

Fastening Technology



DST

SIMPLE. SECURE. DIRAK-SNAP- TECHNOLOGY.

In a world full of connections, we deliver pioneering technology. With DIRAK-SNAP-Technology (DST), you can create high-strength connections easily and without tools – so that your idea can safely become great.

To discover unlimited possibilities, try a new approach easily and at any time with DIRAK-SNAP-Technology. Now you too can use the best solution for your applications and experience the special features of this trendsetting technology – discover what is possible.

High strength with
secure locking

Tool-less
installation in just
seconds – reliable
and convenient
disassembly

Connect materials
with different
thicknesses

Rattle, vibration and
seismic-proof

Reliable and error-
free installation –
even in places that
are hard to reach

Secure and
electrically
conductive

Cannot be lost.

The DST fastener is captive so it cannot be lost, thus meeting the requirements of the Machinery Directive 2006/42EC.

Page 735



Installation in just seconds at Haromac thanks to DST.

Oliver Lück, Managing Director of the HAROMAC tool factory: "The workbenches presented a new challenge for us. They had to provide good load-bearing capacity and be easy to assemble without any screws and with just a few tools. The DST fasteners meet our standards for fast assembly with no screws and good load-bearing capacity, and they are especially well suited for our workbenches."

Page 737

Fastener for applications requiring electrical conductivity.



Page 747

Offers potential.

The DIRAK grounding cage nut has been successfully tested to DIN EN 61439-1 (VDE 0660 part 600):2012:06 and offers a reliable electrically conductive connection at all times.

If you do use screws,
try this way.

Potential equalization with a screw: With the new countersunk grounding screw, a segment cutting edge and scraping tooth can be used to create electrical connections between two metal sheets even without any additional small parts.

Page 752



Fastening Technology

Fastener	Page: 726–745
	Seismic-proof 726, 728–730, 734–735, 739
	Vibration-proof 726, 728–730, 734–735, 739
	Machinery directive 728–730, 734–736
	Conductive 739

Cage nuts	Page: 746–750
	Seismic-proof 746, 748, 750
	Vibration-proof 746, 748, 750
	Front mounted 746–747, 750
	Conductive 747

Screws	Page: 748-748	
	IP protected	751
	Blind assembly	757
	Anti-twist	756
	Under-head teeth	754
	Conductive	752



726 PA Fastener □ 9.5 and □ 12.7 [1-020]



727 DST Fastener □ 9.7 [1-041.01DST]



728 DST Captive Flex-Fastener □ 9.5 [1-034DST]



729 DST Captive Flex-Fastener □ 9.5 [1-034.01DST]



730 DST Captive Fastener □ 9.5 [1-035DST]



731 DST Fastener □ 9.5 [1-041.03DST]



732 DST Fastener □ 9.5 without Leaf Spring [1-041.04DST]



733 DST Fastener □ 9.5 with Leaf Spring [1-041.05DST]



734 DST Captive Fastener □ 9.5 [1-041.06DST]



735 DST Captive Fastener □ 12.7 [1-041.02DST]



736 DST Captive Fastener □ 18.7 [1-041.09DST]



737 DST Fastener 8x15 [1-040DST]



738 DST Fastener 30x10 [1-042DST]



739 DST Fastener 30x14 [1-043DST]



740 DST DUAL Fastener 30x10 [1-044DST]



742 DST Fastener 30x10 Stainless Steel [7-913DST]



743 DST Fastener 30x10 [1-046DST]



744 DST DUAL Fastener 30x10 [1-045DST]



746 Cage Nut □ 9.5 [6-045]



747 Grounding Cage Nut □ 9.5 [6-046]



748 Cage Nuts □ 9.5 [6-045.01]



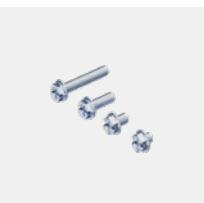
750 Cage Nuts [6-045.02]



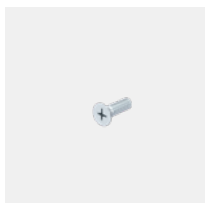
751 Screw Assembly for Terminal Box Cover [6-043]



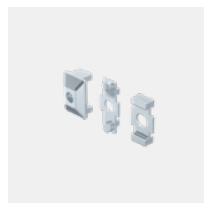
752 Grounding Counter-sunk Screw [6-044]



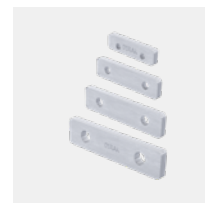
754 Serrated Screws [6-040]



755 Countersunk Screws and Hexagon Nuts [6-041]



756 Tenon Blocks and Anti-twist Protection [4-248]



757 Nut Plates [6-042]



Advantages

- To clip-in for □ 9.5 or □ 12.7 cutout or with 10mm gap, e.g. aluminum profiles.
- Audible click ensures proper secure installation.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- The square base 9.2 and 12.5 prevents the joiner from turning within the installation cutout.

Materials

- **Fastener:** PA, black

Remarks

The (S) dimension indicates the total thickness of the sheet metal panels.

1. cutout for a) and b)
2. cutout for c) and d)
3. aluminum profile fit for a) and b)
4. groove

Advantages

- With DIRAK-SNAP-Technology for joining flat metal sheets.
- For cutout □ 9.7.
- Vibration-proof.
- Tool-less installation.
- The joining of metal sheets is achieved by pressing the fastener into the cutouts.

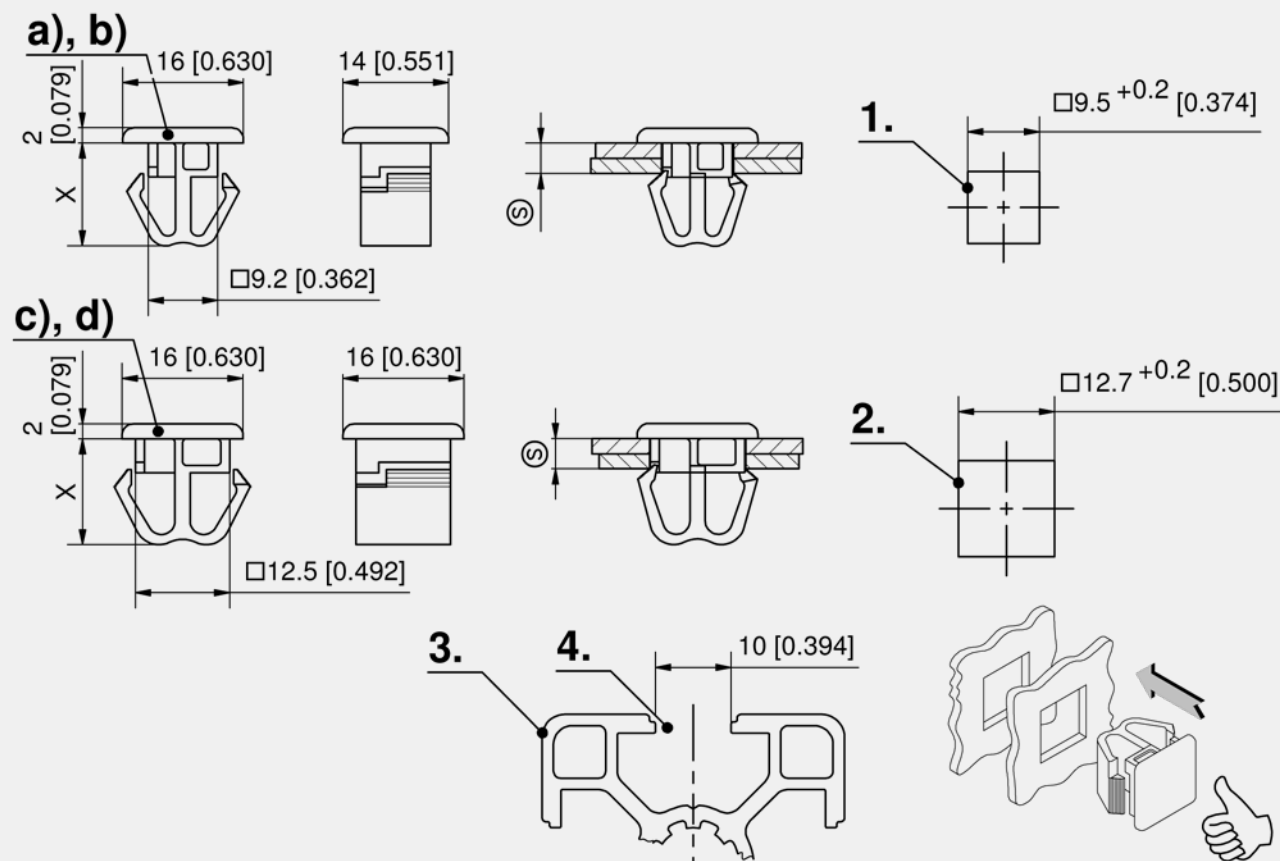
Materials

- **Housing:** zinc die, untreated
- **Snap wedges:** sintered steel, zinc plated

Remarks

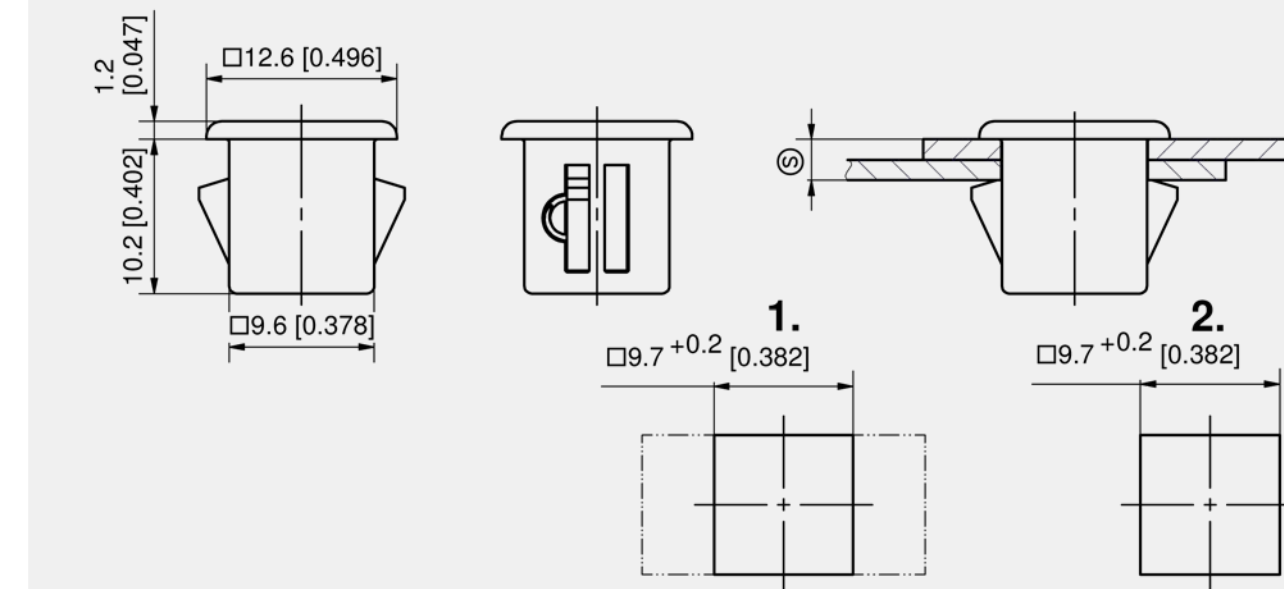
The dimension (S) always means the thickness of both sheets together

1. cutout rear panel, also possible as oblong hole for tolerance adjustment.
2. cutout front panel



Fastener

	Part Number	Clamping range (S)	Cutout	Dimension X	Installation type	Delivery Unit
a)	214-0109.51-00000	3.0 - 3.5 mm	9.5	12.6 mm	tool-less	250 pcs.
b)	214-0109.51-10000	4.0 - 4.5 mm	9.5	13.6 mm	tool-less	250 pcs.
c)	214-0109.51-20000	3.0 - 3.5 mm	12.7	13 mm	tool-less	250 pcs.
d)	214-0109.51-30000	4.0 - 4.5 mm	12.7	14 mm	tool-less	250 pcs.



Fastener

Part Number	Clamping range (S)	Installation type	Delivery Unit
294-9104.00-02224	2.2 - 2.4 mm	tool-less	10 pcs.
294-9104.00-02527	2.5 - 2.7 mm	tool-less	10 pcs.
294-9104.00-02830	2.8 - 3.0 mm	tool-less	10 pcs.
294-9104.00-03133	3.1 - 3.3 mm	tool-less	10 pcs.





Advantages

- With DIRAK-SNAP-Technology for joining of flat metal sheets and securely latching doors and covers.
- For cutout □ 9.5.
- Meets machinery directive 2006/42EC.
- After pre-assembly the concern of losing, dropping or misplacing hardware is eliminated.
- Held securely in the cutout.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- Operation by Phillips H2
- Opening by a 1/4 turn of the insert.
- Self-adjusting clamping range of 0.5 - 5.5mm.
- One-piece.

Materials

- **Housing and washer:** zinc die, chrome plated
- **Insert:** aluminum, hardened
- **Springs:** spring steel
- **SNAP wedges:** sintered steel, zinc plated

Remarks

Removal: by turning the screw-driver counterclockwise, the SNAP wedges (3.) are retracted. The compression spring (2.) pushes the Fastener out of the rear panel, but it remains captive in the front panel, held by the U-shaped spring (1.). (4.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. (5.) Cutout front panel. The (S) dimension indicates the total thickness of the sheet metal panels.



Advantages

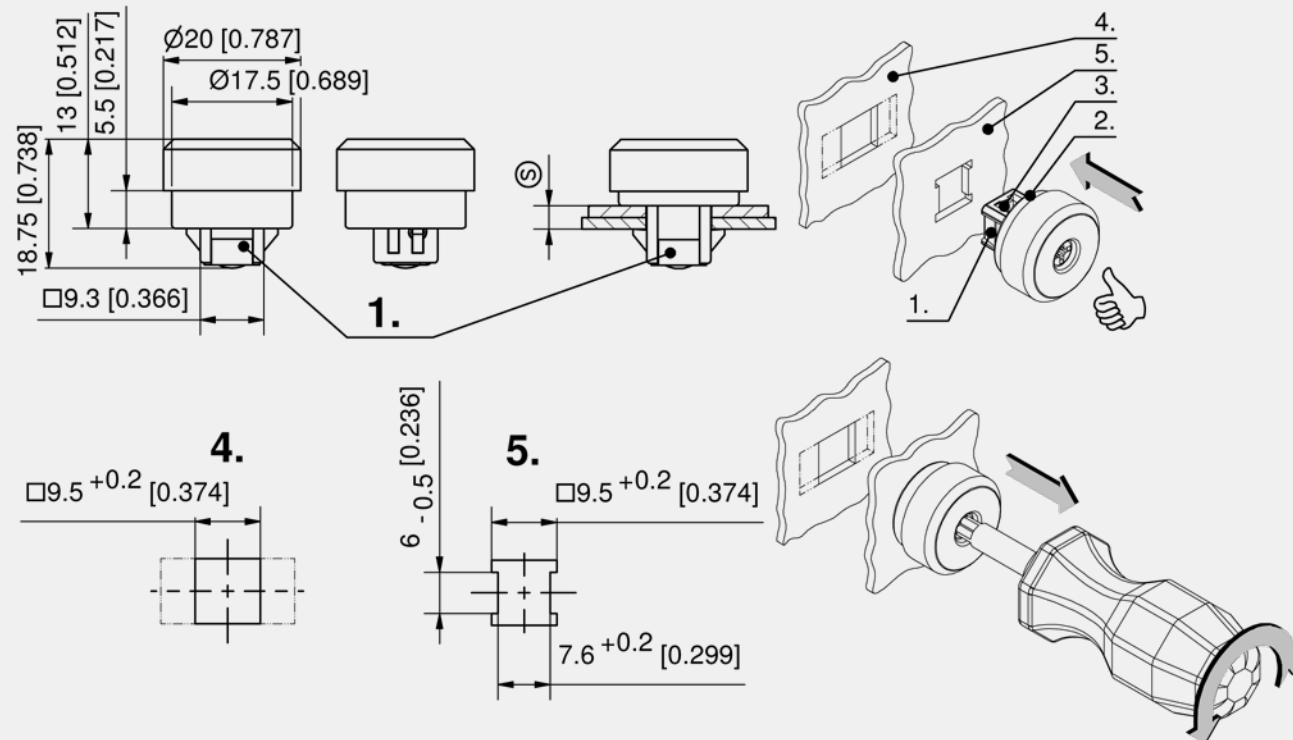
- With DIRAK-SNAP-Technology for joining of flat metal sheets and securely latching doors and covers.
- For cutout □ 9.5.
- Meets machinery directive 2006/42EC.
- After pre-assembly the concern of losing, dropping or misplacing hardware is eliminated.
- Held securely in the cutout.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- Opening by a 1/4 turn by means of handwheel with freestroke.
- Self-adjusting clamping range of 0.5 - 5.5mm.
- One-piece.

