
|--------|--------------------------------------|-----------|-------------------|
| 313010 | Adjustable Stainless Concealed Hinge | Weld-on | Screw-on mounting |

Adjustable Concealed Hinge - 120° Opening Angle

Stainless steel



Material:

- Hinge, pin and E-clip: Stainless steel (303).

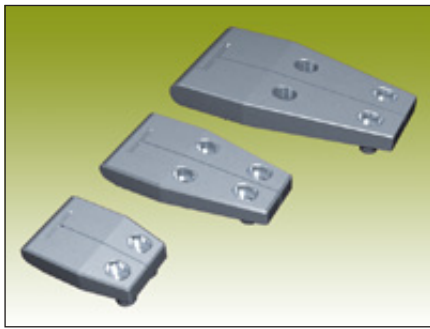
References, Accessories:

- Steel version: Page 3-070.

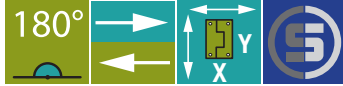
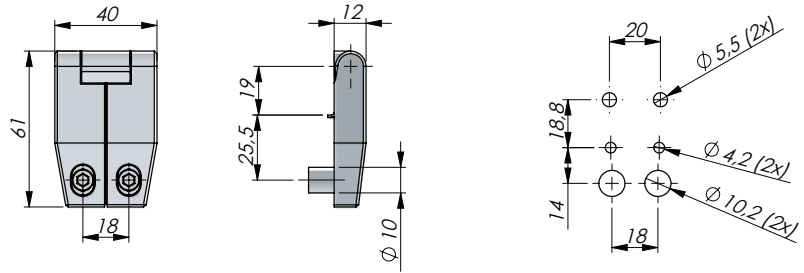
Concealed adjustable hinge for surface mounted doors. Opening angle 120°. Universal left and right mounting. For weld-on and screw mounting. The hinge can be adjusted 5,5 mm vertically. Supplied with E-clip.

Adjustable Concealed Hinge - 120° Opening Angle

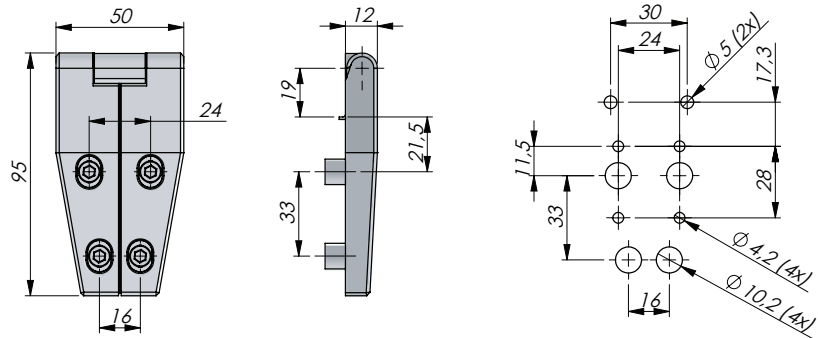
| P/N | Description | Door part | Frame part |
|--------|--------------------------------------|-----------|------------|
| 313012 | Adjustable Stainless Concealed Hinge | Weld-on | Screw-on |



A



B



Material:

- Hinge: Stainless steel (304), polished.
- Mounting plate and pin: Stainless steel (304).

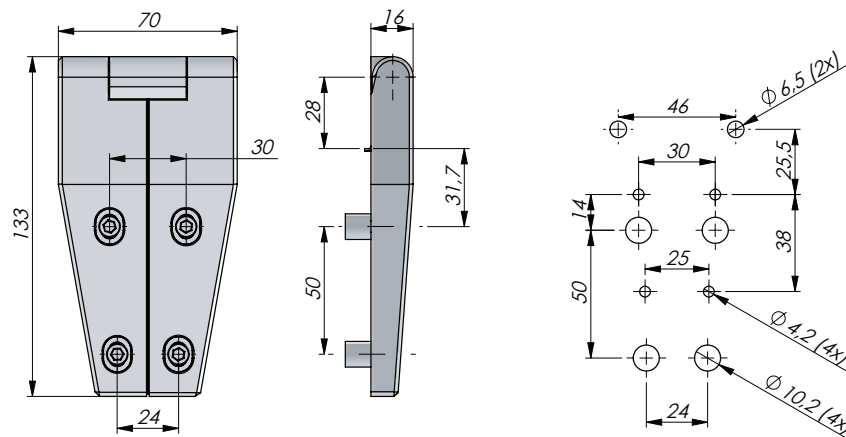
References, Accessories:

- Zinc version: Page 3-160.

Notes, Tests:

On request this hinge may also be delivered in acid-proof stainless steel (316) and acid-proof stainless steel (316L) for welding.

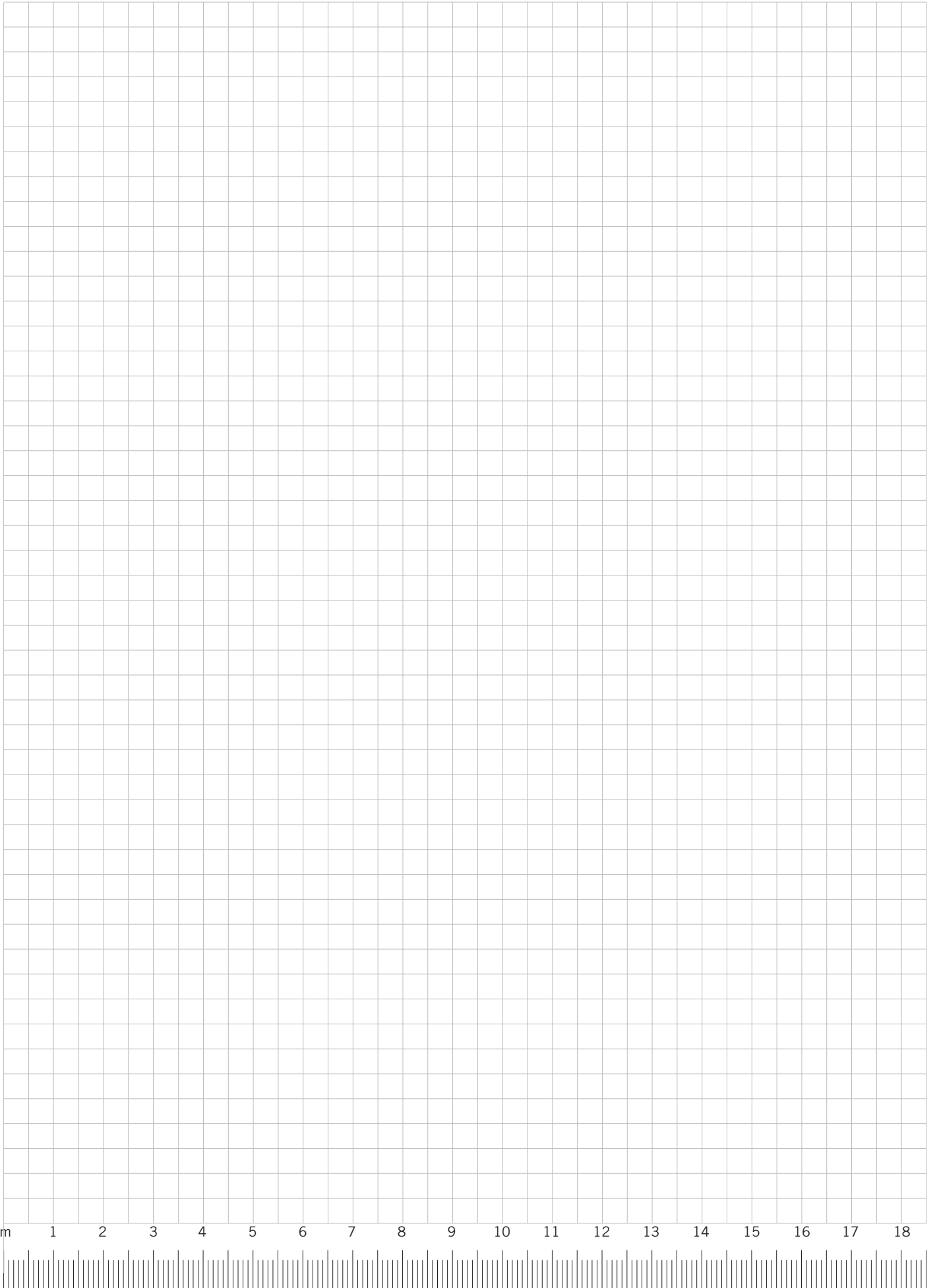
C



Specifically designed hinges to simplify mounting on insulated (double skinned) doors. Adjustable in the X- and Y-axis by 3 mm. Opening angle 180°. Supplied with mounting plate.

Adjustable Hinge for Insulated Doors - System KLIMA-FLEX - 180° Opening Angle

| P/N Stainless Steel (304) | W | L | Drawing |
|---------------------------|----|-----|---------|
| 323050 | 40 | 61 | A |
| 323051 | 50 | 95 | B |
| 323052 | 70 | 133 | C |

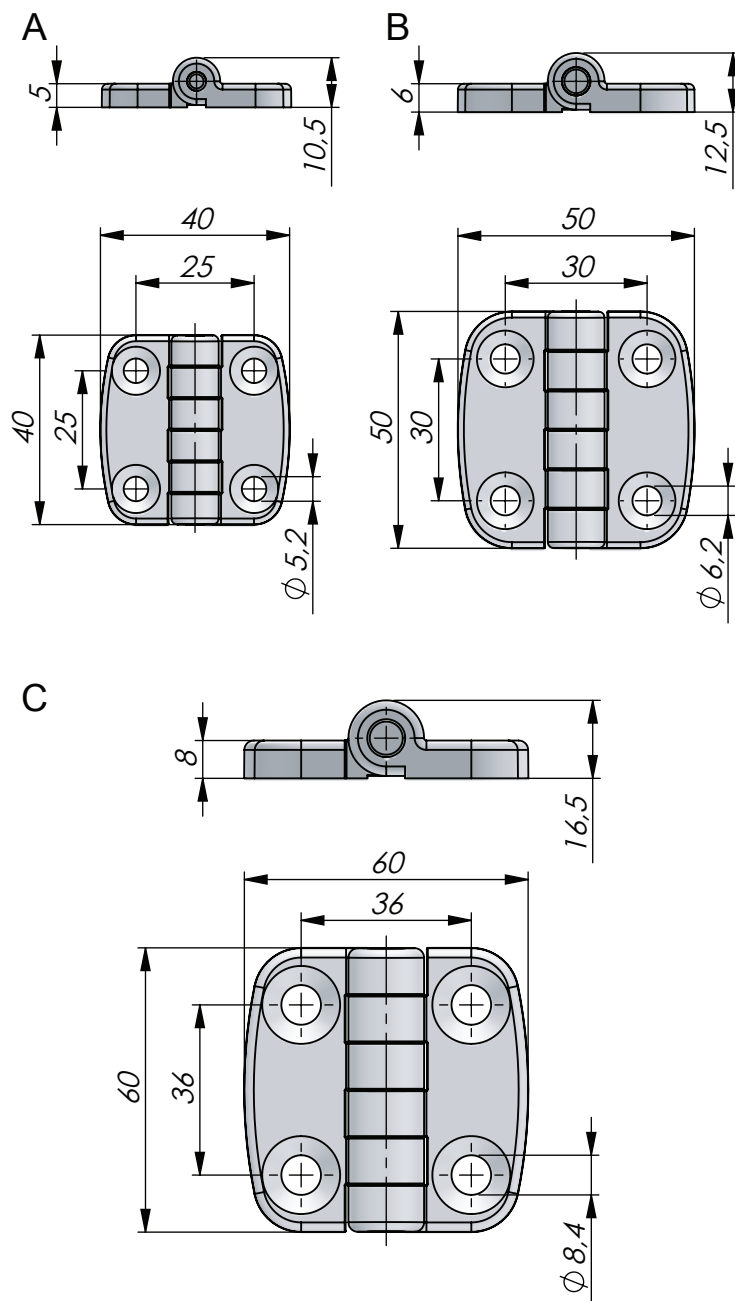


**Material:**

- Acid-proof stainless steel (316).
Brushed surface finish.

References, Accessories:

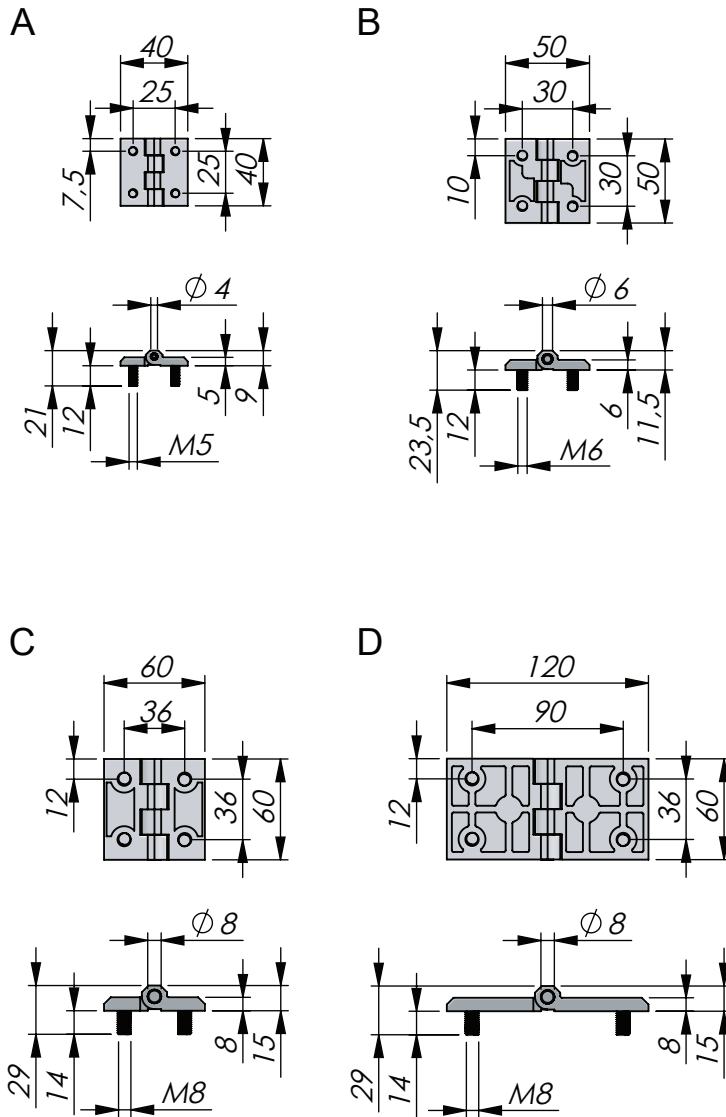
- Zinc version: Page 3-351, 3-361, 3-371, 3-381 and 3-391.



Acid-proof stainless steel (316)
external hinge. Opening angle 270°.
Universal left and right mounting.

External Hinge - 180° Opening Angle - Acid-Proof

| P/N | Description, size W x L | Drawing |
|----------------|-------------------------|---------|
| 3290-600404-30 | 40 x 40 mm | A |
| 3290-600504-30 | 50 x 50 mm | B |
| 3290-600604-30 | 60 x 60 mm | C |



Material:

- Stainless steel (304). Brushed surface finish.

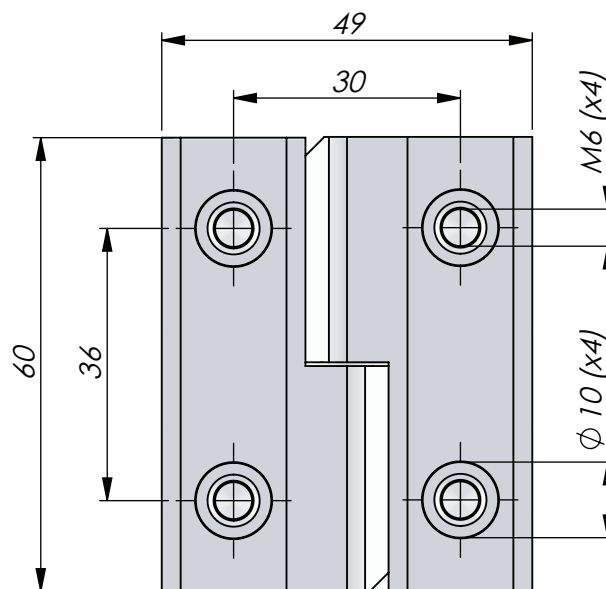
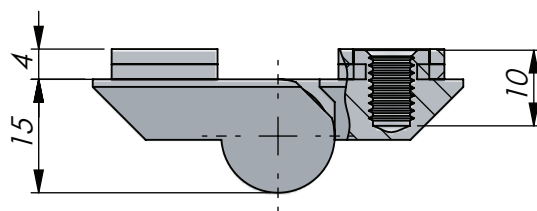
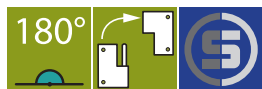
References, Accessories:

- Zinc version: Page 3-351, 3-361, 3-371, 3-381 and 3-391.

Stainless external hinge with cast-in bolts. Opening angle 180°. Universal left and right mounting.

External Hinge - 180° Opening Angle

| P/N | Description, size W x L | Drawing |
|------------------|-------------------------|---------|
| 3230-303000-4040 | 40 x 40 mm | A |
| 3230-303000-5050 | 50 x 50 mm | B |
| 3230-303000-6060 | 60 x 60 mm | C |
| 3230-303000-6012 | 60 x 120 mm | D |



Material:

- Acid-proof stainless steel (316).

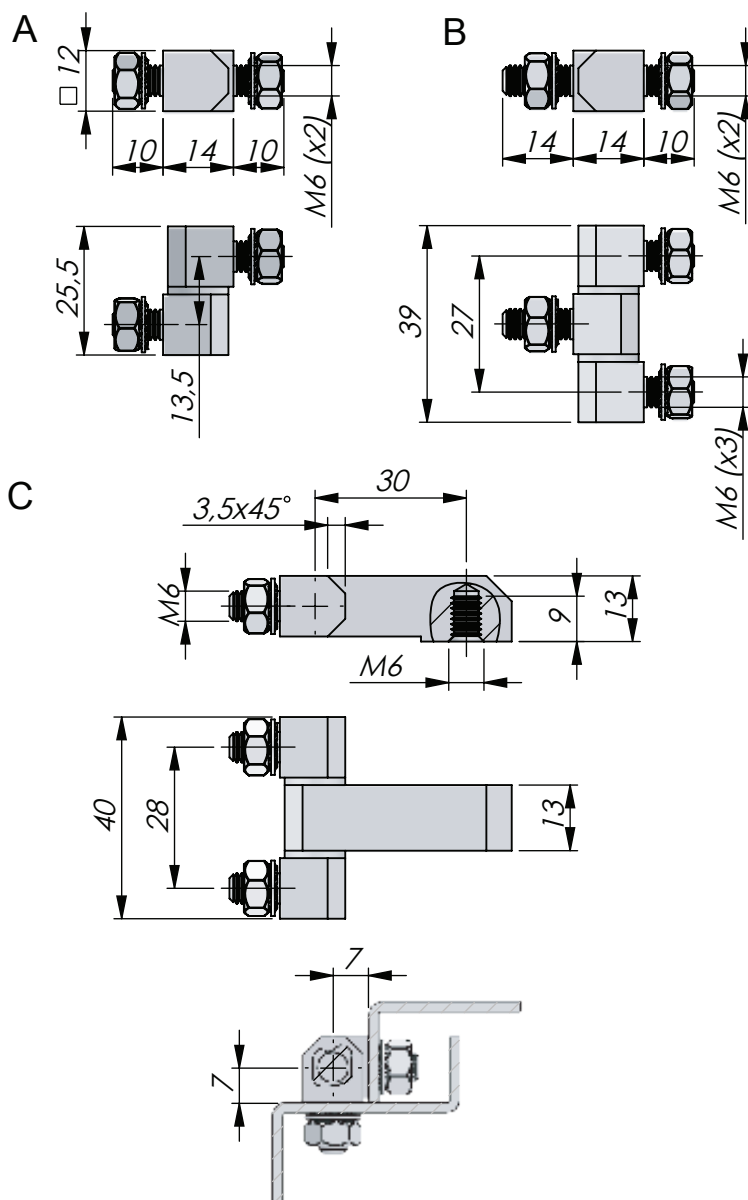
Notes, Tests:

Supplied without M6 screws.

Acid-proof stainless external lift-off hinge for flush mounted doors. Opening angle 180°. Lift-off design. Right or left version.

External Lift-Off Hinge - 180° Opening Angle - Acid-Proof

| P/N | Description |
|--------|------------------------------|
| 329028 | Right hinged version (shown) |
| 329029 | Left hinged version |



Material:

- Stainless steel (303) or acid-proof stainless steel (316).

References, Accessories:

- Steel version: 3-510.

Notes, Tests:

Supplied unassembled, with nuts and washers.

Stainless external bolt-on hinge for surface mounted or flush mounted doors. Universal left and right mounting. Opening angle 180°. Two-part version in lift-off design, and three-part versions in fixed design. Three-part version (drawing C) with elongated center for flush mounted doors. Supplied unassembled, with nuts and washers.

External Bolt-On Hinge - 180° Opening Angle - Acid-Proof

| P/N | Description | Material | Version | Drawing |
|-----------|--|----------|-------------------|---------|
| 323012 | Two-part hinge | SS (303) | Lift-off | A |
| 329012 | Two-part hinge | SS (316) | Lift-off | A |
| 323014 | Three-part hinge | SS (303) | Fixed | B |
| 329014 | Three-part hinge | SS (316) | Fixed | B |
| 323014-30 | Three-part hinge. M6-stud or screw not included. | SS (303) | Elongated / Fixed | C |

**Material:**

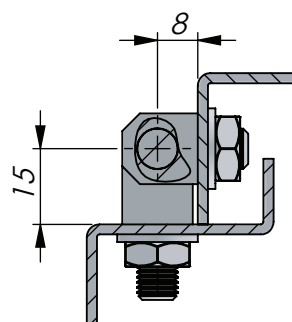
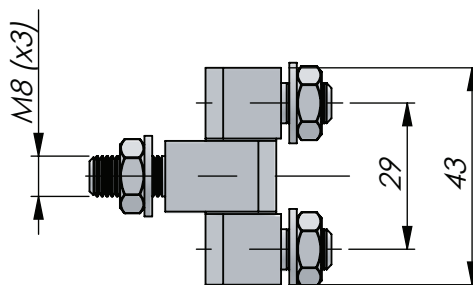
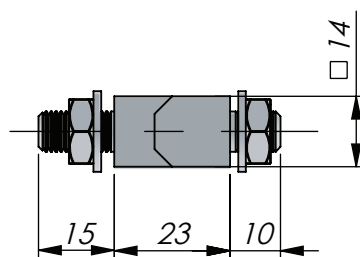
- Stainless steel (303) or acid-proof stainless steel (316).

References, Accessories:

- Steel version: Page 3-530.

Notes, Tests:

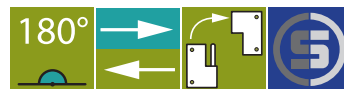
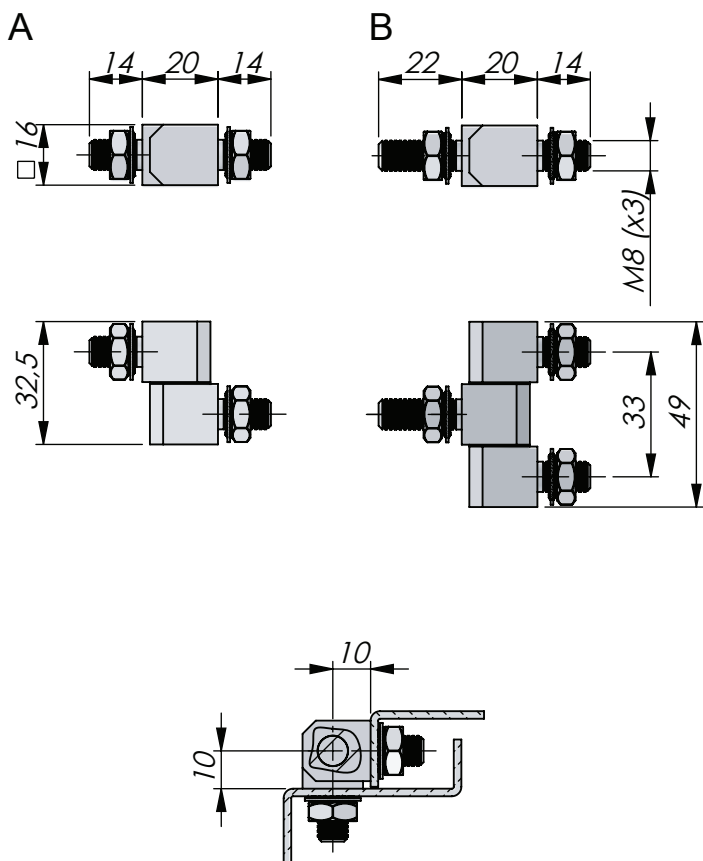
Supplied unassembled, with nuts and washers.



Stainless external bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Supplied unassembled, with nuts and washers.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Material |
|--------|----------------------------------|
| 323016 | Stainless steel (303) |
| 329016 | Acid-proof Stainless steel (316) |



Material:

- Stainless steel (303) or acid-proof stainless steel (316).

References, Accessories:

- Steel version: Page 3-540.

