



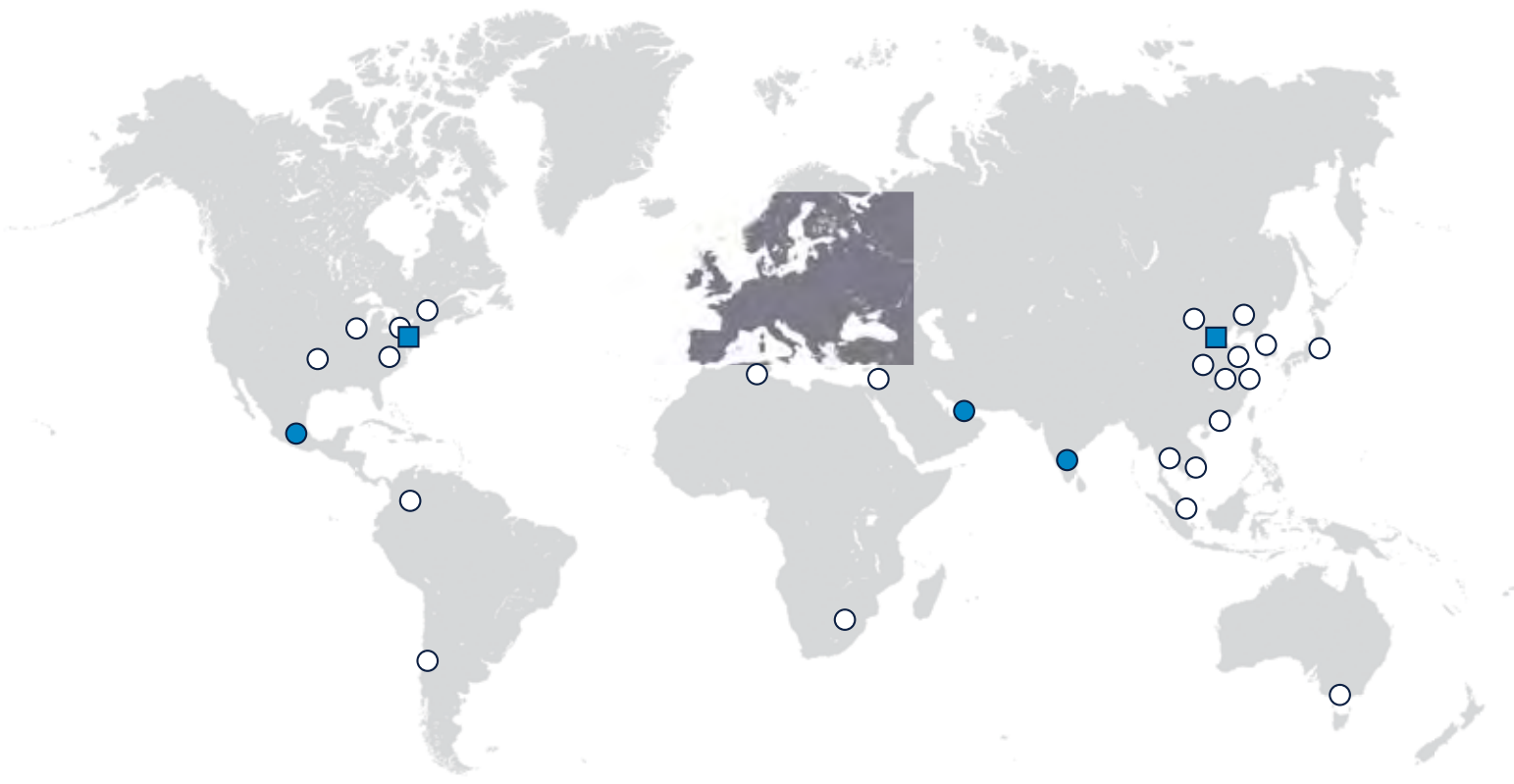
BUSINESS UNIT TRANSPORT

Ingenious Locking Technology for Rail and Road

Expanded edition

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- Headquarters
- Production site
- Subsidiary
- Agencies/Sales office



EMKA worldwide



Wuppertal, Germany



Velbert, Germany



Middletown PA, USA



Birmingham, England



Bourré, France



Henriville, France



Arnedo, Spain



Tianjin, China



Goražde, Bosnia and Herzegovina



The EMKA group is one of the worldwide leading manufacturers of lockings, hinges and seals for enclosures in the areas of industry, electronics and transport.

Currently, the overall range comprises more than 15,000 articles, which are developed, manufactured, refined and assembled at nine production sites in Germany, France, Great Britain, Spain, Bosnia and Herzegovina, USA and China.

With 1,400 employees, the company is represented in 46 countries worldwide.

Locks/Latches



Hinges



Gasketing



Accessories

Product areas

EMKA offers a comprehensive product range of ingenious locking technology from a single source. The modular program structure allows a unique variety of components.

The high quality and product standards are guaranteed by an excellent manufacturing know-how and by the certified process control according to ISO 9001.



Industry

Transport

Electronics

Production

Business units

The EMKA group is divided into four business units which allow a clear focus on individual sectors and taylormade solutions for customers.

With its high level of in-house production, EMKA is in control of the entire production flow in every unit – from the concept to the finished product.



Extrusion of Profiles



Injection Moulding

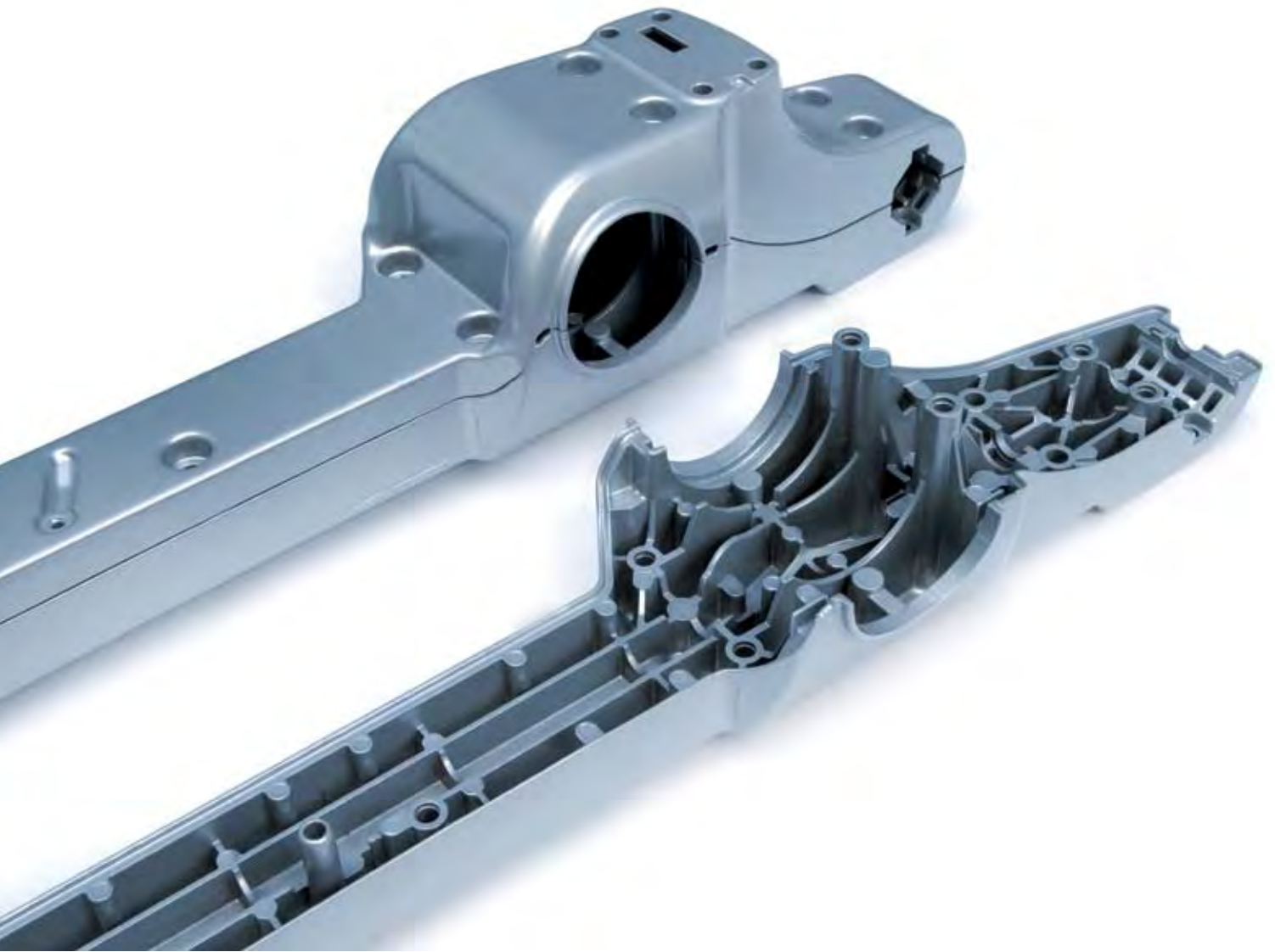


Stamping, Bending
and Forming Technologies



Zinc Die Casting

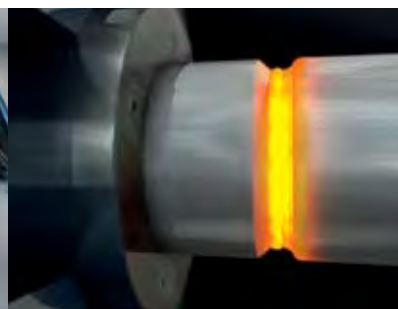
Production from A to Z



Die Cast Aluminium



Aluminium Forging



Friction welding



SST Precision Casting

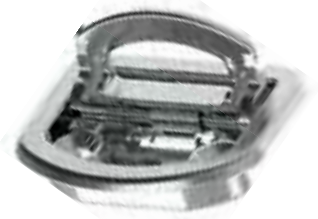
EMKA is an expert not only in stainless steel casting, and in injecting aluminium, zinc and high performance plastics, but also in the extruding of rubber and plastic profiles.

Other production technologies are stamping, bending, turning, milling, coating, and the final assembly of modular structured product solutions.

Thus, EMKA sets quality standards in locking technology.



Solutions for the road



For many years, EMKA has been a major partner of the automotive industry. In its in-house technology centre, EMKA develops standardised product solutions, as well as customised components and systems for furnishing commercial and special vehicles.

The EMKA product range is also used in vehicle bodies as well as in motor homes and caravans.

Whether locks, handles, hinges or gaskets for diverse mobile applications: EMKA products always stand for maximum safety and reliability.

References:
Daimler Benz, MAN, Viseon



Solutions for special
vehicle construction



Special vehicles for road construction, agriculture and forestry, emergency services and disaster control, are exposed to particularly harsh conditions. Wetness, dirt, temperature fluctuations, vibrations and permanent load make extraordinary quality demands for the installed components. The locking systems of EMKA are designed for these special demands.

According to DIN EN 61373 vibrationproof designed locks, undetachable foamed seals, as well as various materials and surfaces, are available with many standard solutions.

The large production depth of EMKA makes the delivery of the complete locking system, consisting of lock, hinge and gasket as well as useful accessories, possible.



Solutions for the rail



The product ranges specifically for the rail industry is characterized by its modular design, versatility and high quality.

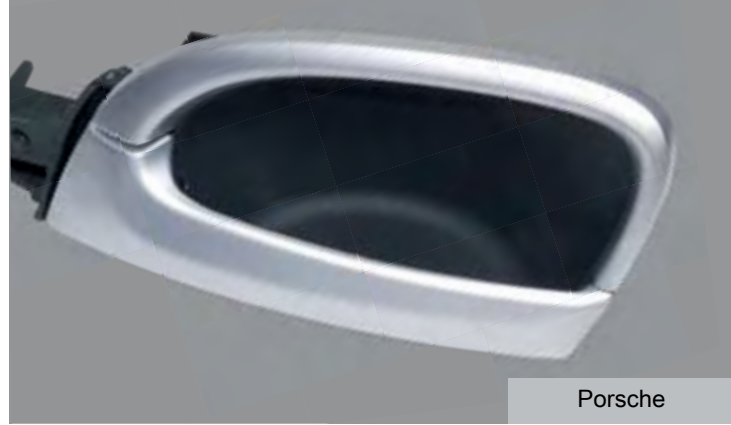
It meets the specific requirements of the industry and corresponds to the relevant standards of the branch such as EN 45545 „Railway applications – Fire protection of railway vehicles“.

The wide product range of EMKA comprises outdoor as well as indoor applications for railway vehicle construction.

References:
Bombardier, Deutsche Bahn, Stadler, Voith, Vossloh



BMW



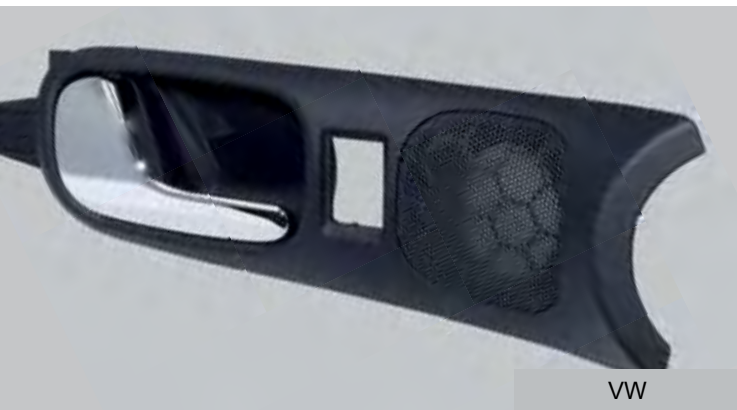
Porsche



Ferrari



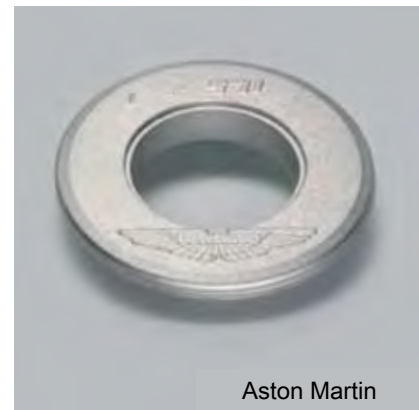
Porsche



VW



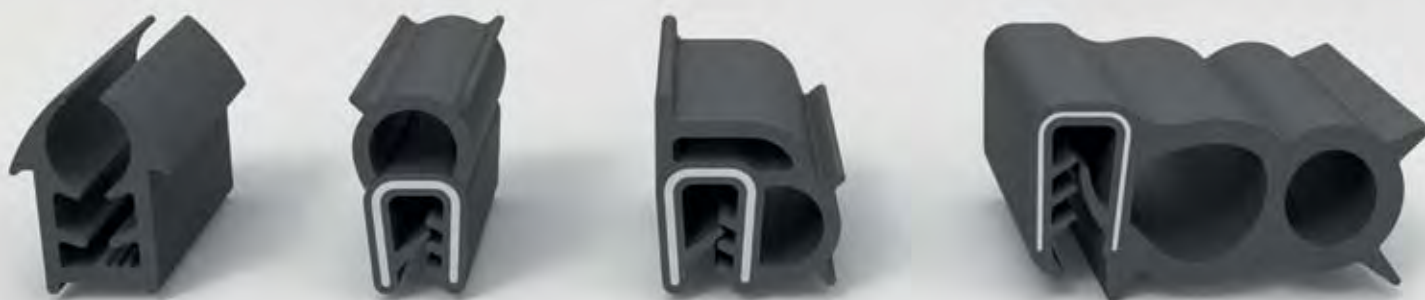
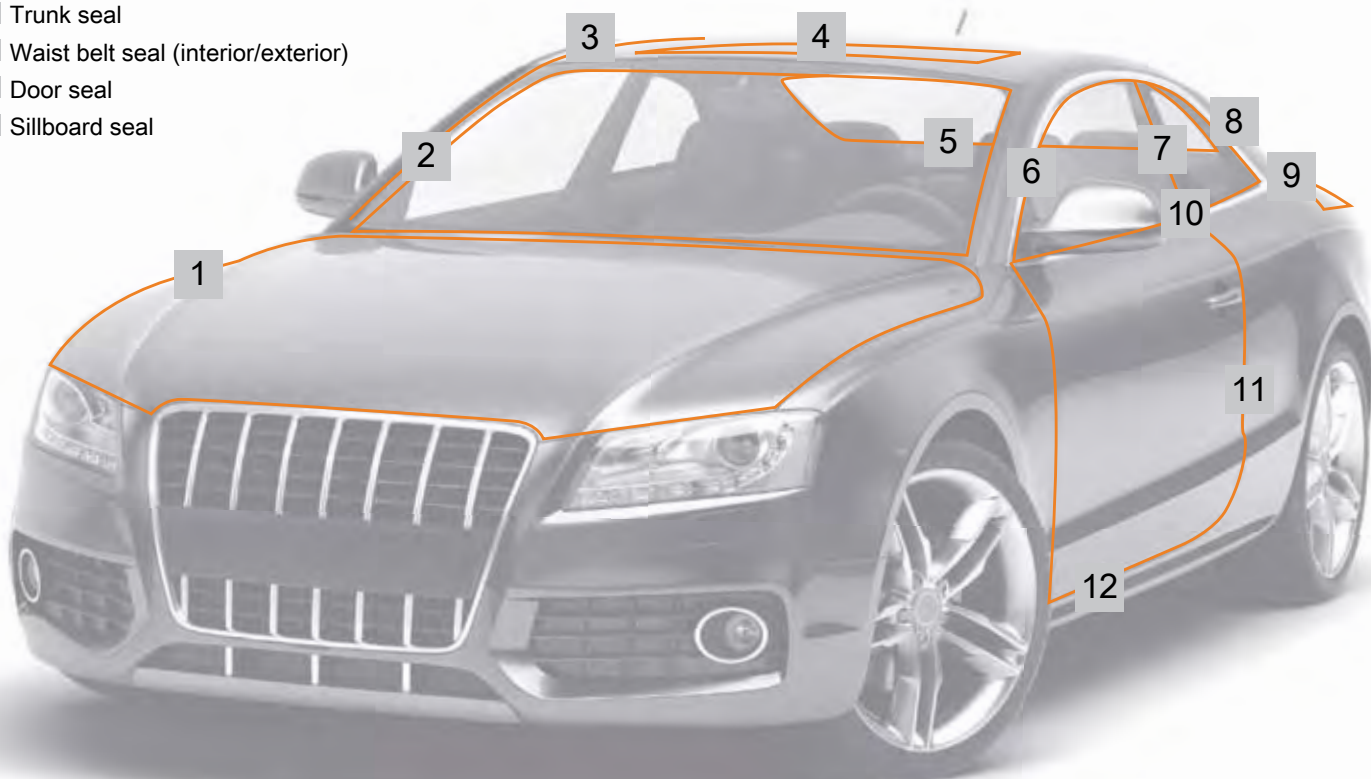
Bentley



Aston Martin

Solutions according to customer drawings

- 1 Engine compartment seal
- 2 Front shield frame
- 3 Roof gap seal
- 4 Sunroof seal
- 5 Back window frame
- 6 Glass run seal
- 7 B-pillar seal
- 8 Encapsulated quarter window
- 9 Trunk seal
- 10 Waist belt seal (interior/exterior)
- 11 Door seal
- 12 Sillboard seal



Besides 15,000 own catalogue articles, EMKA offers individual production according to customer drawing. An ultra-modern machinery and an extensive know-how in different manufacturing technologies allow maximum material and variant diversity.

EMKA offers a wide range of customized rubber profiles, support profiles, hollow section sealing and lip seals in a wide variety of hardnesses. Loops and roll editing tape, stamped steel and reinforcements of textile fibres can be additionally incorporated.

In further processing, it is possible to manufacture fixed lengths, rings and corner frames. Applying adhesive, bonded coating or flocking, complete the offer.

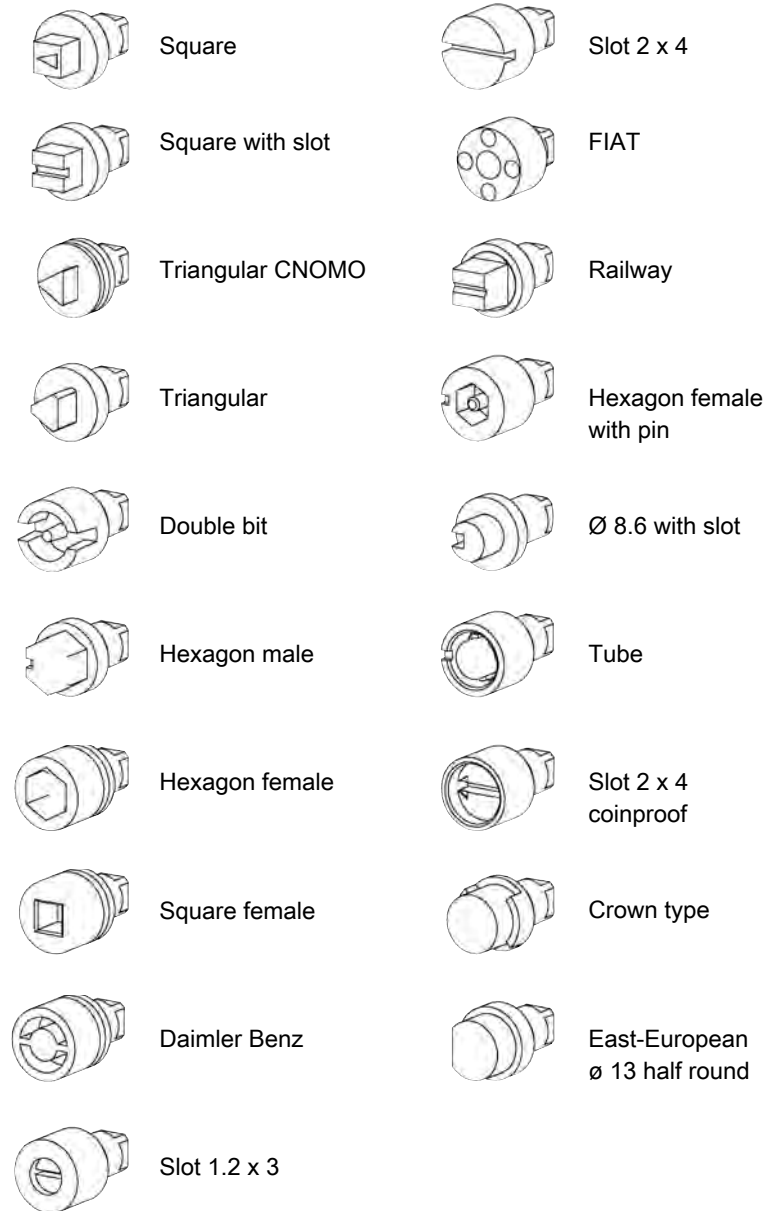
References:

Audi, BMW, Böckmann, Busch-Jäger, Concorde, Dethleffs, Dyn. Nobel, Euramax, EVOBUS, Happich, Hella, Hymer, Karman, Kiekert, Knaus, Land Rover, MAN, Siemens VDO, Tabbert, Volkswagen

Chapter 1: Latches and handles



Inserts



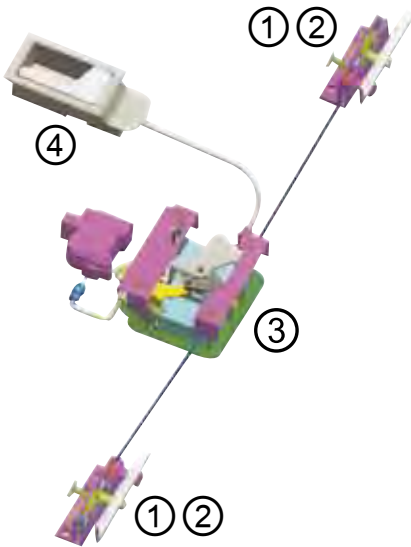
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For more articles see www.emka.com

Latches and handles

System image



Door locking system

Technology

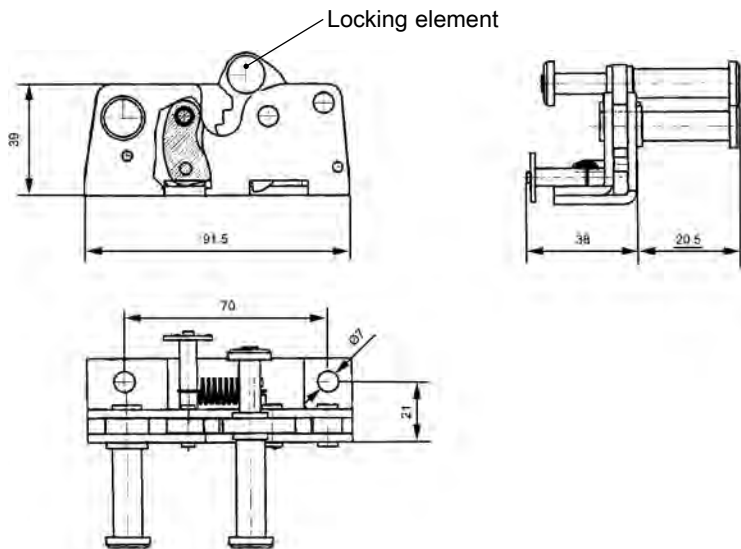
- M1 tested locking system, according to EU specification 70/387
- two rotary latch locks to be positioned freely, hence double security
- Automotive interior door release, zinc die chrome plated, can be positioned freely
- Burglar-proof by exterior handle with freewheel clutch
- Exterior handle designed for clip-in cylinder
- Emergency opening from the interior

Handling

- ergonomically designed actuators
- specially smooth-running operation
- small closing force, hence very quiet
- with central locking, convenient and secure

Versions

- colours as per request
- also available as M1 tested locking system with rotary latch lock
- Interior door release with galvanized surface in alu-look
- designed for clip-in cylinder, compatible with clip-in cylinder system 3
- optionally without central locking



On request:

- Round rod Ø4 available

Further parts see page

- Exterior handle 1.1-125
- Inside handle 1.1-125

Rotary latch lock m.s. zinc plated; with spring

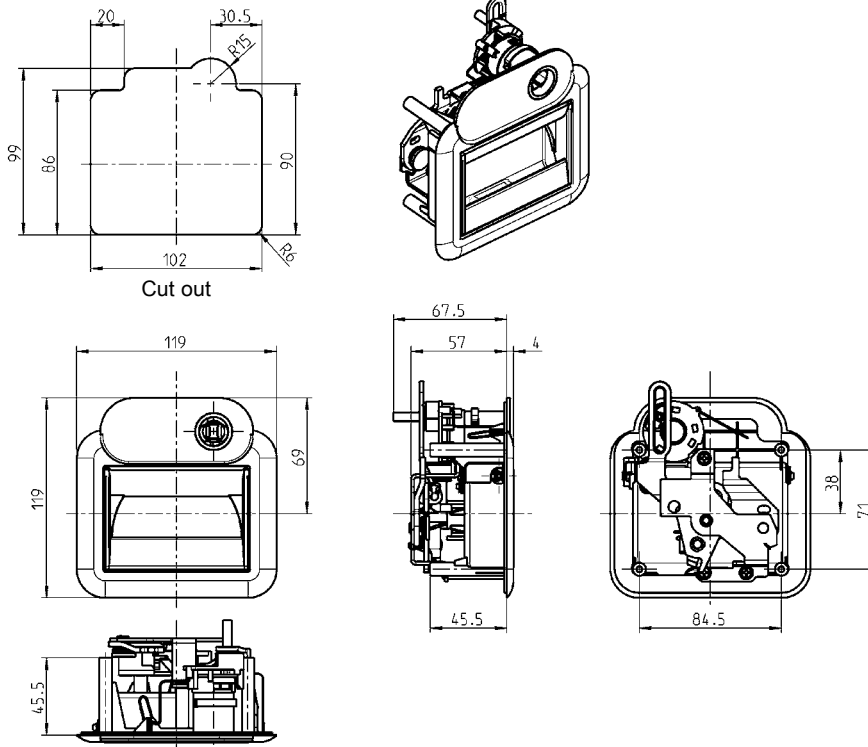
right, as drawn	2004-B8036
left, mirror image	2004-B8031

Strike plate St zinc plated

right, as shown	2004-B8034
left, mirror image	2004-B8027

Door locking system: 2-point-locking

PROGRAM 2004, 5177



Latches and handles

Exterior handle polyamide GF black; pivot m.s. zinc plated; pivot arm zinc die zinc plated; with spring

RH/LH 2004-B8811

Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

keyed 8888 9850-U100

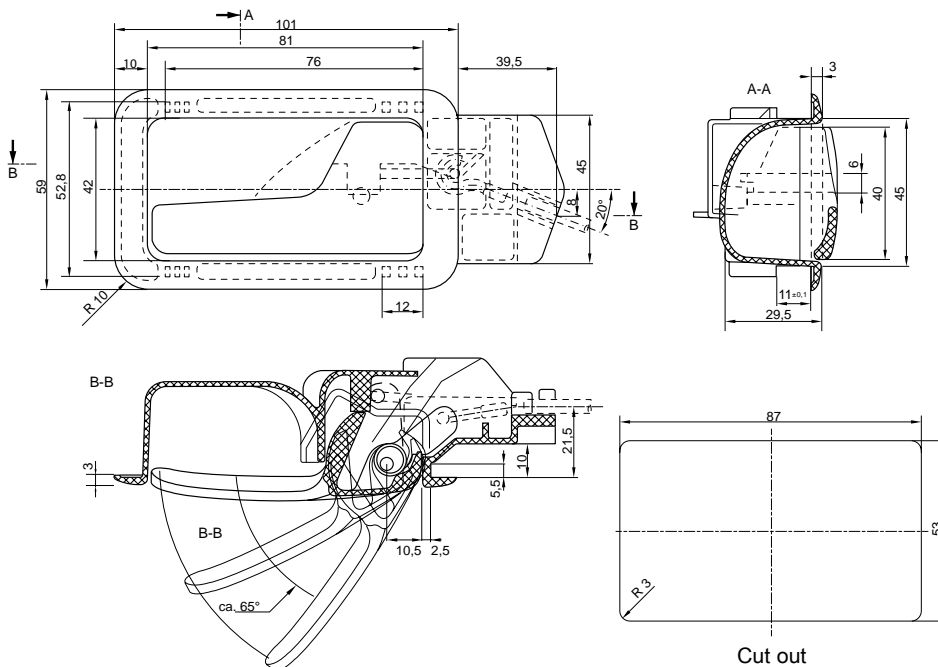
keyed different 9850-U101

On request:

- Round rod Ø4 and bowden cable available

Further parts see page

- Inside handle see below
- Rotary latch lock 1.1-120
- Striking plate 1.1-120



Interior handle polyamide GF black; handle zinc die matt chrome plated; tie rods, mounting plate and strike plate m.s. zinc plated; bowden cable m.s. wire coated

right, as drawn 5177-U200-AA

left, mirror image 5177-U201-AA

On request:

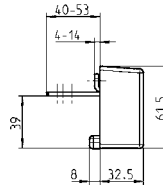
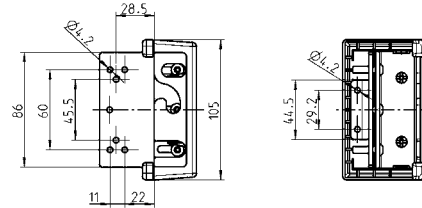
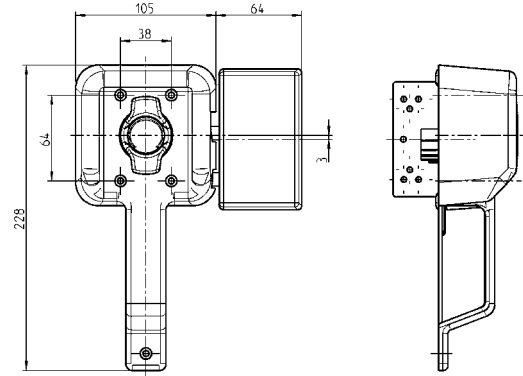
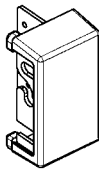
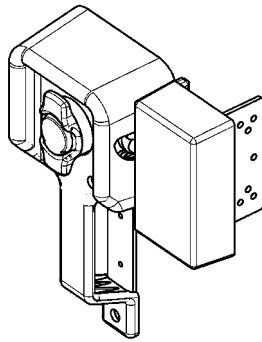
- further colours
- bowden cable available

Further parts see page

- Exterior handle see above
- Rotary latch lock 1.1-120
- Striking plate 1.1-120

Interior handle and exterior handle





- according to European Standard 70/387 EWG
- available in different colours and for different wall thicknesses

Interior lock polyamide black; case m.s. zinc plated;
clamp m.s. zinc plated; covering cap polyamide black; with spring

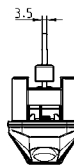
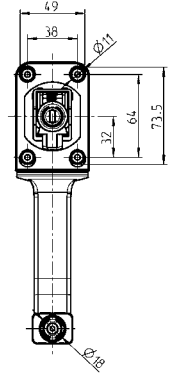
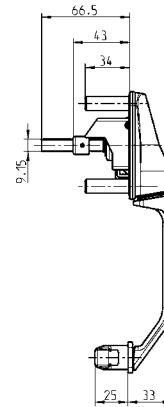
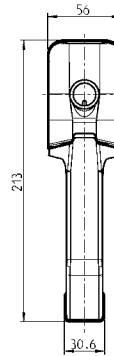
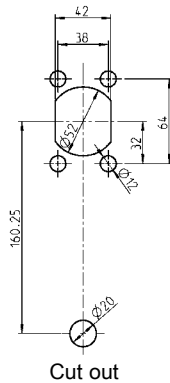
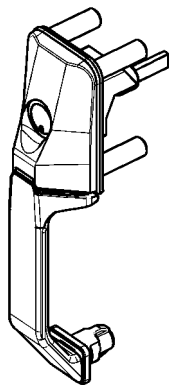
Door thickness = 30; right

9400-U218-AA

Door thickness = 30; left

9400-U219-AA

Further parts see page
– Exterior handle see below



Exterior handle for clip-in cylinder polyamide GF black; pivot arm, cap and handle housing POM; bush zinc die zinc plated; tappet zinc die chromated; with seal and spring

RH

5271-U600-AA

LH

5271-U601-AA

Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

keyed 8888

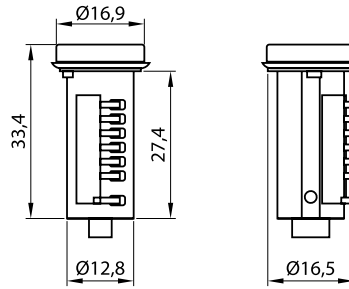
9850-U100

keyed different

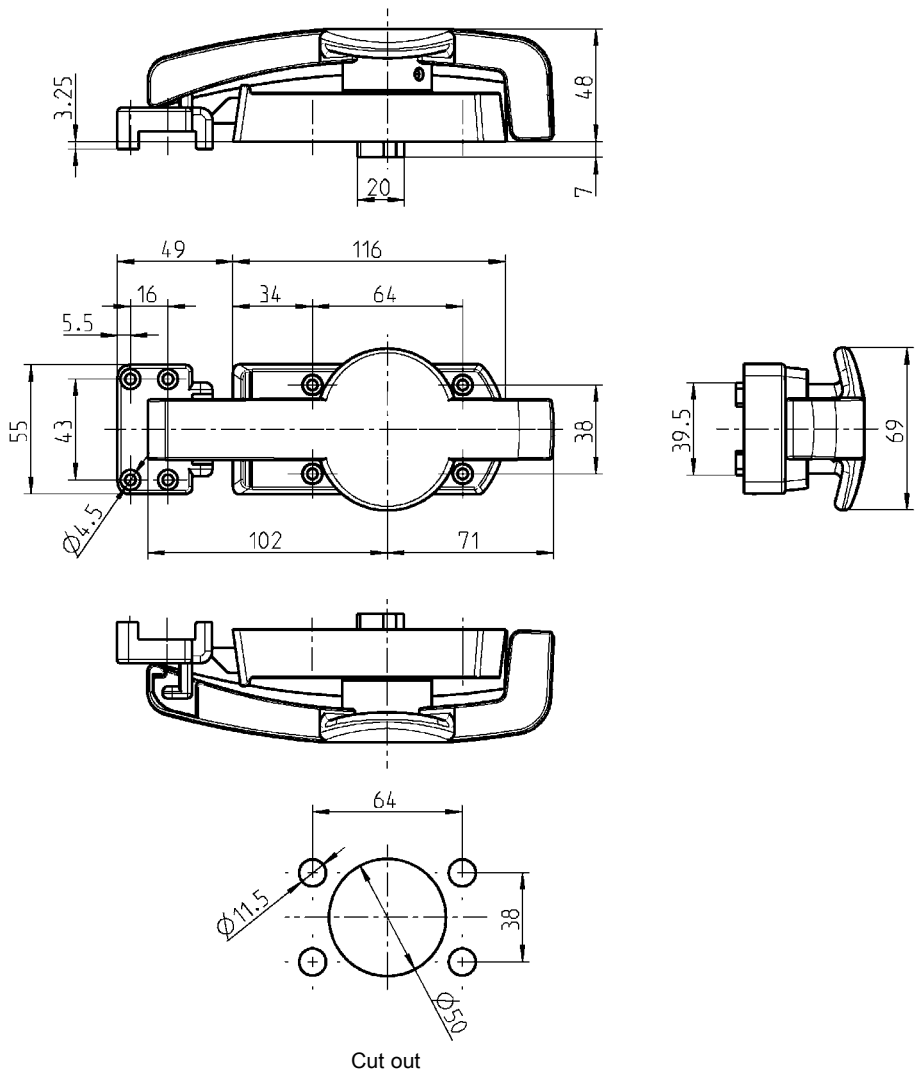
9850-U101

Further parts see page
– Interior lock see above
1.1-150





Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys	
keyed 8888	9850-U100
keyed different	9850-U101



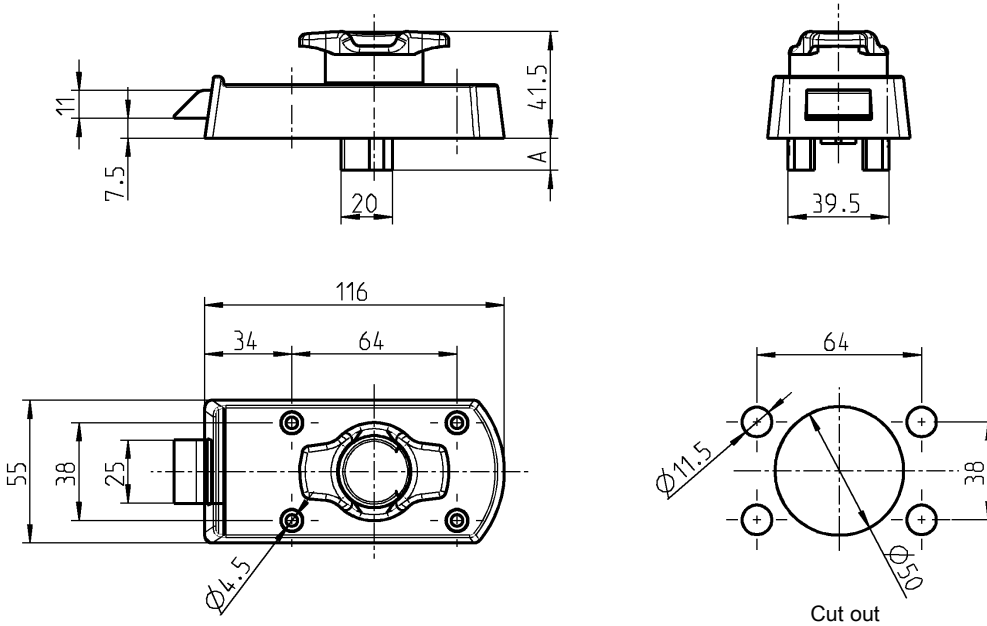
- available in various colours and door thicknesses from 29 - 36 mm
- Please order clamp separately

Interior handle polyamide black; pivot stainless; plate and screws zinc plated; with spring	
RH	9500-U802-AA
LH	9500-U805-AA
Clamp zinc die black; 4 plastic plugs	
	9500-U701-AC

Further parts see page
 - Exterior handle 1.1-160
 - Spacer plate 1.1-170

Interior lock

PROGRAM 5131, 9301

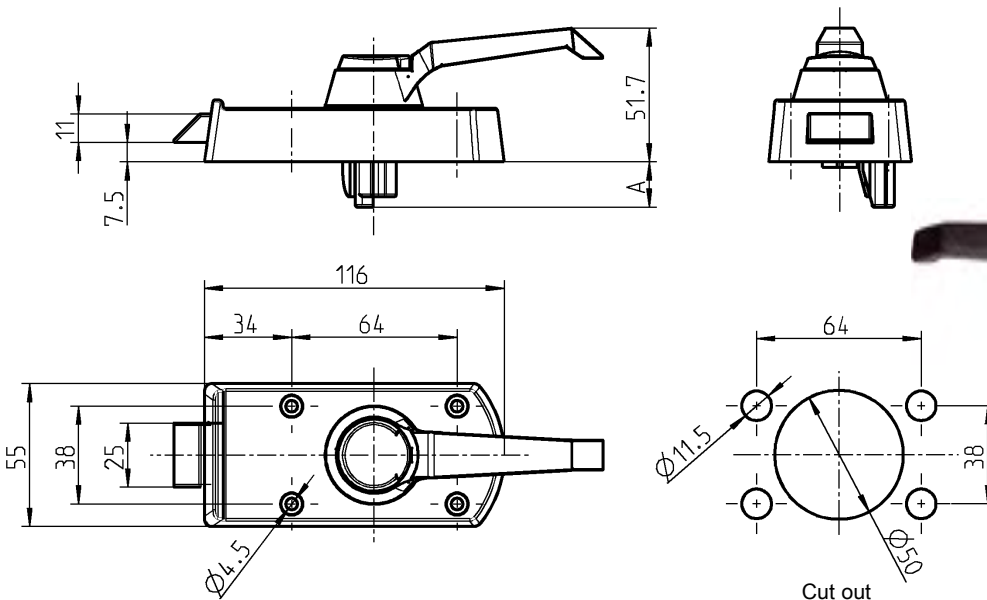


- available in various colours
- Please order clamp separately
- RH and LH application

Interior handle polyamide black; pivot stainless; plate and screws zinc plated; with spring			
for exterior handle (1) or (2)	A	LH	RH
Door thickness = 31 - 35; for (2)	6,5	9301-U803-AA	9301-U802-AA
Door thickness = 32 - 36; for (1)	12,5	9301-U813-AA	9301-U812-AA
Door thickness = 35 - 39; for (2)	10,5	9301-U805-AA	9301-U804-AA

Further parts see page

- Exterior handle (1) 1.1-130
- Exterior handle (2) 1.1-160
- Locking block 1.1-160
- Handle plate 1.1-170
- Spacer plate 1.1-170



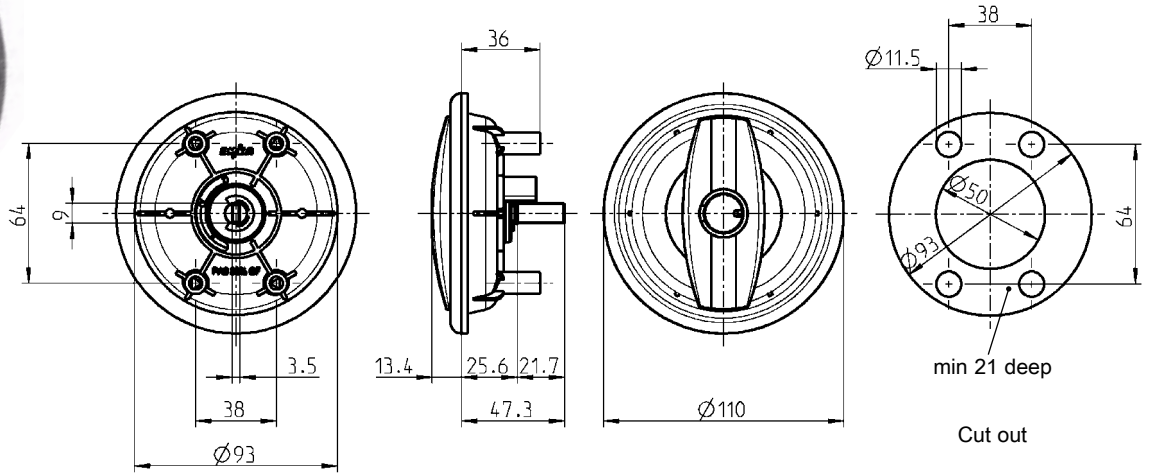
- available in various colours
- Please order clamp separately
- RH and LH application

Interior lock polyamide GF black; handle material of your choice; cam and plate POM; pivot stainless steel; with seal and spring			
	A	LH	RH
Door thickness = 24 - 29; handle polyamide black	3,5	5131-U659-AA	5131-U649-AA
Door thickness = 32 - 36; handle zinc die black powder coated	10,5	5131-U737-AC	5131-U738-AC
Door thickness = 36 - 40; handle polyamide black	17,5	5131-U593-AA	5131-U658-AA

Further parts see page

- Exterior handle 1.1-220
- Locking block 1.1-160
- Handle plate 1.1-170
- Spacer plate 1.1-170

Exterior handle; clamp
PROGRAM 9301, 9500



Exterior handle polyamide GF black; bush zinc die zinc plated;
tappet zinc die chromated; with seal and spring

RH 9301-U500-AA

LH 9301-U501-AA

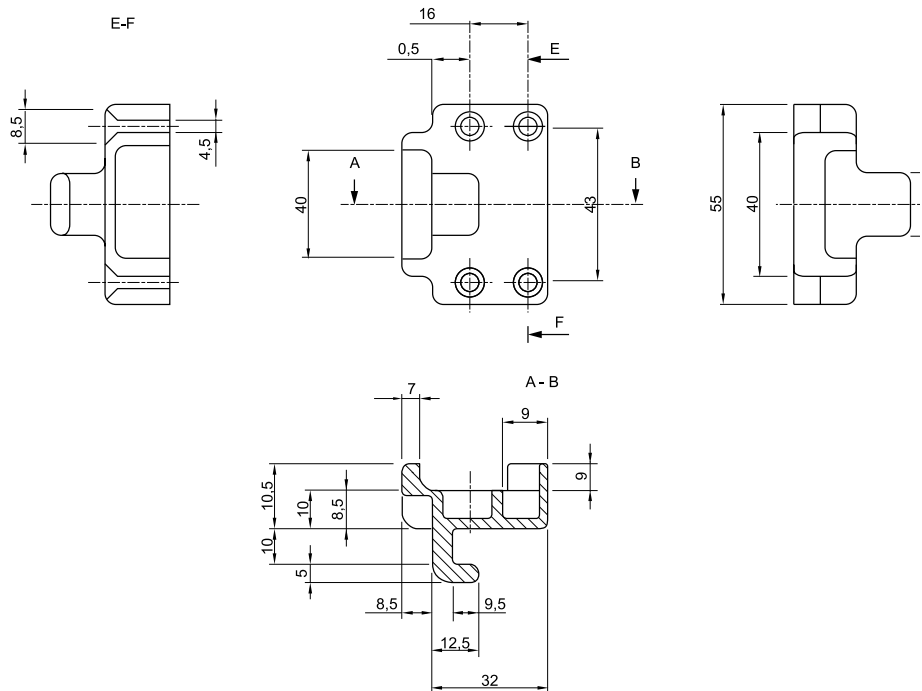
Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

keyed 8888 9850-U100

keyed different 9850-U101

Further parts see page
– Interior lock

1.1-140
1.1-150



Clamp zinc die black; 4 plastic plugs

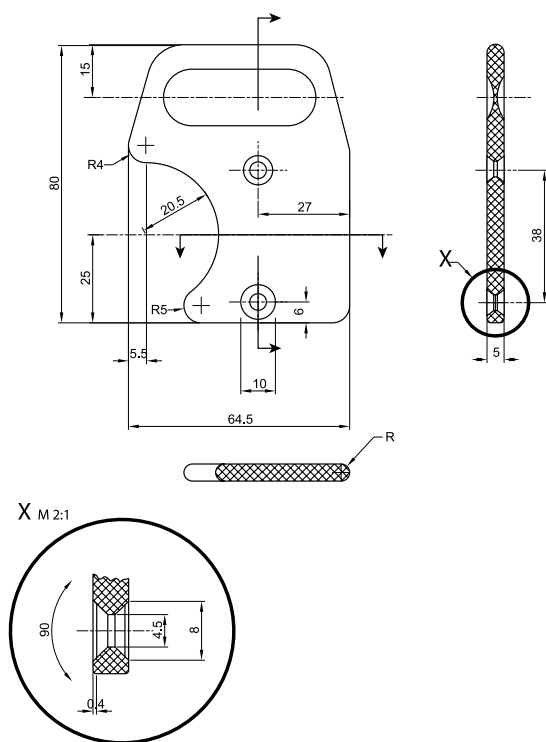
9500-U701-AC

Further parts see page
– Interior lock

1.1-140
1.1-150

Handle plate; spacer plate

PROGRAM 5131



- for interior locks
- Hole center distance 38 mm

On request:
– further colours

Handle plate polyamide black

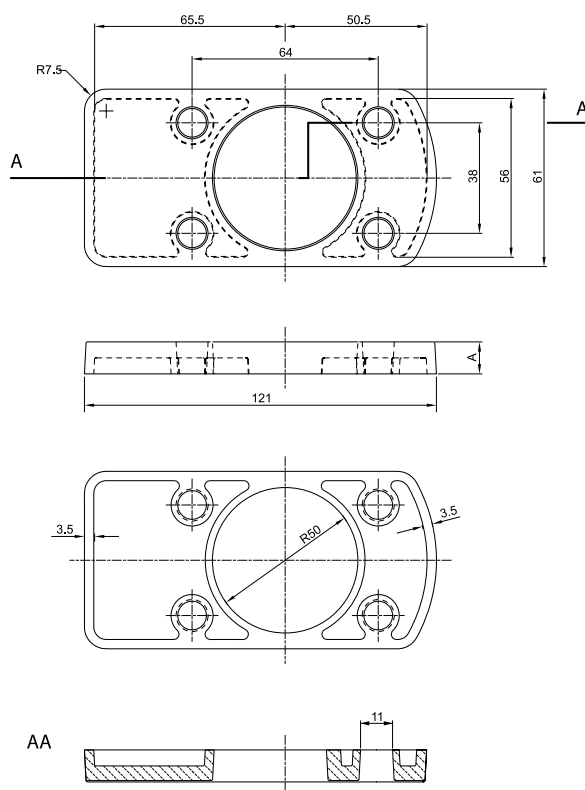
5131-4064-AA

Further parts see page

– Interior lock

1.1-140

1.1-150



On request:
– further colours

Spacer plate polystyrene black

A = 2 mm

5131-4000-AA

A = 4 mm

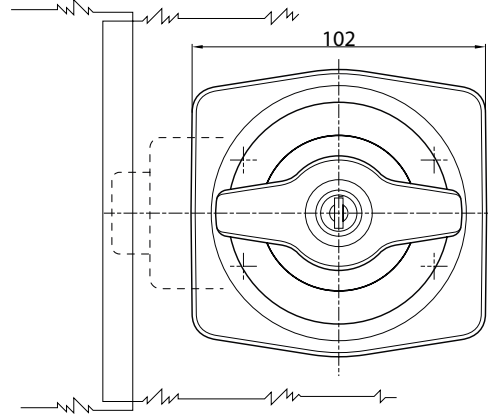
5131-4001-AA

Further parts see page

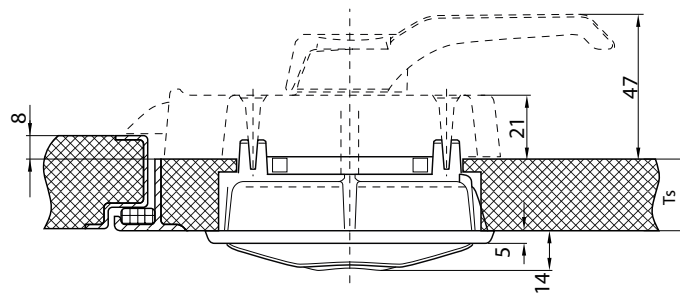
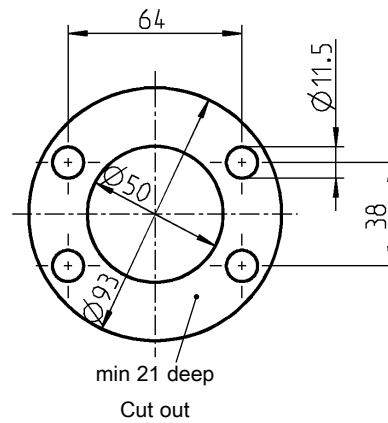
– Interior lock

1.1-140

1.1-150



- lockable with GX lock
- consisting of interior lock and exterior handle
- Ts = door thicknesses



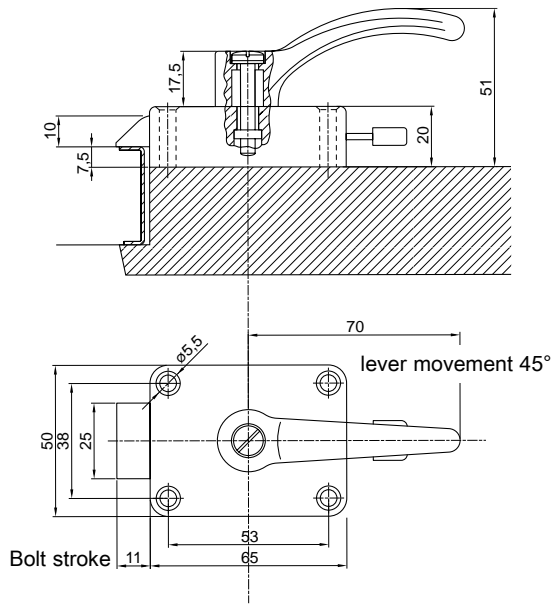
Exterior handle polyamide GF black; pivot stainless steel;
plate cylinder zinc die chrome plated with two keys; plate and screws m.s. zinc plated; with spring

	LH	RH
Door thickness = 24 - 29	5131-U606-AA	5131-U638-AA
Door thickness = 32 - 36	on request	5131-U644-AA
Door thickness = 36 - 40	on request	5131-U758-AA

Further parts see page 1.1-150
- Interior lock

Interior lock

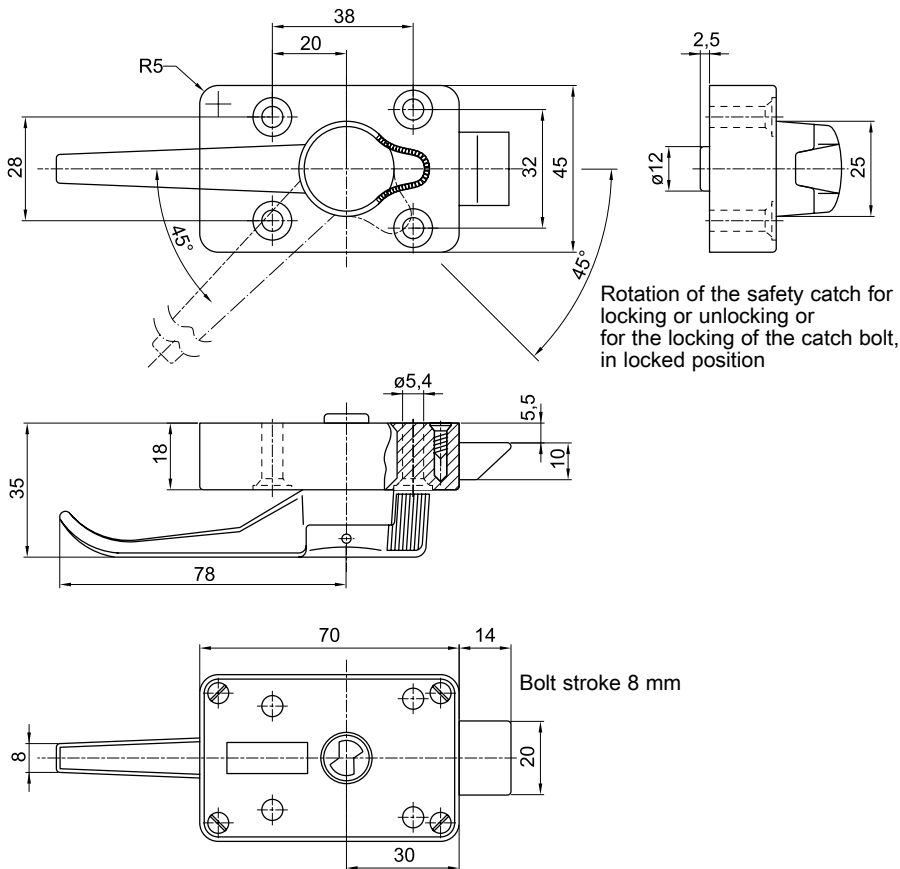
PROGRAM 5036, 5064



- with inside handle and locking device

Interior lock zinc die chrome plated; inside handle alu polished; locking device plastic

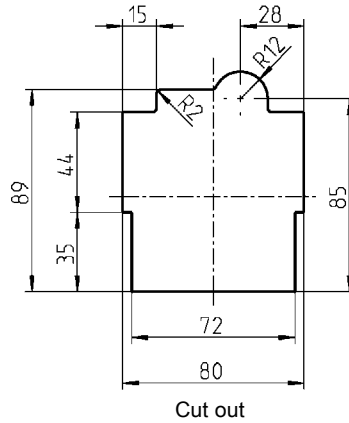
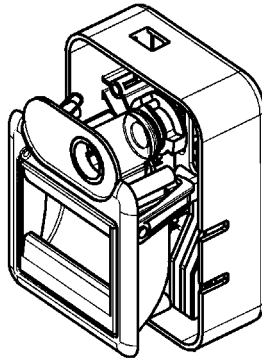
5036-U640-IK



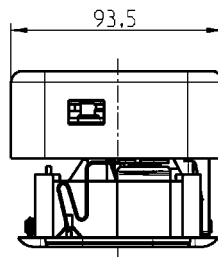
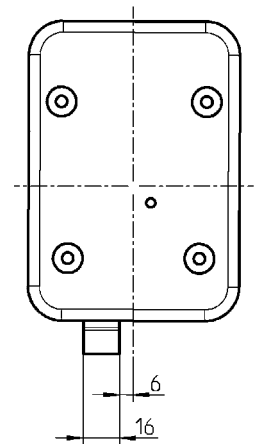
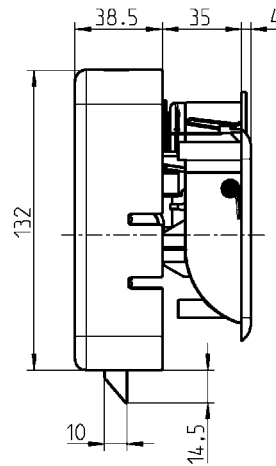
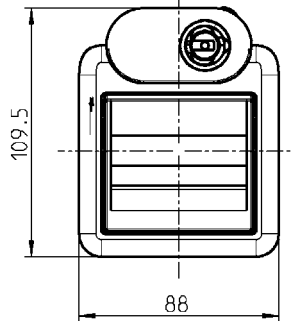
- with inside handle and locking device

Interior lock zinc die chrome plated; inside handle alu polished; locking device plastic

5064-U647-IK



Cut out



Technology

- redesigned locking system with bolt locks
- Interior lock freely positionable
- Burglar-proof by exterior handle with freewheel clutch
- Exterior handle prepared for clip-in cylinder
- Emergency opening from interior

Handling

- ergonomically designed actuators
- specially smooth-running operation
- small closing force, hence very quiet

Versions

- colours as per request
- multi-point locking = increased security
- available as 1-, 2- and 3-point locking mechanism

on request

- with central locking and interior unlocking slide

Lock for stow box polyamide GF black; excentric POM black; adapter for clip-in cylinder zinc die chromated; tappet, pivot arm and bush zinc die zinc plated; screws, plates and pins m.s. zinc plated; with spring

	9802-U810-AA
Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys	
keyed 8888	9850-U100
keyed different	9850-U101

Flap lock for stow box



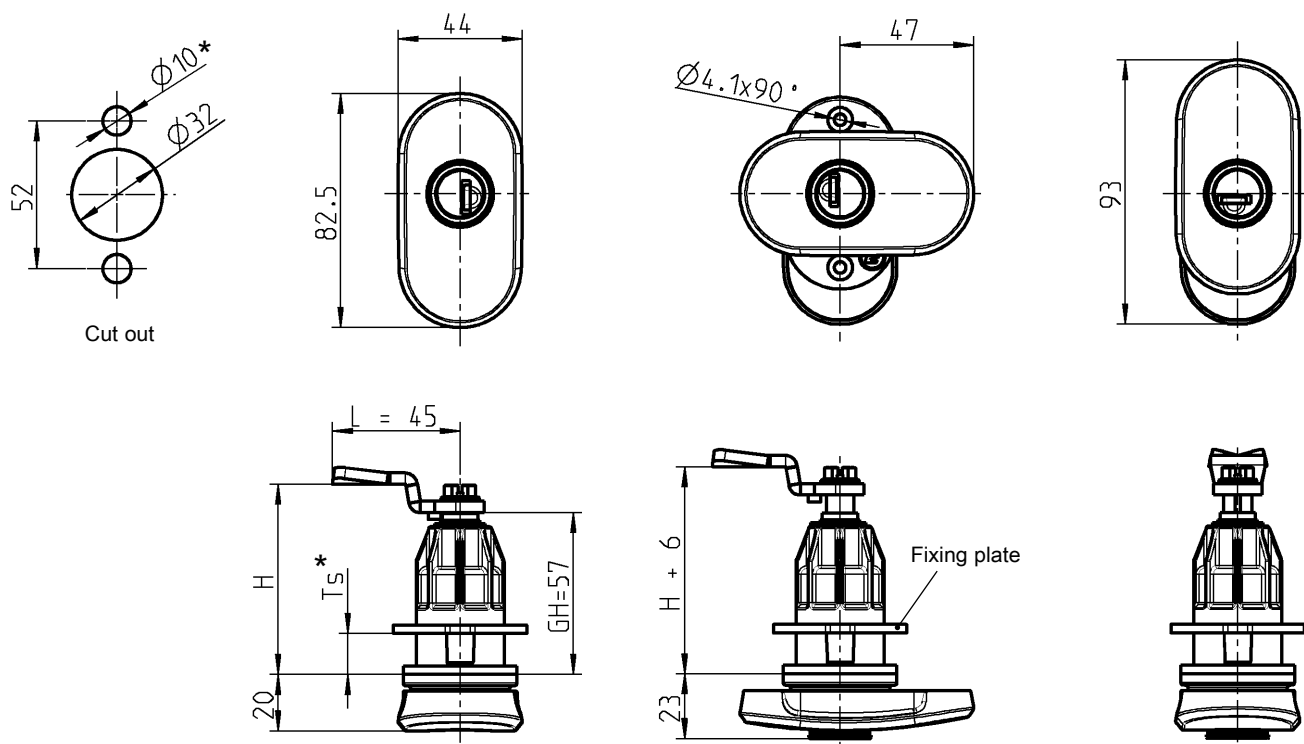
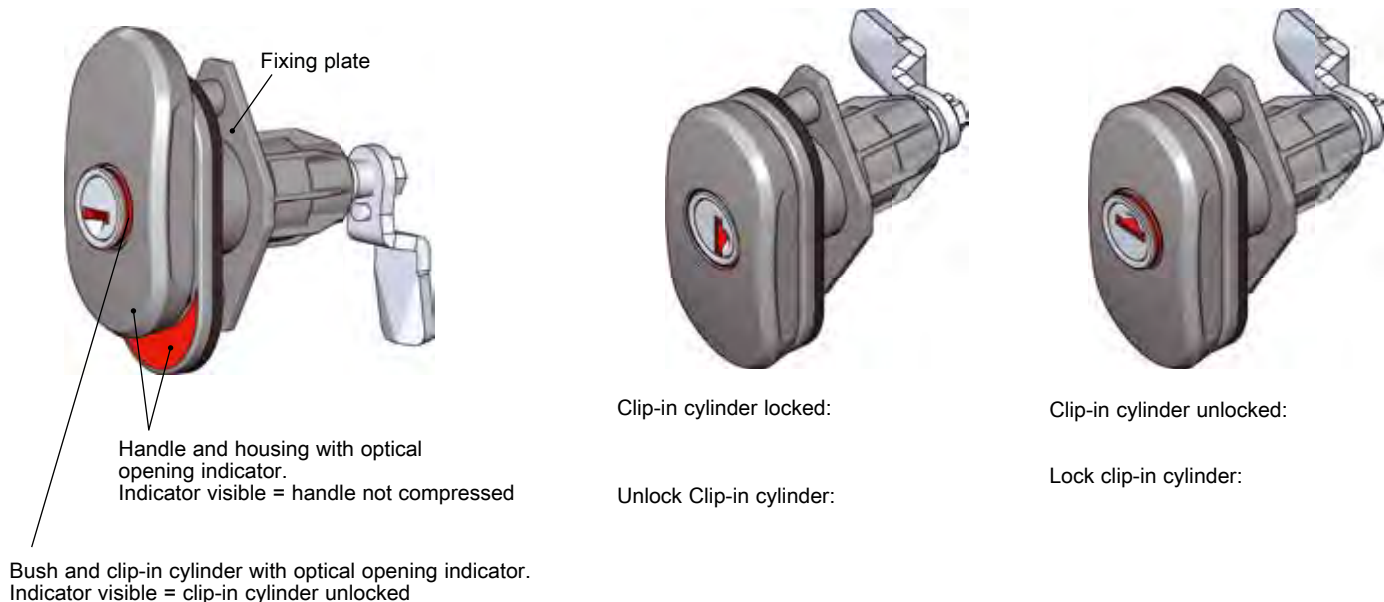
Cover of engine housing transparent



Compression lock "Double Red" with double optical opening indicator for stow box PROGRAM 1000

Product description:

The compression latch has two optical opening indicators. These consist of the indicator of the clip-in cylinder and the second indicator for the position of the handle. In case the opening indicator on the sleeve and the clip-in cylinder is visible, the compression latch is unlocked. The same is true for the opening indicator between handle and housing. In case the opening indicator is visible, the compression latch is compressed.