Materials

- **Housing and washer:** zinc die, chrome plated
- **Handwheel:** PA6, black
- **Springs:** spring steel
- **Snap wedges:** sintered steel, zinc plated

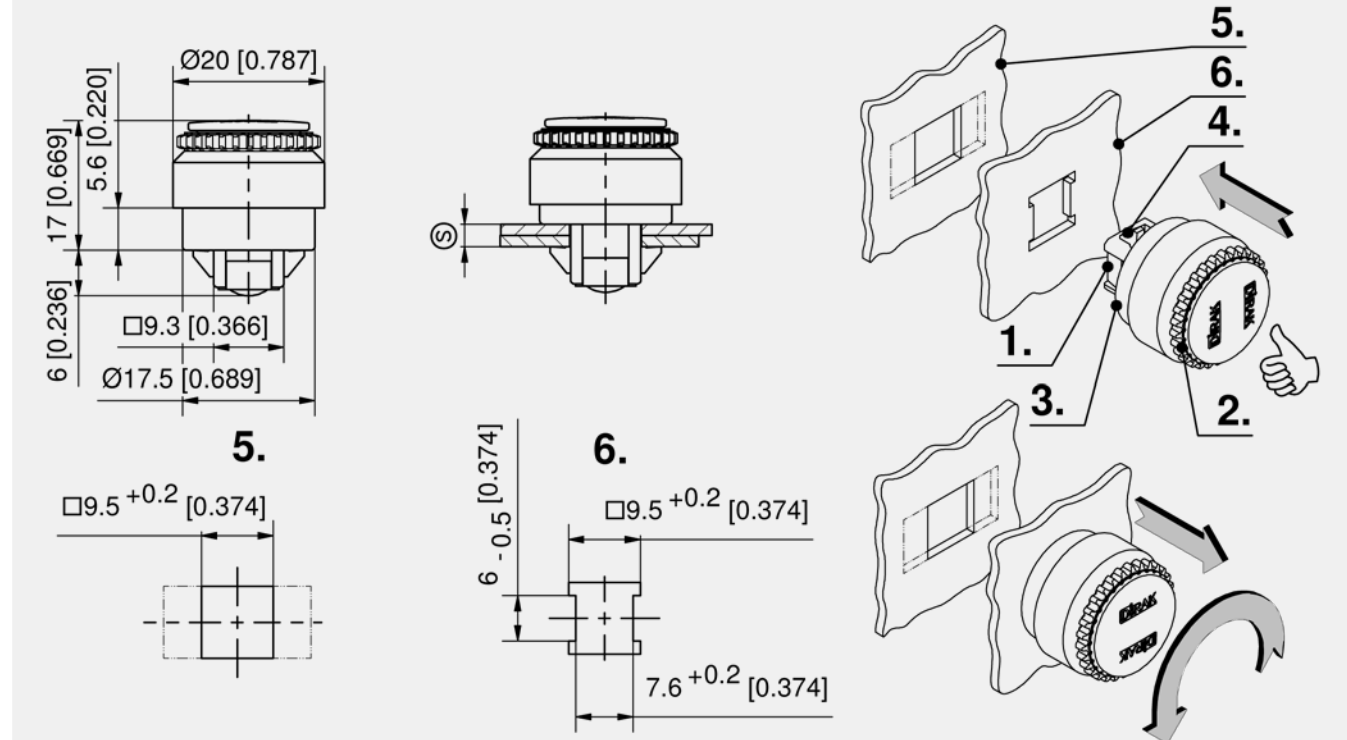
Remarks

Removal: by turning the Handwheel (2.) counterclockwise, the SNAP wedges (4.) are retracted. The leaf spring inside (3.) pushes the fastener out of the rear panel, however, the U-shaped (1.) spring holes the Fastener captive in the front panel (6.). (5.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. The (S) dimension indicates the total thickness of the sheet metal panels.



Fastener

Part Number	Clamping range (S)	Insert	Installation type	Delivery Unit
294-9302.00-00055	0.5 - 5.5 mm	Phillips H2	tool-less	10 pcs.



Fastener

Part Number	Insert	Clamping range (S)	Installation type	Delivery Unit
294-9303.00-00055	Handwheel	0.5 - 5.5 mm	tool-less	10 pcs.





Advantages

- With DIRAK-SNAP-Technology for joining of flat metal sheets and securely latching doors and covers.
- For cutout □ 9.5.
- Meets machinery directive 2006/42EC.
- After pre-assembly the concern of losing, dropping or misplacing hardware is eliminated.
- Held securely in the cutout.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- Operation by handwheel / Phillips H2 or Torx 15.
- Opening by a ¼ turn of the insert.
- One-piece.

Materials

- **Housing:** zinc die, matt chrome plated or black
- **Insert:** zinc die, zinc plated
- **Springs:** spring steel
- **Snap wedges:** sintered steel, zinc plated

Remarks

Removal: turning the screw-driver counterclockwise draws back the SNAP wedges (3.). The leaf spring (1.) pushes the fastener out of the rear panel, but it remains captive in the front panel, held by the U-shaped spring (2.). (4.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. (5.) Cutout front panel. The (S) dimension indicates the total thickness of the sheet metal panels.



Advantages

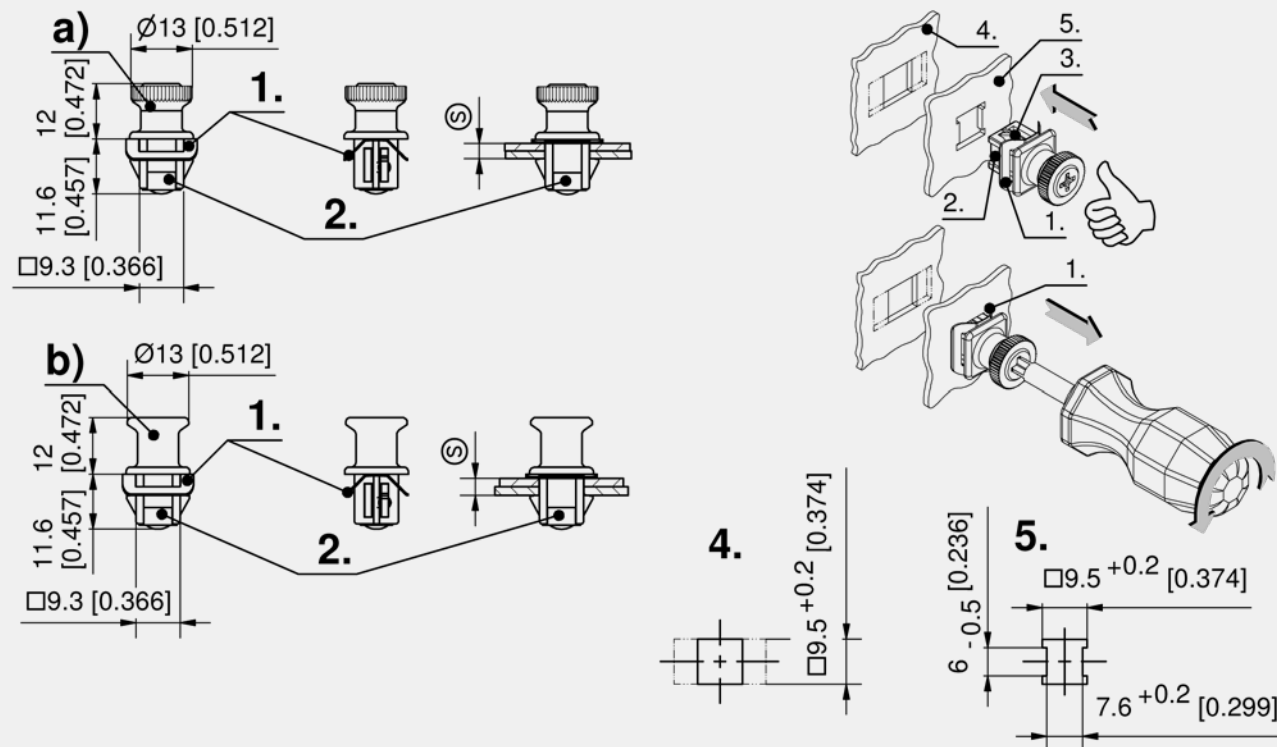
- With DIRAK-SNAP-Technology for joining of metal sheets.
- For cutout □ 9.5.
- Vibration-proof.
- Tool-less installation.
- This fastener can be disengaged from the front of the panel using a flathead screw-driver (Size max. 7x1mm, min. 6x1mm).
- The joining of metal sheets is achieved by pressing the fastener into the cutouts.

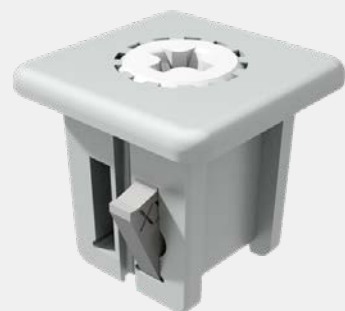
Materials

- **Housing:** zinc die, untreated
- **Snap wedges:** sintered steel, zinc plated
- **Leaf spring:** stainless steel

Remarks

Removal: by turning the screw-driver clockwise, the SNAP wedges (2.) are retracted. **a):** The fastener can be pressed manually from the back of the sheet. **b):** The leaf spring (1.) pushes the fastener out of the rear panel. (3.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. (4.) Cutout front panel. The (S) dimension indicates the total thickness of the sheet metal panels.





Advantages

- With DIRAK-SNAP-Technology for joining sheet metal panels.
- For cutout □ 9.5.
- Vibration-proof.
- Tool-less installation.
- This fastener can be disengaged from the front of the panel using a Phillips H2 screwdriver.
- Sheet metal panels are easily joined by manually pressing the fastener through the panel cutout.
- One piece.

Materials

- **Housing:** zinc die, untreated
- **SNAP wedges:** sintered steel, zinc plated
- **Insert:** aluminum, hardened

Remarks

Removal: by turning the screwdriver counterclockwise, the SNAP wedges (1.) are retracted. The leaf spring pushes the fastener out of rear panel, however, the U-shaped spring holds the fastener captive in the front panel. (3.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. (2.) Cutout front panel. The (S) Dimension indicates the total thickness of the sheet metal panels.

Delivery time on request!



Advantages

- With DIRAK-SNAP-Technology for joining sheet metal panels.
- For cutout □ 9.5.
- Vibration-proof.
- Tool-less installation.
- This fastener can be disengaged from the front of the panel using a Phillips H2 screwdriver.
- Sheet metal panels are easily joined by manually pressing the fastener through the panel cutout.
- One piece.

Materials

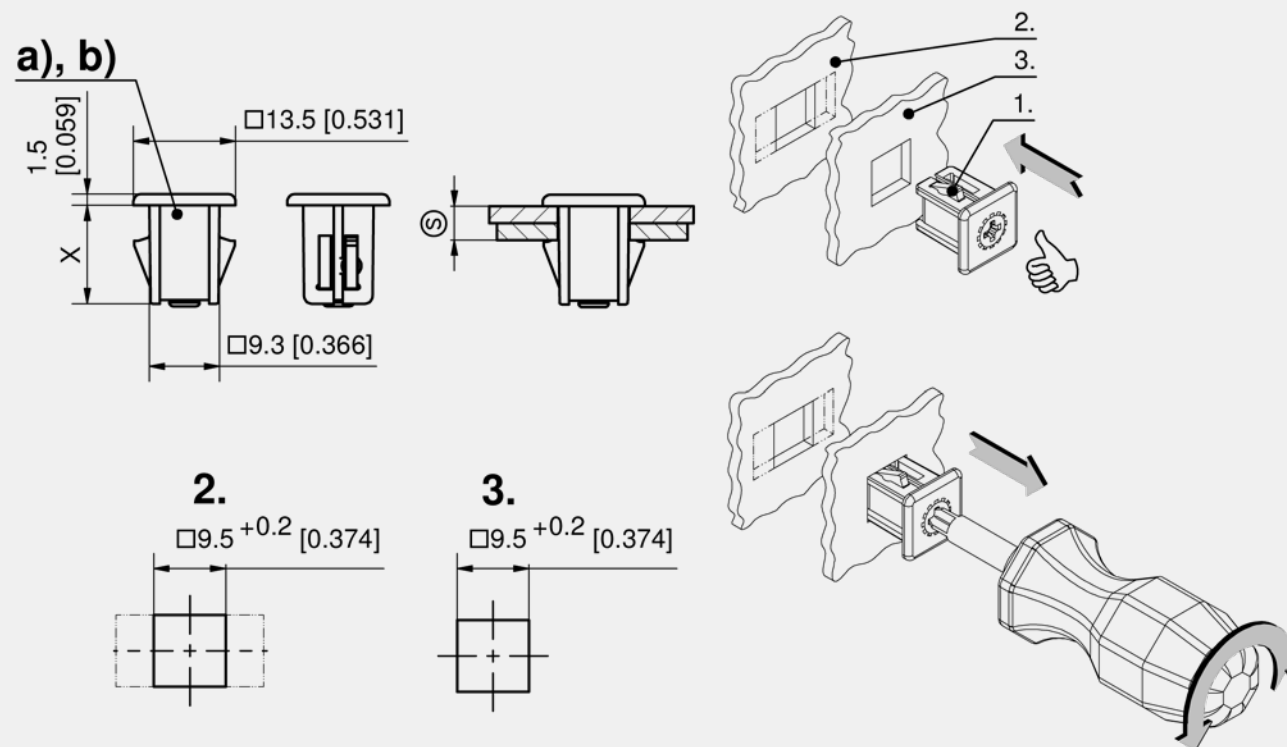
- **Housing:** zinc die, untreated
- **SNAP wedges:** sintered steel, zinc plated
- **Leaf spring:** stainless steel
- **Insert:** aluminum, hardened

Remarks

1. leaf spring
2. SNAP wedges
3. cutout rear panel, also possible as oblong hole for tolerance adjustment.
4. cutout front panel

