

INDUSTRIAL PRODUCT CATALOG



Assembling

Protecting & Finishing

Connecting



A tailor-made catalog, dedicated to industrialists & distributors

Here is our new "Industrial" catalog, designed especially for you; it will allow you to rapidly choose the products you need from an extensive assortment adapted to your particular sector of operations.

Whether you specialize in electrical, home appliances, HVAC, or other trades such as railway, lighting, electronics, furniture manufacturing, elevators, tools, or agricultural machinery... this catalog was made for you.

We have essentially compiled a selection of more than 500 references in our general catalog: all the standard fasteners that you will need to assemble, protect, or connect your products or equipment. We have adapted our organization to keep these references in stock.

One glance at the selection guide (page 6-7) and you will discover our standard product lineup, easily identifiable by function.

Alongside this standard offering, we provide you with a choice of surface treatments: color and finish, available upon request. We know who you are and know that our attachment-and assembly systems need to be integrated into highly variable environments.

Should you wish to further personalize your equipment, you can always turn to our network of distributors. And if it's a particular product more closely adapted to your manufacturing process that you're after, the distributors will be happy to put you in touch with our servicing experts to design the product you need.

Simplicity and a sense of closeness are at the core of our values- it is in this light that we created this new catalog. I hope you find it meets your needs.

François Raymond

Finding the right product quickly

We have developed a selection guide to help you find references faster...

Our selection guide is on page 6-7.

You can use the double-entry table to identify the product family you need:

• The first column shows the type of products to be fastened: cables, tubes, panels, trim pieces, etc. They are grouped by the following functions:

- assembling,
- protecting,
- connecting

Each function is identified by a colour code, which matches the colour coding used in the catalogue pages.

• The top row indicates the element to be fastened to: tube, panel edge, panel hole...

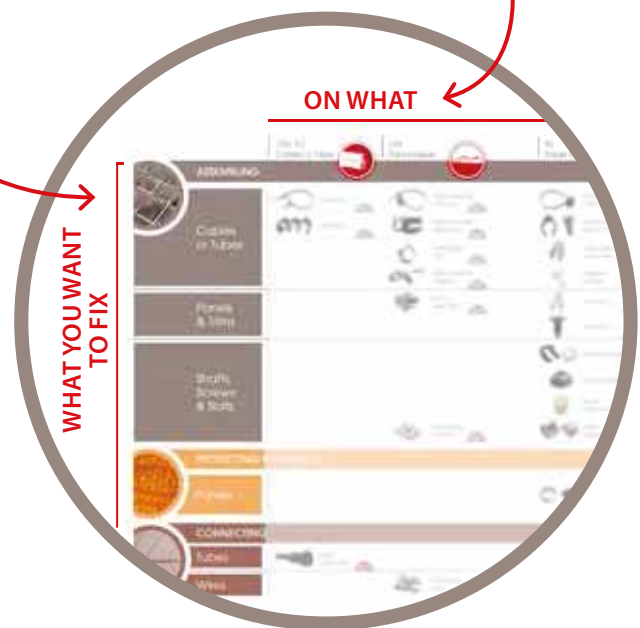
Each type of element is identified by a pictogram, found in the catalogue pages and used to confirm your selection. Simply match what you want to fix with what you want to mount it on and you'll find the product line you need... with a reference to the appropriate page number in the catalogue.

...Fold out flaps to assist your selection

The flap on the left shows the product families.
The flap on the right gives the material description.
You use the right-hand flap to identify the type of material contained in metal or plastic parts.

On the front of the flap, you can find the material and colour for plastic parts and the finish for metal parts. And on the back of the flap, the material and colour for assembled parts.

Once you've chosen the part you need, entering your finish options is child's play and you can easily confirm that you've selected the right part for your needs.



Choosing the right surface treatment

Sometimes it can be hard to choose the right surface treatment, depending on the function and location of the part. A few points should therefore be classified with your quality and production departments, in liaison with your sales person:

- Type of assembly: manual or automatic
- Corrosion resistance: how many hours?
- Environment in which the assembly is located: saline or polluted atmosphere?
- Colours: Will the part be visible? What colours are available?

Finishes for metal parts

There are two solutions for protecting parts from corrosion: lamellar galvanizing and electrolytic galvanizing.

The table below indicates the corrosion resistance of the different finishes available. Salt spray resistance is given in hours of exposure to white rust or red rust.

You'll find the surface treatments available for all of the references on the materials flap on the catalogue cover page.

We have many other finishes available, please contact us for more details.



Surface treatments		Corrosion resistance*	
Material code	Description	Red rust	White rust
Lamellar Galvanizing			
CS-5000	Phosphated	2h	-
CS-4003	Metallic corrosion protection coated, colour silver, lubricated	72h	24h
CS-5421	Metallic corrosion protection coated, colour black	96h	0
CS-5440	Metallic corrosion protection coated, colour silver	288h	120h
CS-5451	Metallic corrosion protection coated, colour black	288h	120h
CS-5410	Metallic corrosion protection coated, colour silver	480h	24h
CS-5450	Metallic corrosion protection coated, colour silver	480h	120h
CS-G2	Metallic corrosion protection coated, colour silver	500h	200h
CS-5412	Metallic corrosion protection coated, colour silver	720h	24h
CS-4001	Metallic corrosion protection coated, colour silver, lubricated	720h	240h
CS-4050	Metallic corrosion protection coated, colour silver, lubricated	840h	240h
CS-4004	Metallic corrosion protection coated, colour silver, lubricated	840h	240h
CS-G3	Metallic corrosion protection coated, colour silver	1000h	200h
CS-GB3	Metallic corrosion protection coated, colour black	1000h	200h
Electrolytic Galvanizing			
CS-5500	Zinc plated / metallic corrosion protection coated, colour silver	480h	240h
CS-3100	Zinc plated / passivated colourless	144h	-
CS-3200	Zinc plated	72h	-
CS-3250	Zinc plated / passivated colourless	240h	72h
CS-3350	Zinc plated / passivated, colour black	-	-
CS-ZnNi	Zinc plated	400h	200h
CS-ZnNi-BI	Zinc Nickel Anthracite	400h	200h

* For information only/According to Salt Spray test - Data of June 2013

* Depends on the geometry of the part

Colours for plastic parts

This type of selection is much simpler since all you do is choose a colour. Most of our parts come in 4 colours: white, natural, black and grey. But other colours may be produced as well: brown, green, blue, etc.

Please contact us.



SELECTION GUIDE

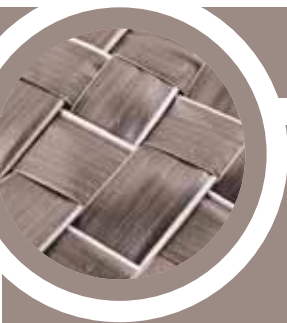
ON/ TO
Cables or Tubes



ON
Panel edges



ASSEMBLING



Cables
or Tubes



Cable Ties

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Cable Clips

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Edge Mounting
Cable Ties

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Edge Mounting
Cable Clips

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Cable Edge
Clips

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Edge Mounting
Adapters

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Panel Clips

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Panels
& Trim

Shafts,
Screws
& Bolts



Metal Snap
on Nuts

p.93-98

PROTECTING & FINISHING



Panels



CONNECTING

Tubes



Quick
Connectors

p.110-111

Wires



Grounding
Clips

p.114-115

IN
Panel holes



ON
Studs



ON
Flat surfaces



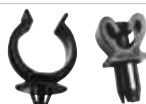
Plug Mounting
Cable Ties

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Stud Mounting
Cable Ties

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Plug in Cable Clips
& Push Pin Clips

p.24-36



Stud
Cable Clips

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Adhesive
Cable Clips

p.41



Cable Clips
Screw Fixed

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Plug in
Adapters

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Trim Clips

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Panel Pins

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Stud
Panel Clips

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Shaft Retainers

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Stamped Nuts

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Plastic
Snap in Nuts

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Metal
Snap in Nuts

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Spring Rings, Caps
& Grommets

p.102-107

Catalogue products and custom solutions

Since our experts know your needs and pay close attention to your manufacturing methods and processes, they can provide you with customised assembly solutions, whatever sector you're in. To deserve your loyalty, we are uncompromising when it comes to quality and precision. The solutions we deliver are tested and approved in our state-of-the-art laboratories. We have a development centre in each country for even faster response to your needs.

Our business: more than fastening...

Fastening specialists, backed by a wealth of experience built up since 1865, we have shaped our development with a series of innovations, from press-studs for the textile industry to plastic injection for the automotive sector. Today, we have five areas of competencies:

- Engineering & Services: design of customised solutions
- Metal transformation: cutting, bending, stamping and roll forming
- Plastic injection: over-moulding, bi-injection, special manufacturing conditions (ISO 5 to 8)
- Bonding services: tailored solutions using fast-curing adhesives
- Assembly: all types of assembly with our manual, semi-automatic and high-speed automatic equipment; Quick Connectors for example.

We can offer you our latest innovations, developed to boost your productivity: traceability, plastic parts that absorb vibrations, fast-curing adhesive tablets, an automatic assembly gun and security solutions. You'll find more information on innovations on the blue inserts in the catalogue p.25, p.37, p.59, p.71 and p.97.



Engineering & Services



Metal transformation



Plastic injection



Bonding services



Assembly

Special requirements? Our experts at your service

- **Assembly line support by our staff**

ARaymond offers you the service of assembly line-walks. During the walks, our experts closely observe your assembly or production lines in order to help you choose the fastening system best-suited to your requirements, optimize your manufacturing process and reduce the number of references used in your products. Our experts' prime concern is to improve your productivity.

With our expertise in metal and plastic parts manufacturing, we can design and produce custom parts, in three steps:

- **Preparation of the mock-up (1 to 3 units)**

We prepare a mock-up, without surface treatment, to define the geometry of the part. Mock-ups of metal parts are made manually. Plastic part mock-ups are produced by 3D printing or sintering (production of plastic components by polymerization).

- **Development of a prototype (100 to 500 units)**

In the prototyping phase, up to 500 standard parts are made. Metal parts are produced on a bending machine simpler than the machines used for batch production.

For plastic parts, we inject the plastic into a soft metal mould.

- **Release of batch production**

After the part is validated, the final mould, made of steel, is fabricated and we release batch production on our series production machines.

Using this method, we have produced mock-ups for parts to fasten bicycle mudguards and even light fittings.



Assembling Cable Ties



On / To
Cables or Tubes

Cable Ties



Standard



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Re-openable



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For tube mounting



p.14



On Panel edges

Edge Mounting Cable Ties



Edge mounting cable ties



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In Panel holes

Plug Mounting Cable Ties



Plug mounting cable ties



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On Studs

Stud Mounting Cable Ties



Stud mounting cable ties



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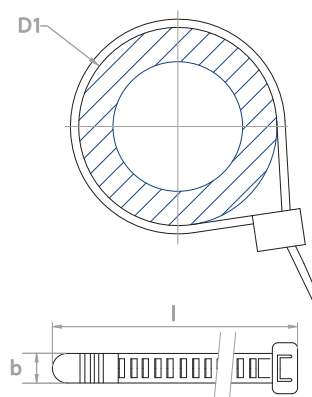


On cables or tubes



Cable Ties

Standard

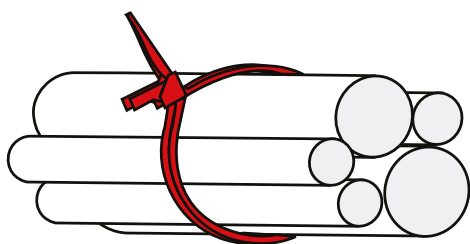


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Max tube diameter (Ø D1)	Cable strap width (b)	Cable strap length (l)	Material*	Carton quantity
056799000	3-26	4,5	120	PA66-BI	2 000
013427001	4-20	4,5	87	PA66-BI	3 000
056889000	5-35	4,5	160	PA66-BI	1 000
013428000	6-30	6	128,7	PA6-BI	3 000
013429002	6-60	6	218,7	PA66-BI	1 000
056686000	10-32	3,6	139	PA66-Na	2 000
056686001	10-32	3,6	139	PA66-BI	2 000
056792000	10-65	4,8	250	PA66-BI	1 000
056799002	24	4,5	120	PA66-Na	2 000
056767000	45	4,8	178	PA66-BI	1 000
056476000	50	3,6	200	PA66-Na	2 000
056476001	50	3,6	200	PA66-BI	2 000
013430000	60-135	6	459	PA66-BI	500
013430001	60-135	6	459	PA66-Na	500
056688000	80	3,6	290	PA66-Na	2 500
056689000	103	3,6	370	PA66-Na	2 000
056766000	115	4,8	430	PA66-Na	2 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix wires onto many supports or to ARaymond adapters
- Complies to norm MIL-S-23190
- Homologated R.I.Na N. 5/043/93
- See also p.53, the product family : adapters for cable clips and ties

COMPLEMENTARY PRODUCTS



Plug in Adapters
p. 54



Edge Mounting
Adapters
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Edge Mounting
Adapters
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A specific need ? Contact us, p.122



ASSEMBLING Cables or Tubes



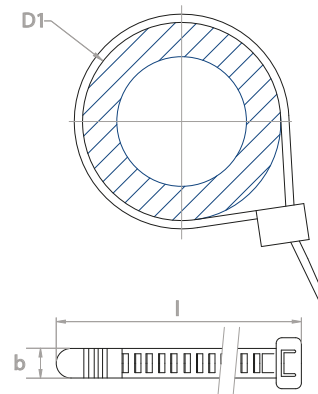
On cables or
tubes



Cable Ties

Cable Ties

Re-openable

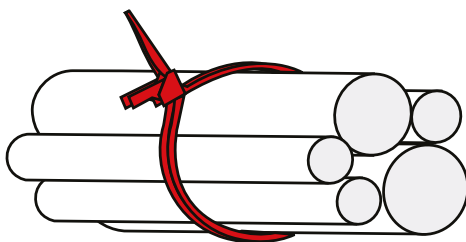


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Max tube diameter (Ø D1)	Max tube diameter 2 (Ø D2)	Cable strap width (b)	Cable strap length (l)	Material*	Carton quantity
208596000	 Double	2-38	3-36,5	4,8	151,6	PA66-Na	6 000
014691000	 Single	6-45	-	4	161,5	PA66-Na	1 000
014691004		6-45	-	4	161,5	PA66-BI	1 000
012526000		8-20	-	7	100	PA12-BI	2 500
012528000		10-70	-	9	250	PA12-BI	1 200