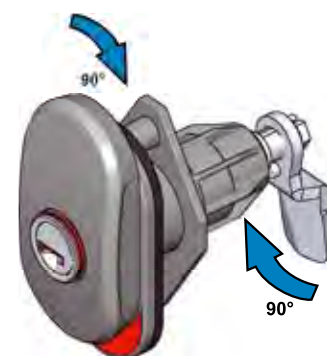
* Attention:
When the fixing plate is turned over, the cut out holes are decreased from $\phi 10$ auf $\phi 4.1$. The Maximum value of the Ts dimension is decreased by -10 mm.

Vibration proof

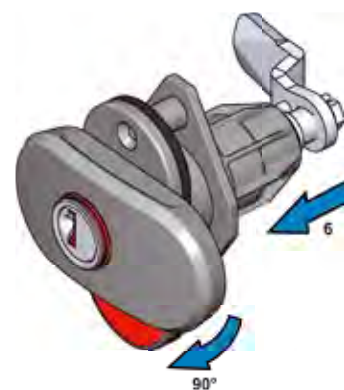
The compression latch is vibration-proof according to DIN EN 61373. Depending on the installation location and operational conditions, specific checks are necessary and/or supplementary measures of fastening required.

Compression lock polyamide GF black for clip-in cylinder;
bush for clip-in cylinder zinc-die zinc-coated;
adapter, cog and locking shaft zinc-die;
fixing plate POM black;
Signal ring polyamide GF red;
screw, circlip and pin m.s. zinc coated, with spring and seal,
key can be removed in both positions

Clip-in cylinder		
System 1		on request
System 2		1000-U866-02
System 3		1000-U866-03
Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys		
keyed 8888		9850-U100
keyed different		9850-U101
To be ordered separately:		
cam m.s. zinc plated		
Cams with other H and L dimensions on request.		
Minimum quantity 2000 pieces		
H	Ts	GH = 57 mm
43	17 - 38	1000-112
45	17 - 40	1000-22
47	17 - 42	1000-113
49	17 - 44	1000-21
52	17 - 47	1000-20
53	17 - 48	1000-19
55	17 - 50	1000-18
57	17 - 50	1000-17
59	17 - 50	1000-16
61	17 - 50	1000-15
63	17 - 50	1000-14
64	17 - 50	1000-27
65	17 - 50	1000-50
67	17 - 50	1000-13
69	17 - 50	1000-28
71	17 - 50	1000-26
73	17 - 50	1000-12
74	17 - 50	1000-11
75	17 - 50	1000-51
77	17 - 50	1000-52
79	17 - 50	1000-25
81	17 - 50	1000-53
83	17 - 50	1000-54
84	17 - 50	1000-10
86	17 - 50	1000-55
89	17 - 50	1000-56



Open condition
By turning the handle by 90°, the cam rotates.



Closed position
By turning the handle by another 90° the cam moves 6 mm in axial direction.



Compressed condition

Unlock:
Reversed rotation

Compression latch swinghandle for storage box

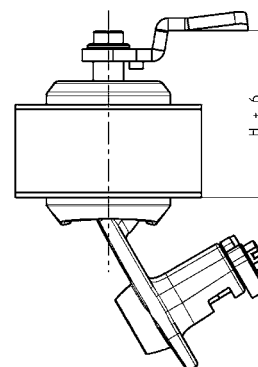
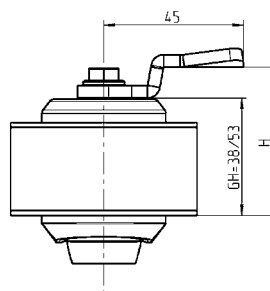
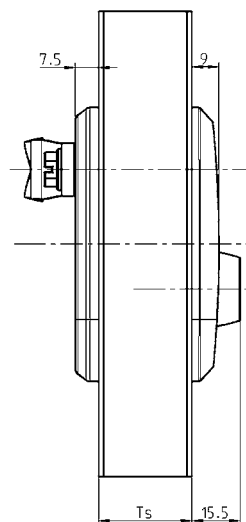
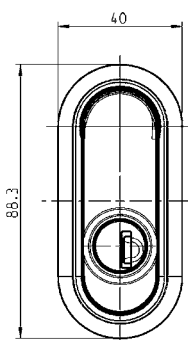
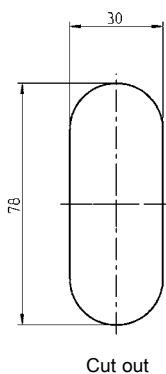
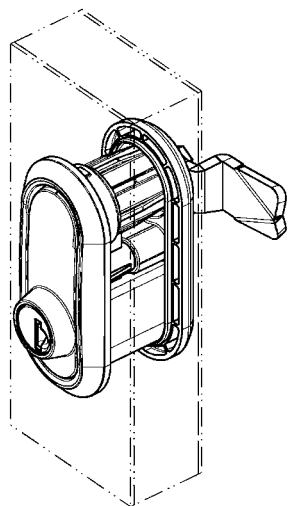
PROGRAM 1342

Vibration proof

The compression latch swinghandle is vibration-proof. Depending on the installation location and operational conditions specific checks are necessary and/or supplementary measures of fastening required.

for $T_s = 15 - 30 \text{ mm}$; $GH = 38 \text{ mm}$

for $T_s = 30 - 45 \text{ mm}$; $GH = 53 \text{ mm}$



Compression latch swinghandle polyamide GF black for clip-in cylinder, clip-in cylinder adapter, screw m.s. zinc plated, with spring and seal.

Clip-in cylinder	GH = 38 mm	Clip-in cylinder	GH = 53 mm
System 1	1342-U1-01	System 1	1342-U2-01
System 2	1342-U1-02	System 2	1342-U2-02
System 3	1342-U1-03	System 3	1342-U2-03

Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

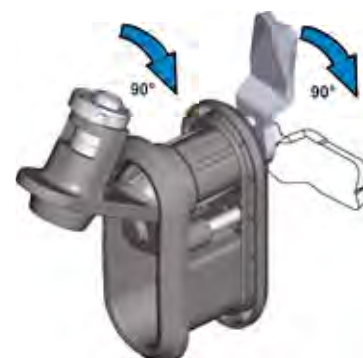
keyed 8888	9850-U100
keyed different	9850-U101

**To be ordered separately:
clamping plate polyamide GF black,
fixing material m.s. zinc plated**

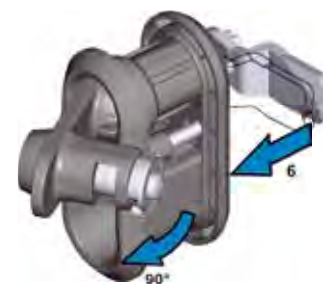
Ts = 15 - 21	1342-U3	Ts = 30 - 36	1342-U5
Ts = 21 - 30	1342-U4	Ts = 36 - 45	1342-U6

**To be ordered separately:
cam m.s. zinc plated**

H	GH = 38 mm	H	GH = 53 mm
38	1000-17	38	-
40	1000-16	40	-
42	1000-15	42	-
44	1000-14	44	-
45	1000-27	45	-
46	1000-50	46	-
48	1000-13	48	-
50	1000-28	50	-
52	1000-26	52	-
53	-	53	1000-17
54	1000-12	54	-
55	1000-11	55	1000-16
56	1000-51	56	-
57	-	57	1000-15
58	1000-52	58	-
59	-	59	1000-14
60	1000-25	60	1000-27
61	-	61	1000-50
62	1000-53	62	-
63	-	63	1000-13
64	1000-54	64	-
65	1000-10	65	1000-28
67	1000-55	67	1000-26
69	-	69	1000-12
70	1000-56	70	1000-11
71	-	71	1000-51
73	-	73	1000-52
75	-	75	1000-25
77	-	77	1000-53
79	-	79	1000-54
80	-	80	1000-10
82	-	82	1000-55
85	-	85	1000-56



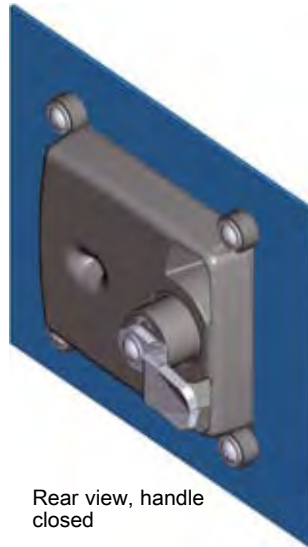
Open condition
By turning the handle by 90°, the cam rotates.



Closed position
By turning the handle by another 90° the cam moves 6 mm in axial direction.



Compressed condition
Unlock:
Reversed rotation



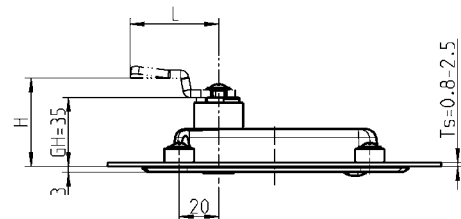
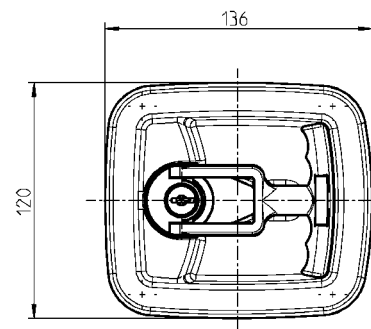
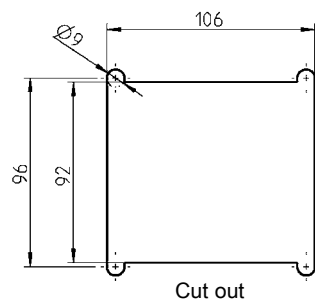
Rear view, handle closed



Front view, handle open

Note:

By pressing the T-handle into the dish, a clamping effect is achieved.



Recess T-handle polyamide GF black; fixing material m.s. zinc plated; with seal.	
Each round cylinder with one key m.s. nickel plated.	
keyed EK 333	1130-U3
keyed different	1130-U4

Further parts see page
– cam with catch 1.5-820

Retractable T-handle with compression function with adjustable cam height

PROGRAM 1130



Rear view, handle closed

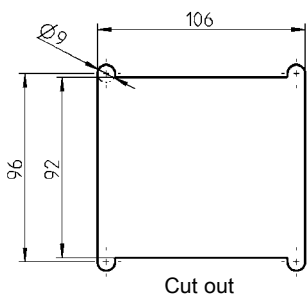


Front view, handle open

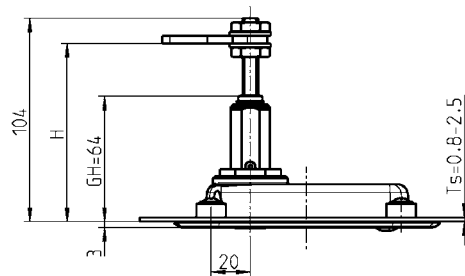
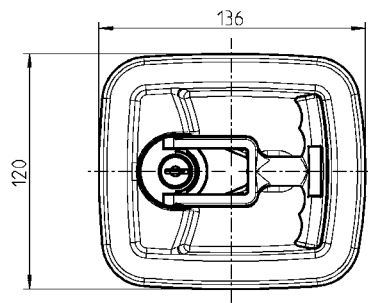


Note:

By pressing the T-handle into the dish, a clamping effect is achieved.



Cut out



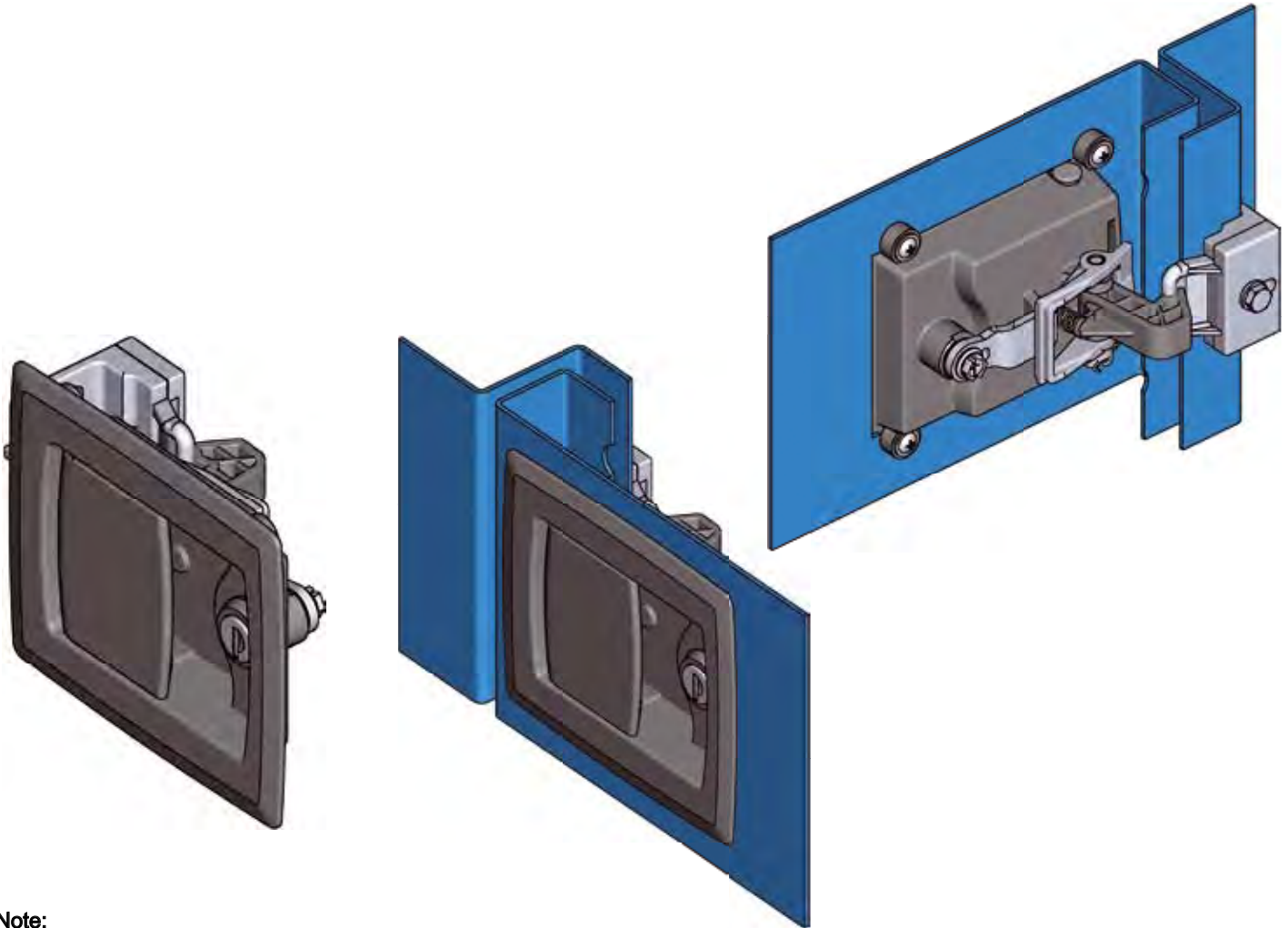
Recess T-handle polyamide GF black; housing zinc die;
fixing material m.s. zinc plated; with seal.
Each round cylinder with one key m.s. nickel plated.

keyed EK 333
keyed different

1130-U10
1130-U11

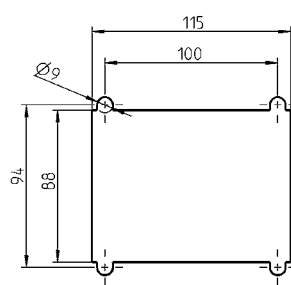
Further parts see page
- Cam

1.5-840

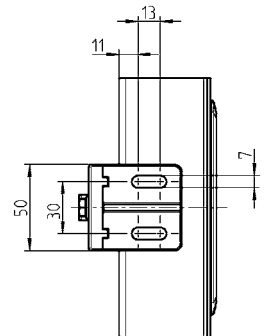
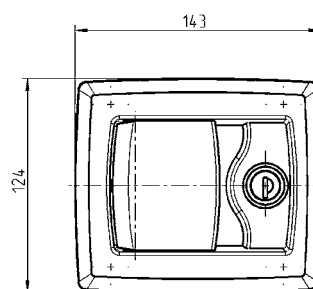


Note:
The version 1130-U1 and -U2 are made for RH use by default.

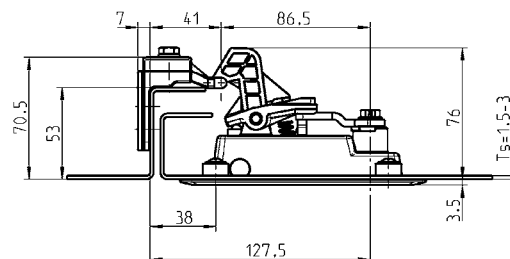
Version for LH use is created by removing the round cylinder rotating it 180° and refitting it.



Cut out



Function:
The spring-loaded locking hook is equipped with a "door-slam" feature. With this the door can also be closed when locked.



Hinged pattern handle polyamide GF black, compensator and lock catch zinc die zinc pl., round cylinder zinc die with stainless steel cap and dust cap, springs stainless steel, cam and fastening material m.s. zinc pl., with seal
Each round cylinder has one silver steel key with polyamide grip GF black.

keyed EK 333

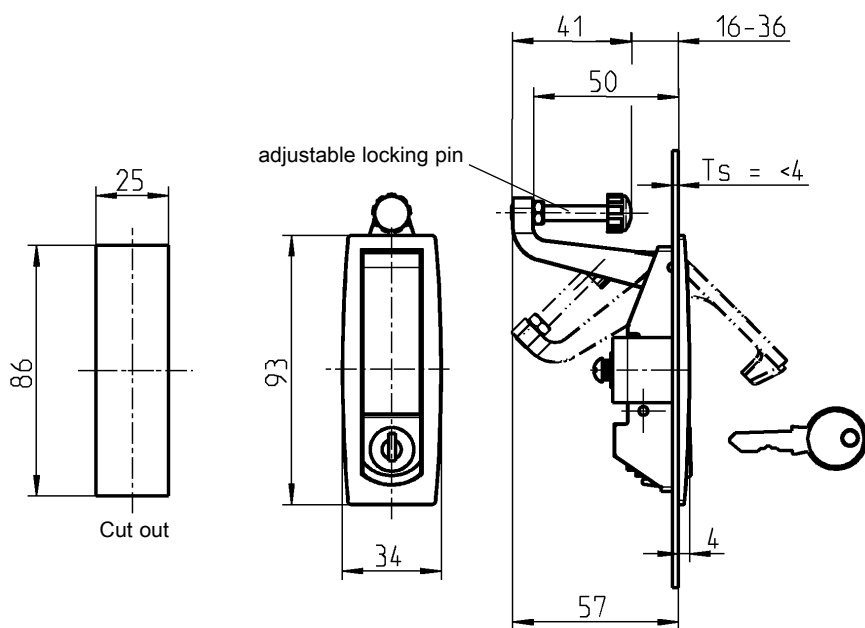
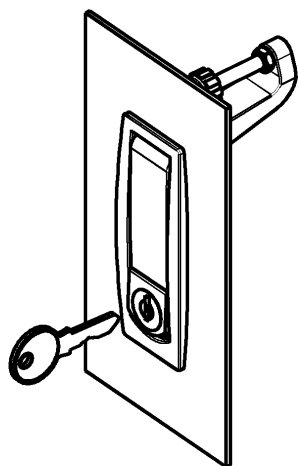
1130-U1

keyed different

1130-U2

Chest handle

PROGRAM 1130



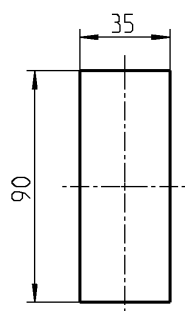
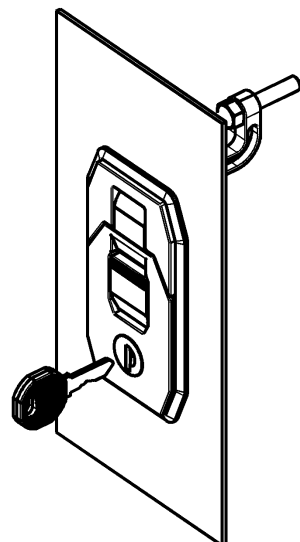
Compression flush handle zinc die black powder coated, locking pin m.s. zinc plated / TPE-V, fixing material m.s. zinc plated.
Each round cylinder has one key m.s. nickel plated.

keyed EK 333

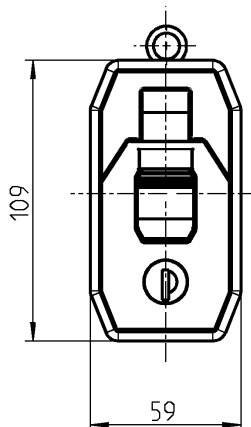
1130-U8

Blank

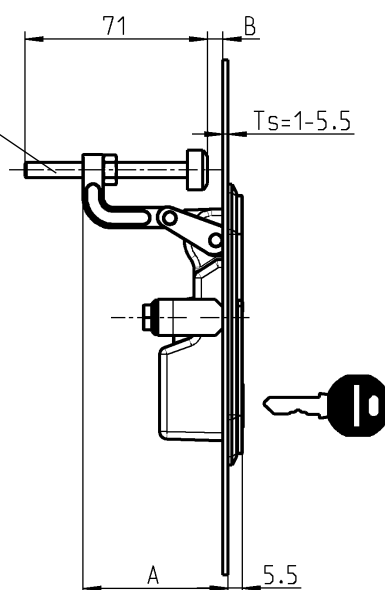
1130-U9



Cut out



adjustable locking pin



On request:
– Chest handle with different lever

Hinged handle zinc die black powder coated, locking pin m.s. zinc plated / TPE-V, fixing material m.s. zinc plated, round cylinder with stainless steel cap and dust cap, with seal. One key from nickel silver with polyamide grip GF black per round cylinder

A = 57 ; keyed EK 333

1130-U7

A = 57 ; keyed different

1130-U7-V

A = 71 ; keyed EK 333

1130-U7-01

A = 71 ; keyed different

1130-U7-01V

Flap lock for stow box

Design proposal 1



Design proposal 2



Design proposal 3

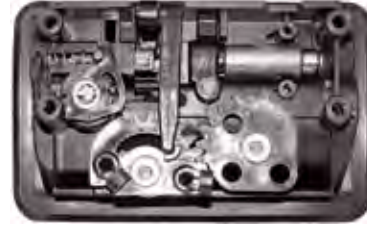




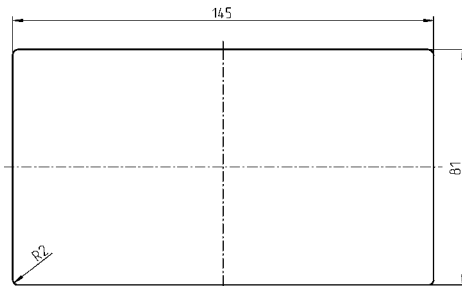
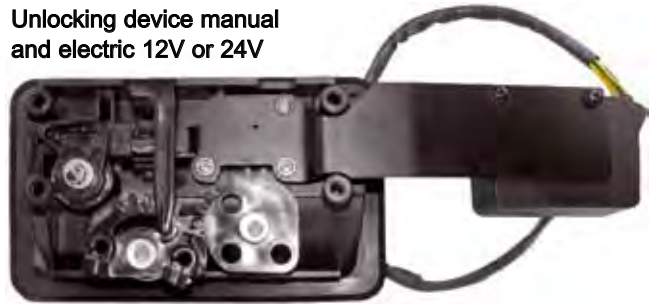
Unlocking device manual



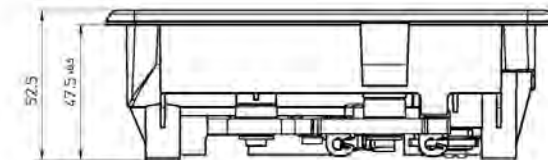
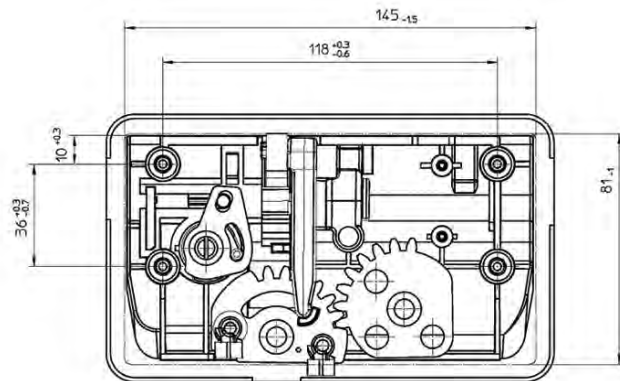
Unlocking device manual and pneumatic



Unlocking device manual and electric 12V or 24V



Cut out



Exterior handle ABS black; screws m.s. zinc plated; with seal and spring

Unlocking device manual	5225-U100
Unlocking device manual and pneumatic	5225-U101
Electrical and manual operation 12V	5225-U102
Unlocking device manual and electric 24V	5225-U103

Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

keyed 8888	9850-U100
keyed different	9850-U101

Further parts see page

- Interior release 1.3-180
- Rotary latch lock 1.3-240
- 1.3-260
- Locking pin 1.3-260

Exterior handle closed

PROGRAM 5225

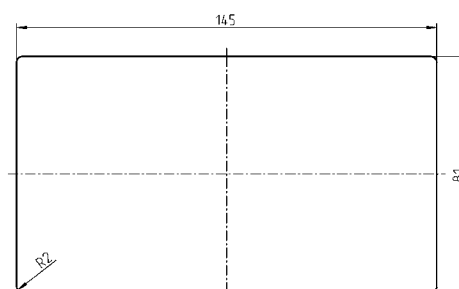
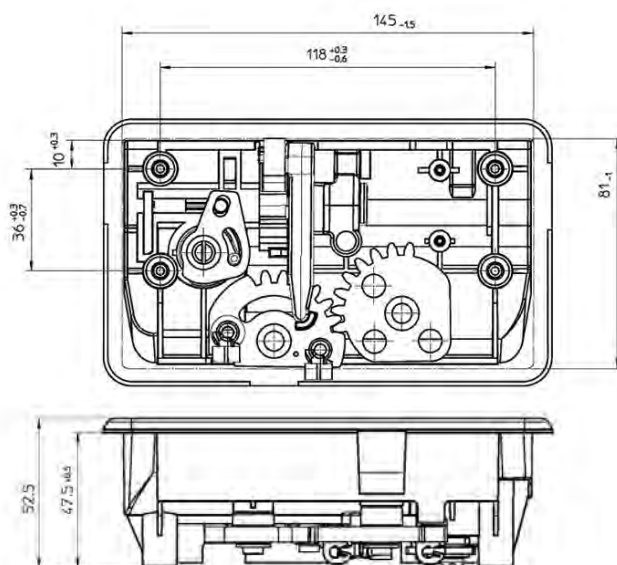
Unlocking device manual



Unlocking device manual and pneumatic



Unlocking device manual and electrical 12V or 24V



Cut out

Exterior handle ABS black; screws m.s. zinc plated; with seal and spring

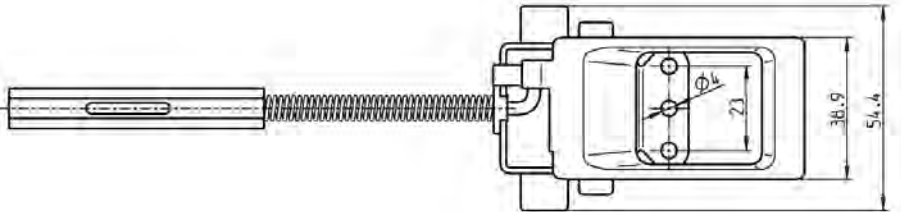
Unlocking device manual	5225-U104
Unlocking device manual and pneumatic	5225-U105
Electrical and manual operation 12V	5225-U106
Unlocking device manual and electric 24V	5225-U107

Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

keyed 8888	9850-U100
keyed different	9850-U101

Further parts see page

– Interior release	1.3-180
– Rotary latch lock	1.3-240
– Locking pin	1.3-260
	1.3-260

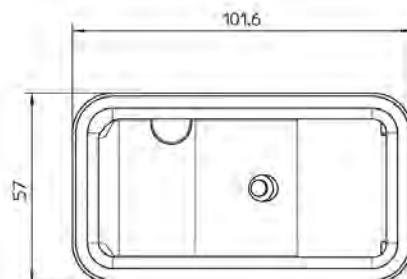


Further parts see page

- Escutcheon see below
- Exterior handle open 1.3-120
- Exterior handle closed 1.3-140

Interior release ABS black; holding plate m.s. zinc plated and chromated; with spring

5225-U8



Further parts see page

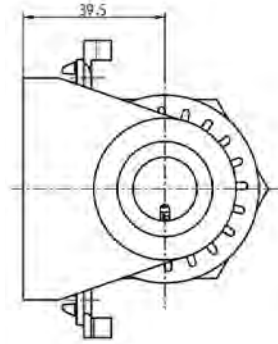
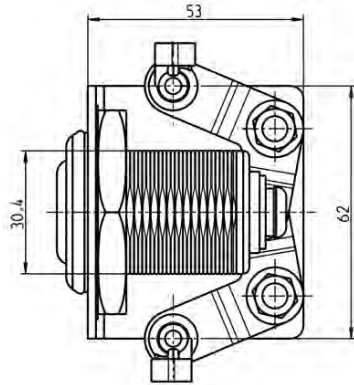
- Interior release see above
- Exterior handle open 1.3-120
- Exterior handle closed 1.3-140

Escutcheon for interior release ABS black

5225-01-AA

Pushbutton lock

PROGRAM 5225



Pushbutton lock with cylinder assembly m.s. zinc plated and chromated; with spring

5225-U200

Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys

keyed 8888

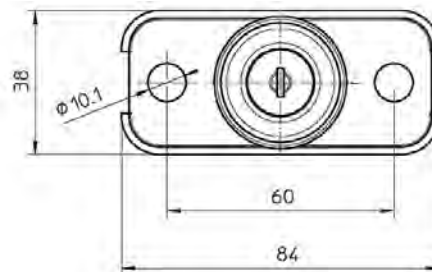
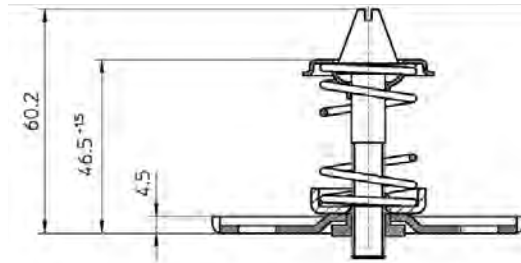
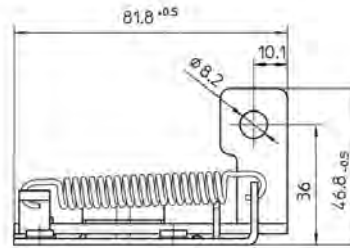
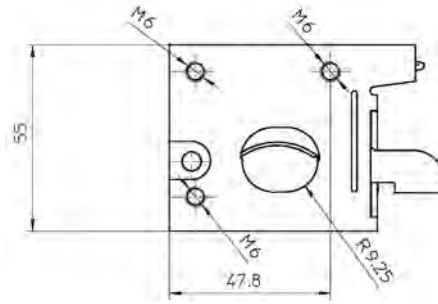
9850-U100

keyed different

9850-U101

Further parts see page

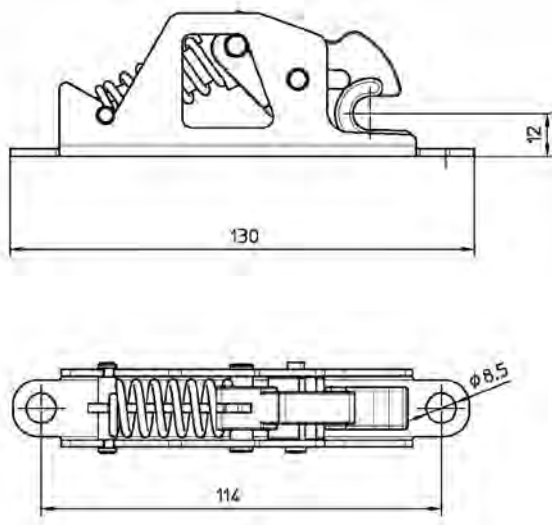
- Rotary latch lock 1.3-240
- 1.3-260
- Locking pin 1.3-260



Lock with manual operation m.s. zinc plated; with spring	5225-U202
Locking bolt m.s. zinc plated; with spring	5225-U203

Spring bolt lock; rotary bolt lock

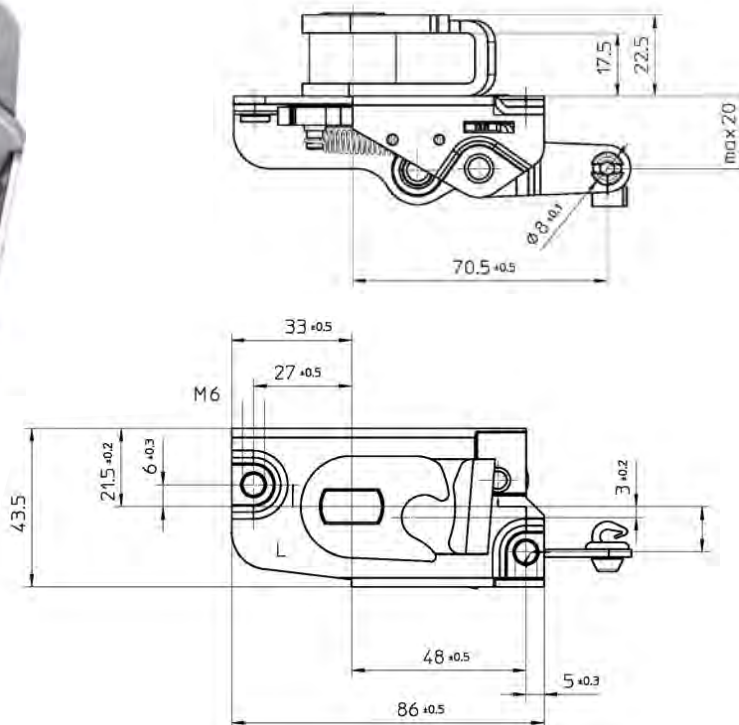
PROGRAM 5225



Opening force: 90N ±12N
 Locking force: 70N ±10N

Spring bolt lock stainless steel

5225-U31



Rotary bolt lock m.s. zinc plated, with spring

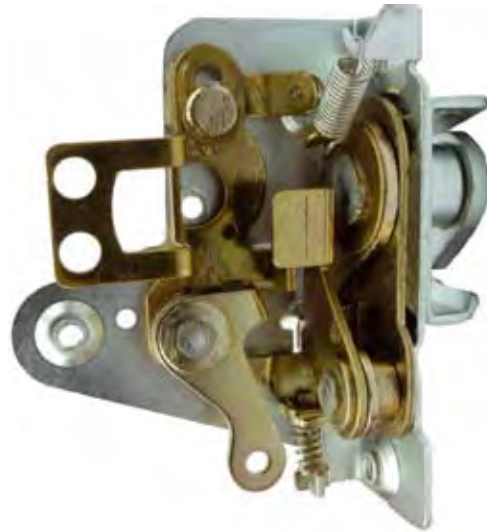
Right mirror image	5225-U9
Left, as shown	5225-U10

Rotary bolt lock m.s. zinc and nickel plated for 480h salt spray test; with spring

Right, mirror image	5225-U9-01
Left, as shown	5225-U10-01

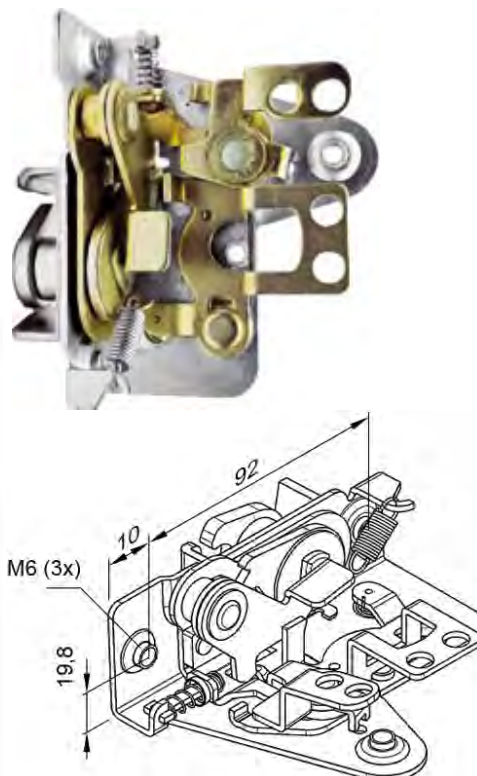
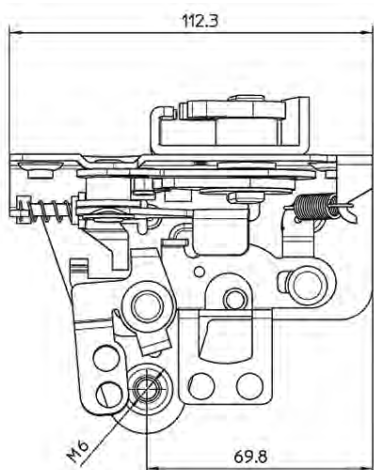
Further parts see page

- Locking pin 1.3-260
- Pushbutton lock 1.3-190
- Exterior handle open 1.3-120
- Exterior handle closed 1.3-140



Rotary bolt lock with safety catch; locking pin with plate

PROGRAM 5225



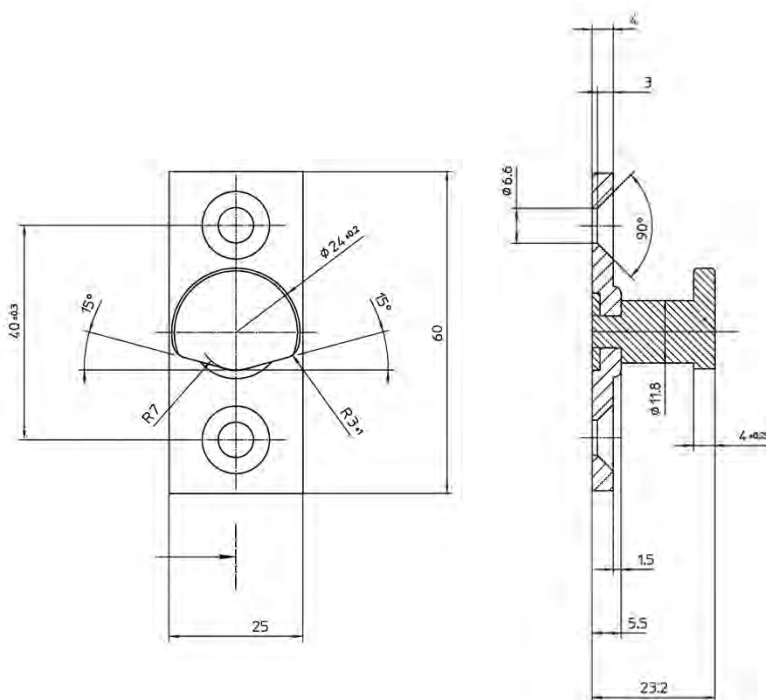
Lockable and unlockable from the inside

Rotary bolt lock with safety catch m.s. zinc plated and chromated; with spring

Right, mirror image	5225-U23
Left, as shown	5225-U24

Further parts see page

- Locking pin on request
- Pushbutton lock 1.3-190
- Exterior handle open 1.3-120
- Exterior handle closed 1.3-140



Locking pin type 1 with plate m.s. zinc plated

RH/LH	5225-U25
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Locking pin type 1 with plate m.s. zinc plated and nickel plated for 480h salt spray test

RH/LH	5225-U25-01
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Further parts see page

- Rotary latch lock 1.3-240
- Pushbutton lock 1.3-190
- Exterior handle open 1.3-120
- Exterior handle closed 1.3-140



on request



see page 1.5-420, 1.5-430



see page 1.5-320

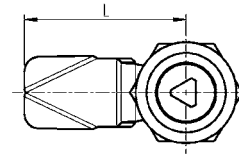
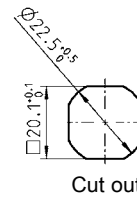
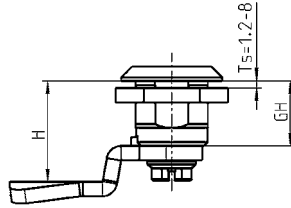
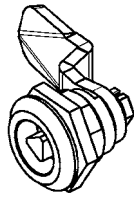
Quarter turns meet the stand-
ard
DIN EN 45545-2



see page 1.5-320, 1.5-330

Quarter turns

PROGRAM 1000



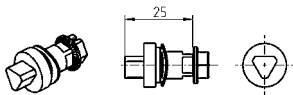
Cut out

Housing with nut or earthnut m.s.zinc plated or nut stainless steel

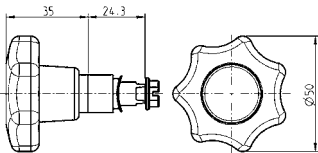
Head diameter	Ø28		Ø30		Ø32		28	
GH = 18 mm								
Head height	4		4		6		4	
	Nut	Earthnut	Nut	Earthnut	Nut	Earthnut	Nut	Earthnut
zinc die chrome pl.	1000-U45	1000-U56	1000-U47	1000-U55	1000-U7	1000-U54	1000-U330	1000-U332
Zinc die chrome plated (with foamed seal)	1000-U45-G	1000-U56-G	1000-U47-G	1000-U55-G	1000-U7-G	1000-U54-G	-	-
Zinc die black powder coated	1000-U223	1000-U224	1000-U221	1000-U222	1000-U219	1000-U220	1000-U331	1000-U333
Zinc die black powder coated (with foamed seal)	1000-U223-G	1000-U224-G	1000-U221-G	1000-U222-G	1000-U219-G	1000-U220-G	-	-
Polyamide GF VO black	1000-U155	-	-	-	1000-U46	-	-	-
Polyamide GF black with fixed TPE seal	1000-U155-D	-	-	-	on request	-	-	-
Stainless steel AISI 303 (with foamed seal)	1000-U134	-	-	-	-	-	-	-
Stainless steel AISI 316 (with foamed seal)	1000-U530	-	-	-	-	-	-	-

Insert zinc die, polyamide or stainless steel;
Fixing material m.s. zinc plated or stainless steel;
with seal (only for stainless steel version)

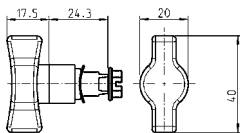
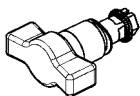
Zinc die chrome plated Zinc die black Polyamide 66 GF 50 black Stainl. steel AISI 304 Stainl. steel AISI 316



Insert

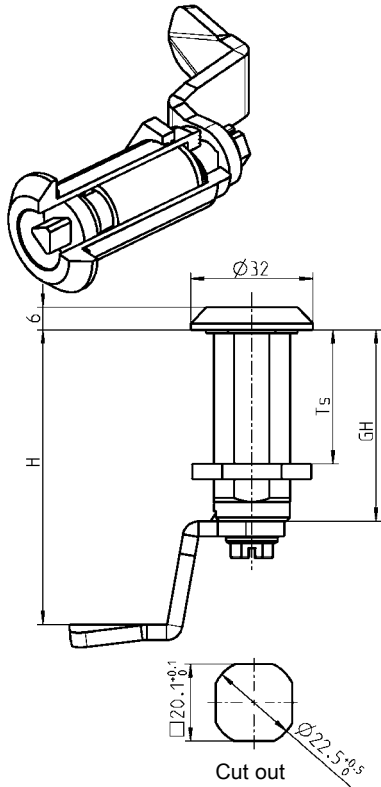


Star handle

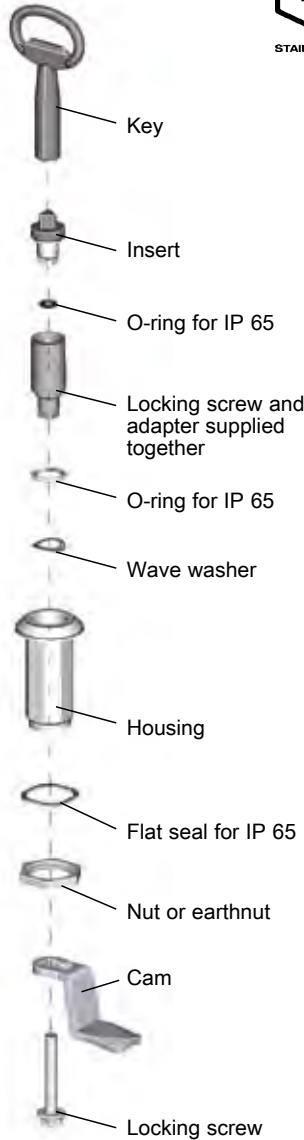


Wing knob

Square 6	1000-U17	1000-U322	-	1000-U351	-
Square 7	1000-U1	1000-U323	1000-U184-N	1000-U135	1000-U531
Square 8	1000-U2	1000-U324	1000-U185-N	1000-U136	1000-U532
Square 8 slotted	1000-U18	-	-	1000-U352	-
Triangular 6.5 CNOMO	1000-U197	-	-	-	-
Triangular 7	1000-U3	1000-U325	-	1000-U334	1000-U536
Triangular 8	1000-U4	1000-U326	1000-U186-N	1000-U335	1000-U537
Triangular 9	1000-U194	-	-	-	-
Triangular 10	1000-U249	-	-	-	-
Double bit 3	1000-U5	1000-U327	1000-U187-N	1000-U183	1000-U533
Double bit 5	1000-U6	1000-U328	1000-U188-N	1000-U137	1000-U534
Hexagon female 10mm	1000-U96	-	-	-	-
Square female 6mm	1000-U168	-	-	-	-
Square female 7	1000-U182	-	-	-	-
Square female 8	1000-U169	-	-	-	-
Daimler Benz	1000-U20	-	-	-	-
Slot 1.2 x 3	1000-U195	-	-	-	-
Slot 2 x 4	1000-U142	1000-U329	1000-U196-N	1000-U630	1000-U631
Slot 2 x 4 coinproof	1000-U738	1000-U739	-	-	-
Crown type	1000-U336	-	-	-	-
Eastern Europe Ø 13	1000-U509	-	-	1000-U729	-
Hexagon female with pin	1000-U757	-	-	1000-U757-01	-
			Polyamide GF / Zinc die black	Polyamide GF black / AISI 304	
Star handle	-	-	1000-U13	1000-U138	-
Wing knob	-	-	1000-U78	1000-U510	-



Assembly instruction



Latches and handles

IP 65 achieved by:	
** flat seal	1000-23
** O-ring	1000-24
IP 66 achieved by:	
Seal set	1000-U769
IP 69K achieved by:	
* Seal set	1000-U841
Assembly on request:	
without O-ring	1000-990
with O-ring	1000-991

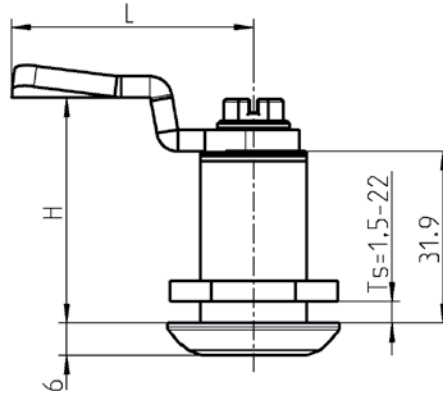
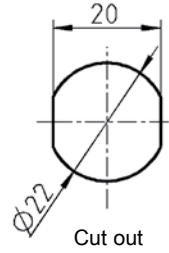
Housing material of your choice, nut or earthnut m.s. zinc plated						
GH	Ts 1.5 –	Zinc die chrome plated		Zinc die black powder coated		polyamide black Nut
		Nut	Earthnut	Nut	Earthnut	
30 mm	20 mm	1000-U51	1000-U65	1000-U225	1000-U226	–
+adapter				1000-U164		
36 mm	26 mm	1000-U246	1000-U248	1000-U317	1000-U318	–
+adapter				1000-U198		
40 mm	30 mm	1000-U66	1000-U67	1000-U227	1000-U228	1000-U737
+adapter				1000-U165		
50 mm	40 mm	1000-U68	1000-U69	1000-U229	1000-U230	1000-U736
+adapter				1000-U166		
60 mm	50 mm	1000-U504	1000-U505	1000-U506	1000-U507	–
+adapter				1000-U535		

** included in case of stainless st. version

* Seal set only completely assembled with housing, insert and cam available

Further parts see page

- cam with catch 1.5-820
- Slam-lock 1.6-120
- Dust cap 1.5-250
- Key 5.1-120



Attention:
The H-dimension will be reduced by 2 mm with this dust cap installed.

Further parts see page
– Cam without catch
– Dust cap

1.5-820
1.5-250

Quarter turn for clip-in cylinder; housing zinc die surface of your choice; adapter zinc die raw; nut and screw m.s. zinc plated	black powder coated	chrome plated
	clip-in cylinder system 1	on request
clip-in cylinder system 2	on request	on request
clip-in cylinder system 3	on request	on request
Clip-in cylinder system 3 zinc die chromated with stainless steel cap; with 2 keys		
keyed 8888		9850-U100
keyed different		9850-U101

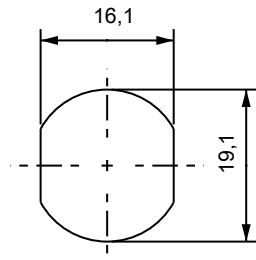
Handle bezels for quarter turn with clip-in cylinder; clip-in pressure cylinder for clip-in cylinder 1, 2 and 3



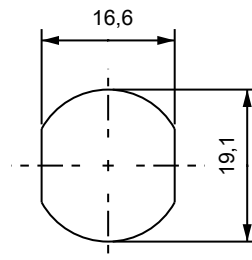
Handle bezels for quarter turn with clip-in cylinder



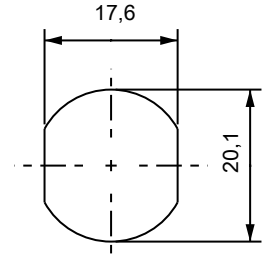
Clip-in pressure cylinder
for clip-in cylinder 1, 2 and 3



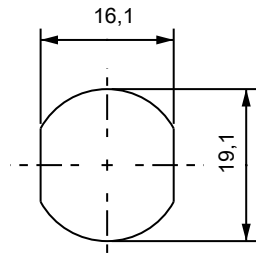
Cut out



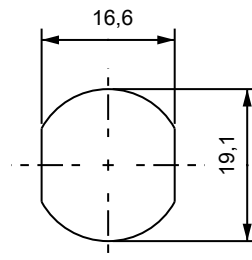
Cut out



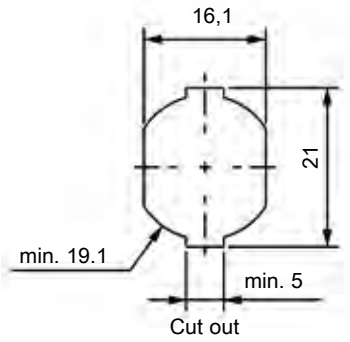
Cut out



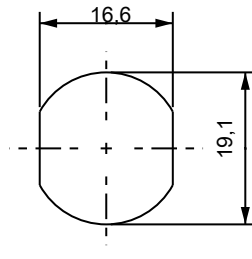
Cut out



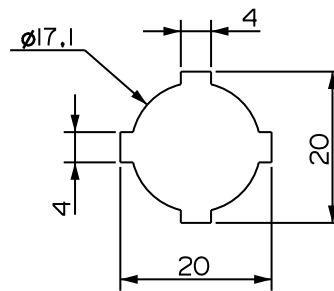
Cut out



Cut out



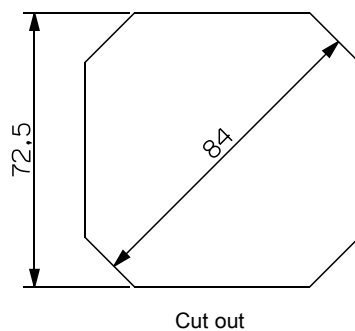
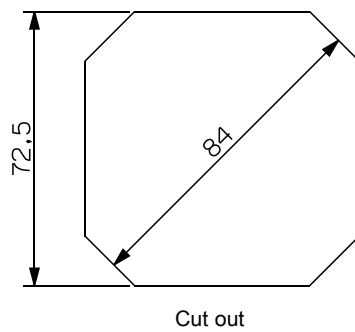
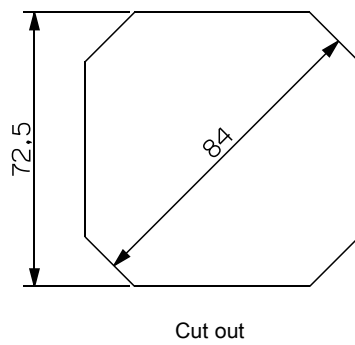
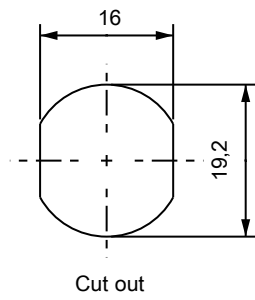
Cut out



Cut out

further Versions of cylinder lock available

Radial cylinder and flush handles



further versions of handles available

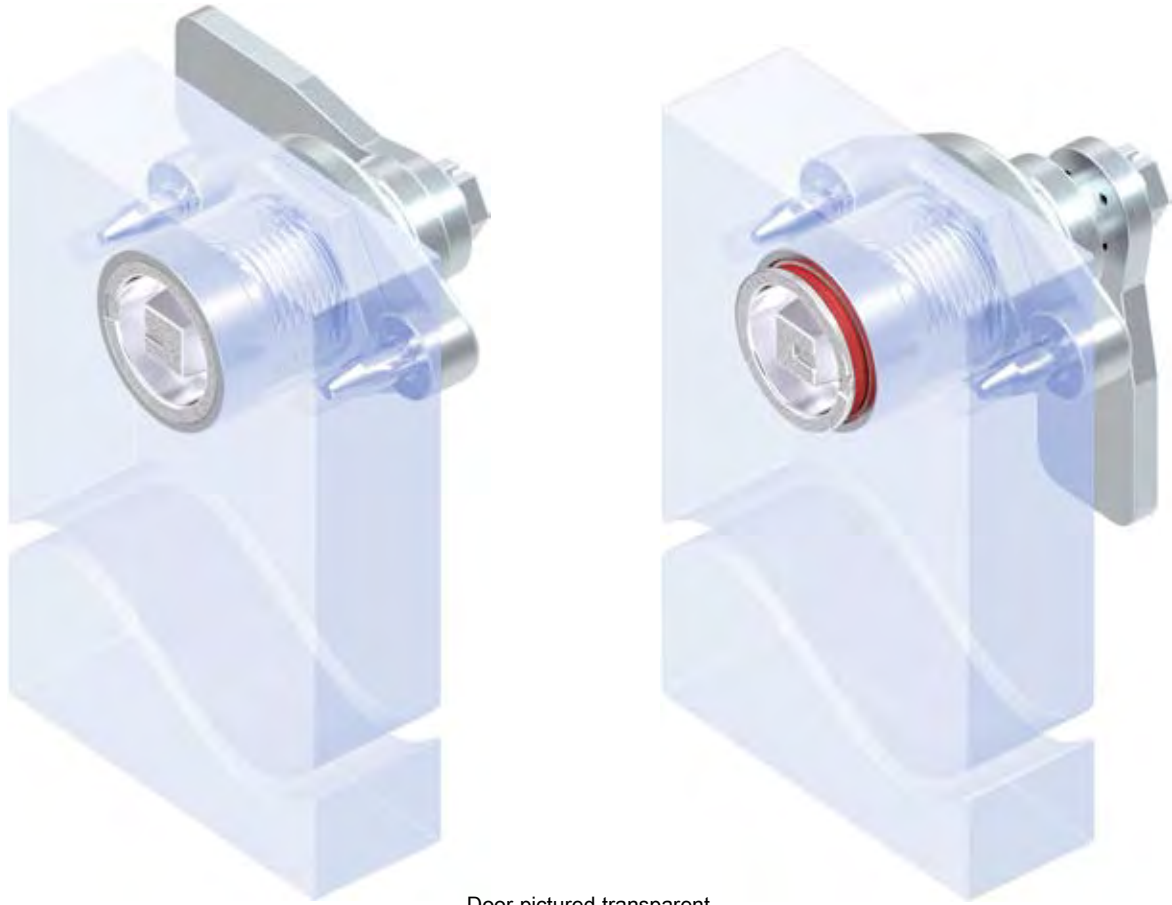
Compression latch quarter turn as multi point locking (flat rod)



Compression latch quarter turn as multi point locking (round rod)



Compression latch with optical opening indicator for flush mounting



Door pictured transparent

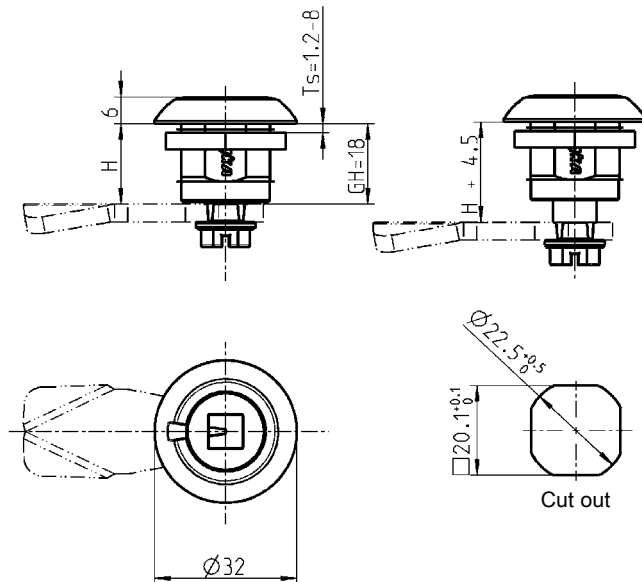


Compression latch

PROGRAM 1000

Vibration proof

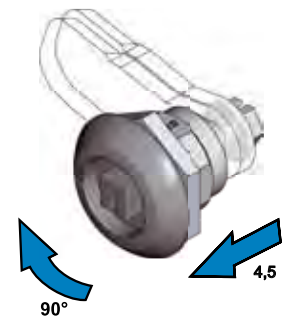
These latches are designed to be vibration proof with a distinct "over-center" action. There may be some cases of extreme vibration where this detent is overcome. Therefore we recommend rigorous testing.