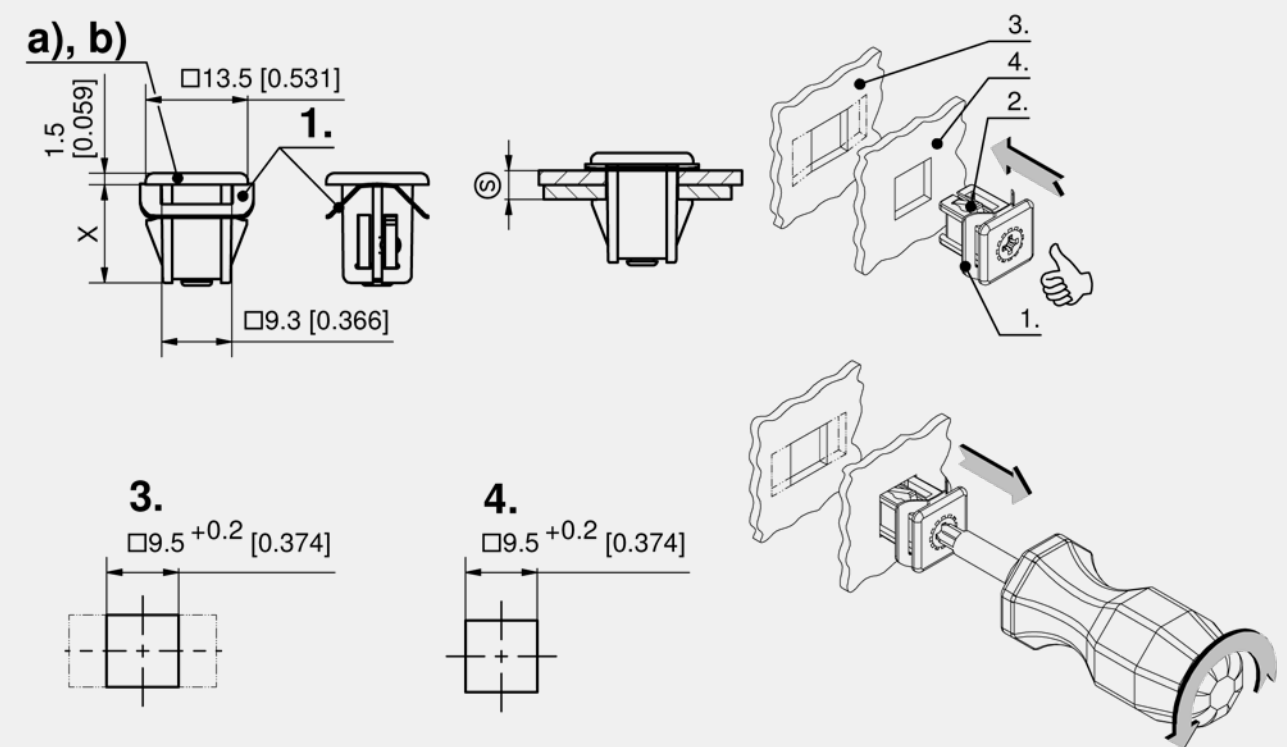
Removal: by turning the screwdriver counterclockwise, the SNAP wedges are retracted. The leaf spring pushes the fastener out of rear panel. The (S) dimension indicates the total thickness of the sheet metal panels.

Delivery time on request!



Fastener with insert Phillips H2, without leaf spring

	Part Number	Clamping range (S)	Dimension X	Installation type	Delivery Unit
a)	294-9114.00-00031	3.0 - 3.3 mm	11 mm	tool-less	10 pcs.
a)	294-9114.00-00039	3.8 - 4.1 mm	11 mm	tool-less	10 pcs.
b)	294-9120.00-00042	4.0 - 4.5 mm	13 mm	tool-less	10 pcs.
b)	294-9120.00-00051	5.0 - 5.3 mm	13 mm	tool-less	10 pcs.
b)	294-9120.00-00055	5.4 - 5.7 mm	13 mm	tool-less	10 pcs.
b)	294-9120.00-00059	5.8 - 6.1 mm	13 mm	tool-less	10 pcs.
b)	294-9120.00-00067	6.6 - 6.9 mm	13 mm	tool-less	10 pcs.



Fastener with insert Phillips H2, with leaf spring

	Part Number	Clamping range (S)	Dimension X	Installation type	Delivery Unit
a)	294-9113.00-00017	1.5 - 2.0 mm	11 mm	tool-less	10 pcs.
a)	294-9113.00-00026	2.5 - 2.8 mm	11 mm	tool-less	10 pcs.
a)	294-9113.00-00030	2.9 - 3.2 mm	11 mm	tool-less	10 pcs.
a)	294-9113.00-00034	3.3 - 3.6 mm	11 mm	tool-less	10 pcs.
a)	294-9113.00-00042	4.1 - 4.4 mm	11 mm	tool-less	10 pcs.
b)	294-9119.00-00037	3.5 - 4.0 mm	13 mm	tool-less	10 pcs.
b)	294-9119.00-00046	4.5 - 4.8 mm	13 mm	tool-less	10 pcs.
b)	294-9119.00-00050	4.9 - 5.2 mm	13 mm	tool-less	10 pcs.
b)	294-9119.00-00054	5.3 - 5.6 mm	13 mm	tool-less	10 pcs.
b)	294-9119.00-00062	6.1 - 6.4 mm	13 mm	tool-less	10 pcs.





Advantages

- With DIRAK-SNAP-Technology for joining of flat metal sheets and securely latching doors and covers.
- For cutout □ 9.5.
- Meets machinery directive 2006/42EC.
- After pre-assembly no losing, dropping or misplacing possible.
- Held securely in the cutout.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- Tool-less installation.
- Operation by Phillips H2, opening by a ¼ turn of the insert.
- One-piece.

Materials

- Housing:** zinc die, untreated
- SNAP wedges:** sintered steel, zinc plated
- Insert:** aluminum, hardened
- Springs:** spring steel

Remarks

Removal: by turning the screw-driver counterclockwise, the SNAP wedges (3.) are retracted. The leaf spring (1.) pushes the fastener out of the rear panel, however, the U-shaped spring (2.) holds the fastener captive in the front panel. (4.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. (5.) Cutout front panel. The (S) dimension indicates the total thickness of the sheet metal panels.



Advantages

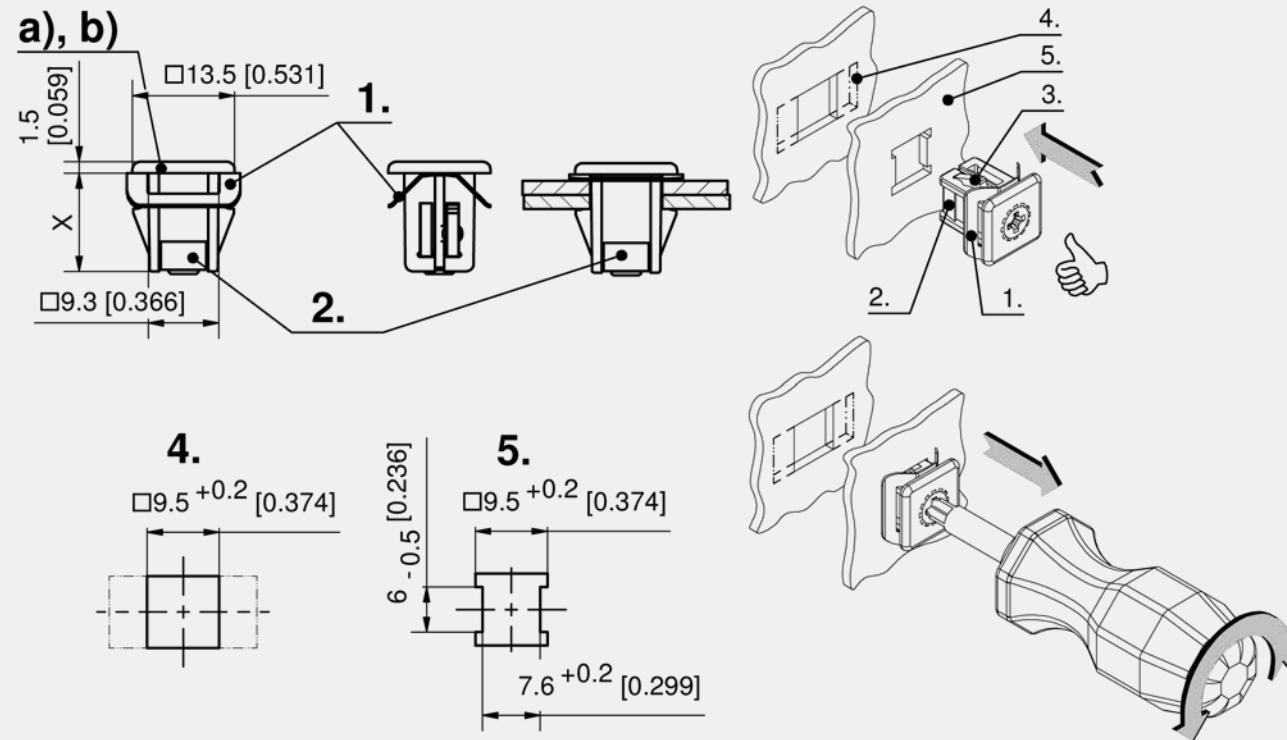
- With DIRAK-SNAP-Technology for joining of flat metal sheets and securely latching doors and covers.
- For cutout □ 12.7.
- Meets machinery directive 2006/42EC.
- After pre-assembly no losing, dropping or misplacing possible.
- Vibration-proof according to DIN EN 61373.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Tool-less installation.
- Operation by Phillips H2, opening by a ¼ turn of the insert.
- The joining of metal sheets is achieved by pressing the fastener into the cutouts.

Materials

- Housing:** zinc die, untreated
- Snap wedges:** sintered steel, zinc plated
- Insert:** aluminum, hardened
- Springs:** spring steel

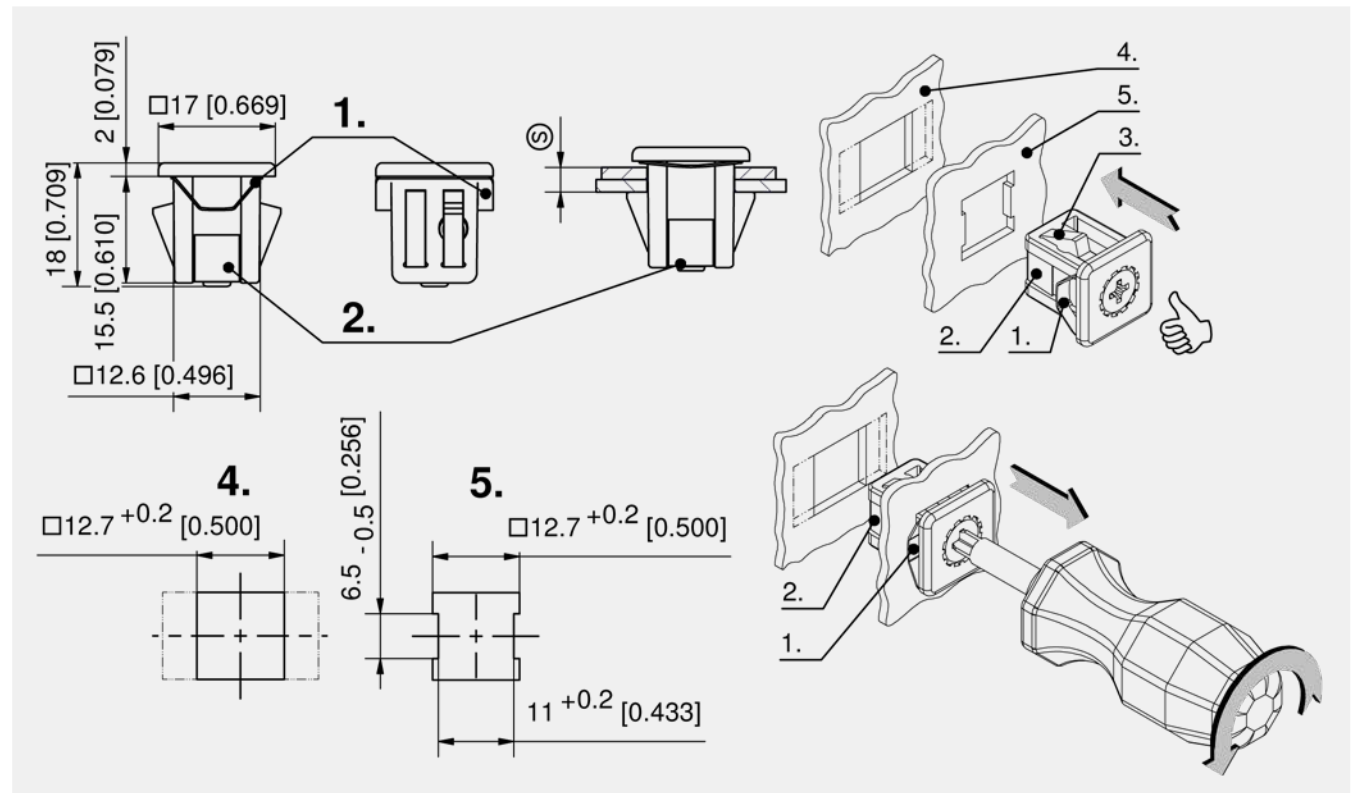
Remarks

Removal: by turning the screw-driver counterclockwise, the SNAP wedges (3.) are retracted. The leaf spring (1.) pushes the fastener out of the rear panel, however, the U-shaped spring (2.) holds the fastener captive in the front panel. (4.) Cutout in the rear panel can also be an oblong hole for tolerance adjustment. (5.) Cutout front panel. The (S) dimension indicates the total thickness of the sheet metal panels.



Fastener with insert Phillips H2

	Part Number	Clamping range (S)	Dimension X	Installation type	Delivery Unit
a)	294-9112.00-00017	1.5 - 2.0 mm	11 mm	tool-less	10 pcs.
a)	294-9112.00-00026	2.5 - 2.8 mm	11 mm	tool-less	10 pcs.
a)	294-9112.00-00030	2.9 - 3.2 mm	11 mm	tool-less	10 pcs.
a)	294-9112.00-00034	3.3 - 3.6 mm	11 mm	tool-less	10 pcs.
a)	294-9112.00-00042	4.1 - 4.4 mm	11 mm	tool-less	10 pcs.
b)	294-9118.00-00037	3.5 - 4.0 mm	13 mm	tool-less	10 pcs.
b)	294-9118.00-00046	4.5 - 4.8 mm	13 mm	tool-less	10 pcs.
b)	294-9118.00-00050	4.9 - 5.2 mm	13 mm	tool-less	10 pcs.
b)	294-9118.00-00054	5.3 - 5.6 mm	13 mm	tool-less	10 pcs.
b)	294-9118.00-00062	6.1 - 6.4 mm	13 mm	tool-less	10 pcs.



Fastener with insert Phillips H2

	Part Number	Clamping range (S)	Installation type	Delivery Unit
	294-9103.00-00021	1.4 - 1.9 mm	tool-less	10 pcs.
	294-9103.00-00031	2.4 - 2.9 mm	tool-less	10 pcs.
	294-9103.00-00036	2.9 - 3.4 mm	tool-less	10 pcs.
	294-9103.00-00041	3.4 - 3.9 mm	tool-less	10 pcs.
	294-9103.00-00046	3.9 - 4.4 mm	tool-less	10 pcs.
	294-9103.00-00056	4.9 - 5.4 mm	tool-less	10 pcs.
	294-9103.00-00061	5.4 - 5.9 mm	tool-less	10 pcs.
	294-9103.00-00066	5.9 - 6.4 mm	tool-less	10 pcs.