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix wires onto many supports or to ARaymond adapters
- With a re-openable locking system
- See also p.53, the product family : adapters for cable clips and ties

COMPLEMENTARY PRODUCTS



Plug in Adapters
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Edge Mounting
Adapters
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Edge Mounting
Adapters
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A specific need ? Contact us, p.122

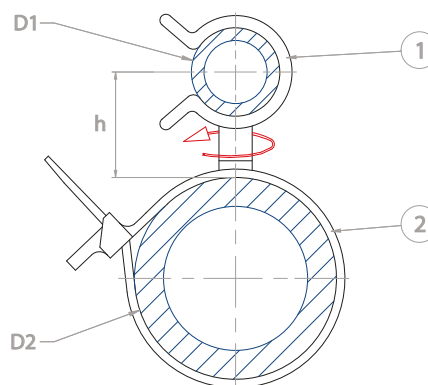


On cables or tubes



Cable Ties

For tube mounting

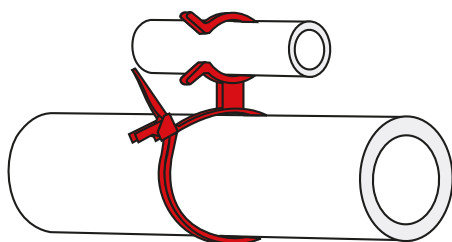


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Max tube diameter (Ø D1)	Max bundle diameter (Ø D2)	Clip width ①	Cable strap width ②	Distance (h)	Material*	Carton quantity
081354000		4,3-5,2	10-52	10	7	13,5	POM-BI/PA12-BI	2 500
080477000		6-6,5	10-52	8	7	14	POM-BI/PA12-BI	2 000
082400000		7,8-8,5	10-52	10	7	15,4	PA12-BI/PA66-BI	500
081929000		7,8-8,5	46-95	10	7	15,4	POM-BI/PA12-BI	1 500
080487000		8-9	10-52	8	7	15	POM-BI/PA12-BI	2 000
081284000		10-12	10-52	10	7	18	POM-BI/PA12-BI	2 000
080465002		10-12	46-75	10	7	18	POM-BI/PA66-BI	1 500
081104000		11-13	10-52	10	7	16,5	POM-BI/PA12-BI	2 000
081363000		13-14	10-52	10	7	17,5	POM-BI/PA12-BI	1 500
081127001		13-14	46-75	10	7	17,5	PA66/PA46-BI	200
081287001		15-16	46-75	10	7	18	POM-BI/PA66-BI	1 000
082604000		16-18	30-80	12	8	17	PA66-BI/PA66-BI	200
081295000		19-24,5	10-52	12	7	20,8	POM-BI/PA12-BI	1 500
081966000		19-24,5	46-95	12	7	20,5	PA66-BI/PA12-BI	200
080983000		14-16	10-52	12	7	18	POM-BI/PA12-BI	150
082165000		23-30	10-52	10	7	28,6	POM-BI/PA12-BI	1 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To assemble a bundle at any orientation to a tube
- With a swivel system to orientate the bundle
- With a re-openable locking system

ALTERNATIVE PRODUCTS

Cable Clips
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A specific need ? Contact us, p.122



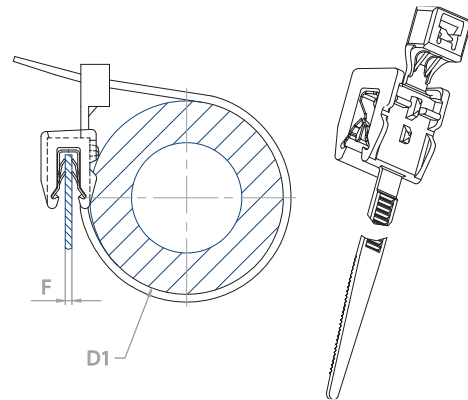
ASSEMBLING Cables or Tubes



On Panel
edges

Cable Ties

Edge Mounting Cable Ties

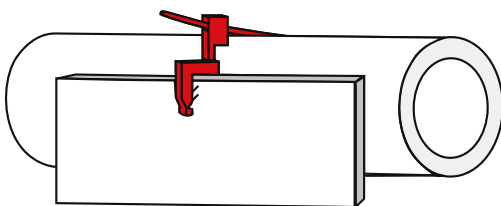


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Max tube diameter (ØD1)	Cable strap width	Cable strap length	Swivel	Material*	Carton quantity
190042000		0,7-2,5	1,5-40	4,8	182,5	Yes	PA66-BI/CS-5410	3 000
203870000		1-3	8-33	4,5	140	Yes	PA66-BI/CS-5451	800
201174002		2-4	8-33	7	140	Yes	PA66-BI/POM-BI/CS-5440	600
082651000		1,5-3,5	1,5-43	4,6	191	No	PA66-BI/CS-5440	2 000
082652000		1,5-3,5	1,5-43	4,5	180	No	PA66-BI/CS-5440	2 000
082653000		1,5-3,5	1,5-43	4,5	186	No	PA66-BI/CS-5440	3 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Cable tie integrating a clip for panel edge fixing
- The panel clip contains a metal part to ensure best performance
- Available in different configurations to cover many fixing layouts
- Some parts include a swivel system and/or reopenable lock

ALTERNATIVE PRODUCTS



Edge Mounting
Cable Clips
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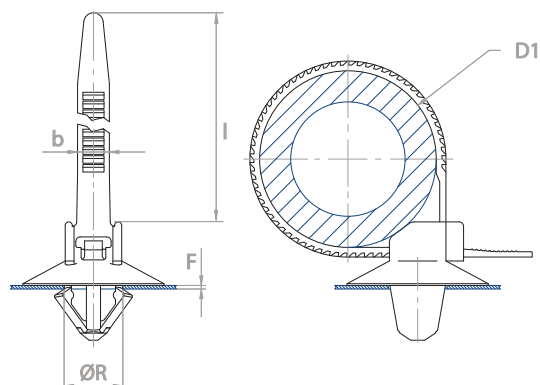


Edge Mounting
Adapters p. 55
+ Cable Ties p.12

A specific need ? Contact us, p.122

In Panel
holes

Plug Mounting Cable Ties

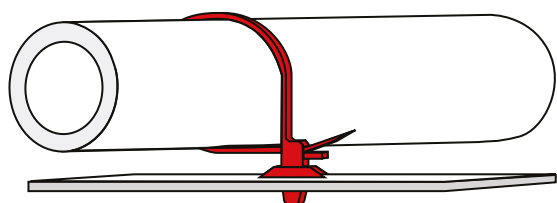


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Hole size (ØR)	Max tube diameter (ØD1)	Cable strap width (b)	Cable strap length (l)	Material*	Carton quantity
056299000		0,5-3	6,2x12,2	3-40	4,5	160,6	PA6-BI	1 200
205246000		0,8-1,3	6,6	0,5-25	3,6	113,6	PA66-BI	6 000
014832001		0,8-1,8	6,5	3-24	4,2	110	PA66-Na	900
014832002		0,8-1,8	6,5	3-24	4,2	110	PA66-BI	900
208025000		0,8-2,8	6,1-6,5	2-30	4,4	130	PA66-BI	6 000
056350000		0,5-3	6,7	3-40	4,7	182,4	PA6-BI	600
216956000		0,6-3	5,4	0,5-25	3,8	114	PA66-BI	8 000
108408001		0,7-3	6,5	3-40	4,5	180	PA66-BI	3 000
175200000		0,6-3	6,2-7,2	1-40	4,8	170	PA66-BI	3 000
175057000		0,7-1,8	6,5	2-40	4,8	155	PA66-BI	5 000
064576000		0,5-3	6,3	10-40	9	174	PA6-BI	700
015118001		0,8-2,2	7	15-55	9	201,5	PA66-BI	2 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Cable tie integrating an anchoring system
- To fasten a bundle onto a panel
- With different anchoring systems to suit different hole depths

ALTERNATIVE PRODUCTS

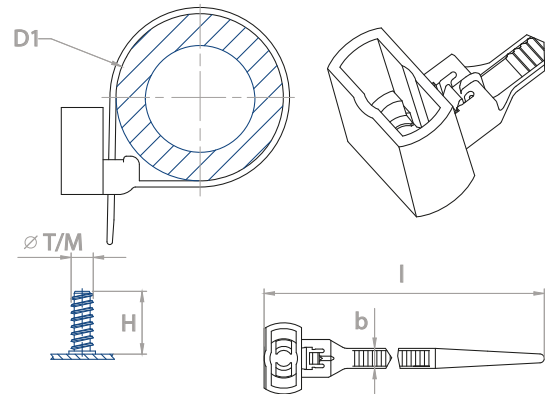


Plug in Adapters
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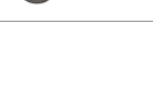
A specific need ? Contact us, p.122



Stud Mounting Cable Ties

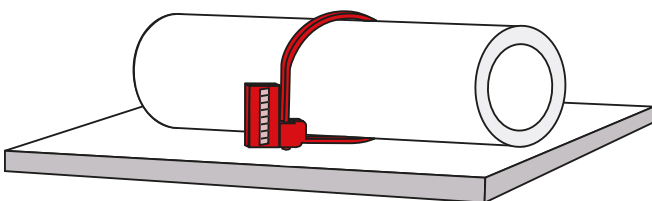


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Stud size (ØTx H)	Max tube diameter (ØD1)	Cable strap width (b)	Cable strap length (l)	Material*	Carton quantity
203449000		Ø5/6x14,2	2-40	4,5	171,3	PA66-BI	3 000
201614001		Ø 5x12 or M6x12	1,5-40	4,5	175,5	PA66-BI	700
020494000		M8x14,5	2-25	4,5	135	PA66-BI	800
202587000		M8x14,2	2-40	4,8	183,5	PA66-BI	2 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Cable tie integrating a female clip to fix onto metric studs
- To fix wire bundles onto a stud or onto a panel with a welded stud

ALTERNATIVE PRODUCTS



Stud Cable Clips
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A specific need ? Contact us, p.122

Assembling Plastic Cable Clips



On / To
Cables or Tubes

Cable Clips



Double tube



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Triple tube



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Swivel tube



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On Panel edges

Edge Mounting Cable Clips



Edge mounting cable clips



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In Panel holes

Plug in Cable Clips



Standard/ Single tube



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Swivel/ Single tube



p.26



Standard/ Double tube



p.28



Swivel/ Double tube



p.30



Universal



p.31



Manual locking



p.32



Omega clips



p.33



In Panel holes

Push Pin Clips



Single cable



p.34



Multi cable



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On Studs

Stud Cable Clips



Single cable



p.38



Double cable



p.40



On Flat surfaces

Adhesive Cable Clips



Adhesive cable clips



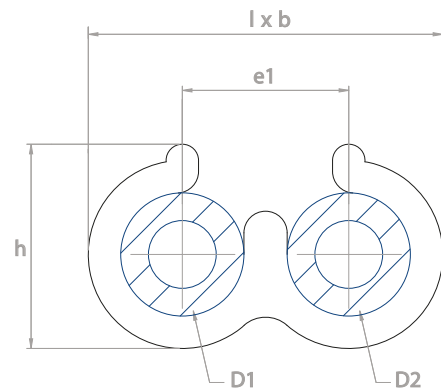
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On cables or
tubes

Cable Clips

Double tube

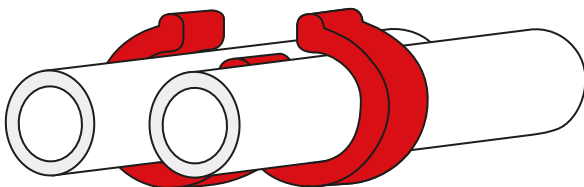


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Tube diameter (Ø D1 & D2)	Distance (e1)	Length x Width (lxb)	Height (h)	Material*	Carton quantity
012583002		x2 (4,75)	6,3	13x12	7,6	POM-BI	5 000
202339000		x2 (4,75-5,2)	6,3	13x12	8	PA66-BI	3 000
053760004		x2 (6-7)	7,7	16,8x8	9,45	POM-BI	3 500
017420003		x2 (7)	8,5	23,12x10	18	POM-BI	6 500
054477002		x2 (8)	10	21,5x8	12	POM-BI	2 200
012738003		x2 (10)	12,1	25,7x10	14,8	POM-BI	3 000
018524000		x2 (4,3-5,2)	14	20,7x10	10,35	POM-BI	5 000
016983000		x2 (6)	12	21x8	13	PA66-BI	4 700
018900001		x2 (12)	18	34x10	16,5	POM-BI	2 000
110075001		x2 (4,7-4,9)	10,0	26x12	18	TPE-BI	2 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two wires/tubes together with a distance between them
- Selected parts fit two wires/ tubes of the same diameter
- Also available for wires/ tubes of different diameters, contact us