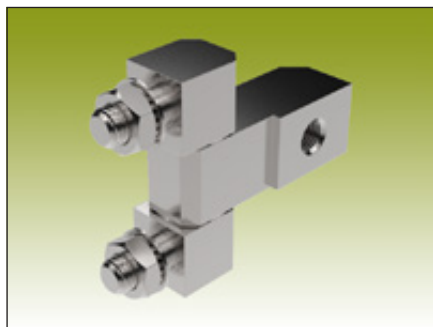
Notes, Tests:

Supplied unassembled, with nuts and washers.

Stainless external bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Two-part version in lift-off design, and three-part version in fixed design. Supplied unassembled, with nuts and washers.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Description | Material | Version | Drawing |
|--------|------------------|----------------------------------|----------|---------|
| 323022 | Two-part hinge | Stainless Steel (303) | Lift-off | A |
| 329022 | Two-part hinge | Acid-Proof Stainless Steel (316) | Lift-off | A |
| 323018 | Three-part hinge | Stainless Steel (303) | Fixed | B |
| 329018 | Three-part hinge | Acid-Proof Stainless Steel (316) | Fixed | B |

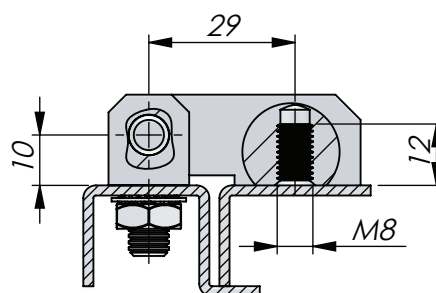
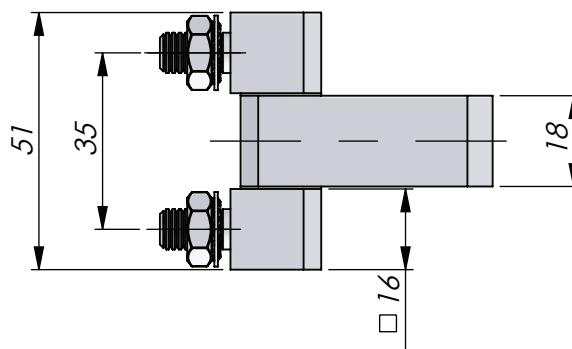
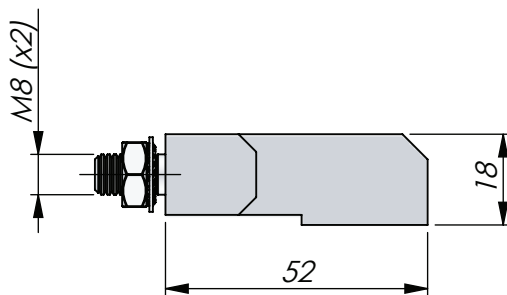


Material:

- Stainless steel (303) or acid-proof stainless steel (316).

References, Accessories:

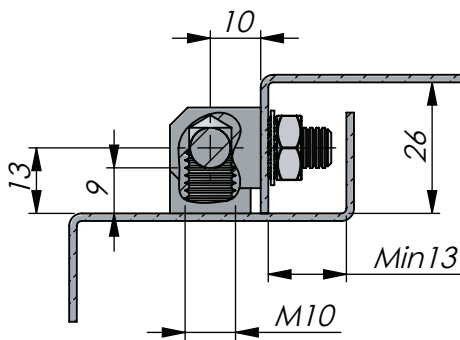
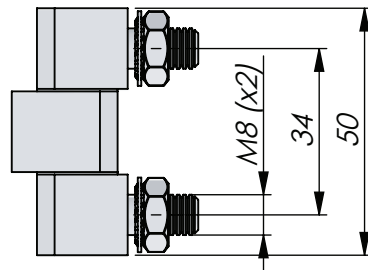
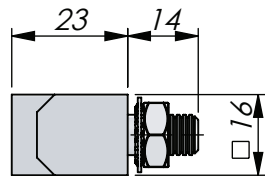
Steel version: Page 3-550.



Stainless external bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Supplied unassembled with washers and nuts. Stud or bolt for door part is not included.

External Bolt-On Hinge - 180° Opening Angle - Acid-Proof

| P/N | Material |
|--------|----------------------------------|
| 323019 | Stainless Steel (303) |
| 329019 | Acid-Proof Stainless Steel (316) |



Material:

- Stainless steel (303) or acid-proof stainless steel (316).

References, Accessories:

- Steel version: Page 3-560.

Stainless external bolt-on hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Supplied unassembled with washers and nuts. Stud or bolt for door part is not included.

External Bolt-On Hinge - 180° Opening Angle

| P/N | Material |
|--------|----------------------------------|
| 323020 | Stainless Steel (303) |
| 329020 | Acid-Proof Stainless Steel (316) |



Material:

- Stainless steel (303).

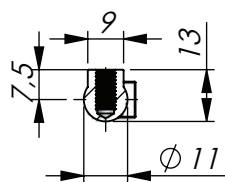
References, Accessories:

- Steel version: Page 3-570.

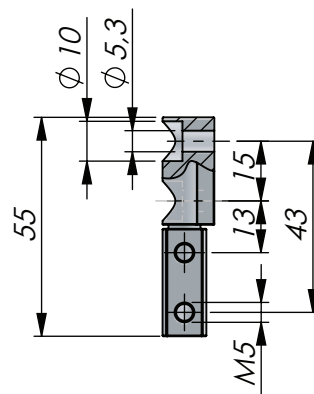
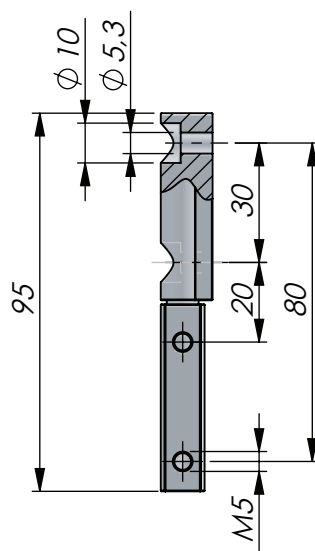
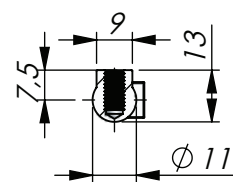
Notes, Tests:

Supplied with screws, screw covers and washers.

A



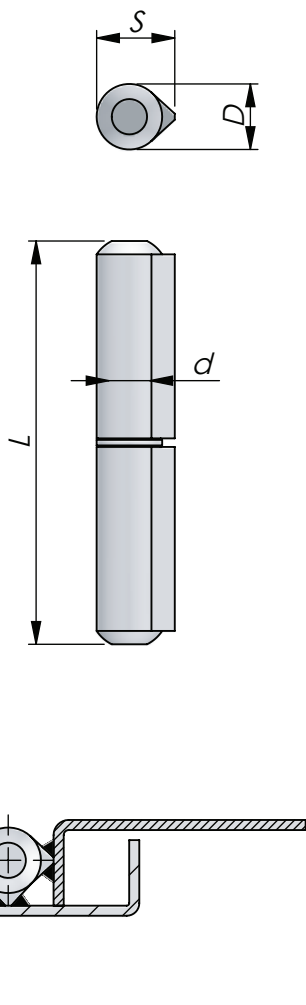
B



Stainless external profile hinge for surface mounted doors. Universal left and right mounting. Opening angle 180°. Screw mounted. Supplied with screws, screw covers and washers.

External Profile Hinge - 180° Opening Angle

| P/N | Description - height | Drawing |
|-----------|----------------------|---------|
| 322123-RF | 95 mm | A |
| 322124-RF | 55 mm | B |



Material:

- Stainless steel (303).

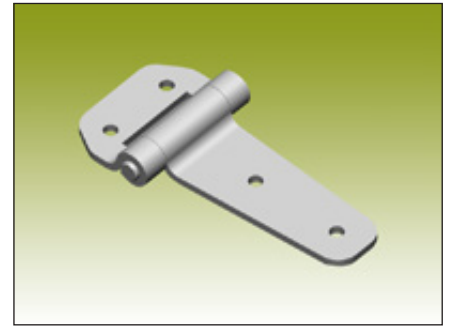
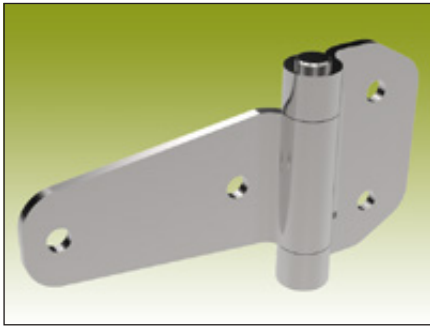
References, Accessories:

- Steel version: Page 3-592.

Stainless steel weld-on hinge. Lift-off design. Universal left and right mounting.

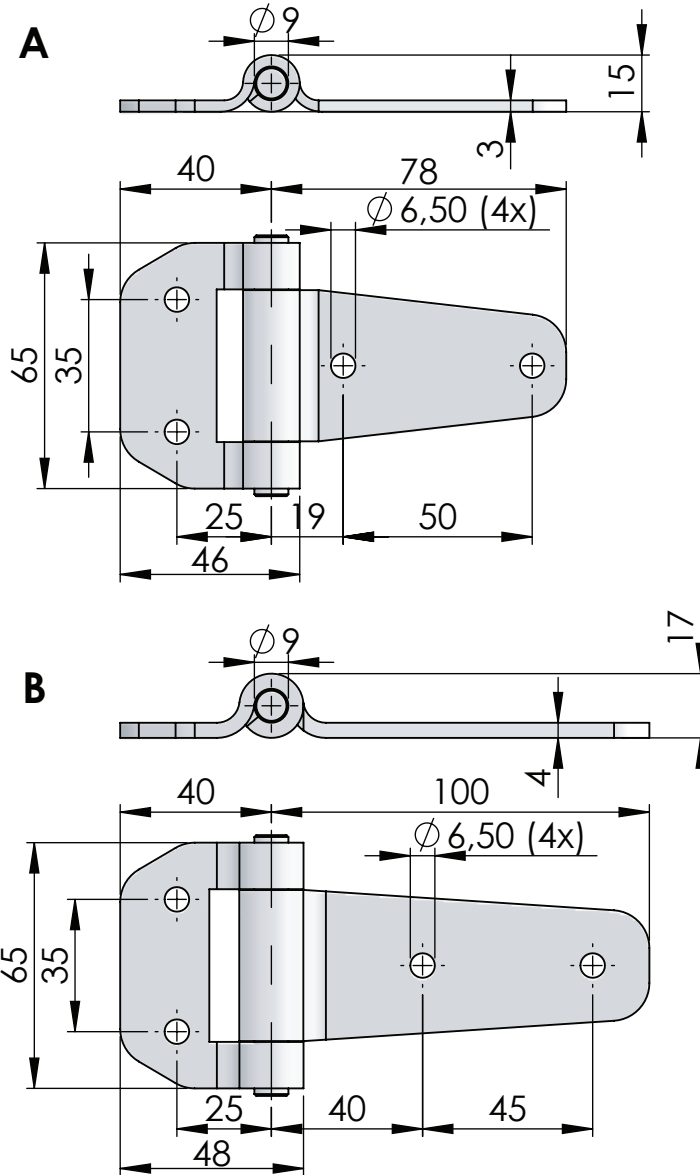
Weld-On Hinge - 60 - 180 mm

| P/N | Description - material | L | d | D | S |
|-------------|------------------------|-----|------|------|------|
| 333001-A060 | Stainless Steel (303) | 60 | 6,0 | 10,0 | 12,0 |
| 333001-A080 | Stainless Steel (303) | 80 | 8,0 | 13,0 | 15,5 |
| 333001-A100 | Stainless Steel (303) | 100 | 10,0 | 16,0 | 20,0 |
| 333001-A120 | Stainless Steel (303) | 120 | 11,0 | 16,0 | 20,0 |
| 333001-A150 | Stainless Steel (303) | 150 | 13,0 | 20,0 | 25,0 |
| 333001-A180 | Stainless Steel (303) | 180 | 14,0 | 20,0 | 25,0 |



Material:

- Steel, zinc plated or stainless steel (304).

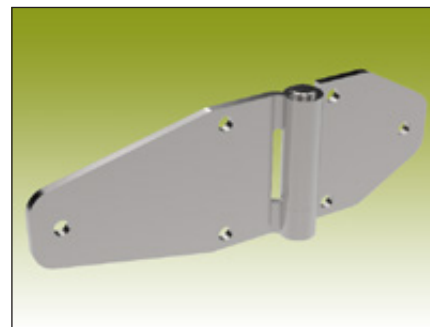
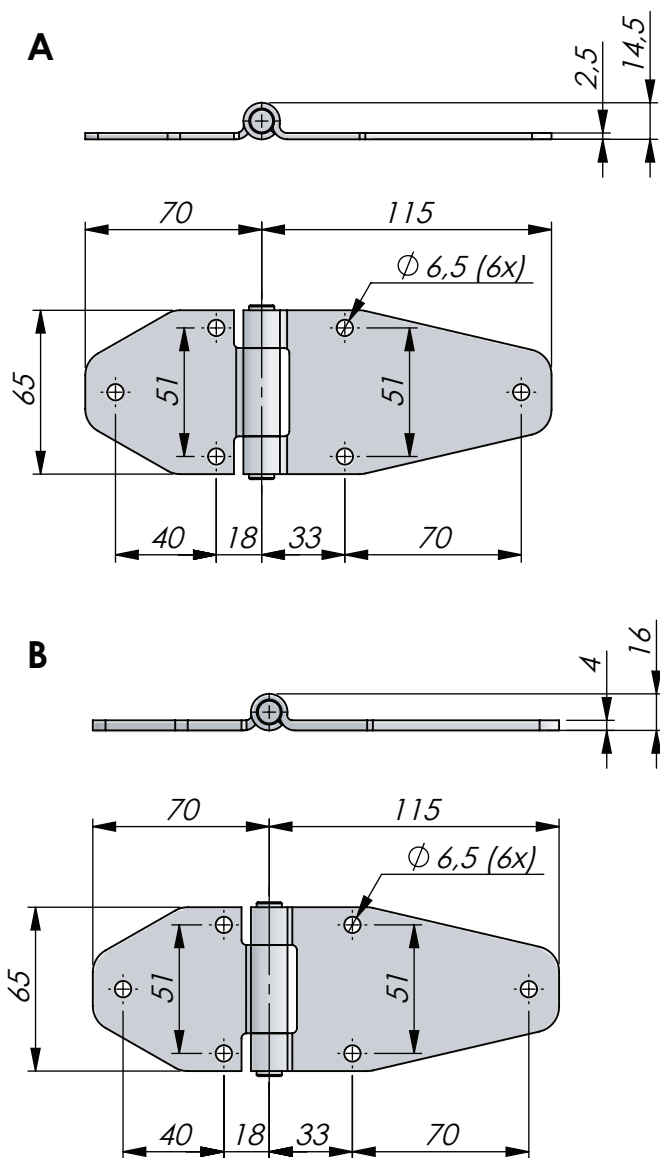


Heavy-duty rolled hinge for mounting with screws or rivets. Ideal for vehicles. The hinge-leaves are folded, designed for a flat surface for mounting. Opening angle 180°. The four mounting holes have hole diameter Ø 6,5 mm. The hinge pin is fixed.

0

Heavy-Duty Hinge - 180° Opening Angle

| P/N | Material | Drawing |
|-----------|-----------------------|---------|
| 322181-01 | Steel, zinc plated | A |
| 322181-02 | Steel, zinc plated | B |
| 323081-01 | Stainless Steel (304) | A |
| 323081-02 | Stainless Steel (304) | B |



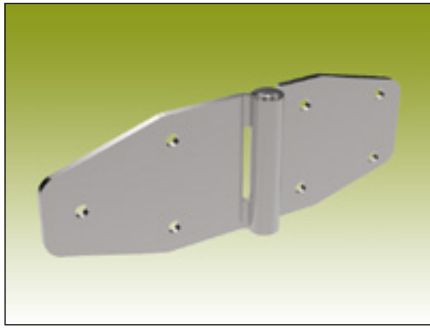
Material:

- Steel, zinc plated or stainless steel (304).

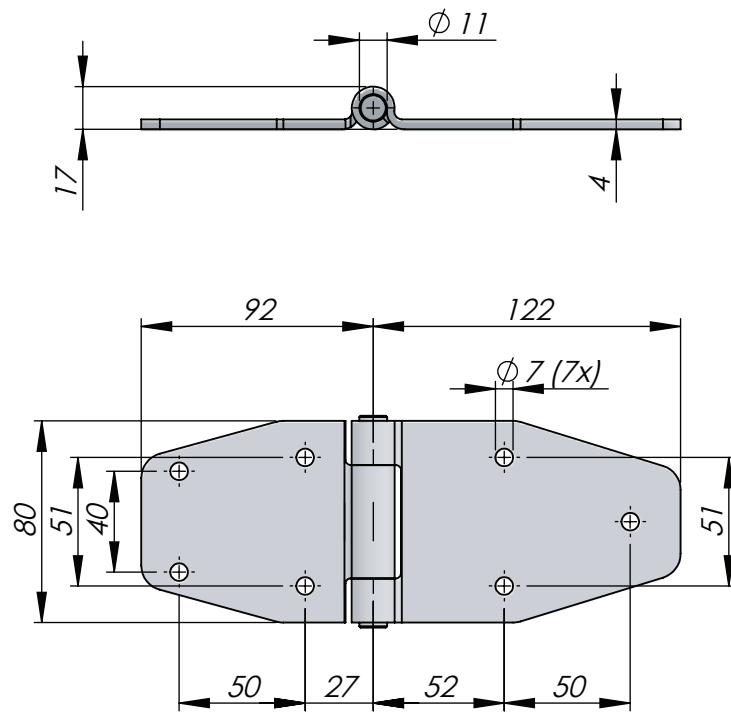
Heavy-duty rolled hinge for mounting with screws or rivets. Ideal for vehicles. The hinge-leaves are folded, allowing for a flat surface when mounting. Opening angle 180°. The six mounting holes have hole diameter $\varnothing 6,5$ mm. The hinge pin is fixed.

Heavy-Duty Hinge - 180° Opening Angle

| P/N | Description | Drawing |
|-----------|-----------------------|---------|
| 322182-02 | Steel, zinc plated | B |
| 323082-01 | Stainless steel (304) | A |

**Material:**

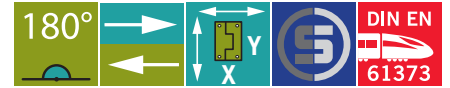
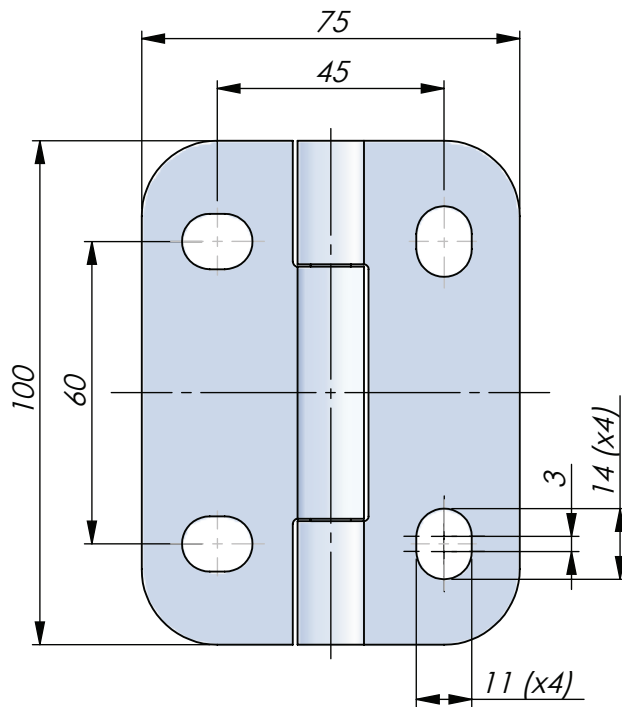
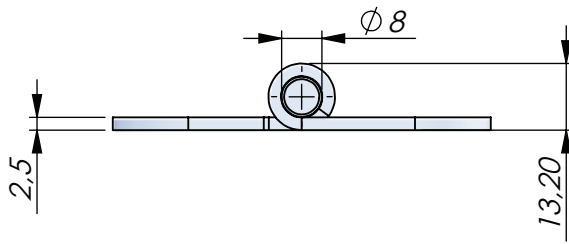
- Steel, zinc plated or stainless steel (304).



Heavy-duty rolled hinge for mounting with screws or rivets. Ideal for vehicles. The hinge-leaves are folded, allowing for a flat surface when mounting. Opening angle 180°. The seven mounting holes have a hole diameter of $\phi 7,0$ mm. The hinge pin is fixed.

Heavy-Duty Hinge - 180° Opening Angle

| P/N | Description |
|-----------|-----------------------|
| 322183-01 | Steel, zinc plated |
| 323083-01 | Stainless steel (304) |



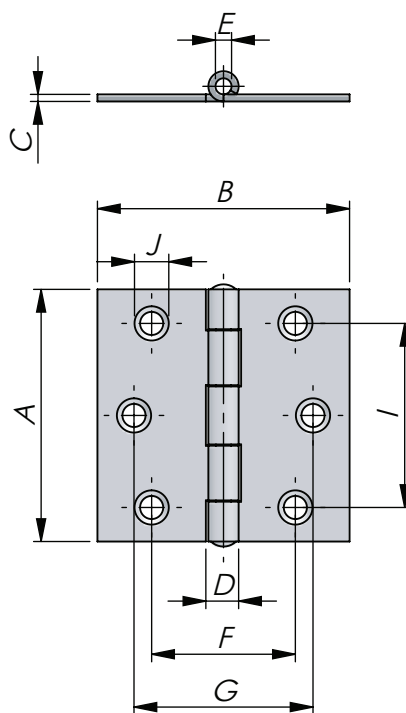
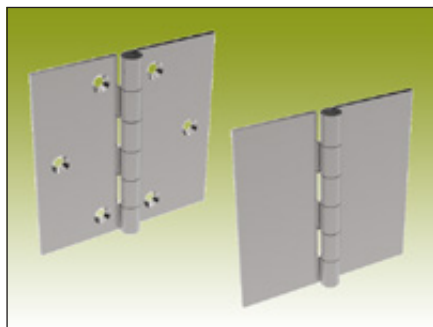
Material:

- Stainless steel (304), electro-polished or black coated.

Stainless heavy-duty hinge. Opening angle 180°. Adjustable 3 mm both horizontally and vertically. Universal left or right mounting.

Heavy-Duty Hinge - 100° Opening Angle

| P/N | Description |
|--------|------------------|
| 323027 | Electro-polished |
| 323527 | Black coated |

**Material:**

- Stainless steel (304).

References, Accessories:

- Steel version: Page 3-731.

Notes, Tests:

The J-measurement describes the largest diameter of the countersunk - and not the diameter of the hole.

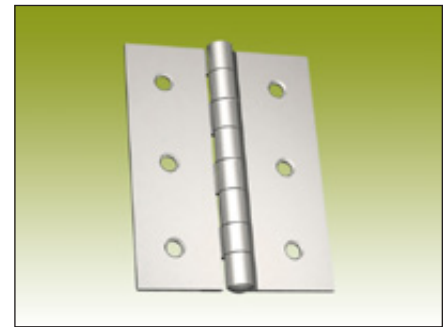
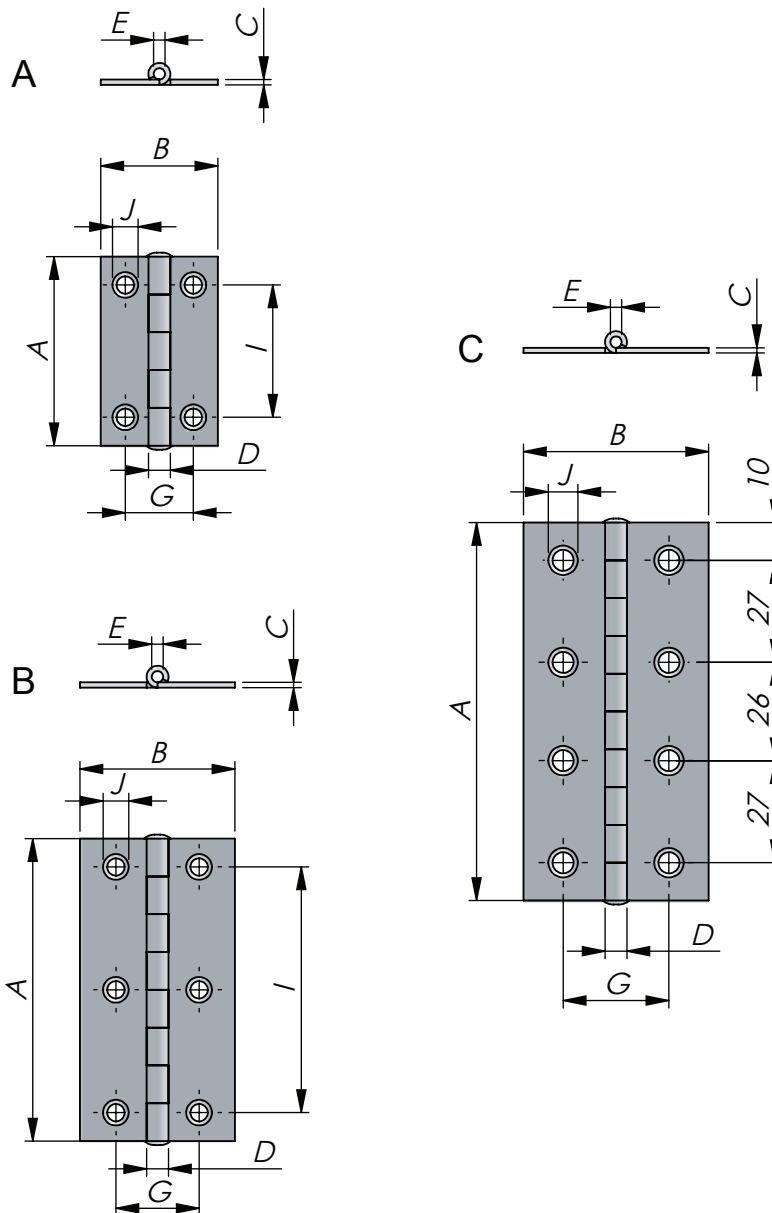
For the holed hinges, we recommend any of the following screws for mounting:

- Countersunk screws against DIN EN ISO 2009.
- Screws with raised countersunk head against DIN EN ISO 2010.
- Countersunk screws against DIN EN ISO 7046-1.
- Screws with raised countersunk head against DIN EN ISO 7047.