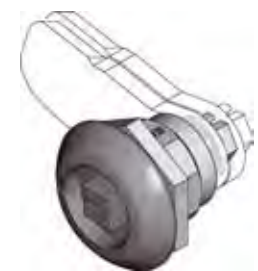
with stainless steel version



Open position
The first 90° of rotation of the insert also turns the cam 90°.



Closed position
The second 90° of rotation of the insert draws the cam 4.5 mm toward the door axially.



Compressed condition

Unlock:
Reversed rotation

Federal Railway version is compliant with RIC.

Housing and insert material of your choice; nut and screw m.s. zinc plated; with spring and seal

	Zinc die black powder coated	Zinc die chrome plated	AISI 316
Square 6	on request	on request	on request
Square 7	on request	1000-U859-IA	1000-U859-PH
Square 8	1000-U852	1000-U852-IA	1000-U852-PH
Triangular 6.5 CNOMO	on request	on request	on request
Triangular 7	on request	1000-U864-IA	1000-U864-PH
Triangular 8	1000-U853	on request	1000-U853-PH
Triangular 9	on request	on request	on request
Triangular 10	on request	on request	on request
Double bit 3	1000-U854	on request	1000-U854-PH
Double bit 5	1000-U855	on request	1000-U855-PH
Male hexagon 11mm with indicator	on request	on request	on request
Hexagon female 8mm	on request	on request	on request
Hexagon female 8mm with pin	on request	on request	on request
Hexagon female 10mm	on request	on request	on request
Square female 6mm	on request	on request	on request
Square female 7	on request	on request	on request
Square female 8	on request	on request	on request
Daimler Benz	on request	on request	on request
Slot 1.2 x 3	on request	on request	on request
Slot 2 x 4	on request	on request	on request
Slot 2 x 4 coinproof	on request	on request	on request
Crown type	on request	on request	on request
Railway	1000-U856	on request	1000-U856-PH
Tube with indicator	on request	on request	on request

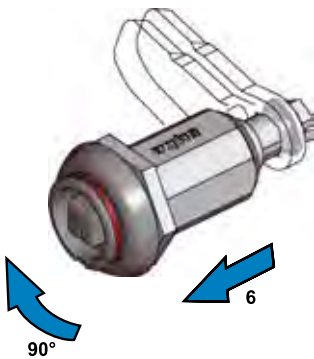
Further parts see page

- Cam without catch 1.5-820
- Dust cap 1.5-250
- Key 5.1-120



Open condition

The first 90° of rotation of the insert also turns the cam 90°.



Closed position

The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



Compressed condition

Unlock:

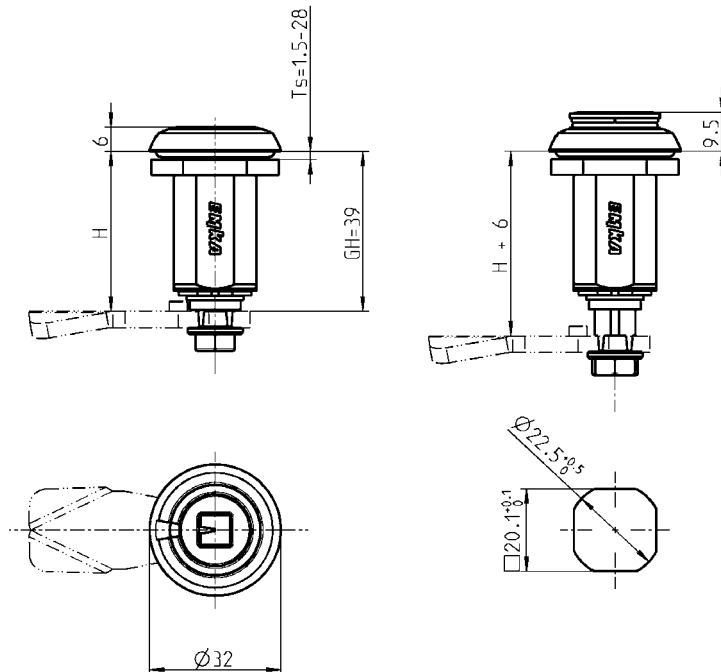
Reversed rotation

Railway version is compliant with RIC.

These latches are designed to be vibration proof with a distinct “over-center” action. There may be some cases of extreme vibration where this detent is overcome. Therefore we recommend rigorous testing.

When using the compression latch in conjunction with the illustrated dust cap (Art.No. 1000-97-02 / see right), there is another safety aspect:

In addition to the visibility of the red ring when the latch is open, the dust cap cannot be put on and remains open.



Further parts see page

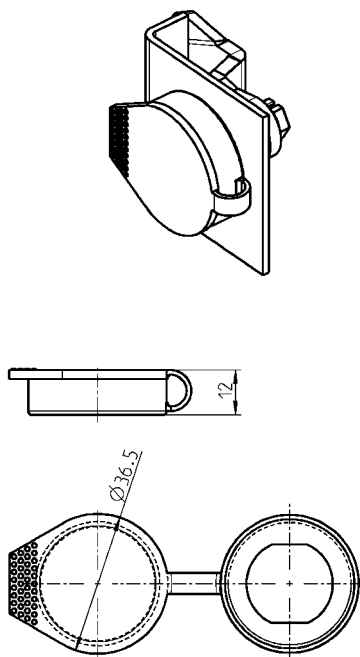
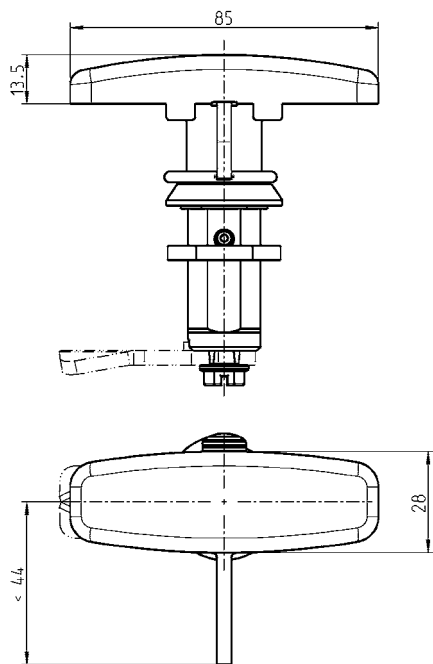
- cam with catch 1.5-820
- Dust cap 1.5-250
- Key 5.1-120

Housing and insert zinc die, surface of your choice, signal-ring red, nut and screw m.s. zinc plated, with spring and seal

	black powder coated	chrome plated
Square 8	1000-U846	1000-U846-IA
Double bit 5	1000-U847	1000-U847-IA
Railway	1000-U848	1000-U848-IA

Dust cap; dust cap for T-handle; dust cap for high-speed trains

PROGRAM 1000

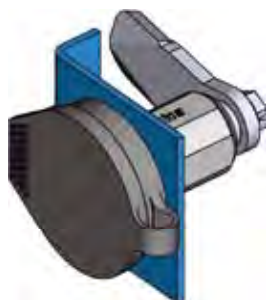


Further parts see page

- T-handle quarter turn 1.5-340
- 1.5-350
- Quarter turns 1.5-140
- 1.5-160
- 1.5-220
- 1.5-240
- 1.5-280
- 1.5-290
- 1.5-320
- 1.5-330
- 1.5-420
- 1.5-430

T-handle cap polypropylene black		Dust cap polyethylene black	
	1000-460		1000-97-01

The dust cap has a special function in conjunction with the compression latch with an optical opening indicator (see left)



Note:

The dust cap was tested successfully by the Technical University of Dresden in respect of high-speed resistant class up to 450 km/h.

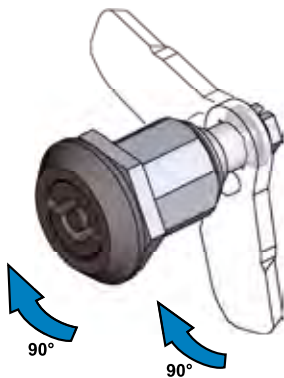
Attention:

The H-dimension will be reduced by 2 mm when using this dust cap.

Further parts see page

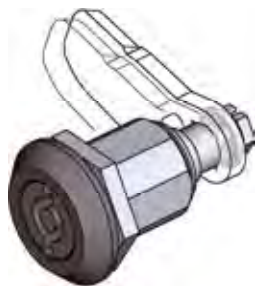
- Quarter turns 1.5-140
- 1.5-160
- 1.5-220
- 1.5-240
- 1.5-280
- 1.5-290
- 1.5-320
- 1.5-330
- 1.5-420
- 1.5-430

Dust cap TPE, UV resistant , black			
			1000-97-02



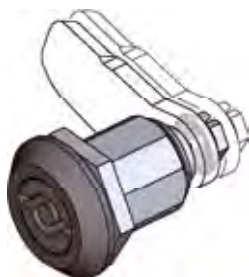
Open condition

The first 90° of rotation of the insert also turns the cam 90°.



Closed position

The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



Compressed condition

Unlock:
Reversed rotation

Railway version is compliant with RIC.

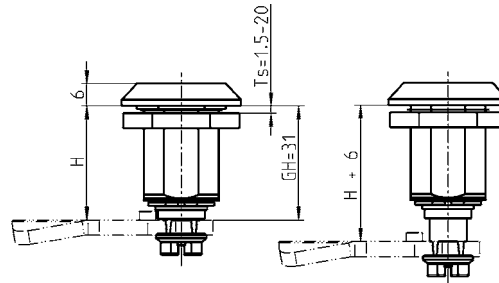
Note:
Further inserts on request

Further parts see page

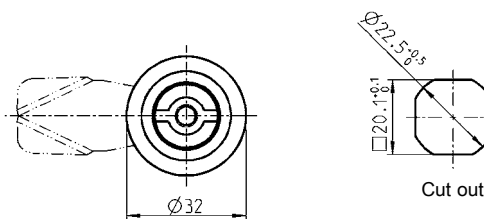
- cam with catch 1.5-820
- Dust cap 1.5-250
- Key 5.1-120

Vibration proof

These latches are designed to be vibration proof with a distinct "over-center" action. There may be some cases of extreme vibration where this detent is overcome. Therefore we recommend rigorous testing.



Housing with indicator on request



Cut out

Housing and insert zinc die surface of your choice; nut and screw m.s. zinc plated; with spring and seal; wing knob polyamide GF black with plug PE black

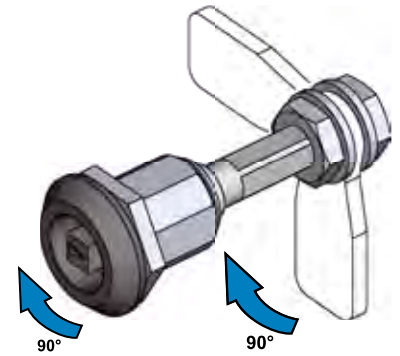
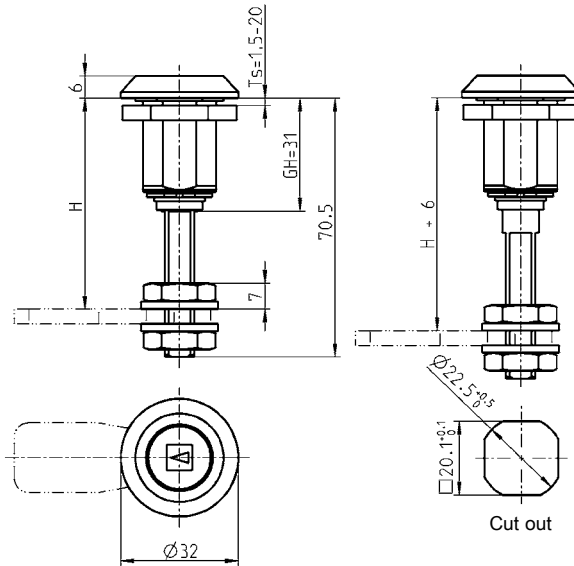
	black powder coated	chrome plated
Square 6	on request	on request
Square 7	1000-U796	on request
Square 8	1000-U755	on request
Square 8 with arrow	1000-U798	on request
Square 8 with M6 thread and wing knob	1000-U800	on request
Triangular 6.5 CNOMO	on request	on request
Triangular 7	1000-U795	on request
Triangular 8	1000-U783	on request
Triangular 9	on request	on request
Triangular 10	on request	on request
Double bit 3	1000-U749	on request
Double bit 5	1000-U748	on request
Male hexagon 11mm with indicator	on request	on request
Hexagon female 8mm	1000-U807	on request
Hexagon female 8mm with pin	1000-U805	on request
Hexagon female 10mm	1000-U809	on request
Square female 6	on request	on request
Square female 7	on request	on request
Square female 8	1000-U811	on request
Daimler Benz	on request	on request
Slot 1.2 x 3	1000-U750	on request
Slot 2 x 4	1000-U777	on request
Slot 2 x 4 coinproof	on request	on request
Crown type	on request	on request
Railway	1000-U831	1000-U831-IA
Tube with indicator	1000-U833	on request

Compression latch with adjustable Cam

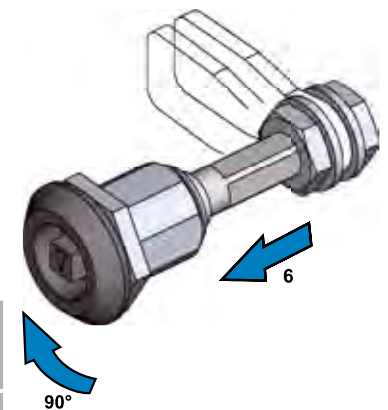
PROGRAM 1000

Vibration proof

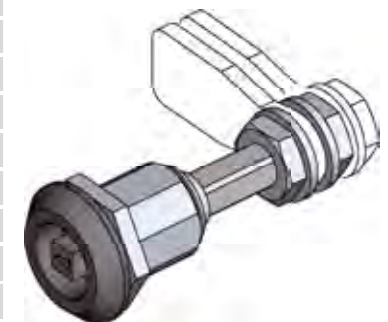
These latches are designed to be vibration proof with a distinct “over-center” action. There may be some cases of extreme vibration where this detent is overcome. Therefore we recommend rigorous testing.



Open condition
The first 90° of rotation of the insert also turns the cam 90°.



Closed position
The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



Compressed condition

Unlock:
Reversed rotation

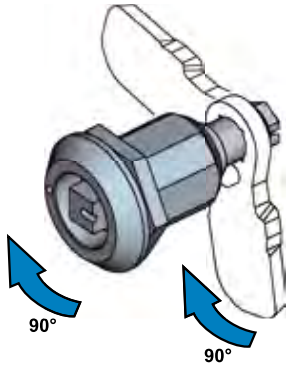
Railway version is compliant with RIC.

Housing and insert zinc die surface of your choice; nut and screw m.s. zinc plated; with spring and seal; wing knob polyamide GF black with plug PE black

	black powder coated	chrome plated
Square 6	on request	on request
Square 7	1000-U786	on request
Square 8	1000-U797	on request
Square 8 with arrow	1000-U799	on request
Square 8 with M6 thread and wing knob	1000-U801	on request
Triangular 6.5 CNOMO	on request	on request
Triangular 7	1000-U794	1000-U794-IA
Triangular 8	1000-U802	on request
Triangular 9	on request	on request
Triangular 10	on request	on request
Double bit 3	1000-U803	1000-U803-IA
Double bit 5	1000-U804	on request
Male hexagon 11mm with indicator	1000-U816	on request
Hexagon female 8mm	1000-U808	on request
Hexagon female 8mm with pin	1000-U806	on request
Hexagon female 10mm	1000-U810	on request
Square female 6	on request	on request
Square female 7	on request	on request
Square female 8	1000-U812	on request
Daimler Benz	on request	on request
Slot 1.2 x 3	1000-U814	on request
Slot 2 x 4	1000-U813	on request
Slot 2 x 4 coinproof	on request	on request
Crown type	on request	on request
Railway	1000-U832	1000-U832-IA
Tube with indicator	1000-U830	on request

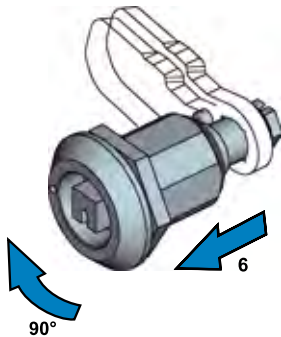
Further parts see page

- Cam 1.5-840
- Dust cap 1.5-250
- Key 5.1-120



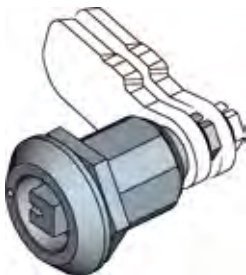
Open condition

The first 90° of rotation of the insert also turns the cam 90°.



Closed position

The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



Compressed condition

Unlock:

Reversed rotation

Railway version is compliant with RIC.

On request:

– Further inserts

Further parts see page

- cam with catch 1.5-820
- Dust cap 1.5-250
- Key 5.1-120

Vibration proof

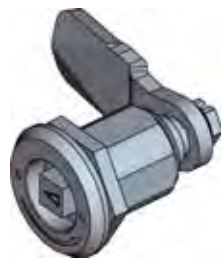
The compression latch is vibration-proof as such. Depending on the installation location and operational conditions specific checks are necessary and/or supplementary measures of fastening required.



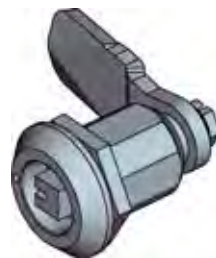
for aluminium version



for stainless steel version



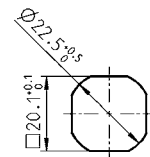
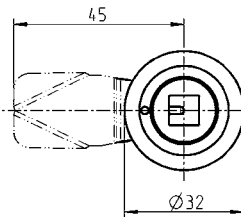
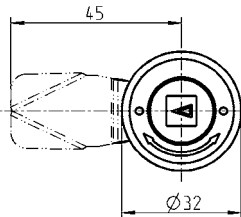
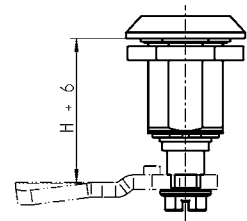
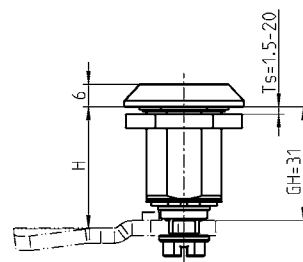
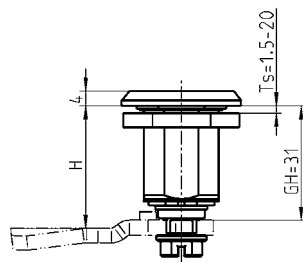
with arrow and red - green indicator



with indicator

Note:

The H-dimension will be reduced by 2 mm if the opening handle is installed



Cut out

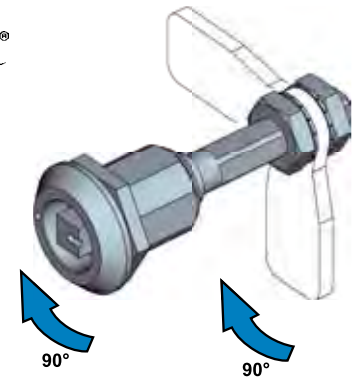
Stainless steel compression latch with arrow and red-green indicator AISI 316, with spring and flat gasket	
Square 8 right-hand version	1000-U834-REPH
Square 8 left-hand version	1000-U834-LIPH
Stainless steel compression latch AISI 316, with spring and seal	
Square 8 with indicator	1000-U755-01
Double bit 3	1000-U749-01
Double bit 5	1000-U748-01
Slot 2 x 4	1000-U777-01
Railway	1000-U831-01
Aluminium compression latch alu, with spring and seal	
Square 8 with indicator	on request
Slot 2 x 4	on request
Railway	on request

Stainless steel compression latch with adjustable cam height

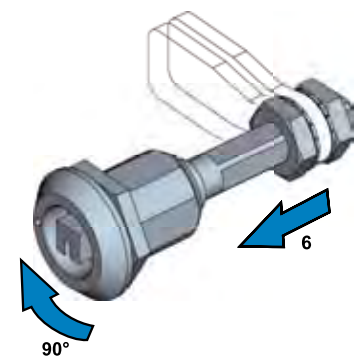
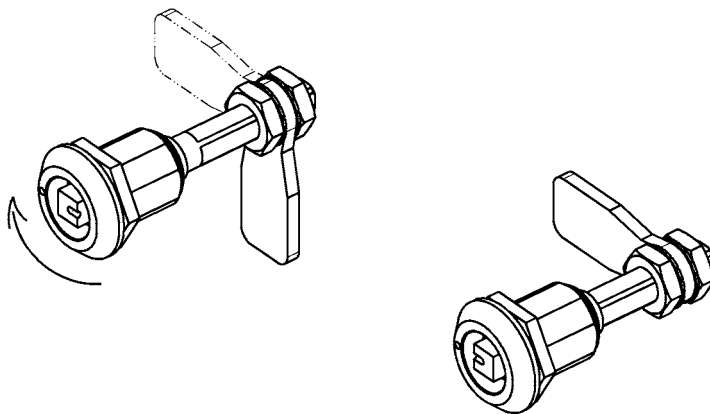
PROGRAM 1000

Vibration proof

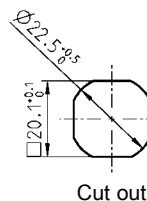
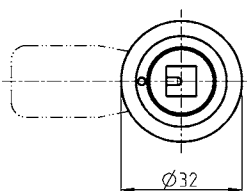
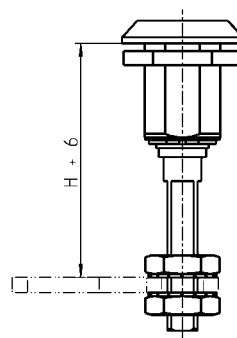
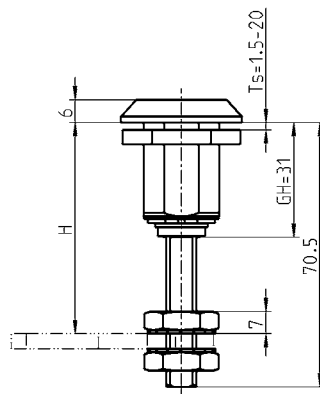
These latches are designed to be vibration proof with a distinct "over-center" action. There may be some cases of extreme vibration where this detent is overcome. Therefore we recommend rigorous testing.



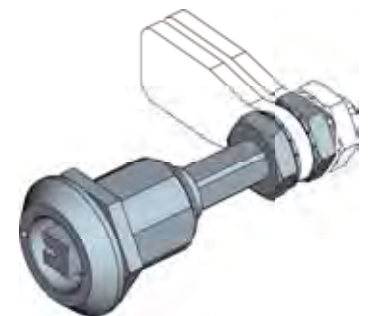
Open condition
The first 90° of rotation of the insert also turns the cam 90°.



Closed position
The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



Cut out



Compressed condition

Unlock:
Reversed rotation

Railway version is compliant with RIC.

On request:
– Further inserts

Compression latch AISI 316, with spring and gasket

Square 8 with indicator

1000-U755-02

Railway

1000-U831-02

further parts see page

– Cam 1.5-840
– Dust cap 1.5-250
– Key 5.1-120



Stainless steel quarter turn with optical opening indicator



Stainless steel quarter turn with optical opening indicator

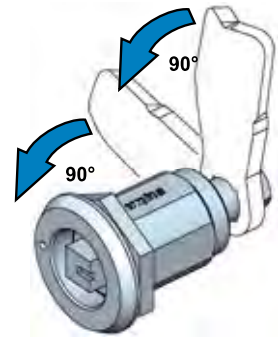
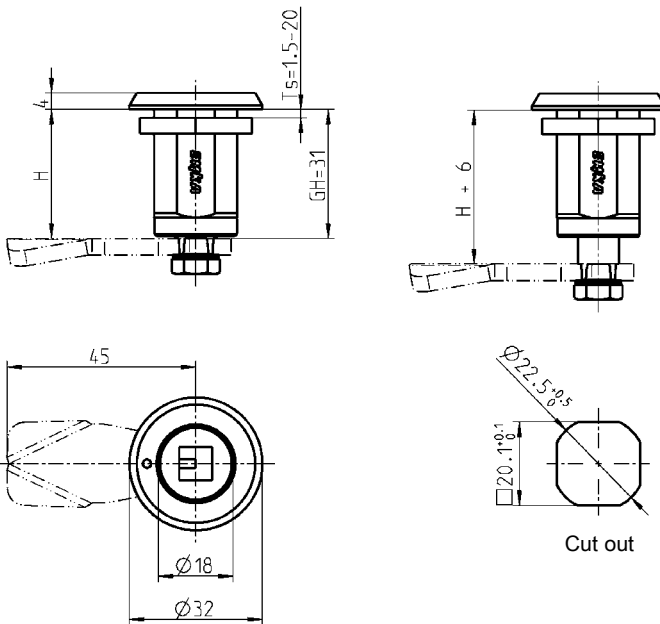
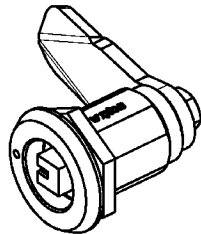
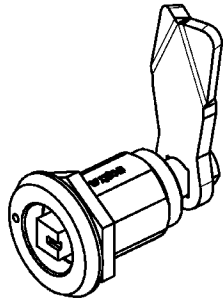


Stainless steel compression latch

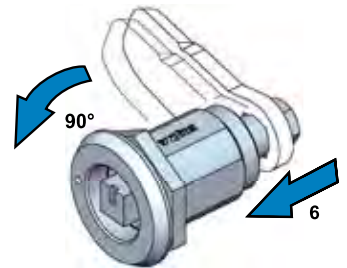
PROGRAM 1000

Vibration proof

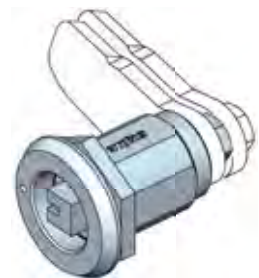
These latches are designed to be vibration proof with a distinct "over-center" action. There may be some cases of extreme vibration where this detent is overcome. Therefore we recommend rigorous testing.



Open condition
The first 90° of rotation of the insert also turns the cam 90°.



Closed position
The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



Compressed condition
Unlock:
Reversed rotation

Stainless steel compression latch AISI 316, with spring and seal

	RH version	LH version
Square 7	on request	on request
Square 8	1000-U865-REPH	1000-U865-LIPH
Triangular 8	on request	on request
Double bit 3	on request	on request
Double bit 5	on request	on request
Hexagon male 10 mm	on request	on request
Slot 2 x 4	on request	on request
Railway	on request	on request

Railway version is compliant with RIC.

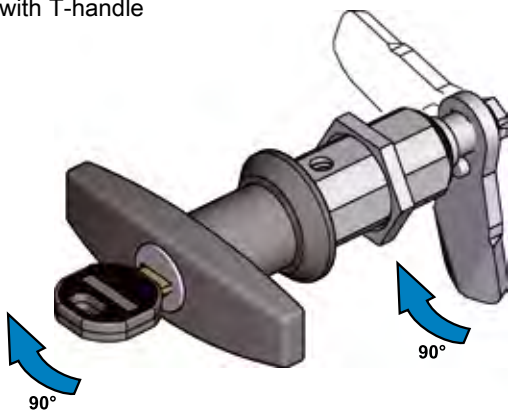
On request:
– further inserts

Further parts see page
– Cam without catch 1.5-820
– Dust cap 1.5-250
– Key 5.1-120

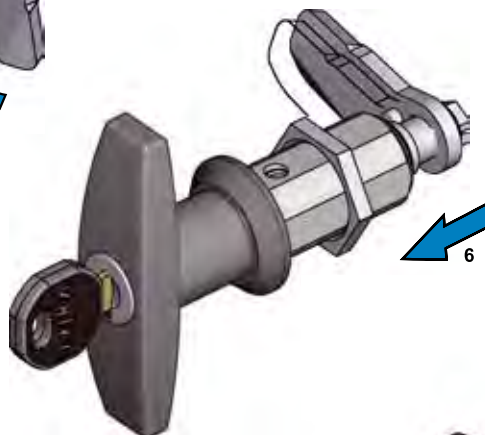
Compression latch with handle

PROGRAM 1000

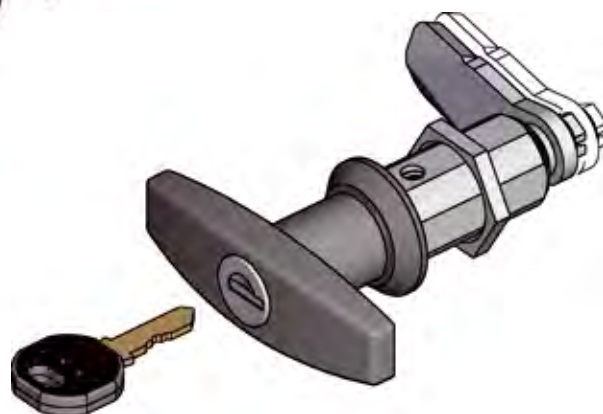
Example:
compression latch
with T-handle



Open condition
The first 90° of rotation
of the handle turns the
cam 90°.



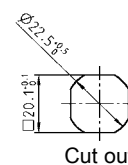
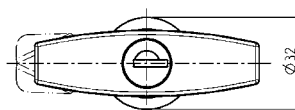
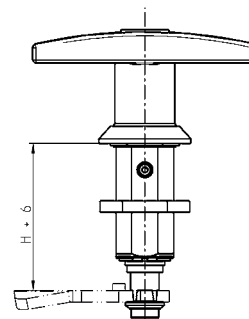
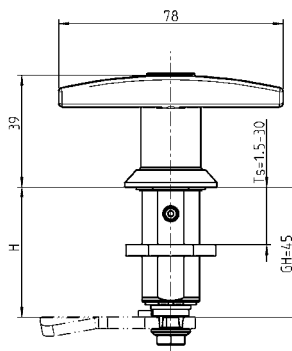
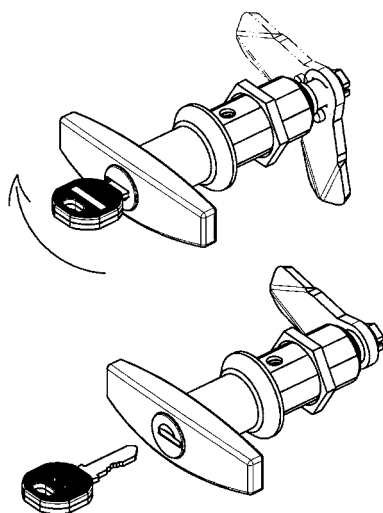
Closed position
The second 90° of rotation
draws the cam 6mm axially
towards the door.



Compressed condition
Key removable

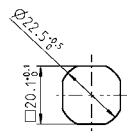
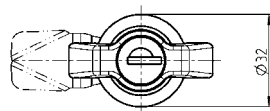
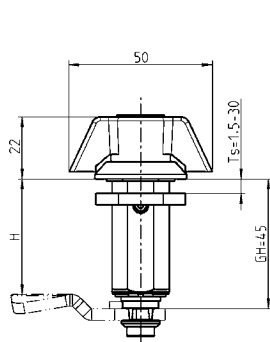
Unlock:
Reversed rotation

Compression latch with T-handle



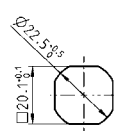
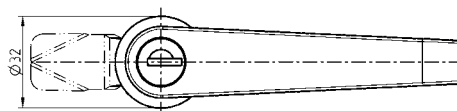
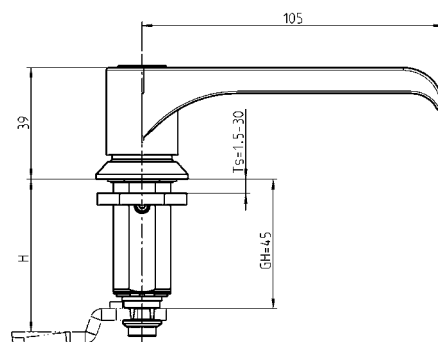
Cut out

Compression latch with wing knob



Cut out

Compression latch with L-handle



Cut out



Vibration proof

This compression latch is vibration-proof as such.
 This depends on the installation location and operational conditions.
 Specific checks are necessary and/or supplementary measures of fastening required.

Handle and housing zinc die, black powder coated, cylinder zinc die, with stainless steel cap and shutter, nut and screw zinc plated m.s. with spring and seal
 Each cylinder has one silver steel key with polyamide grip.
 Key removable in both positions.

	non locking	keyed EK 333	keyed different
Wing knob	1000-U826	1000-U827	1000-U828
T-handle	1000-U820	1000-U821	1000-U822
L-handle	1000-U823	1000-U824	1000-U825

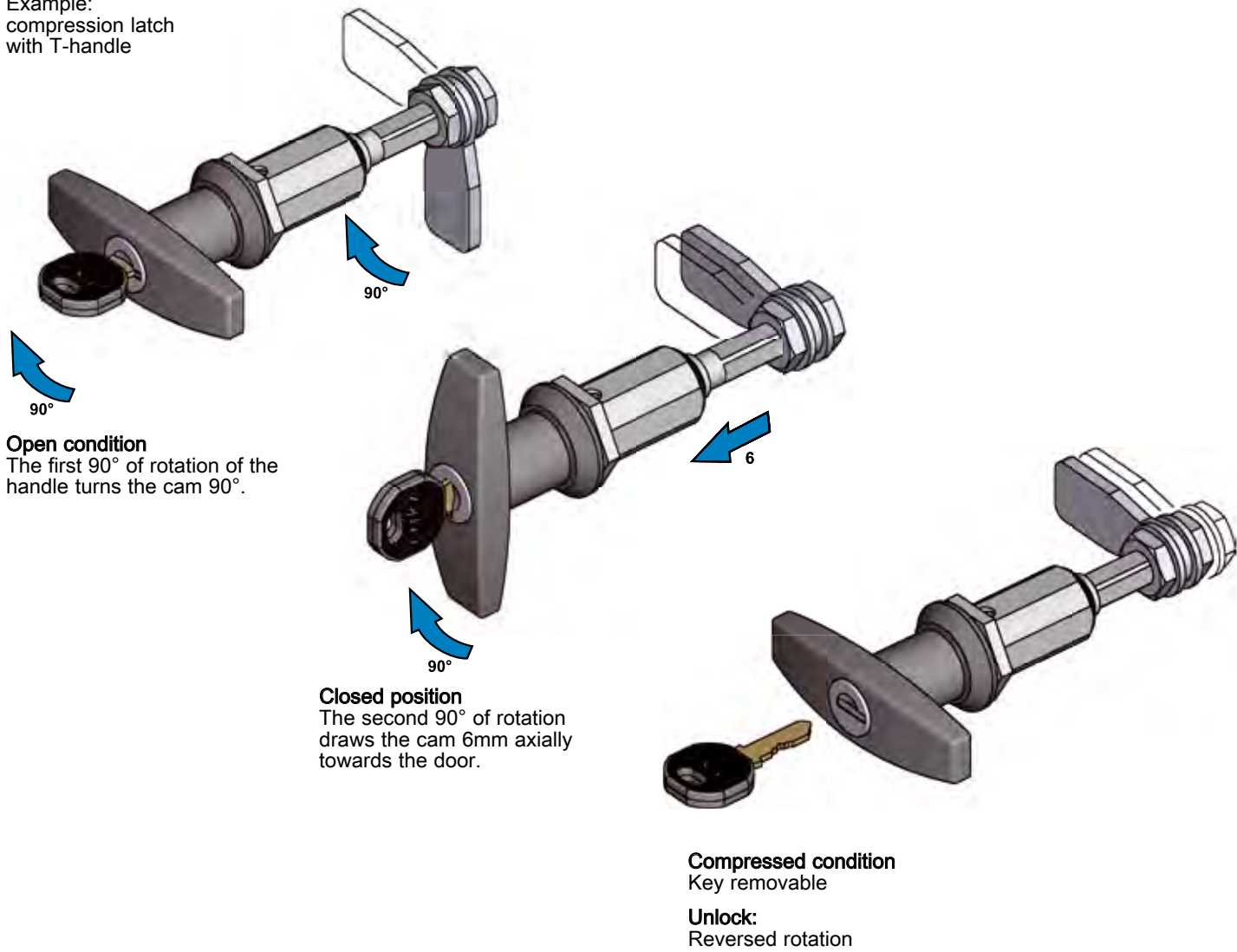
On request:
 – Stainless version

Further parts see page
 – cam with catch 1.5-820
 – dust cap for T-handle 1.5-250

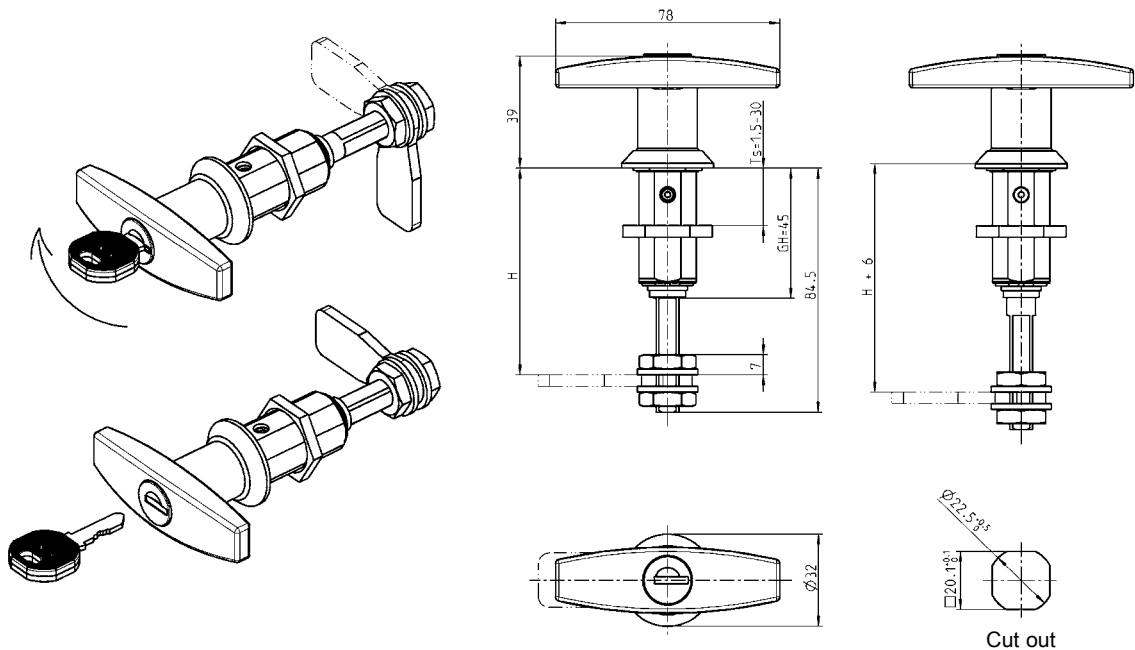
Compression latch with handle with adjustable cam height

PROGRAM 1000

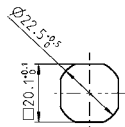
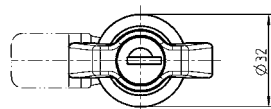
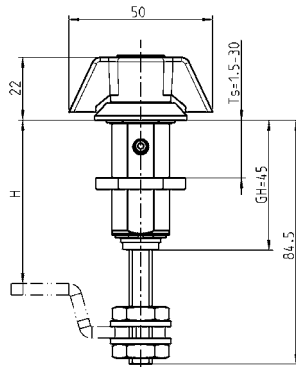
Example:
compression latch
with T-handle



Compression latch with T-handle

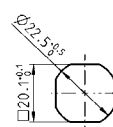
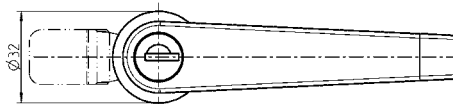
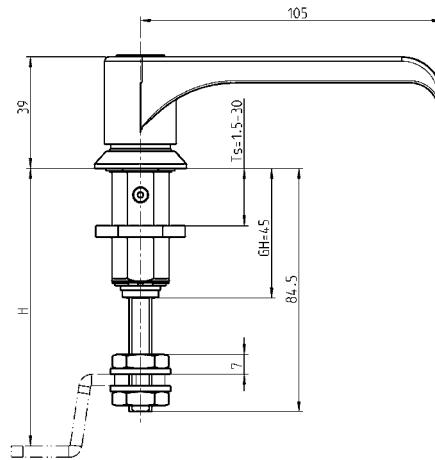


Compression latch with wing knob



Cut out

Compression latch with L-handle



Cut out



Vibration proof

This compression latch is vibration-proof as such.
 This depends on the installation location and operational conditions.
 Specific checks are necessary and/or supplementary measures of fastening required.

Stainless steel version on request.

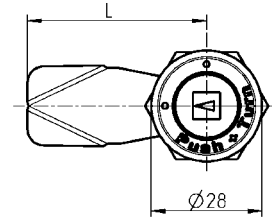
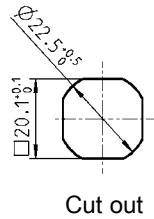
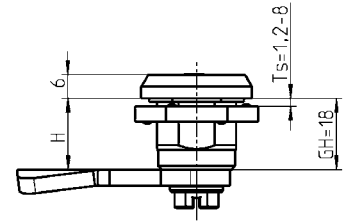
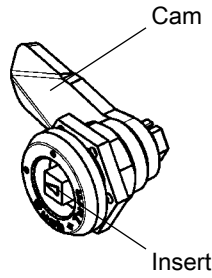
Handle and housing zinc die black powder coated, cylinder zinc die with stainless steel cap and dust cover, nut and screw zinc plated with spring and seal. Each cylinder has one silver steel key with polyamide grip. Key removable in both positions.

	non locking	keyed EK 333	keyed different
Wing knob	1000-U790	1000-U789	1000-U791
T-handle	1000-U785	1000-U784	1000-U792
L-handle	1000-U788	1000-U787	1000-U793

Further parts see page
 – Cam 1.5-840
 – Dust cap for T-handle 1.5-250



for stainless steel version



Press down insert and turn quarter turn!

Safety quarter turn:

This lock is vibration proof as such. Depending on the installation location and operational conditions, specific checks are necessary and/or supplementary measures of fastening required.

Note:

Only cams without catch can be used. The H-dimension will be reduced by 2 mm if the opening handle is installed

Railway version is compliant with RIC.

On request:

- Further inserts

Further parts see page

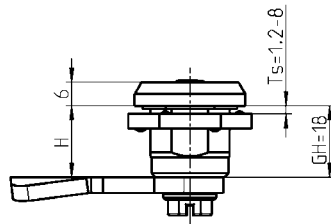
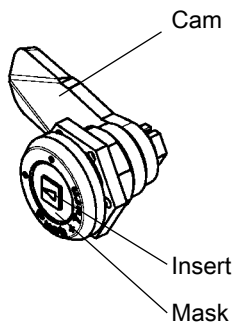
- Cam without catch 1.5-820
- Slam lock 1.6-120
- Dust cap 1.5-250
- Key 5.1-120

Housing and insert material of your choice, mask zinc die raw, screw and earthnut m.s. zinc plated and/or screw and nut stainless steel, with spring and seal		
	zinc die chrome pl.	AISI 316
Square 6	on request	1000-U817-01PH
Square 7	1000-U817-02IA	on request
Square 8	1000-U817-03IA	1000-U817-03PH
Square 8 slotted	on request	on request
Triangular 6.5 CNOMO	on request	on request
Triangular 7	1000-U817-04IA	on request
Triangular 8	1000-U817-05IA	1000-U817-05PH
Triangular 9	on request	on request
Triangular 10	on request	1000-U817-07PH
Double bit 3	on request	on request
Double bit 5	on request	on request
Hexagon female 8mm	on request	1000-U817-24PH
Hexagon female 10mm	on request	on request
Square female 6mm	on request	on request
Square female 7	on request	on request
Square female 8	on request	on request
Daimler Benz	on request	on request
Slot 1.2 x 3	1000-U817-16IA	on request
Slot 2 x 4	1000-U817-17IA	on request
Slot 2 x 4 coinproof	on request	on request
Crown type	on request	on request
Eastern Europe Ø 13	on request	on request
Hexagon female 8mm with pin	on request	on request
Railway version	1000-U817-23IA	on request

Latches and handles

Safety quarter turn with mask

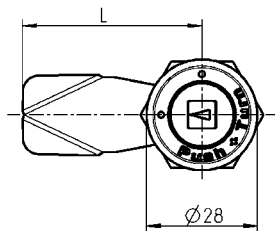
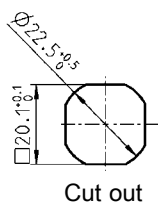
PROGRAM 1000



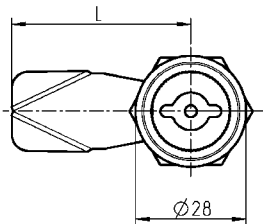
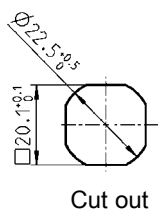
for stainless steel version



Insert square or triangular



Insert double bit



Press down insert and turn quarter turn!

Safety quarter turn:
This lock is vibration proof as such. Depending on the installation location and operational conditions, specific checks are necessary and/or supplementary measures of fastening required.

In case of version double bit: key only removable in locked Position.

Keyhole for double bit according to key DIN 43668.

Note:
Only cams without a catch can be used. In case of using the opening handle, the H-Dimension is decreased by 2 mm

Housing and insert material of your choice, mask zinc die raw, screw and earthnut m.s. zinc plated and/or scew and nut stainless steel, with spring and seal

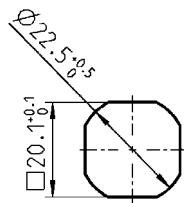
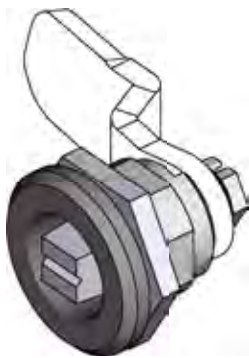
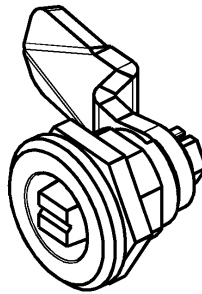
	zinc die chrome pl.	AISI 316
Square 6	on request	on request
Square 7	1000-U818-02IA	on request
Square 8	1000-U818-03IA	on request
Square 8 slotted	on request	on request
Triangular 6.5 CNOMO	on request	on request
Triangular 7	1000-U818-04IA	on request
Triangular 8	1000-U818-05IA	on request
Triangular 9	on request	on request
Triangular 10	on request	on request

Housing and insert material of your choice, mask zinc die raw, screw and earthnut m.s. zinc plated and/or screw and nut stainless steel, with spring and seal

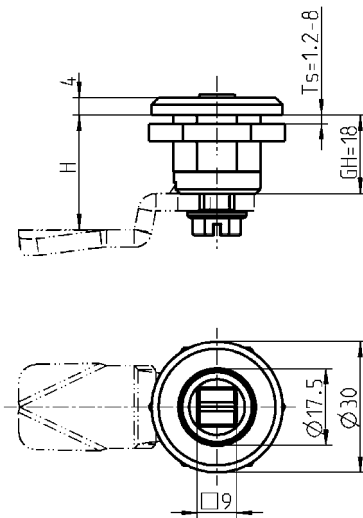
	zinc die chrome pl.	AISI 316
Double bit 3 RH version	1000-U819-01IA	on request
Double bit 3 LH version	1000-U819-03IA	on request
Double bit 5 RH version	1000-U819-02IA	on request
Double bit 5 LH version	1000-U819-04IA	on request

On request:
– further inserts

Further parts see page
– Cam without catch 1.5-820
– Slam lock 1.6-120
– Dust cap 1.5-250
– Key 5.1-120



Cut out



Railway version is compliant with RIC.

Housing zinc die, surface upon request, screw nut and earthnut m.s. zinc plated, insert of your choice		
insert m.s. zinc plated	Nut	Earthnut
housing chrome plated	1000-U431	1000-U499
Housing black powder coated	1000-U432	1000-U500
Insert zinc die chrome plated	Nut	Earthnut
Housing chrome plated	1000-U431-01	-
Housing with insert, screw and nut AISI 304		
	1000-U431-PF	-
IP 65 is achieved by:		
Flat seal		1000-23
O-ring		1000-24
IP 66 is achieved by:		
Seal set		1000-U769
Assembly on request:		
without O-ring		1000-990
with O-ring		1000-991

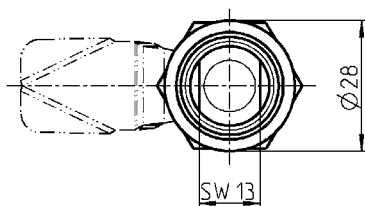
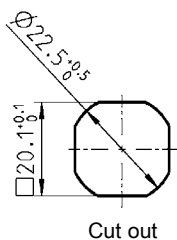
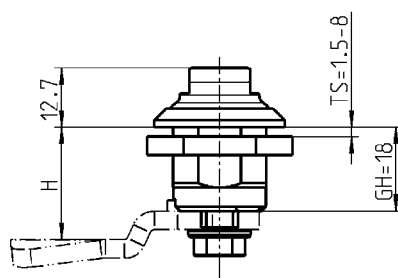
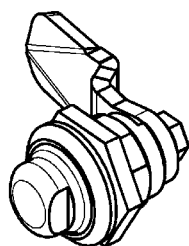
Further parts see page

- cam with catch 1.5-820
- Slam lock 1.6-120
- Dust cap 1.5-250
- Key 5.1-120

Stainless steel quarter turn for hygienic areas

PROGRAM 1000

The quarter turn for hygienic areas
meets hygiene standard acc. to DIN EN 1672- and DIN EN 14159



Quarter turn AISI 316L, with seal

1000-U838

Key zinc die raw

1004-53

Further parts see page
– cam with catch

1.5-820



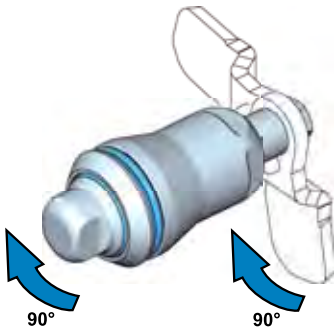
The quarter turn for hygienic areas meets hygiene standard acc. to DIN EN 1672- and DIN EN 14159

This item is completely IP 65, not only from outside to inside (common standard), but also within the application.

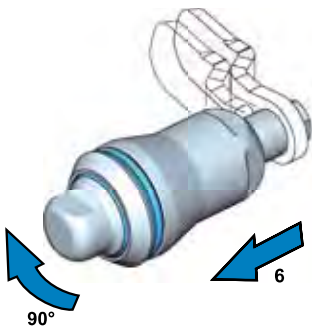
Vibration proof

The compression latch is vibration-proof as such. Depending on the installation location and operational conditions specific checks are necessary and/or supplementary measures of fastening required.

Latches and handles



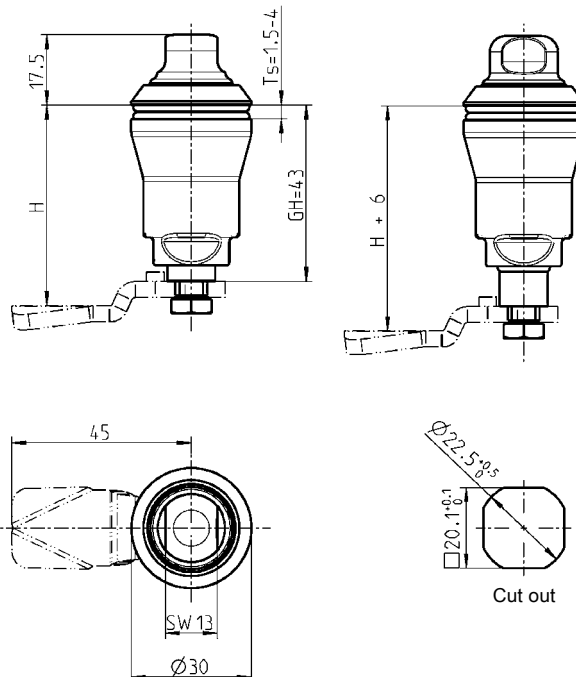
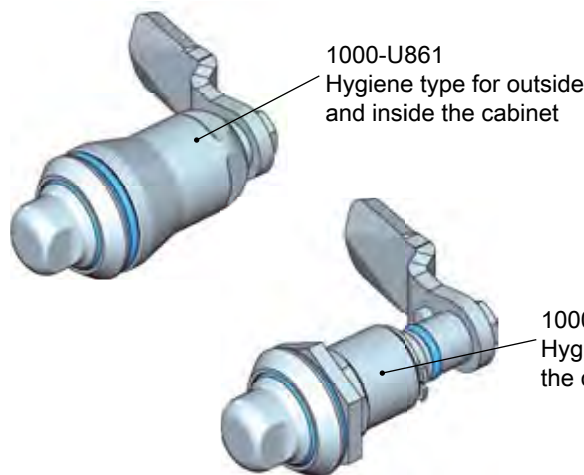
Open condition
The first 90° of rotation of the insert also turns the cam 90°.



Closed position
The second 90° of rotation of the insert draws the cam 6 mm toward the door axially.