 A specific need ? Contact us, p.122



ASSEMBLING Cables or Tubes

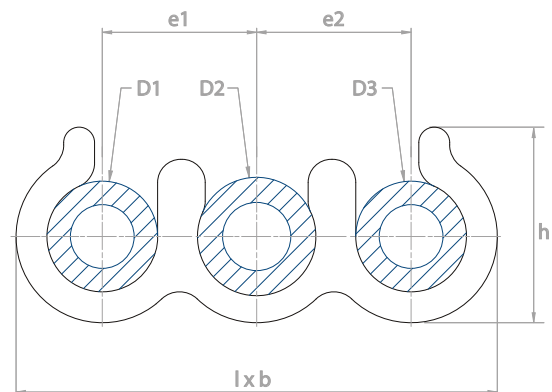


On cables or
tubes



Cable Clips

Triple tubes

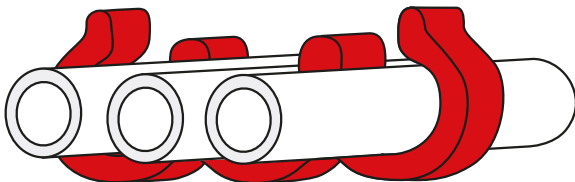


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Tube diameter (Ø D1-D2-D3)	Distance (e1 & e2)	Length x Width (lxb)	Height (h)	Material*	Carton quantity
055451001		x3 (4,5-5)	6	18,7x12	7,6	POM-BI	2 000
175000002		x3 (8)	12	35x8	14	PA66-Na	10 000
020040000		x3 (8-10)	15,5	45x12	16,5	POM-BI	1 200
018556000		x3 (10)	11,5	36x15	14,7	PA66-BI	800
110074002		x3 (4,7-4,9)	10	36x12	18	PP/EPDM 40Sd-BI	1 500
018539001		x3 (4,75-6)	10,5	36,6x12	14,3	POM-BI	1 600
057255002		x3 (8-10)	19	58,5x11	21,5	PE LD-Na	600
055351000		x3 (4,75-5,05)	12	24,8x15	21	POM-BI	500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold three wires/tubes together with a distance between them
- Selected parts fit three wires/ tubes of the same diameter
- Also available for wires/ tubes of different diameters, contact us

A specific need ? Contact us, p.122

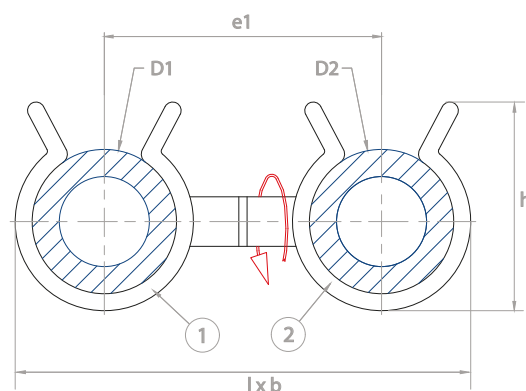


On cables or
tubes



Cable Clips

Swivel tube

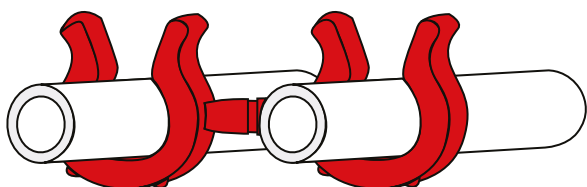


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Tube diameter (Ø D1 & D2)	Distance (e1)	Length x Width (lxb)	Height (h)	Material*	Carton quantity
081226000		x2 (4,3-5,2)	14,5	21,25x10	9,4	PA66-BI	1 200
081083000		x2 (6-6,5)	16,5	25,5x8	11,5	PA66-BI	1 500
081424003		x2 (7,8-8,5)	17,6	28x12	16,9	PA66-BI	1 000
081778002		x2 (8-9)	25	36x8	13,5	PA66-BI	2 000
060710001		x2 (11-13)	21,5-23,5	36,5x10	17,5	POM-BI	500
061000001		x2 (13-14)	19	36,3x10	20	POM-BI	900
081157000		x2 (13-14)	30	47x10	22,5	POM-BI	2 500
060776000		x2 (8-10)	21,3	51,1x10	26	POM-BI	450
081379000		x2 (16-24)	36,7	80,9x10	44,9	POM-BI	800
081995001		x2 (23-30)	45,3	98x10	45,75	PA66-BI	150
060655001		x2 (14-16)	24,5	56,5x12	21	POM-BI	1 600
060637002		x2 (23,5-25)	34,5	74,5x12	33,5	POM-BI	900
081382000		x2 (38-45)	48,7	105x10	62	PA66-BI	200

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two wires/tubes together with a distance between them, integrating a swivel system
- Selected parts fit two wires/ tubes of the same diameter
- Also available for wires/ tubes of different diameters, contact us
- Spare connections allow the assembly of more than two clips and in different layouts
- Contact us for specific layouts

ALTERNATIVE PRODUCTS



Cable Ties
p. 14

A specific need ? Contact us, p.122

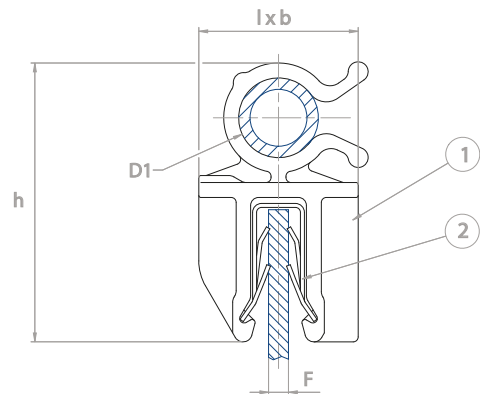


ASSEMBLING Cables or Tubes



On Panel
edges

Edge Mounting Cable Clips

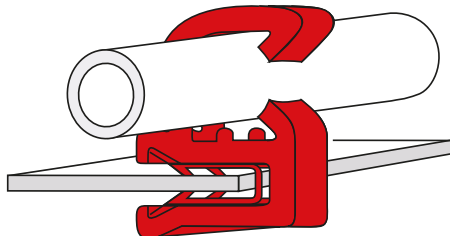


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube capacity	Tube diameter (Ø D1)	Length x Width (lxb)	Height (h)	Material*	Carton quantity
205203001		2-4	Single	8	16x15	28	PA66-BI/CS-5440	450
132068001		1,5-2,5	Multi	3-13	25,1x13	23,9	POM-BI/CS-ZnNi	750
081401000		2-2,5	Multi	6-14	31,5x15	22,5	POM-BI/CS-5000	1 000
061576002		1-2,5	Multi	3-25	37x29	48	POM-BI/CS-ZnNi	400
061585005		1-2,5	Multi	3-25	36x14	33	POM-BI/CS-ZnNi	500
082047001		1-2	Multi	3-5	16,15x40	18,8	PA66-Na/CS-5451	1 300

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix one or more wires to a panel edge
- The panel clip contains a metal part to ensure best performance
- Available in different configurations to cover most fixing layout
- See also the product family: Edge Mounting Cable Ties p.15

ALTERNATIVE PRODUCTS



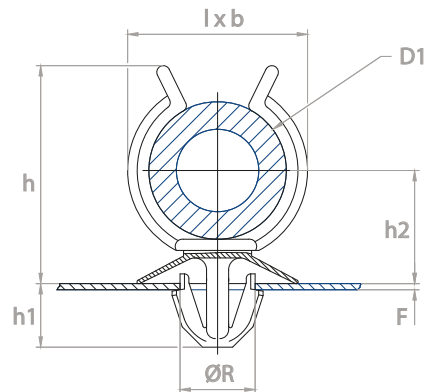
Edge Mounting
Cable Ties
p. 15

A specific need ? Contact us, p.122



Plug in Cable Clips

Standard/ Single tube

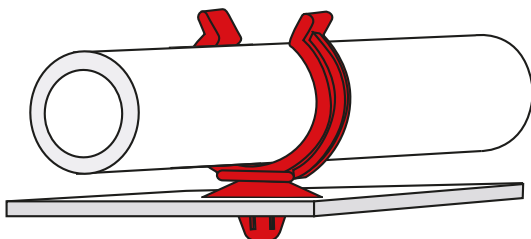


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (Ø D1)	Hole diameter (ØR)	Length x Width (lxb)	Height (h)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
018441000		0,7-1,3	5	9	9,4x13	10,6	7,5-8,1	6,9-7,5	POM-BI	4 500
016048000		0,7-2	7,5-7,8	6-6,2	10,5x10	15,8	8,8	7,5-8,8	PA66-BI	3 500
132033001		0,7-2	9-12	8,2	15,7x10	18,5	9	11	POM-BI	1 000
054478001		0,7-2	17-21	6,5-6,7	24x12	32	6,5	13-17,3	POM-BI	600
108130000		0,7-2	21-23	6,5-6,7	28,5x12	30,2	6	17	PA66-BI	2 400
016850001		0,7-3,2	23-24	5-5,2	30x10	35	8,2-10,7	19	PA66-BI	650
019050000		0,8-4	10-12	6,5-6,7	14x10	26	8,5	17	PA66-BI	400
018776000		1,6-6	16	6,5-6,7	19x10	23	10	11	POM-BI	1 900
055259001		0,7-2	10-12	6,2x8,2	20,5x12	37,5	7	15	POM-BI	1 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix one tube/wire to a panel with holes
- With different anchoring systems to suit different hole depths
- Available also with swivel or locking systems (see ranges on the following pages)

A specific need ? Contact us, p.122

Better equipment traceability

- *Make underground network maintenance easier?*
- *Safely identify electric cables and wires?*
- *Make sure equipment temperature is right?*

We have specially designed products for the embedded identification of your equipments: fastening systems that include encapsulated RFID chips or sensors to facilitate pressure or temperature measurements.

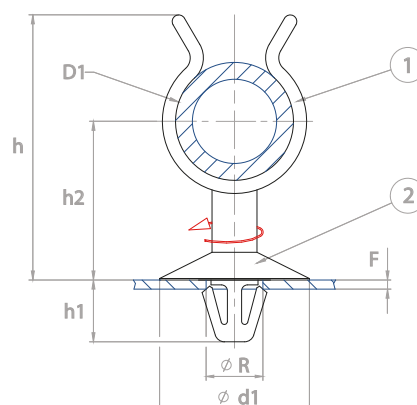
With our expertise in plastics, the aesthetics of visible fastenings are maintained.

Since the company was founded, nearly 150 years ago, our development has been shaped by innovations, from the press-stud to plastic injection moulding. Today, we spend 6% of our turnover on R&D, 3% on staff training, and we have 22 production sites world-wide. We make it our business to design advanced products to help you boost your productivity.

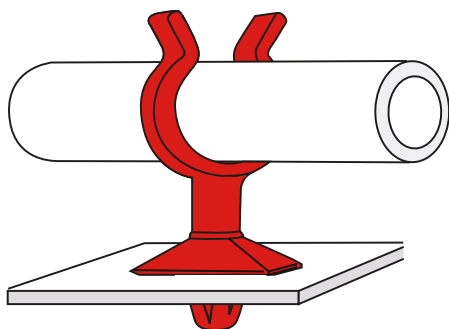


Plug in Cable Clips

Swivel/ Single tube



APPLICATION INFORMATION



- To fix one tube/wire to a panel with holes, integrating a swivel system
- With different anchoring systems to suit different hole depths



In Panel
holes

Plug in Cable Clips

Swivel/ Single tube

All dimensions in mm, angles in ° / Other dimensions and variants on request

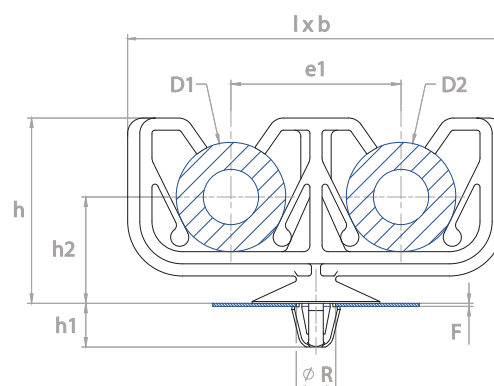
References	Design	Panel thickness (F)	Tube diameter (Ø D1)	Hole diameter (ØR)	Base diameter (Ød1)	Height (h)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
081790000		0,8-6	6-6,5	6,5	20	21,4	10,5	14,4	POM-BI	10 000
081442000		0,8-6	18-20	6,5	20,5	36,3	10,3	22,3	POM-BI	3 000
081474001		0,8-6	25-27	6,5	20	44,9	10,5	25,4	POM-BI	3 000
081580000		0,5-3	7,2-7,5	6,5	21	23,8	6,8	16,8	POM-BI/PA66-BI	1 000
081418000		0,5-3	13-14	6,5	21	32,2	6,8	20,2	POM-BI/PA6-BI	5 000
081471000		0,5-3	16-18	6,5	21	35,2	6,8	21,7	PA66-BI	800
081794000		0,7-2	35-38	6,5	20	57,5	6,5	31,5	POM-BI	2 000
205951000		0,8-2	10-12	6,5	20	28	6,5	-	POM-BI	4 000
081624000		0,8-2	28-30	6,5	20	51	6,5	28,5	POM-BI	400
061240000		0,8-2	29-33	6,5	20	51,4	6,5	27,2	POM-BI	800
082131000		0,8-2	34-36	6,5	20	56,9	6,5	30,9	POM-BI	550

* For material description see the flap at the end of the catalog

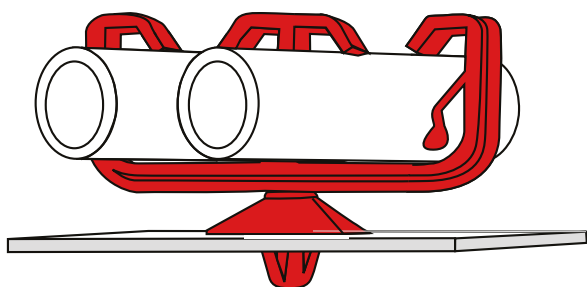
ASSEMBLING Cables or Tubes

Plug in Cable Clips

Standard/ Double tube



APPLICATION INFORMATION



- To fix two tubes/wires on a panel with holes
- With different anchoring systems to suit different hole depths
- Available also with swivel system (see ranges on the following page)