Cold rolled butt hinge in stainless steel with or without countersunk holes. Universal left and right mounting.

Butt Hinges

| P/N | A | B | C | D | E | F | G | I | J | Cut-out |
|------------------|----|----|-----|-----|-----|------|------|------|-----|----------|
| 3430-303000-4040 | 40 | 40 | 1,0 | 5,2 | 3,0 | - | - | - | - | No holes |
| 3430-303000-5050 | 50 | 50 | 1,4 | 6,2 | 3,0 | - | - | - | - | No holes |
| 3430-303000-6060 | 60 | 60 | 1,4 | 6,2 | 3,0 | - | - | - | - | No holes |
| 3430-303000-8080 | 80 | 80 | 1,4 | 6,4 | 3,0 | - | - | - | - | No holes |
| 3430-303001-4040 | 40 | 40 | 1,0 | 5,2 | 3,0 | 22,5 | - | 25,0 | 4,9 | 4 x |
| 3430-303001-5050 | 50 | 50 | 1,4 | 6,2 | 3,0 | 18,0 | 35,0 | 35,0 | 5,8 | 6 x |
| 3430-303001-6060 | 60 | 60 | 1,4 | 6,2 | 3,0 | 18,0 | 45,0 | 45,0 | 5,8 | 6 x |
| 3430-303001-7070 | 70 | 70 | 1,4 | 6,2 | 3,0 | 41,0 | 54,0 | 55,0 | 6,8 | 6 x |
| 3430-303001-8080 | 80 | 80 | 1,4 | 6,2 | 3,0 | 41,0 | 65,0 | 65,0 | 6,8 | 6 x |



Material:

- Stainless steel (304).

References, Accessories:

- Steel version: Page 3-741.

Notes, Tests:

The J-measurement describes the biggest diameter of the countersunk - and not the diameter of the hole.

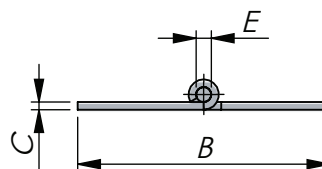
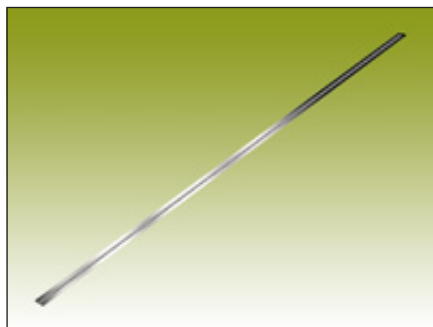
We recommend any of the following screws for mounting:

- Countersunk screws against DIN EN ISO 2009.
- Screws with raised countersunk head against DIN EN ISO 2010.
- Countersunk screws against DIN EN ISO 7046-1.
- Screws with raised countersunk head against DIN EN ISO 7047.

Cold rolled butt hinge in stainless steel with countersunk holes. Universal left and right mounting.

Butt Hinge

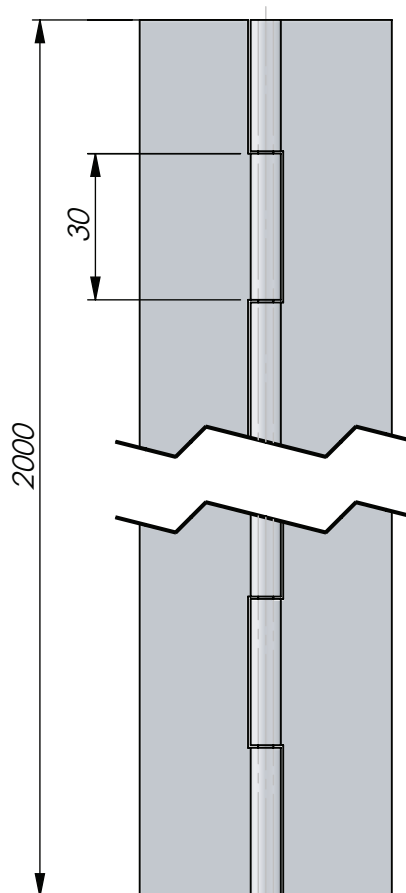
| P/N | A | B | C | D | E | G | I | J | Drawing |
|------------------|-----|----|-----|-----|-----|------|------|-----|---------|
| 3430-303001-3022 | 30 | 22 | 1,0 | 5,2 | 3,0 | 13,0 | 20,0 | 3,3 | A |
| 3430-303001-5031 | 50 | 31 | 1,4 | 6,2 | 3,0 | 18,0 | 35,0 | 5,8 | A |
| 3430-303001-6034 | 60 | 34 | 1,4 | 6,2 | 3,0 | 18,0 | 45,0 | 5,8 | B |
| 3430-303001-8041 | 80 | 41 | 1,4 | 6,2 | 3,0 | 22,0 | 65,0 | 6,8 | B |
| 3430-303001-0049 | 100 | 49 | 1,4 | 6,2 | 3,0 | 28,0 | 80,0 | 7,8 | C |

**Material:**

- Stainless steel (304).

References, Accessories:

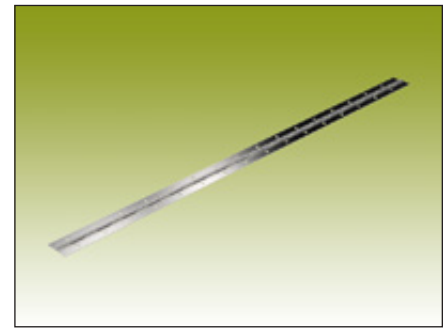
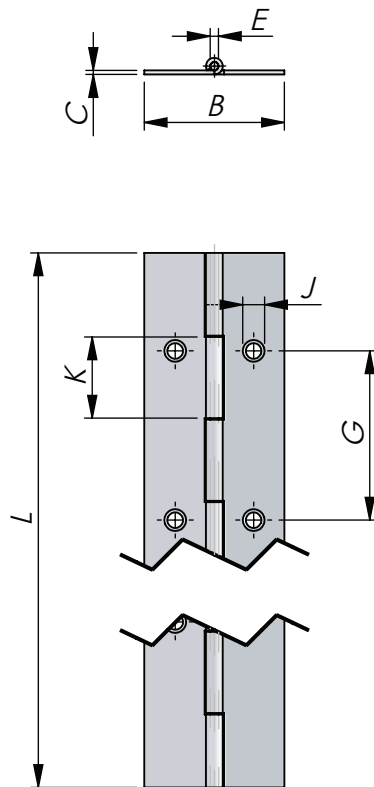
- Steel version: Page 3-810.



Continuous (piano-) hinge in stainless steel. The knuckle length is 30 mm and the length is 2 000 mm. Other dimensions available on request.

Continuous Hinge Without Holes - for Weld-On Mounting

| P/N | B | C | E |
|------------|----|-----|-----|
| 353031-032 | 32 | 1,5 | 3,0 |
| 353031-040 | 40 | 1,5 | 3,0 |
| 353031-050 | 50 | 1,5 | 3,0 |
| 353031-060 | 60 | 1,5 | 3,0 |



Material:

- Stainless steel (304).

References, Accessories:

- Steel version: Page 3-820.
- Version without holes: Page 6-560.

Notes, Tests:

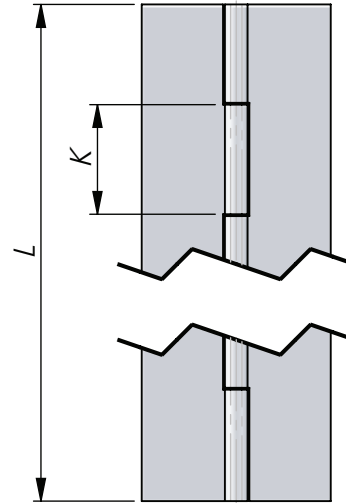
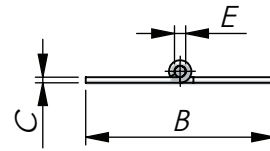
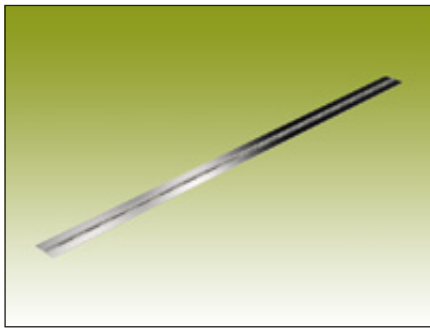
The J-measurement describes the largest diameter of the countersunk and not the diameter of the hole.

Continuous stainless steel hinge ("piano hinge") with recessed holes suitable for screw-on mounting. Supplied in custom lengths according to your choice. The length "L" is stated in millimeters and inserted in the last positions of the part number, instead of the -LLLL. For instance, part number 3530-110720-0852 is 852 mm long.

Minimum order quantities applies when ordering custom lengths. Also available in standard length of 3 500 mm.

Continuous Hinge with Holes - for Screw-On Mounting

| B= | J= | C=0,7 mm E=1,75 mm G=60,4 mm K=15 mm | C=1,0 mm E=1,75 mm G=60,5 mm K=15 mm | C=1,25 mm E=2,5 mm G=90 mm K=30 mm | C=1,5 mm E=3,0 mm G=90 mm K=30 mm | C=2,0 mm E=6,0 mm G=90 mm K=30 mm | C=3,0 mm E= 6,0 mm G=90 mm K=30 mm |
|-----|-----|---|---|---|--|--|---|
| 20 | 4,0 | 3530-110720- LLLL | 3530-111020- LLLL | - | - | - | - |
| 25 | 4,2 | 3530-110725- LLLL | 3530-111025- LLLL | - | - | - | - |
| 28 | 4,8 | 3530-110728- LLLL | 3530-111028- LLLL | - | - | - | - |
| 32 | 5,0 | 3530-110732- LLLL | 3530-111032- LLLL | 3530-121232- LLLL | 3530-131532- LLLL | - | - |
| 40 | 5,4 | 3530-110740- LLLL | 3530-111040- LLLL | 3530-121240- LLLL | 3530-131540- LLLL | 3530-162040- LLLL | 3530-163040- LLLL |
| 50 | 6,0 | 3530-110750- LLLL | 3530-111050- LLLL | 3530-121250- LLLL | 3530-131550- LLLL | 3530-162050- LLLL | 3530-163050- LLLL |
| 60 | 6,5 | - | - | 3530-121260- LLLL | 3530-131560- LLLL | 3530-162060- LLLL | 3530-163060- LLLL |
| 70 | 6,8 | - | - | - | 3530-131570- LLLL | 3530-162070- LLLL | 3530-163070- LLLL |
| 80 | 7,0 | - | - | - | - | 3530-162080- LLLL | 3530-163080- LLLL |
| 100 | 7,5 | - | - | - | - | 3530-162010- LLLL | 3530-163010- LLLL |



Material:

- Stainless steel (304).

References, Accessories:

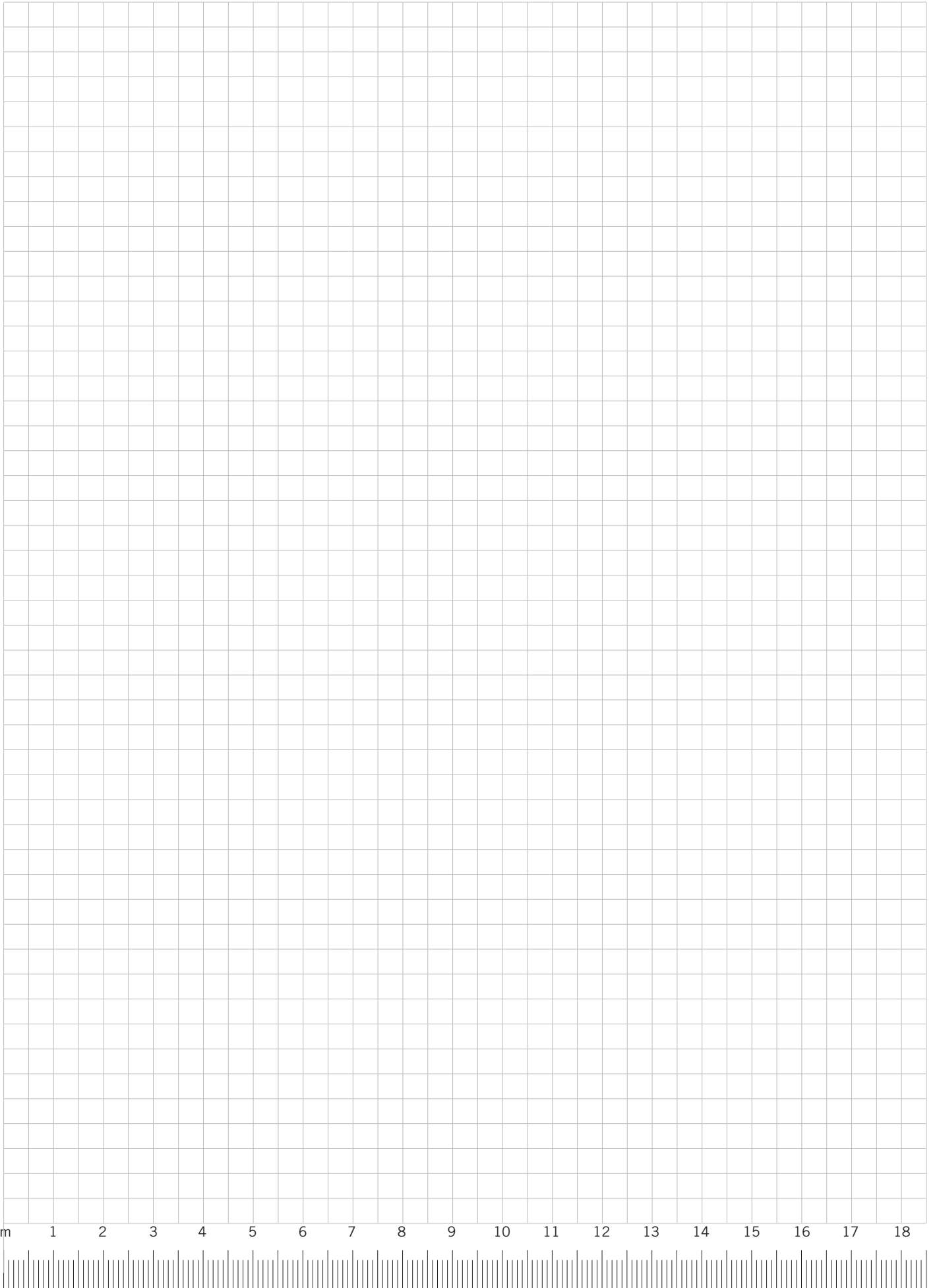
- Version in steel: Page 3-830.
- Version with holes, see page 6-550.

Continuous stainless steel hinge ("piano hinge") without holes suitable for weld-on mounting. Supplied in custom lengths according to your choice. The length "L" is stated in millimeters and inserted in the last positions of the part number, instead of the -LLLL. For instance, part number 3530-010720-0852 is 852 mm long.

Minimum order quantities applies when ordering custom lengths. Also available in standard length of 3 500 mm.

Continuous Hinge Without Holes - for Weld-On Mounting

| B= | C=0,7 mm E=1,75 mm K=15 mm | C=1,0 mm E=1,75 mm K=15 mm | C=1,25 mm E=2,5 mm K=30 mm | C=1,5 mm E=3,0 mm K=30 mm | C=2,0 mm E=6,0 mm K=30 mm | C=3,0 mm E=6,0 mm K=30 mm |
|-----|----------------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 20 | 3530-010720- LLLL | 3530-011020- LLLL | - | - | - | - |
| 25 | 3530-010725- LLLL | 3530-011025- LLLL | - | - | - | - |
| 28 | 3530-010728- LLLL | 3530-011028- LLLL | - | - | - | - |
| 32 | 3530-010732- LLLL | 3530-011032- LLLL | 3530-021232- LLLL | 3530-031532- LLLL | - | - |
| 40 | 3530-010740- LLLL | 3530-011040- LLLL | 3530-021240- LLLL | 3530-031540- LLLL | 3530-062040- LLLL | 3530-063040- LLLL |
| 50 | 3530-010750- LLLL | 3530-011050- LLLL | 3530-021250- LLLL | 3530-031550- LLLL | 3530-062050- LLLL | 3530-063050- LLLL |
| 60 | - | - | 3530-021260- LLLL | 3530-031560- LLLL | 3530-062060- LLLL | 3530-063060- LLLL |
| 70 | - | - | 3530-021270- LLLL | 3530-031570- LLLL | 3530-062070- LLLL | 3530-063070- LLLL |
| 80 | - | - | - | 3530-031580- LLLL | 3530-062080- LLLL | 3530-063080- LLLL |
| 100 | - | - | - | - | 3530-062010- LLLL | 3530-063010- LLLL |



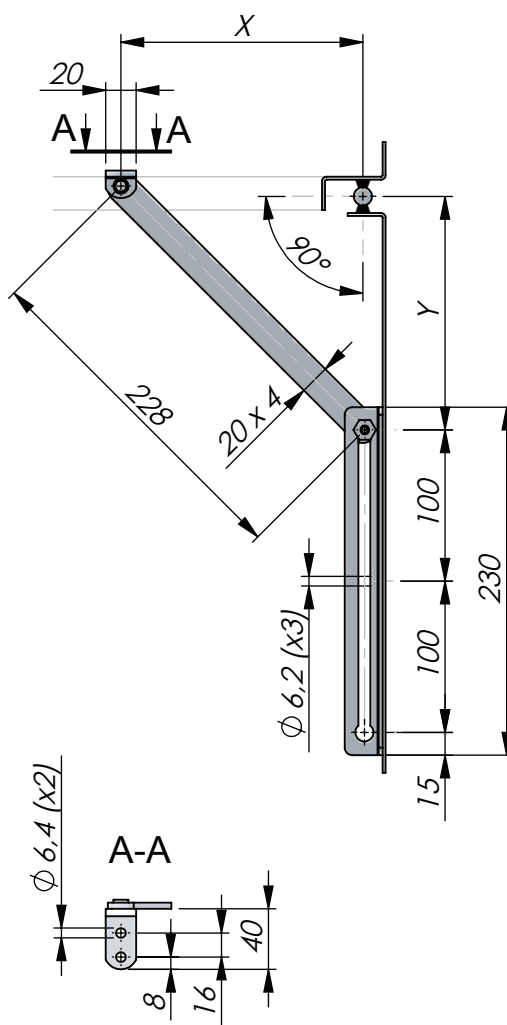


Material:

- Stainless steel (304).

References, Accessories:

- Steel version: Page 5-100.



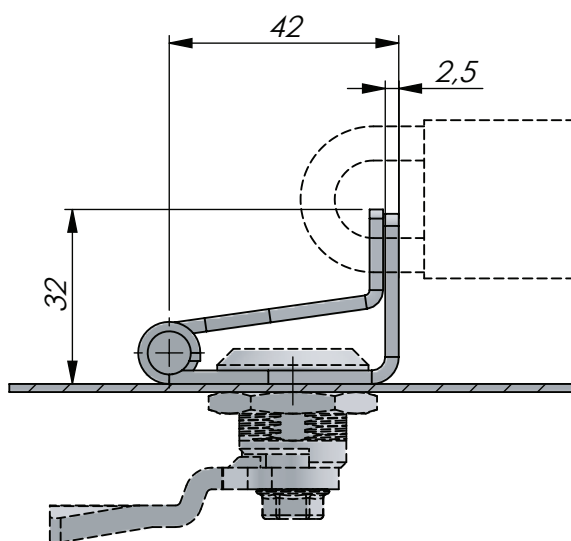
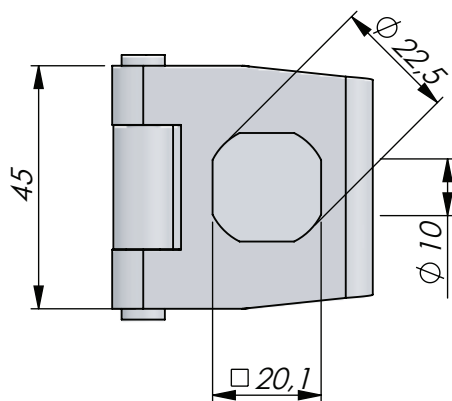
Heavy-duty door retainer. The door retainer automatically locks in the wide open position. Universal left or right mounting. Weld-on, screw mount or attach to welded studs.

Technic Specifications - Angles and Measurements

| Opening angle | X=mm | Y=mm | Min. door width mm |
|---------------|------|------|--------------------|
| 90° | 140 | 180 | 403 |
| 105° | 120 | 166 | 389 |
| 120° | 110 | 150 | 373 |
| 135° | 100 | 146 | 369 |

Door Retainer

| P/N | Description |
|--------|---------------|
| 543004 | Door retainer |



Material:

- Stainless steel (304), polished.

Notes, Tests:

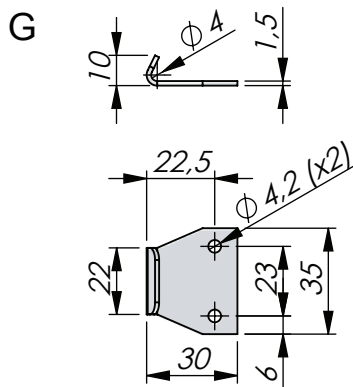
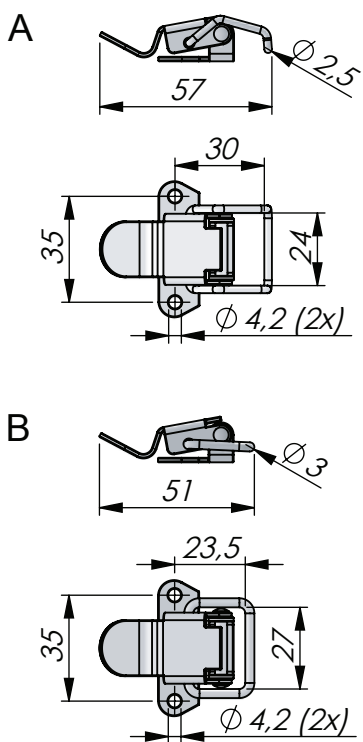
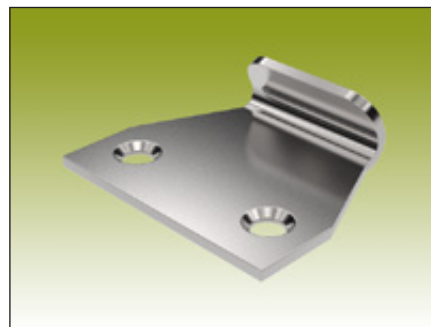
Add 2 mm to the H-dimension of the cam, to compensate for plate thickness of the adapter.

This adapter allows use of a padlock in combination with any quarter-turn latch using the "Combi" cut-out. To achieve IP65 add additional flat gasket 297006.

This adapter allows use of a padlock with any quarter-turn latch with Combi cut-out.

Padlock Adapter for Quarter-Turn Latch

| P/N | Description |
|--------|---------------------------------|
| 293025 | Stainless Steel Padlock Adapter |
| 297006 | Optional flat gasket |



Material:

- Stainless steel (304).

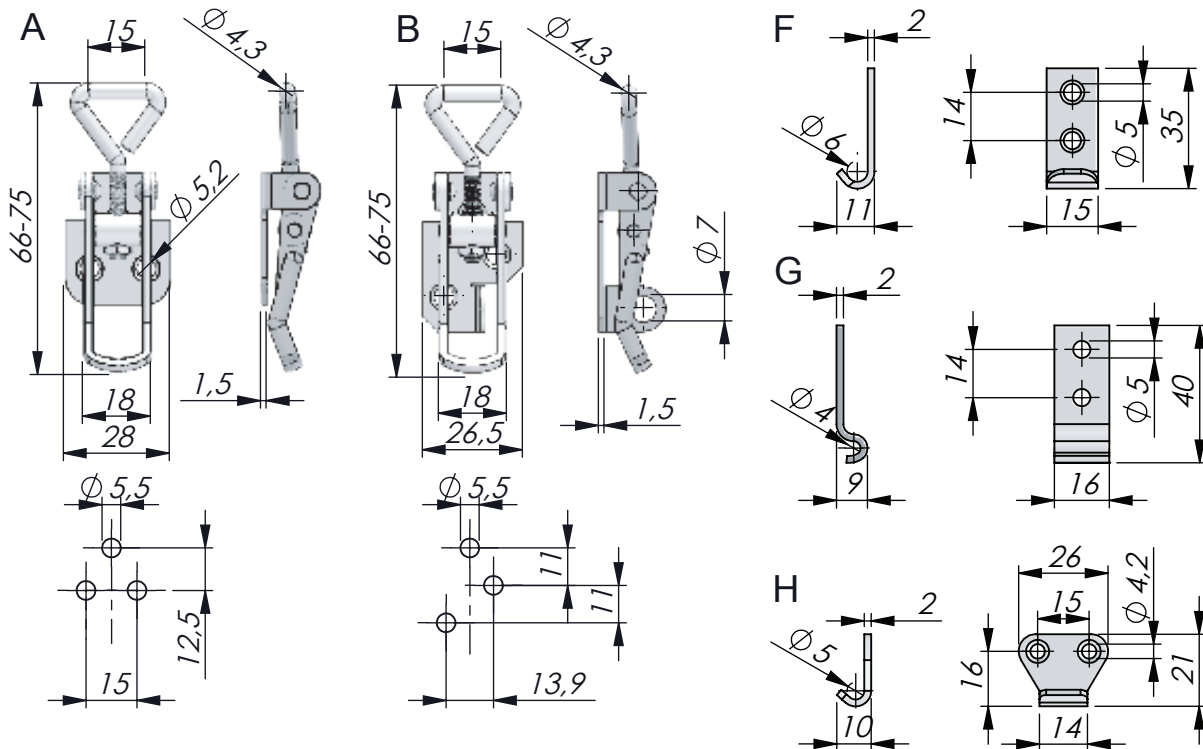
References, Accessories:

- Steel version: Page 5-300.