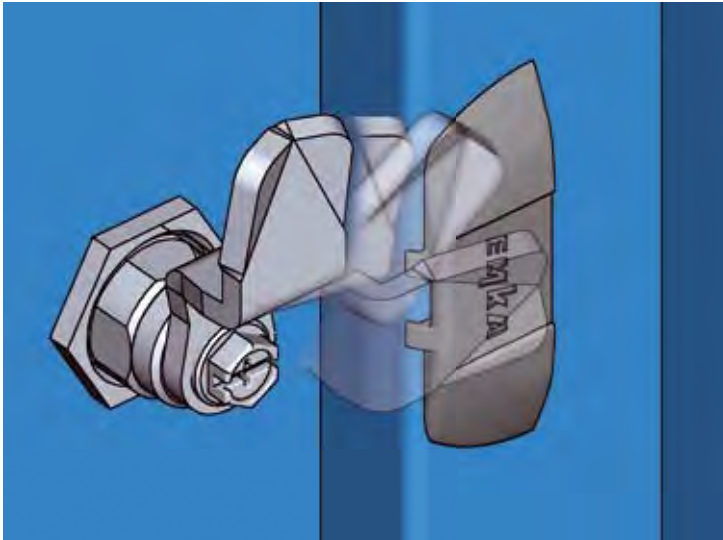
Compressed condition
Unlock:
Reversed rotation



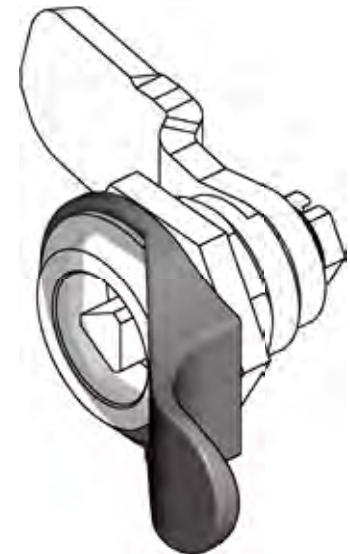
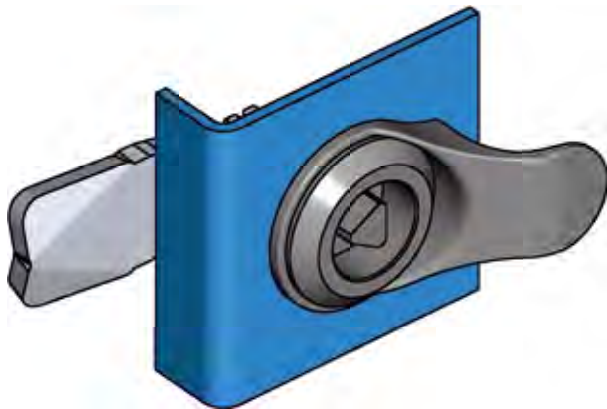
Compression latch for hygienic areas AISI 316L; with spring and seal	
Hygiene type for outside and inside the cabinet	1000-U861
Hygiene type for outside the cabinet, not for inside	1000-U862
Key zinc die raw	
	1004-53

Further parts see page
– Cam with or without catch 1.5-820

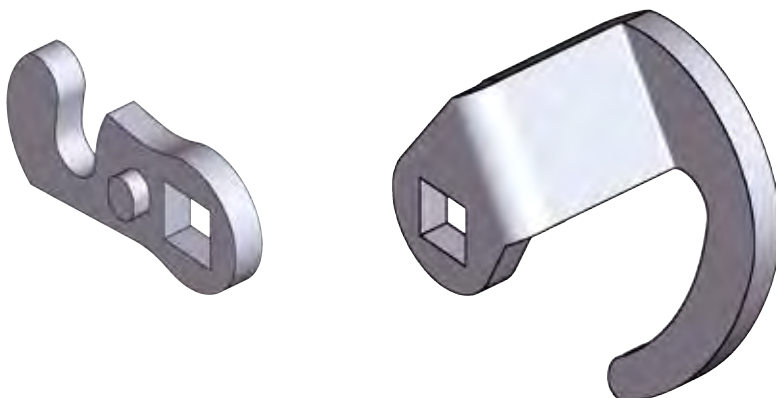
Ramp



Finger pull

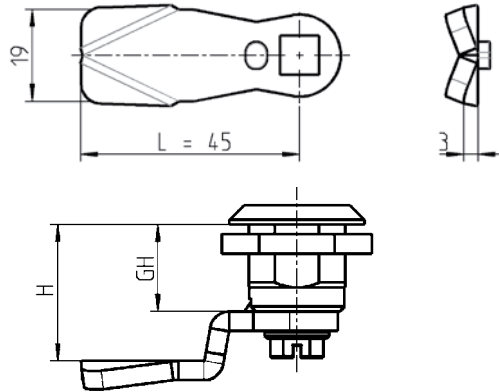


Hooked cam





t = 4



cam with catch



cam without catch

minus offset



straight version



plus offset

Note:
Further cams on request

Further parts see page

Part for cam with catch

- Chest handle 1.2-220
- Quarter turns 1.5-140
- 1.5-240
- 1.5-280
- 1.5-320
- 1.5-340
- 1.5-520
- 1.5-620
- 1.5-630

Part for cam without catch

- Quarter turns 1.5-160
- 1.5-220
- 1.5-336
- 1.5-420
- 1.5-430

Order example for cam without catch:

To order a cam without catch, please add -Z to the part number from the table below.
Example: You need a cam for housing GH = 18 without catch and with the H dimension of 22 mm from one of the available materials: m.s. zinc plated, AISI 304 or AISI 316.

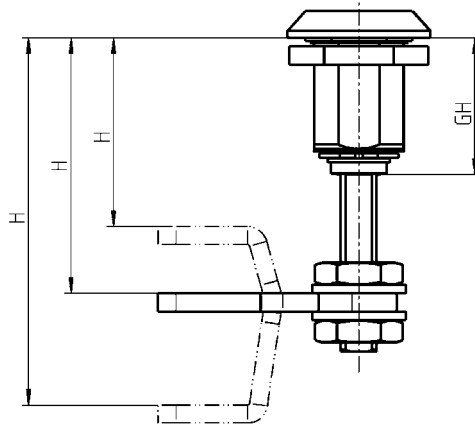
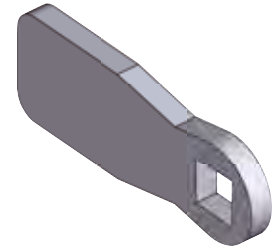
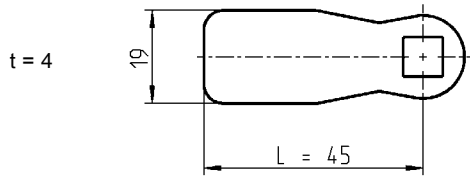
Please order using the following part nos.:

- for cam without catch m.s. zinc plated. = 1000-15-Z
- for cam without catch of AISI 304 = 1000-179-Z
- for cam without catch of AISI 316 = 1000-179-ZPD

Cam with catch material of choice

H für GH =	18	30	31	32	36	39	40	43	45	50	60	m.s. zinc plated	AISI 304	AISI 316
4	16	17	18	22	25	26	29	31	36	46	1000-112	-	-	
6	18	19	20	24	27	28	31	33	38	48	1000-22	1000-221	1000-221-PD	
8	20	21	22	26	29	30	33	35	40	50	1000-113	-	-	
10	22	23	24	28	31	32	35	37	42	52	1000-21	1000-223	1000-223-PD	
13	25	26	27	31	34	35	38	40	45	55	1000-20	-	-	
14	26	27	28	32	35	36	39	41	46	56	1000-19	1000-225	1000-225-PD	
16	28	29	30	34	37	38	41	43	48	58	1000-18	-	-	
18	30	31	32	36	39	40	43	45	50	60	1000-17	1000-227	1000-227-PD	
20	32	33	34	38	41	42	45	47	52	62	1000-16	1000-228	1000-228-PD	
22	34	35	36	40	43	44	47	49	54	64	1000-15	1000-179	1000-179-PD	
24	36	37	38	42	45	46	49	51	56	66	1000-14	1000-229	1000-229-PD	
25	37	38	39	43	46	47	50	52	57	67	1000-27	-	-	
26	38	39	40	44	47	48	51	53	58	68	1000-50	1000-230	1000-230-PD	
28	40	41	42	46	49	50	53	55	60	70	1000-13	1000-180	1000-180-PD	
30	42	43	44	48	51	52	55	57	62	72	1000-28	-	-	
32	44	45	46	50	53	54	57	59	64	74	1000-26	-	-	
34	46	46	48	52	55	56	59	61	66	76	1000-12	-	-	
35	47	48	49	53	56	57	60	62	67	77	1000-11	-	-	
36	48	49	50	54	57	58	61	63	68	78	1000-51	-	-	
38	50	51	52	56	59	60	63	65	70	80	1000-52	-	-	
40	52	53	54	58	61	62	65	67	72	82	1000-25	-	-	
42	54	55	56	60	63	64	67	69	74	84	1000-53	-	-	
44	56	57	58	62	65	66	69	71	76	86	1000-54	-	-	
45	57	58	59	63	66	67	70	72	77	87	1000-10	-	-	
47	59	60	61	65	68	69	72	74	79	89	1000-55	-	-	
50	62	63	64	68	71	72	75	77	82	92	1000-56	-	-	

Latches and handles

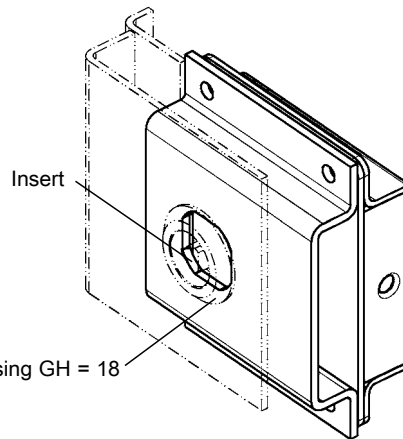
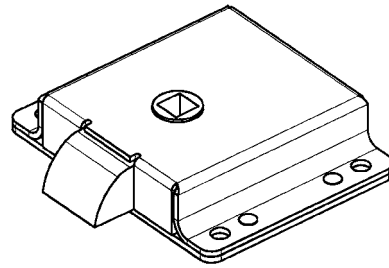


Cam m.s. zinc plated		
for GH = 31	H	GH = 31
straight	38 - 58	1000-476
offset +/- 14 mm	24 - 44 ; 52 - 72	1000-478
offset +/- 26 mm	12 - 32 ; 64 - 84	1000-477
for GH = 45	H	GH = 45
straight	52 - 72	1000-476
offset +/- 14 mm	38 - 58 ; 66 - 86	1000-478
offset +/- 26 mm	26 - 46 ; 78 - 98	1000-477
for GH = 64	H	GH = 64
straight	71 - 91	1000-476
offset +/- 14 mm	57 - 77 ; 85 - 105	1000-478
offset +/- 26 mm	45 - 65 ; 97 - 117	1000-477

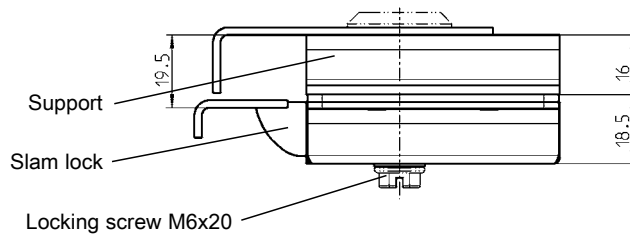
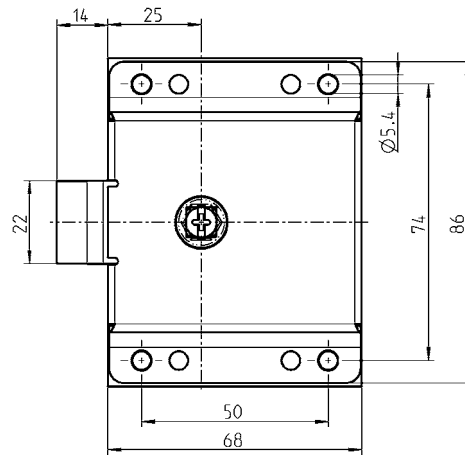
On request:
– further cams

Further parts see page

– Chest handle 1.2-240
– Quarter turns 1.5-290
1.5-330
1.5-350



- Door edge to sq drive c/l approx. 25 mm

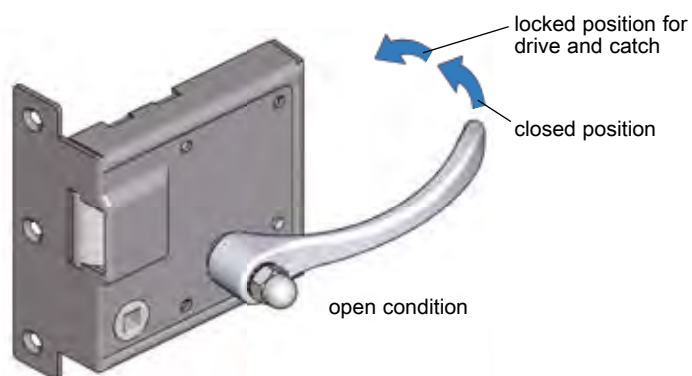


Further parts see page
– Quarter turns

- 1.5-140
- 1.5-420
- 1.5-430
- 1.5-520

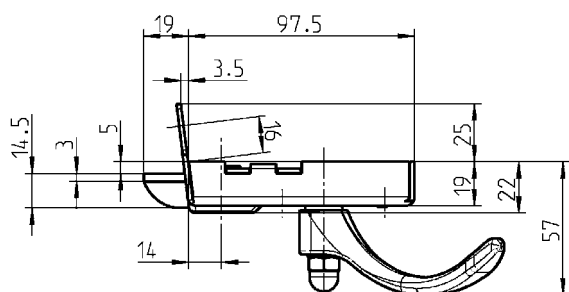
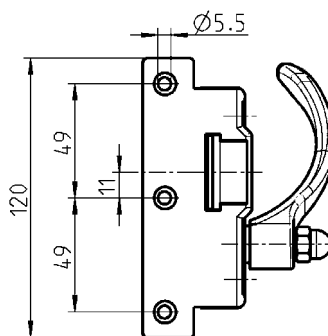
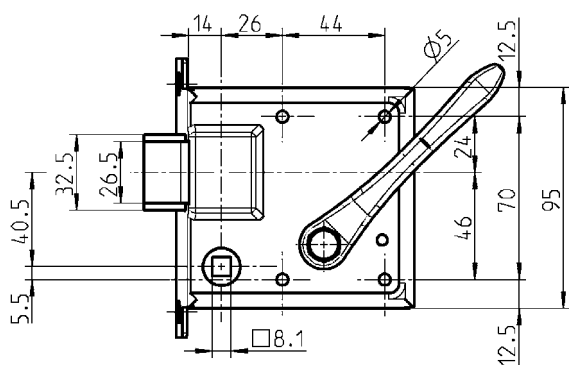
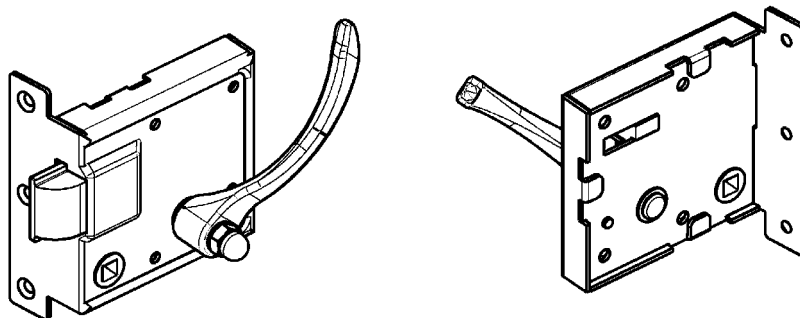
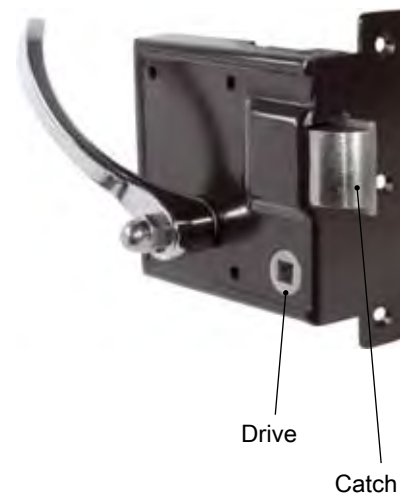
Slam latch m.s. zinc pl., zinc die raw and spring steel Support and vibration proof screw m.s. zinc plated		
Slam lock		1034-U1
Support		1034-03
Locking screw M6x20		1000-277-04JB

Slam lock PROGRAM 1034



LH version

RH version



- inside handle available separately
- Locking via lock and nut
- Door edge to sq drive c/l approx. 15 mm

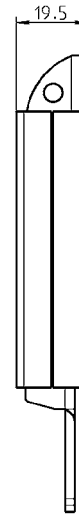
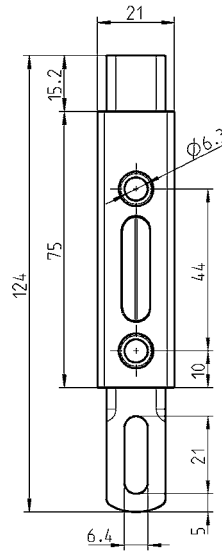
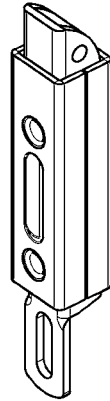
Slam lock m.s. electroplated black; case GTW, interior handle zinc plated, bottom panel and other components m.s.; drive and lock washer ms zinc plated, with spring

Right, mirror image

1034-SU12

left, as shown

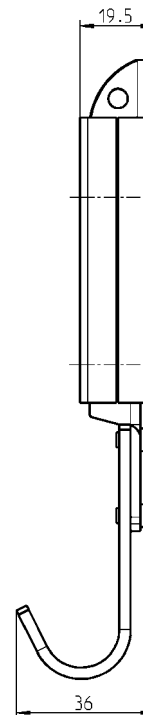
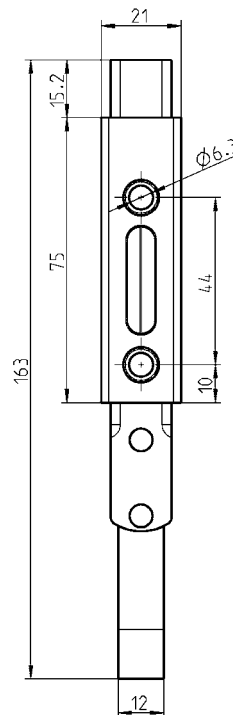
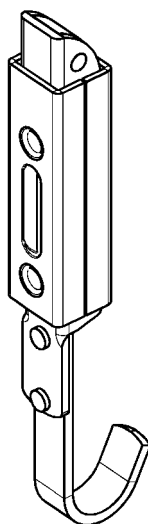
1034-SU11



Slam locks with different tensions on request

Slam lock m.s. zinc plated; with spring

1085-U1

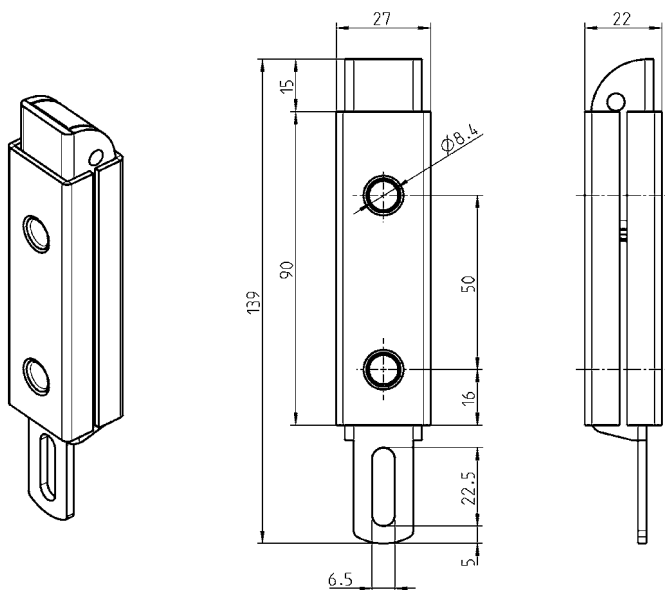


Slam locks with different tensions on request

Slam-lock m.s. zinc plated; with spring

1085-SU8

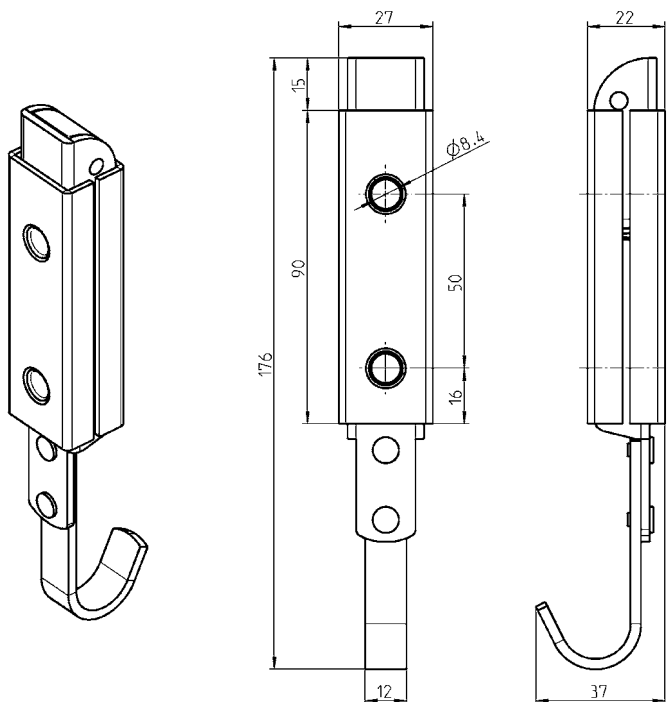
Slam lock PROGRAM 1085



Slam lock m.s. zinc plated; with spring

1085-SU7

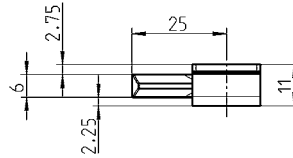
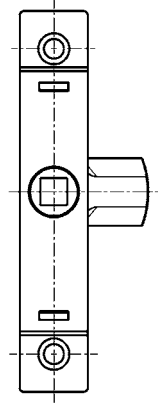
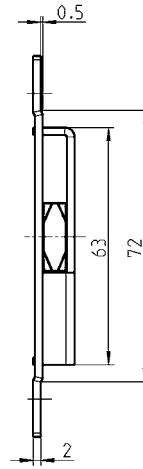
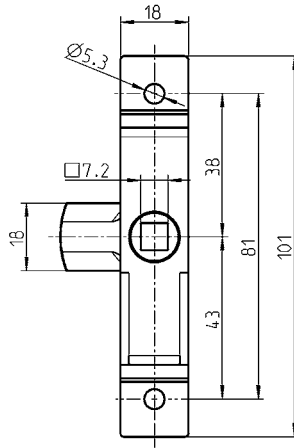
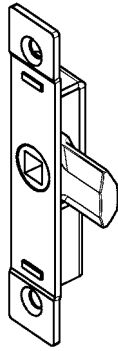
Slam locks with different tensions on request



Slam lock m.s. zinc plated; with spring

1085-SU6

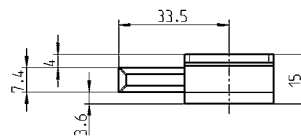
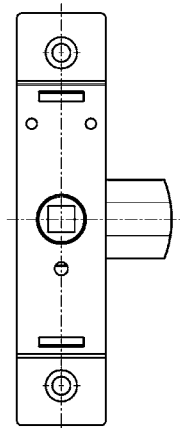
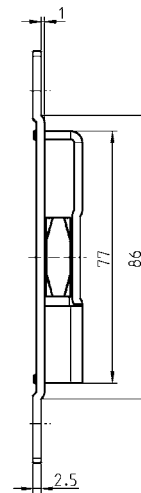
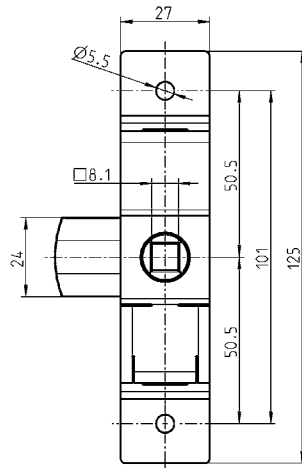
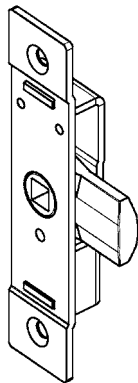
Slam locks with different tensions on request



- Door edge to sq drive c/l approx. 9.5 mm

Latch lock m.s. zinc plated; cam zinc die raw; with spring

1001-U43

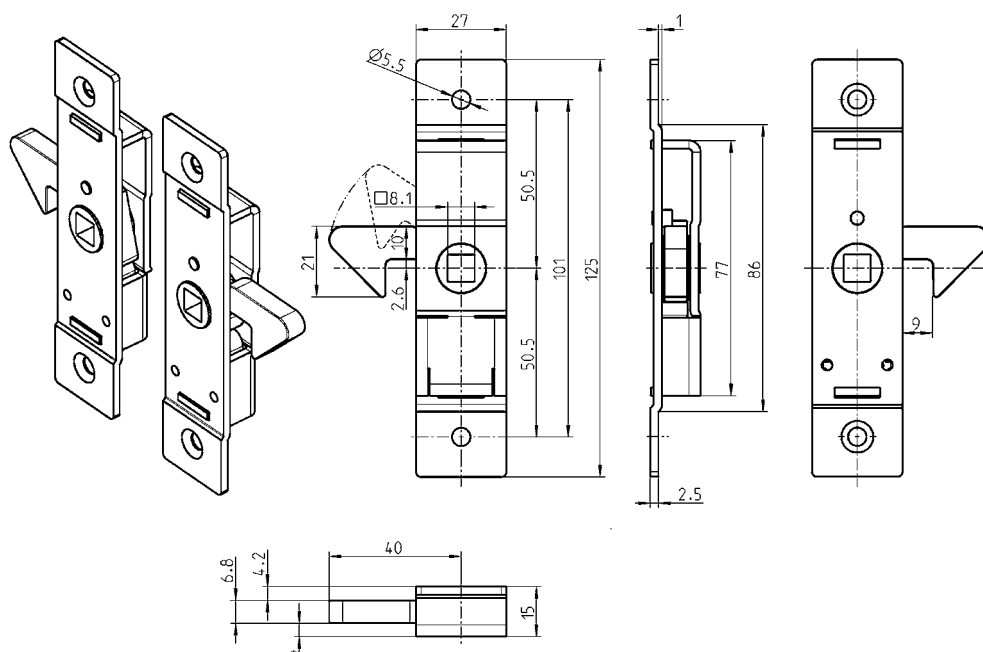


- Door edge to sq drive c/l approx. 13 mm

Latch lock m.s. zinc plated; cam zinc die raw; with spring

1001-U44

Hook latch Dead-bolt lock PROGRAM 1001, 1080



■ Door edge to sq drive c/l approx. 13 mm

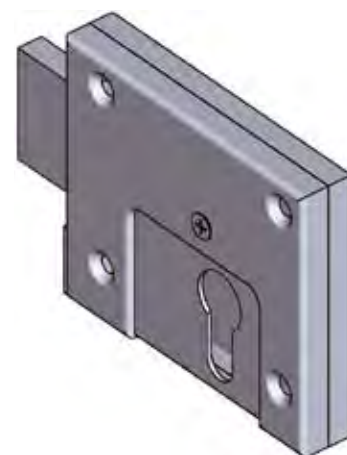
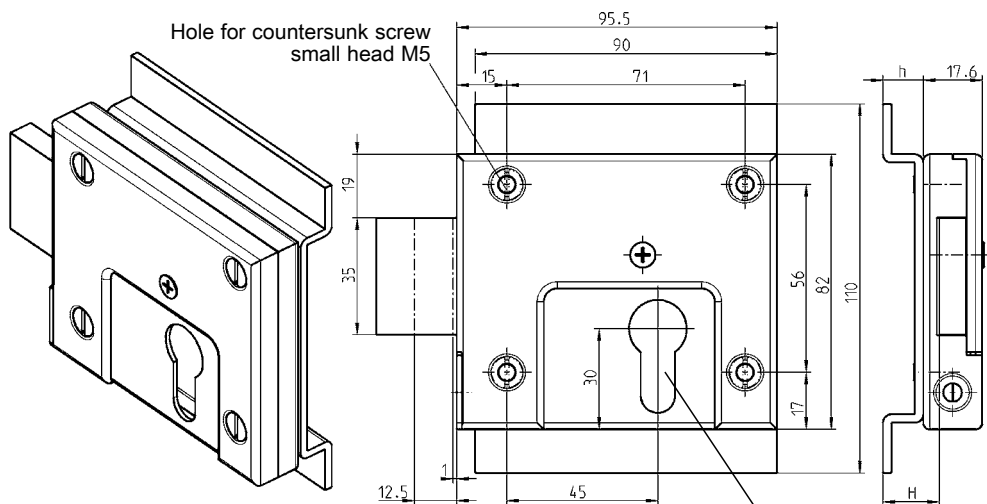
Latch lock m.s. zinc plated; hook cam zinc die raw; with spring

right, as drawn

1001-U45-RE

left, mirror image

1001-U45-LI



Dead-bolt lock for both LH/RH

small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047

Dead-bolt lock m.s. zinc plated

1080-U1

Lock support m.s. raw

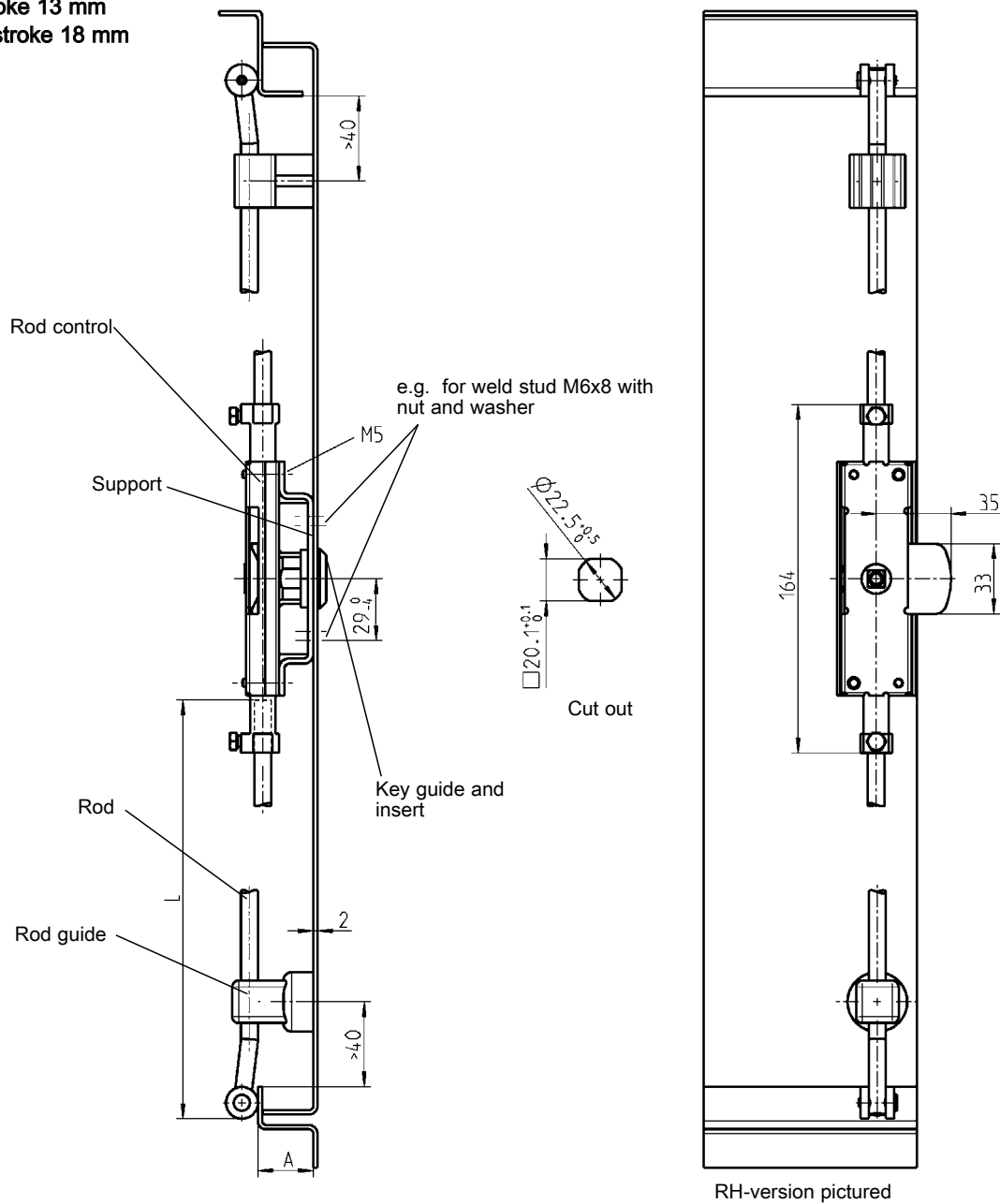
H	h	Profile cylinder length	
16,5	12	40	1080-01
26,5	22	50	1080-02

On request:
– further lock versions

Rod control and insert

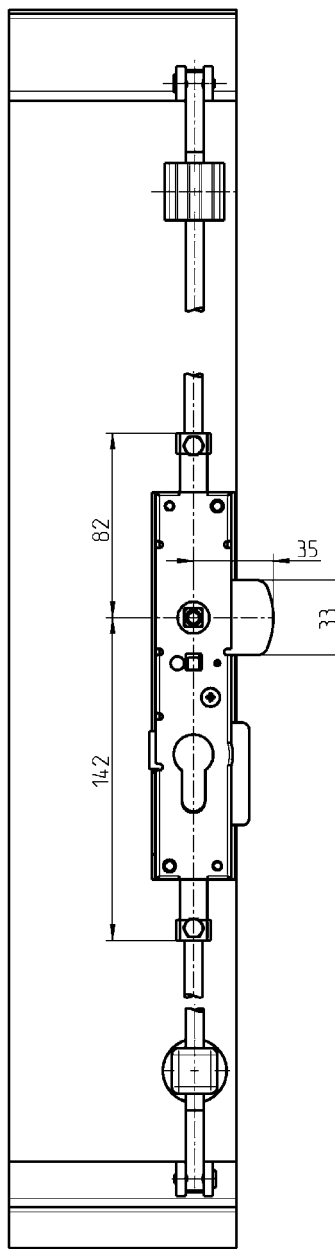
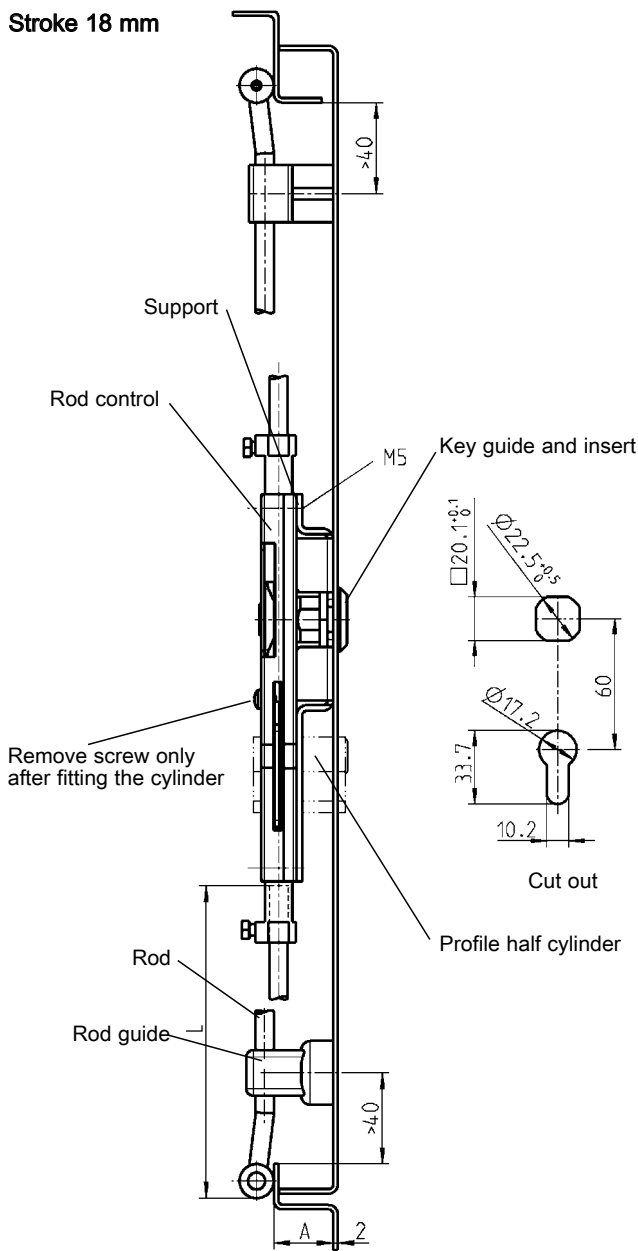
PROGRAM 1049, 1068

Stroke 13 mm
or stroke 18 mm

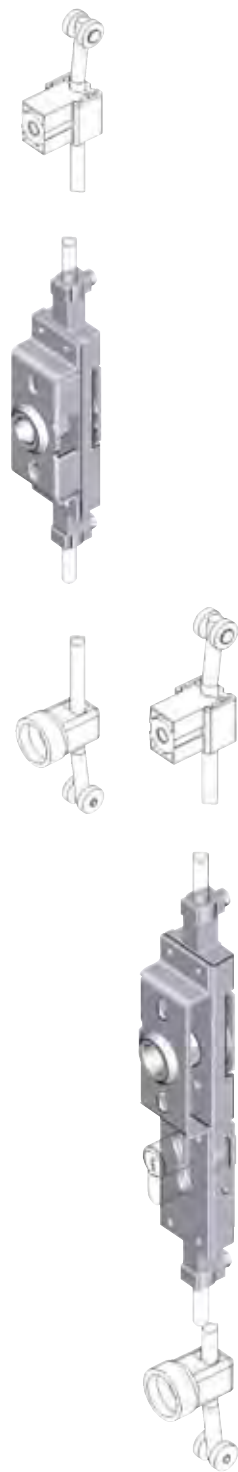


Rod control m.s. zinc plated			Rod control m.s. zinc pl. for profile cylinder		
	Stroke 13	Stroke 18			Stroke 18
RH	1049-U1	1049-U19	RH	-	1068-U1
LH	1049-U2	1049-U20	LH	-	1068-U2
Support m.s. zinc plated			Support m.s. zinc plated		
	A20	A26		A20	A26
RH/LH	1001-47	1001-50	RH	1001-45	1001-48
			LH	1001-46	1001-49

Stroke 18 mm



RH-version pictured

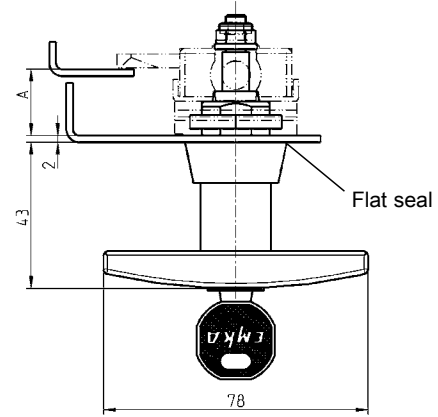
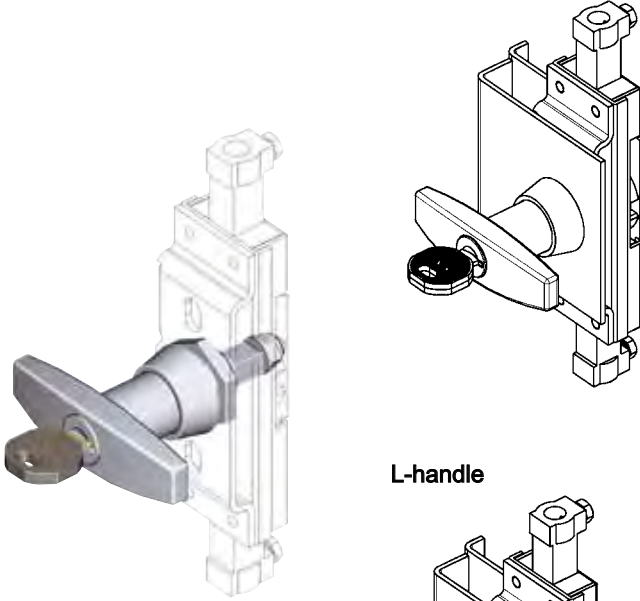


Key guide zinc die Chrome plated or powder coated black with nut m.s. zinc plated			Insert zinc die chrome pl.	
chrome plated	A20	A26	Square	6 1000-59
for square and triangular	1001-U13	1001-U14	Square	7 1000-04
for double bit	1001-U15	1001-U16	Square	8 1000-05
for Daimler Benz	1001-U17	1001-U18	Triangular	7 1000-06
for FIAT	1001-U32	-	Triangular	8 1000-07
black powder coated			for double bit	3 1000-08
for square and triangular	1001-U24	1001-U25	for double bit	5 1000-09
for double bit	1001-U26	1001-U27	for Daimler Benz	1000-64
for Daimler Benz	1001-U28	1001-U29	for FIAT	1000-352
for FIAT	1001-U33	-	IP 65 achieved by:	
			Flat seal	1000-23
			O-ring	1000-24

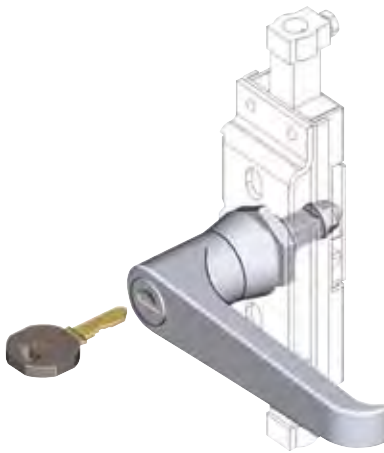
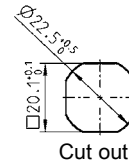
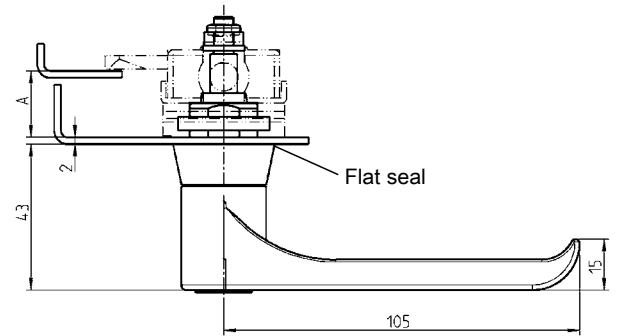
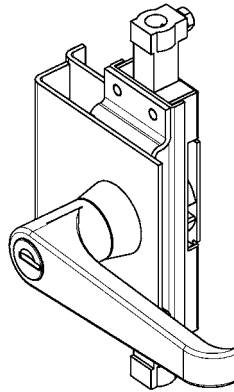
Further parts see page

- T-handle 1.7-340
- L-handle 1.7-340
- Rod on request
- Rod guide on request
- Profile half cylinder on request
- Key 5.1-120
- Escutcheon on request
- Adapter system for insulated doors 1.7-380

T-handle



L-handle



T-handle zinc die with nut and washer m.s. zinc pl., with seal.
For each round cylinder one silver steel key with polyamide grip GF black.

		non locking	Keyed EMKA 333	keyed different
A20	chrome plated	1102-U1	1102-U3	1102-U5
	black powder coated	1102-U7	1102-U9	1102-U11
A26	chrome plated	1102-U2	1102-U4	1102-U6
	black powder coated	1102-U8	1102-U10	1102-U12

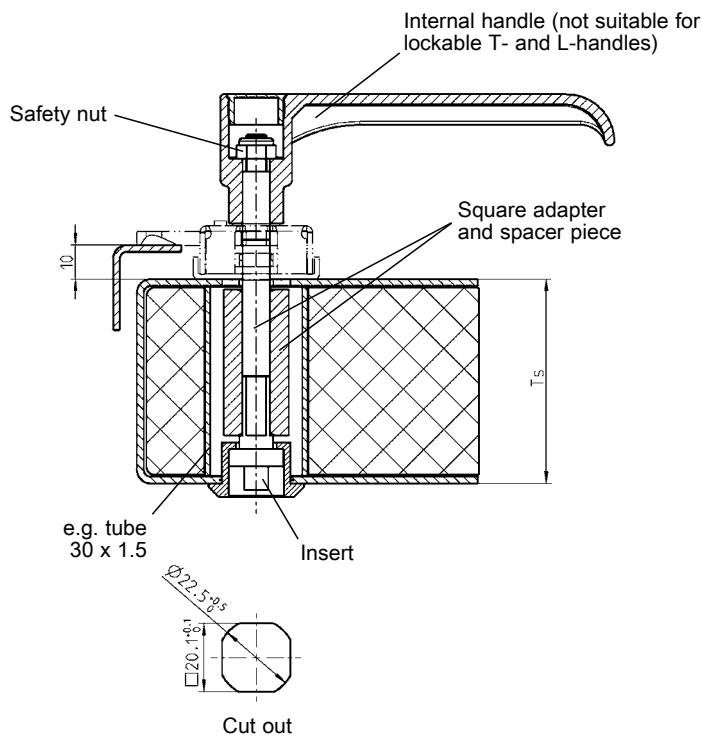
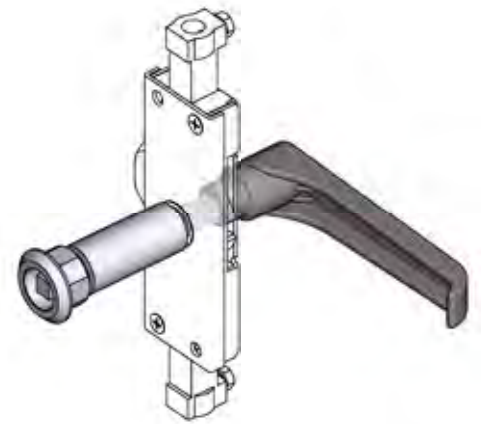
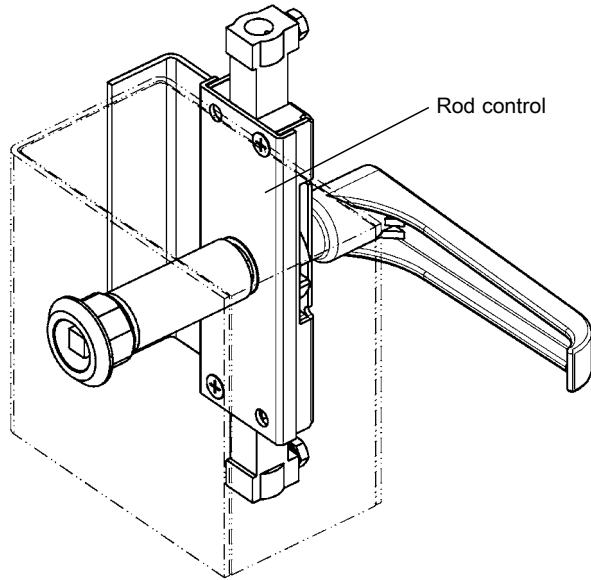
L-handle zinc die with nut and washer m.s. zinc pl., with seal.
For each round cylinder one silver steel key with polyamide grip GF black.
– Insert spring loaded –

		chrome plated		black powder coated	
		A20	A26	A20	A26
non locking	(IP 65)	1103-U1	1103-U2	1103-U21	1103-U22
keyed EMKA 333	(IP 65)	1103-U3	1103-U4	1103-U23	1103-U24
keyed different	(IP 65)	1103-U5	1103-U6	1103-U25	1103-U26
Square	7	1103-U7	1103-U8	1103-U27	1103-U28
Square	8	1103-U9	1103-U10	1103-U29	1103-U30
Triangular	7	1103-U11	1103-U12	1103-U31	1103-U32
Triangular	8	1103-U13	1103-U14	1103-U33	1103-U34
Double bit	3	1103-U15	1103-U16	1103-U35	1103-U36
Double bit	5	1103-U17	1103-U18	1103-U37	1103-U38
Daimler Benz		1103-U19	1103-U20	1103-U39	1103-U40

Further parts see page
– Dust cap for T-handle 1.5-250
– Rod control 1.7-320
– Adapter system for insulated doors 1.7-380
– Key 5.1-120

Adapter System for insulation doors

PROGRAM 1001

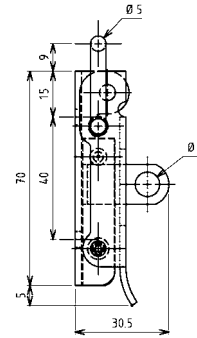
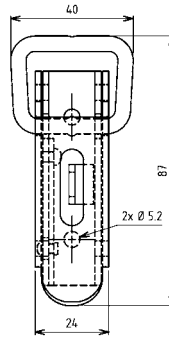


Adapter system pre-assembled with handle or insert, inserted into the aperture and held by locking nut M6.

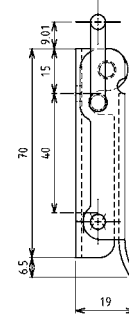
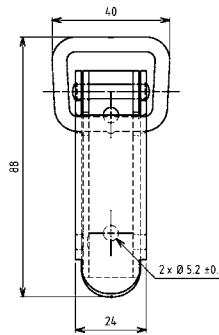
Insert, m.s. zinc plated key guide zinc die chrome plated safety nut m.s.zinc plated		Door thick- ness Ts	Square adapter m.s.z.pl.	Spacer piece aluminium
Square 7	1001-U21	20	–	–
Square 8	1001-U22	40	1x1001-65	1001-69
Double bit 5	1001-U23	50	1x1001-66	1001-70
Adapter for interior handle m.s.zinc plated		60	1x1001-67	1001-71
	1001-65	80	2x1001-66	1001-72
Int. handle polyamide black		100	2x1001-67	1001-73
	1000-U829			

Further parts see page
 – Rod control 1.7-320
 – T- or L-handle
 A = 26 1.7-340
 – Key 5.1-120
 – Lock against rotation on request

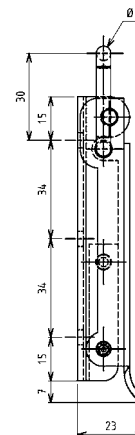
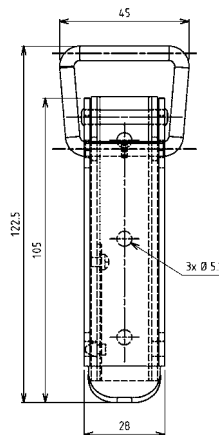
Latches and handles



Toggle latch with high opening resistance		
	without padlock facility	with padlock facility
Zinc plated steel DS plus Top Coat drilled	6002-U75-JQ	6002-U74-JQ
Toggle latch with low opening resistance		
	without padlock facility	with padlock facility
Zinc plated steel DS plus Top Coat drilled	6002-U77-JQ	6002-U73-JQ
AISI 304, drilled	6002-U77-PC	6002-U73-PC

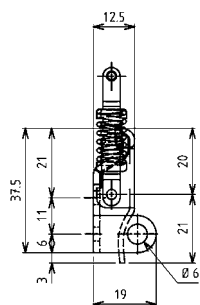
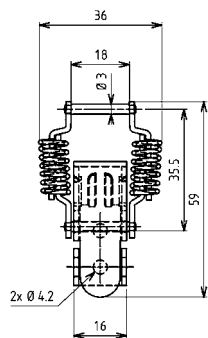


Toggle latch with low opening resistance, economic version		
	without padlock facility	with padlock facility
Zinc plated steel, drilled	6002-U76-JB	-

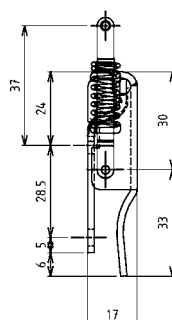
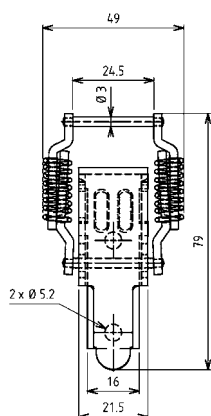


Toggle latch with high opening resistance		
	without padlock facility	with padlock facility
Raw steel drilled	6002-U15-KA	6002-U14-KA
Zinc plated steel DS plus Top Coat drilled	6002-U15-JQ	6002-U14-JQ
AISI 304 drilled	6002-U15-PC	6002-U14-PC

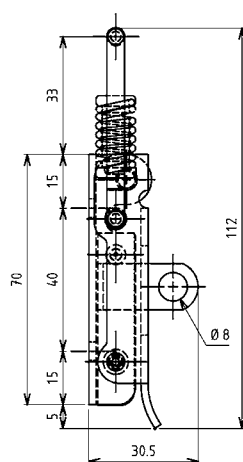
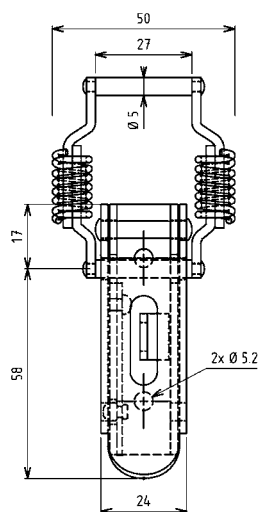
Toggle latches with springs for tolerance compensation PROGRAM 6000



Toggle latch	without padlock-facility	with padlock-facility
Raw steel drilled	6004-U22-KA	6004-U23-KA
Zinc plated steel DS plus Top Coat drilled	6004-U22-JQ	6004-U23-JQ
AISI 304 drilled	6004-U22-PC	6004-U23-PC

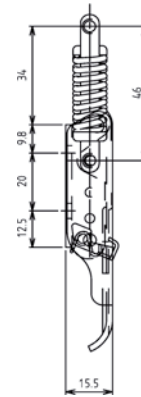
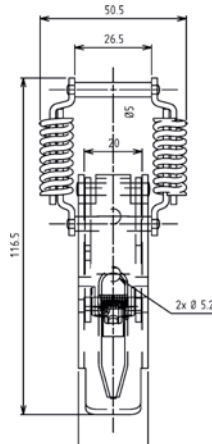


Toggle latch	without padlock-facility	with padlock-facility
Raw steel drilled	6004-U24-KA	6004-U25-KA
Zinc plated steel DS plus Top Coat drilled	6004-U24-JQ	6004-U25-JQ
AISI 304 drilled	6004-U24-PC	6004-U25-PC

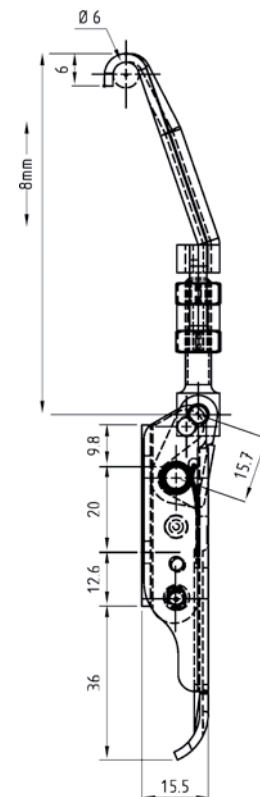
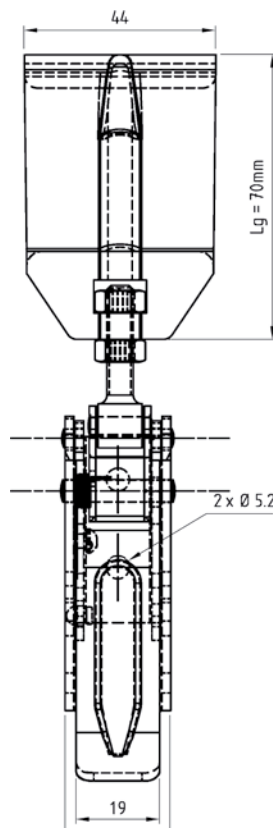


Toggle latch with high opening resistance	without padlock-facility	with padlock-facility
Raw steel drilled	6004-U26-KA	6004-U37-KA
Zinc plated steel DS plus Top Coat drilled	6004-U26-JQ	6004-U37-JQ

Latches and handles



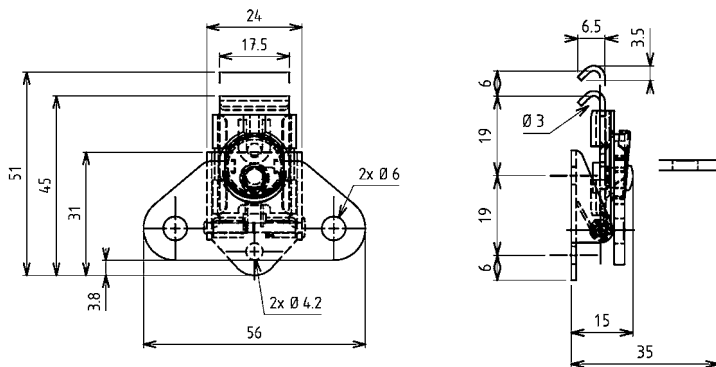
Toggle latch	without locking latch	with locking latch
Zinc plated steel DS plus Top Coat drilled	6004-U17-JQ	6004-U517-JQ
AISI 304, drilled	6004-U17-PC	6004-U517-PC



Toggle latch	without locking latch	with locking latch
Zinc plated steel DS plus Top Coat drilled	6008-U365-JQ	6008-U865-JQ
AISI 304, drilled	6008-U365-PC	6008-U865-PC

Compression latches; hooks

PROGRAM 6000



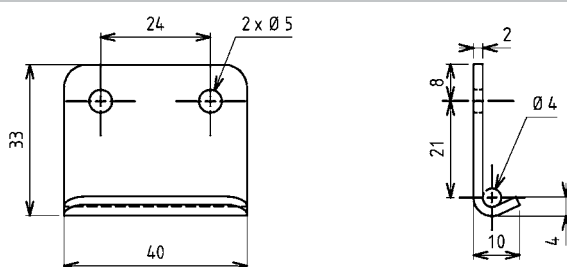
Compression latch

Zinc plated steel DS plus Top Coat drilled

6006-U10-JQ

AISI 304, drilled

6006-U10-PC



Catch plate

Raw steel drilled

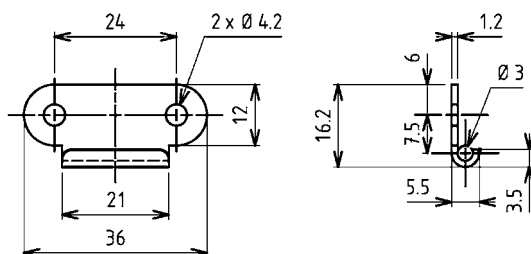
6010-18-KA

Zinc plated steel DS plus Top Coat drilled

6010-18-JQ

AISI 304 drilled

6010-18-PC



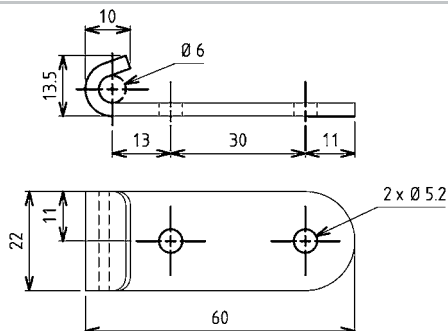
Catch plate

Zinc plated steel DS plus Top Coat drilled

6010-20-JQ

AISI 304, drilled

6010-20-PC



Catch plate

Raw steel, drilled

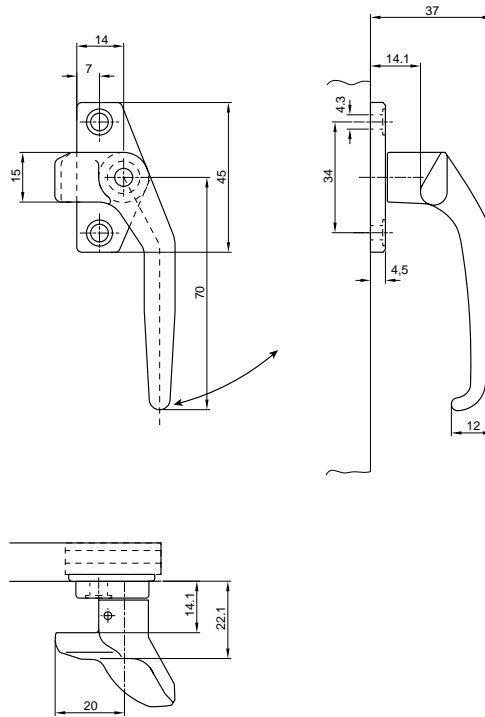
6010-12-KA

Zinc plated steel DS plus Top Coat drilled

6010-12-JQ

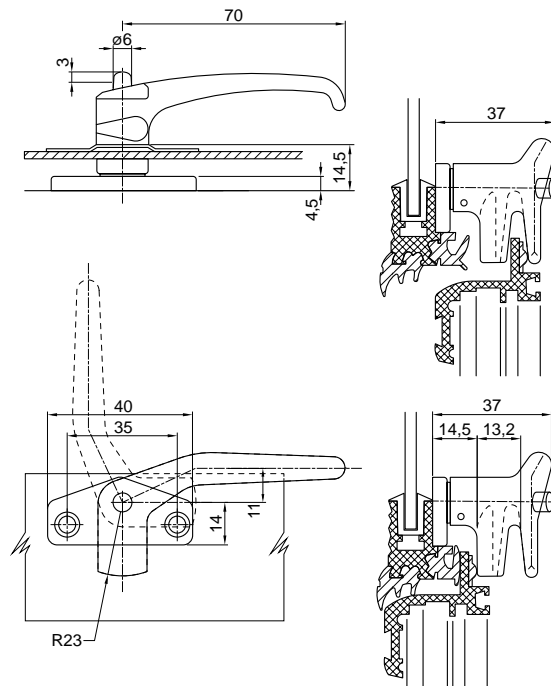
AISI 304, drilled

6010-12-PC



Rotary latch zinc die chrome plated

5072-U804-IA



Rotary latch with vent position zinc die chrome plated

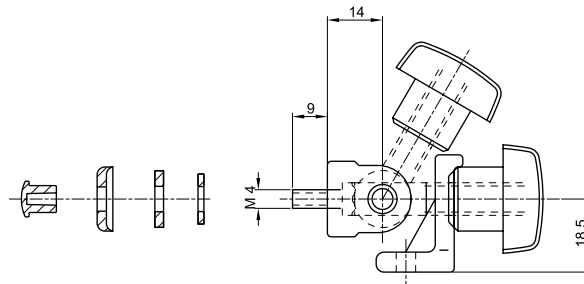
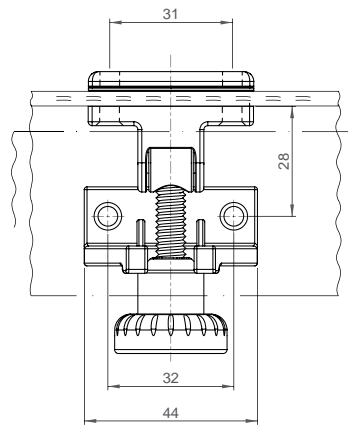
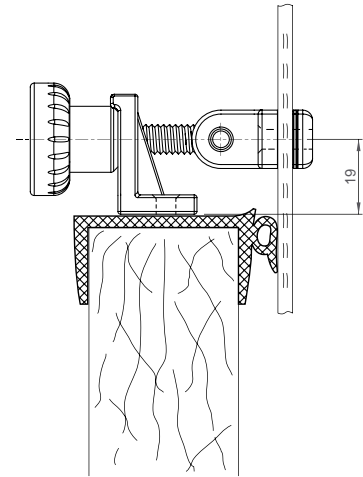
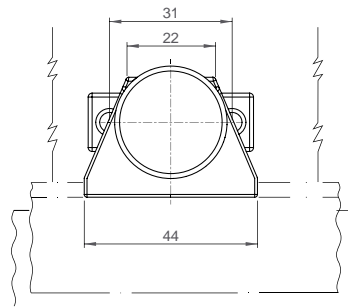
right, as drawn