A specific need ? Contact us, p.122



In Panel
holes

Plug in Cable Clips

Standard/ Double tube

All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (ØD1 & D2)	Hole diameter (ØR)	Distance (e1)	Length x Width (lxb)	Height (h)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
017363000		0,5-3	x2 (16-18)	6,5	28	62x12	31	6,7	18	POM-BI	450
129597000		0,5-6	x2 (9-10,5)	6,2-6,55	16	39,15x21	26,25	9,9	17,5	PA6-BI	500
055766000		0,7-2	x2 (10-14)	6,2x8,2 *hole with specific shape	20	20,5x12	30,4	6,10	15,40	PA66-BI	1 000
201143000		0,7-2	x2 (13,5)	6,5	21	40x18	23	8,5	11	POM-BI	500
016608002		0,8-4	x2 (4-6)	6,5	8,5	18,5x10	12,4	9,3	7,2	PA6-BI	2 000

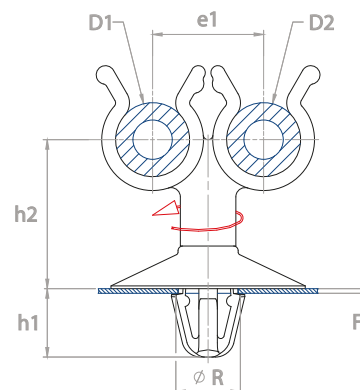
* For material description see the flap at the end of the catalog



In Panel
holes

Plug in Cable Clips

Swivel/ Double tube

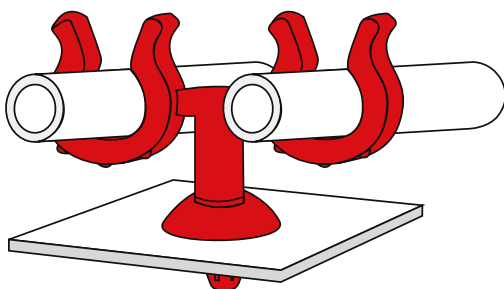


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Tube diameter (ØD1 & D2)	Hole diameter (ØR)	Distance (e1)	Base diameter (Ød1)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
082420000	0,5-3	x2 (6)	6,5	14	21	6,8	16,7	PA66-BI	1 000
081898000	0,5-3	x2 (8-9)	6,5	12	21	6,8	16,7	PA66-BI	4 000
081873000	0,5-3	x2 (13-14)	6,5	19	21	6,8	17,2	PA6-BI/POM-BI	2 500
082258001	0,5-3	x2 (16-17)	6,5	22	21	6,8	17,2	PA66-BI	2 000
082351000	0,5-3	x2 (25-27)	6,5	32	21	6,8	21,7	PA66-BI	2 200

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix two tubes/wires to a panel with holes, integrating a swivel system

A specific need ? Contact us, p.122



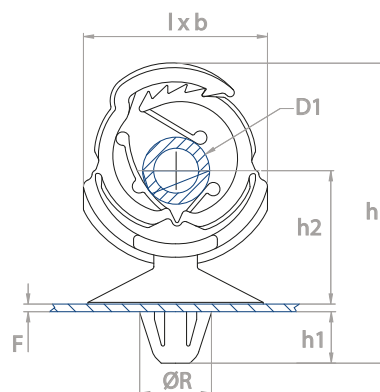
ASSEMBLING Cables or Tubes



In Panel
holes

Plug in Cable Clips

Universal



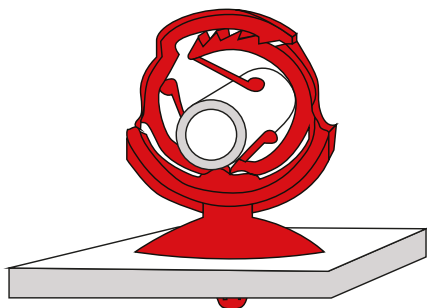
All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Tube diameter (ØD1)	Hole diameter (ØR)	Length x Width (lxb)	Height (h)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
055286007	0,5-2	6-12	6,35-6,7	24x18	37,1	6,7	13-20	PA66-BI	1 000
055473000	0,5-3	11-18	6,35-6,7	32x20	48,5	6,7	21-27	PPC-BI	900
132029000	0,7-3	3-16	6,7	22,6x10	44,6	5,7	-	PPC-BI	800
054283001	0,7-3	17-24	6,3-6,7	34x10	55,5	6,7	21-28	PPC-BI	1 250

* For material description see the flap at the end of the catalog

Plastic
Cable Clips

APPLICATION INFORMATION



- To fix one tube/wire to a panel with holes
- Self-adaptable: suitable for a wide range of tube/ wire diameters
- Self-locking: the clip locks when the tube is installed

COMPLEMENTARY PRODUCTS



Edge Mounting
Adapters
p. 57



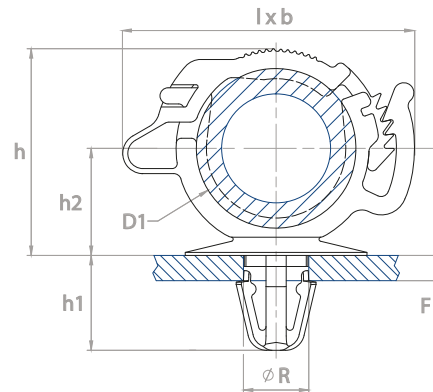
Edge Mounting
Adapters
p. 58

A specific need ? Contact us, p.122



Plug in Cable Clips

Manual locking

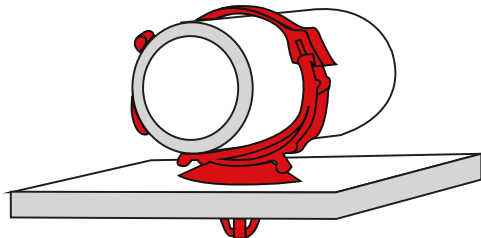


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (ØD1)	Hole diameter (ØR)	Length x Width (lxb)	Height (h)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
017521000		0,8-2,5	20,6-21,4	6,5-6,7	31x20	28	8,4	13,2-14,9	PA66-BI	500
017529000		0,8-2,5	25,1-25,9	6,5-6,7	37x20	32,5	8,4	15,45-17,15	PA66-BI	1 500
020726000		0,8-2,5	33-35	6,5-6,7	45,3x20	40,5	7	23,2-24,9	PA66-BI	300
018890000		2,5	15,5-16,1	6,5-6,7	25,5x20	20,5	9,3	11	PA66-BI	750
017098000		0,8-6	16-18,5	6,5	20x10	34,2	10,5	15,8	PA6-BI	600
204496000		0,8-6	22,6-23,4	6,5-6,7	34,4x20	29,4	12,75	16,1	PA66-BI	450
019778000		1-6	25,1-25,9	6,5-6,7	37,5x20	31	10,5	16,55	PA66-BI	400
017482000		1-6	6,8-7,4	6,5-6,7	15x10	10	10,4	5,7	PA66-BI	4 000
017713000		1-6	9,6-10,2	6,5-6,7	15x15	17	10,5	10,15	PA66-BI	6 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix one tube/wire to a panel with holes
- With different anchoring systems to suit different hole depths
- With an adjustable locking hood

A specific need ? Contact us, p.122



ASSEMBLING Cables or Tubes

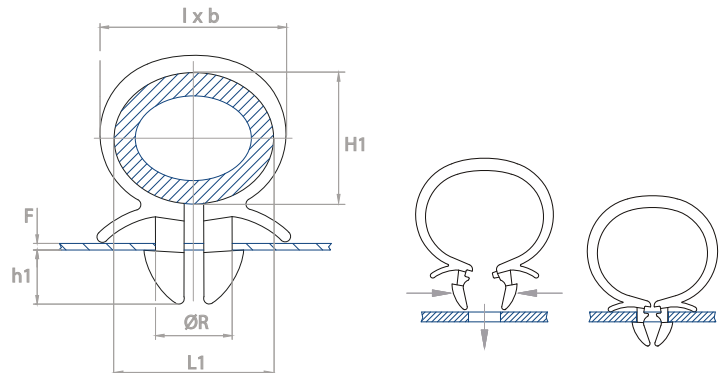


In Panel
holes

Plastic
Cable Clips

Plug in Cable Clips

Omega clips

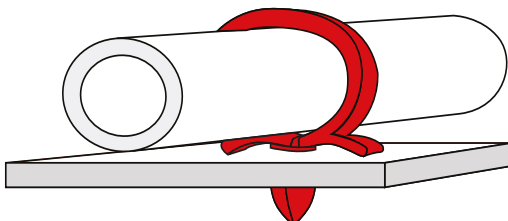


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (L1xH1)	Hole diameter (ØR)	Length x Width (lxb)	Depth (h1)	Material*	Carton quantity
054170000	 Standard	0,5-3	16,8x13,5	6,5-6,7	21x8	4,9	PA66-BI	2 300
053163007		0,7-2	16,8x13,5	6,5-6,7	17,5x8	5	PA6-BI	7 500
053164001		0,7-2	10,8x8,2	6,5-6,7	13,8x8	5	PA6-BI	2 900
053490001		0,7-2	25x22	6,5-6,7	30,5x8	5	PP-BI	1 900
015181001		1-3	8x6	6,5	12,5x8	4	PA66-BI	4 500
014075001		1-3	16,8x13,5	6,5	22x8	4,9	PA66-BI	1 500
015008000		1,5-3	15,8x8,6	6,5	20,8x8	4,7	PA66-BI	2 500
015270001		2,7-4	10,8x7,8	6,5	15,25x8	4,7	PA6-BI	2 500
014767000	 Multi-diameter	0,7-3	18x20,7	6,5-6,7	21,6x24	4,7	PA6-BI	1 400

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION

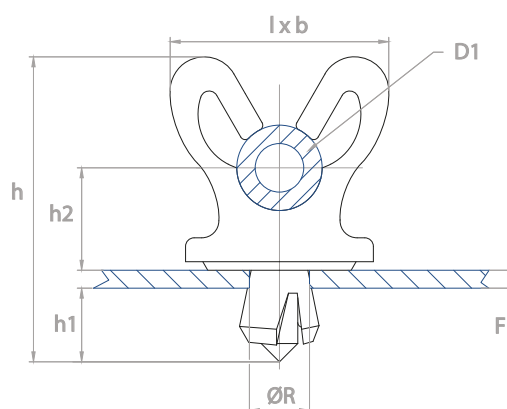


- To fix one tube/wire to a panel with holes
- Positioned first around the tube/ wire before pushing clip foot into the panel hole

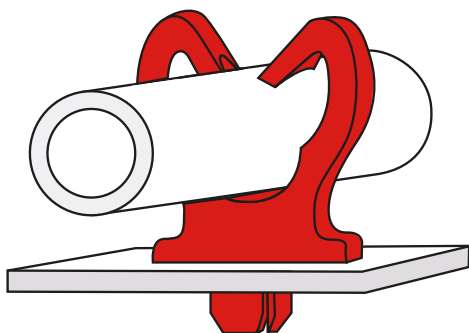
 A specific need ? Contact us, p.122

Push Pin Clips

Single cable



APPLICATION INFORMATION



- To fix one tube/wire to a panel with holes
- With a pre-assembled rivet system
- High pull out resistance



In Panel
holes

Push Pin Clips

Single cable

All dimensions in mm, angles in ° / Other dimensions and variants on request

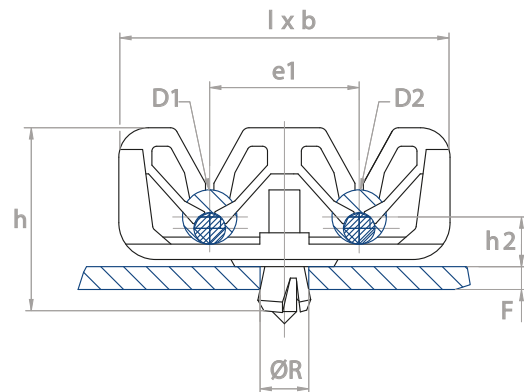
References	Design	Panel thickness (F)	Tube diameter (ØD1)	Hole diameter (ØR)	Length x Width (lxb)	Height (h)	Depth (h1)	Tube height (h2)	Material*	Carton quantity
063274001		0,5-3	4,8	6,5	14x12	18,4	9,9-12,4	5,5	PA66-Na	2 400
064697001		0,5-4	4,8-6	6,5	12,8x12	22,5	6,5-10	5,5	POM-BI	2 200
063571008		0,5-4	8-10	6,5	17x14	26,5	3,5-7	9	PA6-BI	1 000
063350001		0,5-4	12,3-15	6,5	19x15	30	3,5-7	12	PA6-BI	1 200
055154001		0,5-4	17-19	6,5	22x22	31,5	3,5-7	14	PA66-BI	750
064894001		0,7-4	6,5-6,8	6,5	10x10	18,5	3,5-6,8	5,5	PA6-BI	1 900
056654001		0,75-2,5	24-26	7,1	31x13,5	34	5-6,75	16	POM-BI	1 500
064266001		0,5-4	4,8-8	6,6	20x20	26	3,5-7	9,3	POM-BI	500

* For material description see the flap at the end of the catalog



Push Pin Clips

Multi cables



All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Number of tubes	Panel thickness (F)	Tube diameter (ØD1 & D2 (& D3))	Hole diameter (ØR)	Length x Width (lxb)	Height (h)	Distance (e1)	Tube height (h2)	Material*	Carton quantity
064262000		2	0,5-2,5	x2 (4,8-10)	6,6	45x20	30	20	8,5	POM-BI	1 200
064967000		3	0,5-4	x3 (4,8-8)	6,6	50,6x20	26	15,5	9,4	PA66-BI	1 000
055297000		2	0,5-4	x2 (13-15)	6,6	38x20	31,5	19	12	PA66-BI	500
061357001		3	0,7-2,5	x3 (13-15)	6,5	57x12	36	19,5	17	PA12-BI	400

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix two or three tubes/wires to a panel with holes
- With a pre-assembled rivet system
- High pull out resistance

A specific need ? Contact us, p.122

Bi-injection assembly

- *Do you want a sliding assembly?*
- *Absorb tube vibrations?*
- *Save assembly time?*
- *Make procurement simpler?*

For the adjustment of panel mounted components, we use a part with two components that slide on one another. To produce the part, we inject two types of polyamides that don't adhere to each other.