Type A with folded, spring-action catch. Version B with straight catch.

Pull-Down Catch

| P/N | Description - material | Hole pattern | Type | Striker | | | | |
|--------|------------------------|--------------|------|---------|------------------------|--------------|------|--|
| 580884 | SS (304) | 2 x Ø 4,2 | A | P/N | Description - material | Hole pattern | Type | |
| 580894 | SS (304) | 2 x Ø 4,2 | B | 580024 | SS (304) | 2 x Ø 4,2 | G | |



Material:

- Stainless steel (304).

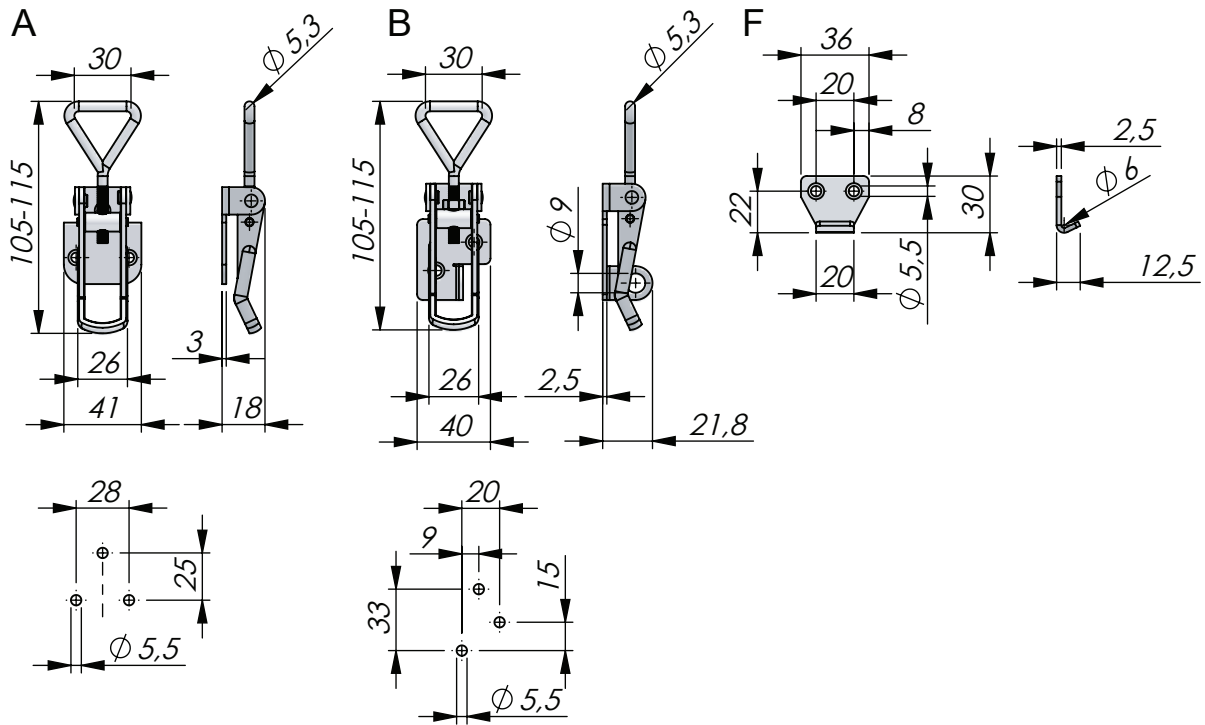
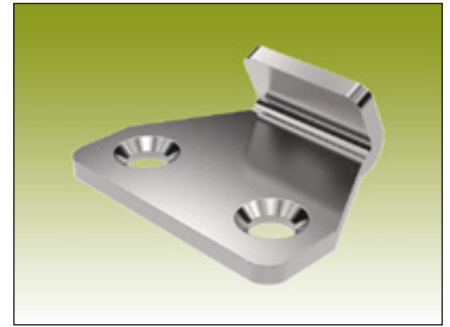
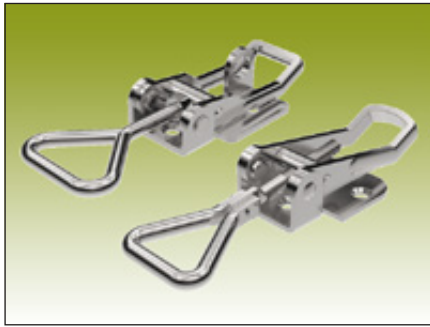
References, Accessories:

- Steel version: Page 5-310.

Adjustable catch with M5-thread. Type B is equipped with a padlock eyelet.

Adjustable Pull-Down Catch

| P/N | Description - material | Hole pattern | Type | Striker | P/N | Description - material | Hole pattern | Type |
|--------|------------------------|--------------|------|---------|--------|------------------------|--------------|------|
| 580903 | SS (304) | - | A | | 580104 | SS (304) | 2 x Ø 4,2 | H |
| 580904 | SS (304) | 3 x Ø 5,5 | A | | 580184 | SS (304) | 2 x Ø 5,0 | F |
| 580913 | SS (304) | - | B | | 580194 | SS (304) | 2 x Ø 5,0 | G |
| 580914 | SS (304) | 3 x Ø 5,5 | B | | | | | |



Material:

- Stainless steel (304).

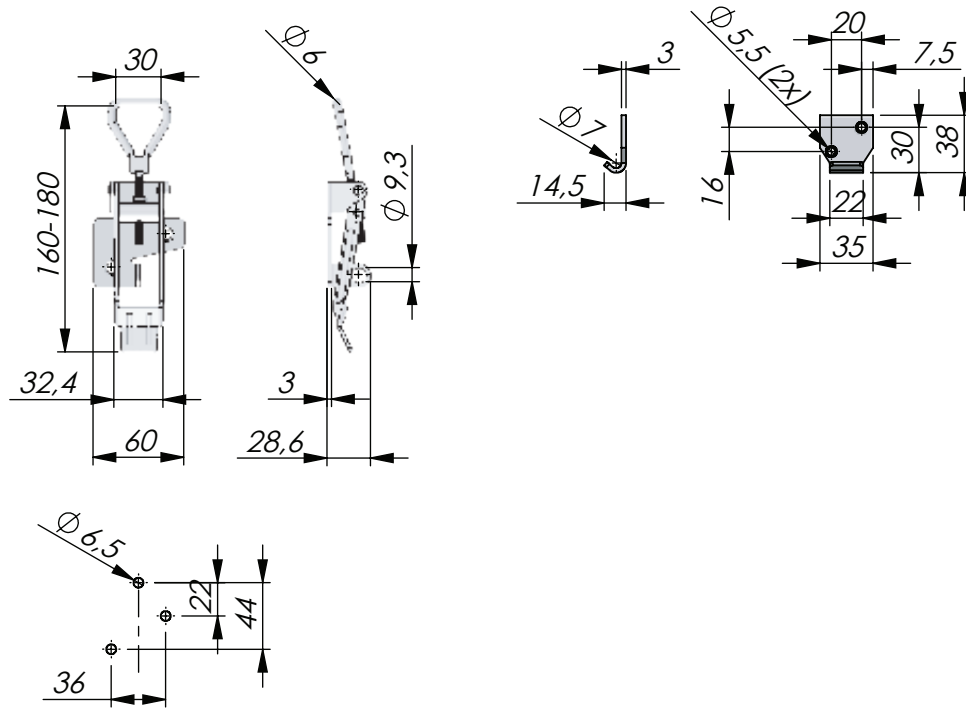
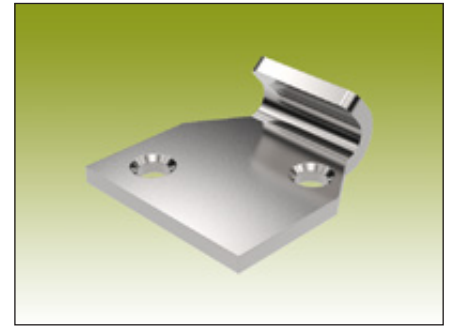
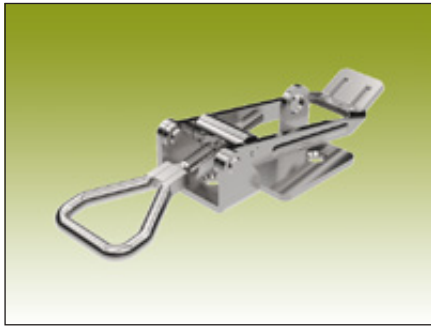
References, Accessories:

- Steel version: Page 5-320.

Adjustable catch with M6-thread. Type B is equipped with a padlock eyelet.

Adjustable Pull-Down Catch

| P/N | Description - material | Hole pattern | Type | Striker | | | |
|--------|------------------------|--------------|------|---------|------------------------|--------------|------|
| 581044 | SS (304) | 3 x Ø 5,5 | A | P/N | Description - material | Hole pattern | Type |
| 581054 | SS (304) | 3 x Ø 5,5 | B | 580394 | SS (304) | 2 x Ø 5,5 | F |



Material:

- Stainless steel (304).

References, Accessories:

- Steel version: Page 5-330.

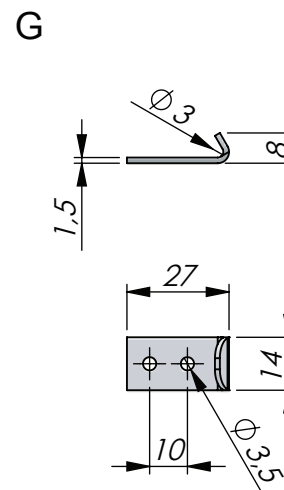
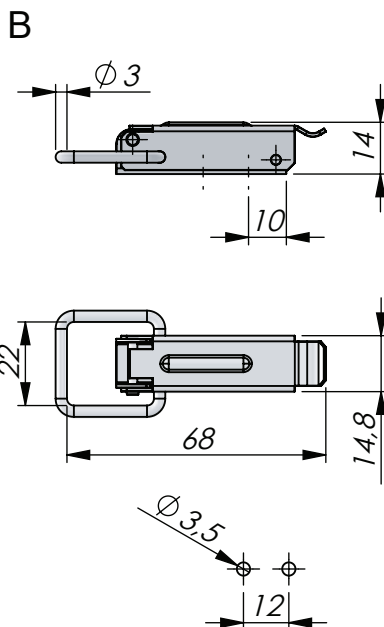
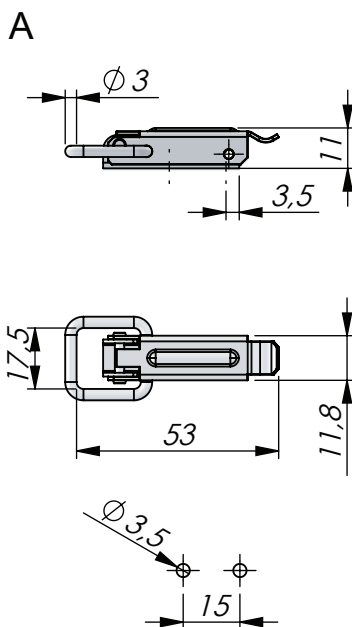
Adjustable catch with M8-thread. Type B is equipped with a padlock eyelet.

Adjustable Pull-Down Catch

| P/N | Description - material | Cut-out |
|--------|------------------------|----------------|
| 581074 | SS (304) | 3 x $\phi 6,5$ |

Striker

| P/N | Description - material | Hole pattern |
|--------|------------------------|----------------|
| 580144 | SS (304) | 2 x $\phi 5,5$ |



Material:

- Stainless steel (304).

References, Accessories:

- Steel version: Page 5-340.

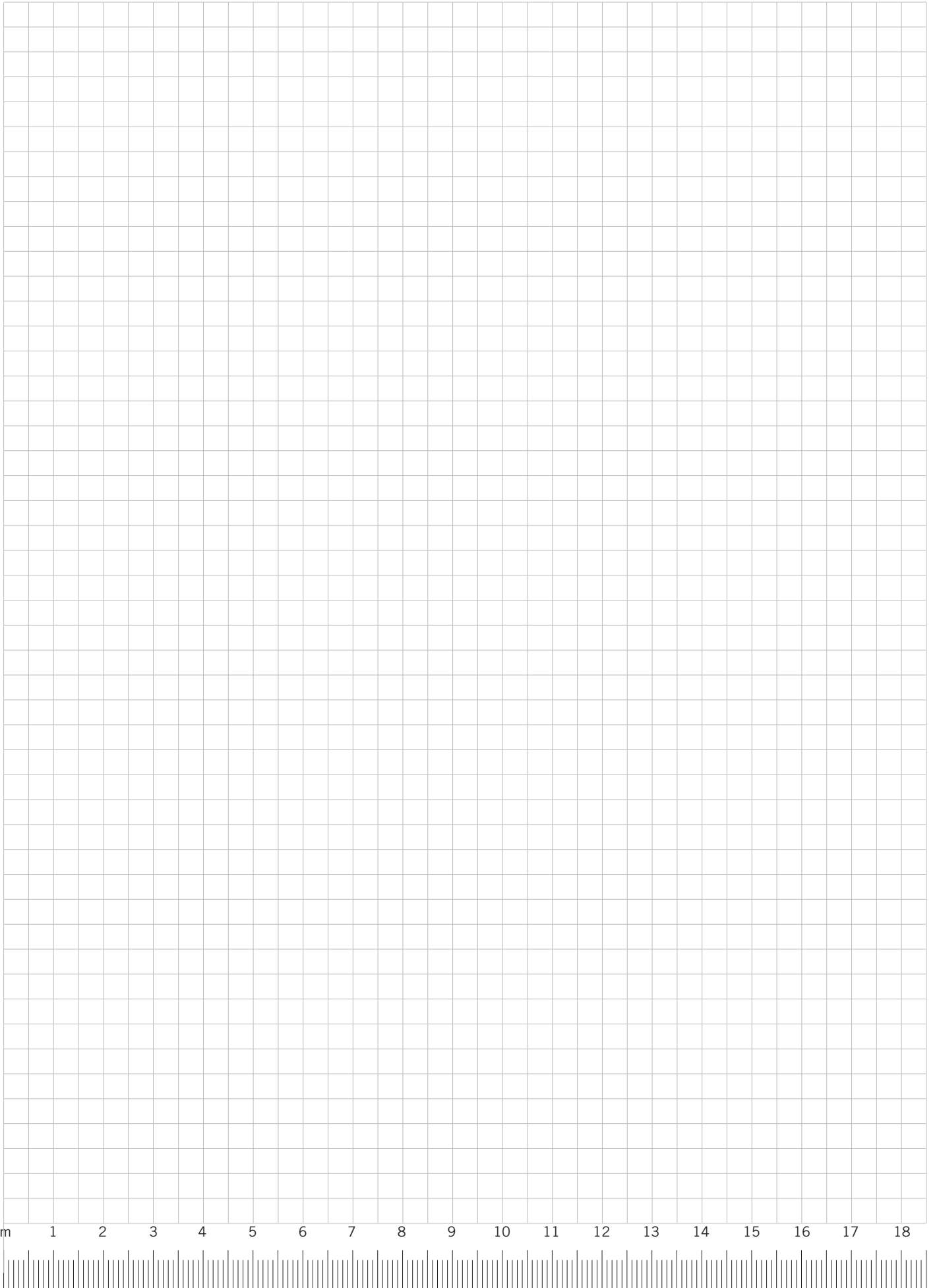
Type A with folded spring-action catch.
Type B with a straight catch and 3 mm hole for locking pin.

Pull-Down Catch

| P/N | Description - material | Hole pattern | Type |
|--------|------------------------|-----------------------|------|
| 581204 | SS (304) | 2 x $\varnothing 3,5$ | A |
| 581214 | SS (304) | 2 x $\varnothing 3,5$ | B |

Striker

| P/N | Description - material | Surface treatment | Hole pattern | Type |
|--------|------------------------|-------------------|-----------------------|------|
| 580314 | SS (304) | - | 2 x $\varnothing 3,5$ | G |



MATERIALS & PROCESSES

ZINC (Zamak 5)

The Industrilas product inventory includes die-cast items made of zinc. The alloy that is utilized is a mixture of zinc, aluminium, magnesium and copper. Industrilas uses the alloy Zamak 5 due to its superior qualities in ease of casting and surface finishing.

Housings, inserts, handles, keys and hinges are all good examples of suitable die-cast products, even though all of these are also available in other materials. In certain demanding environments zinc is not the recommended metal, such as in a marine environment, for external vehicle components or situations where there is a risk of severe mechanical wear.

ZINC DIE-CASTING

Die-casting is a manufacturing process that involves forcing hot, molten metal into the mould cavity made from a tool, which in turn can have varying degrees of design detail. When the metal, under pressure, has solidified, it is ejected from the mould cavity and the item is finished. After vibratory deburring and drying it is ready for surface treatments. The primary advantages of die-casting are the ability to stay within precise dimensional requirements, to cast intricate items with good strength and corrosion qualities, and to obtain a fine surface finish.

STAINLESS STEEL

Certain demanding environments require a more durable material. The corrosion resistance of stainless steel comes from the steel being alloyed with chromium. When the approximate chromium content exceeds 10.5% a thin film is formed on the steel that passively protects the underlying steel from further oxidation, commonly referred to as rusting.



In case of damage to the surface of the steel the top film of chromium oxide forms again very quickly. Industrilas has a large assortment of stainless versions of locks, handles and hinges. If nothing else is stated in the Catalogue, the classification Stainless Steel refers to the European Standard EN 1.4301, which corresponds to American Iron and Steel Institute standard AISI 304.

ACID-PROOF STEEL

Acid-proof or acid resistant steel contains iron and chromium, and additionally some nickel and/or manganese as well as smaller quantities of other metals such as molybdenum, niobium and titanium. Acid-proof steel is used in environments with more challenging chemical exposures, such as a maritime environment or when items come into contact with acids. The steel alloy containing both chromium and nickel is also known as nickel chromium steel. If nothing else is stated in the Catalogue, the classification Acid-Proof Steel refers to the European Standard EN 1.4404, which corresponds to American Iron and Steel Institute standard AISI 316L.

CONSTRUCTION STEELS

The distinguishing characteristics of the general construction steels are their toughness and good response to welding. These materials have been given improved cuttability through cold work and/or lead additives. Industrilas uses S235JR (SS 1312) in for instance cams, if nothing else is stated. S235JR (SS 1312) characterizes cold drawn flat and round bars with good surface finish that are easy to work and weld on. Construction steels are mostly used in items with moderate strength requirements.

FREE-CUTTING STEELS

The main requirement of these steels is good cuttability. The cutting speed needs to be kept optimally high. The shape of the filings needs to be short to make them easy to transport. Industrilas uses 11SMnPb30 (SS 1914) in for instance rod latches in the standard inventory. 11SMnPb30 (SS 1914) characterizes a lead-alloy free cutting steel of moderate strength. Its cuttability is excellent, and it produces short filings. It needs to be worked at a high cutting speed for best results.

BRASS

This is a copper alloy combined with zinc. Other alloy elements may also be present. However, the most common brass consists of 65% copper and 35% zinc. Industrilas primarily uses brass for housing nuts, cylinders, keys, plates and hinge items.

ALUMINIUM

Aluminium is frequently considered a non-corrosive metal, but this is not entirely accurate. Aluminium corrodes, but between pH 4 and pH 9 it forms a passive oxide film that protects the material. Outside of this pH norm aluminium corrodes quickly. Alloys corrode quicker than pure aluminium, and the fastest corrosion occurs when it contains copper. However, aluminium can handle sulphuric acid, nitrates and acetic acid thanks to the formation of either a passive oxide film or acetates that isolate the aluminium from the oxidizing substance. Upon contact with other metals corrosion can occur if the environment is damp. This is true in for instance contact with

copper or iron. Contact with stainless steel is on the other hand harmless under normal conditions. The Industrilas product inventory offers hinges and rod latches made of aluminium.

COPPER

Copper is 100% recyclable without losing any of its properties. According to newly acquired data 34% of the 22 million tons of copper used globally every year come from recycled material. The lifespans of different copper products vary greatly, from 100 years or more in buildings, to just a few years in electronic equipment. In damp air, especially with air pollution present, a brown oxidation film builds up, which later transforms to a green patina. This thin layer protects against further corrosion. Common copper alloys are brass, bronze and silver plate. Industrilas mainly uses copper in custom ordered items.

SINTERING METALS

Sintering is the production step that follows after powder pressing when manufacturing a powder material. The powder pressing produces a so-called green body containing a great amount of pores. In the sintering process the green body is heated so the pores are closed and the item takes on its ultimate mechanical characteristics. There are two types of sintering: Solid State Sintering, where the material is heated below its melting point; and Liquid State Sintering, where some of the material is heated to a melting point. Sintering produces smooth surfaces, and items with complex shapes can be manufactured without the need for much additional work. This can be done with different materials such as stainless steel, and so on. Examples of Industrilas sintered items are cogwheels and pinions.

POLYAMIDE PLASTICS (PA)

Industrilas products are also manufactured through injection moulded Polyamide 6. The auto industry and makers of household appliances and office equipment are main users of PA due to its characteristics: wear-and-tear endurance; toughness; resistance to inorganic compounds, oils, greases, gasoline and organic solvents; can be sterilized with steam; and has a low friction coefficient.

The standard Industrilas Polyamide 6 (PA6) is modified for toughness with various amounts of glass fibre reinforcements, usually 30% (GF30), to additionally optimize the characteristics of the product. Industrilas has chosen PA6 particularly for its high impact toughness and good mechanical characteristics. The temperature range for use of items made of PA6 is -30° to +70° centigrade. Industrilas also injection moulds items out of other plastics, such as PC, POM, ABS, PP, PE and PS. Housings, inserts, handles, keys and hinges are all examples of products manufactured out of PA, even though all these items are available in other materials as well.

PLASTIC INJECTION MOULDING

Injection moulding is a manufacturing process for items in various thermo-plastics. The machine consists of an injection unit and a mould closing unit, and a mould unique to each product or tool. The injection unit is fed with ground up plastic through a funnel that leads to a heated cylinder. The melting point is usually between 175° and 300° centigrade. The temperature depends on the type of material. The plastic is pushed forward with a screw that also functions as a piston. The plastic is melted and portioned out in a non-continual process. The mould closing unit is kept closed until enough plastic is melted and the correct pressure has built up (50-150 MPa). The mould, usually in two pieces, is opened and filled with the molten plastic, which then cools off. Important factors are the temperature of the molten plastic, the pressure in the injection unit, the temperature of the mould, the cooling-off period, and the dimensions and design of the mould itself.

DELRIN

Delrin is a particular manufacturer's trade name for Polyoxymethylene (POM). This is a plastic that is often used as a substitute for metal items. The primary characteristics are low weight, low friction, durability and it can be used in temperatures up to 90° centigrade.

Certain hinge pins in the Industrilas product inventory are made of Delrin.

EPDM

EPDM rubber (ethylene propylene diene M-class rubber) is an elastomer characterized by its wide range of applications. EPDM rubber is used at Industrilas for different types of strips, sealants and gaskets. It exhibits good resistance to water and alkalis, but not oil, gasoline and concentrated acids.

PVC

Polyvinyl chloride (PVC) is one of the most common kinds of plastics. It is a thermoplastic polymer made up of several connected vinyl chloride molecules, and constitutes one of the basic plastics. However, a material that only contains polyvinyl chloride is rather stiff, so a softening agent is added to the polymer. The Industrilas inventory offers edge protection in PVC and so-called carriers of certain sealing profiles.

SILICONE

This is the collective name for basically inorganic polymers based on strands of silicon and oxygen. Silicon does not conduct electricity, does not dissolve in water and is relatively resistant to the effects of chemicals. The silicone putty is soft and malleable before it hardens.

The material is used for instance to caulk joints. The Industrilas inventory offers some strips and caulking in silicone.

IP-CLASSIFICATIONS

The Industrilas inventory features two main intrusion protection classifications.

If a product is rated to seal at IP65 it has either been tested by an independent laboratory, or the product is so similar in construction to another tested product that it could safely be classified as IP65. However, it should be noted that it is the complete product that is rated for intrusion protection, including the cabinet or product that the item is built into. Industrilas AB can only guarantee that its products live up to their stated IP standards if those products are built in and used in a correct manner. The IP classification is designated by two numerals, with the following significance: the first number indicates the degree of protection against touch and intrusive objects; the second number indicates the degree of protection against intrusive water. The higher the number, the better the protection.

Industrilas' IP-CLASSIFICATIONS:

IP 54 = Dust protected and splash-proof. This is considered the standard issue.