Advantages

- With DIRAK-SNAP-Technology for joining of flat metal sheets and securely latching doors and covers.
- For cutout □ 18.7.
- Meets machinery directive 2006/42EC.
- After pre-assembly the concern of losing, dropping or misplacing hardware is eliminated.
- Vibration-proof.
- Tool-less installation.
- Pressed into the front panel (sheet thickness max. 3mm) and permanently secured by the U-shaped spring (1.).
- Can be disconnected from the rear panel from the front with the tool for uninstallation 292-0312.83-00000.
- One-piece.

Materials

- **Housing and Snap wedges:** zinc die, zinc plated
- **U-shaped spring:** AISI 301

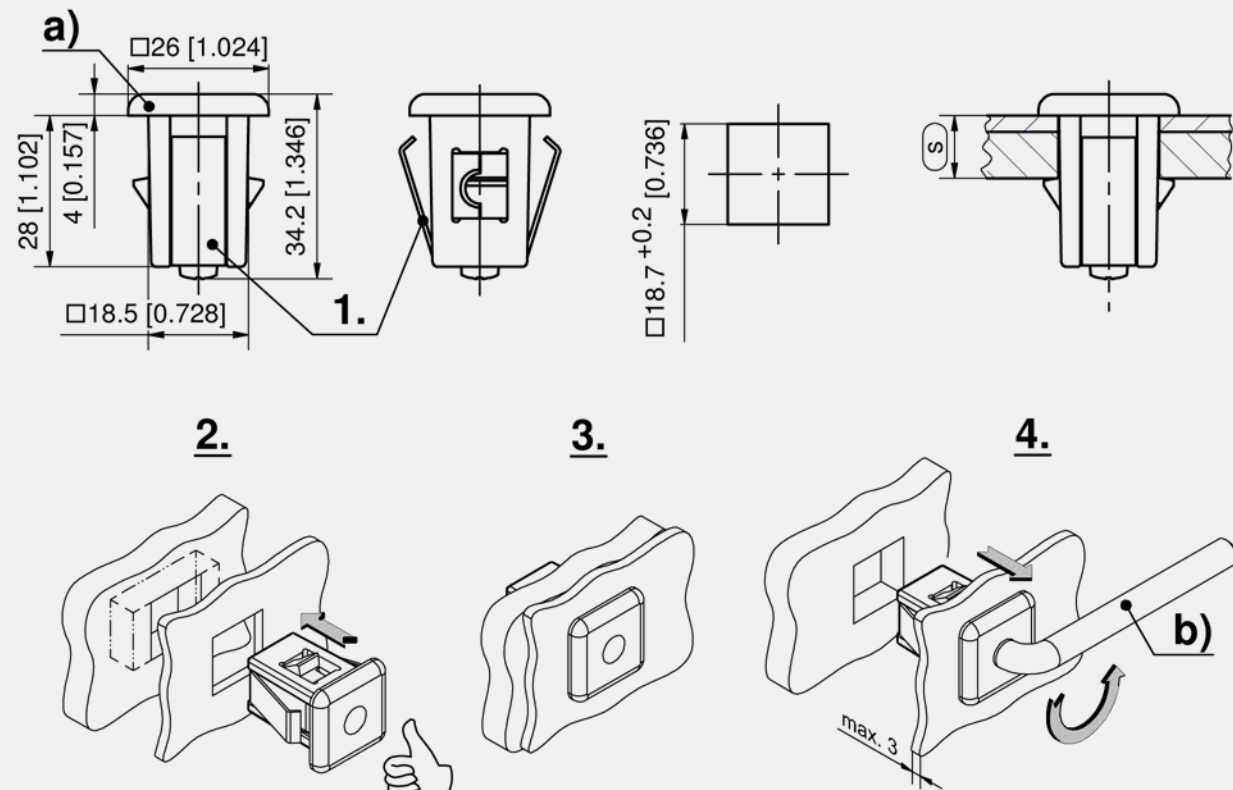
Remarks

2. installation
3. installed
4. removal

Removal: by turning the tool for uninstallation counter clockwise the SNAP wedges are drawn back. The U-shaped spring holds the fastener captive in the front panel.

Oblong hole possible in the rear panel, for tolerance adjustment.

The (S) dimension indicates the total thickness of the sheet metal panels.



Fastener

	Part Number	Clamping range (S)	Installation type	Delivery Unit
a)	294-8004.00-00001	11.5 - 11.8 mm	tool-less	10 pcs.

	Accessories
b)	764 292-0312.83-00000 Tool for uninstallation



Advantages

- With DIRAK-SNAP-Technology for joining metal sheets.
- For cutout 8x15.
- Vibration-proof.
- Tool-less installation.
- The joining of metal sheets is achieved by pressing the fastener into the cutouts.
- With tool Part-No.: 292-0302.70 this fastener can be disconnected both from inside (after removal of the red plug) and from the outside.
- The tool is captive in the open position.

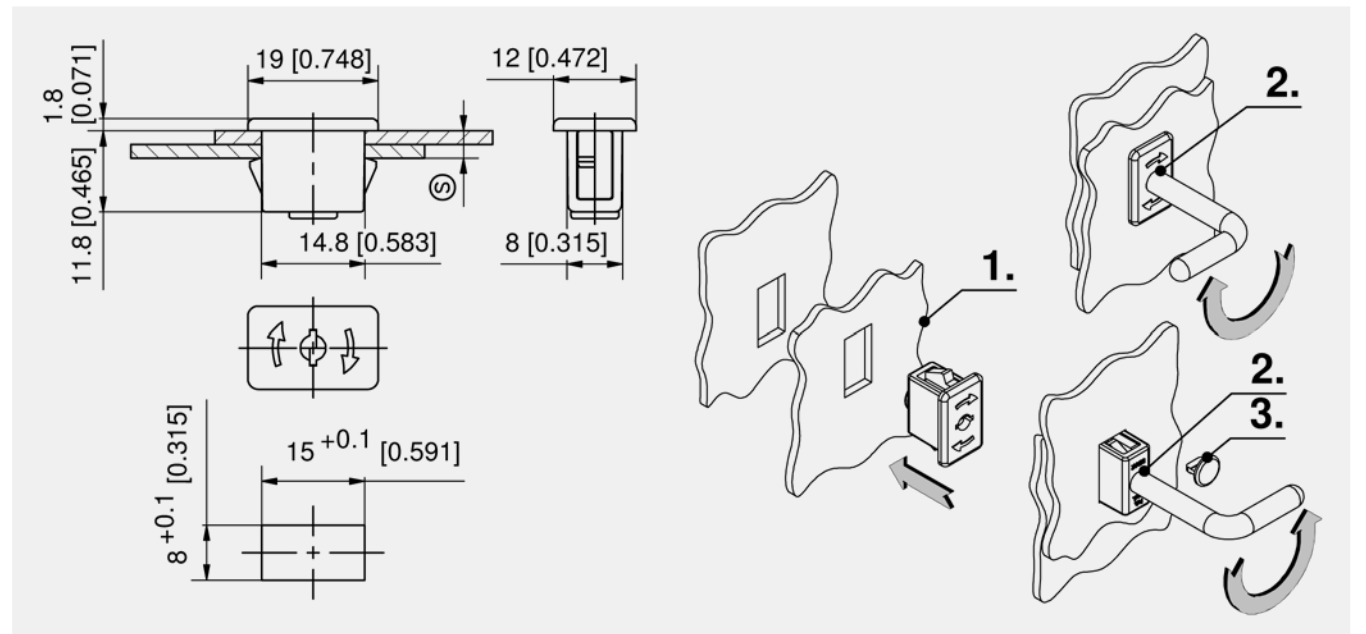
Materials

- **Housing:** PA, black or light grey, RAL 7035
- **Snap wedges:** Grivory, black

Remarks

1. installation
 2. disassembly
 3. disassemble red plug
- The dimension (S) always means the thickness of both sheets e.g.:

- 1.5 + 1.5 = 3
- 2.0 + 1.0 = 3
- 2.0 + 2.0 = 4



Fastener, PA

Part Number	Surface	Clamping range (S)	Installation type	Delivery Unit
294-9001.00-00015	black	1.5 - 1.8 mm	tool-less	10 pcs.
294-9001.00-00020	black	2.0 - 2.3 mm	tool-less	10 pcs.
294-9001.00-00030	black	3.0 - 3.3 mm	tool-less	10 pcs.
294-9001.00-00040	black	4.0 - 4.3 mm	tool-less	10 pcs.
294-9002.00-00015	light grey RAL 7035	1.5 - 1.8 mm	tool-less	10 pcs.
294-9002.00-00020	light grey RAL 7035	2.0 - 2.3 mm	tool-less	10 pcs.
294-9002.00-00030	light grey RAL 7035	3.0 - 3.3 mm	tool-less	10 pcs.
294-9002.00-00040	light grey RAL 7035	4.0 - 4.3 mm	tool-less	10 pcs.

	Accessories
764	292-0302.70-00000 Tool for uninstallation





Advantages

- With DIRAK-SNAP-Technology for joining flat metal sheets.
- For cutout 30x10.
- Tool-less installation.
- Simple clip-in into its cutouts.
- Vibration-proof.

Materials

- **Housing:** zinc die, black
- **Snap wedges:** sintered steel, zinc plated

Remarks

1. installation
- The (S) dimension indicates the total thickness of the sheet metal panels.



Advantages

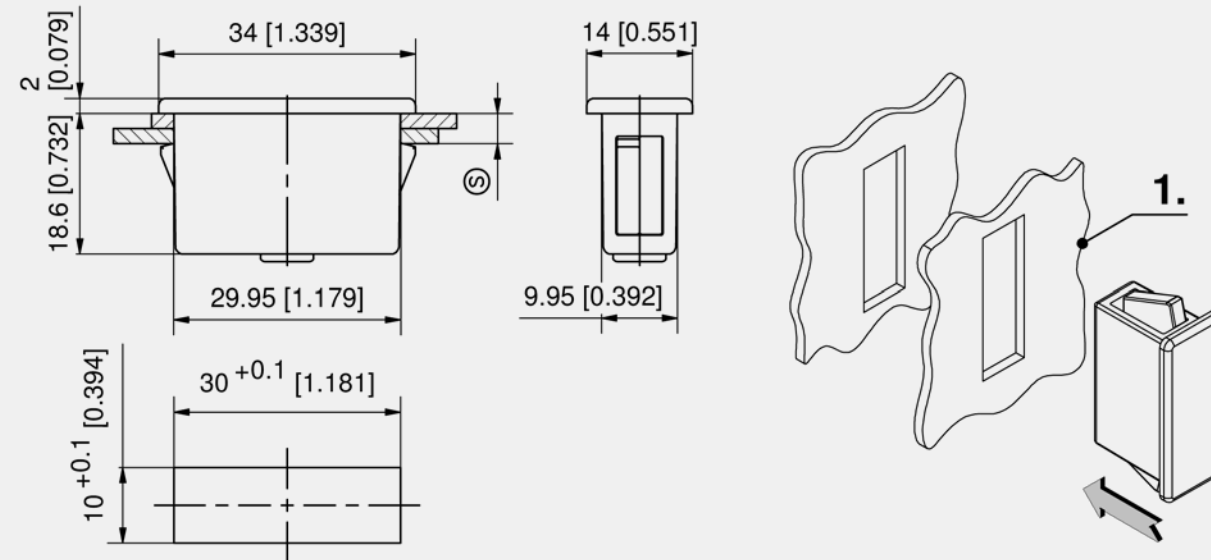
- With DIRAK-SNAP-Technology for joining flat metal sheets.
- For cutout 30x14.
- Tool-less installation.
- Simple clip-in into its cutouts.
- The riveted grounding clip assures an electrical connection between the sheets and the fastener itself.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- The teeth of the riveted grounding clip penetrate the painted edge of the cutouts.
- By using the tool for uninstallation 292-0311.15 a disassembly from the front is possible.

Materials

- **Housing:** zinc die, black
- **Snap wedges:** sintered steel, zinc plated
- **Grounding clip:** stainless steel

Remarks

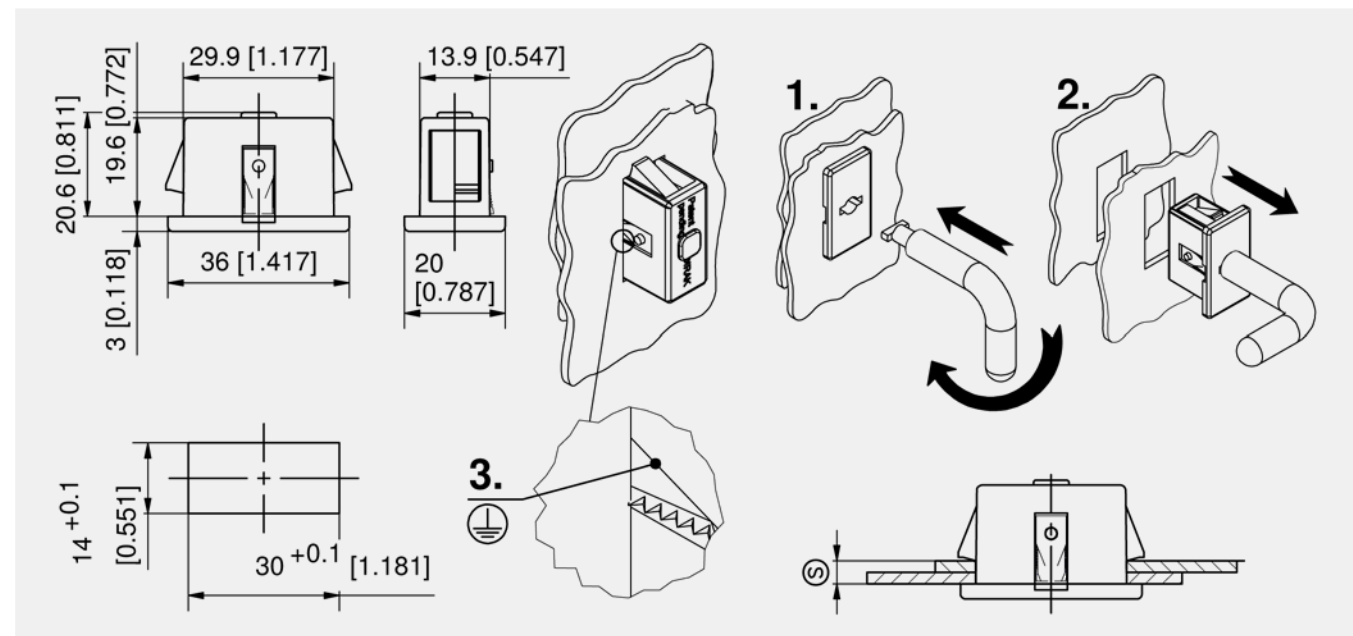
1. and 2. uninstallation
 3. grounding clip
- The (S) dimension indicates the total thickness of the sheet metal panels



Fastener

Part Number	Clamping range (S)	Installation type	Delivery Unit
294-9106.00-00040	3.7 - 4.2 mm	tool-less	10 pcs.
294-9106.00-00045	4.2 - 4.7 mm	tool-less	10 pcs.
294-9106.00-00050	4.7 - 5.2 mm	tool-less	10 pcs.
294-9106.00-00055	5.2 - 5.7 mm	tool-less	10 pcs.
294-9106.00-00060	5.7 - 6.2 mm	tool-less	10 pcs.
294-9106.00-00080	7.7 - 8.2 mm	tool-less	10 pcs.

Accessories	
764	292-0306.80-02530 Tool for uninstallation
762	292-0401.00-03010 Cutout-cover
763	292-0702.15-01030 Reinforcement plate for cutout



Fastener

Part Number	Clamping range (S)	Installation type	Delivery Unit
294-9003.00-00034	3.0 - 3.7 mm	tool-less	10 pcs.
294-9003.00-00043	4.0 - 4.5 mm	tool-less	10 pcs.
294-9003.00-00052	5.0 - 5.5 mm	tool-less	10 pcs.
294-9003.00-00063	6.0 - 6.5 mm	tool-less	10 pcs.