With our expertise in bi-injection technology, we can produce an all-in-one part that would normally have to be assembled. You only order and fit a single part, which save assembly time and mean simpler procurement for you.

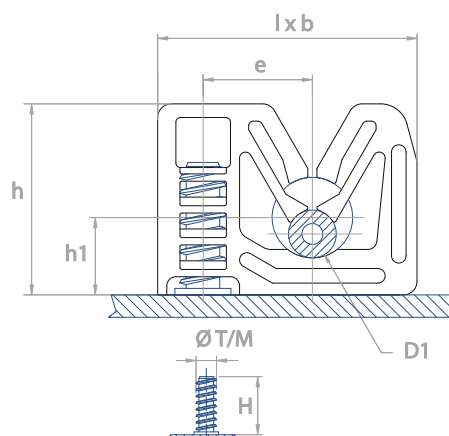
To absorb equipment vibrations, we have designed a push-fit part with anti-vibration rubber. It consists of two reopenable locking caps to allow the tubes to be easily installed. With just a few well-placed injection points, the anti-vibration rubber is spread evenly through the many channels of this complex design.

Since the company was founded, nearly 150 years ago, our development has been shaped by innovations, from the press-stud to plastic injection moulding. Today, we spend 6% of our turnover on R&D, 3% on staff training, and we have 22 production sites world-wide. We make it our business to design advanced products to help you boost your productivity.

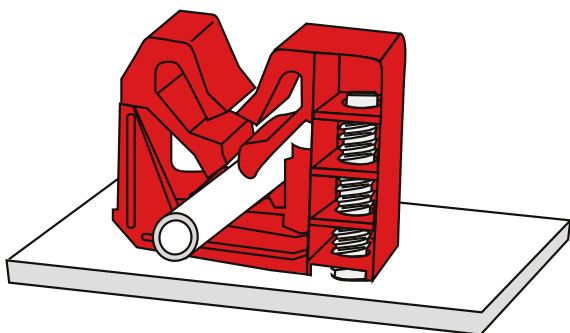


Stud Cable Clips

Single cable



APPLICATION INFORMATION



- To fix one tube/wire to a panel with metric studs
- To be pushed onto a stud

ALTERNATIVE PRODUCTS



Stud Mounting
Cable Ties
p. 17



On Studs

Stud Cable Clips

Single cable

All dimensions in mm, angles in ° / Other dimensions and variants on request

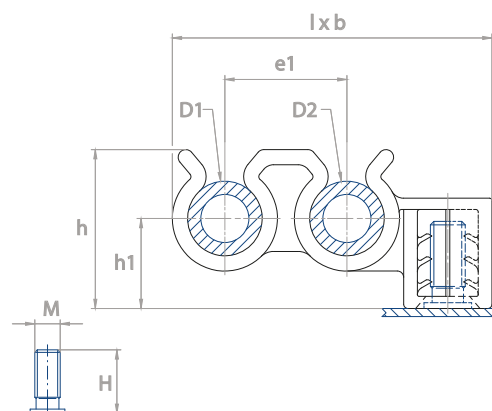
References	Design	Stud size (ØTxH)	Tube diameter (ØD1)	Length x Width (lxb)	Tube height (h1)	Distance (e)	Height (h)	Material*	Carton quantity
054799001		M6x(14-19)	4,8-6	28,5x10	6,5-10	12	21	POM-BI	1 500
206941000		M6x18	10	29,5x10	9	12,5	21,5	POM-BI	1 700
055999000		M8	6-8	31,25x16	7-9	15	18	PA66-BI	600
108060003		M6	5-8	25x10	12	13,5	20,5	PA66-BI	2 000
016547000		M8x18	10-12	32,5x12,5	12,5	18	26,5	POM-BI	1 300
056081000		M6	12-16	51x39	33,4	23,35	37	PA6-BI	380
055689001		M6	15-19	53x12	9	31	25	PA6-BI	500
108233000		M6	14,5-16,5	34,5x10	9	15,5	20	PA66-BI	3 000

* For material description see the flap at the end of the catalog



Stud Cable Clips

Double cables

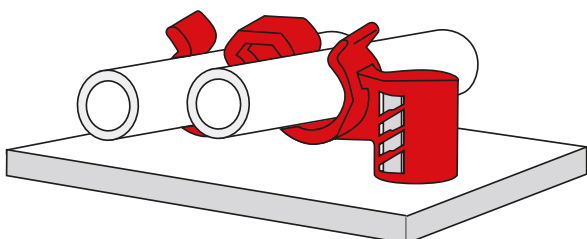


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Stud size (MxH)	Tube diameter (Ø D1&D2)	Length x Width (lxb)	Tube height (h1)	Distance (e1)	Height (h)	Material*	Carton quantity
055465001		M6x(7-10)	x2 (16-18)	41x21,5	21,7	21	31,5	POM-BI	700
200439000		M6x14	x2 (10)	42,5x12	13	16	22	PA66-BI	700

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix two tubes/wires to a panel with metric studs
- To be pushed onto a stud

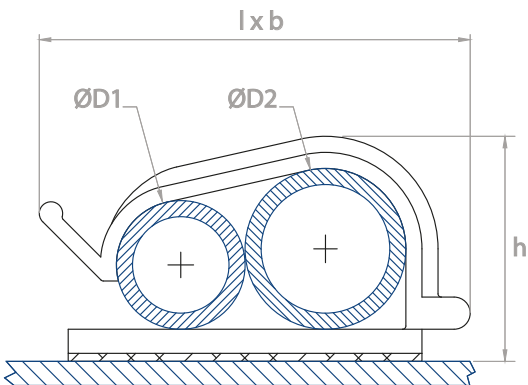
A specific need ? Contact us, p.122



On flat
surfaces

Adhesive Cable Clips

Plastic
Cable Clips

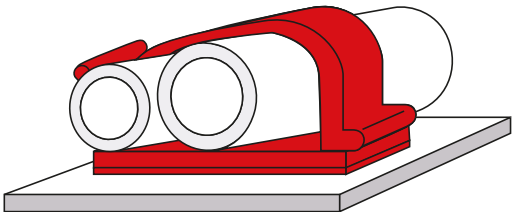


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Tube diameter (Ø D1/ Ø D2)	Length x Width (lxb)	Height (h)	Material*	Carton quantity
060988001		6-12	25x25	27	AD/PP-BI	700
108011000		8/10	27x22	15	AD/PA66-BI	4 500

* For material description see the flap at the end of the catalog

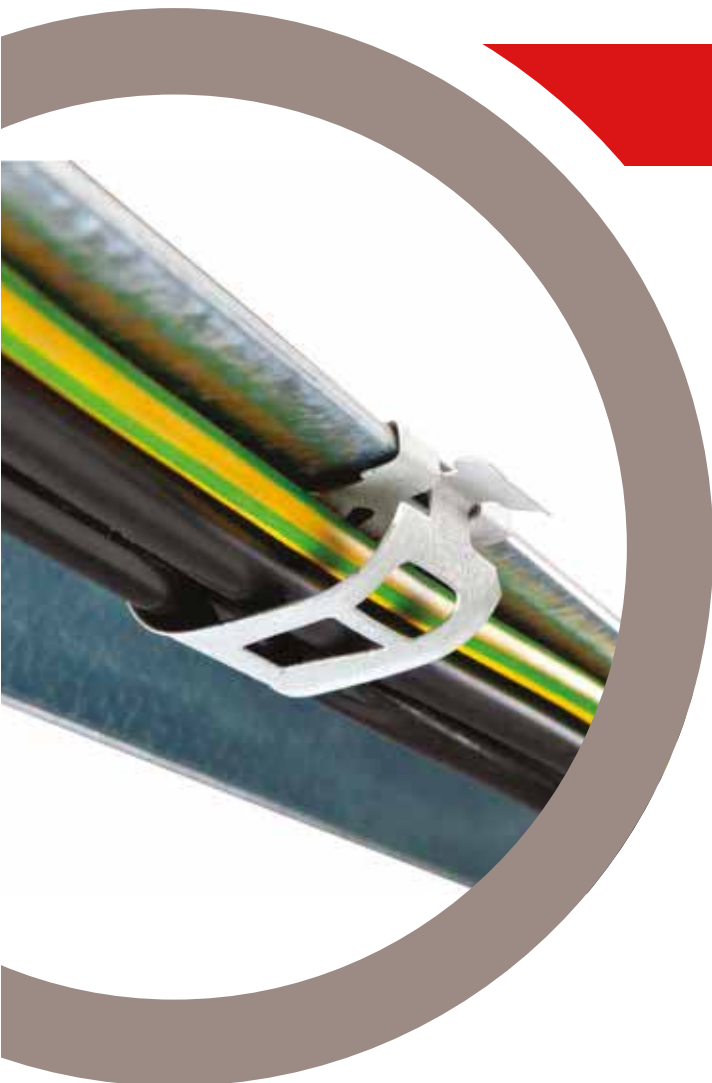
APPLICATION INFORMATION



- To fix one or several tubes/wires to a panel flat surface
- With pre-assembled high quality adhesive tape
- Ensure surface is dry and clean, remove the protective film and position the clip

A specific need ? Contact us, p.122

Assembling Metal Cable Clips



On Panel edges

Cable Edge Clips



Single standard



p.44



Single with rolled edge



p.45



Double with rolled edge



p.46



Universal



p.47



In Panel holes

Cable Clips Screw Fixed



V shape



p.48



P shape



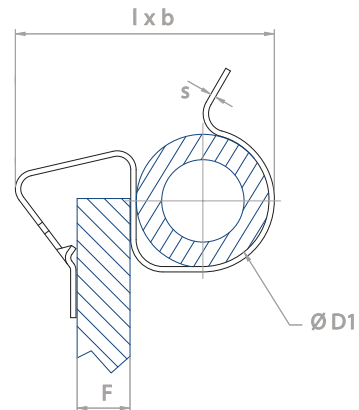
p.50



On Panel
edges

Cable Edge Clips

Single standard

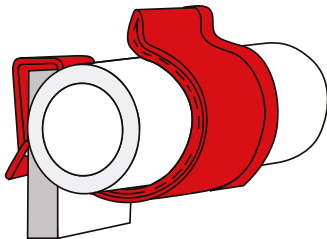


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Tube diameter (ØD1)	Length x Width (lxb)	Material thickness (s)	Material*	Carton quantity
055127005	2-7	6-9	17,2x12	0,6	CS-3250	3 000
055129001	2-7	10-14	17,2x12	0,6	CS-3250	2 500
055131013	2-7	15-21	17,2x12	0,6	CS-3250	2 500
055133001	2-7	22-32	17,2x12	0,6	CS-3250	2 000
055128001	7-12	6-9	21,4x12	0,6	CS-3250	2 500
055130001	7-12	10-14	21,4x12	0,6	CS-3250	2 000
055132001	7-12	15-21	21,4x12	0,6	CS-3250	2 000
055134001	7-12	22-32	21,4x12	0,6	CS-3250	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix one tube along a panel edge
- Spring steel: to be installed by hand, or gently with a hammer
- Instant application achieved with the barb design

A specific need ? Contact us, p.122



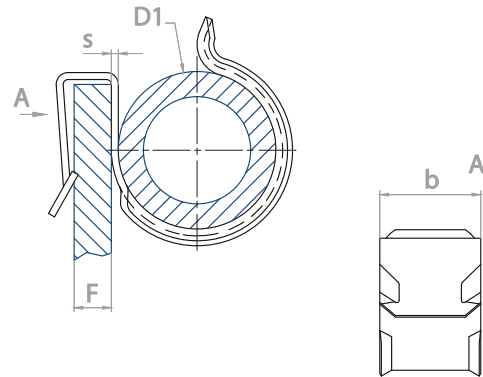
ASSEMBLING Cables or Tubes



On Panel
edges

Cable Edge Clips

Single with rolled edge



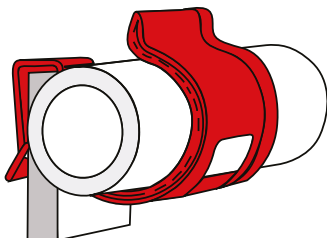
All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Tube diameter (ØD1)	Width (b)	Material thickness (s)	Material*	Carton quantity
018415002	0,7-1,2	13	15	0,4	CS-4001	2 000
014277005	0,7-1,4	8-9	12,75	0,4	CS-3250	4 000
052674007	0,7-2,1	10	14	0,4	CS-ZnNi	3 100
020525001	0,8-1,5	14-19	15	0,4	CS-5451	1 100
011936004	1-1,5	12	18	0,4	CS-5451	1 700
018348005	2-2,5	14	15	0,4	CS-3250	1 400
200504001	2-3,5	14,3	13	0,4	CS-5412	2 000
018529001	3,5-4	15	15	0,4	CS-5451	1 400

* For material description see the flap at the end of the catalog

Metal
Cable Clips

APPLICATION INFORMATION



- To fix one tube/wire along a panel edge
- Spring steel: to be installed by hand, or gently with a hammer
- Instant application achieved with the barb design
- With rolled edge to prevent damage to the sheath when pulling wires