5072-U805-IA

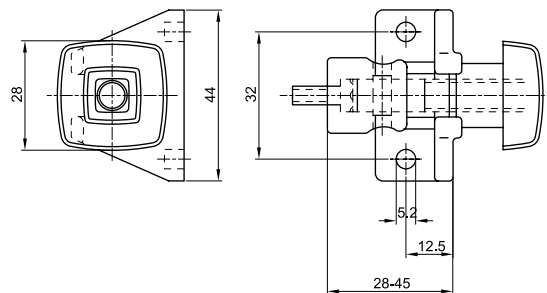
left, mirror image

5072-U806-IA





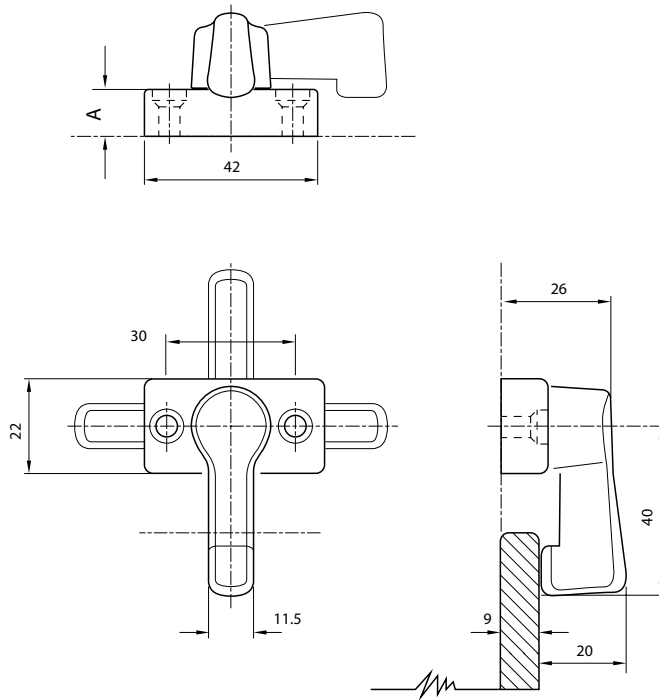
- with bracket
- with single point fastener



Spindle lock polyamide grey, washers plastic and aluminum; pin ms 5101-U816-BD

Door lock; catch plate

PROGRAM 5100



Latches and handles

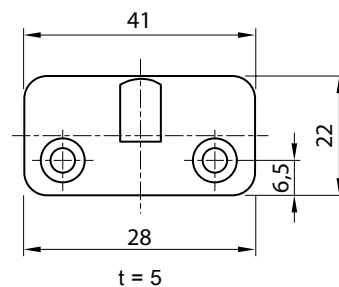
Door lock zinc die chrome plated

A = 5 mm

5100-U830-IA

A = 8 mm

5100-U831-IA



- suitable for all door locks

Catch plate polyamide colour of your choice

cream white

5100-4000-HA

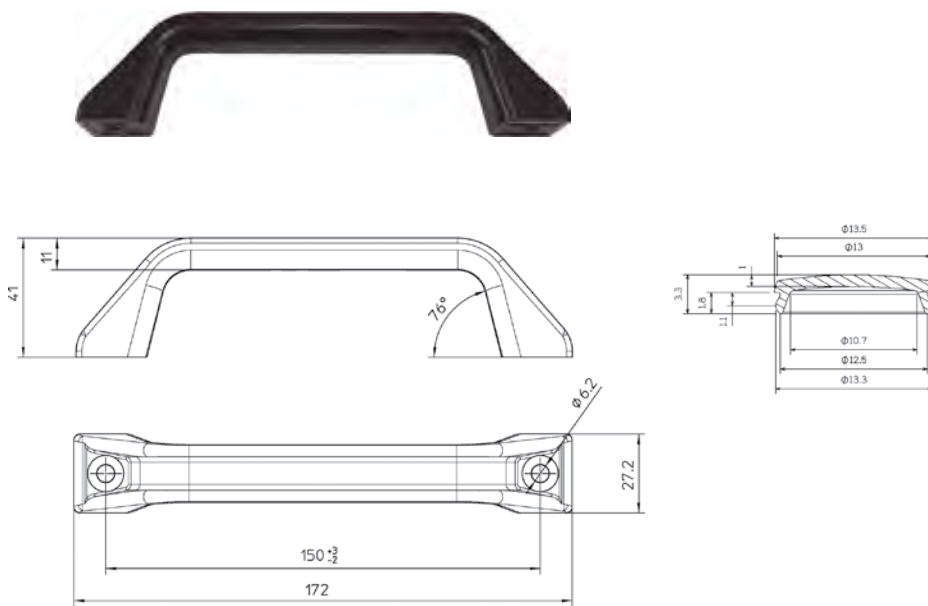
grey

5100-4000-BD

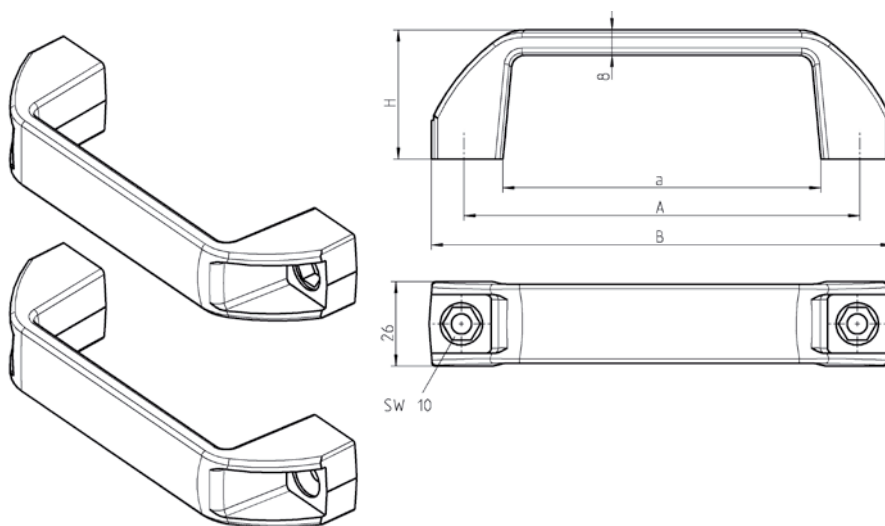


Polyamide handle

PROGRAM 1095



Handle polyamide black	
	1095-33
Cover polyamide black	
(2x per order)	1095-34

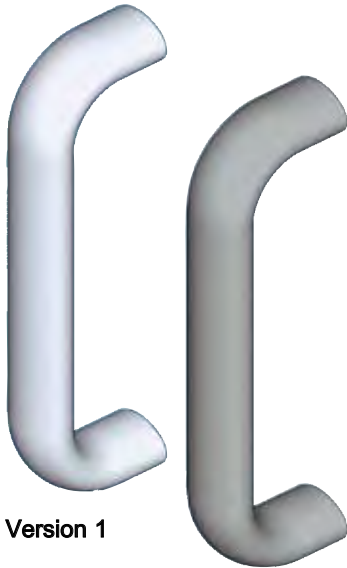


Version 1: a = 98; A = 122; B = 142; H = 40
 Version 2: a = 118,5; A = 152; B = 167; H = 53,5

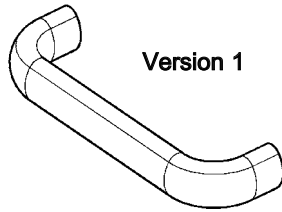
Handle polyamide GF black	Version 1	Version 2
Handle for hexagon or socket head screw M6 acc. to DIN 4017/1207	1095-05	1095-19
Handle for countersunk screw M5 or rivet 4.8 mm diameter	1095-06	-

small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047

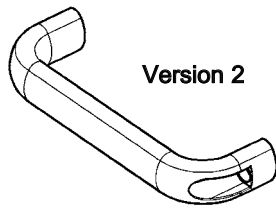
Fastening material is not included in scope.



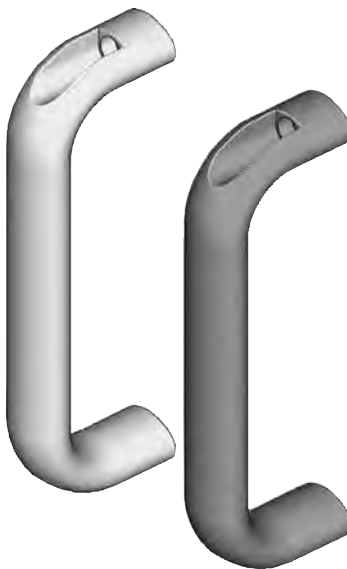
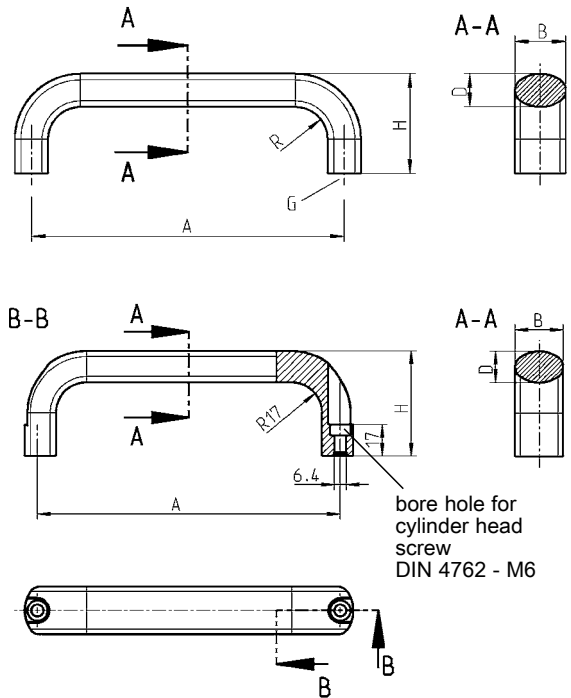
Version 1



Version 1



Version 2



Version 2

Bow-type handle, aluminium optionally raw, anodized black plastic coated or stainless steel AISI

Version 1

A	B	D	G	H	R	raw	anodized	black
100	20	13	M6x10	47	13	1095-26-100KB	1095-26-100NA	1095-26-100AA
112	20	13	M6x10	49	13	1095-26-112KB	1095-26-112NA	1095-26-112AA
112	26	17	M8x12	53	17	1095-27-112KB	1095-27-112NA	1095-27-112AA
128	20	13	M6x10	51	13	1095-26-128KB	1095-26-128NA	1095-26-128AA
128	26	17	M8x12	55	17	1095-27-128KB	1095-27-128NA	1095-27-128AA
160	20	13	M6x10	51	13	1095-26-160KB	1095-26-160NA	1095-26-160AA
160	26	17	M8x12	57	17	1095-27-160KB	1095-27-160NA	1095-27-160AA
192	26	17	M8x12	57	17	1095-26-192KB	1095-26-192NA	1095-26-192AA
300	26	17	M8x12	57	17	1095-26-300KB	1095-26-300NA	1095-26-300AA
400	26	17	M8x12	57	17	1095-26-400KB	1095-26-400NA	1095-26-400AA
500	26	17	M8x12	57	17	1095-26-500KB	1095-26-500NA	1095-26-500AA

Version 1

A	B	D	G	H	R			AISI 304
112	20	13	M6x10	49	13			1095-26-112PC
128	20	13	M6x10	51	13			1095-26-128PC

Bow-type handle, aluminium optionally raw, anodized, black plastic coated or stainless steel AISI

Version 2

A	B	D	H	raw	anodized	black
116	26	17	53	1095-28-116KB	1095-28-116NA	1095-28-116AA
132	26	17	55	1095-28-132KB	1095-28-132NA	1095-28-132AA
164	26	17	57	1095-28-164KB	1095-28-164NA	1095-28-164AA
196	26	17	57	1095-28-196KB	1095-28-196NA	1095-28-196AA

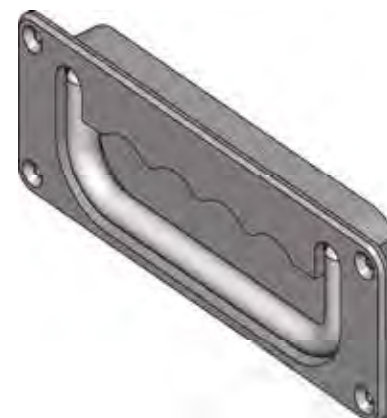
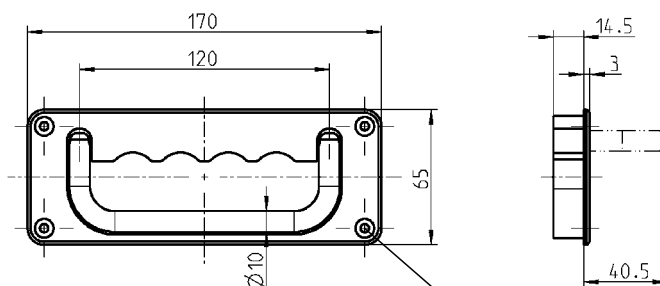
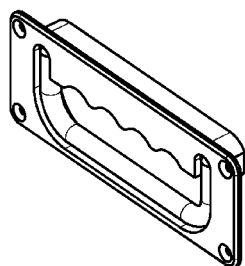
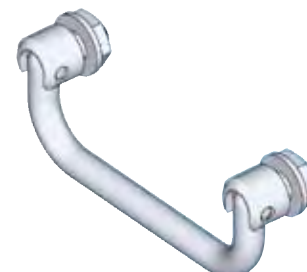
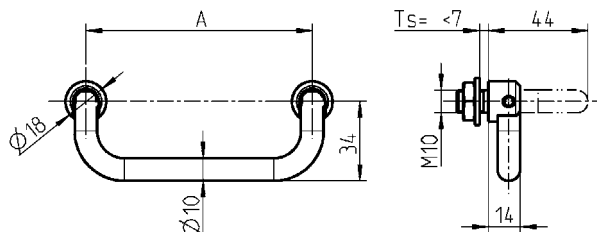
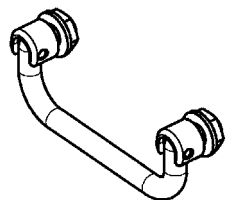
Version 2

A	B	D	H			AISI 316
116	26	17	53			1095-28-116PH

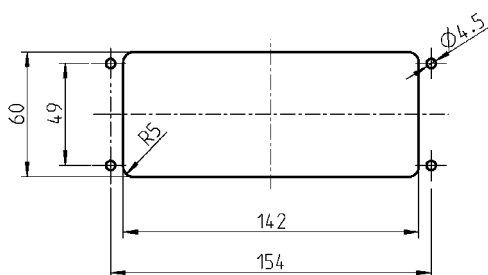
Fastening material is not included in scope.

Chest handle

PROGRAM 1095



* Fixing hole for counter-sunk screw M4 DIN 7991



Cut out

* Fastening material is not included in scope.

** = on request
 – Handle length 100 instead of 120
 – with spring reset of the handle when folded in

Chest handle m.s. chrome plated or stain. st. AISI 303, fastening mat. AISI 303

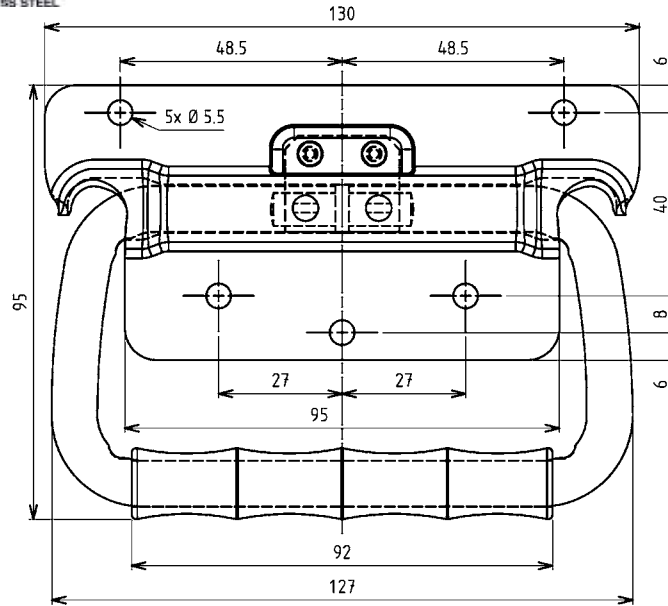
A	m.s. chrome pl.	AISI 303
100	1095-U32-100IA	1095-U32-100PF
120	1095-U32-120IA	1095-U32-120PF
180	1095-U32-180IA	1095-U32-180PF

Recessed chest handle m.s. chrome plated, tray zinc alloy black

with locking mechanism of the handle both when folded in and out	1095-U32-AA **
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STAINLESS STEEL

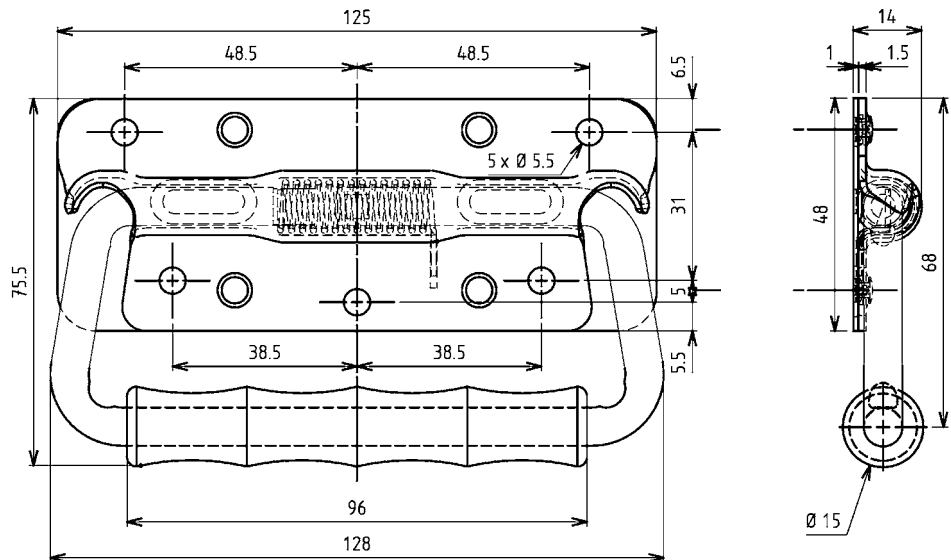


Chest handle		
	without leaf spring	with leaf spring
Zinc plated steel DS plus Top Coat drilled	6040-U24-JQ	6040-U23-JQ
AISI 304, drilled	6040-U24-PC	6040-U23-PC



STAINLESS STEEL

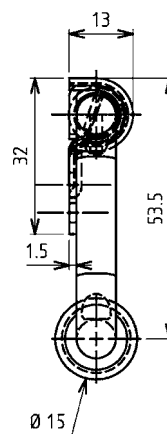
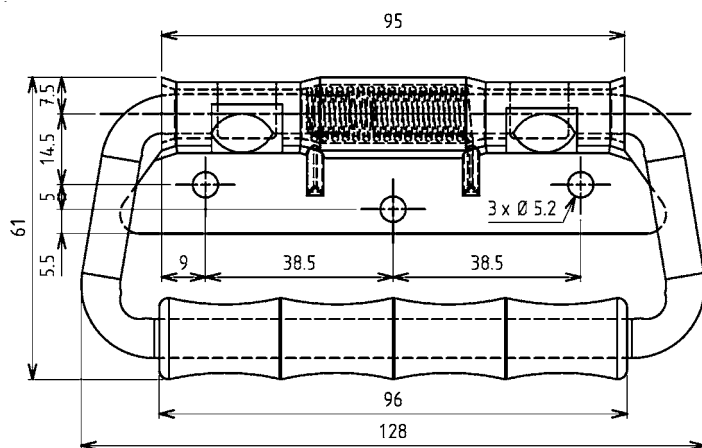
depicted with piano wire torsion spring and counter plate



Chest handle		
	without piano wire torsion spring and counter plate	with piano wire torsion spring
Zinc plated steel DS plus Top Coat drilled	6040-U34-JQ	6040-U33-JQ
AISI 304, drilled	6040-U34-PC	6040-U33-PC

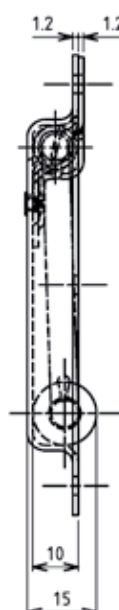
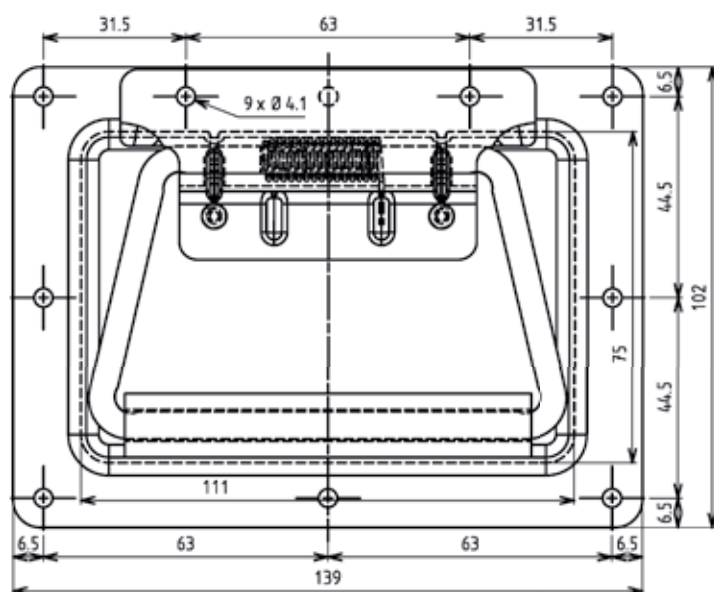
Handles

PROGRAM 6040



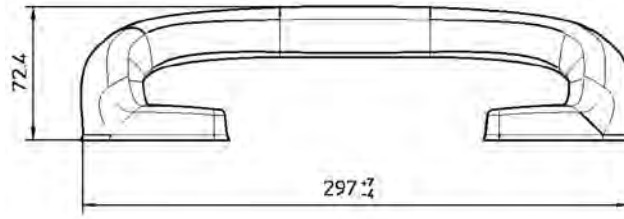
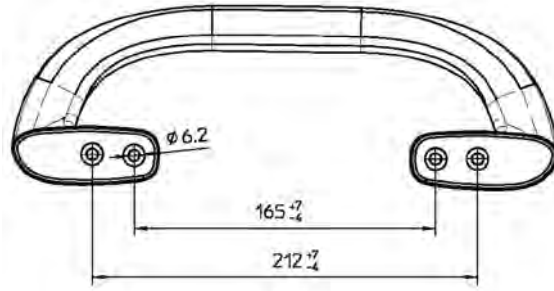
Chest handle

	with piano wire torsion spring
Zinc plated steel DS plus Top Coat drilled	6040-U35-JQ
AISI 304, drilled	6040-U35-PC



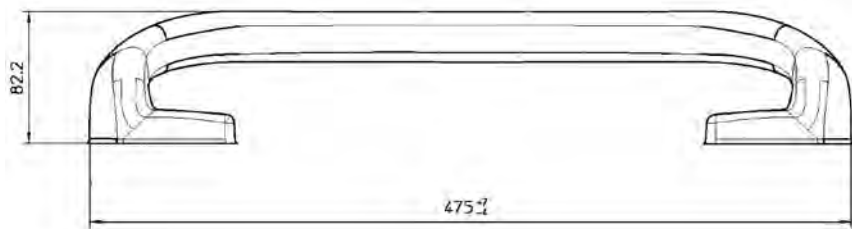
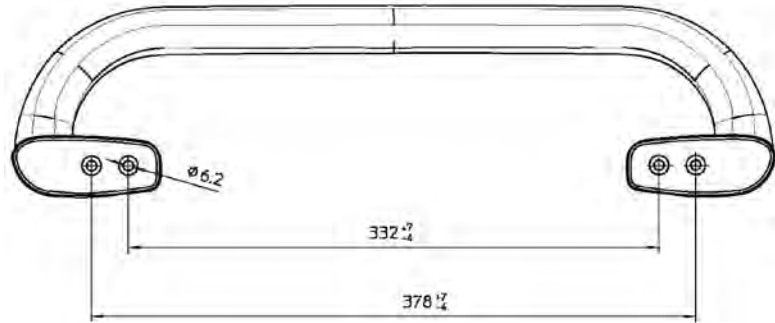
Recessed chest handle

	with piano wire torsion spring
Zinc plated steel DS plus Top Coat, drilled	6040-U41-JQ
AISI 304, drilled	6040-U41-PC



Handle black polyurethane pitted, screw covers included

5225-U308

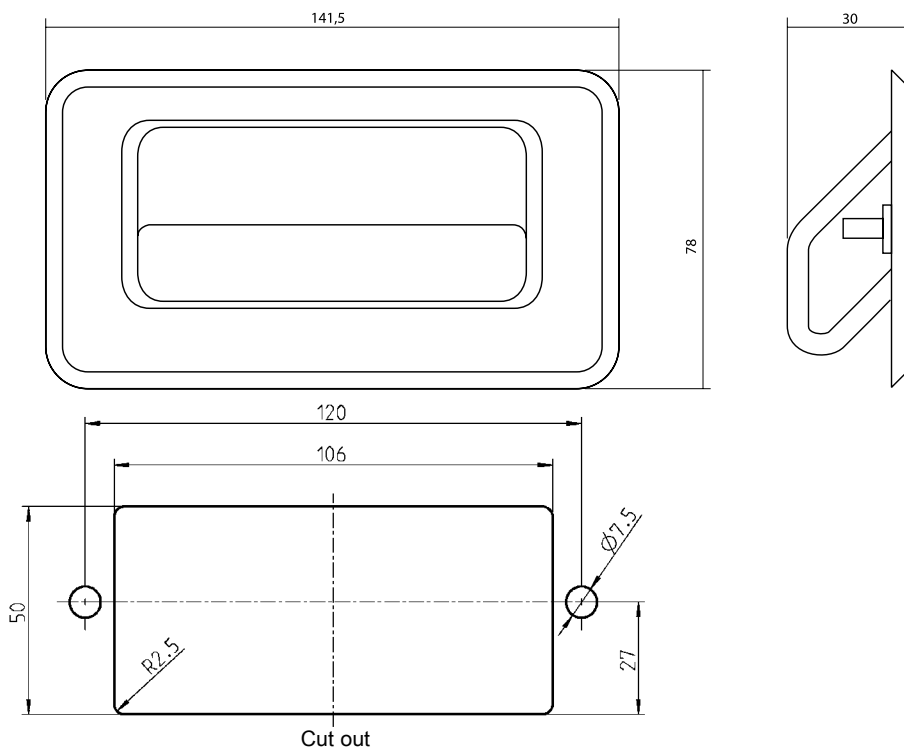


Handle black polyurethane pitted, screw covers included

5225-U309

Pull

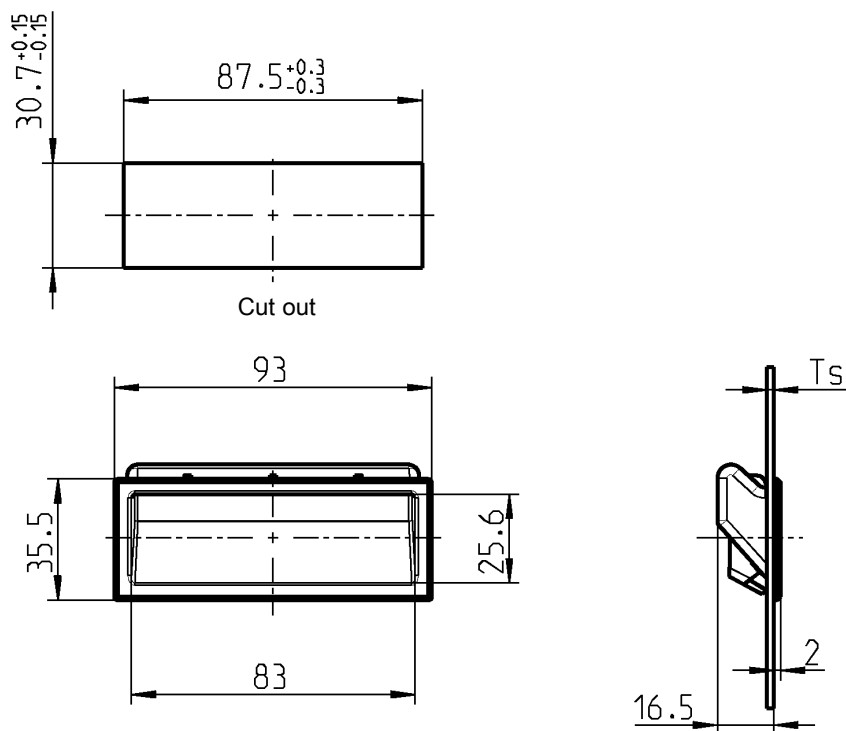
PROGRAM 1091



Latches and handles

Recessed grip polyamide black, threaded pin M5 m.s. zinc plated; with seal

1091-U145



Assembly:
The pull is fitted with clips that automatically snap in behind the door part.

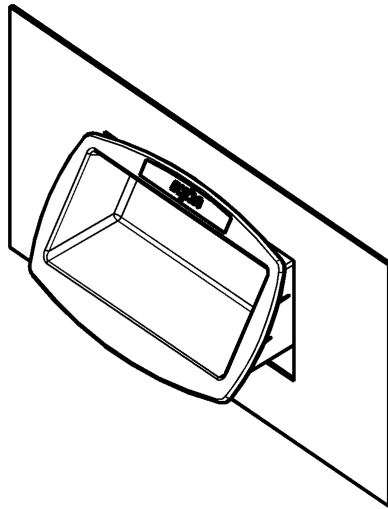
Pull polyamide GF black

Ts 0.8 - 1.2 mm	1091-103-01
Ts 1.2 - 1.6 mm	1091-103-02
Ts 1.75 - 2.2 mm	1091-103-03

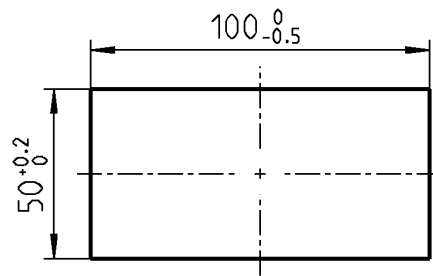
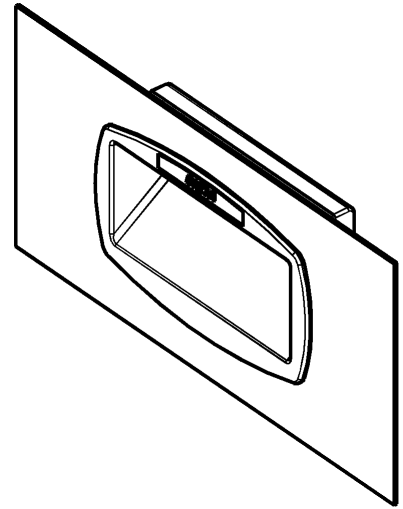
On request:
– Recessed grip for further door thicknesses



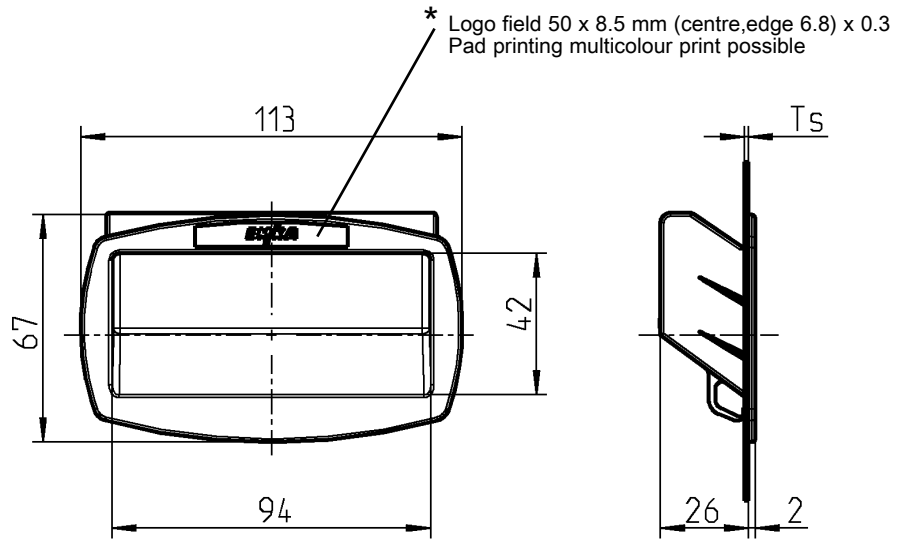
Press pull into cut out



Ready for use

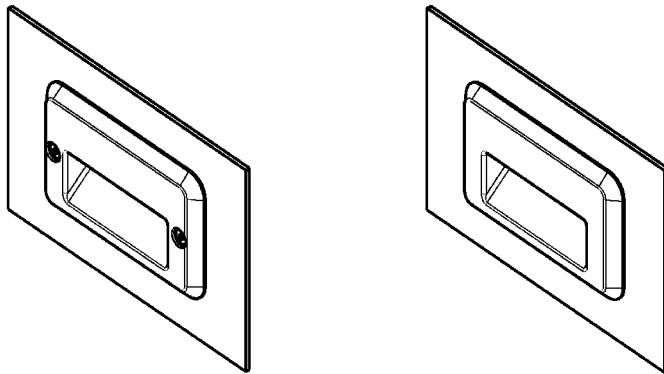


Cut out

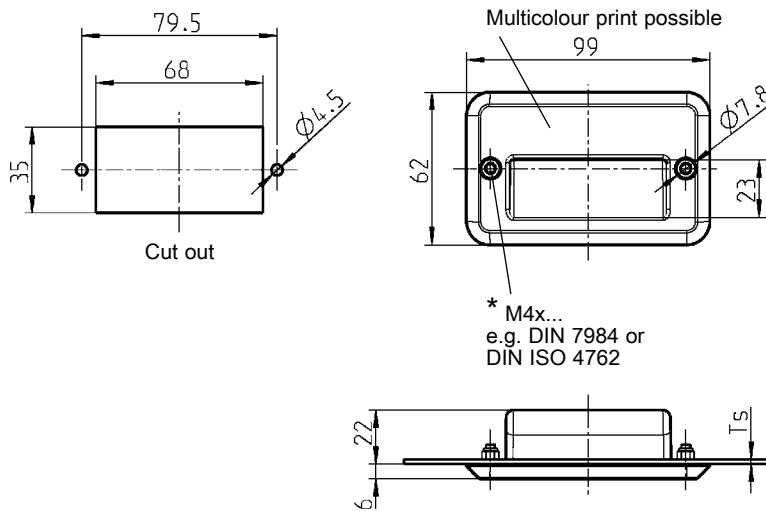


Assembly:
The pull is fitted with clips that automatically snap in behind the door part.

Pull polyamide GF black	
Ts 0.80 - 1.2 mm	1091-93
Ts 1.20 - 1.6 mm	1091-91
Ts 1.75 - 2.2 mm	1091-92



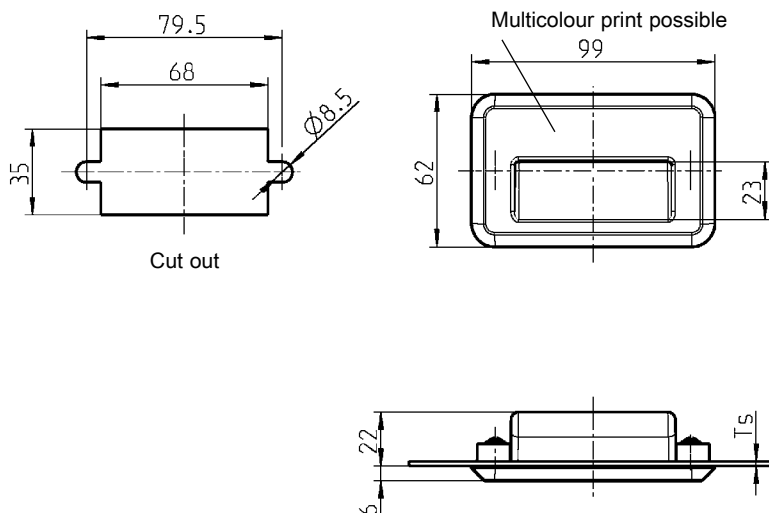
Version A



Version A



Version B



Version B



Pull polyamide GF black, with seal

version B clip polyamide GF black, fixing material m.s. zinc pl.

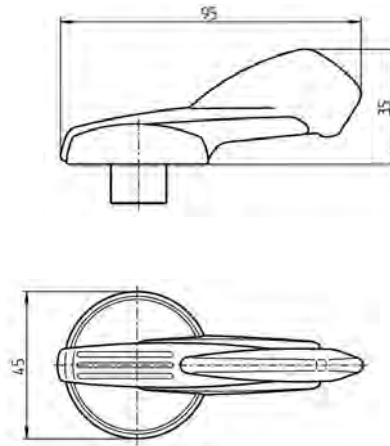
Version A	IP 54	Ts 0.8 - 7	1091-105
Version B	IP 65	Ts 0,8 - 3 **	1091-U144

Plug polyethylene black for version A

(2 plugs are needed per pull)			1091-106
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* not included

**On request:
– Pulls for further door thicknesses



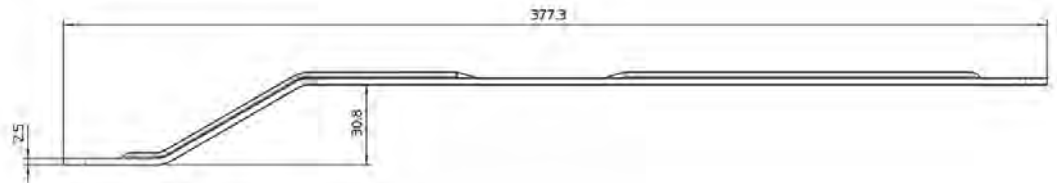
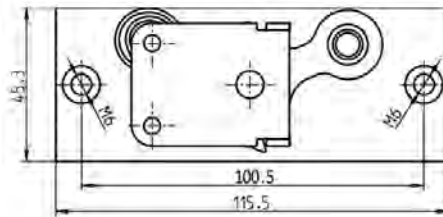
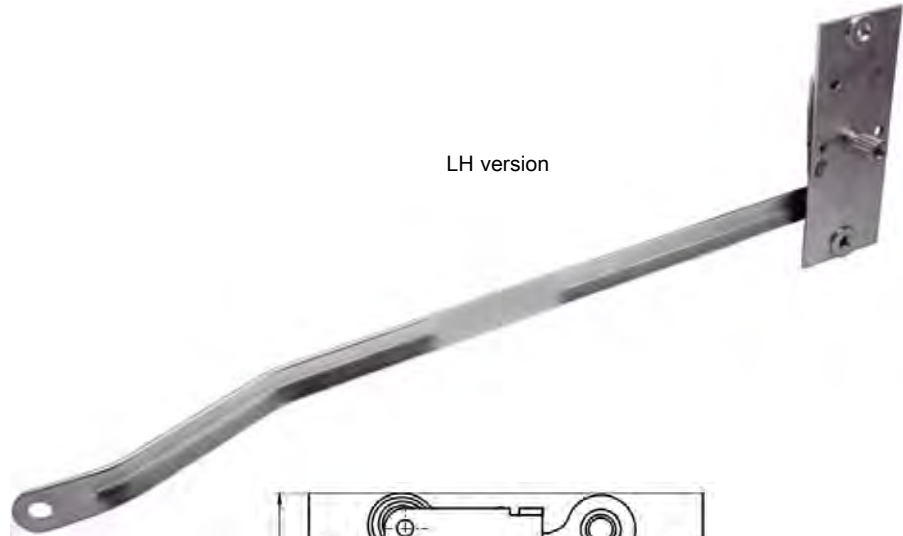
Further parts see page
– Interior release see below
1.11-130

Interior handle zinc chrome plated, black PVC grip

5225-U5-IK



LH version



Further parts see page
– Inside handle see above

Interior release zinc plated steel connecting rod, with spring

Right, mirror image

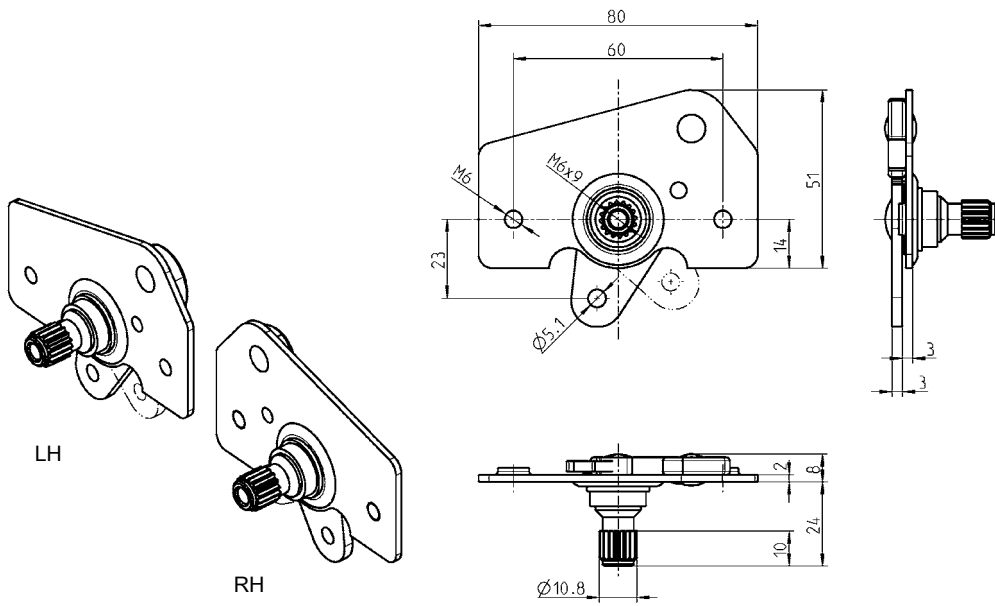
5225-U6

Left, as shown

5225-U7

Interior release; lock interior handle

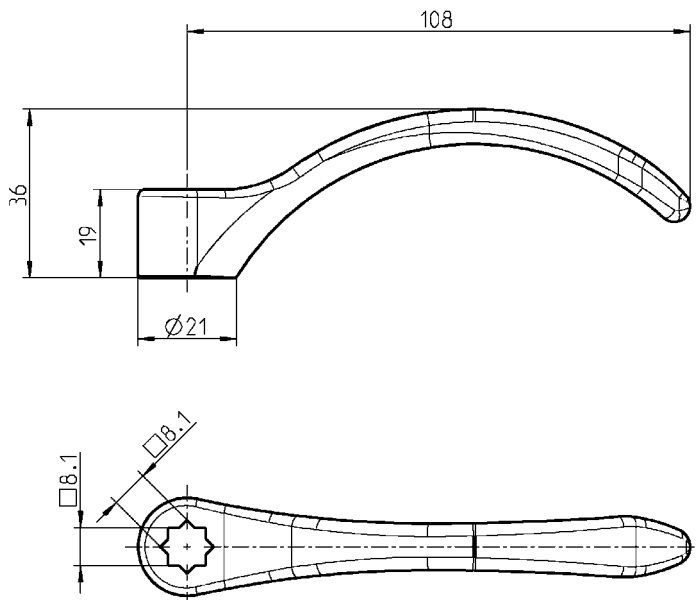
PROGRAM 1107, 5115



■ 110 gr./pc.

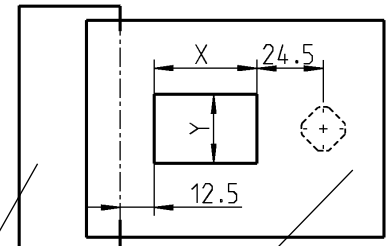
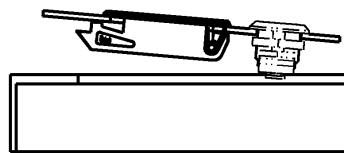
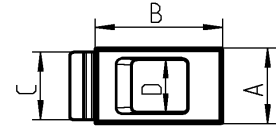
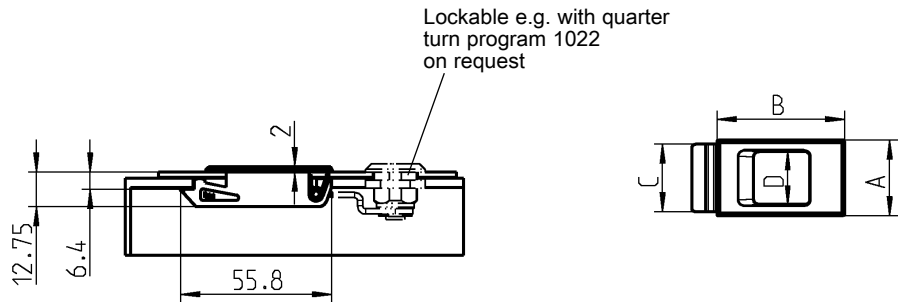
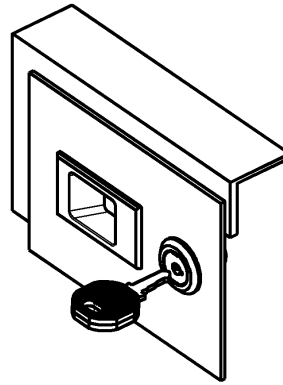
Internal control ms zinc plated, with spring	
Right, mirror image	5115-SU5-01
Left, as shown	5115-SU5

Further parts see page
– Inside handle 1.11-120



- with 8 mm square hole offset by 45° and nut M8
- Handle length 115 mm
- 110 gr./pc.

Lock inside handle zinc die chrome, dome nut M8 St chrome	
	1107-SU439



Frame

Door

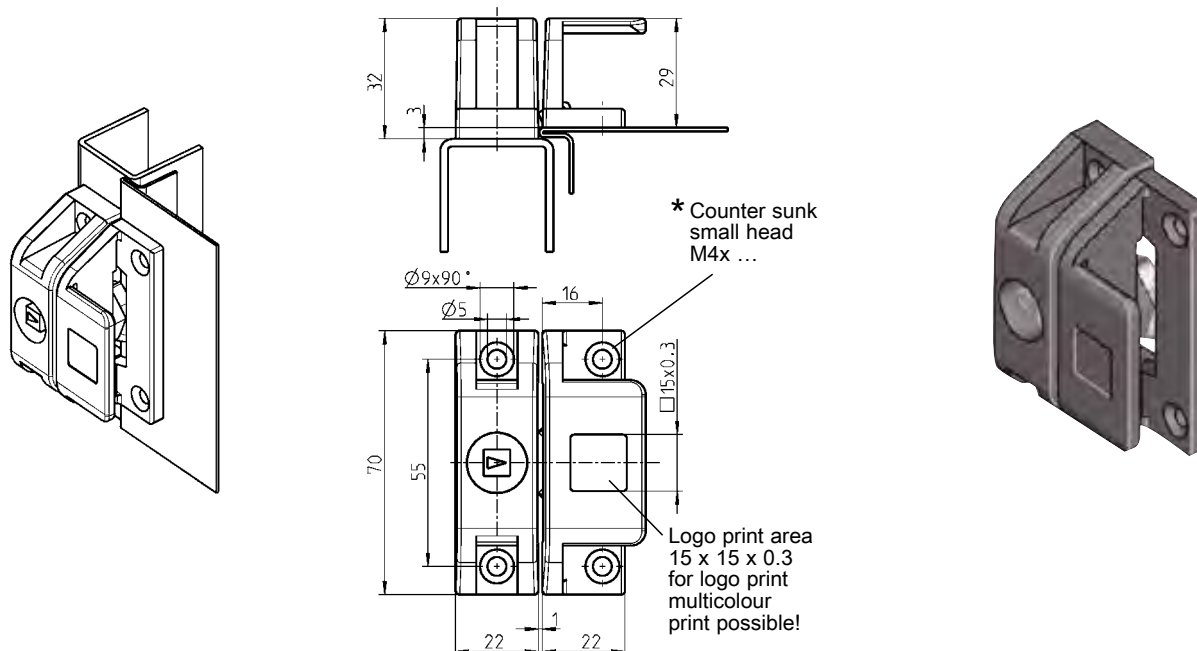
Suitable for door gauges of 1.2 up to 2.2 mm

Further parts see page
- Quarter turns on request

Slide latch polyamide black with spring m.s. zinc plated							
Size	Ts = 1.2 – 1.6				Ts = 1.75 – 2.2		
1	1091-U114-01				1091-U114		
2	1091-U115-01				1091-U115		
3	on request				1091-U116		
Measurement	A	B	C	D	Door cut out	X	Y
1	28	47	25	20	1	38	25,5
2	47	47	44	39,5	2	38	44,5
3	86	47	83	78,5	3	38	83,5

Cam and snaplock PROGRAM 1000

Cam lock



small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047

Cam lock polyamide black, insert zinc die chrome pl. cam, screw and wave washer m.s. zinc pl.

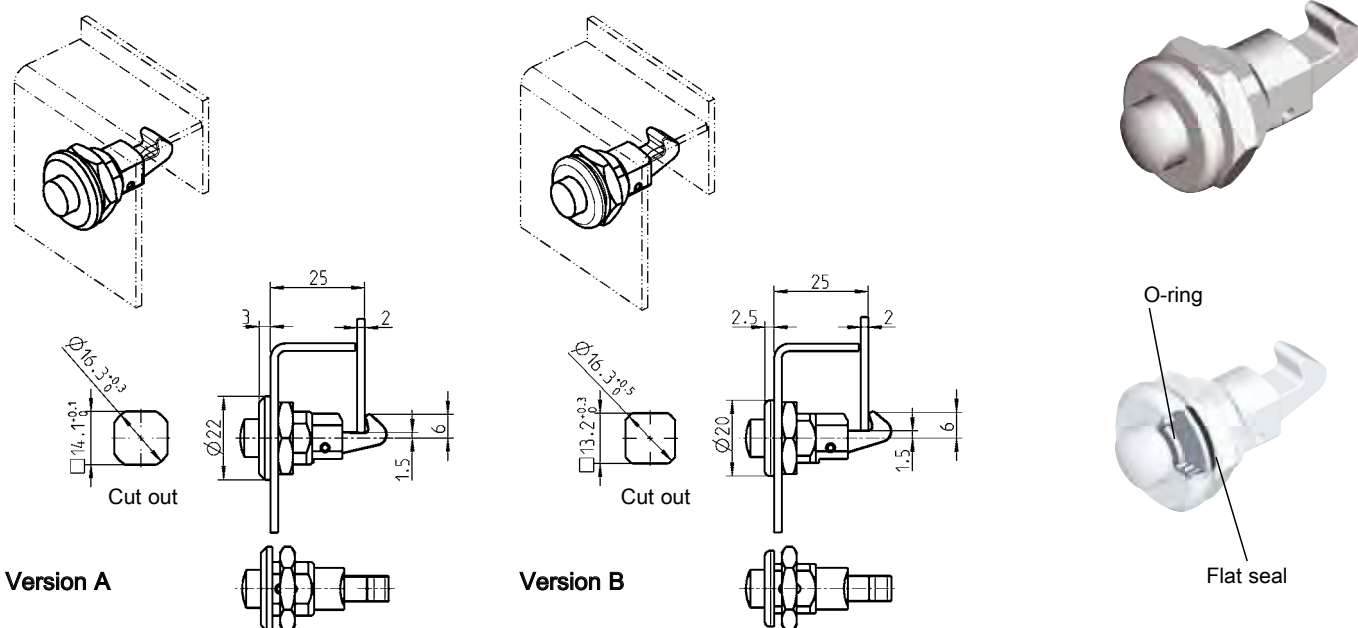
Square 7	1076-U5	Double bit 3	1076-U9
Square 8	1076-U6	Double bit 5	1076-U10
Triangular 7	1076-U7	Hexagon female 10mm	1076-U11
Triangular 8	1076-U8	Slot 2 x 4	1076-U12

* not included

Further parts see page
- Key

5.1-120

Snap lock with and without seal



Snap lock zinc die chrome plated, without or with seal

Version A		Version B	
without seal	1047-U3	without seal	1047-U2
with seal IP 65	1047-U5	with seal IP 65	1047-U4



Locking
e.g. for horse trailers (tailgate)





Examples of customer solutions



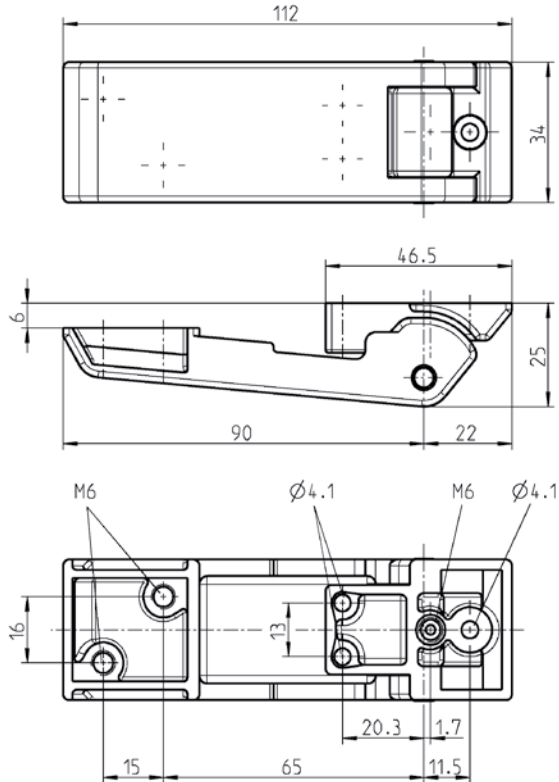
The background of the page is a light-colored wood grain pattern, likely oak, with vertical lines and some darker, irregular spots. The text is positioned in the bottom-left corner.