Accessories	
764	292-0311.15-00000 Tool for uninstallation
762	292-0402.00-03014 Cutout-cover





Advantages

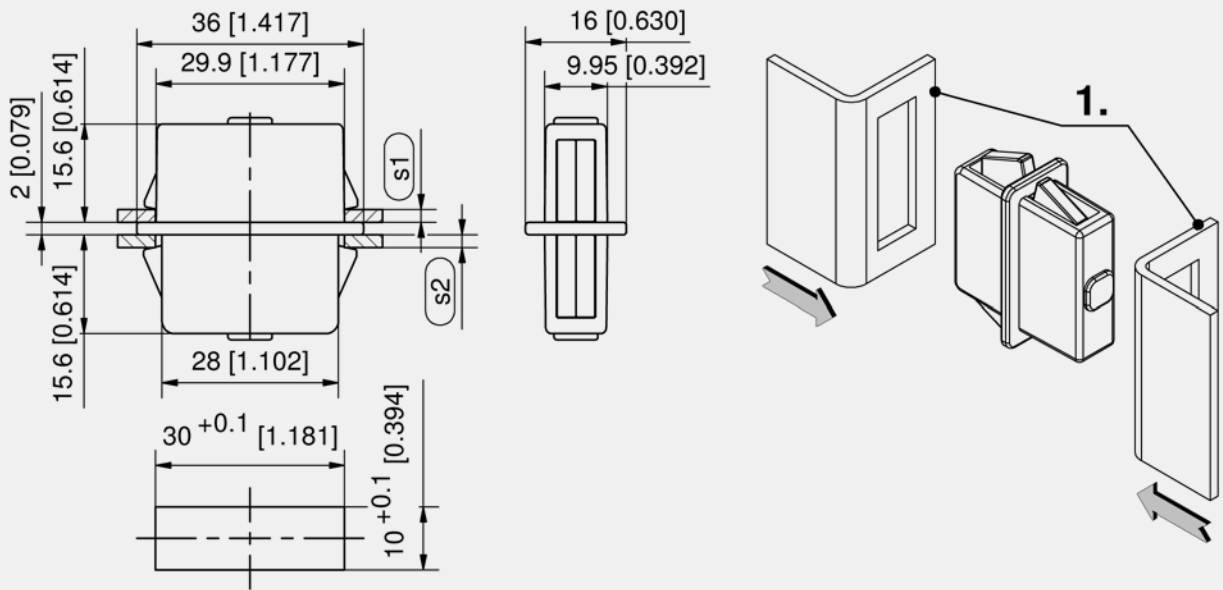
- With DIRAK-SNAP-Technology for joining flat metal sheets.
- For cutout 30x10.
- Tool-less installation.
- In order to provide a tolerance for installation, one half of the housing is just 28mm long.
- Vibration-proof.

Materials

- **Housing:** zinc die, black or PA black
- **Snap wedges:** sintered steel, zinc plated

Remarks

1. installation



Fastener, black

Part Number	Material	Clamping range (S)	Clamping range (S) 2	Installation type	Delivery Unit
294-9102.52-10010	PA	0.7 - 1.2 mm	0.7 - 1.2 mm	tool-less	10 pcs.
294-9102.52-20020	PA	1.7 - 2.2 mm	1.7 - 2.2 mm	tool-less	10 pcs.
294-9102.52-15015	PA	1.2 - 1.7 mm	1.2 - 1.7 mm	tool-less	10 pcs.
294-9102.52-25025	PA	2.2 - 2.7 mm	2.2 - 2.7 mm	tool-less	10 pcs.
294-9102.52-30030	PA	2.7 - 3.2 mm	2.7 - 3.2 mm	tool-less	10 pcs.
294-9107.33-10010	zinc die	0.7 - 1.2 mm	0.7 - 1.2 mm	tool-less	10 pcs.
294-9107.33-15015	zinc die	1.2 - 1.7 mm	1.2 - 1.7 mm	tool-less	10 pcs.
294-9107.33-20020	zinc die	1.7 - 2.2 mm	1.7 - 2.2 mm	tool-less	10 pcs.
294-9107.33-25025	zinc die	2.2 - 2.7 mm	2.2 - 2.7 mm	tool-less	10 pcs.
294-9107.33-30030	zinc die	2.7 - 3.2 mm	2.7 - 3.2 mm	tool-less	10 pcs.

Accessories	
764	292-0306.80-02530 Tool for uninstallation
762	292-0401.00-03010 Cutout-cover
763	292-0702.15-01030 Reinforcement plate for cutout



Hinges Pr01 180° with Grounding Countersunk Screw

See from page 509–510

Grounding Countersunk Screw

See page 752





Advantages

- With DIRAK-SNAP-Technology for a one-sided fixed and a one-sided detachable connection.
- For cutout 30x10.
- The width of the cutout can be enlarged for adjusting.
- Installation in closed profiles.
- Various fastening options e.g. with countersunk screws.
- The fastener can be installed in a recessed mounting position for flush applications.

Materials

- **Fastener and snap wedges:** AISI 304

Remarks

- F = pull-off force
1. cutout for detachable side / tolerance dimension
 2. e.g. sheet metal
 3. e.g. wood



Advantages

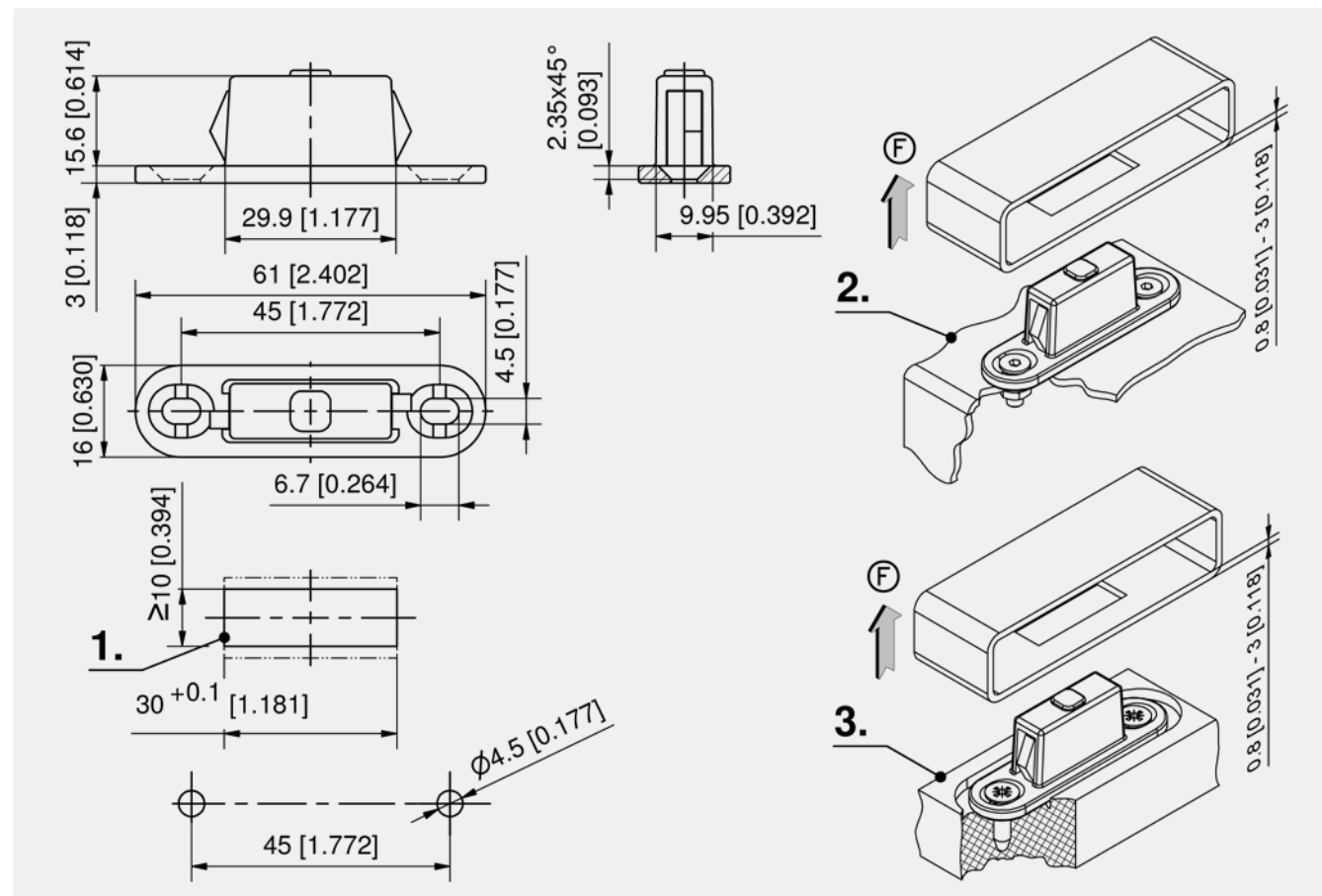
- With DIRAK-SNAP-Technology for a one-sided fixed and a one-sided detachable connection.
- For cutout 30x10.
- The width of the cutout can be enlarged for adjusting.
- Blind assembly in closed profiles.
- Vibration-proof.
- The fastener can be screwed on for flush applications in a recess (metal sheet / wood)

Materials

- **Fastener:** zinc die, black
- **Snap wedges:** sintered steel, zinc plated

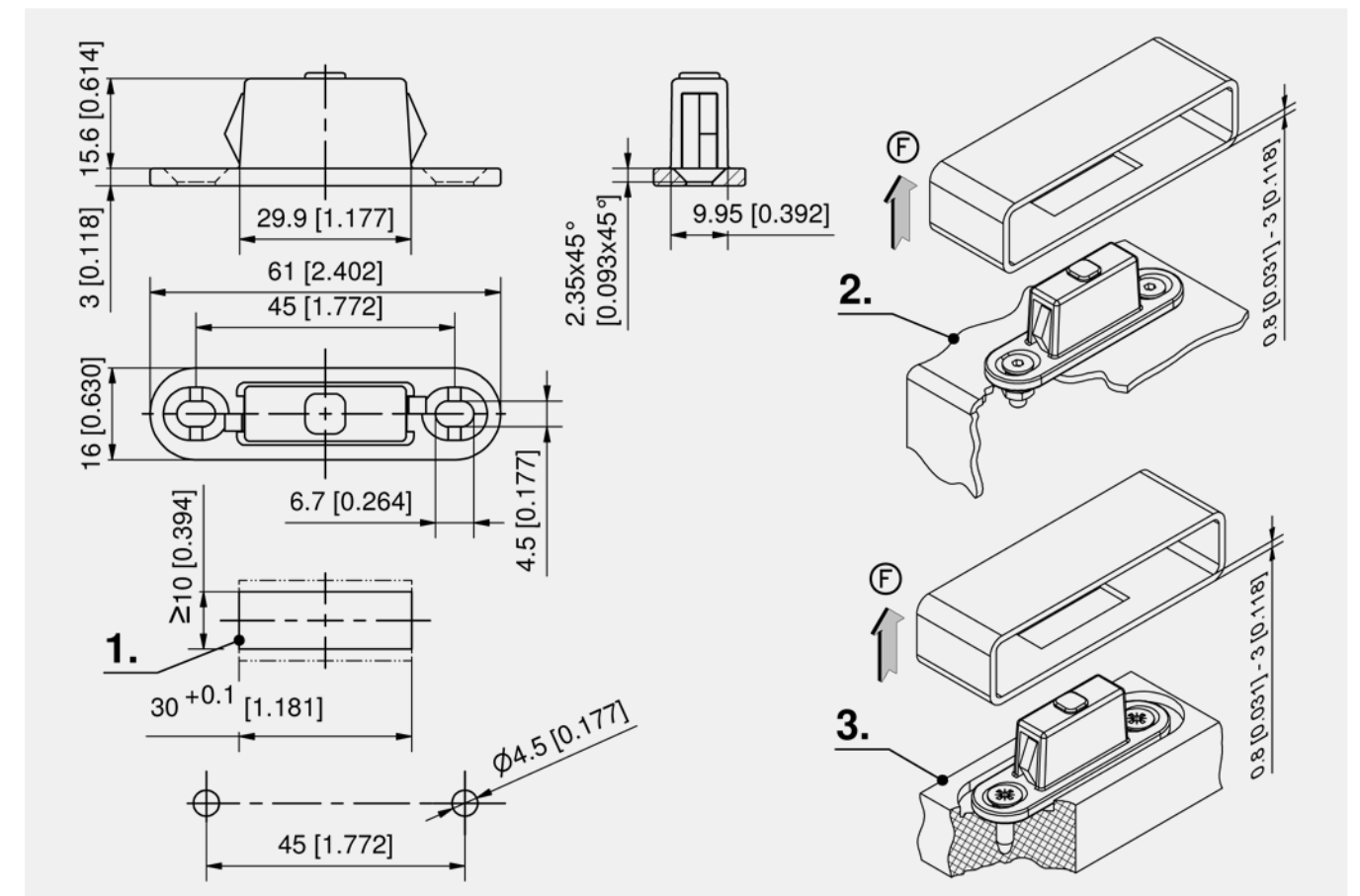
Remarks

- F = pull-off force
- Fastening with countersunk screws M4 or wood screws.
1. cutout for detachable side / tolerance dimension
 2. e.g. sheet metal
 3. e.g. wood



Fastener

Part Number	Version	Pull-off force	Clamping range (S)	Countersunk screws	Installation type	Delivery Unit
295-9003.00-00005	one removable side	~50N	0.8 - 3.0 mm	for Ø4.5mm hole diameter	tool-less / screw-on	10 pcs.



Fastener

Part Number	Clamping range (S)	Pull-off force	Installation type	Delivery Unit
295-9002.00-00001	0.8 - 3.0 mm	~15N	tool-less / screw-on	10 pcs.
295-9002.00-00003	0.8 - 3.0 mm	~30N	tool-less / screw-on	10 pcs.
295-9002.00-00005	0.8 - 3.0 mm	~50N	tool-less / screw-on	10 pcs.





Advantages

- With DIRAK-SNAP-Technology has one fixed side and one detachable side.
- Application for double-walled or bended non-sealed doors and side panels.
- The cutout for the fixed side is 30x10mm.
- For the detachable side a cut-out of 28x10mm to 30x16mm is possible.
- Tool-less installation.
- Vibration-proof.
- The DUAL fastener keep the door in position and prevent vibration of the door.

Materials

- **Dual Fastener:** PA, black or zinc die, black
- **Snap wedges:** sintered steel, zinc plated

Remarks

1. installed
 2. removed
 3. cutout for fixed side
 4. cutout for detachable side / tolerance dimension
 5. possible misalignment of the 2 cutouts
- The sheet thicknesses (S) can be designed differently.