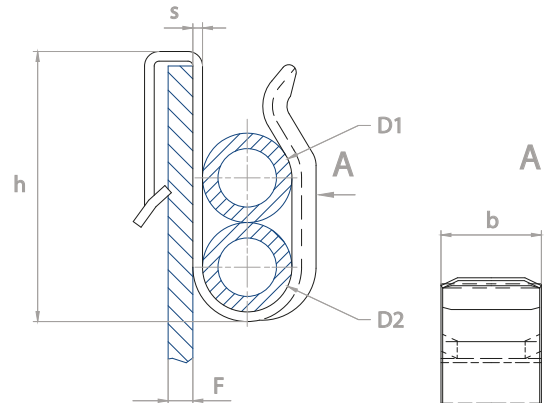
A specific need ? Contact us, p.122



On Panel
edges

Cable Edge Clips

Double with rolled edge

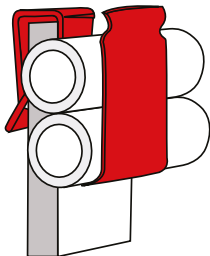


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (ØD1)	Tube diameter 2 (ØD2)	Height (h)	Width (b)	Material thickness (s)	Material*	Carton quantity
013475003		0,75-1	5	5	13	13	0,4	CS-3250	4 500
012744001		0,75-1,25	6	6	13,7	15	0,4	CS-3250	3 000
011289005		1,5-2	4	4	13	13	0,4	CS-3250	4 000
013493004		2	12	12	24	18	0,5	CS-3250	800
012247006		2-2,5	5	5	15	15	0,4	CS-3250	3 000
014173003		3,25-4,2	5,8-6,2	5,8-6,2	13	15	0,4	CS-5410	2 000
211723000		0,7-2	3-5	3-5	19,91	12,7	0,5	CS-3250	2 000
018551002		3-6	7	7	18,5	18	0,4	CS-5440	1 600

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix two tubes/wires along a panel edge
- Spring steel: to be installed by hand, or gently with a hammer
- Instant application achieved with the barb design
- With rolled edge to prevent damage to the sheath when pulling wires

A specific need ? Contact us, p.122



ASSEMBLING Cables or Tubes

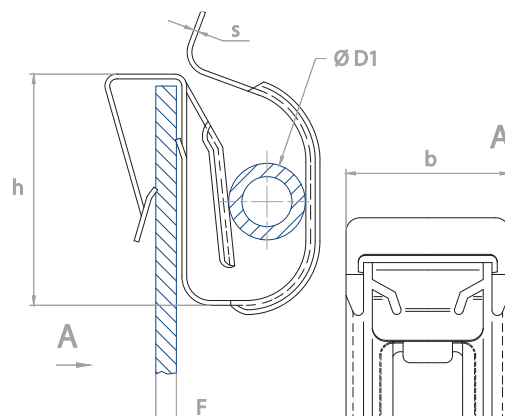


On Panel
edges

Cable Edge Clips

Universal

Metal
Cable Clips

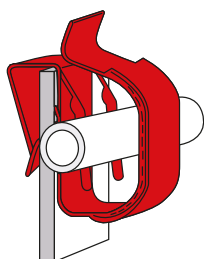


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (ØD1)	Height (h)	Width (b)	Material thickness (s)	Material*	Carton quantity
052495005		0,5-4,5	8-12	14,5	15	0,4	CS-ZnNi	2 300
151177005		0,7-3,5	4-7	14	15	0,4	CS-5450	1 000
053810006		0,8-2	3,5-6,5	17	15	0,4	CS-3250	2 400
228187001		1,5-2,5	15-16/8-9	26,5	24	0,4	CS-4001	600
018690003		0,8-3	4,5-10	19	24	0,4	CS-4001	700

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION

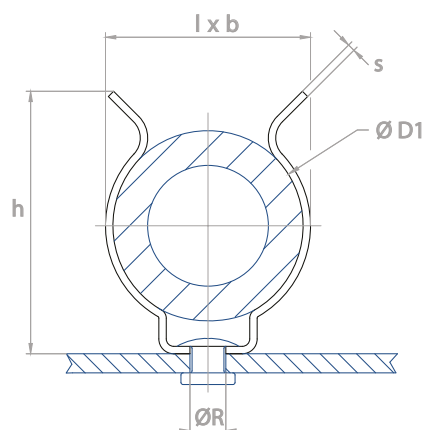


- To fix one or more tubes/wires of various diameters along a panel edge
- Spring steel: to be installed by hand, or gently with a hammer
- Instant application achieved with the barb design
- With rolled edge to prevent damage to the sheath when pulling wires

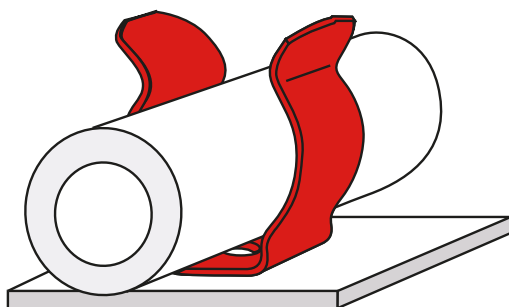
A specific need ? Contact us, p.122

Cable Clips Screw Fixed

V shape



APPLICATION INFORMATION



- To fix one tube to a panel
- To screw or rivet into a panel hole



In Panel
holes

Cable Clips Screw Fixed

V shape

All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Tube diameter (Ø D1)	Hole diameter (Ø R)	Length x Width (lxb)	Height (h)	Material thickness (s)	Material*	Carton quantity
053133010		7,5-8,5	3,5	9,3x16	11,5	0,4	CS-5440	6 000
053133005		7,5-8,5	3,5	9,3x16	11,5	0,4	CS-ZnNi	6 000
051964003		13-16	5,0	13,7x20	19,7	0,6	CS-ZnNi	3 000
051963004		17-20	5,0	16,7x20	23,5	0,6	CS-3250	1 800
051955017		21-25	5,0	21,2x20	27,1	0,6	CS-ZnNi	1 500
051955021		21-25	5,0	21,2x20	27,1	0,6	CS-3250/PVC-BI	1 500
052244001		26-30	5,0	26,2x20	32,6	0,6	CS-3250	1 200
052245001		31-36	5,0	30,6x20	38,5	0,6	CS-ZnNi	1 000
054500003		31-36	6,0	32,6x11	35,3	0,8	CS-5451	2 000
054136006		35-40	5,2	35x17,5	46	1	CS-ZnNi	900
054436007		10-12	3,5	12,5x20	16	0,4	CS-5440	1 200
054631004		21-25	5,0	22x20	27	0,6	CS-ZnNi	1 500
052466005		9-10	3,5	10,2x15	12,5	0,6	CS-ZnNi	4 000
052466001		9-10	3,5	10,2x15	12,5	0,6	CS-3200	4 000
053901011		43-50	6,3	41x20	56	1	CS-3250	750
053901016		43-50	6,3	41x20	56	1	CS-ZnNi/PVC-BI	360
053934007		55-58	6,3	53x17,5	72	1	CS-ZnNi	400

* For material description see the flap at the end of the catalog

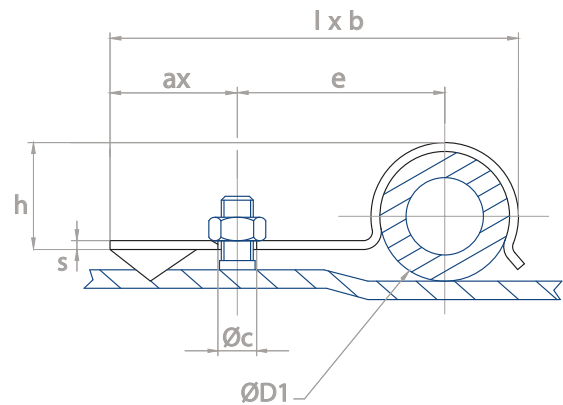


In Panel
holes

Cable Clips Screw Fixed

P shape

Metal Cable
Clips

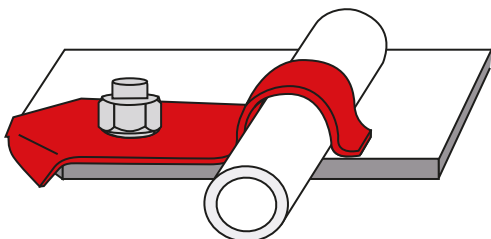


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Tube diameter (Ø D1)	Hole diameter (Ø c)	Distance (e)	Length x Width (lxb)	Height (h)	Distance 2 (ax)	Material thickness (s)	Material*	Carton quantity
052544000	7	5,5	15	33,4x20	7,5	12,0	0,6	CS-3250	3 000
052540000	12-13	5,5	15,2	35x20	9,5	12,0	0,6	CS-3250	4 000
054749003	14-16	6,5	16	37,5x20	12,1	12,0	0,6	CS-3250	1 800
054116005	16	8,5	19,5	60x20	15,9	9,2	0,6	CS-3250	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix one tube to a panel
- To screw or rivet into a panel hole
- With an anti-rotation tab
- Can be positionned anywhere on soft panels (wood) as anti-rotation tab penetrate material whilst screwing
- to position on the sides or corners of hard (metal) panels (for anti-rotation tabs)
- Also available with a push on stud system instead of a hole, contact us

A specific need ? Contact us, p.122

Assembling Adapters for Cable Clips & Ties



In Panel holes

Plug in Adapters



For cable ties



p.54



On Panel edges

Edge Mounting Adapters



For cable ties



p.55



Universal clip



p.56



For cable clips / 0°



p.57



For cable clips / 90°



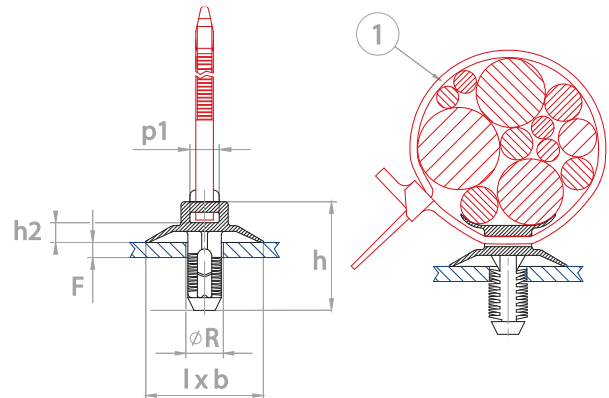
p.58



In Panel
holes

Plug in Adapters

For cable ties

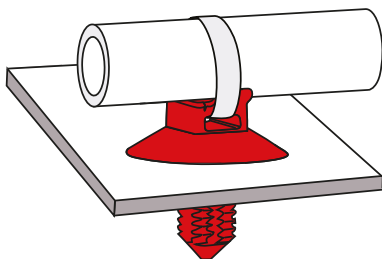


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Hole diameter (ØR)	Cable strap width (p1)	Length x Width (lxb)	Height (h)	Height 2 (h2)	Material*	Carton quantity
017160001		0,8-10	6,5	5	20x20	20	3,4	POM-BI	3 600
013888001		4,5-6	11,1	9,2	18x18	27,5	8,5	PA66-BI	1 500
055969000		0,5-4	7,1	9,5	31x13	17,6	5,5	PA66-BI	600
014130000		2,5-2,6	6,5	6,6	11x10	13,5	8,5	POM-Na	5 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Cable tie bases to plug into a panel hole
- To be used with standard or re-openable cable ties
- See also Plug Mounting Cable Ties p.16

ALTERNATIVE PRODUCTS



Plug Mounting
Cable Ties
p. 16

COMPLEMENTARY PRODUCTS



Cable Ties
p. 12



Cable Ties
p. 13

A specific need ? Contact us, p.122



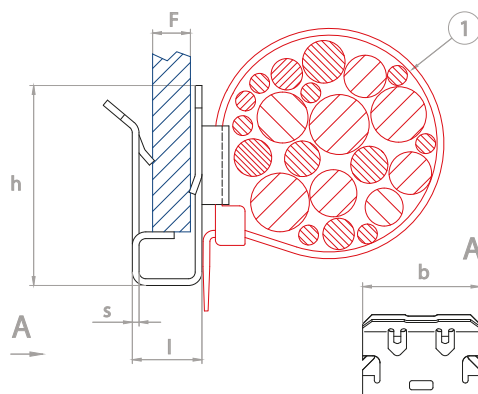
ASSEMBLING Cables or Tubes



On Panel
edges

Edge Mounting Adapters

For cable ties



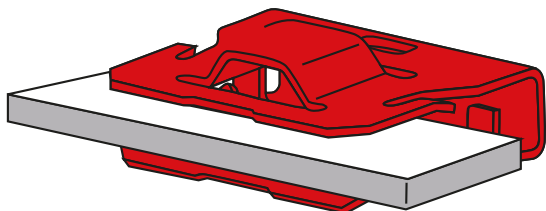
All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Length (l)	Width (b)	Height (h)	Cable strap width ①	Material thickness (s)	Material*	Carton quantity
019752001		0,8-1,2	0,8-1,2	16	15,7	5	0,5	CS-5451	4 000
017890001		1,5-4,5	1,5-4,5	25	17,8	5,8	0,6	CS-5410	1 600
208738001		1,5-4	1,5-4	15	14,2	5	0,5	CS-4001	4 300
019408001		1-3	18	13	15,3	5	0,5	CS-5410	2 000

* For material description see the flap at the end of the catalog

Adapters for Cable
Clips & Ties

APPLICATION INFORMATION



- To be used with standard or re-openable cable tie
- See also, p.15, the product family: Edge Mounting Cable Ties