Chapter 2: Hinges



Content

2.1	Hinges for flush doors	128
2.2	Hinges for prominent doors	139
2.3	Torque hinges	145
2.4	Hinges for table tops	151

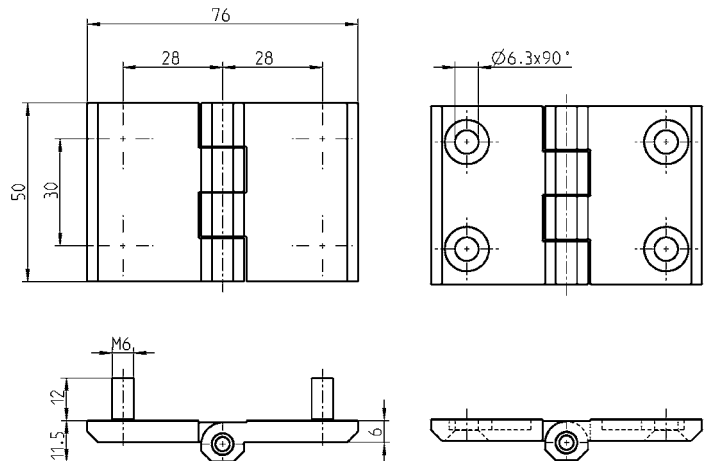
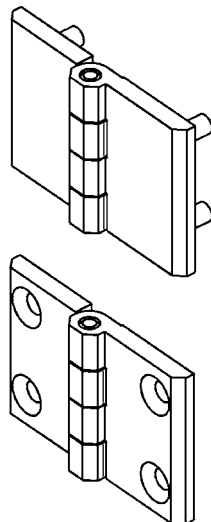
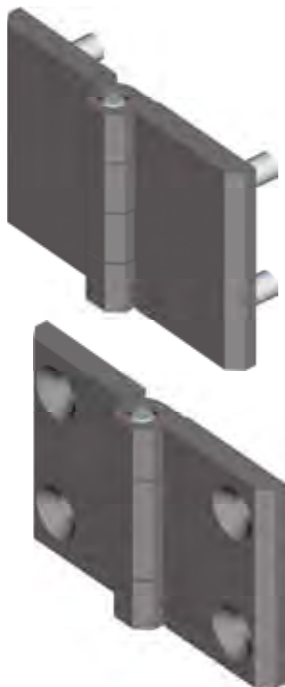


Hinge zinc die white aluminium powder coated, RAL 9006; hinge pin m.s. zinc plated

3060-U380-BK



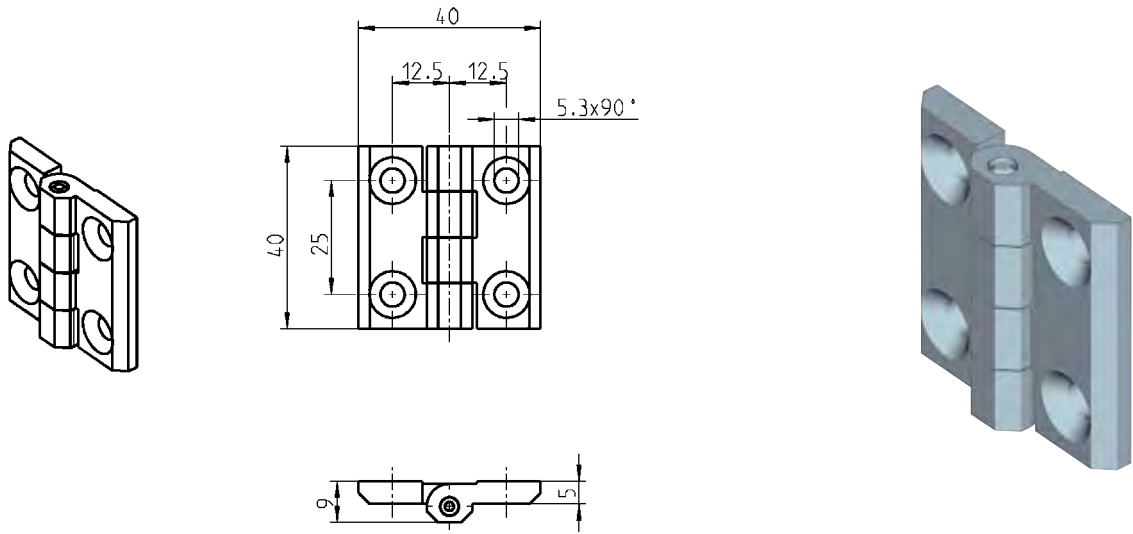
270° screw-on hinge



Screw-on hinge zinc die or stainl. steel, threaded studs M6 stainl. steel

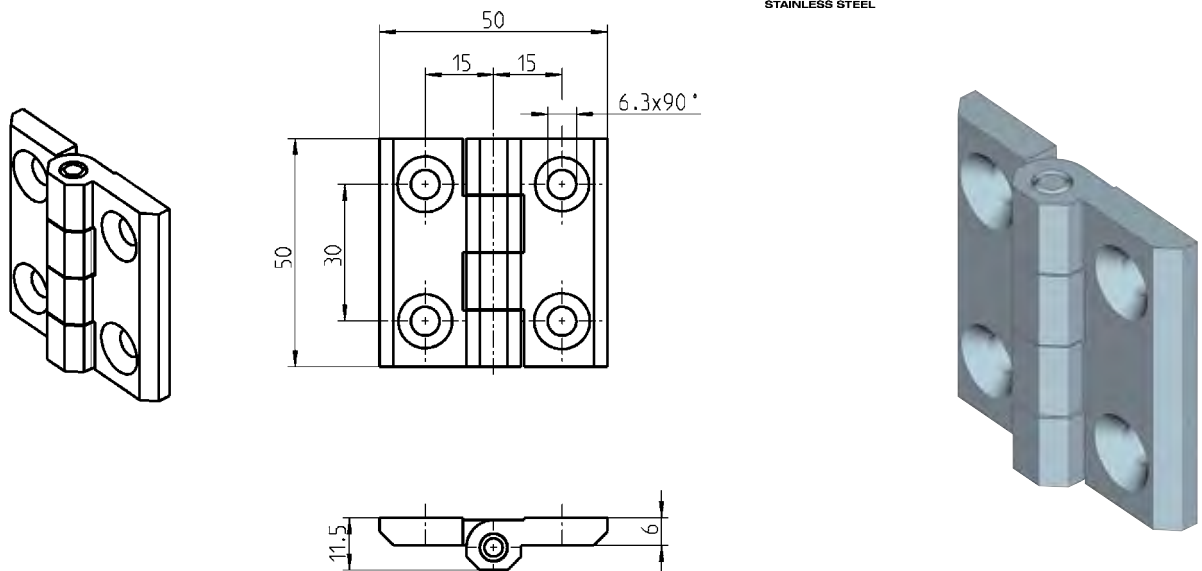
	Pin	threaded stud M6	for countersunk screw M6 (2D-nut possible)
zinc die chrome pl.	stainless steel	1056-U15	1056-U17
zinc die black p.c.	stainless steel	1056-U16	1056-U18
AISI 316	stainless steel	-	1056-U17-PH

180° stainless steel screw-on hinge PROGRAM 1056

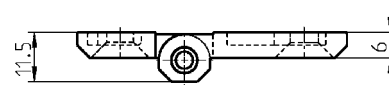
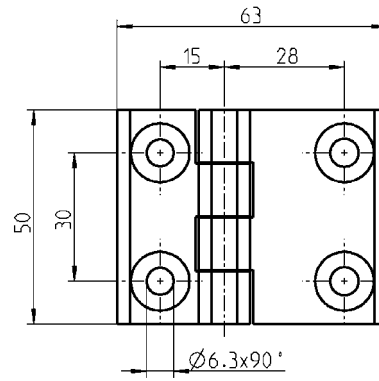
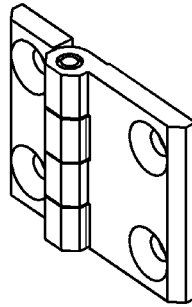
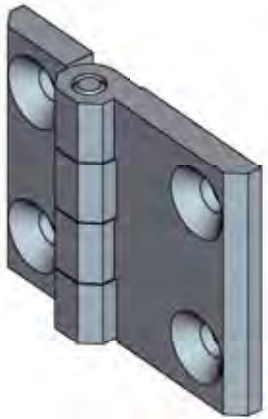


Hinges

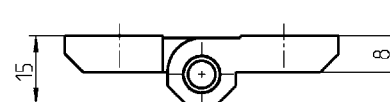
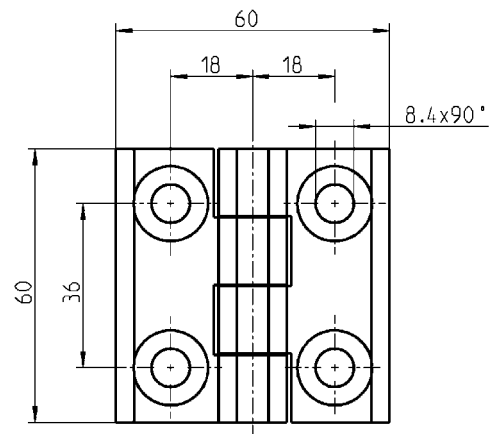
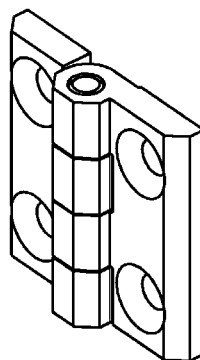
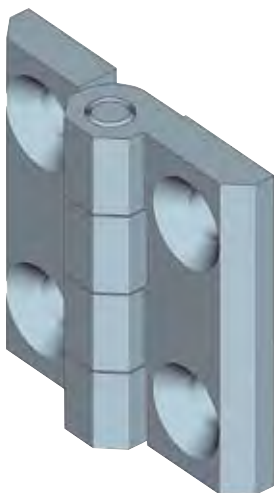
Screw-on hinge AISI 316 for countersunk screw M5	1056-U5-PH
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Screw-on hinge AISI 316 for countersunk screw M6	1056-U9-PH
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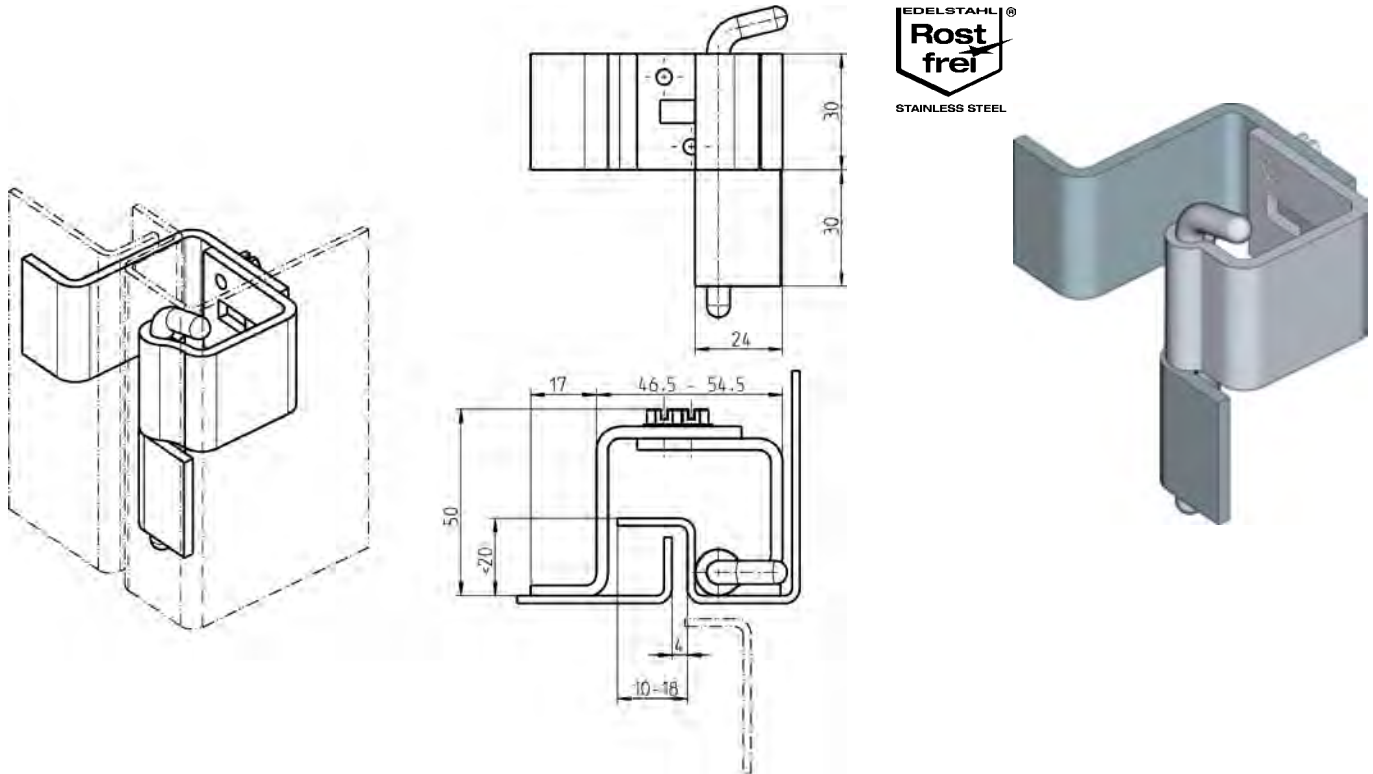
Screw-on hinge AISI 316, hinge pin stainless steel, for countersunk screw M6
1056-U59-PH



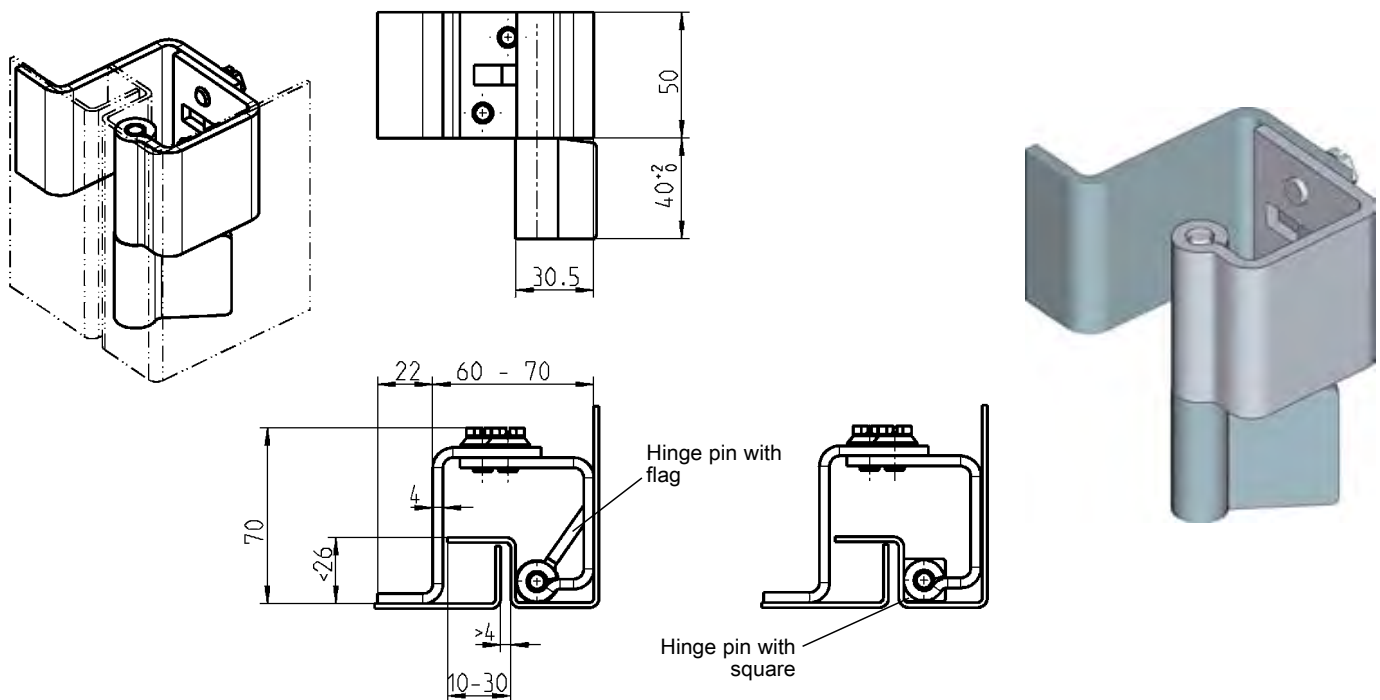
Screw-on hinge AISI 316 for countersunk screw M8
1056-U13-PH

90° concealed hinge

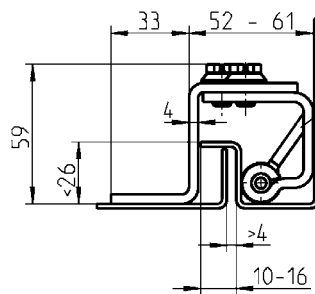
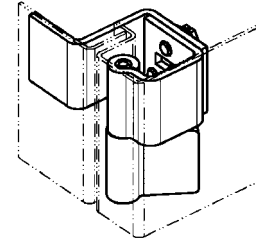
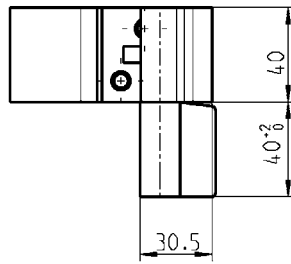
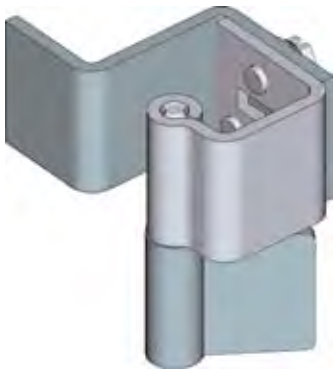
PROGRAM 1006, 1007



Concealed hinge	
m.s. zinc pl., weld-on part m. s. raw	1006-U1
AISI 304 and AISI 303	1006-U1-PC

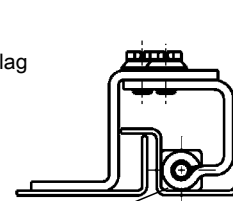


Concealed hinge m.s. zinc pl., weld-on parts m.s. raw	
Hinge pin with flag	1007-U2
Hinge pin with square (17x50)	1007-U1



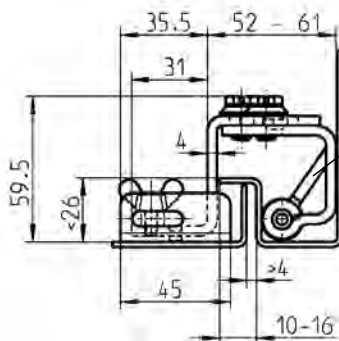
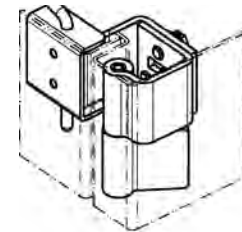
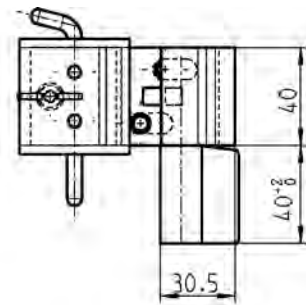
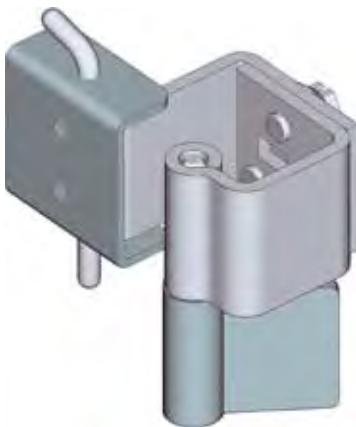
Hinge pin with flag

Hinge pin with square



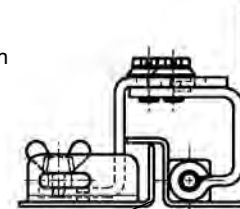
Concealed hinge m.s. zinc pl., weld-on parts m.s. raw or AISI 304 and AISI 303

	m.s.	AISI 304
Hinge pin with flag	1046-U1	1046-U5
Hinge pin with square (17x50)	1046-U3	-



Hinge pin with flag

Hinge pin with square

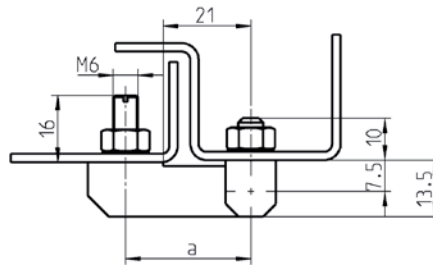
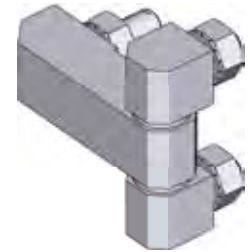
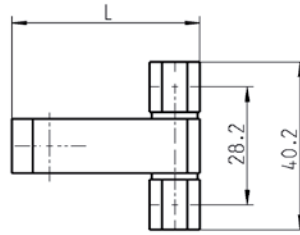
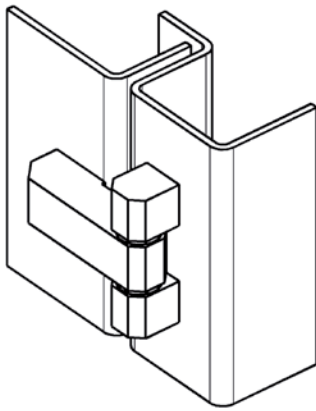


Concealed hinge m.s. zinc pl., weld-on parts m.s. raw

Hinge pin with flag	1046-U2
Hinge pin with square (17x50)	1046-U4

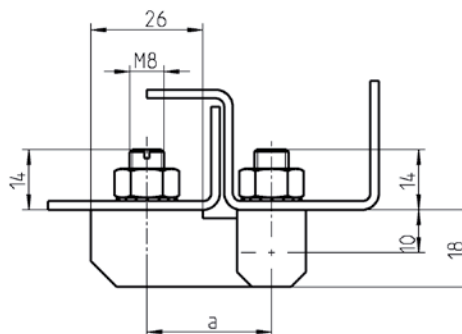
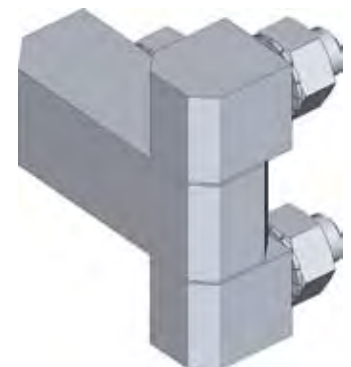
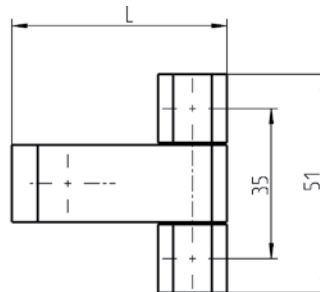
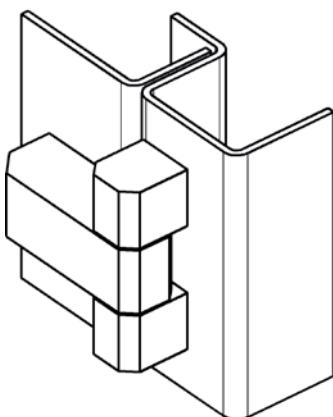
180° screw-on hinge

PROGRAM 1039, 1055



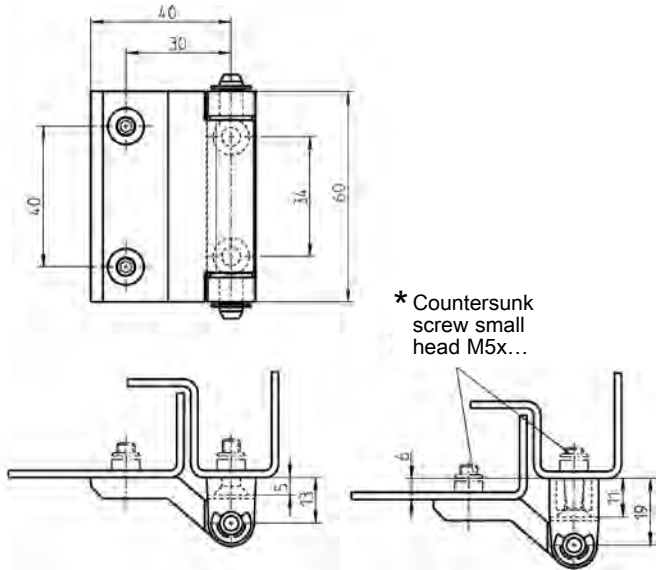
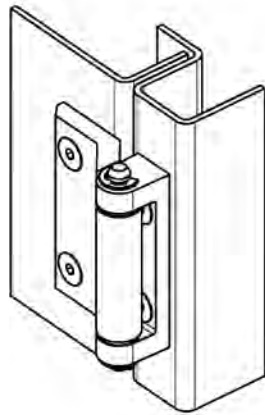
Screw-on hinge m.s. zinc pl., pin and washers brass nickel pl. or completely stainl. steel

L	A	m.s.	AISI 303	AISI 316
45	30	1055-U3	1055-U7	1055-U9
53	38	1055-U4	-	-



Screw-on hinge m.s. zinc pl., pin and washers brass nickel pl. or completely stainl. steel

L	A	m.s.	AISI 303	AISI 316
50	29	1039-U10	1039-U18	1039-U25
61	40	1039-U11	-	-



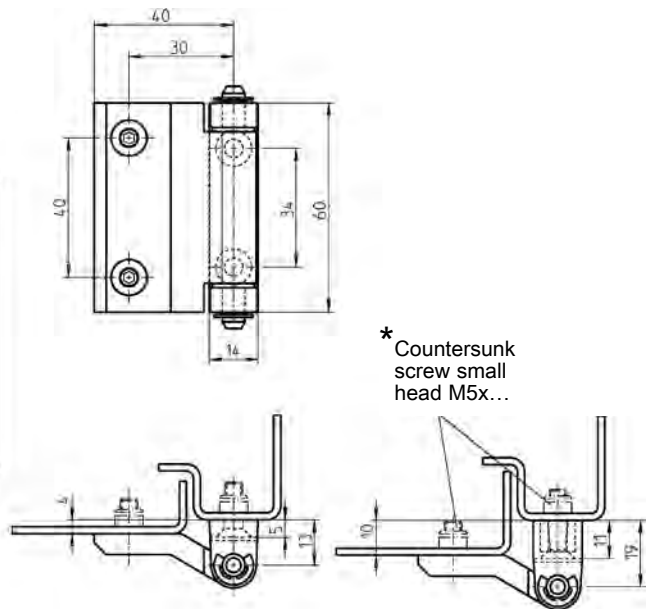
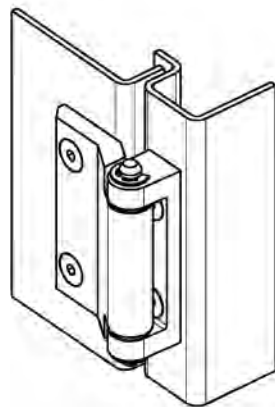
Screw-on hinge zinc die, pin and washer m.s. zinc pl. and bushes polyamide

	straight	6 mm higher
chrome plated	1054-U4	1054-U27
black powder coated	1054-U5	1054-U28
raw	1054-U22**	1054-U29**

** = Minimum order quantity 1000 pcs.

Screw-on hinge AISI 316 and bushes polyamide

	1054-U5-PH	-
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Screw-on hinge zinc die, pin and washer m.s. zinc pl. and bushes polyamide

	4 mm higher	10 mm higher
chrome plated	1054-U7	1054-U19
black powder coated	1054-U10	1054-U20
raw	1054-U18**	1054-U21**

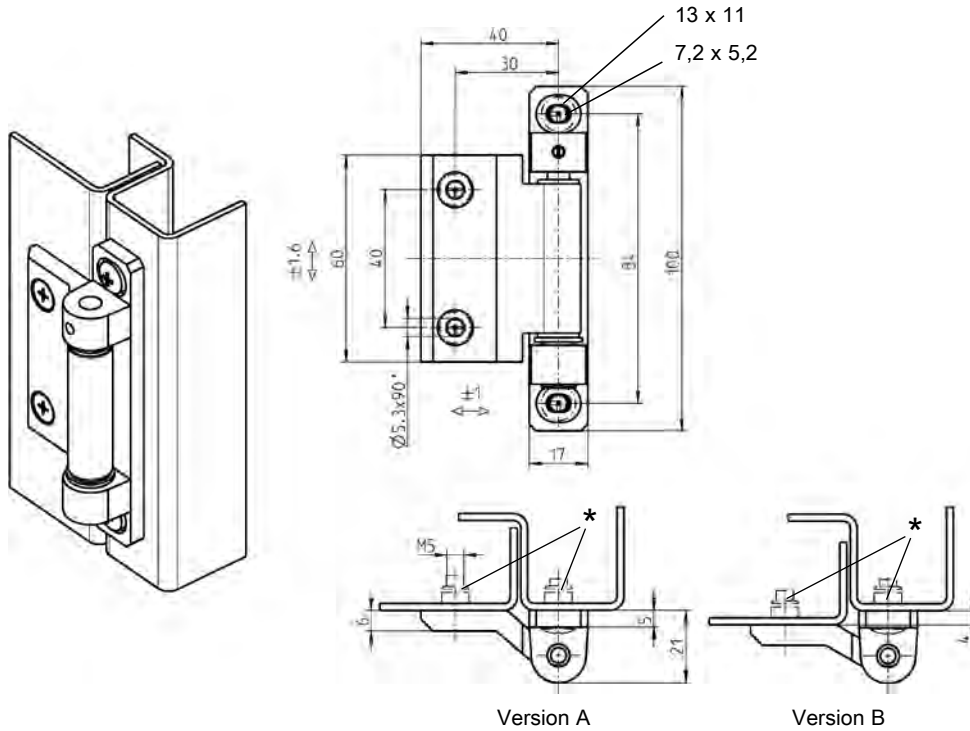
** = Minimum order quantity 1000 pcs.

* not included

small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047

180° 2D-screw-on hinge

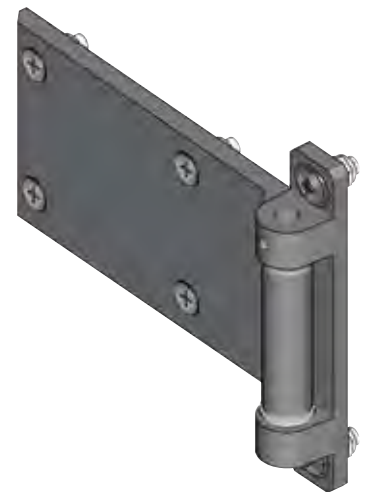
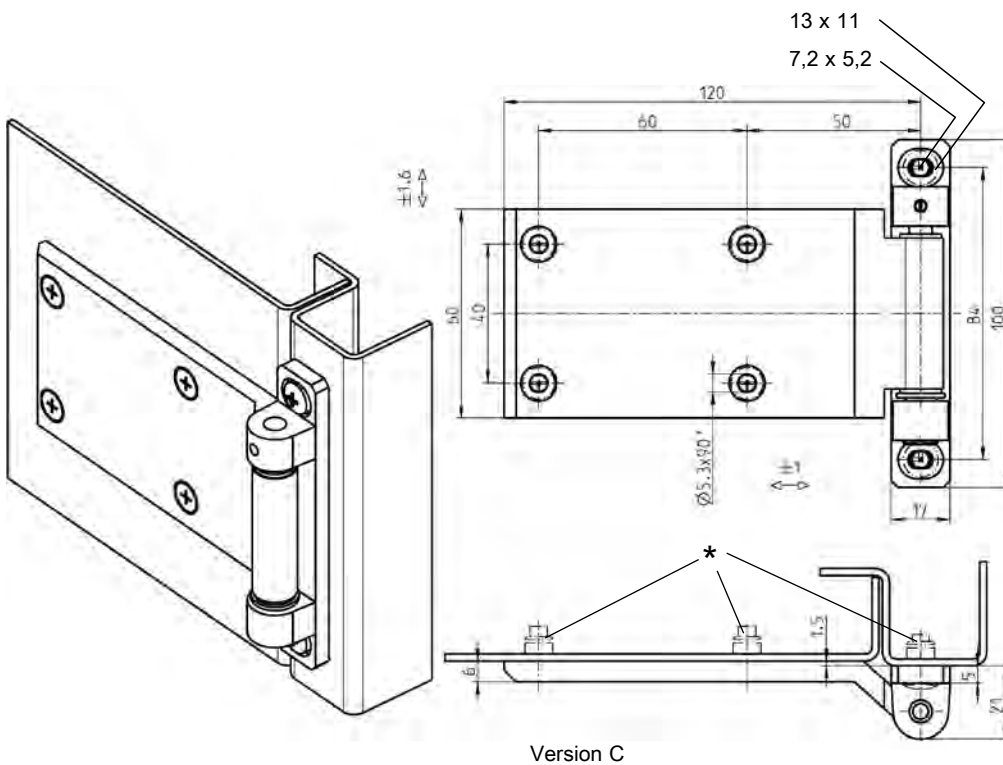
PROGRAM 1054



Counterbores for small head countersunk screw M5x

Version for RH use respectively version for LH use is created by turning the hinge pin with flag.

Hinge pin is self-gripping

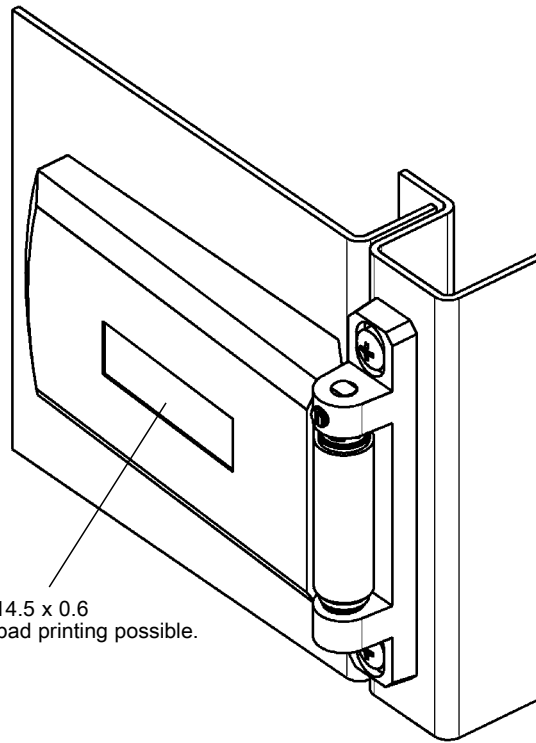
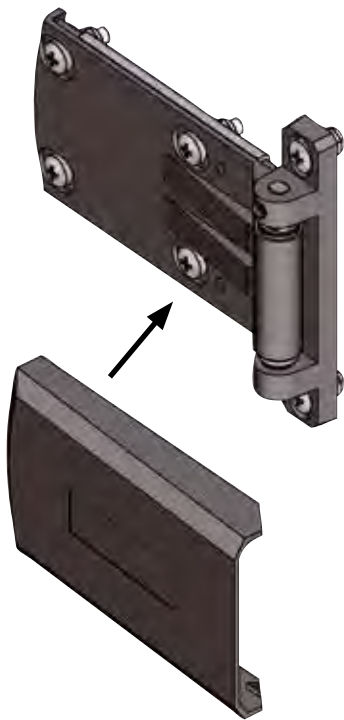


2D-screw-on hinge zinc die, axle brass nickel pl., washer m.s. zinc pl. and bush polyamide	Version A	Version B	Version C
black powder coated	1054-U33-01	1054-U34-01	1054-U35-01
raw	1054-U33-02	1054-U34-02	1054-U35-02

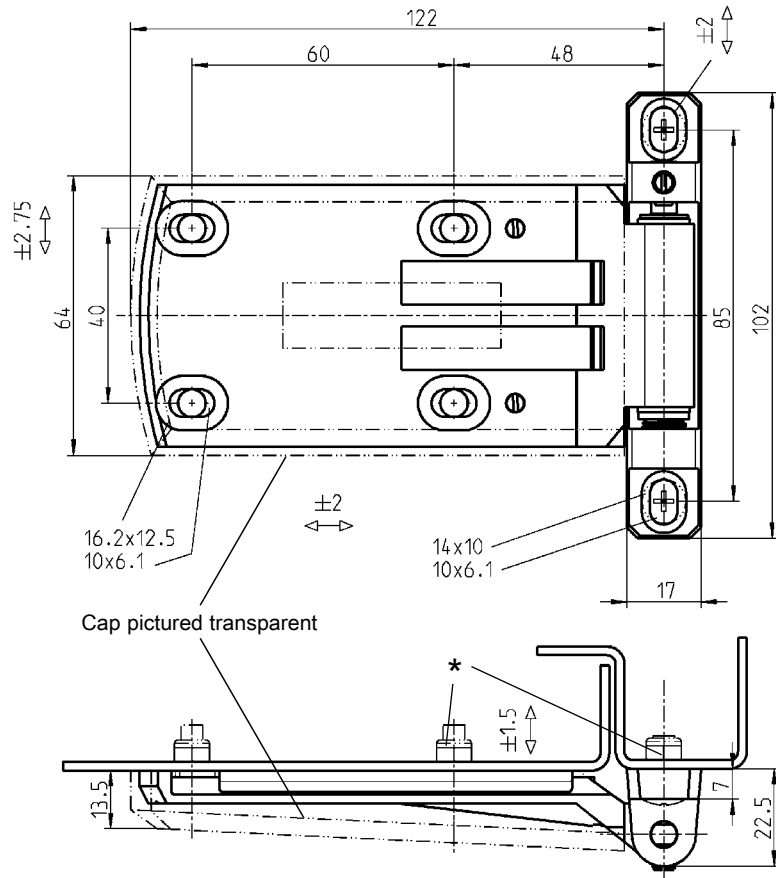
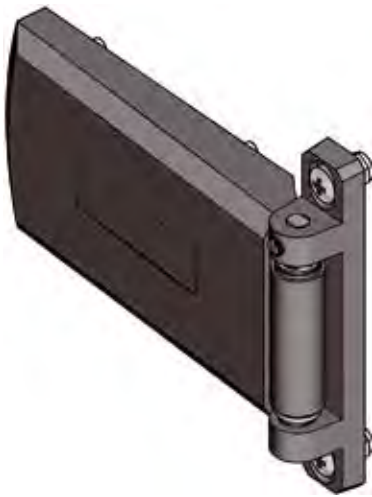
* not included

small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047

Hinges



Logo: 49 x 14.5 x 0.6
Multicolour pad printing possible.



* not included

RH or LH version by turning around the hinge with flag.

3D-screw-on hinge zinc die black p.c., axle stainless steel, plate and pins steel zinc pl., cap and bushes polyamide black

RH version

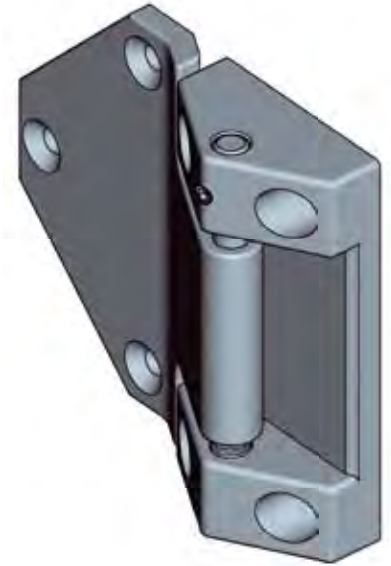
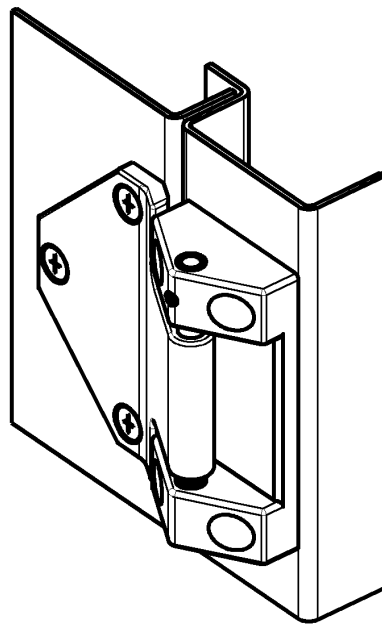
1054-U36-RE

LH version

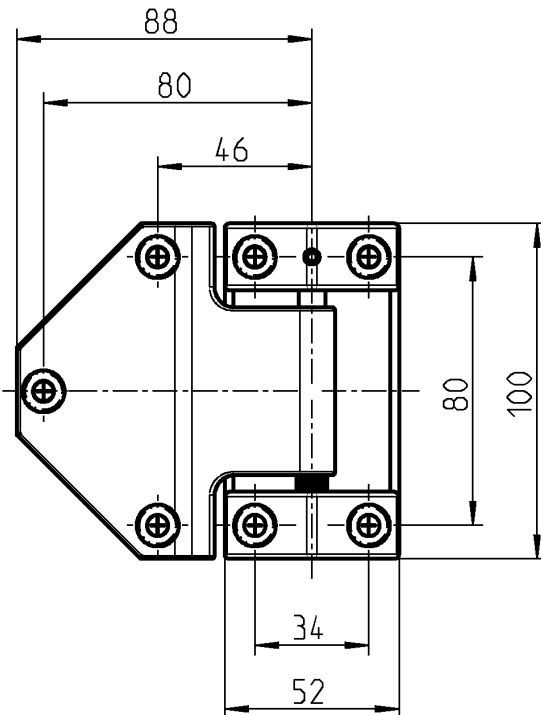
1054-U36-LI

180° stainless steel screw-on hinge adjustable

PROGRAM 1054



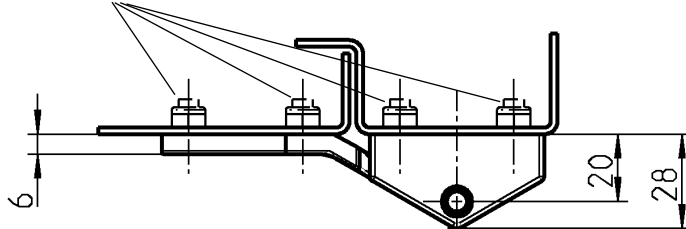
Hinges



Height adjustment ± 4 mm

RH- or LH-version by turning around the hinge with flag

* Countersunk screw small head M6x...



* not included

Screw-on hinge adjustable stainless steel 1.4571; washer and hinge pin stainless steel

1054-U39

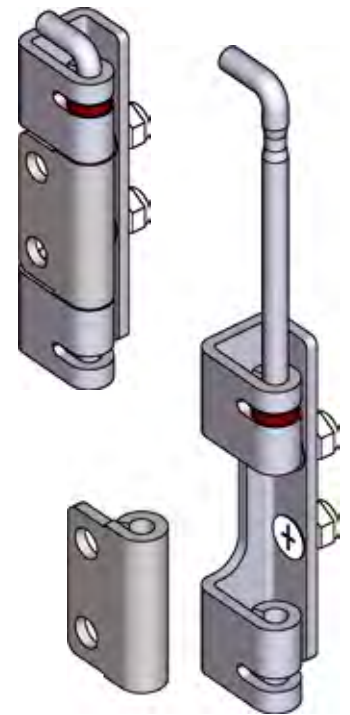
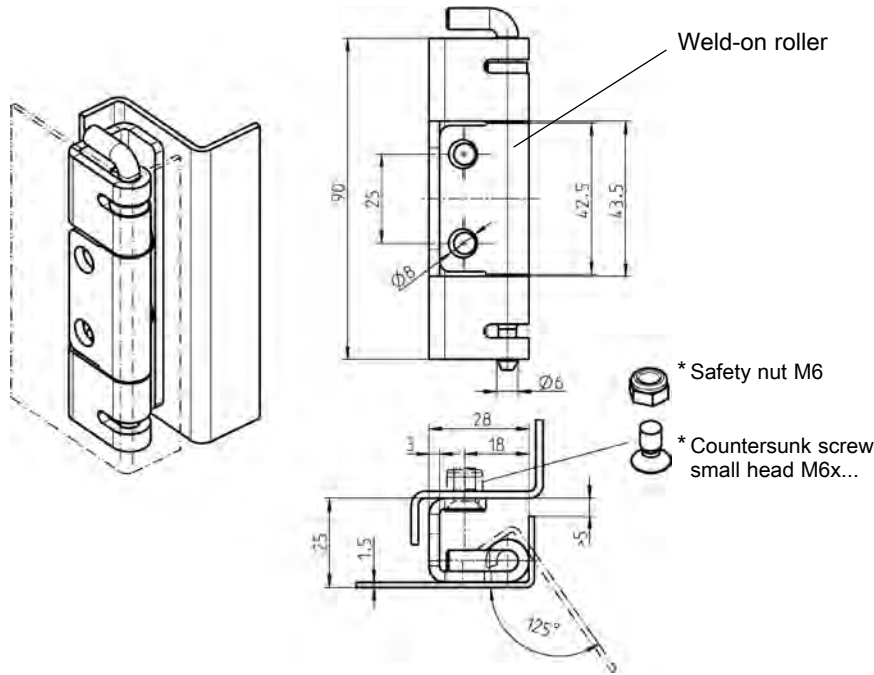
small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047



125° hinge with captive pin

PROGRAM 1031

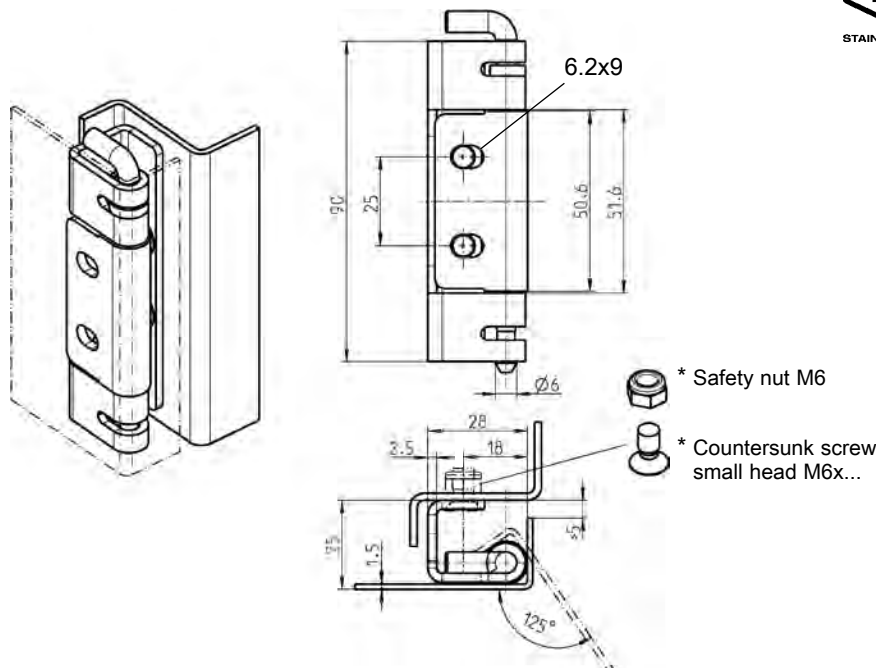
125° hinge
for 25 mm chamfer



Note:
For the use in the area of fire protection it is to be seen to that the hinge pin is mounted from the top.

125° hinge m.s. zinc pl.; roller m.s. raw, pin clamping ring POM red	1031-U12
--	----------

125° hinge
for 25 mm chamfer



Note:
For the use in the area of fire protection it is to be seen to that the hinge pin is mounted from the top.

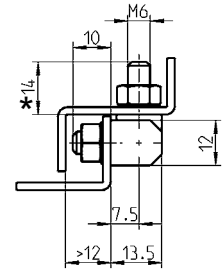
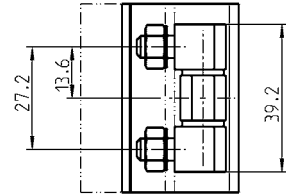
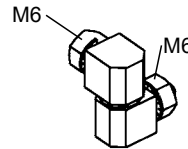
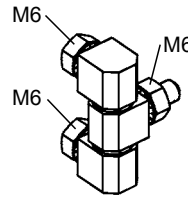
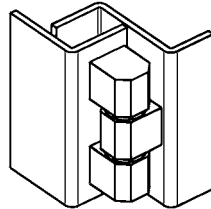
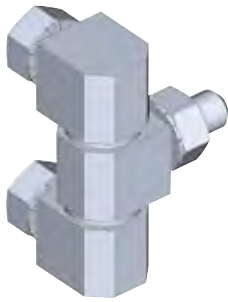
125° hinge material as requested; pin clamping ring POM red	* not included in the scope
AISI 304	1031-U13
m.s. zinc plated	on request

small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047

180° screw-on hinge
PROGRAM 1055, 1039



180° screw-on hinge



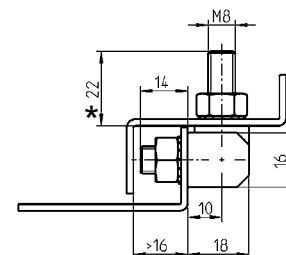
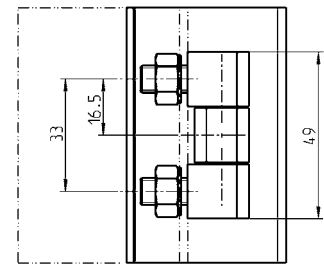
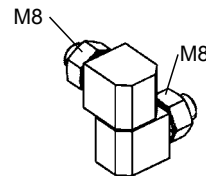
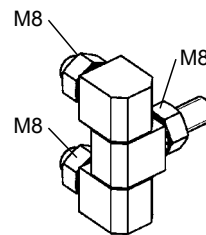
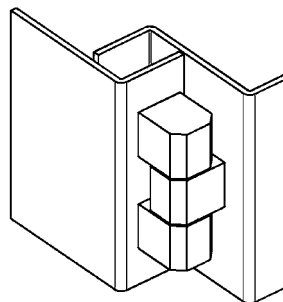
* = 10 mm in case of 2-part hinge

180° screw-on hinge m.s. zinc plated; pin and washers brass nickel plated respectively completely stainless steel

– three-piece	m.s.	1055-U2
	AISI 303	1055-U6
	AISI 316	1055-U8
– two-piece	m.s.	1055-U5



180° screw-on hinge



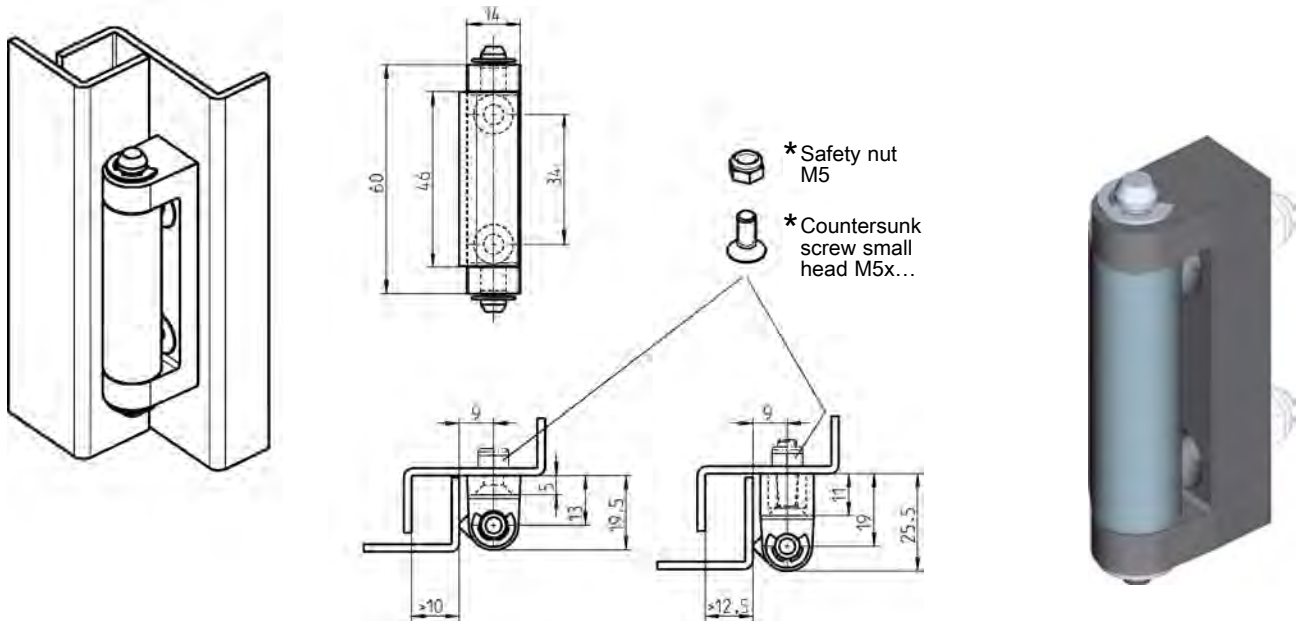
* = 14 mm in case of 2-part hinge

180° screw-on hinge m.s. zinc plated; pin and washers brass nickel plated respectively completely stainless steel

– three-piece	m.s.	1039-U12
	AISI 303	1039-U19
	AISI 316	1039-U26
– two-piece	m.s.	1039-U17

Hinge

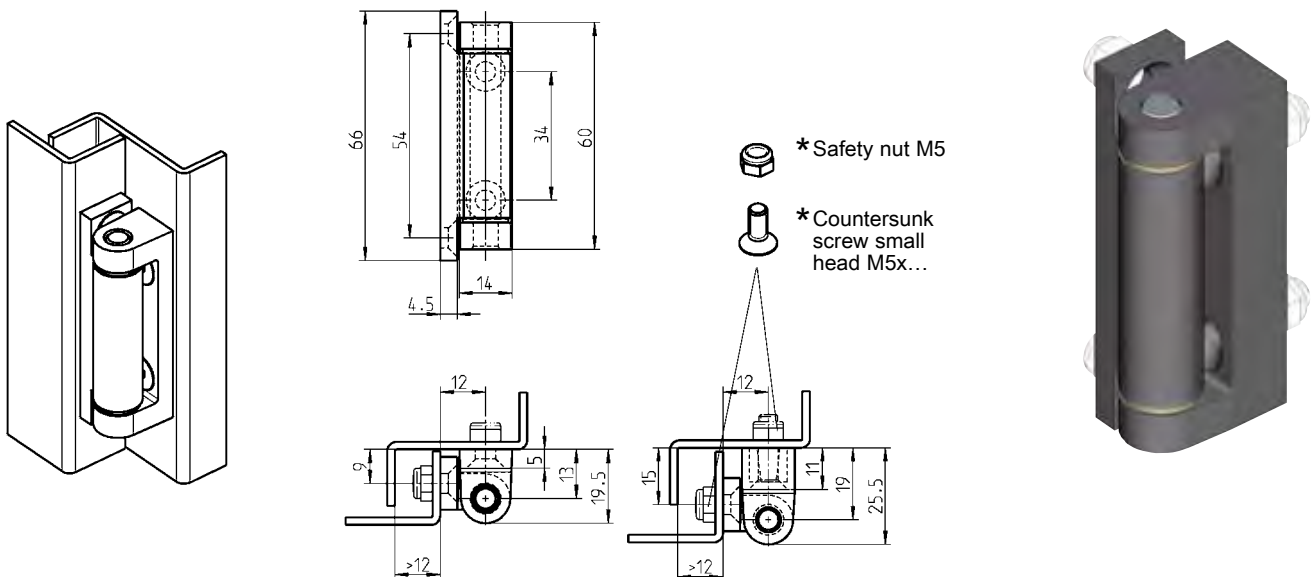
PROGRAM 1054



Hinge zinc die; middle part m.s. raw; pin and washer m.s. zinc plated

	Dimension 19.5	Dimension 22.5
chrome plated	1054-U2	1054-U14
black powder coated	1054-U8	1054-U15
raw	1054-U26 **	1054-U25 **

**=Minimum order quantity: 1000 pieces



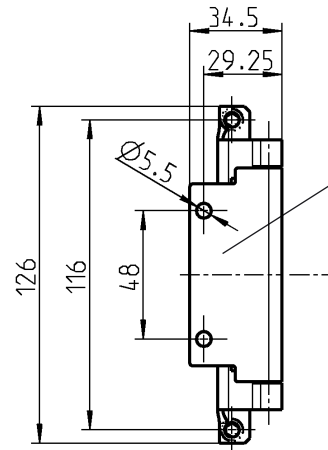
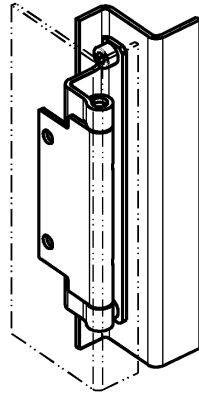
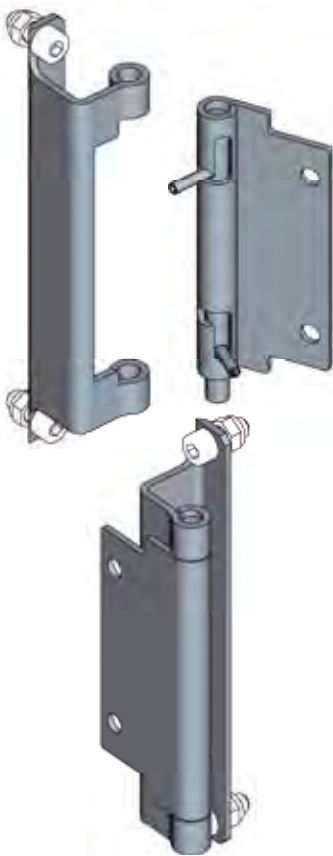
Hinge zinc die; pin stainless steel and bushes polyamide

	Dimension 19.5	Dimension 22.5
chrome plated	1054-U3	1054-U16
black powder coated	1054-U9	1054-U17
raw	1054-U23 **	1054-U24 **

** = Minimum order quantity: 1000 pieces

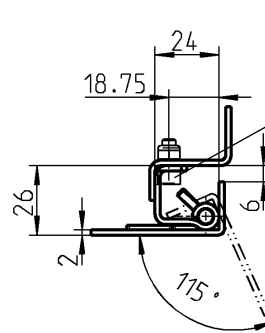
* not included

small head = DIN ISO 2009, 2010, 7046-1, 7046-2, 7047



Weld-on roller

115° hinge
for 26 mm chamfer

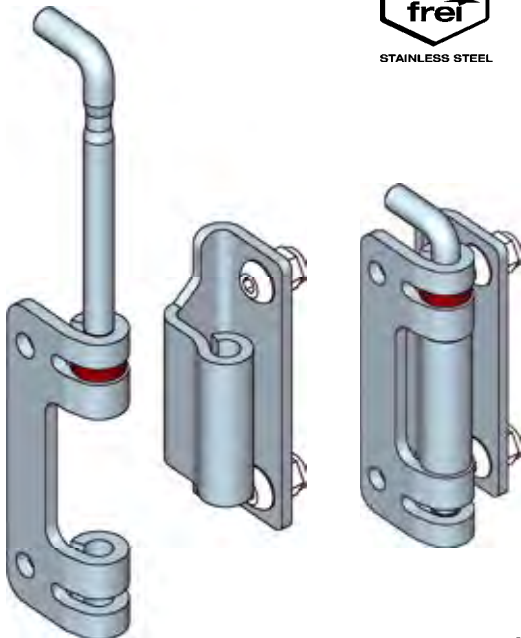


* Safety nut M5

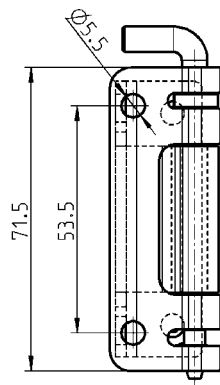
* Socket head screw
M5x...

115° hinge AISI 304

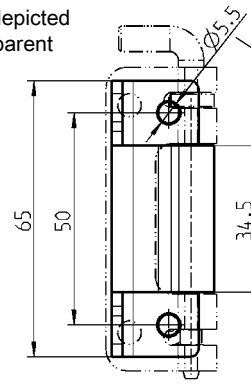
1031-U14



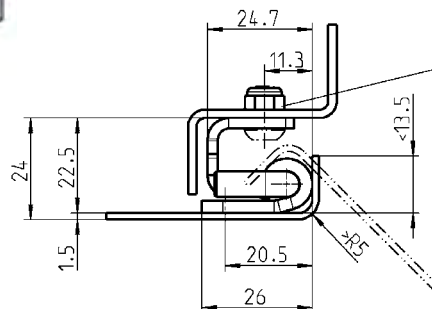
135° hinge
for 24 mm chamfer



Hinge depicted
transparent



Frame part with
hole Ø9
on request



* Safety nut M5



* Oval head screw
DIN ISO 7380 M5x...

Note:
For the use in the
area of fire protection it is to
be seen to that the hinge pin is
mounted from the top.

135° hinge AISI 304; pin AISI 303; pin clamping ring POM red

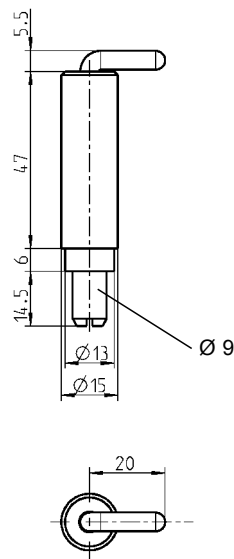
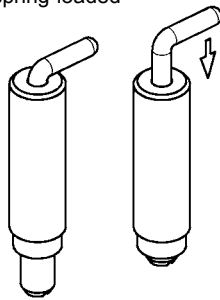
Fixing points according to common standards

1031-U15

* not included in the scope

Pin hinge PROGRAM 1117

spring-loaded

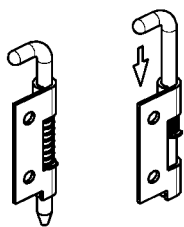


Pin hinge m.s. zinc pl., spring material spring steel zinc pl.,
guide tube m.s. raw or AISI 304, pin AISI 303, spring stainless steel

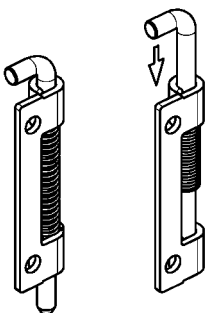
m.s.	1117-U1
AISI	1117-U1-PF



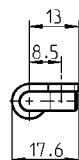
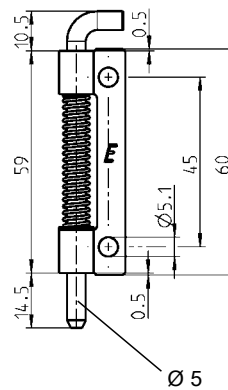
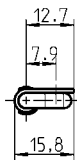
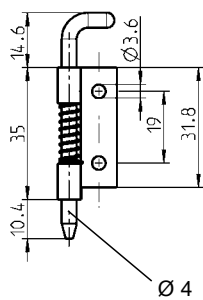
spring-loaded



Version A



Version B

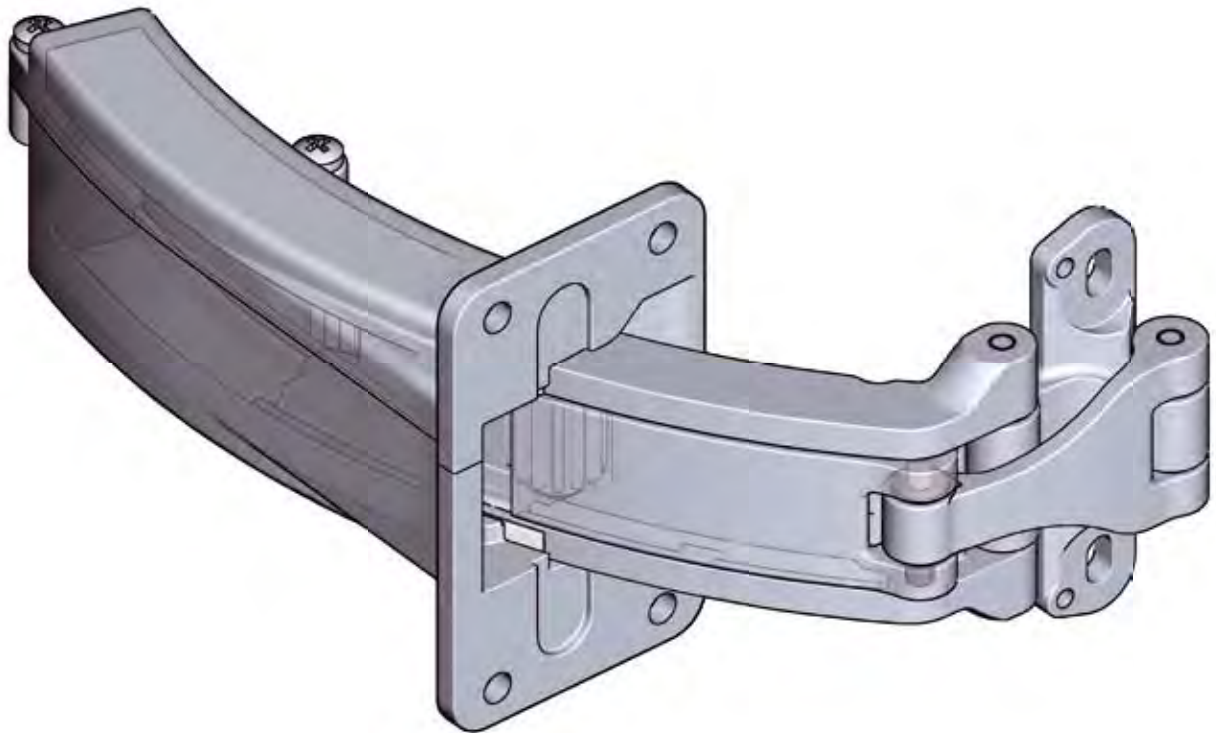


Pin hinge m.s. zinc pl., spring material spring steel zinc pl.