IP 65 = Dust tight and water jet-proof. The higher classification of intrusion protection is obtained by sealing for instance a lock's housing with an O-ring and a flat gasket or a fixed gasket.

NEMA SEALING CLASSIFICATIONS

In North America intrusion protection is classified according to the standards of NEMA (National Electrical Manufacturers Association). If an Industrilas product is rated to seal at NEMA 4 it has either been tested by an independent laboratory, or the product is so similar in construction to another tested product that it could safely be classified as NEMA.

O-RING

One or more O-rings are used to seal between for instance handle/ insert and housing in order to obtain IP65 in Industrilas products. These O-rings are made of NBR (Nitrile Rubber), a material with good chemical resistance and very good oil durability.

FLAT GASKET

A flat gasket is used to seal between for instance the lock and the door of a monitor housing in order to obtain IP65 in Industrilas products. The flat gasket is made of a blend of NBR (Nitrile Rubber) and SBR (Styrene-Butadiene Rubber). It has good chemical- and oil resistance.

FIXED GASKET (FIPFG)

As part of the product development at Industrilas an increasing number of products contain an injected, fixed porous gasket called FIPFG (Formed In Place Foam Gasket), also known as a "PUR"-gasket (polyurethane gasket). The method involves robotic application on the item of a bead of liquid gasket material, consisting of a two-component polyurethane. As the gasket cures it also expands, turning into an attached, flexible, porous gasket, which offers a reliable barrier against influence from external elements. The fixed gasket simplifies assembly, reduces the number of loose items and offers improved sealing.

SURFACE TREATMENTS

ELECTROLYTE SURFACE TREATMENTS

ZINC PLATING is the most common metal plating method, offering corrosion protection for steel items. The plating baths consist of cyanides in alkaline liquids.

NICKEL PLATING is primarily used on decorative surfaces and for corrosion protection, but also as a substrate for chrome, gold and silver plating. The baths usually consist of sulphates, chlorides and boric acid (= Watt's solution).

ANODIZING turns the surface layer of a metal into an insoluble oxide which provides corrosion protection, decorative surfaces, good adherence for enamels and other surface treatments, as well as certain electrical and mechanical characteristics. Aluminium is the most common metal for anodizing, but magnesium, zinc, and titanium are also used for this purpose. The electrolyte solution consists of diluted sulphuric acid or chromium acid.

CHEMICAL SURFACE TREATMENTS

DEGREASING. The surface treatment is often the last stage in the manufacturing process, which generally has been preceded by some form of mechanical work where oil has been used for lubrication or cooling. Oil may also be used as corrosion protection during interim storage of the items. Alkaline and acidic parts cleaning, or degreasing with a solvent (trichloroethylene) is performed to remove oils, grease etc., from the item's surface before the final stage of surface treatment (see list above). For the same reason steeping is employed to remove forge scale, rolling skin, rust and other types of oxidation layers. Steeping is commonly accomplished by submerging the item in one or more acids, but also complex-forming alkaline salts and steeping pastes may be used. (Even electrolyte steeping may occur.)

PASSIVATION is a process whereby a protective layer is obtained on metals, especially stainless steel and copper, through submersion in an acidic solution.

PHOSPHATING is performed to provide corrosion protection, a foundation for the lacquer coat, corrosion protection underneath a layer and/or to obtain lubrication. It is primarily iron and zinc that are given a phosphate coating. The most common methods of phosphate coating are, according to the content of the baths, iron, zinc and manganese, and they usually take place through spraying or submersion.

BONDERITE NT is a modern method of pre-treatment for powder coated items, based on nanotechnology. It is a multi-metal process adapted primarily for zinc, aluminium and steel. The process offers improved corrosion protection compared with for instance iron phosphating, as well as excellent adhesion for application of powder. The four rinse stages assure a better process stability. Reverse osmosis is employed to de-ionize the water, which involves a membrane technique that requires a minimal use of chemicals.

CHROMING provides corrosion protection and adhesion for layers of enamel or plastics. The method may also be used for decorative purposes. Different colours can be obtained depending on the chromate concentration in the bath: metallic shiny, light blue, yellow, green, bronze or black. The baths contain among other things chromic acid, chromates, cyanides and acids.

MECHANICAL SURFACE TREATMENTS

DEBURRING is performed to remove burrs, smooth out edges, eliminate forge scales or improve the surface quality of objects. The items are placed in a rotating drum or a vibrating container and are either circulated through the machine “as-is” or with the addition of a grinding agent. The deburring process can be performed wet (most common) or dry. During wet tumbling water or oil is used with added chemicals and grinding agents, which can consist of aluminium oxide, silicon carbide, steel, etc.

POWDER COATING. Industrilas aspires to control as many production processes as possible, and consequently in-house powder coating capability has also been obtained. The choice of method is based on several criteria, prioritizing product quality and environmental concerns. The preparation method is Bonderite, and the powder application is performed in a box with modern application equipment that charges the powder electrostatically. The applied powder is especially formulated for coating of porous items, such as die-cast or zinc plated steel, where the risk of blister build-up and pinholes are prevalent during the tempering process. The Industrilas standard powder contains polyester as a bonding agent, which renders the finished products extra resistant to bleaching by sunlight. After the coating the powder is hardened for 20 minutes in an electrically heated furnace. The advantages of an electric furnace are primarily better process stability, and a less sensitive coating process of for instance light-coloured items.

ED COATING. ED coating (Electrolytic Dip Coating) is an alternative to powder coating. This coating is employed when the required tolerances are very precise. ED coating is an acrylic/urethane polymer applied cathodically through electrophoresis. The surface becomes decorative with a relatively high shine. ED coating can be applied to steel, aluminium, die-cast zinc, hot-galvanized steel, electrolytically zinc plated steel surfaces, etc. The method makes it possible to cover the metal with an evenly regulated and extremely thin surface layer

(approximately 20-22 µm) with excellent adherence to the entire surface. The UV-resistant coating layer is void of pores and provides excellent corrosion protection as well as great wear resistance. ED coating has been classified by the Swedish Occupational Health and Safety Board as one of the most environmentally conscious coating procedures available. Industrilas includes ED coating as an alternative surface treatment for a number of items in the product inventory.

RECOMMENDED TIGHTENING TORQUES: BOLT and NUT

| Dimension | Nm |
|-----------|-------|
| M3 | 0.75 |
| M4 | 1.50 |
| M5 | 3.50 |
| M6 | 6.00 |
| M8 | 15.00 |
| M10 | 25.00 |
| M12 | 50.00 |

NUTS FOR ASSEMBLY ON HOUSINGS

| Housing | Dimension | Nm |
|---------|-----------|-------|
| Zinc | M16 | 8.00 |
| Zinc | M22 | 18.00 |
| PA6 | M22 | 1.50 |

QUALITY MANAGEMENT

POLICY

Quality, know-how, motivation, adaptability, innovation and a high level of service are the most important factors governing our ability to fulfil the high demands and expectations of our customers, and we will always pursue improvement in these areas. The health and wellbeing of our team members as well as an ever-decreasing negative impact on the environment are imperative to the long-term survival of our organization. In the book "Victor – The key to success" we specify our philosophy and other valuable aspects of our business mind set.

Industrilas built up a platform, known as IMS (Industrilas Management System), for different tools in order to develop, implement and control processes, activities and communication. The system is based on regulations, standards and routines to assure a high quality-level of the products and the lowest possible impact of the environment. The most important legal requirements are listed below.

REACH REGULATIONS

(Registration, Evaluation, Authorization and Restriction of Chemicals) Since June 1, 2007 the new EU regulation REACH has been in effect, and it replaced large portions of the then current Swedish statutes governing the chemical industry. It involves an extensive set of rules that are gradually implemented over a period of many years. Some of these rules went into effect on June 1, 2007. The regulation will end up affecting considerably more companies than were covered by the previous chemical statutes, however, to varying degrees.

ROHS REGULATIONS

(Restriction of the use of certain Hazardous Substances in electrical and electronic equipment)
The RoHS-directive prohibits or restricts the use of certain hazardous substances, such as mercury, lead, cadmium, fire retardants PBB and PBDE and hexavalent chromium in electrical and electronic products released on the market after July 1, 2006. In 2015 the list of restricted substances in annex II has been expanded by four phthalates PBDE, BBP, DBP and DIBP. The threshold limit value for the hazardous substances are 0.1 weight percent-

age. Cadmium is only permissible at 0.01 weight percentage. Those who market a product covered by RoHS are responsible for the product's compliance with the stated requirements in the directive. Today other industries are also applying parts of the RoHS directive voluntarily in order to reduce the large quantities of hazardous waste. (The RoHS-directive 2002/95/EG is included in Swedish Statutes SFS 1998:944.)

WEEE REGULATIONS

(Waste Electrical and Electronic Equipment)

The purpose of the directive is to reduce waste of electrical and electronic equipment while increasing recycling and reclamation of these products. It also aims to increase the environmental standards among manufacturers, distributors and consumers during the products' usable life, and among those who are directly affected by the treatment of waste from such products.

QUALITY

EN ISO 9001:2015

(Management System for Quality)

This standard specifies the demands on a management system where a company has to, or wants to, prove their ability to perform systematic and goal-oriented quality work, while adhering to applicable statutes and providing products that fulfil customer requirements.

ENVIRONMENT

EN ISO 14001:2015

(Management System for Environment)

The purpose of this standard is to encourage companies to institute and maintain an environmental management system. Through methodical application of the rules of the standard, and continual improvements of its own environmental efforts, a company can accomplish reduced environmental impact caused by its activities.

CERTIFICATIONS

Industrilas is currently certified according to EN ISO 9001:2015 (Quality Management System) and EN ISO 14001:2015 (Environmental Management System).



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Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that: **Industrilas I Nilsjö AB**
Svedjeqatan 1
57123 Nilsjö
Sweden

Holds Certificate No: **FM 585208**
and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Development, design, manufacturing and distribution of latching systems, hinges, sealing profiles and associated industrial hardware.

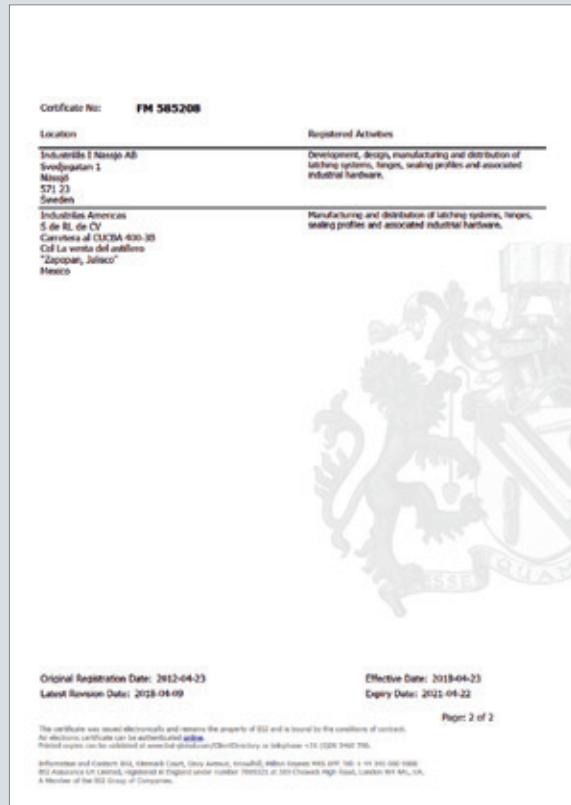
For and on behalf of BSI: 
Andrew Lacey, B2EA Systems Certification Director

Original Registration Date: 2012-04-23 Effective Date: 2018-04-23
Latest Revision Date: 2018-04-09 Expiry Date: 2021-04-22

 Page 1 of 2

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Certificate No: **FM 585208**

| Location | Registered Activities |
|---|---|
| Industrilas I Nilsjö AB Svedjeqatan 1 Nilsjö 571 23 Sweden | Development, design, manufacturing and distribution of latching systems, hinges, sealing profiles and associated industrial hardware. |
| Industrilas Americas S de RL de CV Carretera al CUICBA 400-35 Cajal La venta del edificio "Zapotlan, Jalisco" Mexico | Manufacturing and distribution of latching systems, hinges, sealing profiles and associated industrial hardware. |

Original Registration Date: 2012-04-23 Effective Date: 2018-04-23
Latest Revision Date: 2018-04-09 Expiry Date: 2021-04-22

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Page 2 of 2



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Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that: **Industrilas I Nilsjö AB**
Svedjeqatan 1
57123 Nilsjö
Sweden

Holds Certificate No: **EMS 585209**
and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

Development, design, manufacturing and distribution of latching systems, hinges, sealing profiles and associated industrial hardware.

For and on behalf of BSI: 
Andrew Lacey, B2EA Systems Certification Director

Original Registration Date: 2012-04-23 Effective Date: 2018-04-23
Latest Revision Date: 2018-04-09 Expiry Date: 2021-04-22

 Page 1 of 1

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INDEX

| Part number | Page | Part number | Page | Part number | Page |
|-----------------|-----------|------------------|-----------|------------------|-----------|
| 096001 | 2-491 | 1301-01A1A2B1B2 | 1-008.05d | 139010-A | 1-008.13d |
| 096001 | 2-480 | 1302-00A1A2B1B2 | 1-008.13d | | |
| 096001 | 2-490 | 1302-01A1A2B1B2 | 1-008.13d | | |
| 096001 | 2-481 | 1303-00A1A2B1B2 | 1-008.25b | 141611110-13011 | |
| | | 1303-01A1A2B1B2 | 1-008.25b | 141611330-13471 | 1-006.13 |
| | | 1304-00A1A2B1B2 | 1-008.25b | 141611110-C21S | |
| 121611110-13010 | | 1304-01A1A2B1B2 | 1-008.25b | 141611330-C23S | 1-006.11 |
| 125011331-13471 | 1-002.13 | | | 141611810-13011 | |
| 121611110-C21S | | | | 141611830-13471 | 1-006.03 |
| 125011331-500S | 1-002.11 | 13110201 | 1-008.25b | 141611810-C21S | |
| 121611110-C60U | | 131103 | 1-008.21b | 141611830-C23S | 1-006.01 |
| 125011330-C60D | 1-002.12 | 131105 | 1-008.04d | | |
| 121611110-C65U | | 131106 | 1-008.05d | | |
| 121641330-C65D | 1-002.12 | 131106-01 | 1-008.07 | 14700-01 | 2-630 |
| 121611111-C70U | | 131108 | 1-008.04d | 14700-02 | 2-630 |
| 121641331-C70D | 1-002.18 | 131116 | 1-008.21b | 14700-05 | 2-630 |
| 121611410-90010 | | 131116-05 | 1-008.13d | 14700-07 | 2-630 |
| 121641631-90471 | 1-004.13 | 131116-05 | 1-008.21b | | |
| 121611710-90010 | | 131116-07 | 1-008.13d | | |
| 121641731-90471 | 1-004.03 | 131116-07 | 1-008.21b | 1510-012560-00 | |
| 121611810-13010 | | 13140201 | 1-008.25b | 1510-832561-00 | 1-006.50b |
| 125011831-13471 | 1-002.03 | 131403 | 1-008.21b | | |
| 121611810-C21S | | 131406 | 1-008.05d | | |
| 125011831-500S | 1-002.01 | 131406-01 | 1-008.07 | 1520-130001 | |
| 121611810-C60U | | 131416 | 1-008.21b | 1523-161136 | 1-007 |
| 125011830-C60D | 1-002.02 | | | | |
| 121611810-C65U | | | | | |
| 121641830-C65D | 1-002.02 | 13210600-XXXX-YY | 1-008.07 | 1530-01251-00 | |
| 121611811-C70U | | 132107-06 | 1-008.04d | 1530-90253-00 | 1-005.10b |
| 121641831-C70D | 1-002.08 | 132110-A | 1-008.13d | 1531-01251-00 | |
| | | | | 1533-90253-00 | 1-005.15b |
| | | | | | |
| 123031110-C01U | | 135001 | 1-008.04d | | |
| 123031331-C60D | 6-020 | 135003 | 1-008.21b | 2023-301353-0000 | |
| 123031820-C01U | | 135006 | 1-008.05d | 2029-901959-HH45 | 6-147 |
| 123031831-C60D | 6-010 | 135006-01 | 1-008.07 | | |
| | | 135010 | 1-008.13d | | |
| | | 135016 | 1-008.21b | 2102-005200-0000 | |
| 12900-01 | 2-620 | 1351-00A1A2B1B2 | 1-008.05d | 2126-128630-HHLL | 2-060b |
| 12900-02 | 2-620 | 1352-00A1A2B1B2 | 1-008.13d | | |
| 12900-03 | 2-620 | 1353-00A1A2B1B2 | 1-008.25b | | |
| 12900-04 | 2-620 | 1354-00A1A2B1B2 | 1-008.25b | 211301-121B | 2-041 |
| | | | | 211301-1B | 2-021 |
| | | | | 211302-121B | 2-041 |
| | | | | 211302-1B | 2-021 |
| 1301-00A1A2B1B2 | 1-008.05d | 13900600-XXXX-YY | 1-008.07 | | |

| Part number | Page | Part number | Page | Part number | Page |
|-------------|-------|-------------|-------|-------------|-------|
| 211305-IB | 2-021 | 221313-12IB | 2-042 | 221349 | 2-052 |
| 211306-IB | 2-021 | 221313-IB | 2-022 | 221349-12IB | 2-042 |
| 211320 | 2-051 | 221314 | 2-052 | 221349-IB | 2-022 |
| 211321 | 2-051 | 221314-12IB | 2-042 | 221351 | 2-052 |
| 211322 | 2-051 | 221314-IB | 2-022 | 221351-12IB | 2-042 |
| 211323 | 2-051 | 221315 | 2-052 | 221351-IB | 2-022 |
| 211376 | 2-111 | 221315-12IB | 2-042 | 221378 | 2-111 |
| 211601-12IB | 2-041 | 221315-IB | 2-022 | 221379 | 2-111 |
| 211601-IB | 2-021 | 221316 | 2-052 | 221380 | 2-111 |
| 211602-12IB | 2-041 | 221316-12IB | 2-042 | 221381 | 2-111 |
| 211602-IB | 2-021 | 221316-IB | 2-022 | 221383 | 2-111 |
| 211605-IB | 2-021 | 221317 | 2-052 | 221601 | 2-052 |
| 211606-IB | 2-021 | 221317-12IB | 2-042 | 221601-12IB | 2-042 |
| 211620 | 2-051 | 221317-IB | 2-022 | 221601-IB | 2-022 |
| 211621 | 2-051 | 221318 | 2-052 | 221607 | 2-052 |
| 211622 | 2-051 | 221318-12IB | 2-042 | 221607-12IB | 2-042 |
| 211623 | 2-051 | 221318-IB | 2-022 | 221607-IB | 2-022 |
| 211676 | 2-111 | 221319 | 2-052 | 221608 | 2-052 |
| 213076 | 6-131 | 221319-12IB | 2-042 | 221608-12IB | 2-042 |
| | | 221319-IB | 2-022 | 221608-IB | 2-022 |
| | | 221320 | 2-052 | 221609 | 2-052 |
| 215032-IB | 2-021 | 221320-12IB | 2-042 | 221609-12IB | 2-042 |
| 215033-IB | 2-021 | 221320-IB | 2-022 | 221609-IB | 2-022 |
| | | 221321 | 2-052 | 221610 | 2-052 |
| | | 221321-12IB | 2-042 | 221610-12IB | 2-042 |
| 219150-12IB | 2-041 | 221321-IB | 2-022 | 221610-IB | 2-022 |
| 219150-IB | 2-021 | 221322 | 2-052 | 221611 | 2-052 |
| 219151-12IB | 2-041 | 221322-12IB | 2-042 | 221611-12IB | 2-042 |
| 219151-IB | 2-021 | 221322-IB | 2-022 | 221611-IB | 2-022 |
| | | 221323 | 2-052 | 221612 | 2-052 |
| | | 221323-12IB | 2-042 | 221612-12IB | 2-042 |
| 221301 | 2-052 | 221323-IB | 2-022 | 221612-IB | 2-022 |
| 221301-12IB | 2-042 | 221324 | 2-052 | 221613 | 2-052 |
| 221301-IB | 2-022 | 221324-12IB | 2-042 | 221613-12IB | 2-042 |
| 221307 | 2-052 | 221324-IB | 2-022 | 221613-IB | 2-022 |
| 221307-12IB | 2-042 | 221326 | 2-052 | 221614 | 2-052 |
| 221307-IB | 2-022 | 221326-12IB | 2-042 | 221614-12IB | 2-042 |
| 221308 | 2-052 | 221326-IB | 2-022 | 221614-IB | 2-022 |
| 221308-12IB | 2-042 | 221328 | 2-052 | 221615 | 2-052 |
| 221308-IB | 2-022 | 221328-12IB | 2-042 | 221615-12IB | 2-042 |
| 221309 | 2-052 | 221328-IB | 2-022 | 221615-IB | 2-022 |
| 221309-12IB | 2-042 | 221339 | 2-052 | 221616 | 2-052 |
| 221309-IB | 2-022 | 221339-12IB | 2-042 | 221616-12IB | 2-042 |
| 221310 | 2-052 | 221339-IB | 2-022 | 221616-IB | 2-022 |
| 221310-12IB | 2-042 | 221341 | 2-052 | 221617 | 2-052 |
| 221310-IB | 2-022 | 221341-12IB | 2-042 | 221617-12IB | 2-042 |
| 221311 | 2-052 | 221341-IB | 2-022 | 221617-IB | 2-022 |
| 221311-12IB | 2-042 | 221347 | 2-052 | 221618 | 2-052 |
| 221311-IB | 2-022 | 221347-12IB | 2-042 | 221618-12IB | 2-042 |
| 221312 | 2-052 | 221347-IB | 2-022 | 221618-IB | 2-022 |
| 221312-12IB | 2-042 | 221348 | 2-052 | 221619 | 2-052 |
| 221312-IB | 2-022 | 221348-12IB | 2-042 | 221619-12IB | 2-042 |
| 221313 | 2-052 | 221348-IB | 2-022 | 221619-IB | 2-022 |

| Part number | Page | Part number | Page | Part number | Page |
|------------------|--------|------------------|--------|-------------|----------|
| 221620 | 2-052 | 22500-05 | 2-655 | 232121 | 2-480 |
| 221620-12IB | 2-042 | 22500-06 | 2-655 | 232121-U | 2-481 |
| 221620-IB | 2-022 | | | 232122 | 2-480 |
| 221621 | 2-052 | | | 232122-U | 2-481 |
| 221621-12IB | 2-042 | 2302-001240-000L | | 232123 | 2-480 |
| 221621-IB | 2-022 | 2306-139640-000R | 2-160b | 232123-U | 2-481 |
| 221622 | 2-052 | | | 232124 | 2-480 |
| 221622-12IB | 2-042 | | | 232124-U | 2-481 |
| 221622-IB | 2-022 | 231101.1 | 2-312b | 232127 | 2-480 |
| 221623 | 2-052 | 231101.2 | 2-312b | 232127-U | 2-481 |
| 221623-12IB | 2-042 | 231104 | 2-312b | 232131 | 2-480 |
| 221623-IB | 2-022 | 231107 | 2-312b | 232131-U | 2-481 |
| 221624 | 2-052 | 2312-001240-020L | | 232155 | 2-111 |
| 221624-12IB | 2-042 | 2316-139640-025R | 2-140b | 232156 | 2-111 |
| 221624-IB | 2-022 | 2313-301303-0000 | | 232157 | 2-111 |
| 221626 | 2-052 | 2319-941959-5045 | 6-110b | 232158 | 2-111 |
| 221626-12IB | 2-042 | | | 232159 | 2-111 |
| 221626-IB | 2-022 | | | 232160 | 2-118 |
| 221628 | 2-052 | 23210030 | 2-118 | 232160 | 2-111 |
| 221628-12IB | 2-042 | 232101 | 2-480 | 232161 | 2-118 |
| 221628-IB | 2-022 | 232101-U | 2-481 | 232161 | 2-111 |
| 221639 | 2-052 | 232102 | 2-480 | 232162 | 2-111 |
| 221639-12IB | 2-042 | 232102-U | 2-481 | 232162-33 | 2-118 |
| 221639-IB | 2-022 | 232103 | 2-480 | 232163 | 2-111 |
| 221641 | 2-052 | 232103-U | 2-481 | 232163 | 2-118 |
| 221641-12IB | 2-042 | 232104 | 2-480 | 232164 | 2-111 |
| 221641-IB | 2-022 | 232104-U | 2-481 | 232165 | 2-111 |
| 221647 | 2-052 | 232105 | 2-480 | 232166 | 2-111 |
| 221647-12IB | 2-042 | 232105-U | 2-481 | 232172 | 2-480 |
| 221647-IB | 2-022 | 232107 | 2-480 | 232172-U | 2-481 |
| 221648 | 2-052 | 232107-U | 2-481 | 232180-1 | 2-520 |
| 221648-12IB | 2-042 | 232108 | 2-480 | 232180-2 | 2-520 |
| 221648-IB | 2-022 | 232108-U | 2-481 | 232180-U | 2-520 |
| 221649 | 2-052 | 232109 | 2-480 | 232183-1 | 2-520 |
| 221649-12IB | 2-042 | 232109-U | 2-481 | 232183-2 | 2-520 |
| 221649-IB | 2-022 | 232110 | 2-480 | 232183-U | 2-520 |
| 221651 | 2-052 | 232110-U | 2-481 | 2321S01 | 2-490 |
| 221651-12IB | 2-042 | 232111 | 2-480 | 2321S01-U | 2-491 |
| 221651-IB | 2-022 | 232111-U | 2-481 | 2321S01P | 1-008.51 |
| 221678 | 2-111 | 232112 | 2-480 | 2321S01PU | 1-008.50 |
| 221679 | 2-111 | 232112-U | 2-481 | 2321S02 | 2-490 |
| 221680 | 2-111 | 232114 | 2-480 | 2321S02-U | 2-491 |
| 221681 | 2-111 | 232114-U | 2-481 | 2321S02P | 1-008.51 |
| 221683 | 2-111 | 232115 | 2-480 | 2321S02PU | 1-008.50 |
| | | 232115-U | 2-481 | 2321S03 | 2-490 |
| | | 232116 | 2-480 | 2321S03-U | 2-491 |
| 2222-001200-0000 | | 232116-U | 2-481 | 2321S03P | 1-008.51 |
| 2226-139650-5045 | 2-090b | 232117 | 2-480 | 2321S03PU | 1-008.50 |
| | | 232117-U | 2-481 | 2321S04 | 2-490 |
| | | 232118 | 2-480 | 2321S04-U | 2-491 |
| 223078 | 6-131 | 232118-U | 2-481 | 2321S04P | 1-008.51 |
| 223080 | 6-131 | 232120 | 2-480 | 2321S04PU | 1-008.50 |
| | | 232120-U | 2-481 | 2321S05 | 2-490 |