F = pull-off force

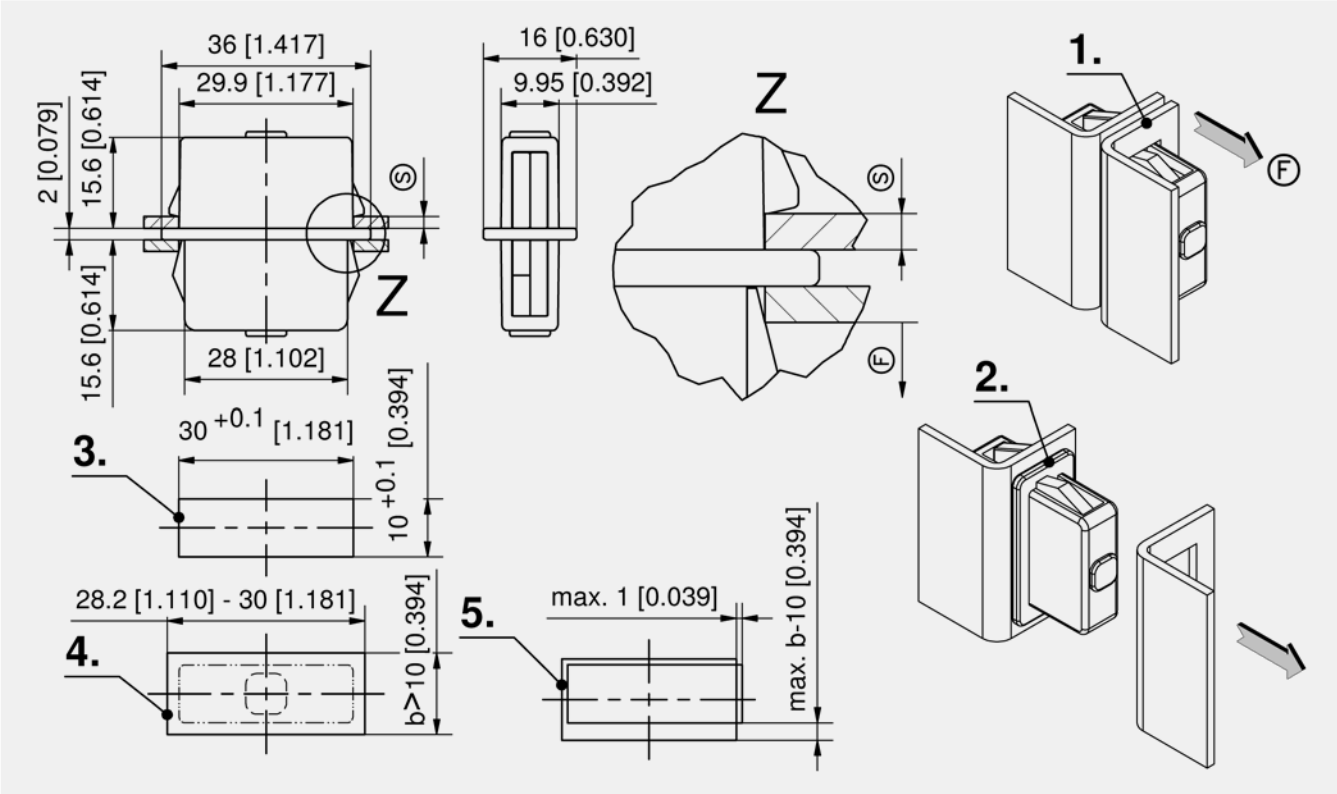
Fastener, zinc die, black

Part Number	Clamping range (S)	Pull-off force	Installation type	Delivery Unit
295-9001.33-10001	0.7 - 1.2 mm	~15N	tool-less	10 pcs.
295-9001.33-10003	0.7 - 1.2 mm	~30N	tool-less	10 pcs.
295-9001.33-10005	0.7 - 1.2 mm	~50N	tool-less	10 pcs.
295-9001.33-15001	1.2 - 1.7 mm	~15N	tool-less	10 pcs.
295-9001.33-15003	1.2 - 1.7 mm	~30N	tool-less	10 pcs.
295-9001.33-15005	1.2 - 1.7 mm	~50N	tool-less	10 pcs.
295-9001.33-20001	1.7 - 2.2 mm	~15N	tool-less	10 pcs.
295-9001.33-20003	1.7 - 2.2 mm	~30N	tool-less	10 pcs.
295-9001.33-20005	1.7 - 2.2 mm	~50N	tool-less	10 pcs.
295-9001.33-25001	2.2 - 2.7 mm	~15N	tool-less	10 pcs.
295-9001.33-25003	2.2 - 2.7 mm	~30N	tool-less	10 pcs.
295-9001.33-25005	2.2 - 2.7 mm	~50N	tool-less	10 pcs.
295-9001.33-30001	2.7 - 3.2 mm	~15N	tool-less	10 pcs.
295-9001.33-30003	2.7 - 3.2 mm	~30N	tool-less	10 pcs.
295-9001.33-30005	2.7 - 3.2 mm	~50N	tool-less	10 pcs.

Fastener, PA, black

Part Number	Clamping range (S)	Pull-off force	Installation type	Delivery Unit
295-9001.52-10001	0.7 - 1.2 mm	~15N	tool-less	10 pcs.
295-9001.52-10003	0.7 - 1.2 mm	~30N	tool-less	10 pcs.
295-9001.52-10005	0.7 - 1.2 mm	~50N	tool-less	10 pcs.
295-9001.52-15001	1.2 - 1.7 mm	~15N	tool-less	10 pcs.
295-9001.52-15003	1.2 - 1.7 mm	~30N	tool-less	10 pcs.
295-9001.52-15005	1.2 - 1.7 mm	~50N	tool-less	10 pcs.
295-9001.52-20001	1.7 - 2.2 mm	~15N	tool-less	10 pcs.
295-9001.52-20003	1.7 - 2.2 mm	~30N	tool-less	10 pcs.
295-9001.52-20005	1.7 - 2.2 mm	~50N	tool-less	10 pcs.
295-9001.52-25001	2.2 - 2.7 mm	~15N	tool-less	10 pcs.
295-9001.52-25003	2.2 - 2.7 mm	~30N	tool-less	10 pcs.
295-9001.52-25005	2.2 - 2.7 mm	~50N	tool-less	10 pcs.
295-9001.52-30001	2.7 - 3.2 mm	~15N	tool-less	10 pcs.
295-9001.52-30003	2.7 - 3.2 mm	~30N	tool-less	10 pcs.
295-9001.52-30005	2.7 - 3.2 mm	~50N	tool-less	10 pcs.

Accessories	
764	292-0306.80-02530 Tool for uninstallation
762	292-0401.00-03010 Cutout-cover
763	292-0702.15-01030 Reinforcement plate for cutout





Advantages

- Impossible to rotate nut and cage.
- Can be installed in the cutout without tools from the front as well as from behind.
- Cage made of PA is flexible and thus easy to install.
- Secure fit of the cage in the cutout through fitted square.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.
- Clamping range 1-4mm.
- For cutouts □ 9.5 and □ 9.2mm.
- Suitable for high torque and high tensile forces of up to 8 nm.

Materials

- **Cage:** PA, black
- **Nut:** steel, zinc plated white

Remarks

- Installation description (1. - 6.) see www.DIRAK.com
- a) + b) configure the cage a) with the nut b).
- c) cages and nuts are packed pre-assembled per 100 in a bag.



Advantages

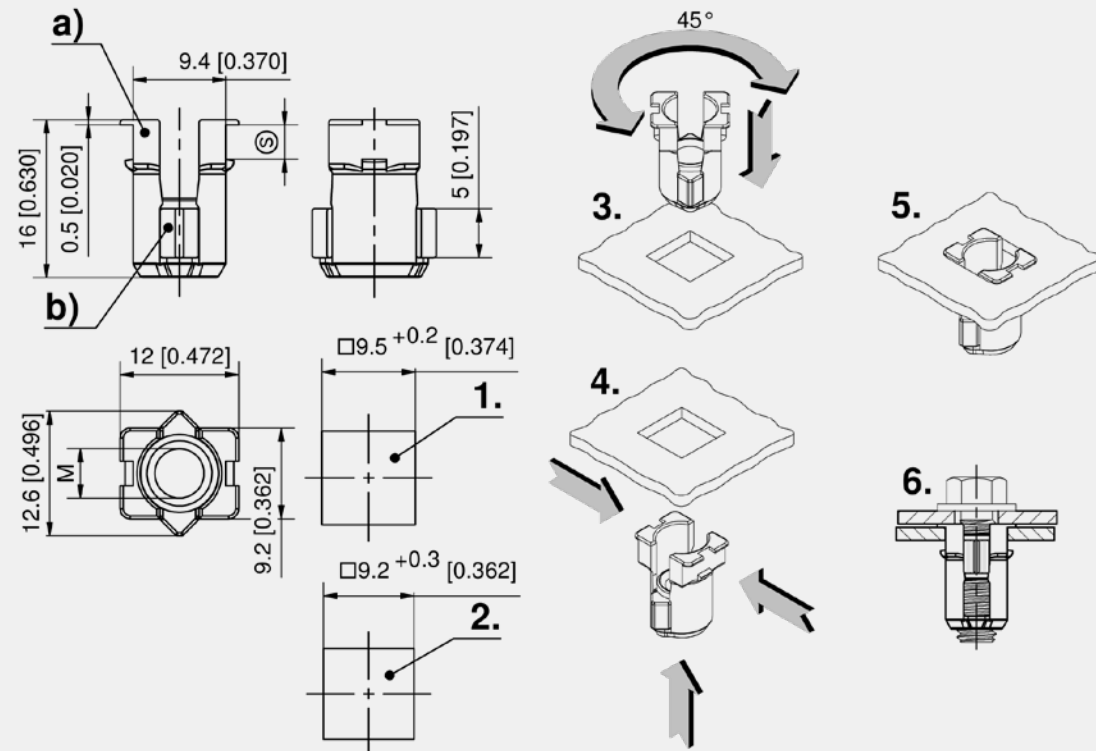
- For the secure joining of metal sheets.
- With grounding nut M6.
- Tested according DIN EN 61439-1 (VDE 0660 part 600): 2012-06.
- Can be installed in the cutout without tools from the front as well as from behind.
- Secure fit of the cage in the cutout through fitted square.
- For cutouts □ 9.5 and □ 9.2mm.
- Suitable for high torque and high tensile force from 3 up to 8 nm.
- Cage and grounding nut packed in bulk.

Materials

- **Cage:** PA, black
- **Grounding nut:** steel, zinc plated white

Remarks

- Installation description (1. - 7.) see www.DIRAK.com
- Attention:** The contact points must be designed in such a way that the contact pressure will not be transferred through the PA cage.
- Configure the cage a) with the grounding nut b).

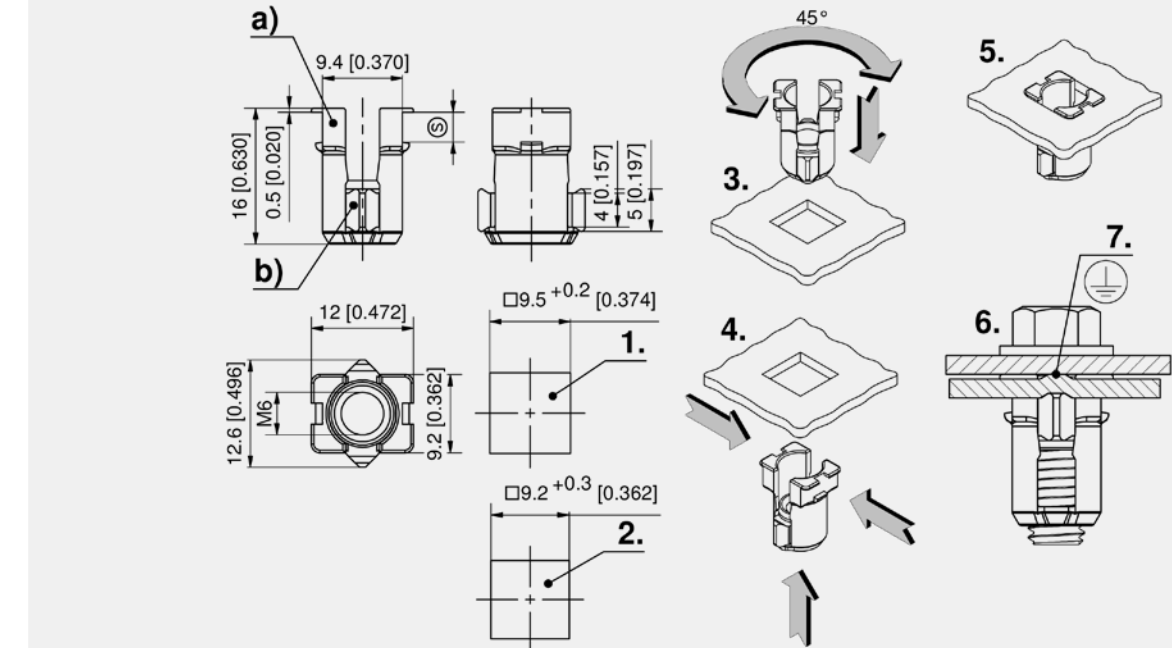


Cage nut, unmounted

	Part Number	Name	Clamping range (S)	Delivery Unit
a)	203-1901.06-00095	Cage for Nut	1 - 4 mm	2000 pcs.
b)	203-1902.15-00006	Nut M6		2000 pcs.

Cage nut, pre-assembled

	Part Number	Thread size	Clamping range (S)	Delivery Unit
c)	203-9002.00-00000	M6	1 - 4 mm	100 pcs.



Cage nut, unmounted

	Part Number	Name	Clamping range (S)	Delivery Unit
a)	203-1901.06-00095	Cage for Nut	1 - 4 mm	2000 pcs.
b)	203-1904.15-00006	Grounding nut M6		2000 pcs.





DIN
61373

RoHS
WEEE

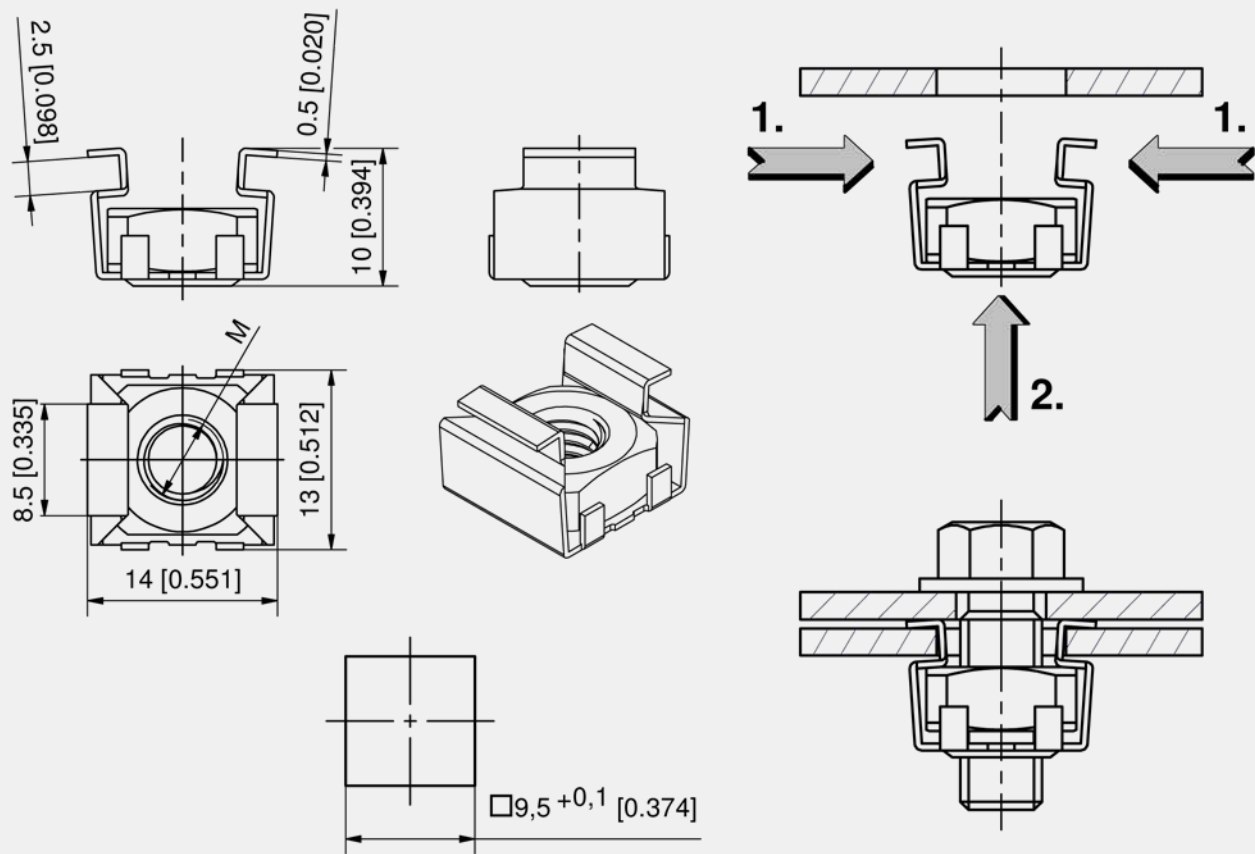


Advantages

- Ensures fixed connection of two metal sheets.
- Easy installation by pressing in square cutouts.
- Nut is moveable and adjustable in the cage until final fixing by screw.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.