RH-version A	1117-U2	LH-version A	1117-U3
Version B right	1117-U4	Version B left	1117-U5

Pin hinge AISI 304, pin AISI 303, spring stainless steel

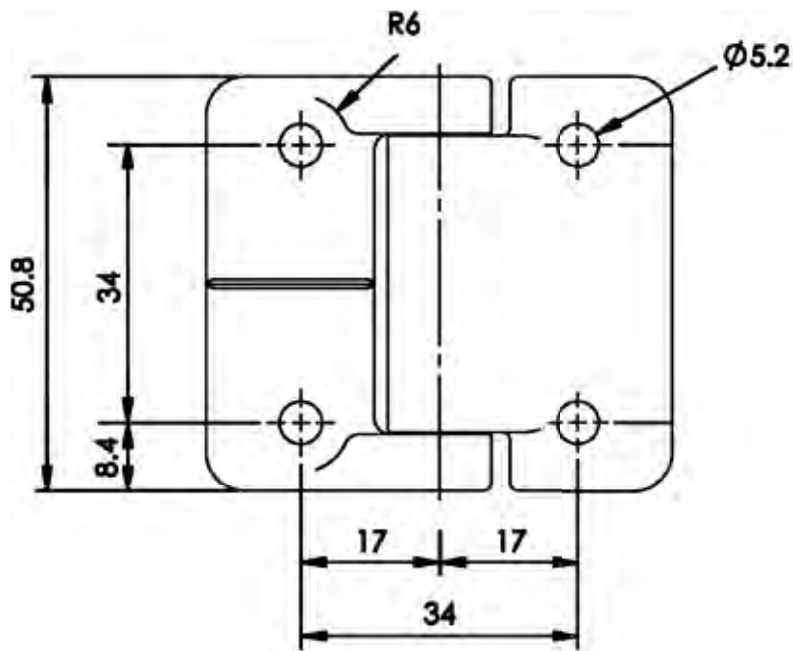
Version B right	1117-U4-PC	Version B left	1117-U5-PC
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180° gear hinge open and pictured transparently

270° torque hinge

PROGRAM 1058



Hinges

Torque hinge

The hinge has a constant torque and can be brought into position steplessly.

There it remains in the same position.

The torque is the same during opening and closing.

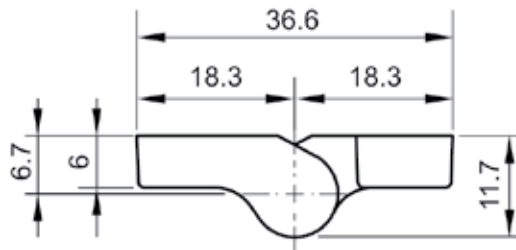
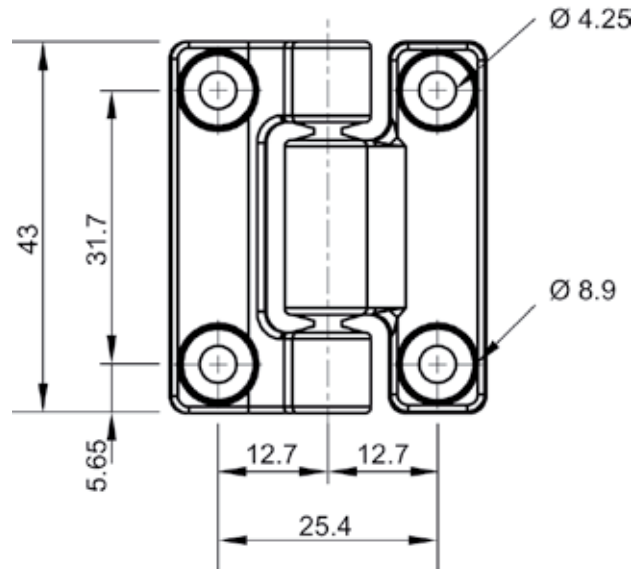
Note:

- Springback < 1°
- > 20.000 cycles with 180° open-close
- Constant torque

Further versions on request!

270° torque hinge zinc die or AISI 316; pin and spring element steel hardened

Nm	Tolerance +/-%	Zinc die raw	Zinc die black
3,4	20	on request	1058-U8035-105



Torque hinge

The hinge has a constant torque and can be brought into position steplessly. There it remains in the same position. The torque is the same during opening and closing.

Note:

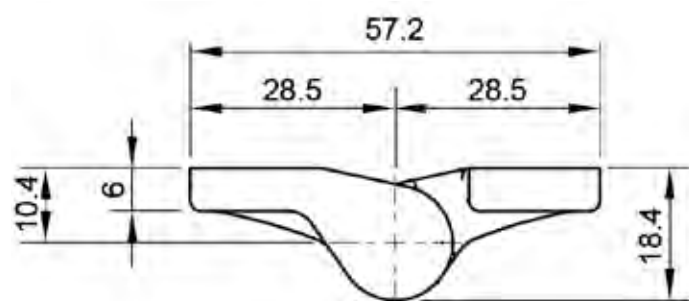
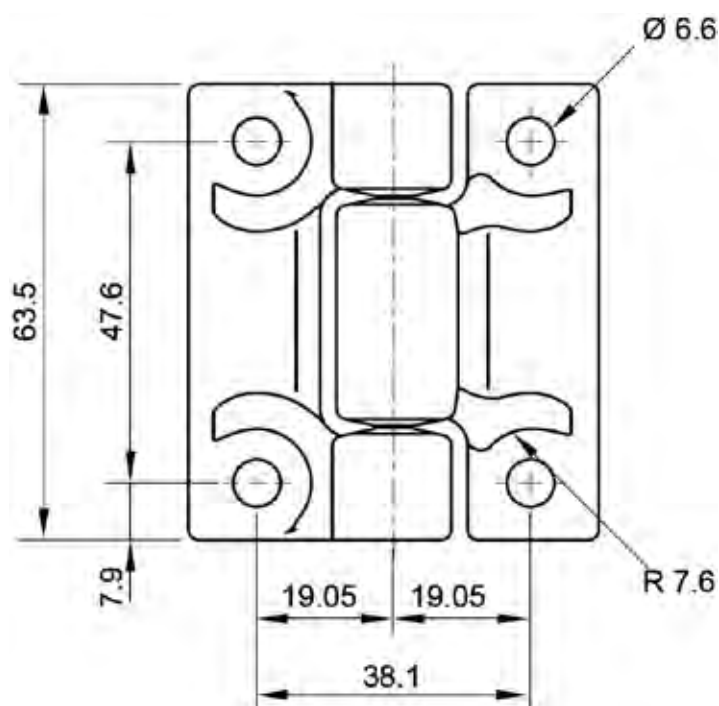
- Springback < 1°
- > 25.000 cycles with 180° open-close
- Constant torque

Further versions on request!

270° torque hinge plastic black, pin and spring element steel hardened		
Nm	Tolerance +/-%	
0,4	35	1058-U12-000
0,8	25	on request
1,6	20	1058-U12-003

270° torque hinge

PROGRAM 1058



Hinges

Torque hinge

The hinge has a constant torque and can be brought into position steplessly. There it remains in the same position. The torque is the same during opening and closing.

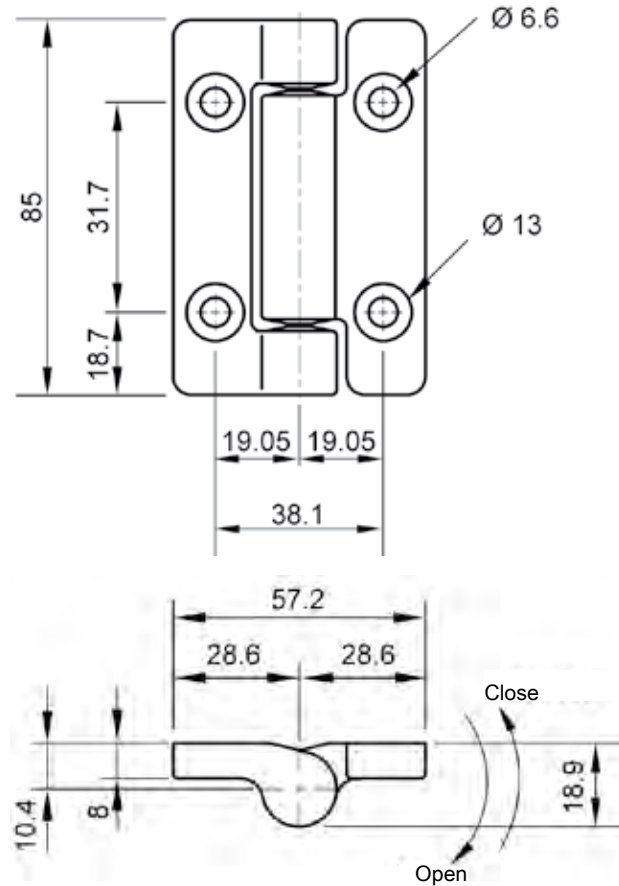
Note:

- Springback < 1°
- > 20.000 cycles with 180° open-close
- Constant torque

Further versions on request!

270° torque hinge plastic black, pin and spring element steel hardened

Nm	Tolerance +/--%	
1,8	30	1058-U14-118
3,4	20	1058-U14-134
4,2	20	on request
5,8	20	1058-U14-158



Torque hinge

The hinge has a constant torque and can be brought into position steplessly.

There it remains in the same position.

Two versions available:

1. same torque during opening and closing
2. different torques during opening and closing on request

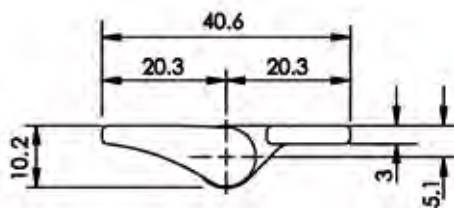
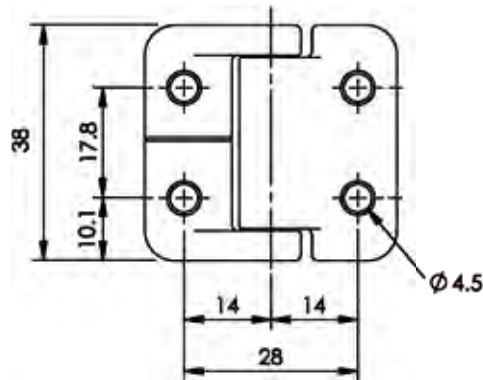
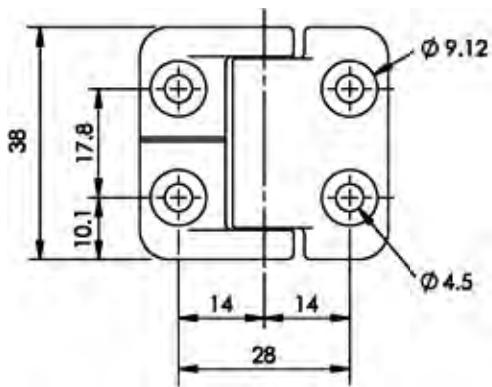
Note:

- Springback < 1°
- > 20.000 cycles with 180° open-close
- Constant torque

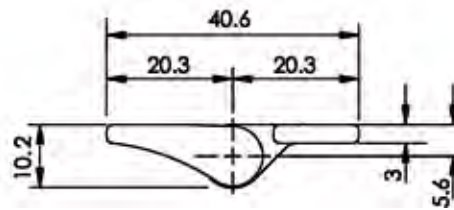
Further versions on request!

270° torque hinge plastic black, pin and spring element steel hardened		
Nm during opening and closing	Tolerance +/-%	
8,0	20	1058-U15-206

270° torque hinge PROGRAM 1058



Version A



Version B

Version A



Version B



Torque hinge
The hinge has a constant torque and can be brought into position steplessly. There it remains in the same position. The torque is the same during opening and closing.

Note:

- Springback < 1°
- > 20.000 cycles with 180° open-close
- Constant torque

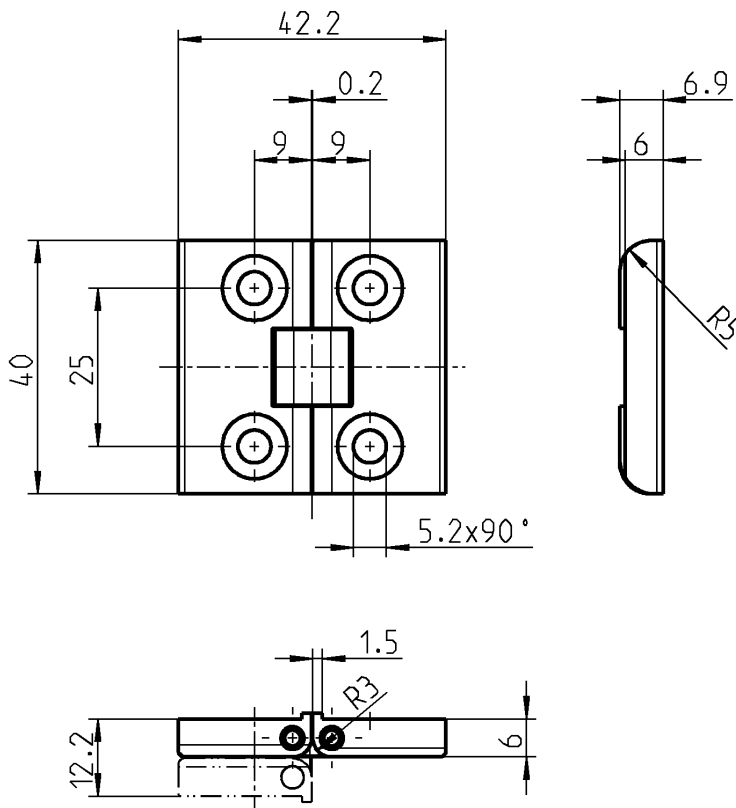
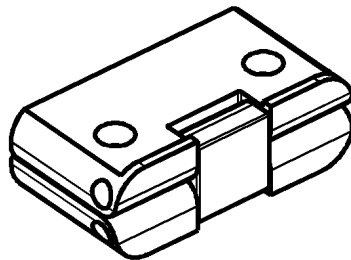
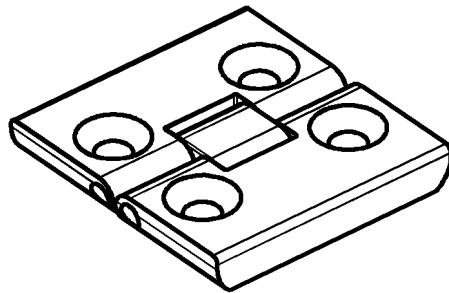
Further versions on request!

270° torque hinge zinc die or AISI 316, pin and spring element steel hardened respectively AISI 316

Nm	Tolerance +/-%	Zinc die raw	Zinc die black	AISI 316
Version A				
1,57	20	1058-U28-016	on request	on request
Version B				
0,44	20	1058-U35-004	on request	on request
2,79	20	1058-U35-030	on request	on request

180° hinge for table tops

PROGRAM 1056



Hinges

180° hinge AISI 316

1056-SU136-PH

Hinge for countersunk screw M5
according to
DIN ISO 2009, 2010,
7046-1, 7046-2 und 7047

Chapter 3: Gasketing



Tolerance of gaskets:

Gasket tolerance on the basis of DIN ISO 3302-1. Soft rubber usually according to "E2" and sponge rubber according to "E3".

PVC edge protection profile tolerance on the basis of DIN 16941-3B.

Some examples:

Nominal dimension		Tolerance class DIN ISO 3302-1 E2	Tolerance class DIN ISO 3302-1 E3
over	up to		
0	1,5	±0.25	±0.40
1,5	2,5	±0.35	±0.50
2,5	4,0	±0.40	±0.70
4,0	6,3	±0.50	±0.80
6,3	10	±0.70	±1.00
10	16	±0.80	±1.30
16	25	±1.00	±1.60
25	40	±1.30	±2.00
40	63	±1.60	±2.50

Nominal dimension		Tolerance class DIN 16941-3B
over	up to	
0	3	±0.40
3	6	±0.60
6	10	±0.70
10	18	±0.80
18	30	±1.00

The appropriate storage is important (optimal storage temperature +5°C to +20°C).

For the storage of gaskets, attention should be paid to DIN 7716 (guidelines for storage, maintenance and cleaning of rubber products). If possible, wrong storage in respect to long lay days or storing times should be avoided, since the mechanical characteristics may change.

Elastomers - operating temperatures and hardnesses:		
Materials	Operating temperatures	Hardness(±5° Shore A)
EPDM	approx. -40°C to 100°C	25° (MG) to 90° (WG)
NBR	approx. -30°C to 100°C	25° (MG) to 90° (WG)
CR	approx. -25°C to 100°C	40° to 90°
PVC	approx. -40°C to 70°C	55° to 75°
Silicone	approx. -60°C to 180°C	10° to 90°

MG=sponge rubber / WG=soft rubber

Recommended compression for extruded sealing profile:

The compression of our sealing profiles should be 50% max., since otherwise the function (tightness) and the restoring forces are affected. In practice, the profiles are compressed between 30-50%.

It does not matter, whether it is a EPDM, NBR or a silicone profile. Here, the mechanical properties are (unlike the chemical resistances) quite comparable. If the gasket is deformed beyond these limitations, there is the risk of the compression set (DVR) becoming too big, because the material deforms plastically as well.

Then the gasket would be designed too small.

Resistances:

Because of the large variety of possible chemicals, solvent (concentrations), operating temperatures and times, no evaluations concerning the possible resistances can be made at this point. In every individual case, a test in the present circumstances, like concentration, temperature and duration of the impact, is recommended.

Fire protection:

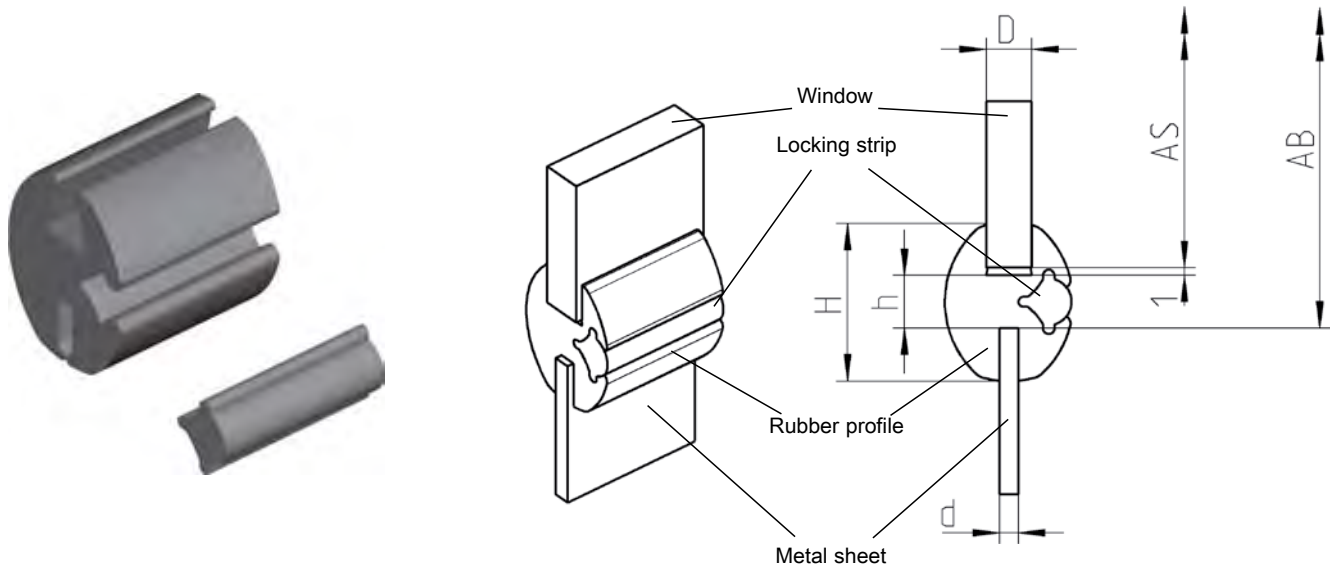
We supply materials certified according to the current fire protection standards for rail vehicles. E. g. according to DIN 5510-2; NF F 16-101/ -102; DIN EN 45545-2; UNI CEI 11170; ASTM-C and -E. Whether the achieved categories fit to the respective requirements or vehicle classes has to be verified for the individual case. Generally speaking, silicone profile achieve higher fire protection classes than EPDM.

Disclaimer:

As a rule, disclosed values are standard values detected on sample plates and correspond to our state of knowledge. However, they do not release the end user of individual and thorough tests.

Content

3.1	Glazing profiles with filler	156
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3.3	Fire protection gaskets	160
3.4	EMC gasketing material	166
3.5	Edge-protection	167
3.6	Support for tank bands	169



AS = dimension of the window
AB = dimension of the cut out

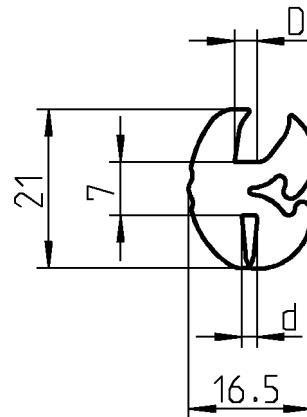
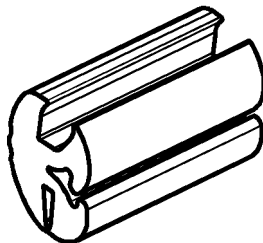
The indication of the bending radius is based on the pane receiver = AS + 1 mm

**Glazing profile EPDM 75° ± 5 Shore black
with Filler EPDM 85° ± 5 Shore black**

D	d	H	h	Bending radius	AB in mm	Rubber profile	+	Locking strip
4	2	15	4	>30	AS+10	1030-01	+	1030-04
4	2,5	21	7	>70	AS+16	1030-02	+	1030-05
6	2,5	21	7	>70	AS+16	1030-03	+	1030-05
5	2	17	5	>50	AS+12	1030-07	+	1030-10

2 tools for installation for window and locking strip

1030-U1

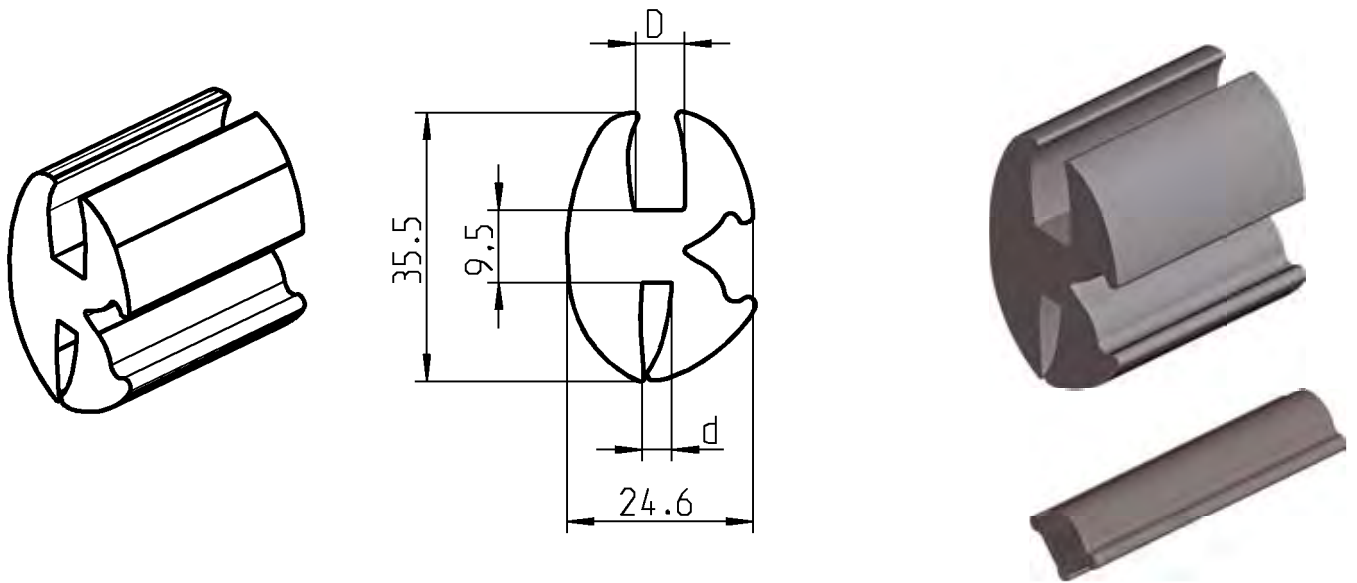


**Glazing profile EPDM 70° ± 5 Shore black
with Filler EPDM 80° ± 5 Shore black**

D	d	Bending radius	Rubber profile	+	Locking strip
4	1.5	>80	1030-HP453	+	1030-HP454

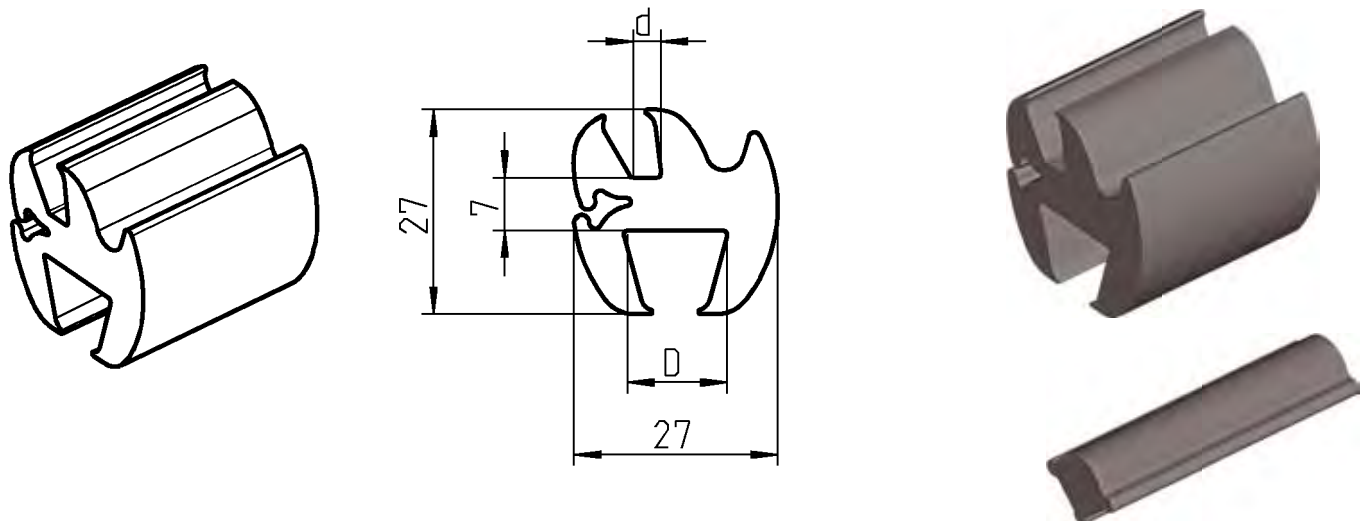
Window-rubber with locking strip

PROGRAM 1030



Glazing profile EPDM 70° ± 5 Shore black
with Filler EPDM 80° ± 5 Shore black

D	d	Bending radius	Rubber profile	+	Locking strip
6	3.5	>100	1030-HP488	+	1030-HP454



Glazing profile EPDM 70° ± 5 Shore black
with Filler EPDM 80° ± 5 Shore black

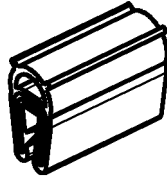
D	d	Bending radius	Rubber profile	+	Locking strip
13	3.5	>100	1030-HP511	+	1030-HP454

Gasketing

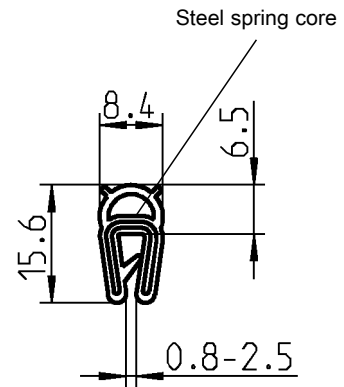
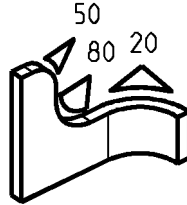


c **RU** [®] **US** *

<3



compressible



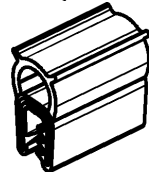
Material for gasket as requested

Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)	1011-10*
Sponge rubber (NBR) black (gripping profile NBR 60° ±5 Shore A)	1011-50

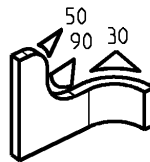


c **RU** [®] **US** *

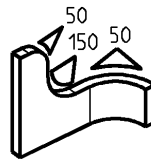
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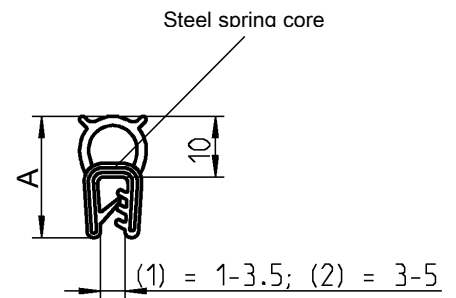
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1011-05, -15



1011-47, -49



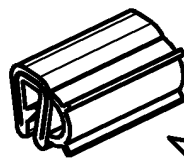
Material for gasket as requested

	A	
Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)	20	1011-05* (1)
Sponge rubber (NBR) black (gripping profile NBR 60° ±5 Shore A)	21	1011-15 (1)
Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)	21	1011-49 (2)
Sponge rubber (NBR) black (gripping profile NBR 60° ±5 Shore A)	21	1011-47 (2)

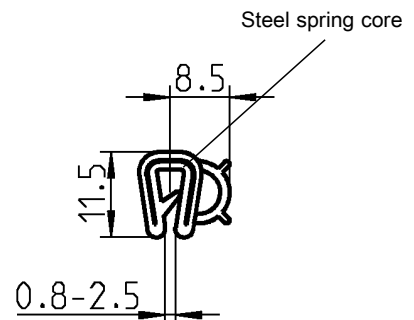
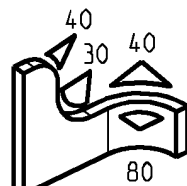


c **RU** [®] **US** *

<3.5



compressible



* c **RU** [®] **US**

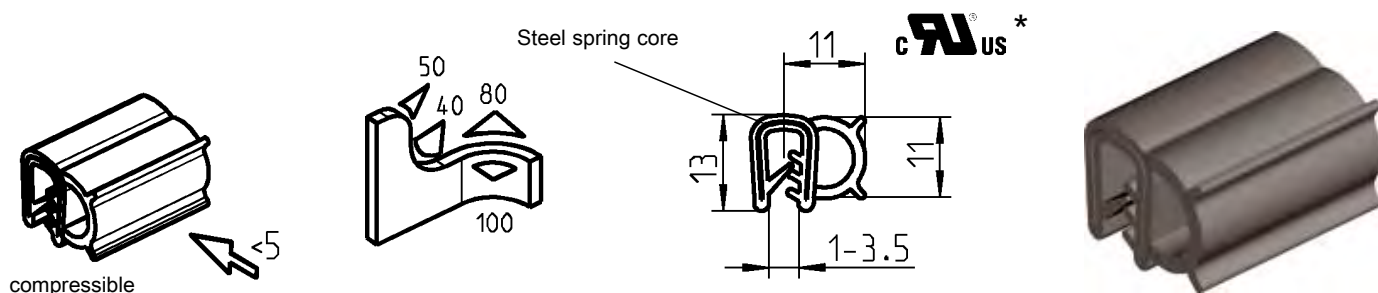
- UL 50
- UL 50(E)
- UL 94-HB

Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)

	1011-09*
--	----------

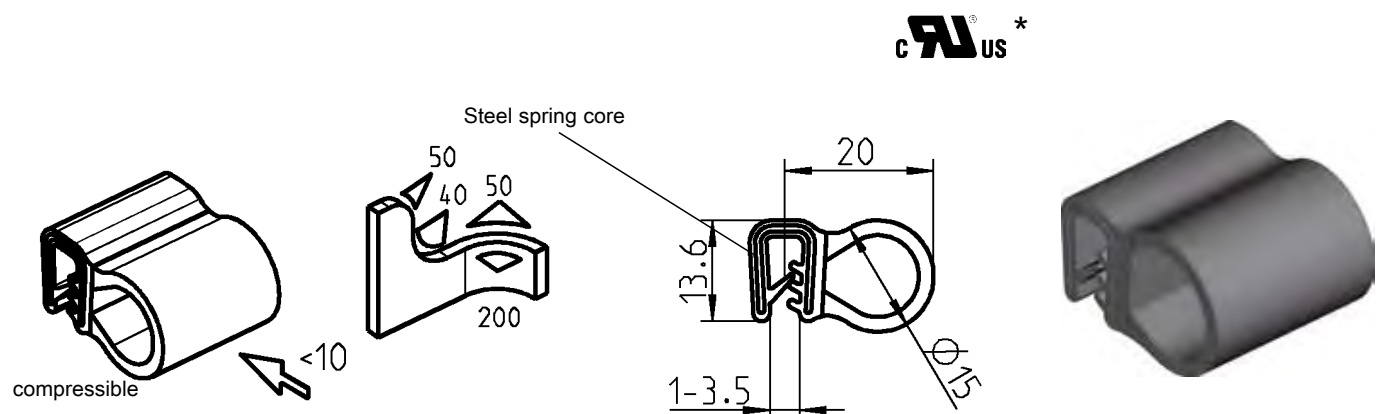
Self-gripping gasketing

PROGRAM 1011



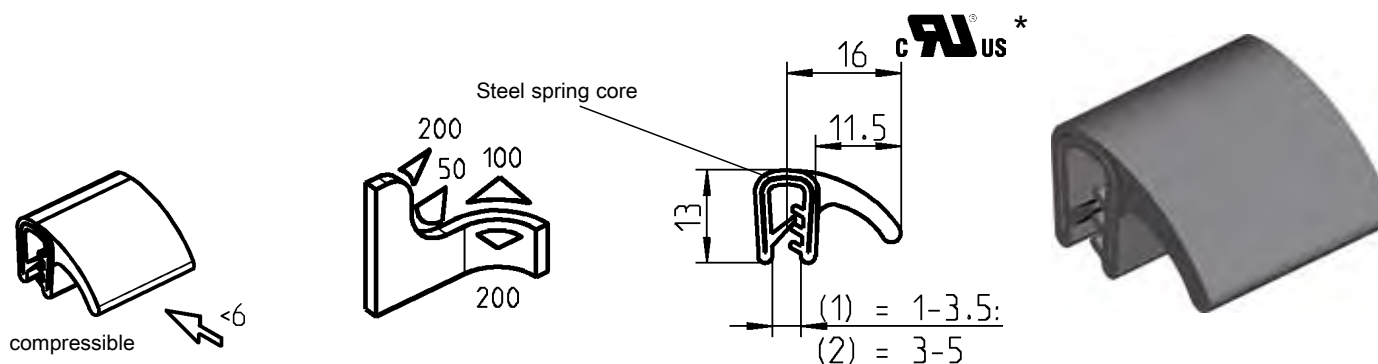
Material for gasket as requested

Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)	1011-06*
Sponge rubber (NBR) black (gripping profile NBR 60° ±5 Shore A)	1011-16



Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)

1011-12*



Material for gasket as requested

Sponge-rubber (EPDM) black (gasket EPDM 65° ± 5 Shore A)	(1)	1011-08*
Sponge rubber (NBR) black (gripping profile NBR 60° ±5 Shore A)	(1)	1011-46
Sponge rubber (NBR) black (gripping profile NBR 60° ±5 Shore A)	(2)	1011-48

*
 UL 50
 UL 50(E)
 UL 94-HB

History:

- The work on EN 45545 was finished in January 2012 for the time being.
- DIN EN 45545 was published in June 2013 (available from August 2013).
- The DOW (date of withdrawal) has been Extended from 6 to 36 months so that national standards, e. g. DIN 5510, are to be withdrawn by March 2016.

DIN EN 45545-2:

This part stipulates the test procedures for test conditions and requirements for the reaction to fire of each Hazard Level.

Hazard Level:

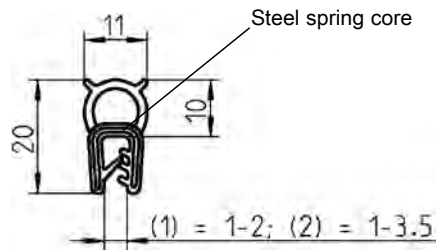
Operation category	Building class			
	N: Standard vehicles	A: Vehicles for automatic train operation not having staff on board that is trained for emergencies.	D: Double-decker trains	S: Sleepers and couchettes (bilevel or unilevel)
1	HL1	HL1	HL1	HL2
2	HL2	HL2	HL2	HL2
3	HL2	HL2	HL2	HL3
4	HL3	HL3	HL3	HL3

Operation categories:

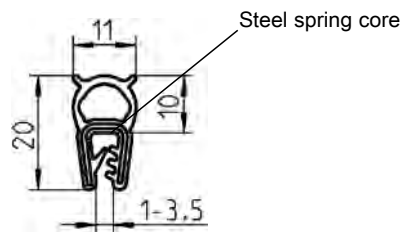
- Operation category 1: surface vehicles
- Operation category 2: tunnel max. 5 km
- Operation category 2: tunnel > 5 km
- Operation category 4: tunnel, evacuation from the side not possible

Gasketing:

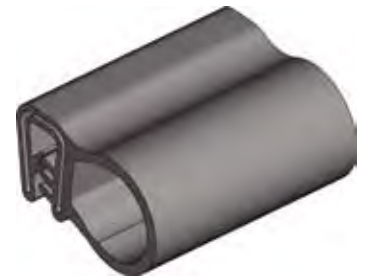
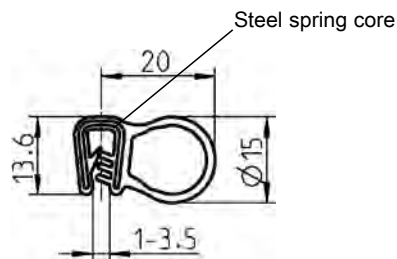
The gasketing has been included in DIN EN 45545 and have to meet the requirements R22 for indoors or R23 for outdoors as a function of the Hazard Level. In order to be able to define the Hazard Level, you need to know the Operation Category and Building Class, e. g. 2 (tunnel max. 5 km) D (double-decker trains)!



Fire protection sealing profile		
⑤⑥⑦	Sponge-rubber (EPDM) black (gasket sponge-rubber EPDM)	1011-S19 (1)
①②	Sponge rubber (EPDM) black (gripping profile soft rubber)	1011-S39 (2)

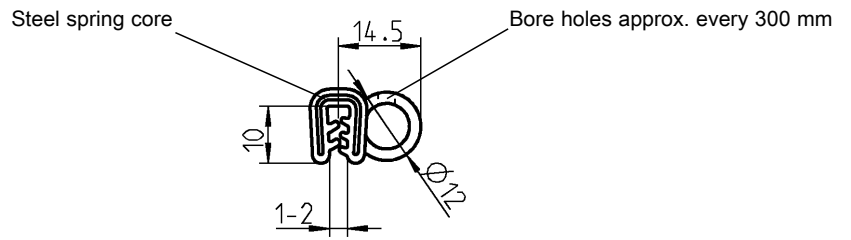


Fire protection sealing profile silicon solid material		
①②③④	graphite grey 65° ±5° Shore A	1011-S47-BF
②③	white 75° ±5° Shore A	1011-S47-HA



Fire protection sealing profile silicon solid material		
①②③④	graphite grey 65° ±5° Shore A	1011-S42-BF
②③	white 75° ±5° Shore A	1011-S42-HA

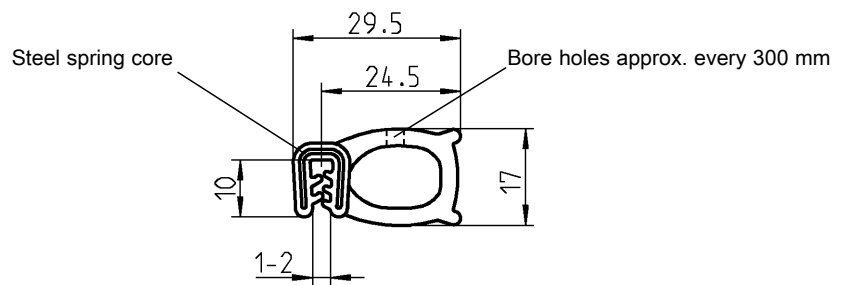
Fire protection standards	
①	DIN 5510-2
②	NF F 16-101/ -102
③	DIN EN 45545-2
④	UNI CEI 11170
⑤	ASTM C542-90
⑥	ASTM E662-95
⑦	SMP 800-C



Fire protection sponge-rubber (EPDM) black (gasket sponge-rubber EPDM)

⑤⑥⑦

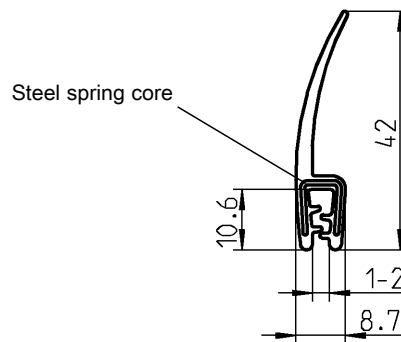
1011-S23



Fire protection sponge-rubber (EPDM) black (gasket sponge-rubber EPDM)

⑤⑥⑦

1011-S24



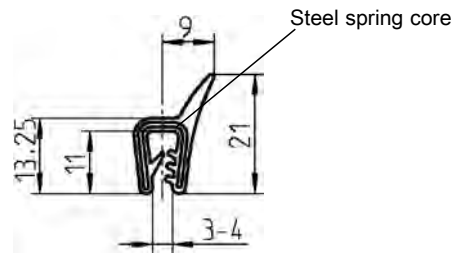
Fire protection sealing profile silicon solid material 65° ±5° Shore A graphite grey

①②③④

1011-S83-BF

Fire protection standards

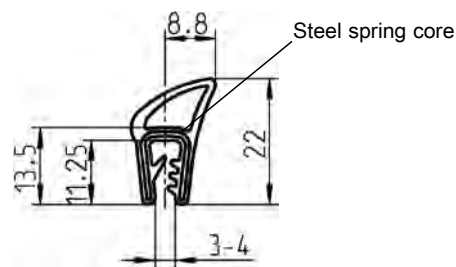
①	DIN 5510-2
②	NF F 16-101/ -102
③	DIN EN 45545-2
④	UNI CEI 11170
⑤	ASTM C542-90
⑥	ASTM E662-95
⑦	SMP 800-C



Fire protection sealing profile silicon solid material 65° ±5° Shore A graphite grey

①②③④

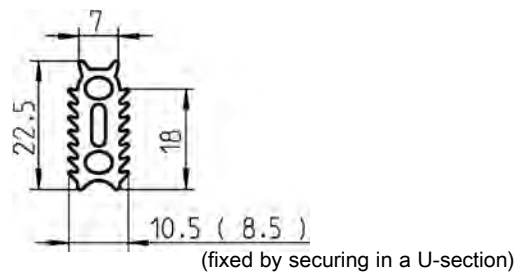
1011-S53-BF



Fire protection sealing profile silicon solid material 65° ±5° Shore A graphite grey

①②③④

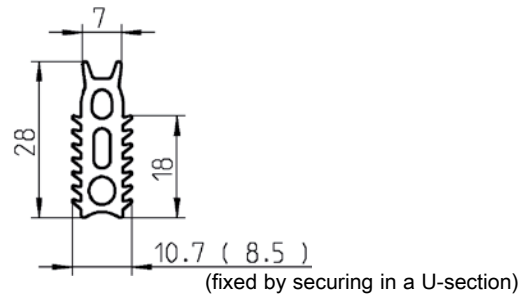
1011-S56-BF



Fire protection sealing profile material of your choice

①②	Sponge rubber 30 ±5° Shore A black	1003-S23
①	Silicon solid material 50° ±5° Shore A graphite grey	1003-S30-BF

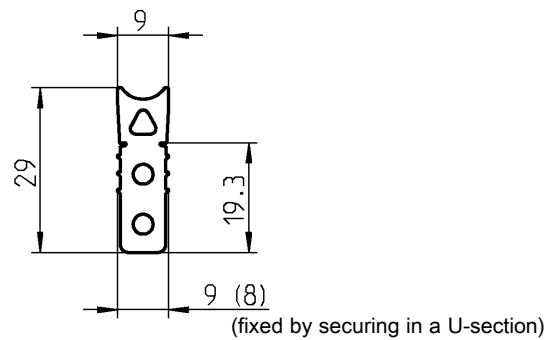
Fire protection standards	
①	DIN 5510-2
②	NF F 16-101/ -102
③	DIN EN 45545-2
④	UNI CEI 11170
⑤	ASTM C542-90
⑥	ASTM E662-95
⑦	SMP 800-C



Fire protection sealing Profile silicon solid material 50° ±5° Shore A graphite grey

①

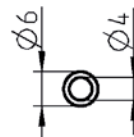
1003-S29-BF



Fire protection sealing profile silicone foam graphite grey

①③

1003-S32-BF



Fire protection sealing profile silicon solid material

①②③④	graphite grey 65° ±5° Shore A	1016-S4-BF
②③	white 75° ±5° Shore A	1016-S4-HA

Fire protection standards

①	DIN 5510-2
②	NF F 16-101/ -102
③	DIN EN 45545-2
④	UNI CEI 11170
⑤	ASTM C542-90
⑥	ASTM E662-95
⑦	SMP 800-C

Examples of customer solutions

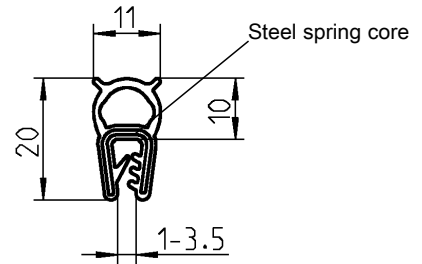
EPDM-Fire protection gasket



Gasketing



anti-static



Attention:

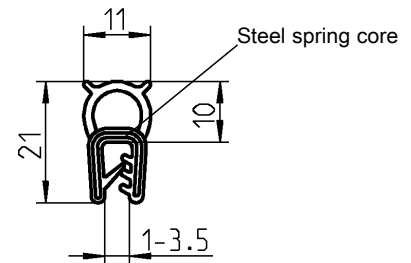
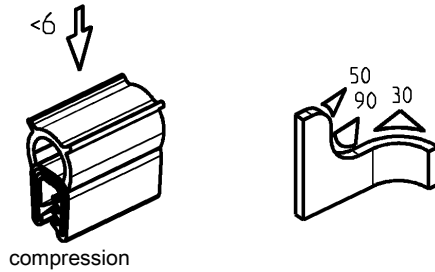
Please provide a contact area for all anti-static gaskets. For painted or powder coated cabinets see conductive tape.

Sealing profile silicon solid material and steel spring core; flame proof according to DIN 5510-2

1011-S80



EMC



Attention:

Please provide a contact area for all EMC gasketings. For painted or powder coated cabinets see conductive tape.

Soft-sponge rubber / EPDM with conductive overall coating and steel spring core

1011-05-E

EMC conductive tape

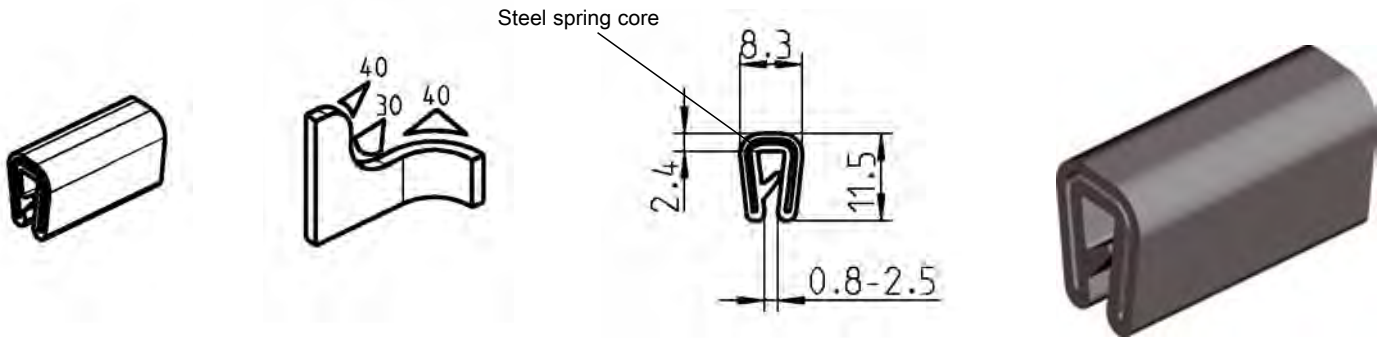
- for painting and contact
- highly-conductive adhesive for creating paint-free contact areas
- length 25 metres

Note:

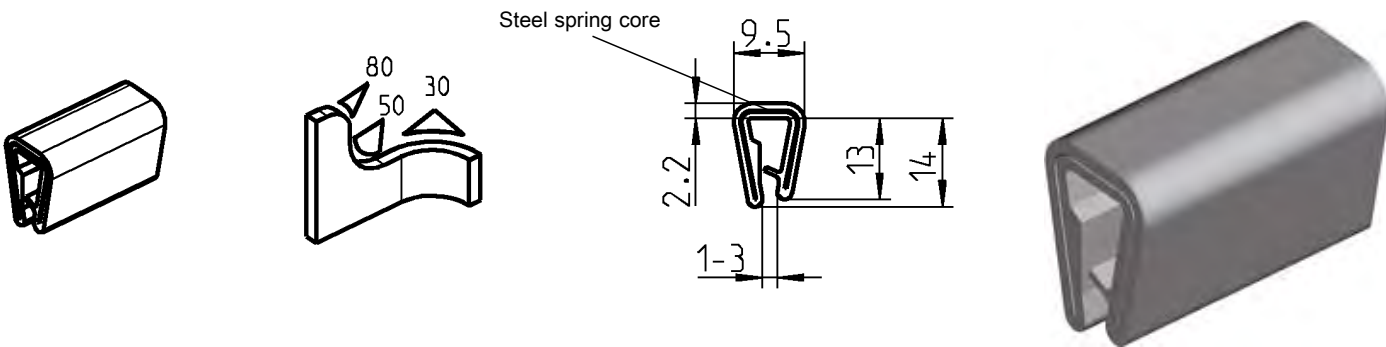
- The area to be adhered to has to be free of grease and dust.
- Remove the protective foil from the conductive tape and adhere it to the contact area. For better adhesion the conductive tape is wider than the mask.
- Afterwards painting or coating is possible, the mask prevents the coating adhering to the conductive tape. Please note the following instructions for heat treatment of the conductive tape: max. 120°C permanent heat; short term up to 230°C possible; each time individual testing is necessary.
- After painting or powder coating the mask can be removed easily, the conductive tape is left securely in place.



EMC conductive tape		
width of tape (mm)	in combination with EMC gasketing	
12,7	--	1016-220-127E
22	1011-09-E; 1011-10-E	1016-220-220E
25,4	1011-05-E; 1011-06-E; 1011-S80	1016-220-254E
Further dimensions on request		

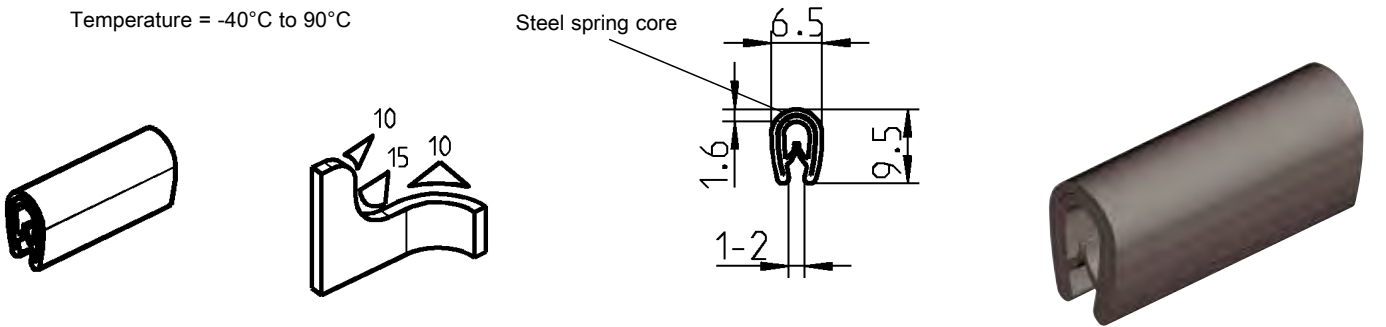


Edge-protection EPDM 60° ± 5 Shore A black
1010-12



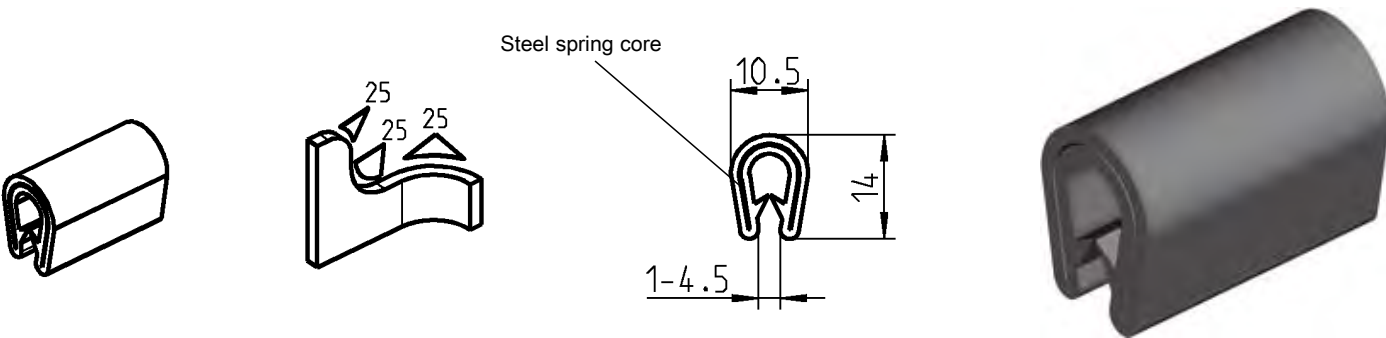
Edge protector PVC grey
1010-05

Temperature = -40°C to 90°C



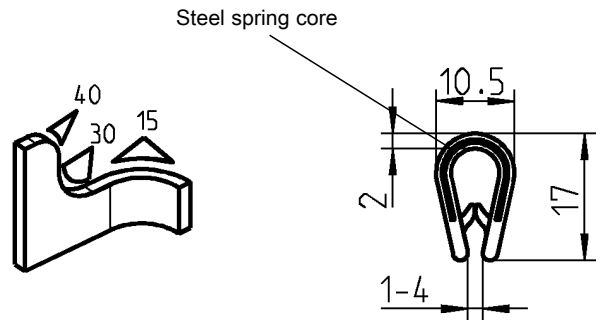
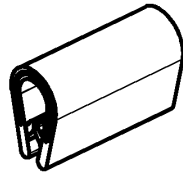
Edge-protection PVC black
1010-02

Temperature = -40°C to 90°C



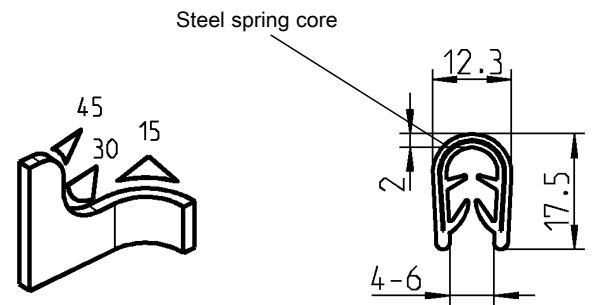
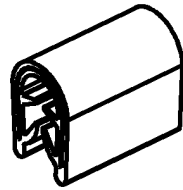
Edge-protection PVC black
1010-01

Gasketing



Edge-protection PVC black

1010-08



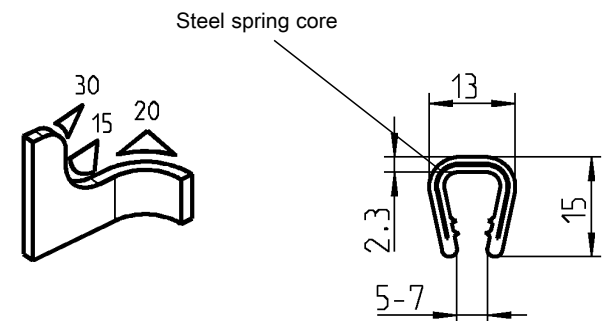
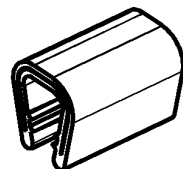
Edge protection PVC color of your choice

black

1010-11

dark grey

1010-11-01



Edge protection color of your choice

black

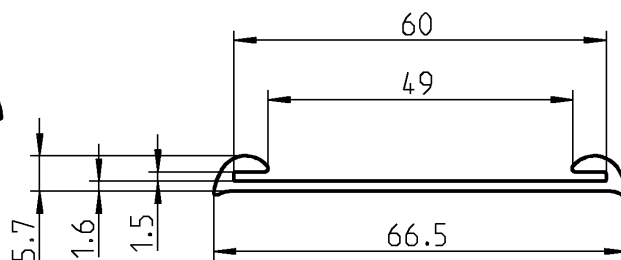
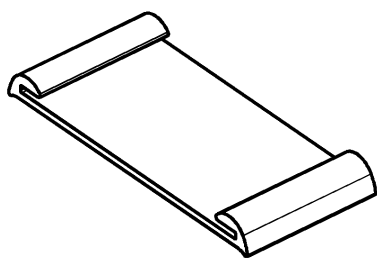
1010-06

light-grey

1010-06-01

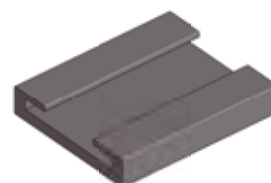
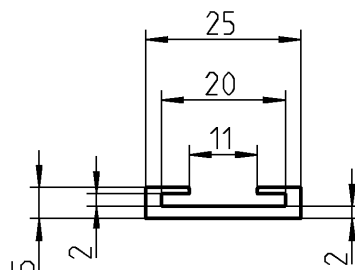
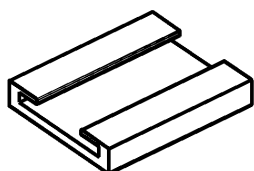
Support for tank bands

PROGRAM 1038



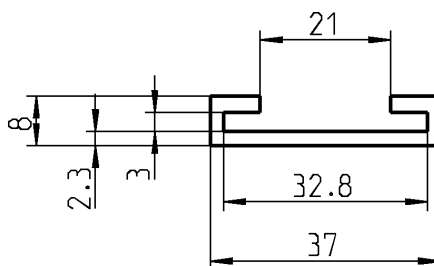
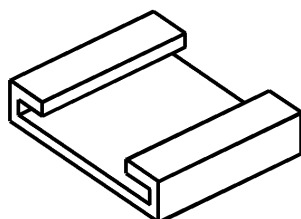
Support for tank bands EPDM 60° Shore A black

1038-HP437



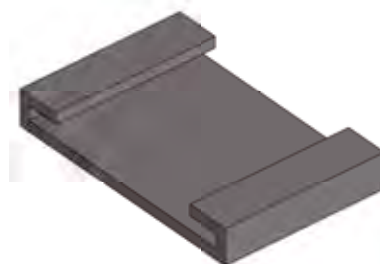
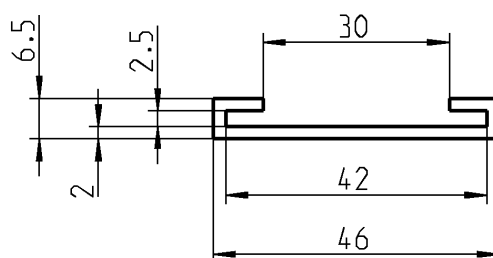
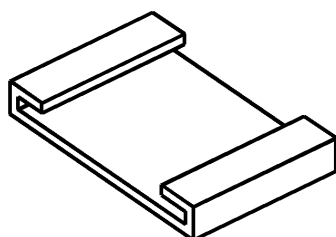
Support for tank bands NBR 70° Shore A black

1038-HP353



Support for tank bands NBR 70° Shore A black

1038-HP298



Support for tank bands NBR 70° Shore A black

1038-HP299

Chapter 4: Electronics

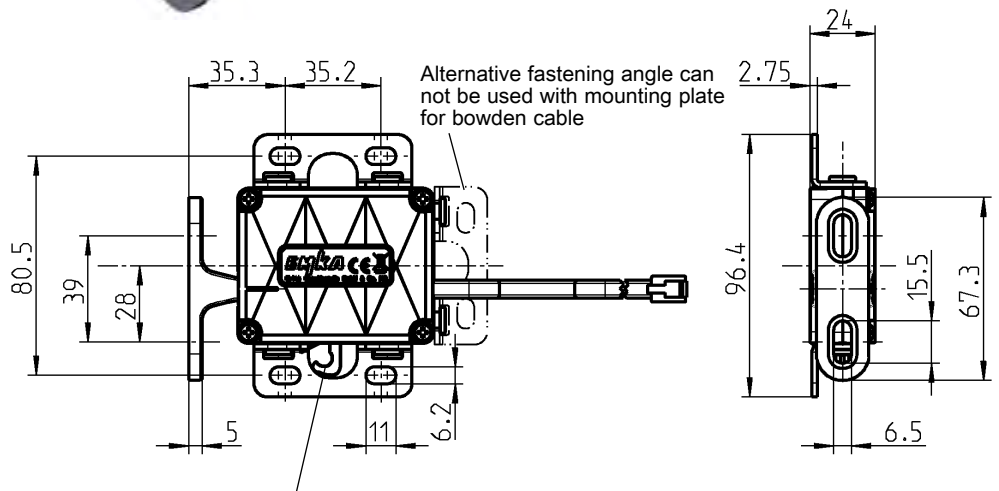
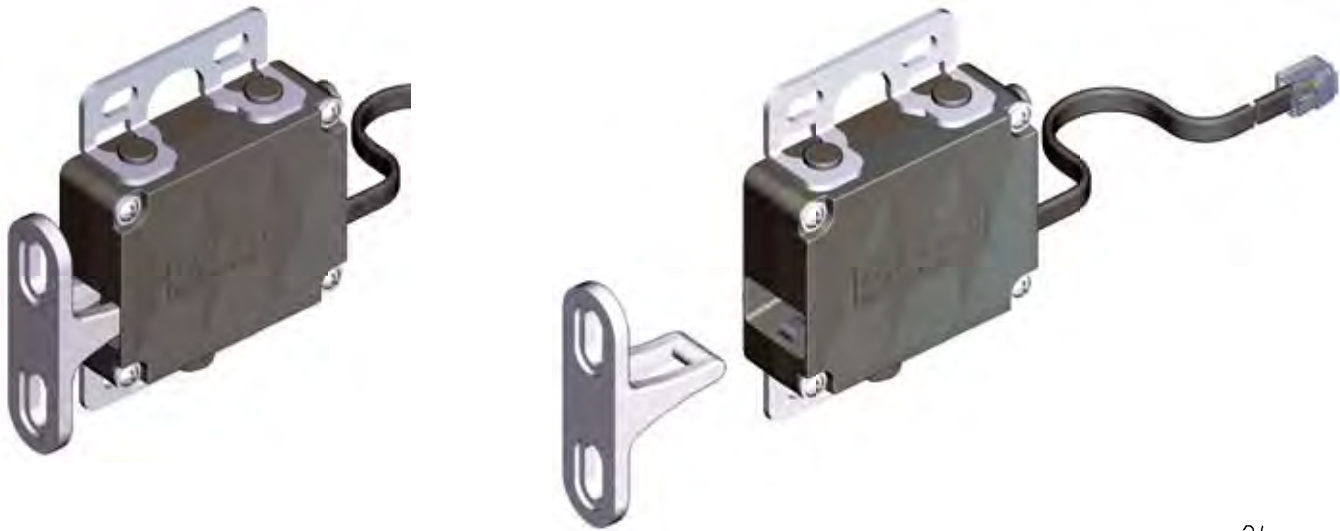


Content

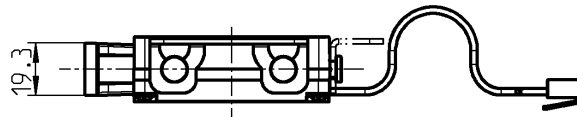
4.1	Electronic locking system	174
4.2	Electromechanical locking system	175

Single point latch with integrated status contact

The single-point-locking is applicable in special application areas. The single-point-locking is designed for the connection with the control modules 3000-U32-0x and 3000-U33-0x.