| Part number | Page | Part number | Page | Part number | Page |
|----------------|----------|------------------|----------|-------------|-------|
| 2321S05-U | 2-491 | 2321S18-U | 2-491 | 233007 | 2-480 |
| 2321S05P | 1-008.51 | 2321S18P | 1-008.51 | 233007-U | 2-481 |
| 2321S05PU | 1-008.50 | 2321S18PU | 1-008.50 | 233008 | 2-480 |
| 2321S07 | 2-490 | 2321S20 | 2-490 | 233008-U | 2-481 |
| 2321S07-R01 | 2-312b | 2321S20-U | 2-491 | 233009 | 2-480 |
| 2321S07-R05 | 2-312b | 2321S20P | 1-008.51 | 233009-U | 2-481 |
| 2321S07-U | 2-491 | 2321S20PU | 1-008.50 | 233010 | 2-480 |
| 2321S07P | 1-008.51 | 2321S21 | 2-490 | 233010-U | 2-481 |
| 2321S07PU | 1-008.50 | 2321S21-U | 2-491 | 233011 | 2-480 |
| 2321S08 | 2-490 | 2321S21P | 1-008.51 | 233011-U | 2-481 |
| 2321S08-U | 2-491 | 2321S21PU | 1-008.50 | 233012 | 2-480 |
| 2321S08P | 1-008.51 | 2321S22 | 2-490 | 233012-U | 2-481 |
| 2321S08PU | 1-008.50 | 2321S22-U | 2-491 | 233014 | 2-480 |
| 2321S09 | 2-490 | 2321S22P | 1-008.51 | 233014-U | 2-481 |
| 2321S09-004U | 2-510 | 2321S22PU | 1-008.50 | 233015 | 2-480 |
| 2321S09-00M | 2-510 | 2321S23 | 2-490 | 233015-U | 2-481 |
| 2321S09-00MP | 1-008.51 | 2321S23-U | 2-491 | 233016 | 2-480 |
| 2321S09-00MPU | 1-008.50 | 2321S23P | 1-008.51 | 233016-U | 2-481 |
| 2321S09-00U | 2-510 | 2321S23PU | 1-008.50 | 233017 | 2-480 |
| 2321S09-00U-36 | 2-510 | 2321S24 | 2-490 | 233017-U | 2-481 |
| 2321S09-00U-50 | 2-510 | 2321S24-U | 2-491 | 233018 | 2-480 |
| 2321S09-U | 2-491 | 2321S24P | 1-008.51 | 233018-U | 2-481 |
| 2321S09P | 1-008.51 | 2321S24PU | 1-008.50 | 233020 | 2-480 |
| 2321S09PU | 1-008.50 | 2321S27 | 2-490 | 233020-U | 2-481 |
| 2321S10 | 2-490 | 2321S27-U | 2-491 | 233021 | 2-480 |
| 2321S10-U | 2-491 | 2321S27P | 1-008.51 | 233021-U | 2-481 |
| 2321S10P | 1-008.51 | 2321S27PU | 1-008.50 | 233022 | 2-480 |
| 2321S10PU | 1-008.50 | 2321S28 | 2-490 | 233022-U | 2-481 |
| 2321S11 | 2-490 | 2321S28-U | 2-491 | 233023 | 2-480 |
| 2321S11-U | 2-491 | 2321S28P | 1-008.51 | 233023-U | 2-481 |
| 2321S11P | 1-008.51 | 2321S28PU | 1-008.50 | 233024 | 2-480 |
| 2321S11PU | 1-008.50 | 2321S29 | 2-490 | 233024-U | 2-481 |
| 2321S12 | 2-490 | 2321S29-U | 2-491 | 233027 | 2-480 |
| 2321S12-U | 2-491 | 2321S29P | 1-008.51 | 233027-U | 2-481 |
| 2321S12P | 1-008.51 | 2321S29PU | 1-008.50 | 233031 | 2-480 |
| 2321S12PU | 1-008.50 | 2327S24-R | 2-500b | 233031-U | 2-481 |
| 2321S14 | 2-490 | 2327S24-UR | 2-500b | 233055 | 6-131 |
| 2321S14-U | 2-491 | 2327S25-R | 2-500b | 233056 | 6-131 |
| 2321S14P | 1-008.51 | 2327S25-UR | 2-500b | 233057 | 6-131 |
| 2321S14PU | 1-008.50 | | | 233058 | 6-131 |
| 2321S15 | 2-490 | | | 233059 | 6-131 |
| 2321S15-U | 2-491 | 2330-301303-0000 | | 233060 | 6-131 |
| 2321S15P | 1-008.51 | 2356-903959-5045 | 6-120b | 233061 | 6-131 |
| 2321S15PU | 1-008.50 | 233001 | 2-480 | 233062 | 6-131 |
| 2321S16 | 2-490 | 233001-U | 2-481 | 233062-33 | 2-118 |
| 2321S16-U | 2-491 | 233002 | 2-480 | 233063 | 6-131 |
| 2321S16P | 1-008.51 | 233002-U | 2-481 | 233064 | 6-131 |
| 2321S16PU | 1-008.50 | 233003 | 2-480 | 233065 | 6-131 |
| 2321S17 | 2-490 | 233003-U | 2-481 | 233066 | 6-131 |
| 2321S17-U | 2-491 | 233004 | 2-480 | 233067 | 6-131 |
| 2321S17P | 1-008.51 | 233004-U | 2-481 | 233072 | 2-480 |
| 2321S17PU | 1-008.50 | 233005 | 2-480 | 233072-U | 2-481 |
| 2321S18 | 2-490 | 233005-U | 2-481 | 2330S01 | 2-490 |

| Part number | Page | Part number | Page | Part number | Page |
|---------------|----------|-------------|----------|------------------|----------|
| 2330S01-U | 2-491 | 2330S12P | 1-008.51 | 2330S29PU | 1-008.50 |
| 2330S01P | 1-008.51 | 2330S12PU | 1-008.50 | | |
| 2330S01PU | 1-008.50 | 2330S14 | 2-490 | | |
| 2330S02 | 2-490 | 2330S14-U | 2-491 | 2362-001200-0000 | |
| 2330S02-U | 2-491 | 2330S14P | 1-008.51 | 2376-139650-HHLL | 2-050b |
| 2330S02P | 1-008.51 | 2330S14PU | 1-008.50 | | |
| 2330S02PU | 1-008.50 | 2330S15 | 2-490 | | |
| 2330S03 | 2-490 | 2330S15-U | 2-491 | 2373-301303-0000 | |
| 2330S03-U | 2-491 | 2330S15P | 1-008.51 | 2373-941959-HH45 | 6-134b |
| 2330S03P | 1-008.51 | 2330S15PU | 1-008.50 | | |
| 2330S03PU | 1-008.50 | 2330S16 | 2-490 | | |
| 2330S04 | 2-490 | 2330S16-U | 2-491 | 2383-301303-0000 | |
| 2330S04-U | 2-491 | 2330S16P | 1-008.51 | 2383-326353-2824 | 6-130b |
| 2330S04P | 1-008.51 | 2330S16PU | 1-008.50 | | |
| 2330S04PU | 1-008.50 | 2330S17 | 2-490 | | |
| 2330S05 | 2-490 | 2330S17-U | 2-491 | 239001 | 2-480 |
| 2330S05-U | 2-491 | 2330S17P | 1-008.51 | 239001-U | 2-481 |
| 2330S05P | 1-008.51 | 2330S17PU | 1-008.50 | 239002 | 2-480 |
| 2330S05PU | 1-008.50 | 2330S18 | 2-490 | 239002-U | 2-481 |
| 2330S07 | 2-490 | 2330S18-U | 2-491 | 239003 | 2-480 |
| 2330S07-R01 | 2-312d | 2330S18P | 1-008.51 | 239003-U | 2-481 |
| 2330S07-R01 | 2-311d | 2330S18PU | 1-008.50 | 239004 | 2-480 |
| 2330S07-R06 | 2-311d | 2330S20 | 2-490 | 239004-U | 2-481 |
| 2330S07-R05 | 2-312d | 2330S20-U | 2-491 | 239005 | 2-480 |
| 2330S07-R05 | 2-311d | 2330S20P | 1-008.51 | 239005-U | 2-481 |
| 2330S07-R06 | 2-312d | 2330S20PU | 1-008.50 | 239007 | 2-480 |
| 2330S07-R08 | 2-311d | 2330S21 | 2-490 | 239007-U | 2-481 |
| 2330S07-R08 | 2-312d | 2330S21-U | 2-491 | 239008 | 2-480 |
| 2330S07-U | 2-491 | 2330S21P | 1-008.51 | 239008-U | 2-481 |
| 2330S07P | 1-008.51 | 2330S21PU | 1-008.50 | 239009 | 2-480 |
| 2330S07PU | 1-008.50 | 2330S22 | 2-490 | 239009-U | 2-481 |
| 2330S08 | 2-490 | 2330S22-U | 2-491 | 239010 | 2-480 |
| 2330S08-U | 2-491 | 2330S22P | 1-008.51 | 239010-U | 2-481 |
| 2330S08P | 1-008.51 | 2330S22PU | 1-008.50 | 239011 | 2-480 |
| 2330S08PU | 1-008.50 | 2330S23 | 2-490 | 239011-U | 2-481 |
| 2330S09 | 2-490 | 2330S23-U | 2-491 | 239012 | 2-480 |
| 2330S09-00M | 2-510 | 2330S23P | 1-008.51 | 239012-U | 2-481 |
| 2330S09-00MP | 1-008.51 | 2330S23PU | 1-008.50 | 239014 | 2-480 |
| 2330S09-00MPU | 1-008.50 | 2330S24 | 2-490 | 239014-U | 2-481 |
| 2330S09-00U | 2-510 | 2330S24-U | 2-491 | 239015 | 2-480 |
| 2330S09-U | 2-491 | 2330S24P | 1-008.51 | 239015-U | 2-481 |
| 2330S09P | 1-008.51 | 2330S24PU | 1-008.50 | 239016 | 2-480 |
| 2330S09PU | 1-008.50 | 2330S27 | 2-490 | 239016-U | 2-481 |
| 2330S10 | 2-490 | 2330S27-U | 2-491 | 239017 | 2-480 |
| 2330S10-U | 2-491 | 2330S27P | 1-008.51 | 239017-U | 2-481 |
| 2330S10P | 1-008.51 | 2330S27PU | 1-008.50 | 239018 | 2-480 |
| 2330S10PU | 1-008.50 | 2330S28 | 2-490 | 239018-U | 2-481 |
| 2330S11 | 2-490 | 2330S28-U | 2-491 | 239020 | 2-480 |
| 2330S11-U | 2-491 | 2330S28P | 1-008.51 | 239020-U | 2-481 |
| 2330S11P | 1-008.51 | 2330S28PU | 1-008.50 | 239021 | 2-480 |
| 2330S11PU | 1-008.50 | 2330S29 | 2-490 | 239021-U | 2-481 |
| 2330S12 | 2-490 | 2330S29-U | 2-491 | 239022 | 2-480 |
| 2330S12-U | 2-491 | 2330S29P | 1-008.51 | 239022-U | 2-481 |

| Part number | Page | Part number | Page | Part number | Page |
|---------------------|--------|------------------|--------|-------------|--------|
| 239023 | 2-480 | 241389-18 | 2-136 | 243089-13 | 6-136 |
| 239023-U | 2-481 | 241389-20 | 2-136 | 243089-14 | 6-136 |
| 239024 | 2-480 | 241389-21 | 2-136 | 243089-15 | 6-136 |
| 239024-U | 2-481 | 241389-22 | 2-136 | 243089-16 | 6-136 |
| 239027 | 2-480 | 241389-28 | 2-136 | 243089-17 | 6-136 |
| 239027-U | 2-481 | 241389-47 | 2-136 | 243089-18 | 6-136 |
| 239031 | 2-480 | 241389-56 | 2-136 | 243089-20 | 6-136 |
| 239031-U | 2-481 | 241389-79 | 2-136 | 243089-28 | 6-136 |
| 239072 | 2-480 | 241576-00-0000 | | 243089-48 | 6-136 |
| 239072-U | 2-481 | 241576-01-2824 | 2-115 | 243089-500 | 6-152 |
| | | 241589-01 | 2-136 | 243089-600 | 6-162 |
| | | 241589-09 | 2-136 | 243089-79 | 6-136 |
| 2402-001200-0000 | | 241589-11 | 2-136 | 243092-01 | 6-137 |
| 2430-439680-4445 | 2-040b | 241589-12 | 2-136 | 243092-02 | 6-138 |
| | | 241589-13 | 2-136 | 243092-03 | 6-139 |
| | | 241589-14 | 2-136 | 243095-01 | 6-140 |
| 2412-001200-0000 | | 241589-15 | 2-136 | 243095-07 | 6-140 |
| 2442-439680-5045 | 2-020b | 241589-16 | 2-136 | 243095-08 | 6-140 |
| 2412-230200-0000 | | 241589-17 | 2-136 | 243095-09 | 6-140 |
| 2416-430680-5045 | 2-120b | 241589-18 | 2-136 | 243095-11 | 6-140 |
| 241300-1101.1 | 2-700 | 241589-20 | 2-136 | 243095-12 | 6-140 |
| 241300-1102.1 | 2-700 | 241589-21 | 2-136 | 243095-13 | 6-140 |
| 241300-1103.1 | 2-700 | 241589-22 | 2-136 | 243095-14 | 6-140 |
| 241300-2501.1 | 2-720 | 241589-28 | 2-136 | 243095-15 | 6-140 |
| 241300-2502.1 | 2-720 | 241589-47 | 2-136 | 243095-16 | 6-140 |
| 241300-2503.1 | 2-720 | 241589-56 | 2-136 | 243095-17 | 6-140 |
| 241300-2602.1 | 2-720 | 241589-79 | 2-136 | 243095-18 | 6-140 |
| 2413061-01-HHLL | 2-125 | 241755-XX | 2-130 | 243095-20 | 6-140 |
| 2413063-01-HHLL | 2-125 | 241756-XX | 2-130 | 243095-28 | 6-140 |
| 2413071-1560 | | 241757-XX | 2-130 | 243095-48 | 6-140 |
| 2413073-3360 | 2-126 | 241758-XX | 2-130 | 243095-79 | 6-140 |
| 241334-180-0000 | | 241759-XX | 2-130 | 243096-01 | 6-141 |
| 241536-HNS-090-HH45 | 2-220a | 241760-XX | 2-130 | 243096-07 | 6-141 |
| 24134-20-0000 | | 241761-XX | 2-130 | 243096-08 | 6-141 |
| 24504-37-HH45 | 2-252 | 241762-XX | 2-130 | 243096-09 | 6-141 |
| 241356-180-0000 | | 241763-XX | 2-130 | 243096-11 | 6-141 |
| 241557-HNS090-HH45 | 2-220b | 241766-XX | 2-130 | 243096-12 | 6-141 |
| 241375-01 | 2-117 | 2419-301913-0000 | | 243096-13 | 6-141 |
| 241375-02 | 2-117 | 2419-926959-5045 | 6-115b | 243096-14 | 6-141 |
| 241375-03 | 2-117 | 2419-330313-0000 | | 243096-15 | 6-141 |
| 241385-0000 | | 2419-930959-HH45 | 6-134a | 243096-16 | 6-141 |
| 241686-HH45 | 2-260 | | | 243096-17 | 6-141 |
| 241387-01-0000 | | | | 243096-18 | 6-141 |
| 241587-79-6745 | 2-135b | 243087-01-0000 | | 243096-20 | 6-141 |
| 241389-01 | 2-136 | 243087-79-HH45 | 6-135 | 243096-28 | 6-141 |
| 241389-09 | 2-136 | 243087-500 | 6-152 | 243096-48 | 6-141 |
| 241389-11 | 2-136 | 243087-600 | 6-162 | 243096-79 | 6-141 |
| 241389-12 | 2-136 | 243089-01 | 6-136 | | |
| 241389-13 | 2-136 | 243089-07 | 6-136 | | |
| 241389-14 | 2-136 | 243089-08 | 6-136 | 245001 | 2-118 |
| 241389-15 | 2-136 | 243089-09 | 6-136 | 245020 | 2-318a |
| 241389-16 | 2-136 | 243089-11 | 6-136 | 245021 | 2-318b |
| 241389-17 | 2-136 | 243089-12 | 6-136 | | |

| Part number | Page | Part number | Page | Part number | Page |
|------------------|--------|------------------|-------|-------------|-------|
| 2452-001200-0000 | | 261576-06-2-HH45 | 2-292 | 261611-49 | 2-350 |
| 2456-233650-2824 | 2-110b | 261572 | 2-302 | 261612-10 | 2-350 |
| 2452-044200-0000 | | 261573 | 2-303 | 261612-20 | 2-350 |
| 2456-044650-2824 | 2-112 | 261601-01 | 2-340 | 261613 | 2-350 |
| | | 261601-07 | 2-340 | 261621-01 | 2-351 |
| | | 261601-08 | 2-340 | 261621-07 | 2-351 |
| 248801-3 | 2-303 | 261601-09 | 2-340 | 261621-08 | 2-351 |
| 248801-3 | 1-010 | 261601-10 | 2-340 | 261621-09 | 2-351 |
| 248801-3 | 2-302 | 261601-11 | 2-340 | 261621-10 | 2-351 |
| 248801-4 | 1-010 | 261601-12 | 2-340 | 261621-11 | 2-351 |
| 248801-4 | 2-302 | 261601-13 | 2-340 | 261621-12 | 2-351 |
| 248801-4 | 2-303 | 261601-14 | 2-340 | 261621-13 | 2-351 |
| | | 261601-15 | 2-340 | 261621-14 | 2-351 |
| 249014 | 6-125 | 261601-16 | 2-340 | 261621-15 | 2-351 |
| 249042-0 | 6-148 | 261601-17 | 2-340 | 261621-16 | 2-351 |
| 249042-8 | 6-148 | 261601-18 | 2-340 | 261621-17 | 2-351 |
| 249085 | 6-149 | 261601-19 | 2-340 | 261621-18 | 2-351 |
| | | 261601-20 | 2-340 | 261621-19 | 2-351 |
| | | 261601-21 | 2-340 | 261621-20 | 2-351 |
| 2510-000200-0000 | | 261601-22 | 2-340 | 261621-21 | 2-351 |
| 2510-190650-HH45 | 2-271 | 261601-23 | 2-340 | 261621-22 | 2-351 |
| | | 261601-24 | 2-340 | 261621-23 | 2-351 |
| | | 261601-28 | 2-340 | 261621-24 | 2-351 |
| 2511-100200-0000 | | 261601-41 | 2-340 | 261621-28 | 2-351 |
| 2511-690320-5045 | 2-276 | 261601-47 | 2-340 | 261621-41 | 2-351 |
| 251380 | 2-390 | 261601-48 | 2-340 | 261621-47 | 2-351 |
| 251380-1 | 2-390 | 261601-49 | 2-340 | 261621-48 | 2-351 |
| 251580 | 2-390 | 261602-10 | 2-340 | 261621-49 | 2-351 |
| 251580-1 | 2-390 | 261602-20 | 2-340 | 261622-10 | 2-351 |
| | | 261603 | 2-340 | 261622-20 | 2-351 |
| | | 261611-01 | 2-350 | 261623 | 2-351 |
| 25300-01 | 2-650 | 261611-07 | 2-350 | 261631-01 | 2-352 |
| 25300-02 | 2-650 | 261611-08 | 2-350 | 261631-07 | 2-352 |
| 25300-03 | 2-650 | 261611-09 | 2-350 | 261631-08 | 2-352 |
| 25300-10 | 2-650 | 261611-10 | 2-350 | 261631-09 | 2-352 |
| 25300-20 | 2-650 | 261611-11 | 2-350 | 261631-10 | 2-352 |
| 25300-25 | 2-650 | 261611-12 | 2-350 | 261631-11 | 2-352 |
| 25300-27 | 2-650 | 261611-13 | 2-350 | 261631-12 | 2-352 |
| 253050-0000 | | 261611-14 | 2-350 | 261631-13 | 2-352 |
| 259050-HH45 | 6-150 | 261611-15 | 2-350 | 261631-14 | 2-352 |
| | | 261611-16 | 2-350 | 261631-15 | 2-352 |
| | | 261611-17 | 2-350 | 261631-16 | 2-352 |
| 255069 | 2-360 | 261611-18 | 2-350 | 261631-17 | 2-352 |
| | | 261611-19 | 2-350 | 261631-18 | 2-352 |
| | | 261611-20 | 2-350 | 261631-19 | 2-352 |
| 259005 | 6-151 | 261611-21 | 2-350 | 261631-20 | 2-352 |
| | | 261611-22 | 2-350 | 261631-21 | 2-352 |
| | | 261611-23 | 2-350 | 261631-22 | 2-352 |
| 261356-0-0000 | | 261611-24 | 2-350 | 261631-23 | 2-352 |
| 261561-2-HH45 | 2-290 | 261611-28 | 2-350 | 261631-24 | 2-352 |
| 261364-0-0000 | | 261611-41 | 2-350 | 261631-28 | 2-352 |
| 261565-2-HH45 | 2-300 | 261611-47 | 2-350 | 261631-41 | 2-352 |
| 261376-00-0-0000 | | 261611-48 | 2-350 | 261631-47 | 2-352 |

| Part number | Page | Part number | Page | Part number | Page |
|----------------|--------|------------------------------|--------|------------------|--------|
| 261631-48 | 2-352 | 265026-2015 | 2-320b | 2651-101025 | 2-315c |
| 261631-49 | 2-352 | 265026-2022 | 2-320b | 2651-101030 | 2-315c |
| 261632-10 | 2-352 | 265026-2024 | 2-320b | 2651-101035 | 2-315c |
| 261632-20 | 2-352 | 265056 | 2-360 | 2651-101043 | 2-315c |
| 261633 | 2-352 | 265076-00 | 2-310b | 2651-101045 | 2-315c |
| 261904-0-0000 | | 265076-02-H | 2-310b | 2651-101050 | 2-315c |
| 261604-2-HH45 | 2-298 | 265076-10 | 2-310b | 2651-101060 | 2-315c |
| 261905-0-0000 | | 265076-12-H | 2-310b | 2651-101070 | 2-315c |
| 261608-2-HH45 | 2-299 | 265076-20 | 2-310b | 2651-101075 | 2-315c |
| | | 265076-22-H | 2-310b | 2651-101095 | 2-315c |
| | | 265076-3009 | 2-310b | 2651-101100 | 2-315c |
| 26210009 | 2-500a | 265076-3012 | 2-310b | 2651-205000 | 2-315d |
| | | 265076-3023 | 2-310b | 2651-205105 | 2-315d |
| | | 265076-3209-H | 2-310b | 2651-205114 | 2-315d |
| 26300009 | 2-500a | 265076-3212-H | 2-310b | 2651-205134 | 2-315d |
| 263031-41 | 6-210 | 265076-3223-H | 2-310b | 2651-205280 | 2-315d |
| 263031-47 | 6-210 | 265076-50 | 2-312b | 2651-205281 | 2-315d |
| 263033 | 6-210 | 265076-51 | 2-312b | 2651-205290 | 2-315d |
| 263064-0-0000 | | 265076-52 | 2-312b | 2651-205400 | 2-315d |
| 263064-2-HH45 | 6-175 | 265076-53 | 2-312b | 2651-205505 | 2-315d |
| 263076-50 | 2-312d | 265076-60 | 2-310b | 2651-205514 | 2-315d |
| 263076-54 | 2-312d | 265076-62-H ¹ | 2-310b | 2651-205534 | 2-315d |
| 263079-10 | 2-313b | 265076-IL10 | 2-310b | 2651-205680 | 2-315d |
| 263079-10 | 2-312d | 265076-IL10-7-H ¹ | 2-310b | 2651-205681 | 2-315d |
| 263079-S25-G40 | 2-311d | 265077-00 | 2-310b | 2651-205690 | 2-315d |
| 263079-S30-G40 | 2-311d | 265078-301 | 2-315c | 2651-215400 | 2-310c |
| 263079-S50-G40 | 2-311d | 265078-301 | 2-310b | 2651-215505 | 2-310c |
| 263079-S60-G40 | 2-311d | 265078-302 | 2-310b | 2651-215514 | 2-310c |
| 263901-0-0000 | | 265078-D01 | 2-316a | 2651-215534 | 2-310c |
| 269001-2-HH45 | 6-160 | 265078-D01-1 | 2-316a | 2651-215680 | 2-310c |
| 263966-0-0000 | | 265078-D02 | 2-316b | 2651-215681 | 2-310c |
| 269966-2-HH45 | 6-170 | 265078-D03 | 2-316a | 2651-215690 | 2-310c |
| | | 265078-G50 | 2-311b | 2651-225400 | 2-315d |
| | | 265078-GC50 | 2-311b | 2651-225700 | 2-315d |
| 264566-0-0000 | | 265078-M25 | 2-311b | 2651-235400 | 2-310c |
| 264567-2-HH45 | 2-305 | 265078-M50 | 2-311b | 2651-235700 | 2-310c |
| | | 265078-M60 | 2-311b | 2651-305125-0062 | 2-315e |
| | | 265078-S100 | 2-311b | 2651-400000 | 3-155b |
| 265026-0003 | 2-320b | 265078-S25-G40 | 2-311b | 2651-400000 | 2-317b |
| 265026-0005 | 2-320b | 265078-S50 | 2-311b | 2651-400035 | 2-317b |
| 265026-0014 | 2-320b | 265078-S50-G40 | 2-311b | 2651-400035 | 3-155b |
| 265026-0015 | 2-320b | 265078-S60-G40 | 2-311b | 2651-400070 | 2-317b |
| 265026-0022 | 2-320b | 265078-S75-G40 | 2-311b | 2651-400070 | 3-155b |
| 265026-0024 | 2-320b | 265078-SC50 | 2-311b | 2651-400080 | 2-317b |
| 265026-1003 | 2-320b | 265078-T25H | 2-314 | 2651-400080 | 3-155b |
| 265026-1005 | 2-320b | 265078-T25V | 2-314 | 2651-401000 | 3-155b |
| 265026-1014 | 2-320b | 265078-T40H | 2-314 | 2651-401000 | 2-317b |
| 265026-1015 | 2-320b | 265078-T40V | 2-314 | 2651-401035 | 2-317b |
| 265026-1022 | 2-320b | 265078-T50H | 2-314 | 2651-401035 | 3-155b |
| 265026-1024 | 2-320b | 265078-T50V | 2-314 | 2651-401070 | 2-317b |
| 265026-2003 | 2-320b | 265078-T85H | 2-314 | 2651-401070 | 3-155b |
| 265026-2005 | 2-320b | 265078-T85V | 2-314 | 2651-401080 | 2-317b |
| 265026-2014 | 2-320b | 265079-10 | 2-313b | 2651-401080 | 3-155b |