Materials

- **Cage:** steel, zinc plated or stainless steel AISI 304
- **Nut:** steel, zinc plated or stainless steel AISI 316



Cage nuts

Part Number	Thread size	Material	Surface	Delivery Unit
359-0250.06-00000	M5	steel	zinc plated	200 pcs.
353-2010.00-00000	M5	AISI 304		200 pcs.
359-0206.06-00000	M6	steel	zinc plated	200 pcs.



Grounding Cage Nut □ 9,5

See page 747





DIN 61373

RoHS WEEE

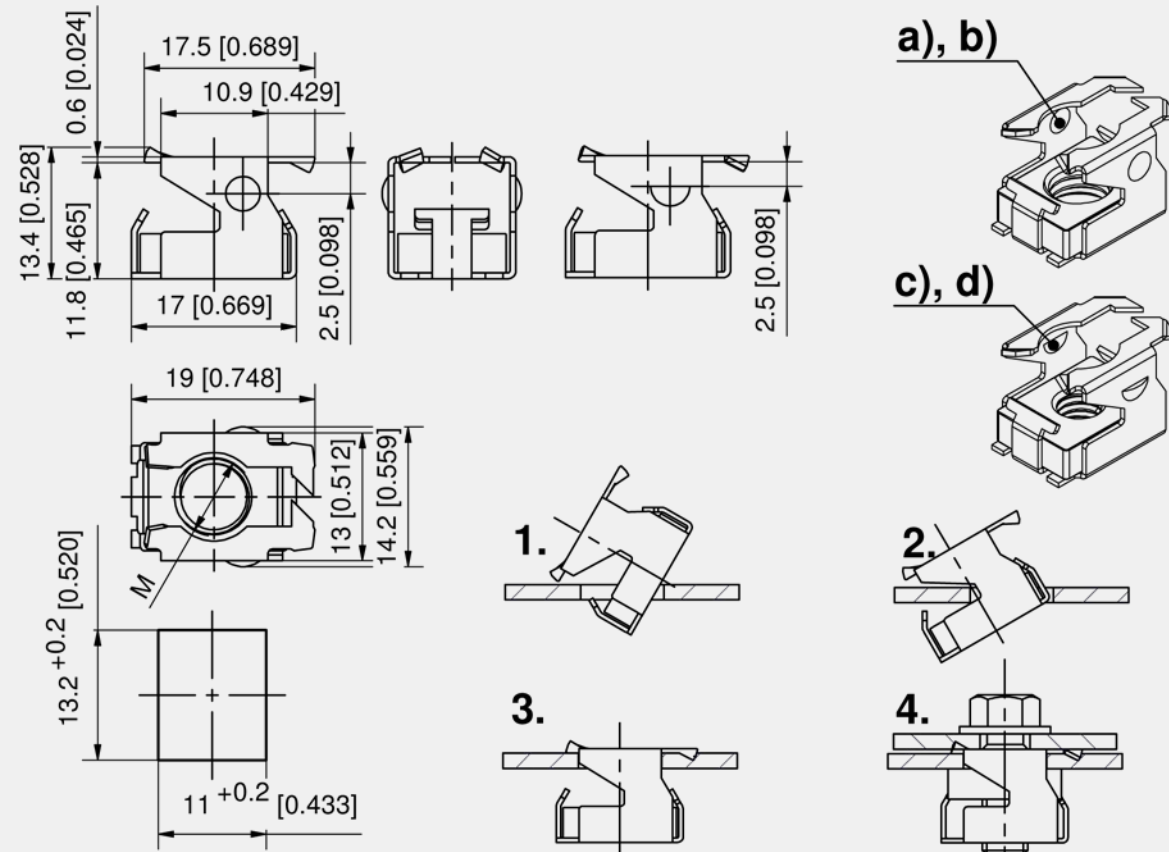


Advantages

- Ensures fixed connection of two metal sheets.
- Easy installation by pressing into square cutouts.
- Nut is moveable and adjustable in the cage until final fixing by screw.
- c) and d) special design of the cage prevents from falling out of the cutout.
- Seismic-proof according to GR-63-CORE, Issue 4.
- Vibration-proof according to DIN EN 61373.

Materials

- Cage and nut:** steel, zinc plated



Cage nuts

	Part Number	Thread size	Delivery Unit
a)	350-2004.00-00000	M8	200 pcs.
b)	350-2005.00-00000	M6	200 pcs.
c)	350-2046.00-00000	M6	200 pcs.
d)	350-2096.00-00000	1/4-20UNC	200 pcs.



all product details
on DIRAK.com

6-045.02

IP 66

RoHS WEEE



Advantages

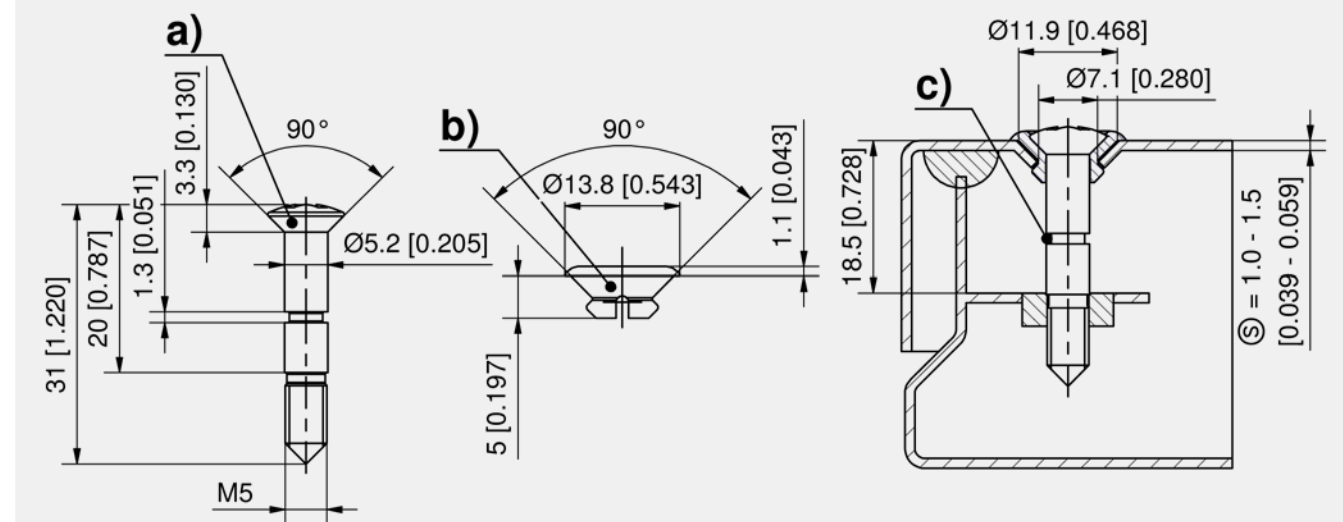
- Screw assembly consists of raised countersunk M5x30 Phillips H2 screw and sleeve.
- Meets IP66 certification (applicable for installation example shown below with even compression of the foam/glued seal).
- Captive by using o-ring 839-3770.00-00412.

Materials

- Screw:** steel, zinc plated
- Sleeve:** PA, black
- O-ring:** NBR, black

Remarks

Additional lengths and materials of the screw available on request.



Screw assembly

	Part Number	Name	Material	Surface	Delivery Unit
a)	202-1103.15-00530	Raised countersunk screw, M5x30	steel	zinc plated	50 pcs.
b)	203-0655.61-00000	Sleeve	TPV Santoprene	black	50 pcs.



Specific accessories

- c) 839-3770.00-00412 O-ring 4 x 1.2mm

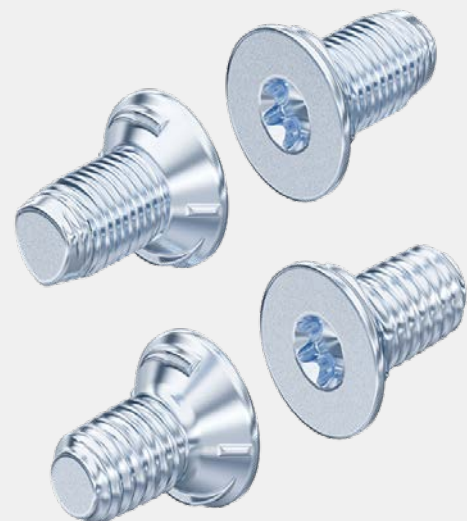


all product details
on DIRAK.com

6-043



RoHS
WEEE



Vorteile

- Grounding is implemented by segment cutting edge (2.) or scraping tooth (3.).
- Tested according to DIN EN 61439-1 (VDE 0660 part 600): 2012-06 "Low Voltage Switchgear Combinations".
- Sliding coating ensures low screw-in torques.
- Hexagon socket drive in accordance with DIN EN ISO 10664 no. 30 (4.).
- DIRAK screws are shaped for applications without a nut thread so that they cut a metric nut thread.
- The counter thread is formed due to the non-circular cross-section and the slightly conical design.

Werkstoffe

- **Screw:** steel (10B21), strength 8.8 ISO898, zinc plated, sliding coated

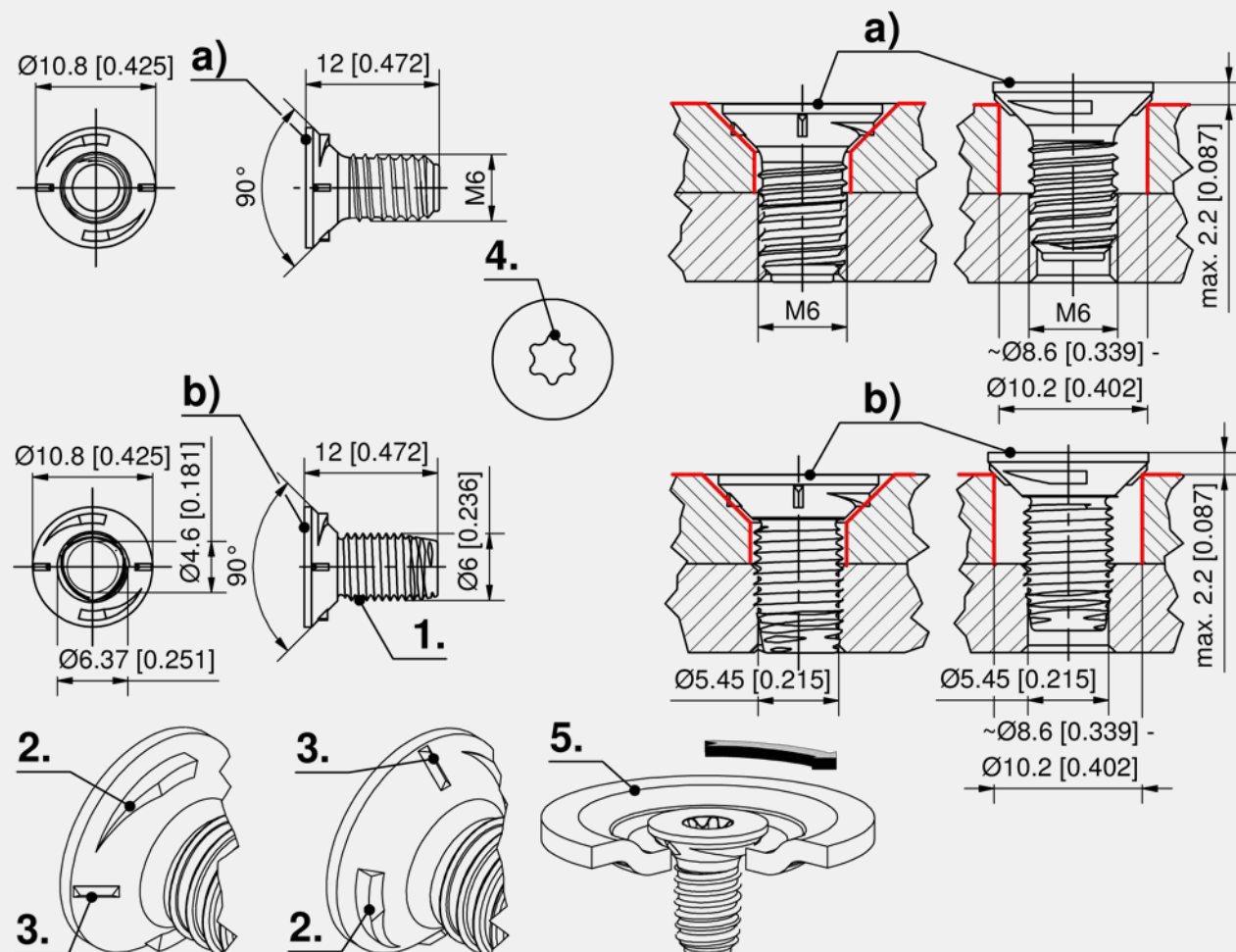
Anmerkungen

Please request our data sheet with detailed technical information.

a) metric thread M6.

b) metric thread cutting screw M6 according to DIN 7500. (1.)

5. Embossing at a cylindrical hole for flush surface.



Grounding countersunk screws

	Part Number	Version	Dimension	Delivery Unit
a)	800-9001.00-00000	metric thread	M6 x 12	100 pcs.
b)	800-9002.00-00000	metric thread cutting	Ø6 x 12	100 pcs.



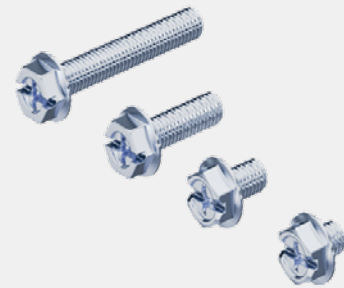
DST Captive Fastener

See page 735





RoHS
WEEE



Advantages

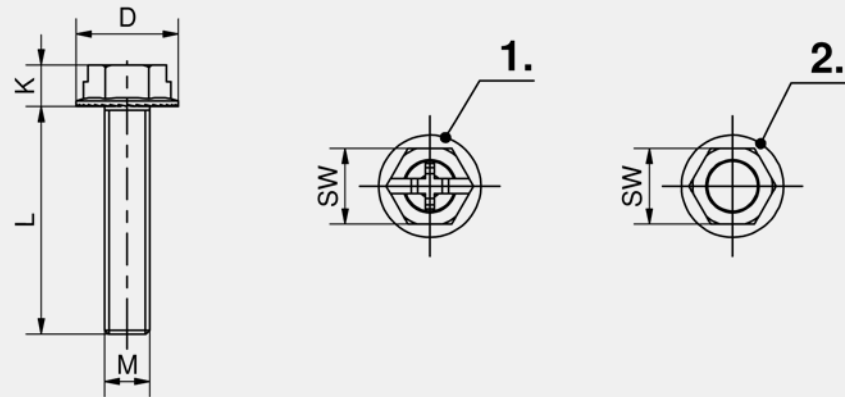
- Serrated screw with under-head serrations with Phillips/slot head.