ALTERNATIVE PRODUCTS



Edge Mounting
Cable Ties
p. 15

COMPLEMENTARY PRODUCTS



Cable Ties
p. 12



Cable Ties
p. 13

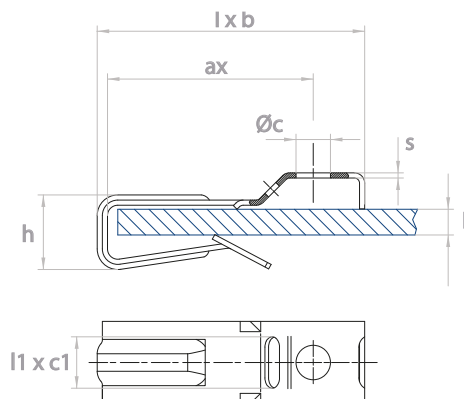
A specific need ? Contact us, p.122



On Panel
edges

Edge Mounting Adapters

Universal



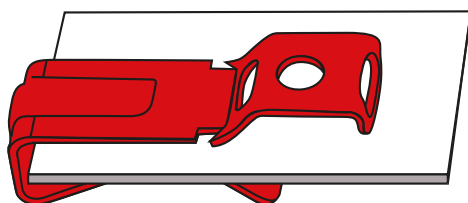
All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Hole diameter (Øc)	Hole size (l1xc1)	Hole fastener fitting	Distance (ax)	Height (h)	Length x Width (lxb)	Material thickness (s)	Material*	Carton quantity
053748000		3-10	6,7	10x4	strap 9mm	40	14,5	52x16	1	CS-3250	1 000
053749000		10-18	6,7	10x4	strap 9mm	40	22,5	52x16	1	CS-3250	1 000
203297005		2-8	6,6	10x9	Rod M6-M8	2,7	30	28x19	0,7	CS-5410	1 000
203697005		8-16	6,6	10x9	Rod M6-M8	2,7	38	30x19	0,7	CS-5410	800

Tiger clip®

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Multi-purpose base to fit onto a panel edge
- To install by hand or softly with a hammer
- Suitable for cable ties, studs or AR plastic clips for holes Ø6,5-6,7mm
- Instant application achieved with the barb design

COMPLEMENTARY PRODUCTS



Cable Ties
p. 12



Cable Ties
p. 13



Plug in Cable Clips
p. 31

A specific need ? Contact us, p.122



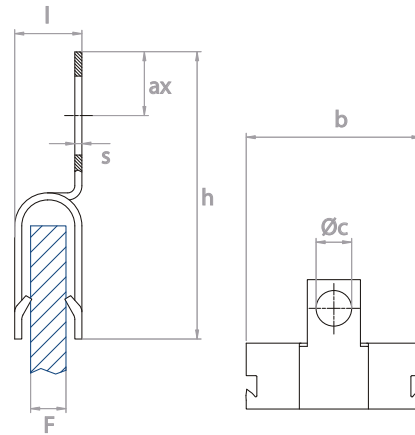
ASSEMBLING Cables or Tubes



On Panel
edges

Edge Mounting Adapters

For cable clips/ 0°



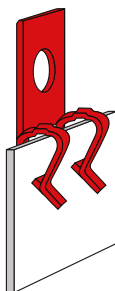
All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Hole diameter (Øc)	Length x Width (lxb)	Height (h)	Distance (ax)	Material thickness (s)	Material*	Carton quantity
054207005		0,7-2	6,7	5,2x28	21	8,2	0,6	CS-3250	3 100
054218008		1,5-3	6,7	5,2x28	21,8	8,2	0,6	CS-ZnNi	1 500
054026007		3-5	6,7	6,7x28	21	7,7	0,6	CS-GB3	1 500
054030000		0,5-3	6,6	4,2x33	24,9	5,4	0,6	CS-5451	1 500

* For material description see the flap at the end of the catalog

Adapters for Cable
Clips & Ties

APPLICATION INFORMATION



- Cable clip base to fit onto a panel edge
- To install by hand or softly with a hammer
- Suitable for AR plastic clips for holes Ø6,5-6,7mm
- Instant application achieved with the barb design

COMPLEMENTARY PRODUCTS



Plug in Cable Clips
p. 31

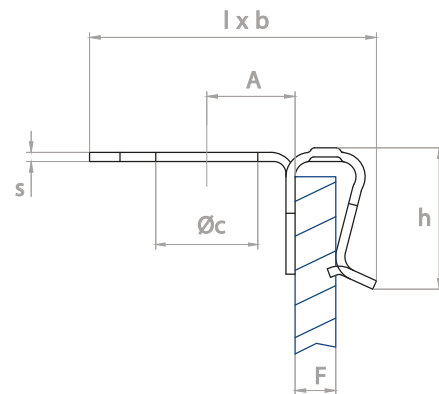
A specific need ? Contact us, p.122



On Panel
edges

Edge Mounting Adapters

For cable clips/ 90°

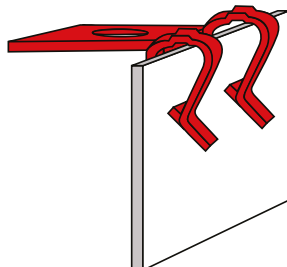


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Hole diameter (Øc)	Length x Width (lxb)	Height (h)	Distance (A)	Material thickness (s)	Material*	Carton quantity
054220004		0,7-2	6,6	18,1x28	9	6	0,6	CS-G2	1 300
054219006		1,5-3	6,6	19,1x28	9	5,8	0,6	CS-G3	1 200
054025008		3-5	6,7	19,7x28	8	6,5	0,6	CS-ZnNi	1 300
020305002		3,3-3,7	6,25	18,8x30	12,5	6,2	0,6	CS-3250	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Cable clip base to fit onto a panel edge
- To install by hand or softly with a hammer
- Suitable for AR plastic clips for holes Ø6,5-6,7mm
- Instant application achieved with the barb design

COMPLEMENTARY PRODUCTS



Plug in Cable Clips
p. 31

A specific need ? Contact us, p.122

Speeding up the bonding processes

- *Reduce assembly time? Simplify storage?*
- *Avoid waste? Reduce errors?*
- *Improve quality?*

Our Techbond Pur Tab dry adhesive bonding ranges are effective for both integrated manufacturing processes and manual methods. They may be used on steel, aluminium, glass, composite materials and most plastics.

We've developed:

- fast-curing polyurethane adhesives. Assembly time is sharply reduced since the adhesive sets in less than a minute. This also reduces the cost of work in process.
- extremely precise, pre-dosed adhesive tablets which avoid all waste. Available as granules, tablets and pearls.
- even easier application, as the adhesive tablets are tack free; the capsules may be prepositioned.

We've also developed a self-checking pearl dispensing system, to dispense just the right number of pearls, with no location errors or missing pearls.

Since the company was founded, nearly 150 years ago, our development has been shaped by innovations, from the press-stud to plastic injection moulding. Today, we spend 6% of our turnover on R&D, 3% on staff training, and we have 22 production sites world-wide. We make it our business to design advanced products to help you boost your productivity.



Assembling Metal Panel Clips



On Panel edges

Panel Clips



U shape / Barbs on both legs



p.62



U shape/ Barbs on one leg



p.63



S shape/ Barbs on both legs



p.64



Snap on lock



p.65



In Panel holes

Trim Clips



Standard



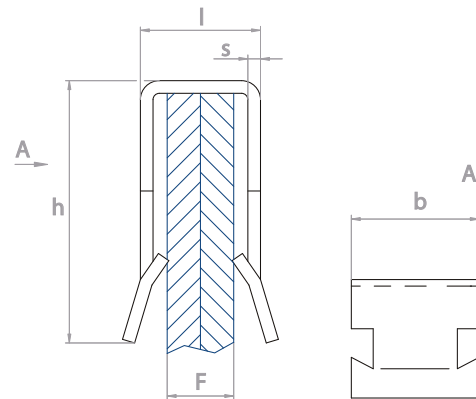
p.66



On Panel
edges

Panel Clips

U shape/ Barbs on both legs

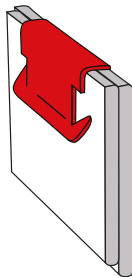


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Length (l)	Width (b)	Height (h)	Material thickness (s)	Material*	Carton quantity
011847004	0,75-2	2,6	13	4,7	0,3	CS-3250	13 000
013031002	1-2,2	3,75	20	8,75	0,5	CS-5421	5 700
054712015	1-2,5	6,2	10	9,7	0,4	CS-3250	10 000
013414006	1,5 - 3,5	5,1	20	13	0,6	CS-5451	3 500
013126004	3,5 - 4	5	20	13	0,4	CS-3250	3 000
053328004	4-5	5,2	13,5	8,7	0,5	CS-G2	6 000
136895002	6,2-6,5	9,1	12,7	9,77	0,36	CS-3250	10 000
012204009	6,9-7,1	8	15	11	0,5	CS-3250	4 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two panels together or a trim piece onto a panel
- With barbs on both sides
- With straight back

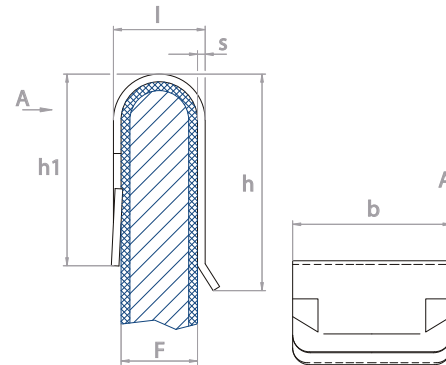
A specific need ? Contact us, p.122



On Panel
edges

Panel Clips

U shape/ Barbs on one leg

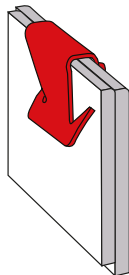


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Length (l)	Width (b)	Height (h)	Height (h1)	Material thickness (s)	Material*	Carton quantity
053438003		2,5-3,5	4,75	12,7	8,6	8,3	0,4	CS-5451	7 000
053327006		2,8 - 3,3	4,6	12,7	8,7	8,7	0,5	CS-3250	2 500
011802003		1,5 - 2	3	15	13	11	0,5	CS-4001	7 000
015435002		1,75 - 2	3	14	14,8	9,1	0,4	CS-3250	7 700
012070004		1,75 - 2	3,2	12,5	8,5	8	0,4	CS-4001	7 500
011619003		2 - 2,5	3,6	12,5	8,2	7,8	0,3	CS-5410	8 500
013750003		3 - 4,5	5,9	25	12	12	0,45	CS-5410	3 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two panels together or a trim piece onto a panel
- With barbs on one side
- With straight or curved back

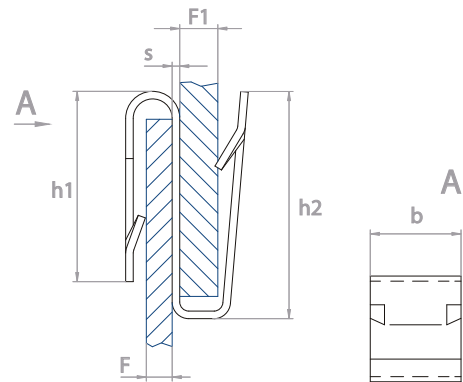
A specific need ? Contact us, p.122



On Panel
edges

Panel Clips

S shape/ Barbs on both legs

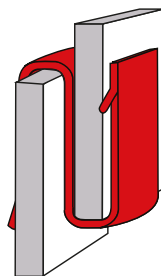


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Panel thickness 2 (F1)	Height (h1)	Height 2 (h2)	Width (b)	Material thickness (s)	Material*	Carton quantity
011516006		0,9	2,3	9	10,1	12,5	0,4	CS-3250	8 000
052047004		2-3	0,8-1,4	9	9	13	0,4	CS-ZnNi	4 000
013698003		0,8-1,5	0,5-1,5	10	14	12,75	0,4	CS-3250	5 000
053142001		0,8-1,7	0,8-1,7	9,2	9,2	13	0,4	CS-ZnNi	5 000
055536000		2-2,3	2-2,3	9	10	13	0,4	Sst	4 000
136918003		2,2-3,1	2,2-3,1	10	12	9,52	0,5	CS-5000	8 000
052225000		0,8-1	0,7-2	10	10	13	0,4	CS-5000	10 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two panels together
- With barbs on both sides
- With straight or curved back

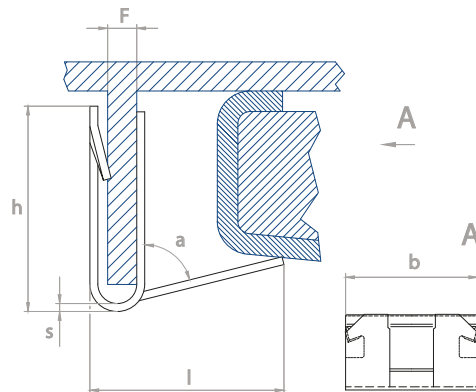
A specific need ? Contact us, p.122



On Panel
edges

Panel Clips

Snap on lock

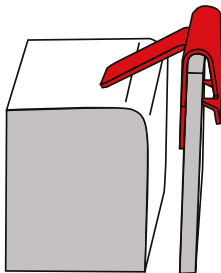


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Width (b)	Height (h)	Lug length (l)	Lug angle (a)	Material thickness (s)	Material*	Carton quantity
013075003		1 - 1,5	14	9,5	9	50	0,4	CS-3250	5 000
014812001		1 - 1,5	13	8,5	4,75	45	0,5	CS-5410	7 000
011855003		1,25 - 1,75	18	10,4	12	75	0,35	CS-3250	5 500
012964005		1,9 - 2,3	18	8	6,8	85	0,3	CS-3250	7 500
018148002		1,5 - 1,8	18	7,5	8,6	68	0,5	CS-5412	7 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold a panel in a specific position from a perpendicular panel edge
- With barbs on one or both sides