| Part number | Page | Part number | Page | Part number | Page |
|------------------|--------|------------------|-----------|-------------|-----------|
| 2651-420034 | 2-317d | 276001 | 2-590 | 282109 | 2-540 |
| 2651-420034 | 3-155d | | | 282110-1000 | 1-008.52 |
| 2651-430034 | 3-155d | | | 282110-1100 | 1-008.52 |
| 2651-430034 | 2-317d | 2800-001020-0100 | | 282110-1200 | 1-008.52 |
| 2651-510050 | 3-156 | 2800-202030-0101 | 2-831b | 282110-400 | 1-008.52 |
| 2651-511050 | 3-156 | 2800-001040-0100 | | 282110-500 | 1-008.52 |
| 2651-901025 | 2-315f | 2800-202040-0100 | 2-832b | 282110-600 | 1-008.52 |
| 2651-901050 | 2-315f | 2800-001050-0100 | | 282110-700 | 1-008.52 |
| 2651-901075 | 2-315f | 2800-202050-0101 | 2-834b | 282110-800 | 1-008.52 |
| 2651-901100 | 2-315f | 2800-01 | 2-640 | 282110-900 | 1-008.52 |
| 2651-902001 | 2-315f | 2800-03 | 2-640 | 282110-LLLL | 1-008.52 |
| 2651-903000 | 2-315f | | | 282110-LLLL | 2-540 |
| 2651-903001 | 2-315f | | | 282111 | 1-008.53a |
| 2651-903002 | 2-315f | 281125 | 1-008.21b | 282111 | 2-541 |
| | | 281125 | 1-008.25b | 282112 | 1-008.53a |
| | | 281125 | 1-008.57 | 282112 | 2-541 |
| 2698-209740-2515 | 2-741 | 2814-030009-0124 | 2-396 | 282113 | 1-008.53a |
| 2698-209840-2515 | 2-741 | 2814-030009-2346 | 2-396 | 282113 | 2-541 |
| | | 2814-030609-0124 | 2-396 | 282114 | 2-541 |
| | | 2814-030609-2346 | 2-396 | 282114 | 1-008.53a |
| 271102 | 2-420 | 2814-037059-0324 | 2-397 | 282115 | 2-541 |
| 271103 | 2-052 | 2814-037059-2246 | 2-397 | 282115 | 1-008.53a |
| 271134-01 | 5-401 | 2814-037159-0324 | 2-397 | 282116 | 2-541 |
| 271161-H-0000 | | 2814-037159-2246 | 2-397 | 282116 | 1-008.53a |
| 291105-VP-HH45 | 2-070 | 281425 | 1-008.25b | 282117 | 1-008.53a |
| 271502 | 2-420 | 281425 | 1-008.57 | 282117 | 2-541 |
| 271634-01 | 5-401 | 2815-505014-1128 | 2-398 | 282118 | 1-008.53a |
| | | 2815-505024-1128 | 2-398 | 282118 | 2-541 |
| | | 2815-505034-1128 | 2-398 | 282119 | 2-541 |
| 272021-00H5861 | | 2815-505044-1128 | 2-398 | 282119 | 2-545 |
| 273921-06-S1 | 2-800b | 2815-505054-1128 | 2-398 | 282119 | 1-008.53b |
| 272063-52H5861 | | 2815-505064-1128 | 2-398 | 282119 | 1-008.54 |
| 273963-68-S1 | 2-810b | 2815-505074-1128 | 2-398 | 282119-10 | 2-770 |
| | | 281570-007000 | 2-398 | 282119-10 | 2-541 |
| | | | | 282119-10 | 2-545 |
| 275001 | 1-010 | | | 282119-10 | 1-008.53b |
| 275002 | 1-010 | 282101 | 1-008.52 | 282119-6 | 2-541 |
| 275004-30 | 2-210 | 282101 | 2-540 | 282119-6 | 2-545 |
| 275004-40 | 2-210 | 282102 | 1-008.52 | 282119-6 | 1-008.53b |
| 275004-50 | 2-210 | 282102 | 2-540 | 282120-1000 | 1-008.53a |
| 275006-30 | 2-210 | 282103 | 2-540 | 282120-1100 | 1-008.53a |
| 275006-40 | 2-210 | 282103 | 1-008.52 | 282120-1200 | 1-008.53a |
| 275006-50 | 2-210 | 282104 | 2-540 | 282120-400 | 1-008.53a |
| 275008 | 1-020 | 282104 | 1-008.52 | 282120-500 | 1-008.53a |
| 27501130-1201 | | 282105 | 2-540 | 282120-600 | 1-008.53a |
| 27501150-1248 | 2-215 | 282105 | 1-008.52 | 282120-700 | 1-008.53a |
| 275015-01 | 5-400 | 282106 | 2-540 | 282120-800 | 1-008.53a |
| 275015-02 | 5-400 | 282106 | 1-008.52 | 282120-900 | 1-008.53a |
| 275018 | 2-590 | 282107 | 1-008.52 | 282120-LLLL | 1-008.53a |
| 2751-10282-1861 | | 282107 | 2-540 | 282120-LLLL | 2-541 |
| 2751-10682-S1 | 2-820b | 282108 | 1-008.52 | 282121 | 2-541 |
| | | 282108 | 2-540 | 282121 | 1-008.53a |
| | | 282109 | 1-008.52 | 282123 | 1-008.54 |

| Part number | Page | Part number | Page | Part number | Page |
|----------------|-----------|-------------|-----------|-------------|-----------|
| 282123 | 2-570 | 283004 | 2-540 | 283021 | 2-541 |
| 28212302 | 2-570 | 283005 | 2-540 | 283021 | 1-008.53a |
| 28212302 | 1-008.54 | 283005 | 1-008.52 | 283023 | 1-008.54 |
| 282124 | 2-570 | 283006 | 1-008.52 | 283024 | 1-008.54 |
| 282124 | 1-008.54 | 283006 | 2-540 | 283050-1000 | 2-313a |
| 282125 | 2-570 | 283007 | 1-008.52 | 283050-1100 | 2-313a |
| 28212502 | 2-570 | 283007 | 2-540 | 283050-1200 | 2-313a |
| 282126 | 2-570 | 283008 | 2-540 | 283050-1300 | 2-313a |
| 282127-AA | 2-570 | 283008 | 1-008.52 | 283050-1400 | 2-313a |
| 282128-AA | 2-570 | 283009 | 2-540 | 283050-1500 | 2-313a |
| 282130-LLLL | 2-770 | 283009 | 1-008.52 | 283050-1600 | 2-313a |
| 282135 | 2-770 | 283010-1000 | 1-008.52 | 283050-1700 | 2-313a |
| 282135-01 | 2-770 | 283010-1100 | 1-008.52 | 283050-900 | 2-313a |
| 282150-1000 | 2-313a | 283010-1200 | 1-008.52 | 283050-L1 | 2-313a |
| 282150-1100 | 2-313a | 283010-400 | 1-008.52 | 283051 | 1-008.53b |
| 282150-1200 | 2-313a | 283010-500 | 1-008.52 | 283051 | 2-545 |
| 282150-1300 | 2-313a | 283010-600 | 1-008.52 | 283052 | 1-008.53b |
| 282150-1400 | 2-313a | 283010-700 | 1-008.52 | 283052 | 2-545 |
| 282150-1500 | 2-313a | 283010-800 | 1-008.52 | 283053 | 2-545 |
| 282150-1600 | 2-313a | 283010-900 | 1-008.52 | 283053 | 1-008.53b |
| 282150-1700 | 2-313a | 283010-LLLL | 2-540 | 283054 | 2-545 |
| 282150-900 | 2-313a | 283010-LLLL | 1-008.52 | 283054 | 1-008.53b |
| 282150-L1 | 2-313a | 283011 | 1-008.53a | 283055 | 1-008.53b |
| 282151 | 1-008.53b | 283011 | 2-541 | 283055 | 2-545 |
| 282151 | 2-545 | 283012 | 2-541 | 283056 | 2-545 |
| 282152 | 2-545 | 283012 | 1-008.53a | 283056 | 1-008.53b |
| 282152 | 1-008.53b | 283013 | 2-541 | 283057 | 1-008.53b |
| 282153 | 1-008.53b | 283013 | 1-008.53a | 283057 | 2-545 |
| 282153 | 2-545 | 283014 | 1-008.53a | 283058 | 1-008.53b |
| 282154 | 1-008.53b | 283014 | 2-541 | 283058 | 2-545 |
| 282154 | 2-545 | 283015 | 2-541 | 283060-LLLL | 2-545 |
| 282155 | 1-008.53b | 283015 | 1-008.53a | 283060-LLLL | 1-008.53b |
| 282155 | 2-545 | 283016 | 1-008.53a | 283061 | 1-008.53b |
| 282156 | 2-545 | 283016 | 2-541 | 283061 | 2-545 |
| 282156 | 1-008.53b | 283017 | 1-008.53a | | |
| 282157 | 1-008.53b | 283017 | 2-541 | | |
| 282157 | 2-545 | 283018 | 1-008.53a | 285023 | 2-560 |
| 282158 | 2-545 | 283018 | 2-541 | 285023 | 1-008.54 |
| 282158 | 1-008.53b | 283019 | 1-008.54 | 285024 | 2-560 |
| 282160-LLLL | 1-008.53b | 283019 | 2-541 | 285024 | 1-008.54 |
| 282160-LLLL | 2-545 | 283019 | 2-545 | 285025 | 1-008.57 |
| 282161 | 2-545 | 283019 | 1-008.53b | 285025 | 1-008.21b |
| 282161 | 1-008.53b | 283020-1000 | 1-008.53a | 285025 | 1-008.25b |
| 282170-AA-LLLL | 1-008.21b | 283020-1100 | 1-008.53a | | |
| | | 283020-1200 | 1-008.53a | | |
| | | 283020-400 | 1-008.53a | 291101 | 2-370 |
| 283001 | 2-540 | 283020-500 | 1-008.53a | 291102 | 2-370 |
| 283001 | 1-008.52 | 283020-600 | 1-008.53a | 291103 | 2-370 |
| 283002 | 1-008.52 | 283020-700 | 1-008.53a | 291104 | 2-370 |
| 283002 | 2-540 | 283020-800 | 1-008.53a | 291105 | 2-370 |
| 283003 | 2-540 | 283020-900 | 1-008.53a | 291106 | 2-370 |
| 283003 | 1-008.52 | 283020-LLLL | 2-541 | 291107 | 2-370 |
| 283004 | 1-008.52 | 283020-LLLL | 1-008.53a | 291108 | 2-370 |

| Part number | Page | Part number | Page | Part number | Page |
|------------------|--------|-------------|-------|----------------|--------|
| 291118 | 2-410 | 295068 | 2-360 | 313021 | 3-094 |
| 291119 | 2-410 | 295068-RF | 2-360 | | |
| 291120 | 2-410 | 295069 | 2-360 | | |
| 291121 | 2-410 | 295070 | 2-360 | 321110 | 3-520 |
| 291122 | 2-370 | 295070-RF | 2-360 | 321111 | 3-525 |
| 291125 | 2-370 | 295071 | 2-360 | 321129 | 3-170 |
| 291127 | 2-410 | 295072 | 2-360 | 32112901 | 3-170 |
| 291128 | 2-410 | 295073 | 2-360 | 321130 | 3-170 |
| 291129 | 2-410 | 295074 | 2-360 | 32113001 | 3-170 |
| 291130 | 2-410 | 295074-IB | 2-360 | 321142 | 3-500 |
| 291131 | 2-410 | 295075 | 2-360 | 321150 | 3-160b |
| 291132 | 2-410 | 295078 | 2-360 | 321151 | 3-160b |
| 291133 | 2-410 | 295082-12IB | 2-360 | 321151-3D | 3-163 |
| 291134 | 2-410 | | | 321152 | 3-160b |
| 291135 | 2-380 | | | 321158 | 3-162 |
| 291136-A8 | 2-370 | 297003 | 6-131 | 321179 | 3-171 |
| 291138 | 2-130 | 297003 | 2-111 | 32117901 | 3-171 |
| 291140 | 2-370 | 297004 | 2-111 | 321180 | 3-171 |
| 291141 | 2-370 | 297004 | 6-131 | 32118001 | 3-171 |
| 291141 | 5-061 | 297006 | 2-585 | 321185 | 3-161 |
| 291143 | 2-370 | 297006 | 2-400 | 321227 | 3-190 |
| 291151 | 2-370 | 297006 | 6-610 | 321234 | 3-180 |
| 291153 | 2-380 | 297006 | 2-590 | 321235 | 3-180 |
| 291156 | 2-370 | | | 321259 | 3-185 |
| 291157 | 2-380 | | | 321266 | 3-185 |
| 2912-001210-0000 | | 311115 | 3-080 | 321311 | 3-525 |
| 2916-039650-5045 | 2-030b | 311116 | 3-080 | 321328 | 3-190 |
| | | 311117 | 3-095 | 321329 | 3-170 |
| | | 311322-01 | 3-098 | 32132901 | 3-170 |
| 293001 | 2-410 | 311322-02 | 3-098 | 321330 | 3-120 |
| 293025 | 2-400 | 311322-03 | 3-098 | 321331 | 3-120 |
| 293025 | 6-610 | 311322-04 | 3-098 | 321332 | 3-120 |
| 293028 | 2-410 | 311417 | 3-095 | 321334 | 3-180 |
| | | | | 321335 | 3-180 |
| | | | | 321359 | 3-185 |
| 295005 | 2-590 | 312101 | 3-010 | 321366 | 3-185 |
| 295006 | 2-590 | 312102 | 3-020 | 321379 | 3-171 |
| 295007 | 2-585 | 312103 | 3-020 | 32137901 | 3-171 |
| 29501001 | 2-372 | 312105 | 3-030 | 321380 | 3-171 |
| 29501002 | 2-372 | 312106 | 3-050 | 32138001 | 3-171 |
| 29501003 | 2-372 | 312107 | 3-050 | 321386 | 3-177 |
| 29501004 | 2-372 | 312109 | 3-060 | 321530 | 3-120 |
| 29501005 | 2-372 | 312111 | 3-070 | 321531 | 3-120 |
| 29501006 | 2-372 | 312118 | 3-045 | 321532 | 3-120 |
| 29501007 | 2-372 | 312119 | 3-096 | 321536 | 3-130 |
| 29501008 | 2-372 | 312121 | 3-094 | 321542 | 3-500 |
| 29501009 | 2-372 | | | 3216-600304-30 | 3-345 |
| 29501010 | 2-372 | | | 3216-600404-30 | 3-351 |
| 29501011 | 2-372 | 313003 | 6-300 | 3216-600504-30 | 3-361 |
| 29501012 | 2-372 | 313008 | 6-310 | 3216-600544-30 | 3-330 |
| 29501013 | 2-372 | 313010 | 6-320 | 3216-600604-30 | 3-391 |
| 295011 | 2-111 | 313012 | 6-330 | 3216-600634-30 | 3-381 |
| 295011 | 6-131 | 313018 | 6-308 | 3216-600764-30 | 3-371 |

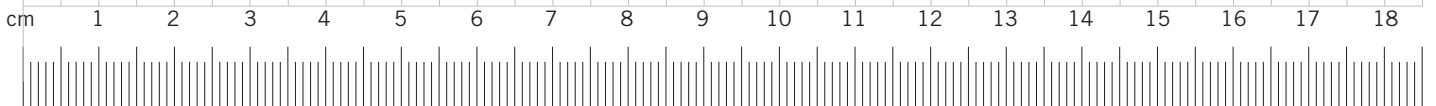
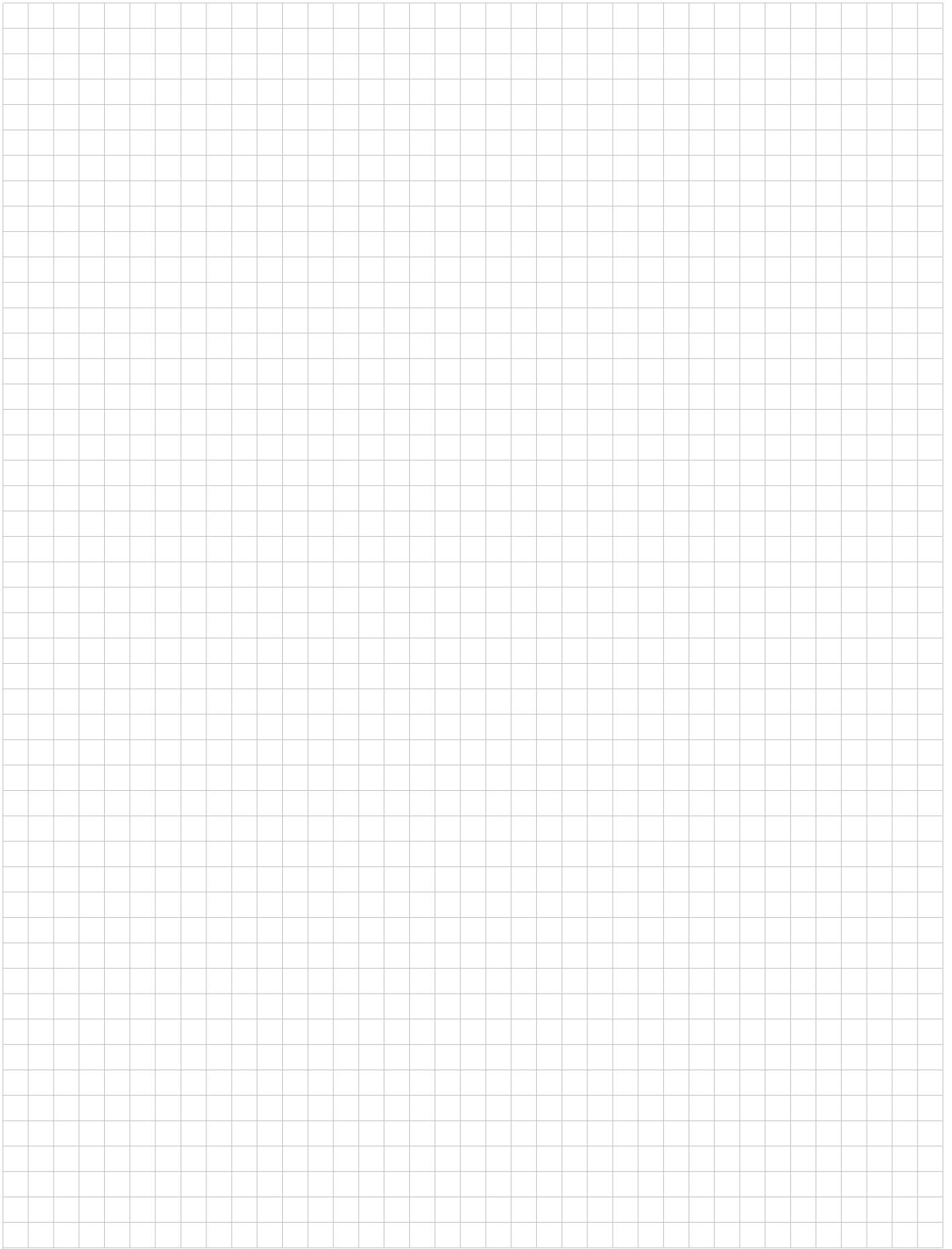
| Part number | Page | Part number | Page | Part number | Page |
|----------------|--------|------------------|-------|------------------|-------|
| 3216-610304-30 | 3-345 | 322110 | 3-505 | 324625 | 3-580 |
| 3216-610404-30 | 3-351 | 322112 | 3-510 | 324625-SL | 3-580 |
| 3216-610504-30 | 3-361 | 322113 | 3-510 | 324626 | 3-580 |
| 3216-610544-21 | 3-328 | 322113-30 | 3-510 | 324626-SL | 3-580 |
| 3216-610544-30 | 3-330 | 322115 | 3-530 | | |
| 3216-610604-30 | 3-391 | 322116 | 3-540 | | |
| 3216-610634-30 | 3-381 | 322117 | 3-540 | 3250-502000-6560 | 3-475 |
| 3216-610764-30 | 3-371 | 322119 | 3-550 | 325006 | 3-195 |
| 3216-620304-30 | 3-345 | 322120 | 3-560 | 325070 | 3-175 |
| 3216-620404-30 | 3-351 | 322121 | 3-570 | | |
| 3216-620504-30 | 3-361 | 322122 | 3-570 | | |
| 3216-620544-30 | 3-330 | 322123 | 3-570 | 3290-600404-30 | 6-385 |
| 3216-620604-30 | 3-391 | 322123-RF | 6-450 | 3290-600504-30 | 6-385 |
| 3216-620634-30 | 3-381 | 322124 | 3-570 | 3290-600604-30 | 6-385 |
| 3216-620764-30 | 3-371 | 322124-RF | 6-450 | 329012 | 6-400 |
| 3216-630634-30 | 3-381 | 322181-01 | 3-680 | 329014 | 6-400 |
| 321610 | 3-520 | 322181-01 | 6-465 | 329016 | 6-410 |
| 321611 | 3-525 | 322181-02 | 6-465 | 329018 | 6-420 |
| 321627 | 3-190 | 322181-02 | 3-680 | 329019 | 6-430 |
| 321629 | 3-170 | 322182-02 | 6-466 | 329020 | 6-440 |
| 32162901 | 3-170 | 322182-02 | 3-685 | 329022 | 6-420 |
| 321633 | 3-170 | 322183-01 | 3-687 | 329028 | 6-395 |
| 32163301 | 3-170 | 322183-01 | 6-467 | 329029 | 6-395 |
| 321634 | 3-180 | | | | |
| 321635 | 3-180 | | | | |
| 321650 | 3-160b | 3230-303000-4040 | 6-386 | 332000-A040 | 3-592 |
| 321651 | 3-160b | 3230-303000-5050 | 6-386 | 332000-A050 | 3-592 |
| 321651-3D | 3-163 | 3230-303000-6012 | 6-386 | 332000-A060 | 3-592 |
| 321652 | 3-160b | 3230-303000-6060 | 6-386 | 332000-A070 | 3-592 |
| 321658 | 3-162 | 32300-02 | 2-645 | 332000-A080 | 3-592 |
| 321659 | 3-185 | 32300-04 | 2-645 | 332000-A100 | 3-592 |
| 321664-065 | 3-413 | 323012 | 6-400 | 332000-A120 | 3-592 |
| 321665-065 | 3-413 | 323014 | 6-400 | 332000-A135 | 3-592 |
| 321666 | 3-185 | 323014-30 | 6-400 | 332000-A150 | 3-592 |
| 321667-00-0 | 3-461 | 323016 | 6-410 | 332000-A180 | 3-592 |
| 321667-04-0 | 3-461 | 323018 | 6-420 | 332000-A200 | 3-592 |
| 321667-06-0 | 3-461 | 323019 | 6-430 | | |
| 321667-10-0 | 3-461 | 323020 | 6-440 | | |
| 321668-0 | 3-451 | 323022 | 6-420 | 333001-A060 | 6-460 |
| 321669-0 | 3-451 | 323027 | 6-470 | 333001-A080 | 6-460 |
| 321676-01 | 3-310 | 323050 | 6-355 | 333001-A100 | 6-460 |
| 321676-11 | 3-310 | 323051 | 6-355 | 333001-A120 | 6-460 |
| 321679 | 3-171 | 323052 | 6-355 | 333001-A150 | 6-460 |
| 32167901 | 3-171 | 323081-01 | 3-680 | 333001-A180 | 6-460 |
| 321680 | 3-171 | 323081-01 | 6-465 | | |
| 32168001 | 3-171 | 323081-02 | 3-680 | | |
| 321685 | 3-161 | 323081-02 | 6-465 | 334000-A060 | 3-632 |
| 321686 | 3-177 | 323082-01 | 6-466 | 334000-A070 | 3-632 |
| 321930 | 3-170 | 323082-01 | 3-685 | 334000-A080 | 3-632 |
| 32193001 | 3-170 | 323083-01 | 6-467 | 334000-A100 | 3-632 |
| | | 323083-01 | 3-687 | 334000-A120 | 3-632 |
| | | 323527 | 6-470 | 334000-A150 | 3-632 |
| | | | | 334000-A180 | 3-632 |
| 322109 | 3-505 | | | | |