Materials

- Serrated screws:** steel, zinc plated property class 5.8 or AISI 304
- Versions with powder locking dot on request.

Remarks

- 202-0606.04-00000 = only available with hexagon head.
- 202-0635.00-00000 = as long as stock lasts, hexagon head property class 8.8.
- 1. version Phillips/ slot
- 2. version hexagon



Serrated screws

Part Number	D	k	SW	L	Thread size	Material	Surface	Delivery Unit
202-0506.00-00000	10 mm	4.5 mm	8 mm	6 mm	M5	steel	zinc plated	200 pcs.
202-0508.00-00000	10 mm	4.5 mm	8 mm	8 mm	M5	steel	zinc plated	200 pcs.
202-0606.00-00000	13.5 mm	5.5 mm	10 mm	6 mm	M6	steel	zinc plated	200 pcs.
202-0607.00-00000	13.5 mm	5.5 mm	10 mm	7 mm	M6	steel	zinc plated	200 pcs.
202-0608.00-00000	13.5 mm	5.5 mm	10 mm	8 mm	M6	steel	zinc plated	200 pcs.
202-0610.00-00000	13.5 mm	5.5 mm	10 mm	10 mm	M6	steel	zinc plated	200 pcs.
202-0616.00-00000	13.5 mm	5.5 mm	10 mm	16 mm	M6	steel	zinc plated	200 pcs.
202-0620.00-00000	13.5 mm	5.5 mm	10 mm	20 mm	M6	steel	zinc plated	200 pcs.
202-0625.00-00000	13.5 mm	5.5 mm	10 mm	25 mm	M6	steel	zinc plated	200 pcs.
202-0630.00-00000	13.5 mm	5.5 mm	10 mm	30 mm	M6	steel	zinc plated	200 pcs.
202-0635.00-00000	13.5 mm	5.5 mm	10 mm	35 mm	M6	steel	zinc plated	200 pcs.
202-0640.00-00000	13.5 mm	5.5 mm	10 mm	40 mm	M6	steel	zinc plated	200 pcs.
202-0650.00-00000	13.5 mm	5.5 mm	10 mm	50 mm	M6	steel	zinc plated	200 pcs.
202-0810.00-00000	16.5 mm	7.5 mm	13 mm	10 mm	M6	steel	zinc plated	200 pcs.
202-0606.04-00000	13.5 mm	5.5 mm	10 mm	6 mm	M6	AISI 304	stainless steel	200 pcs.
202-0608.04-00000	13.5 mm	5.5 mm	10 mm	8 mm	M6	AISI 304	stainless steel	200 pcs.
202-0610.04-00000	13.5 mm	5.5 mm	10 mm	10 mm	M6	AISI 304	stainless steel	200 pcs.
202-0616.04-00000	13.5 mm	5.5 mm	10 mm	16 mm	M6	AISI 304	stainless steel	200 pcs.

RoHS
WEEE

Advantages

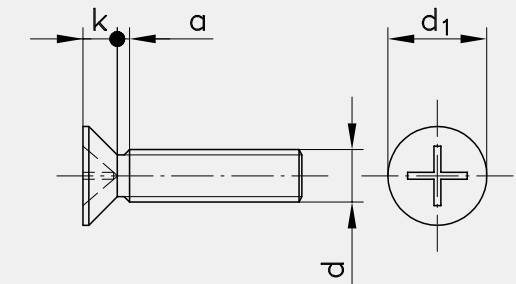
- Countersunk machine screws according to DIN 965 DIN-EN-ISO 7046.
- Hex. nut according to DIN 934 DIN-EN-ISO 4032 and DIN 985 DIN-EN-ISO 10511.

Materials

- Countersunk machine screws and hex. nuts:** steel, zinc plated



d = M5	d = M6	d = M8
a = 1.6	a = 2.0	a = 2.5
k = 2.5	k = 3.0	k = 4.0
d ₁ = 9.2	d ₁ = 11.0	d ₁ = 14.5



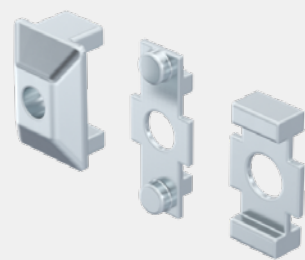
Countersunk screws

Part Number	Thread size	L	Delivery Unit
860-0965.00-00512	M5	12 mm	200 pcs.
860-0965.00-00516	M5	16 mm	200 pcs.
860-0965.00-00520	M5	20 mm	200 pcs.
860-0965.00-00525	M5	25 mm	200 pcs.
860-0965.00-00530	M5	30 mm	200 pcs.
860-0965.00-00540	M5	40 mm	200 pcs.
860-0965.00-00612	M6	12 mm	200 pcs.
860-0965.00-00616	M6	16 mm	200 pcs.
860-0965.00-00620	M6	20 mm	200 pcs.
860-0965.00-00625	M6	25 mm	200 pcs.

Hexagon nut

Part Number	Thread size	self-locking	Delivery Unit
860-0934.00-00005	M5		200 pcs.
860-0985.00-00005	M5	Yes	200 pcs.
800-0035.00-00000	M6		200 pcs.
800-0074.00-00000	M6	Yes	200 pcs.
860-0934.00-00008	M8		200 pcs.
800-0036.00-00000	M8		200 pcs.
800-0022.00-00000	M8	Yes	200 pcs.





Advantages

- For application with hinges 4-247 and 4-247.01.
- Tenon blocks for 8 or 10mm groove.
- Fastening by M6.
- Anti-twist protection for sheet metal construction.
- For vertical or horizontal applications.
- Tolerance compensation possible by oblong holes.

Materials

- **Tenon blocks and anti-twist protection:** zinc die, untreated



Advantages

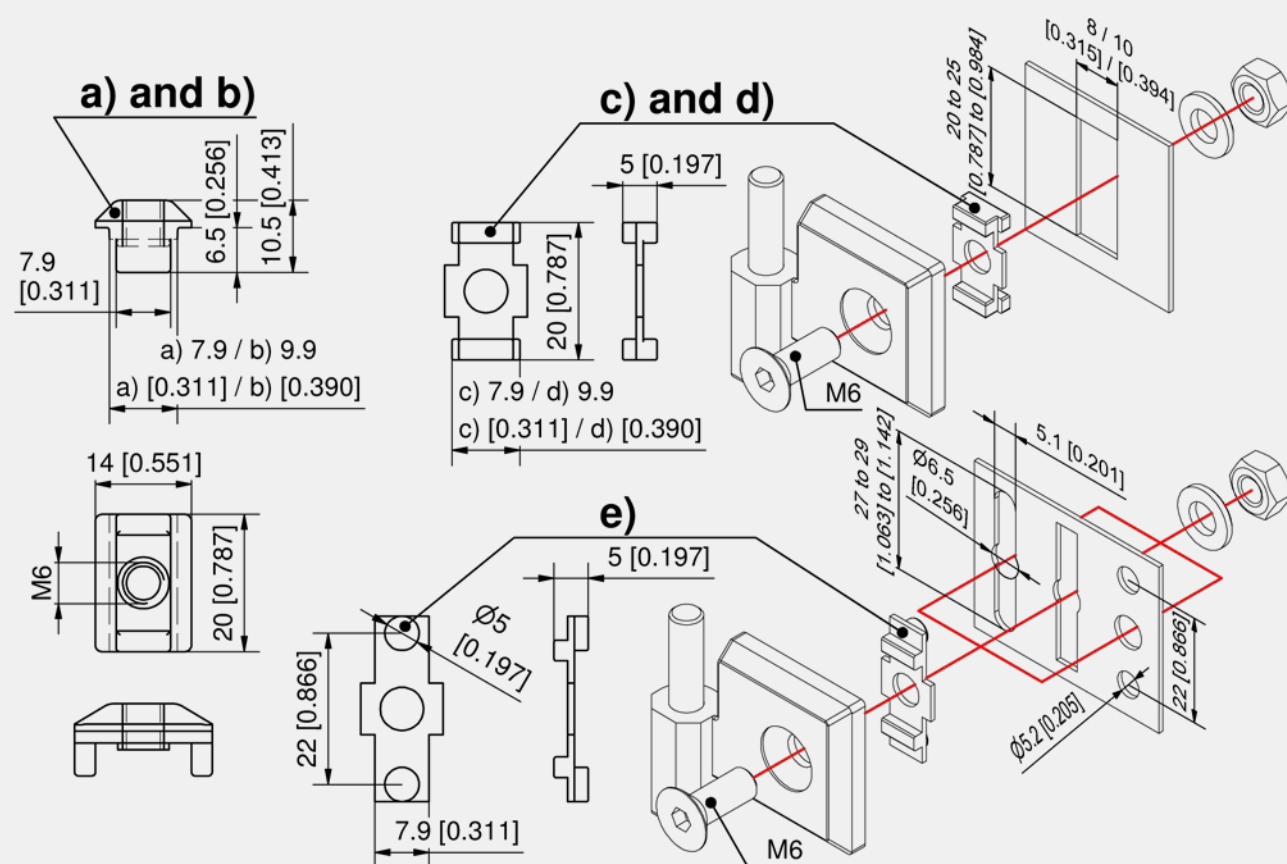
- The nut plates have been designed to allow an easy installation of the hinges in our 218-series. Tightening the screws from the outside only.
- Elimination of the time-consuming fitting of small single nuts in often quite difficult accessible corners.
- Oversized holes/cutouts allow for horizontal and/or vertical adjusting.
- Adjustment and alignment with just one tool, only from outside.
- The teeth (1.) on all 4 corners create enough friction to simplify installation and adjusting.
- If this friction is not wanted: these teeth can also point away from the inner skin of the door/frame.

Materials

- **Nut plate:** steel, zinc plated

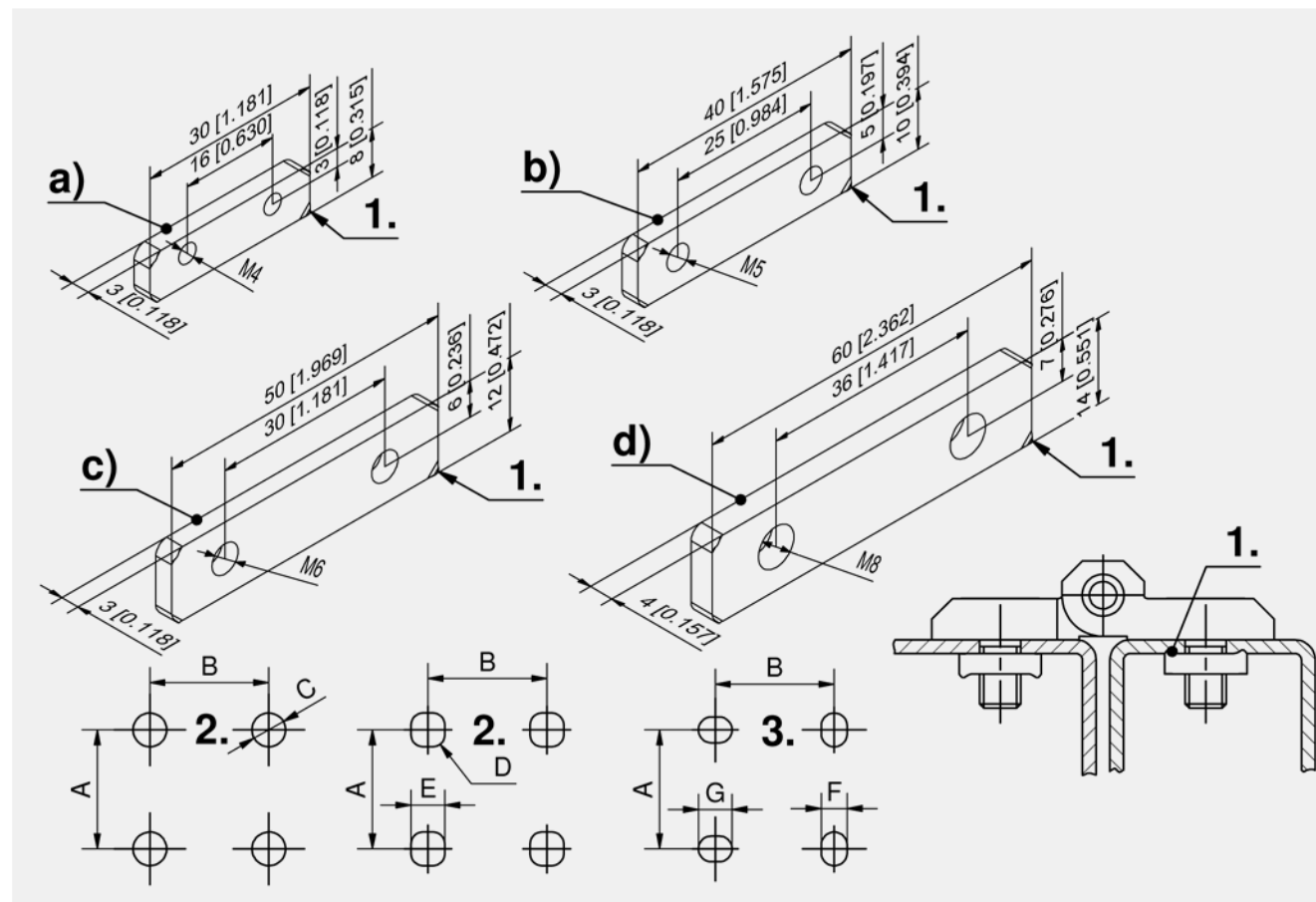
Remarks

- cutout for horizontal and vertical adjustment
- cutout for horizontal and/or vertical adjustment



Tenon blocks and anti-twist protection

	Part Number	Name	Groove width	Cutout	Thread size	Door-thickness (S)	Delivery Unit
a)	265-1001.00-00000	Tenon blocks with anti-twist protection	8 mm	8 x 20 to 25 mm	M6	0 - 3.2 mm	10 pcs.
b)	265-1002.00-00000	Tenon blocks with anti-twist protection	10 mm	10 x 20 to 25 mm	M6	0 - 3.2 mm	10 pcs.
c)	265-1101.00-00000	Anti-twist protection for square	8 mm	8 x 20 to 25 mm			10 pcs.
d)	265-1102.00-00000	Anti-twist protection for square	10 mm	10 x 20 to 25 mm			10 pcs.
e)	265-1103.00-00000	Anti-twist protection for drill-holes		3 options, see drawing			10 pcs.



Nut plates

	Part Number	Thread size	A	B	C	D	e	f	G	Delivery Unit
a)	218-0907.15-00000	M4	16 mm	18 mm	6.5 mm	2 mm	6.5 mm	4.5 mm	6.5 mm	10 pcs.
b)	218-0908.15-00000	M5	25 mm	25 mm	7.5 mm	2.5 mm	7.5 mm	5.5 mm	7.5 mm	10 pcs.
c)	218-0909.15-00000	M6	30 mm	30 mm	8.5 mm	3 mm	8.5 mm	6.5 mm	8.5 mm	10 pcs.
d)	218-0910.15-00000	M8	36 mm	36 mm	10.5 mm	4 mm	10.5 mm	8.5 mm	10.5 mm	10 pcs.