Lever for mechanic unlock, e.g. bowden cable



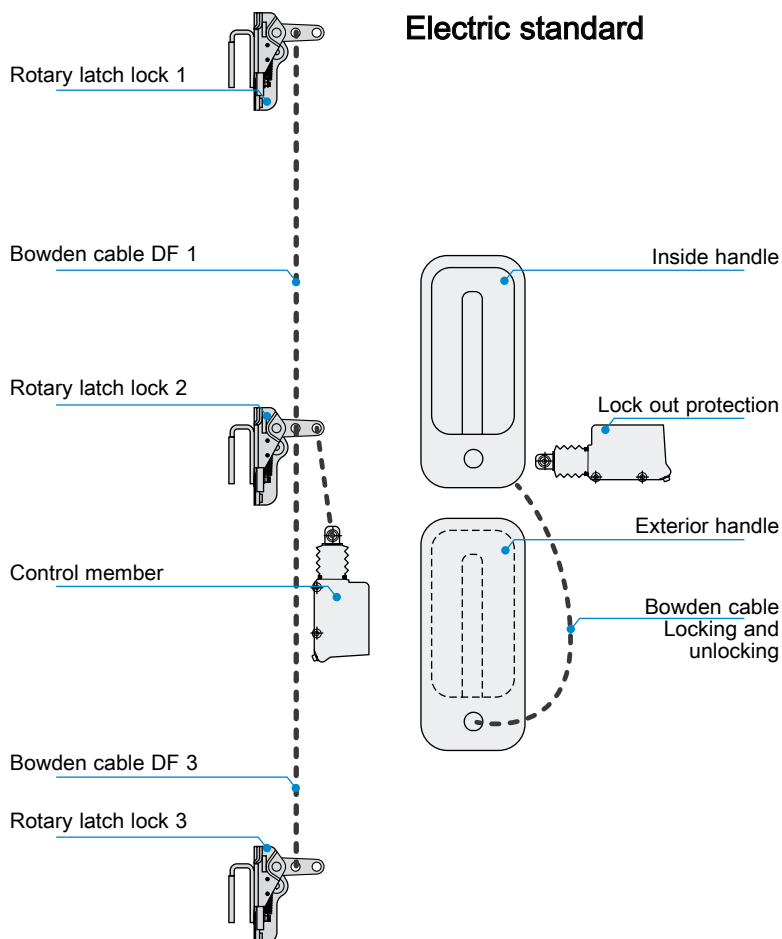
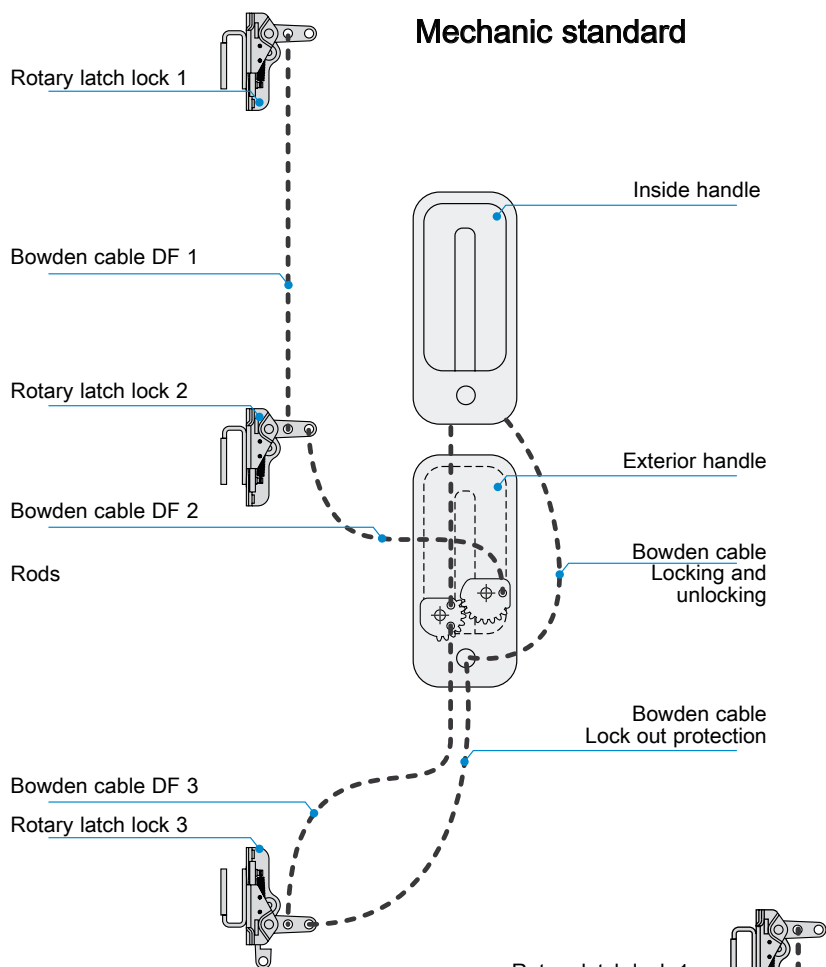
Single-point-locking with integrated status contact,
housing polyamide 66+PA6i GF 40 V0 black;
rotary latch and ratchet m.s. bonded coating;
bolt catch AISI 316; gear motor; electronics; cable with RJ connector 150 mm;
fastening angle m.s. zinc plated; screw m.s. zinc plated; with springs;
with assembly instruction and user manual

Basic	3000-U300-01
Basic delayed Re-Lock; (with delayed re-lock)	3000-U300-02
Energy-store; automatic unlock in case of power failure	3000-U300-03
Adapter cable for RJ-box to	
open cable end for modular construction form KIT	3000-U15
Plug for modules of type Box and 19" rack mount unit	3000-U15-01

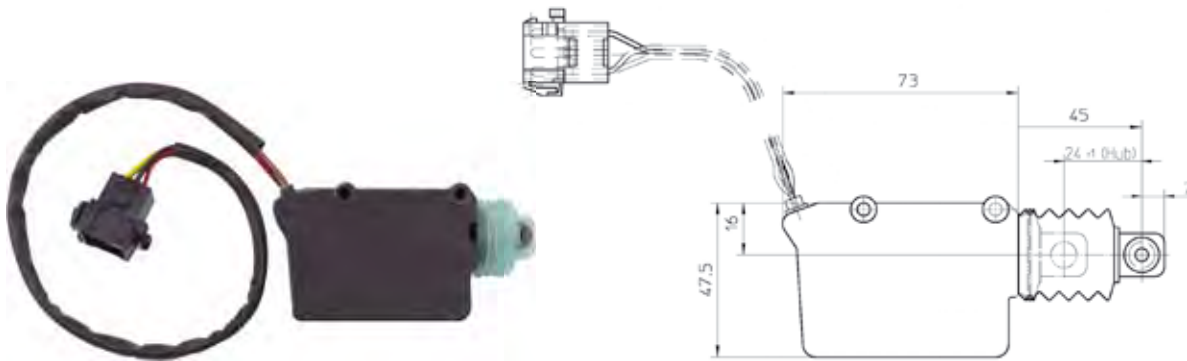
On request:

- Fitting panel for Bowden cable
- Bowden cable

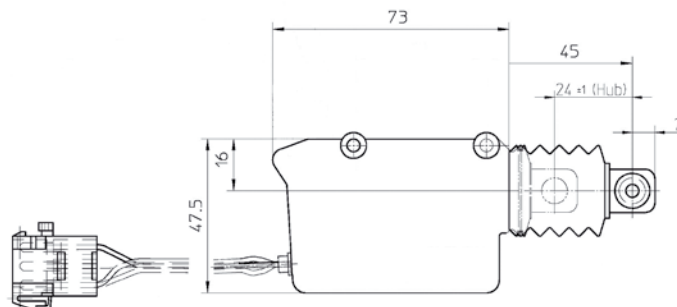
Electromechanical locking system on basis of rotary latch lock



Electronics



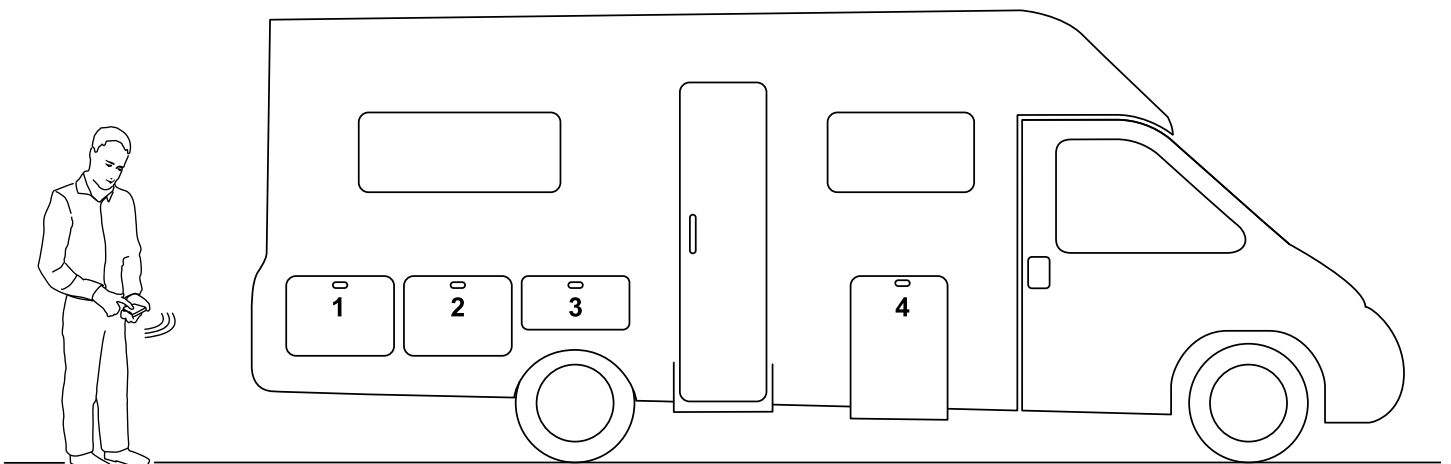
Version 5225-U1 and U3; max. 1 second to energize



Several versions available:
Tension and pressure motor with spring return

- Motor for central locking
- Tension and pressure motor
- with or without microswitch
- multiple connectors
- Cable lengths and versions on request

Actuator electric locking and unlocking e.g. for central locking		
12V with microswitch, cable length 400 mm with 6-pin. AMP connector		5225-U1
24V with microswitch, cable length 400 mm with 6-pin. AMP connector		5225-U3
Further versions and cable lengths		on request



Chapter 5: Accessories

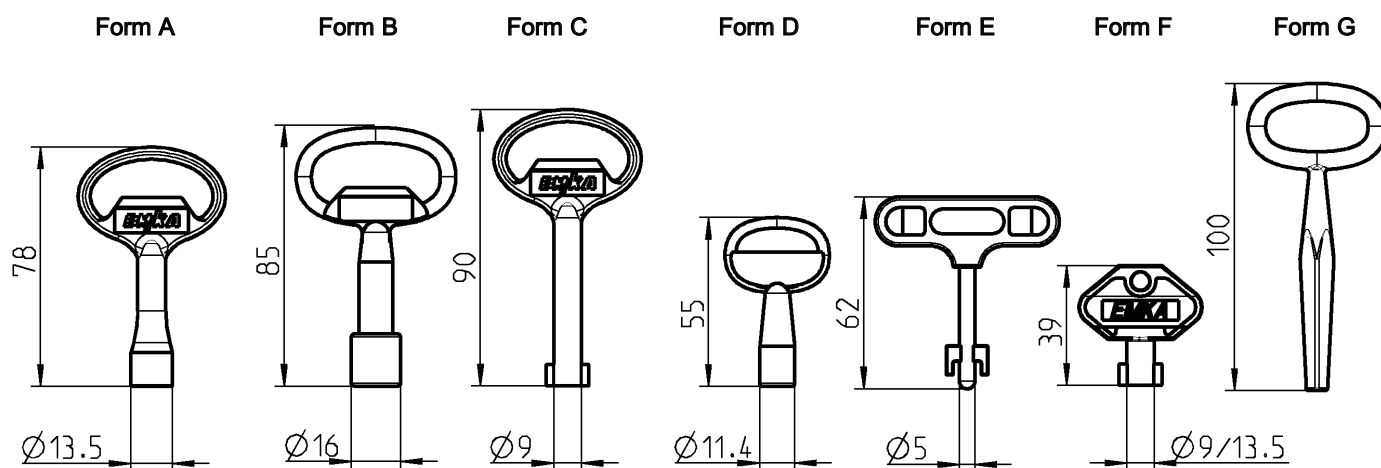


Content

5.1	Key	182
5.2	Retractable loops and slinging rings	184
5.3	Dove tails	186
5.4	Aluminium window - with or without a frame	188
5.5	Miscellaneous	190

Key

PROGRAM 1004



Keys can be supplied on request with customer logo

Minimum quantity: Form A, B, C, D

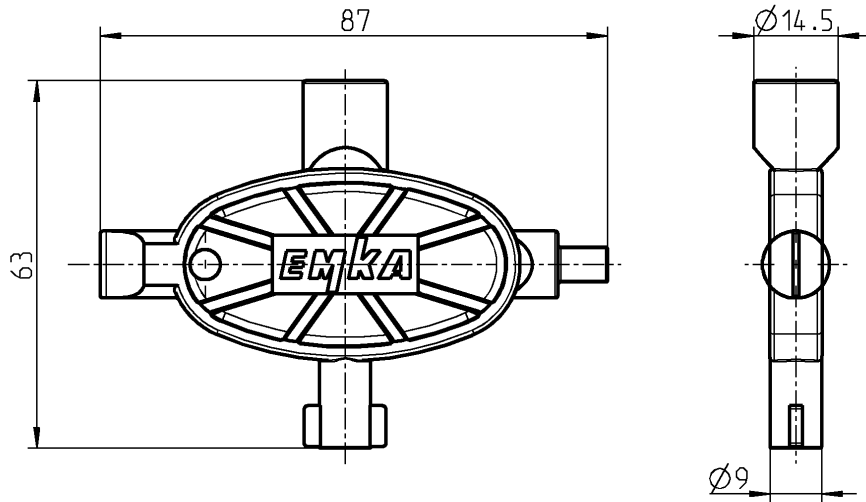
2,000 pieces

Minimum quantity: Form E, F, H

5,000 pieces

Key-Form	A	B	C	D	E	F	G
	Zinc die black	Zinc die black	Zinc die black	Zinc die black	zinc die/ polyamide	Polyamide GF	GTW nickel plated
Square 6	1004-18	-	-	1004-20	-	1004-37	-
Square 7	1004-01	-	-	-	-	1004-36	-
Square 8	1004-02	-	-	-	-	1004-35	-
Triangular 6,5	-	-	-	1004-21	-	-	-
Triangular 6.5mm CNOMO	1004-26	-	-	-	-	-	-
Triangular 7	1004-03	-	-	-	-	1004-39	-
Triangular 8	1004-04	-	-	-	-	1004-38	-
Triangular 10	-	1004-24	-	-	-	-	-
Crown type	-	1004-31	-	-	-	-	-
Eastern Europe Ø13 half round	-	1004-42	-	-	-	-	-
Double bit 3	-	-	1004-05	-	-	1004-34	-
Double bit 5	-	-	1004-06	-	-	1004-33	-
Male hexagon 11.1 with indicator	-	1004-54	-	-	-	-	-
Daimler Benz	1004-17	-	-	-	-	-	-
FIAT	-	-	-	-	1004-41	-	-
Square male 6	1004-29	-	-	-	-	-	-
Square male 8	1004-30	-	-	-	-	-	-
Square male 6 – 9.5	-	-	-	-	-	-	1004-19
Hexagon head 8 with boring	1004-49	-	-	-	-	-	-
Tube	-	-	-	1004-51	-	-	-

Form H

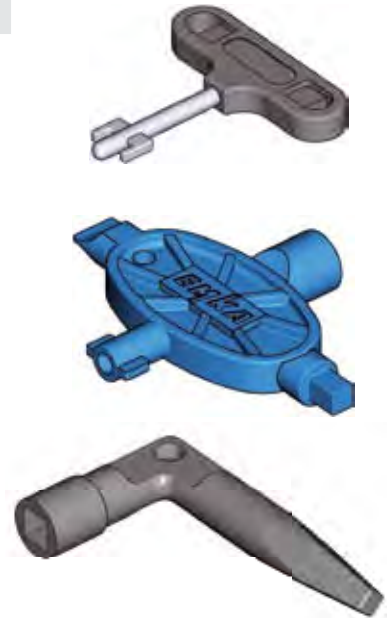
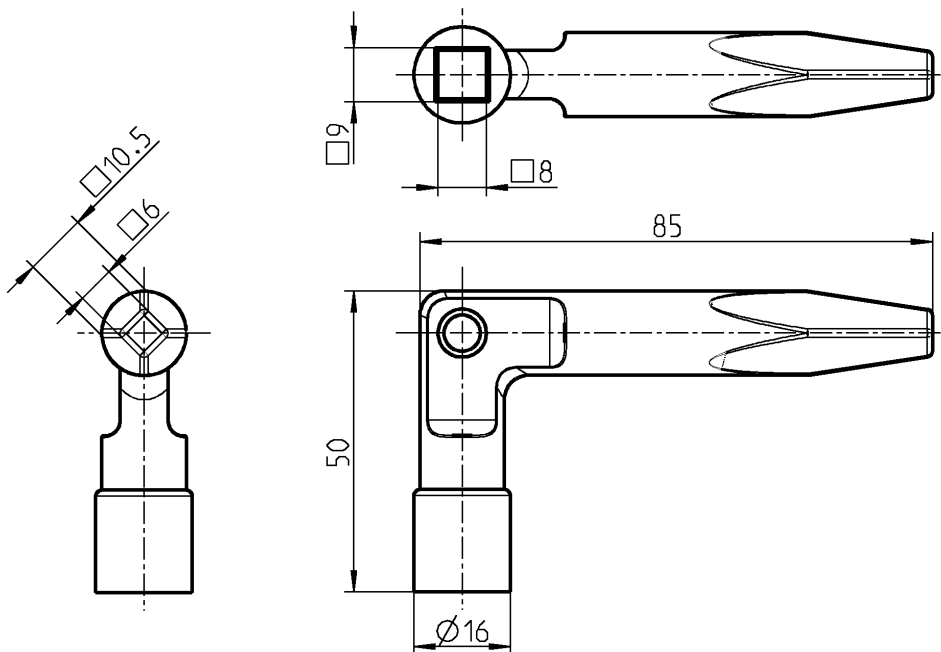


Form H, universal-key polyamide blue

Square male 6, square 8, double bit 5 and slot insert

1004-48

Form I



Form I, railway version, zinc die black

Square 8 - 9, square male 6 - 10.5

1004-52

Stainless steel key
on request

Further parts see page

- Quarter turns up to 1.5-140
up to 1.5-520

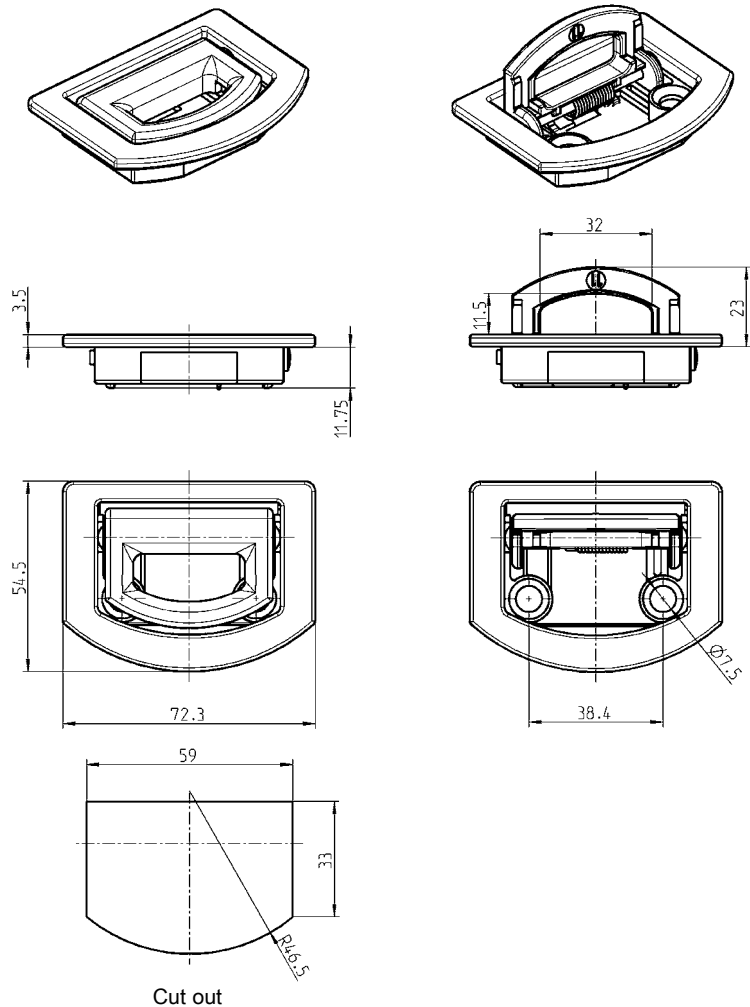
Detail: Loop and belt



Item without bracing



Complete item with bracing

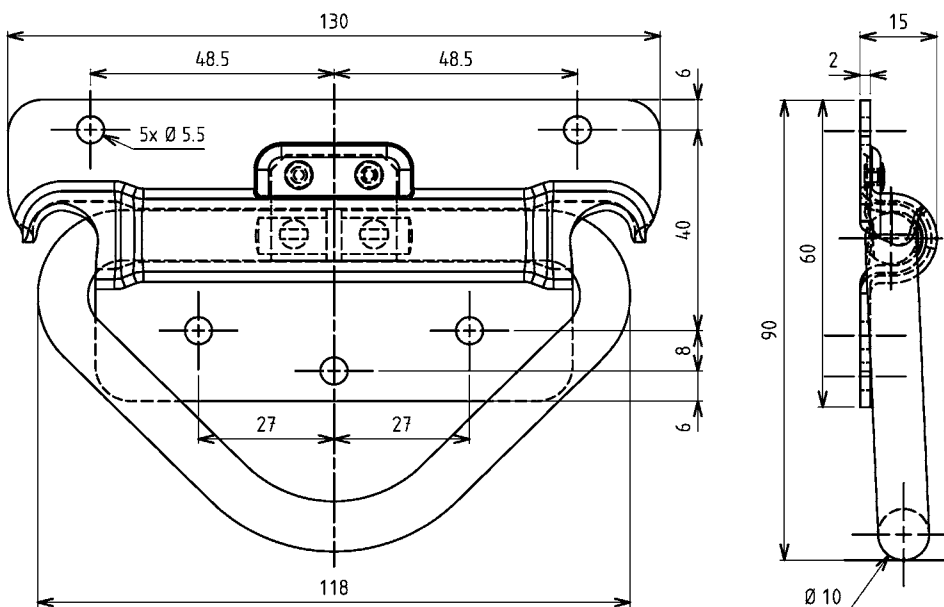


- e.g. for suitcases, bicycles and pushchairs
- retrofittable for all vehicles
- robust die-cast zinc construction, chrome
- accessible
- depending on surface resilient up to 3,000 N (300 kgs)
- further colours upon request

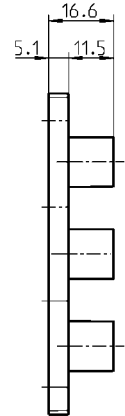
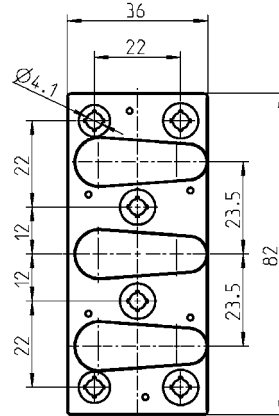
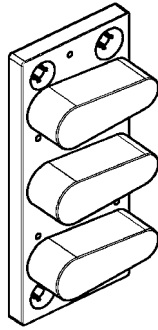
Loop chrome plated	
with latching cams	5291-U500-IA
without latching cams	5291-U501-IA
Loop zinc die chrome plated, mounting plates steel zinc plated	
without latching cams	5291-U701-IA

Slinging ring

PROGRAM 6040

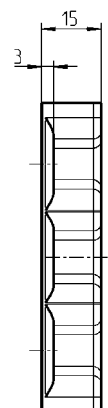
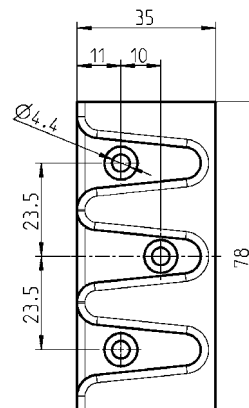
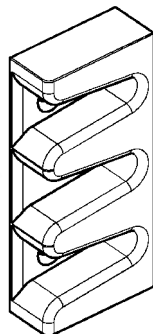


Slinging ring	
	with leaf spring
Zinc plated steel DS plus Top Coat drilled	6040-U80-JQ
AISI 304 drilled	6040-U80-PC



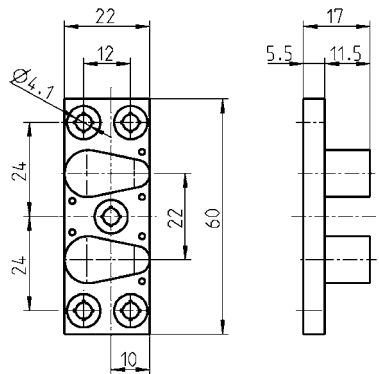
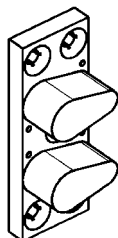
Dove tail zinc die with rubber coating self lubricated

8900-SB12-01



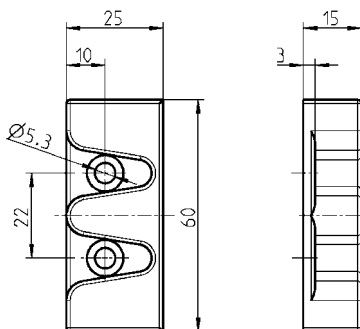
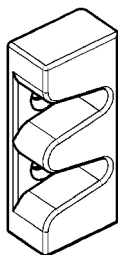
Dove tail zinc die raw

8900-S331-03KA



Dove tail zinc die with rubber coating self lubricated

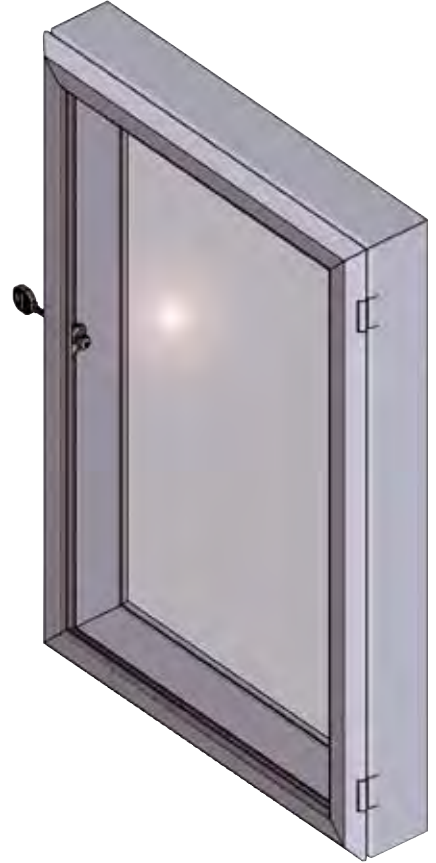
8900-SB11-01



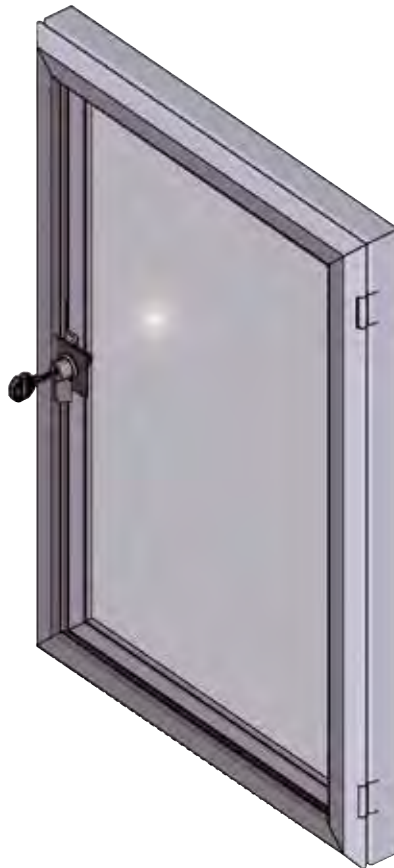
Dove tail zinc die raw

8900-S330-03KA

Aluminium window with 61 mm
frame
available fully assembled



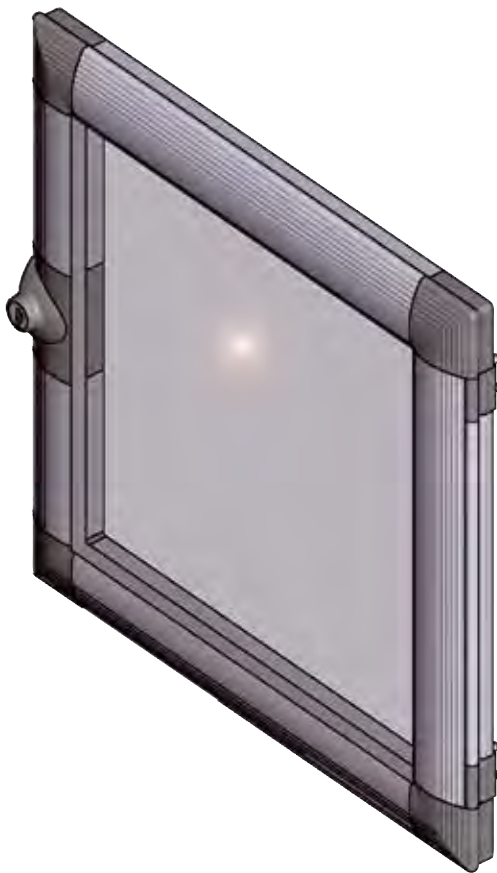
Aluminium window with 30 mm
frame
available fully assembled



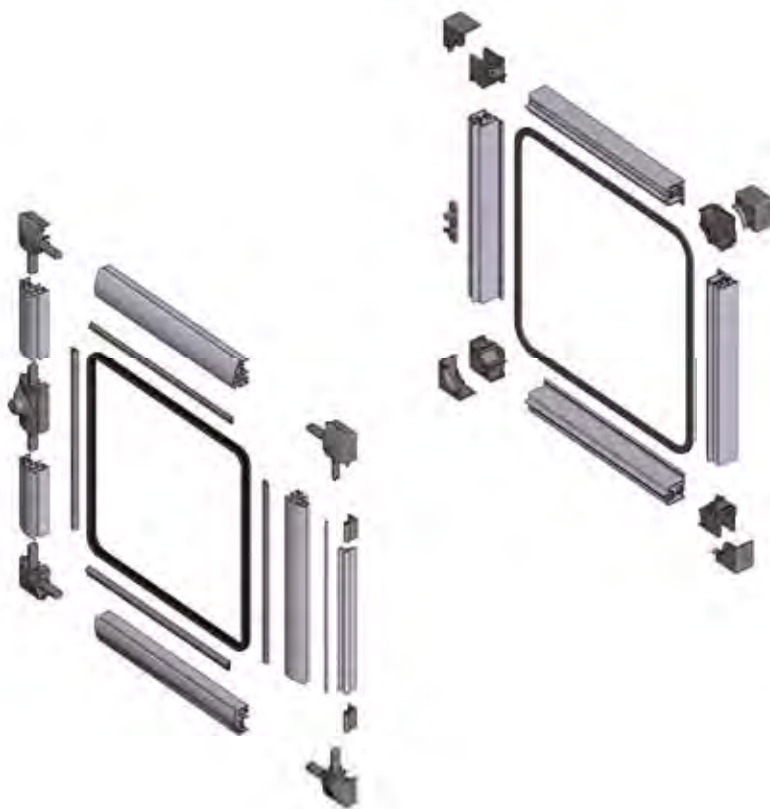
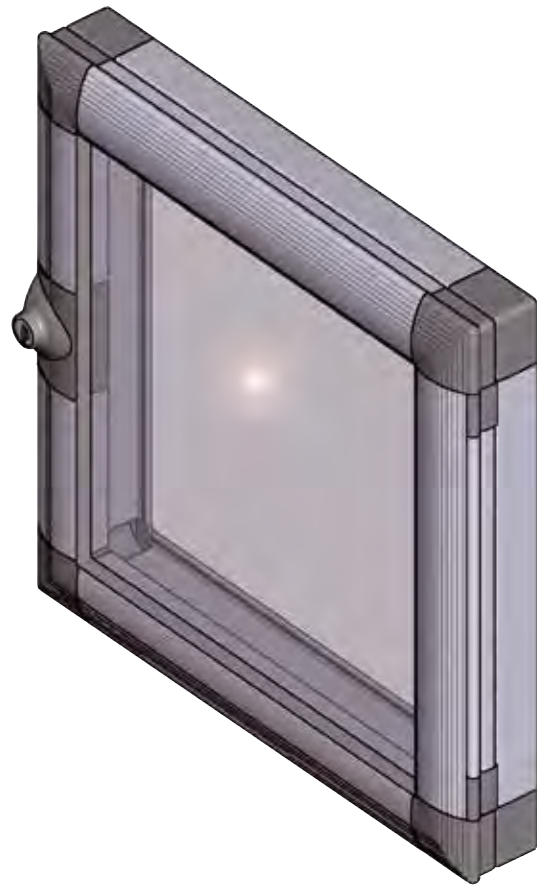
Aluminium window without frame
available fully assembled



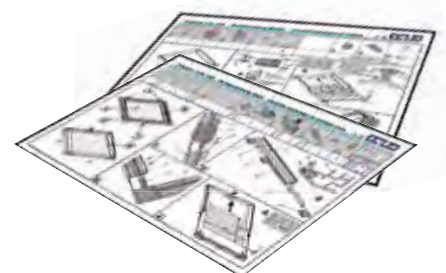
Aluminium window without frame
available fully assembled



Aluminium window without frame
available fully assembled



Windows and frames unmounted
as assembly set

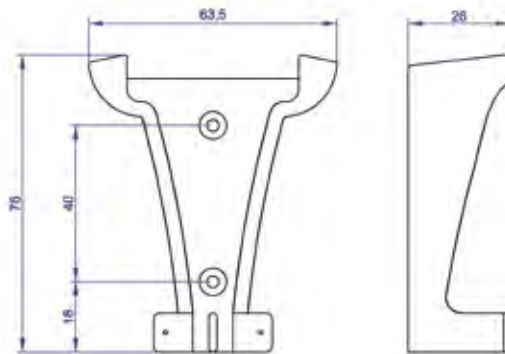




Prüfzeichen Test Mark

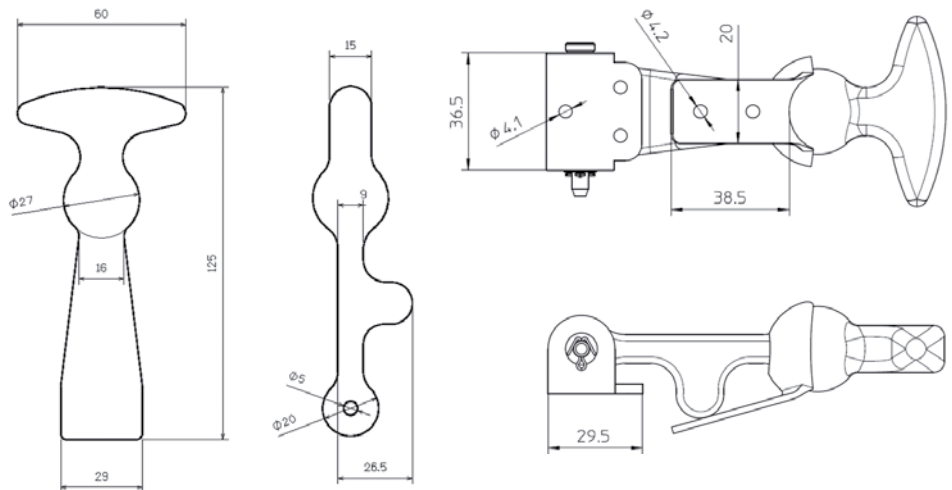


Zertifikat Nr. Certificate No.
R 50215914

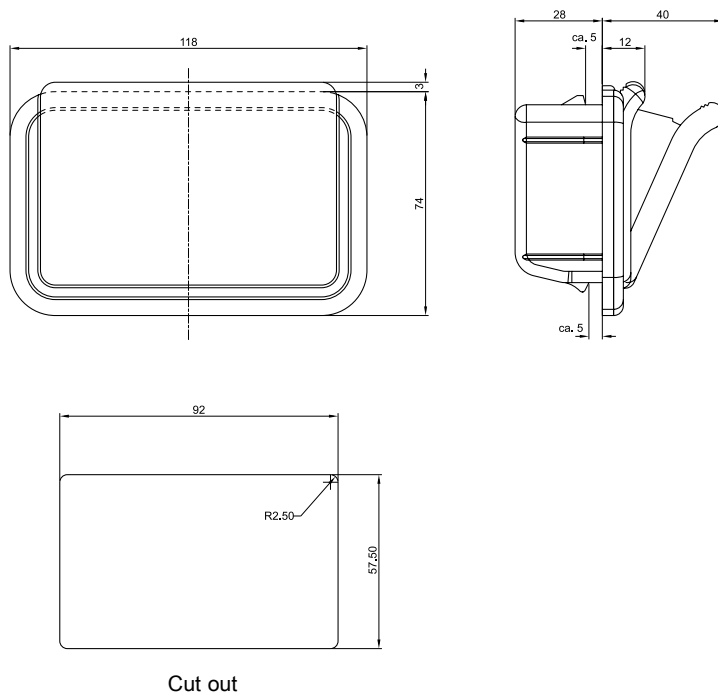


Emergency hammer material to
fire test
95/28/EC Annex 4

Emergency hammer polypropylene red, steel zinc plated with hardened insert on tip	5225-U305
Emergency hammer holder grey polypropylene	5225-03

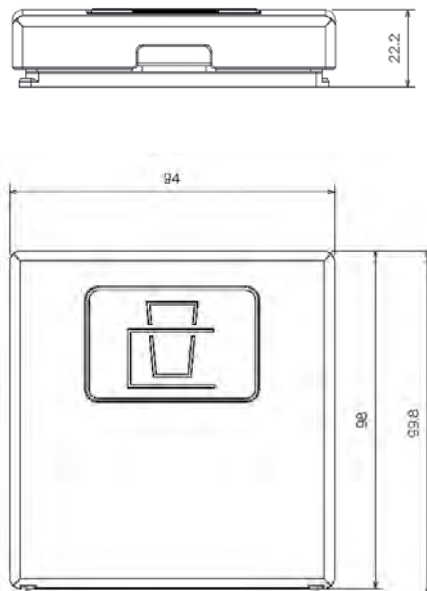


Bonnet lock black rubber self greasing, steel parts chrome plated	
without holder	5225-02-AA
with holder	5225-U201



Clip-in ashtray housing thermoplastic black, ash container Thermoset black, embossed cover with steel detent spring

5225-U300

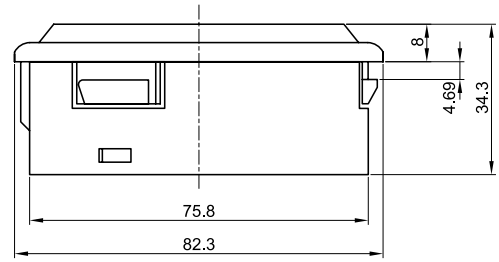
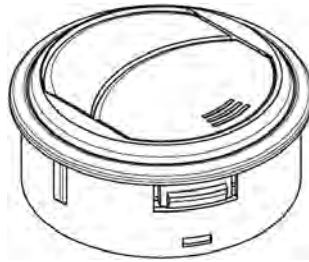


Cup holder polyamide 66 black

Approx. 70 mm diameter

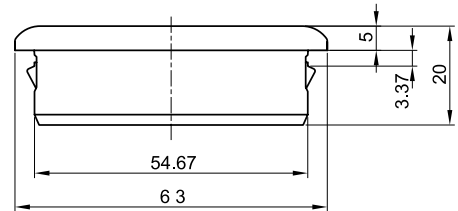
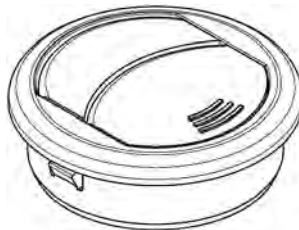
5225-U301

Clip in vents
PROGRAM 5225



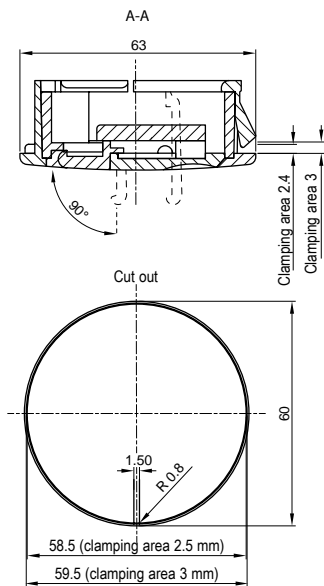
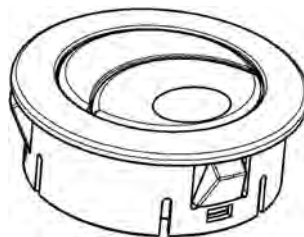
Infinitely adjustable and rotating

Clip in ABS vent	
Black housing	5225-U302-AA
Housing RAL 9006	5225-U302-BK



Infinitely adjustable, non rotating

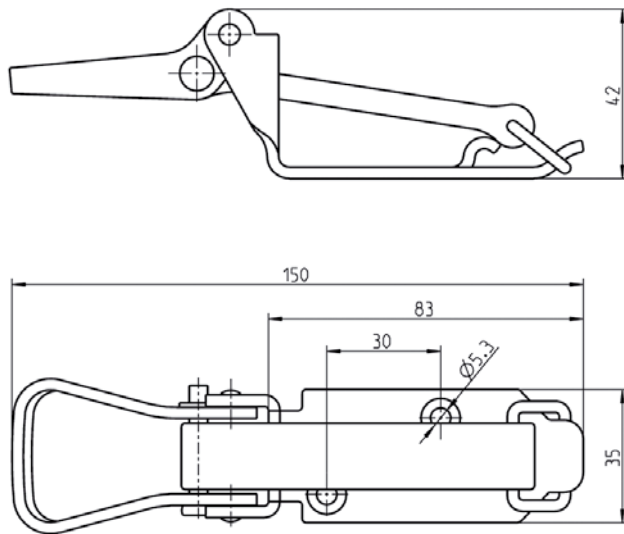
Clip in black ABS vent	
	5225-U303-AA



Infinitely adjustable and rotating

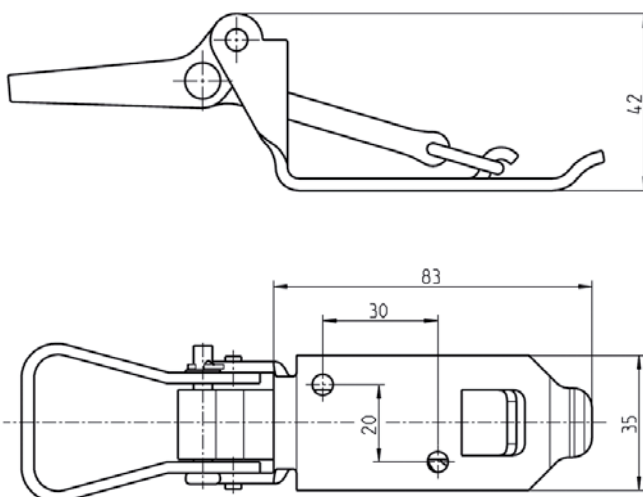
Clip in black ABS vent	
	5225-U304-AA

Stowage clamp for axe
Stowage clamp for spade
PROGRAM 5225



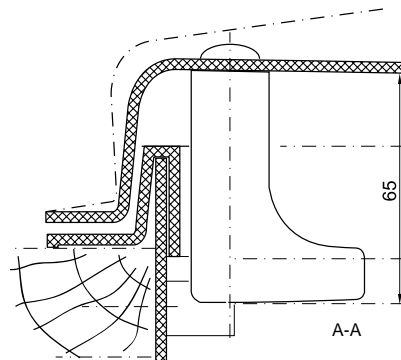
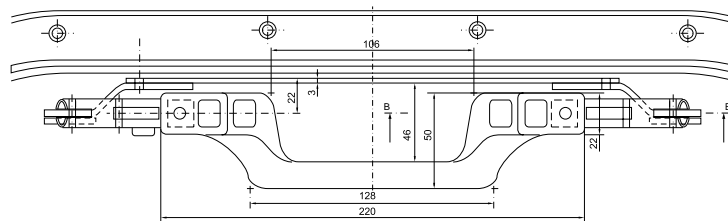
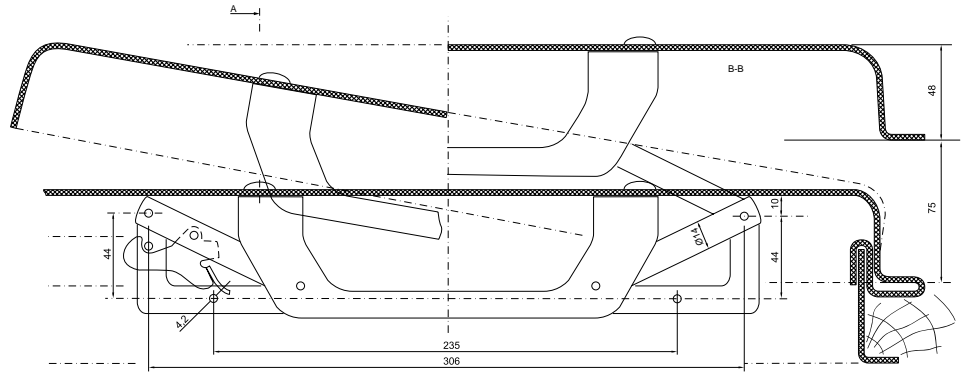
Stowage clamp for claw axe with coating from selection with black rubber strap

Green	5225-U306
zinc plated	5225-U306-JB
CDP coated black	5225-U306-IL



Stowage clamp for spade with coating from selection with black rubber strap

Green	5225-U307
zinc plated	5225-U307-JB
CDP coated black	5225-U307-IL



- with catch
- white powder coated, RAL 9010

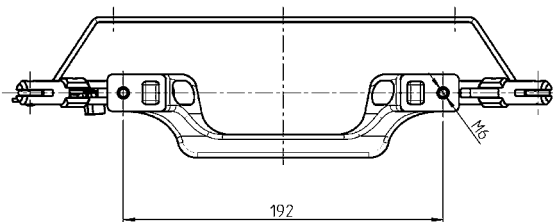
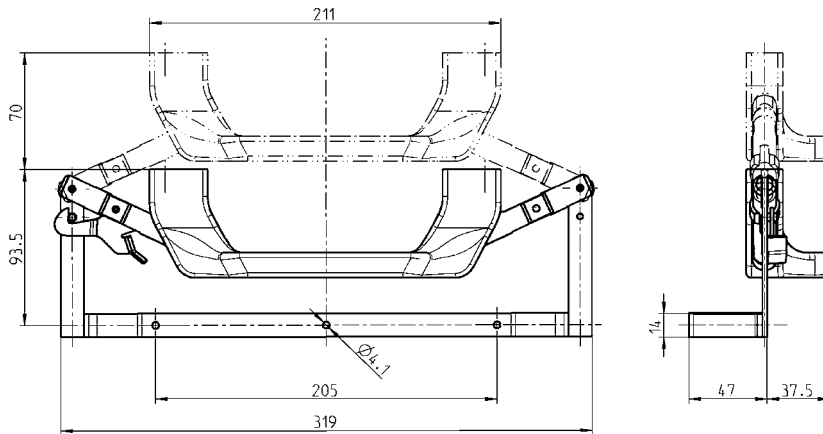


Roof hatch opener white polypropylene, RAL 9010;
mounting bracket m.s. powder coated white, RAL 9010; catch m.s. zinc plated

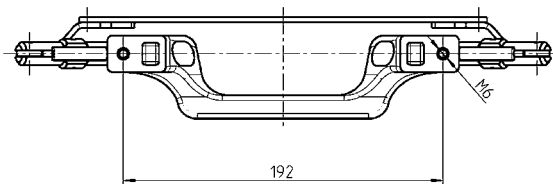
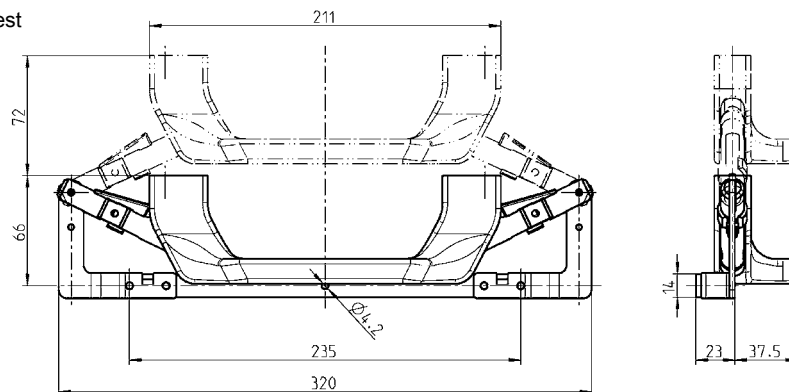
5124-U853-HA

Roof hatch opener with and without catch

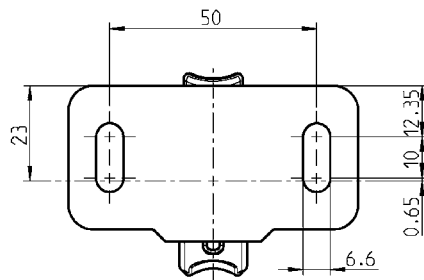
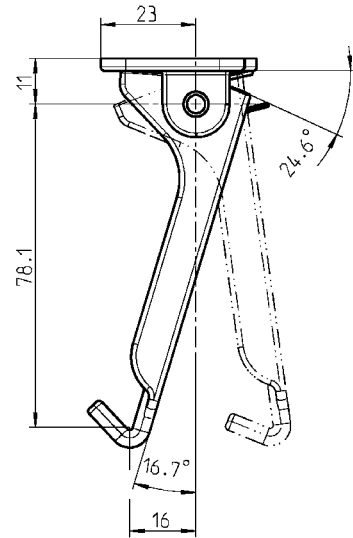
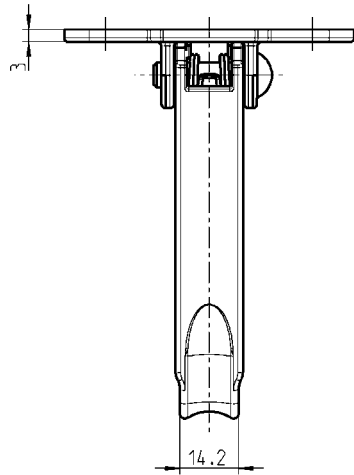
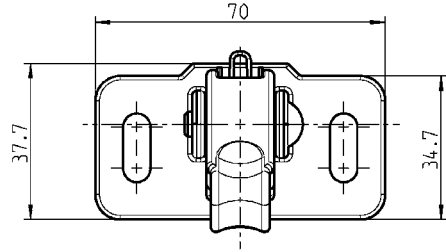
PROGRAM 5124



on request



Roof hatch opener natural polypropylene; mounting bracket and catch m.s. zinc plated	
without catch	5124-U856-JB
with catch	5124-U857-JB
Roof hatch opener white polypropylene, RAL 9010; mounting bracket m.s. powder coated white, RAL 9010	
	5124-U850-HA
Roof hatch opener light grey polypropylene; mounting bracket m.s. zinc plated	
2 locking slides polyamide light grey	
	on request



Tail hook AISI 316; spring and half-round rivet
stainless steel

5225-U400

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1342-U2-01	1.2-160	5131-U593-AA	1.1-150	5225-U303-AA	5.5-160	6004-U37-JQ	1.8-140

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6004-U517-PC	1.8-160	9301-U815-AA	1.1-150	
6006-U10-JQ	1.8-180	9400-U218-AA	1.1-130	
6006-U10-PC	1.8-180	9400-U219-AA	1.1-130	
6008-U365-JQ	1.8-160	9500-U701-AC	1.1-140	
6008-U365-PC	1.8-160	9500-U701-AC	1.1-160	
6008-U865-JQ	1.8-160	9500-U802-AA	1.1-140	
6008-U865-PC	1.8-160	9500-U805-AA	1.1-140	
6010-12-JQ	1.8-180	9802-U810-AA	1.2-120	
6010-12-KA	1.8-180	9850-U100	1.1-125	
6010-12-PC	1.8-180	9850-U100	1.1-130	
6010-18-JQ	1.8-180	9850-U100	1.1-140	
6010-18-KA	1.8-180	9850-U100	1.1-160	
6010-18-PC	1.8-180	9850-U100	1.2-120	
6010-20-JQ	1.8-180	9850-U100	1.2-150	
6010-20-PC	1.8-180	9850-U100	1.2-160	
6040-U23-JQ	1.10-180	9850-U100	1.3-120	
6040-U23-PC	1.10-180	9850-U100	1.3-140	
6040-U24-JQ	1.10-180	9850-U100	1.3-190	
6040-U24-PC	1.10-180	9850-U100	1.5-160	
6040-U33-JQ	1.10-180	9850-U101	1.1-125	
6040-U33-PC	1.10-180	9850-U101	1.1-130	
6040-U34-JQ	1.10-180	9850-U101	1.1-140	
6040-U34-PC	1.10-180	9850-U101	1.1-160	
6040-U35-JQ	1.10-200	9850-U101	1.2-120	
6040-U35-PC	1.10-200	9850-U101	1.2-150	
6040-U41-JQ	1.10-200	9850-U101	1.2-160	
6040-U41-PC	1.10-200	9850-U101	1.3-120	
6040-U80-JQ	5.2-160	9850-U101	1.3-140	
6040-U80-PC	5.2-160	9850-U101	1.3-190	
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8900-S330-03KA	5.3-140			
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9301-U500-AA	1.1-160			
9301-U501-AA	1.1-160			
9301-U802-AA	1.1-150			
9301-U803-AA	1.1-150			
9301-U804-AA	1.1-150			
9301-U805-AA	1.1-150			
9301-U810-AA	1.1-150			

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