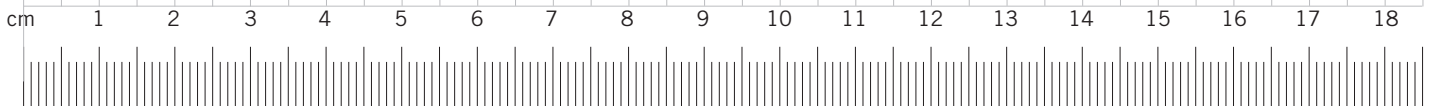
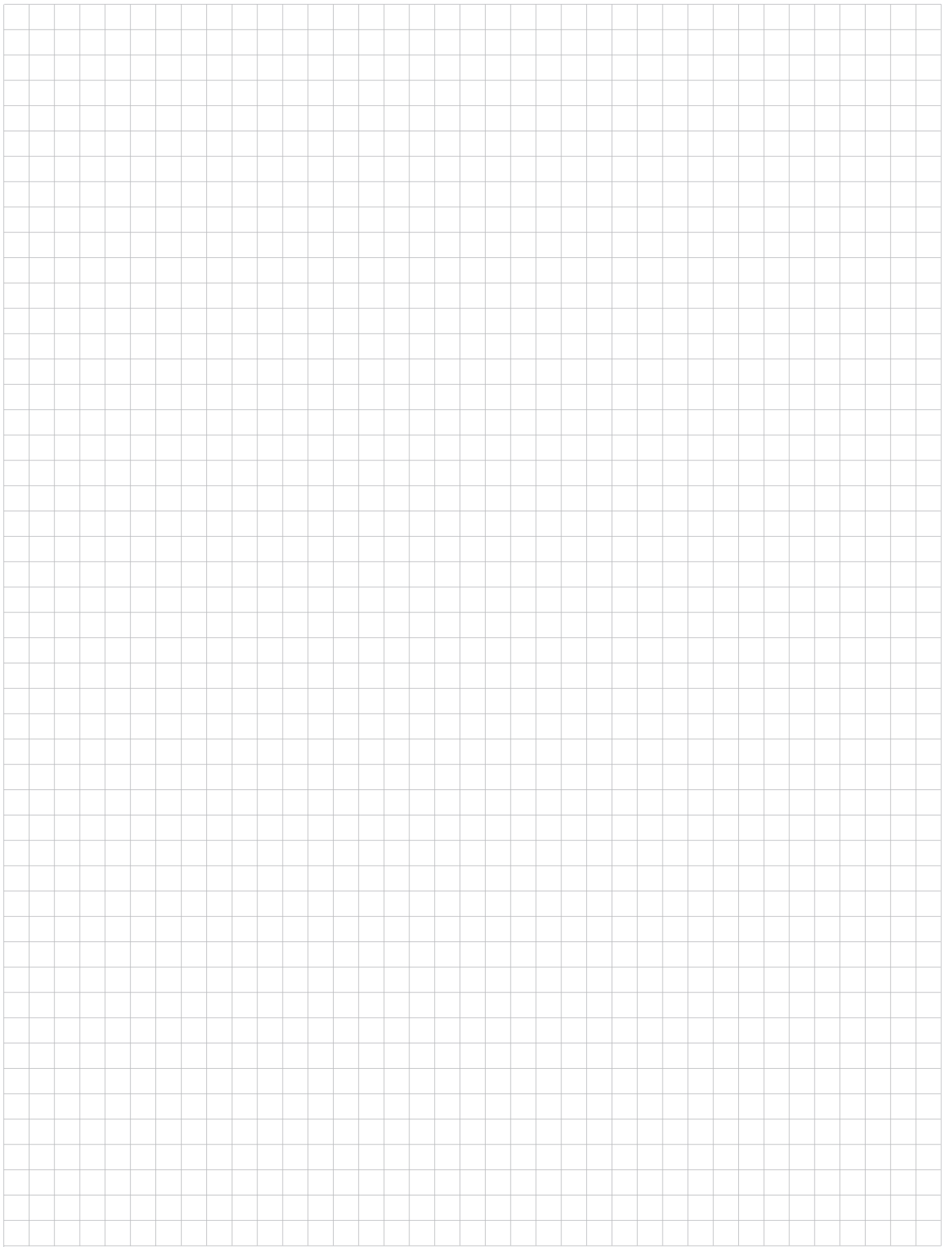
| Part number | Page | Part number | Page | Part number | Page |
|------------------|-------|------------------|-------|------------------|-------|
| 334005-A100 | 3-634 | 3430-303001-4040 | 6-496 | 3520-111032-LLLL | 3-820 |
| 334005-A150 | 3-634 | 3430-303001-5031 | 6-501 | 3520-111040-LLLL | 3-820 |
| | | 3430-303001-5050 | 6-496 | 3520-111050-LLLL | 3-820 |
| | | 3430-303001-6034 | 6-501 | 3520-121232-LLLL | 3-820 |
| 338000-A040 | 3-592 | 3430-303001-6060 | 6-496 | 3520-121240-LLLL | 3-820 |
| 338000-A050 | 3-592 | 3430-303001-7070 | 6-496 | 3520-121250-LLLL | 3-820 |
| 338000-A060 | 3-592 | 3430-303001-8041 | 6-501 | 3520-121260-LLLL | 3-820 |
| 338000-A070 | 3-592 | 3430-303001-8080 | 6-496 | 3520-131532-LLLL | 3-820 |
| 338000-A080 | 3-592 | | | 3520-131540-LLLL | 3-820 |
| 338000-A100 | 3-592 | | | 3520-131550-LLLL | 3-820 |
| 338000-A120 | 3-592 | 3520-010720-LLLL | 3-830 | 3520-131560-LLLL | 3-820 |
| 338000-A135 | 3-592 | 3520-010725-LLLL | 3-830 | 3520-162010-LLLL | 3-820 |
| 338000-A150 | 3-592 | 3520-010728-LLLL | 3-830 | 3520-162040-LLLL | 3-820 |
| 338000-A180 | 3-592 | 3520-010732-LLLL | 3-830 | 3520-162050-LLLL | 3-820 |
| 338000-A200 | 3-592 | 3520-010740-LLLL | 3-830 | 3520-162060-LLLL | 3-820 |
| 338005-A080 | 3-612 | 3520-010750-LLLL | 3-830 | 3520-162070-LLLL | 3-820 |
| 338005-A100 | 3-612 | 3520-011020-LLLL | 3-830 | 3520-162080-LLLL | 3-820 |
| 338005-A120 | 3-612 | 3520-011025-LLLL | 3-830 | 3520-163010-LLLL | 3-820 |
| 338005-A135 | 3-612 | 3520-011028-LLLL | 3-830 | 3520-163050-LLLL | 3-820 |
| 338005-A150 | 3-612 | 3520-011032-LLLL | 3-830 | 3520-163060-LLLL | 3-820 |
| 338005-A180 | 3-612 | 3520-011040-LLLL | 3-830 | 3520-163070-LLLL | 3-820 |
| 338005-A200 | 3-612 | 3520-011050-LLLL | 3-830 | 3520-163080-LLLL | 3-820 |
| | | 3520-021232-LLLL | 3-830 | 352031-032 | 3-810 |
| | | 3520-021240-LLLL | 3-830 | 352031-040 | 3-810 |
| 3420-202000-5050 | 3-731 | 3520-021250-LLLL | 3-830 | 352031-050 | 3-810 |
| 3420-202000-6060 | 3-731 | 3520-021260-LLLL | 3-830 | 352031-060 | 3-810 |
| 3420-202000-8080 | 3-731 | 3520-021270-LLLL | 3-830 | | |
| 3420-2030-004060 | 3-675 | 3520-031532-LLLL | 3-830 | | |
| 3420-2030-040120 | 3-675 | 3520-031540-LLLL | 3-830 | 3530-010720-LLLL | 6-560 |
| 3420-2030-040200 | 3-675 | 3520-031550-LLLL | 3-830 | 3530-010725-LLLL | 6-560 |
| 3420-2030-050120 | 3-675 | 3520-031560-LLLL | 3-830 | 3530-010728-LLLL | 6-560 |
| 3420-2030-050200 | 3-675 | 3520-031570-LLLL | 3-830 | 3530-010732-LLLL | 6-560 |
| 3420-2030-080160 | 3-675 | 3520-031580-LLLL | 3-830 | 3530-010740-LLLL | 6-560 |
| 3420-2030-080200 | 3-675 | 3520-062010-LLLL | 3-830 | 3530-010750-LLLL | 6-560 |
| | | 3520-062040-LLLL | 3-830 | 3530-011020-LLLL | 6-560 |
| | | 3520-062050-LLLL | 3-830 | 3530-011025-LLLL | 6-560 |
| 3421-212001-0049 | 3-741 | 3520-062060-LLLL | 3-830 | 3530-011028-LLLL | 6-560 |
| 3421-212001-5031 | 3-741 | 3520-062070-LLLL | 3-830 | 3530-011032-LLLL | 6-560 |
| 3421-212001-5050 | 3-731 | 3520-062080-LLLL | 3-830 | 3530-011040-LLLL | 6-560 |
| 3421-212001-6034 | 3-741 | 3520-063010-LLLL | 3-830 | 3530-011050-LLLL | 6-560 |
| 3421-212001-6060 | 3-731 | 3520-063040-LLLL | 3-830 | 3530-021232-LLLL | 6-560 |
| 3421-212001-7038 | 3-741 | 3520-063050-LLLL | 3-830 | 3530-021240-LLLL | 6-560 |
| 3421-212001-7070 | 3-731 | 3520-063060-LLLL | 3-830 | 3530-021250-LLLL | 6-560 |
| 3421-212001-8041 | 3-741 | 3520-063070-LLLL | 3-830 | 3530-021260-LLLL | 6-560 |
| 3421-212001-8080 | 3-731 | 3520-063080-LLLL | 3-830 | 3530-021270-LLLL | 6-560 |
| | | 3520-110720-LLLL | 3-820 | 3530-031532-LLLL | 6-560 |
| | | 3520-110725-LLLL | 3-820 | 3530-031540-LLLL | 6-560 |
| 3430-303000-4040 | 6-496 | 3520-110728-LLLL | 3-820 | 3530-031550-LLLL | 6-560 |
| 3430-303000-5050 | 6-496 | 3520-110732-LLLL | 3-820 | 3530-031560-LLLL | 6-560 |
| 3430-303000-6060 | 6-496 | 3520-110740-LLLL | 3-820 | 3530-031570-LLLL | 6-560 |
| 3430-303000-8080 | 6-496 | 3520-110750-LLLL | 3-820 | 3530-031580-LLLL | 6-560 |
| 3430-303001-0049 | 6-501 | 3520-111025-LLLL | 3-820 | 3530-062010-LLLL | 6-560 |
| 3430-303001-3022 | 6-501 | 3520-111028-LLLL | 3-820 | 3530-062040-LLLL | 6-560 |

| Part number | Page | Part number | Page | Part number | Page |
|------------------|-------|-------------|-------|--------------|-------|
| 3530-062050-LLLL | 6-560 | 390001-06 | 3-660 | 426029 | 4-090 |
| 3530-062060-LLLL | 6-560 | 390001-07 | 3-660 | 426030 | 4-070 |
| 3530-062070-LLLL | 6-560 | | | 426031 | 4-060 |
| 3530-062080-LLLL | 6-560 | | | 426034 | 4-060 |
| 3530-063010-LLLL | 6-560 | 416001 | 4-050 | | |
| 3530-063040-LLLL | 6-560 | 416002 | 4-040 | | |
| 3530-063050-LLLL | 6-560 | 416003-02 | 4-050 | 427007 | 4-120 |
| 3530-063060-LLLL | 6-560 | 416003-04 | 4-050 | 427008 | 4-120 |
| 3530-063070-LLLL | 6-560 | 416003-06 | 4-050 | 427008-45545 | 4-120 |
| 3530-063080-LLLL | 6-560 | 416004 | 4-040 | 427008-NBR | 4-120 |
| 3530-110720-LLLL | 6-550 | 416005 | 4-040 | 427009 | 4-110 |
| 3530-110725-LLLL | 6-550 | 416006 | 4-050 | 427009-45545 | 4-110 |
| 3530-110728-LLLL | 6-550 | 416007 | 4-050 | 427009-NBR | 4-110 |
| 3530-110732-LLLL | 6-550 | 416008 | 4-040 | 427010 | 4-130 |
| 3530-110740-LLLL | 6-550 | 416009-02 | 4-040 | 427011 | 4-140 |
| 3530-110750-LLLL | 6-550 | 416010 | 4-040 | 427012 | 4-170 |
| 3530-111020-LLLL | 6-550 | 416013 | 4-050 | 427013 | 4-170 |
| 3530-111025-LLLL | 6-550 | 416017 | 4-050 | 427015 | 4-170 |
| 3530-111028-LLLL | 6-550 | 416020 | 4-050 | 427016 | 4-170 |
| 3530-111032-LLLL | 6-550 | 416022 | 4-040 | 427017 | 4-170 |
| 3530-111040-LLLL | 6-550 | 416023 | 4-040 | 427018 | 4-180 |
| 3530-111050-LLLL | 6-550 | | | 427019 | 4-180 |
| 3530-121232-LLLL | 6-550 | | | 427020-04 | 4-130 |
| 3530-121240-LLLL | 6-550 | 426001 | 4-080 | 427020-06 | 4-130 |
| 3530-121250-LLLL | 6-550 | 426002 | 4-070 | 427021 | 4-110 |
| 3530-121260-LLLL | 6-550 | 426003 | 4-070 | 427022 | 4-140 |
| 3530-131532-LLLL | 6-550 | 426004 | 4-080 | 427023 | 4-180 |
| 3530-131540-LLLL | 6-550 | 426005 | 4-090 | 427024 | 4-180 |
| 3530-131550-LLLL | 6-550 | 426009 | 4-080 | 427026 | 4-120 |
| 3530-131560-LLLL | 6-550 | 426010 | 4-060 | 427029-02 | 4-110 |
| 3530-131570-LLLL | 6-550 | 426011 | 4-060 | 427029-04 | 4-110 |
| 3530-162010-LLLL | 6-550 | 426012 | 4-070 | 427030 | 4-110 |
| 3530-162040-LLLL | 6-550 | 426013 | 4-070 | 427031 | 4-120 |
| 3530-162050-LLLL | 6-550 | 426014 | 4-080 | 427032 | 4-120 |
| 3530-162060-LLLL | 6-550 | 426015-02 | 4-080 | 427033 | 4-130 |
| 3530-162070-LLLL | 6-550 | 426015-04 | 4-080 | 427034 | 4-140 |
| 3530-162080-LLLL | 6-550 | 426015-06 | 4-080 | 427038-04 | 4-130 |
| 3530-163010-LLLL | 6-550 | 426017-02 | 4-090 | 427038-06 | 4-130 |
| 3530-163040-LLLL | 6-550 | 426017-04 | 4-090 | 427040 | 4-110 |
| 3530-163050-LLLL | 6-550 | 426017-06 | 4-090 | 427040-4555 | 4-110 |
| 3530-163060-LLLL | 6-550 | 426018 | 4-080 | 427042 | 4-130 |
| 3530-163070-LLLL | 6-550 | 426019-02 | 4-100 | 427043 | 4-110 |
| 3530-163080-LLLL | 6-550 | 426019-04 | 4-100 | 427044 | 4-140 |
| 353031-032 | 6-540 | 426019-06 | 4-100 | 427045 | 4-130 |
| 353031-040 | 6-540 | 426020 | 4-100 | 427051 | 4-145 |
| 353031-050 | 6-540 | 426021 | 4-060 | 427052 | 4-120 |
| 353031-060 | 6-540 | 426022-02 | 4-070 | 427052-45545 | 4-120 |
| | | 426022-04 | 4-070 | 427061 | 4-140 |
| | | 426022-06 | 4-070 | 427064 | 4-145 |
| 390001-02 | 3-660 | 426023 | 4-060 | 427065 | 4-145 |
| 390001-03 | 3-660 | 426024 | 4-060 | 427066 | 4-145 |
| 390001-04 | 3-660 | 426027 | 4-090 | 427067 | 4-145 |
| 390001-05 | 3-660 | 426028 | 4-090 | 427068 | 4-130 |

| Part number | Page | Part number | Page | Part number | Page |
|----------------|-------|-------------|-------|----------------|--------|
| 427073 | 4-145 | 4504042 | 4-300 | 4970-05 | 2-612 |
| 427081 | 4-140 | 4504051 | 4-300 | | |
| 427084 | 4-145 | 4504062 | 4-300 | | |
| 427085 | 4-145 | 4504071 | 4-300 | 4H1000 | 4-200 |
| | | 4504081 | 4-300 | 4H1001 | 4-200 |
| | | 4504092 | 4-300 | 4H1010 | 4-200 |
| | | 4504101 | 4-300 | | |
| 4300-0500-1810 | 4-150 | 4504111 | 4-300 | | |
| 4300-0500-2010 | 4-150 | 4504121 | 4-300 | 505005-30 | 5-253 |
| 4300-0500-2210 | 4-150 | 4504121-0 | 4-022 | 505005-40 | 5-253 |
| 4300-0500-2410 | 4-150 | 4504121-0 | 4-300 | 505005-50 | 5-253 |
| 4300-0500-2610 | 4-150 | 4504132 | 4-300 | 505005-60 | 5-253 |
| 4300-0500-2810 | 4-150 | 4504142 | 4-300 | 505006-30 | 5-256 |
| | | 4504151 | 4-300 | 505006-40 | 5-256 |
| | | 4504151-0 | 4-300 | 505006-50 | 5-256 |
| 437018 | 4-190 | 4504151-0 | 4-022 | 505006-60 | 5-256 |
| 437019 | 4-200 | 4505012 | 4-330 | | |
| 437020 | 4-190 | 4505021 | 4-330 | | |
| 437021 | 4-200 | 4505031 | 4-330 | 506001-48 | 5-255 |
| 437022 | 4-190 | 4505042 | 4-330 | 506002-40 | 5-252 |
| 437023 | 4-190 | 4505052 | 4-330 | 506002-50 | 5-252 |
| 437024 | 4-190 | 4505062 | 4-330 | 506002-60 | 5-252 |
| 437025 | 4-190 | 4505072 | 4-330 | | |
| 437026 | 4-190 | 4505102 | 4-330 | | |
| 437028 | 4-190 | 4505112 | 4-330 | 511054-1001 | 1-210 |
| 437029 | 4-190 | 4505121 | 4-330 | 511058-1002 | 1-211 |
| 437030 | 4-190 | 4505141 | 4-330 | 511058-1002-01 | 1-211 |
| 437032 | 4-190 | 4505181 | 4-330 | 511058-1004 | 1-211 |
| 437033 | 4-190 | 4505182 | 4-330 | 511058-1005 | 1-211 |
| 437035 | 4-190 | | | 511058-1006 | 1-211 |
| 437036 | 4-190 | | | 511058-1007 | 1-211 |
| 437037 | 4-190 | 4900-01 | 2-610 | 511058-1008 | 1-211 |
| 437038 | 4-190 | 4900-02 | 2-610 | 511058-1009 | 1-211 |
| 437039 | 4-190 | 4900-03 | 2-610 | 511058-1010 | 1-211 |
| 437040 | 4-190 | 4900-07 | 2-610 | 511058-1011 | 1-211 |
| 437041 | 4-190 | 4900-08 | 2-610 | 511058-1012 | 1-211 |
| 437042 | 4-190 | 4900-09 | 2-610 | 511058-1020 | 1-211 |
| 437043 | 4-190 | 4900-13 | 2-610 | 511059-1001 | 1-210 |
| 437046 | 4-190 | 4900-14 | 2-610 | 511059-1002 | 1-211 |
| 437047 | 4-190 | 4900-15 | 2-610 | 511066-1000 | 1-210 |
| 437048 | 4-190 | 4900-17 | 2-610 | 511067-5001 | |
| 437049 | 4-190 | 4900-19 | 2-610 | 511067-7682 | 1-209b |
| 437080 | 4-200 | 4900-20 | 2-610 | 511158-1000 | 1-211 |
| 437085 | 4-200 | 4900-47 | 2-610 | 511159-1000 | 1-211 |
| 437086 | 4-200 | 4900-48 | 2-610 | | |
| 437087 | 4-200 | | | | |
| 437088 | 4-200 | | | | |
| 437089 | 4-200 | | | 521301 | 5-020 |
| | | 4970-01 | 2-612 | 522002 | 5-030 |
| | | 4970-01/1 | 2-612 | 522101 | 5-040 |
| 4501104 | 4-330 | 4970-02 | 2-612 | 522102 | 5-040 |
| 4504011 | 4-300 | 4970-03 | 2-612 | 522103 | 5-040 |
| 4504022 | 4-300 | 4970-04 | 2-612 | 522105 | 5-040 |
| 4504031 | 4-300 | 4970-04/1 | 2-612 | 522106 | 5-040 |

| Part number | Page | Part number | Page | Part number | Page |
|-------------|-------|-------------|-------|-------------|-------|
| 522107 | 5-040 | 580012 | 5-300 | 581304 | 5-285 |
| 522108 | 5-040 | 580022 | 5-300 | | |
| 522112 | 5-061 | 580024 | 6-700 | | |
| | | 580101 | 5-310 | 595000-6 | 5-212 |
| | | 580102 | 5-310 | 595000-8 | 5-212 |
| 542104 | 5-100 | 580104 | 6-710 | 595001 | 5-213 |
| 542504 | 5-100 | 580112 | 5-320 | | |
| | | 580112 | 5-330 | | |
| | | 580141 | 5-330 | 715929-07 | 2-655 |
| 543004 | 6-600 | 580142 | 5-330 | 715929-25 | 2-655 |
| | | 580144 | 6-730 | 715929-28 | 2-655 |
| | | 580181 | 5-310 | 715929-35 | 2-655 |
| 552304 | 5-080 | 580182 | 5-310 | 715929-36 | 2-655 |
| 552304-1 | 5-080 | 580184 | 6-710 | 715929-68 | 2-655 |
| 55230401 | 5-080 | 580192 | 5-310 | 715929-85 | 2-655 |
| 552802 | 5-090 | 580194 | 6-710 | 715929-86 | 2-655 |
| 552803 | 5-090 | 580302 | 5-340 | 715929-89 | 2-655 |
| | | 580312 | 5-340 | | |
| | | 580314 | 6-740 | | |
| 566005 | 5-220 | 580391 | 5-320 | 723101032 | 2-670 |
| | | 580394 | 6-720 | 723101032-1 | 2-670 |
| 571301 | 5-160 | 580395 | 5-320 | 723101080 | 2-670 |
| 571302 | 5-160 | 580882 | 5-300 | 723101080-1 | 2-670 |
| 571501 | 5-160 | 580884 | 6-700 | 72350001-1 | 2-680 |
| 571502 | 5-160 | 580892 | 5-300 | 72350001-2 | 2-680 |
| | | 580894 | 6-700 | | |
| | | 580901 | 5-310 | | |
| 572103 | 5-195 | 580902 | 5-310 | 78700010001 | 2-685 |
| | | 580903 | 6-710 | 78700011001 | 2-685 |
| | | 580904 | 6-710 | 78700011002 | 2-685 |
| 575004 | 5-191 | 580911 | 5-310 | | |
| 575005-01 | 5-191 | 580912 | 5-310 | | |
| 575005-02 | 5-191 | 580913 | 6-710 | | |
| 575033 | 5-180 | 580914 | 6-710 | | |
| 575033-01 | 5-180 | | | | |
| 575035 | 5-180 | | | | |
| 575037 | 5-181 | 581042 | 5-320 | | |
| 575040 | 5-200 | 581044 | 6-720 | | |
| 575040-1 | 5-200 | 581051 | 5-320 | | |
| 575040-2 | 5-200 | 581052 | 5-320 | | |
| 575040-3 | 5-200 | 581054 | 6-720 | | |
| 575040-4 | 5-200 | 581062 | 5-330 | | |
| 575040-5 | 5-200 | 581071 | 5-330 | | |
| 575040-6 | 5-200 | 581072 | 5-330 | | |
| 57504001 | 5-200 | 581074 | 6-730 | | |
| 575043 | 5-200 | 581192 | 5-340 | | |
| | | 581202 | 5-340 | | |
| | | 581204 | 6-740 | | |
| 576050 | 5-190 | 581212 | 5-340 | | |
| 576051 | 5-190 | 581214 | 6-740 | | |
| | | 581301 | 5-285 | | |
| | | 581302 | 5-285 | | |
| 580011 | 5-300 | 581303 | 5-285 | | |





ABOUT ...

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