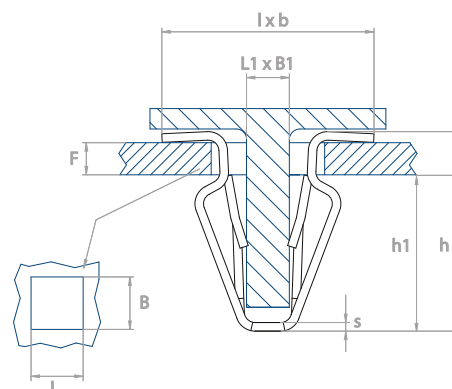
A specific need ? Contact us, p.122



In Panel
holes

Trim Clips

Standard

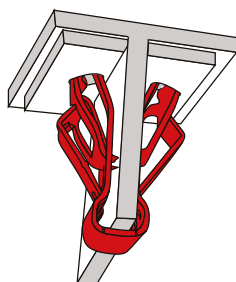


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Length1 x Width1 (L1xB1)	Length2 x Width2 (Lxb)	Hole size (LxB)	Height (h)	Height (h1)	Material thickness (s)	Material*	Carton quantity
104009004		0,7-3	1,5x12	14x12	20x6	15	10,5	0,5	CS-3250	3 000
209684000		0,7-3	1,5	16-16,7x12	20x6	13,5	9,5	0,6	CS-3250	3 500
204469000		2	4,6x5,4	10,4x9	7,7x10	17	15	0,5	CS-5000	5 000
212576000		3,5	4,4	10,4x9	7x15	17	15	0,6	CS-5000	5 000
016437001		2,3-2,7	(1,7-2,1)x14	12,5x9,45	(8-8,5)x16	16,5	13,2	0,5	CS-5000	4 500
151898004		2,5	(1,1-1,3)x9,5	11x9,5	(8-8,2)x10	18,1	15,5	0,4	CS-5412	4 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION

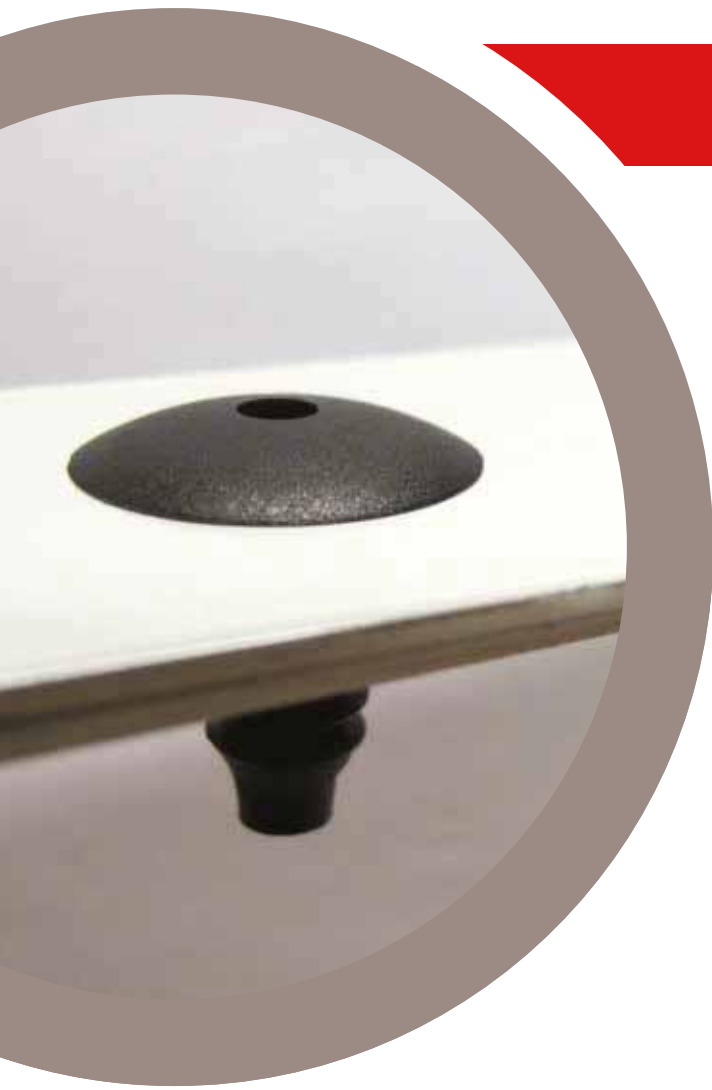


- Part that attaches two panels together by pushing onto a stud or clip tower on one panel and snapping into a hole in the other panel
- Comes in several different design variations, contact us



A specific need ? Contact us, p.122

Assembling Plastic Panel Clips



In Panel holes

Panel Pins



Push to lock rivet



p.70



Rokut rivets



p.72



Fir tree fix



p.74



Plasti plug



p.75



On Studs

Stud Panel Clips



For insulation fixing



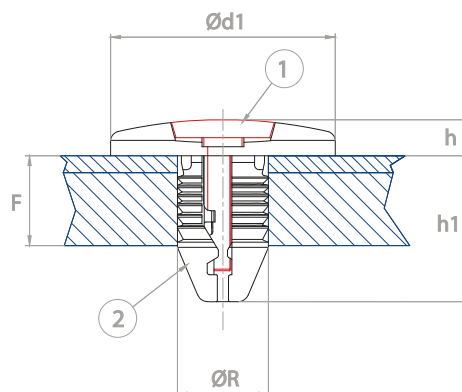
p.76



In Panel
holes

Panel Pins

Push to lock rivet

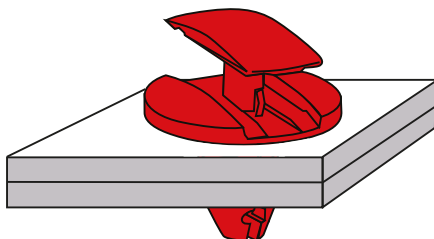


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Hole diameter (Ø R)	Head diameter (Ø d1)	Head thickness (h)	Height (h1)	Material*	Carton quantity
202493000		2-7	6,5	22	2,6	14	PA66-BI	1 800
201793000		2-7,5	8,1-8,3	20	3,2	13	PA66-BI	3 600
201793001		2-7,5	8,1-8,3	20	3,2	13	PA66-Gr	3 600
018610000		0,8-7	7,8-8,8	17	4,5	13	PA66-Gr	1 200
018610003		0,8-7	7,8-8,8	17	4,5	13	PA66-BI	1 200
015269000		2,5-8,5	7	15	6	17	PA6-BI	2 000
018795003		3-6	4,6-4,9	15	3	11,5	PA6-BI	5 500
207926000		4,5	15	22	4,5	13,7	PA66-BI	1 500
020074000		4,5-5	10	17,8	5	11,5	PA6-BI	2 500
017489000		4,6	12	18	6	10	PA66-BI	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two panels together
- The pin ensures a high pull out resistance
- Easy push to lock system
- Disassemblable by pulling out the pin



A specific need ? Contact us, p.122

High-speed assembly

- *Optimize the assembly process?*
- *Improve workstation ergonomics?*
- *Reduce assembly time and downtime costs?*

Although our core competencies are assembly, connection and protection systems, we also have the know-how to design the tools to perform these operations. A good example is our automatic assembly gun.

Fed by an “endless” reel of plastic clips, the gun ensures regularly positioned, high-quality fasteners, with a cycle time of less than a second. Plus, the gun is reloaded in an instant. Your operators save time and the fasteners are perfectly installed every time.

Research is still on going to further improve this production optimization tool, already covered by three patents with another six pending.

Since the company was founded, nearly 150 years ago, our development has been shaped by innovations, from the press-stud to plastic injection moulding. Today, we spend 6% of our turnover on R&D, 3% on staff training, and we have 22 production sites world-wide. We make it our business to design advanced products to help you boost your productivity.



Automatic assembly gun

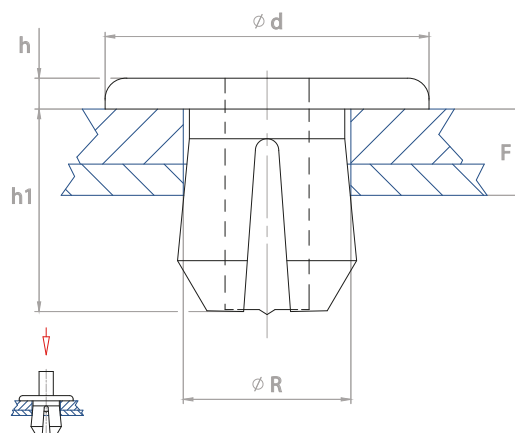


Raymond parts to assemble in the industrial equipment

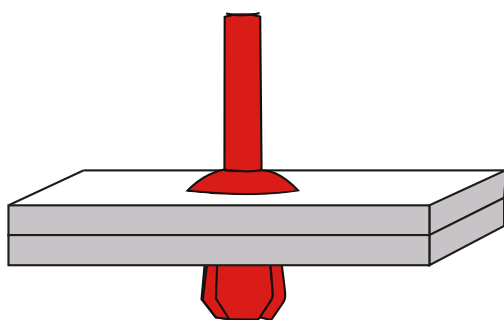


Panel Pins

Rokut rivets



APPLICATION INFORMATION



- To hold two panels together
- The pin ensures a high pull out resistance
- Easy push to lock system



In Panel
holes

Panel Pins

Rokut rivets

All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Hole diameter (Ø R)	Head diameter (Ø d)	Head thickness (h)	Height (h1)	Material*	Carton quantity
012821000	0,75-3	5-5,2	8,5	2	6	PA66-Na	5 000
012821001	0,75-3	5-5,2	8,5	2	6	PA66-BI	5 000
012694001	0,8-4,5	3-3,65	4,8	1,3	6,2	POM-BI	20 000
013266000	1,5-5	4,95-5,35	9	2,3	7,5	PA66-Gr	3 000
013266001	1,5-5	4,95-5,35	9	2,3	7,5	PA66-BI	3 000
013266002	1,5-5	4,95-5,35	9	2,3	7,5	PA66-Bg	3 000
063863000	1,5-6,5	6,2-6,5	10	2	12	PA6-BI	2 200
063277001	2-6	4-4,2	8	1	8,5	POM-Na	11 000
063277002	2-6	4-4,2	8	1	8,5	POM-BI	11 000
012710031	2-8	5,9-7,1	10	2	12	PA6-BI	2 000
062314001	2,5-8	5-5,2	10	2	11,4	PA12-Na	2 000
062314002	2,5-8	5-5,2	10	2	11,4	PA12-BI	4 600
012696000	3-8	4,95-5,55	10	2	11,5	PA12-Na	8 000
012696014	3-8	4,95-5,55	10	2	11,5	PA6-BI	4 000
013011005	4-7	7,9-8,7	16	2	12	PA66-Na	1 000
013011006	4-7	7,9-8,7	16	2	12	PA66-BI	1 000
014584001	4-8	8-8,4	22	3	13	PA12-BI	3 000
014584000	4,8	8-8,4	22	3	13	PA12-Gr	3 000
017385000	5,5-10	8-8,6	13	3	15	PA12-Na	5 500
017385002	5,5-10	8-8,6	13	3	15	PA66-BI	5 500
013100000	6-11	5,1-5,5	10	2	15	PA6-BI	5 000
014142000	7,5-8,6	6-6,2	16	2,5	14,5	POM-BI	6 000

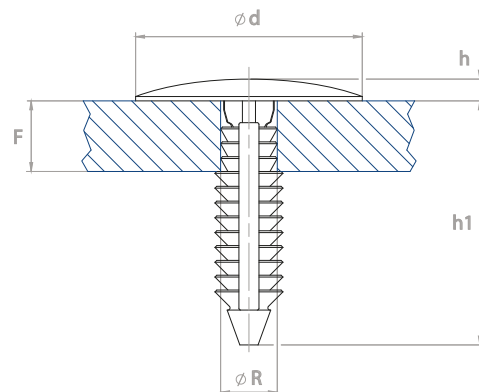
* For material description see the flap at the end of the catalog

Plastic
Panel Clips



Panel Pins

Fir tree fix

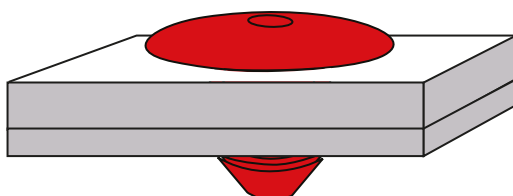


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Hole diameter (Ø R)	Head diameter (Ø d)	Head thickness (h)	Height (h1)	Material*	Carton quantity
017905001	0,5-4	6,5	12	1	7	POM-Gr	7 500
017905003	0,5-4	6,5	12	1	7	POM-BI	7 500
206987000	1,25-8,4	8	11,5	1,7	13	PA6-BI	2 500
201012000	1,6-10,3	5-5,4	16	2,2	14,9	POM-BI	5 000
201012002	1,6-10,3	5-5,4	16	2,2	14,9	POM-Na	5 000
018751001	1,9-8	6,8-7,1	18	2,5	15	PA6-BI	2 000
018751003	1,9-8	6,8-7,1	18	2,5	15	PA6-Gr	2 000
019246000	3,4-19,4	6,5-6,7	26	2,5	28	PA66-BI	2 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold two panels together or a trim piece to a panel
- Not disassemblable

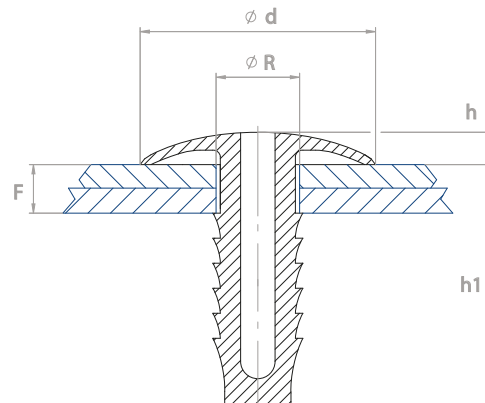


A specific need ? Contact us, p.122



Panel Pins

Plasti plug

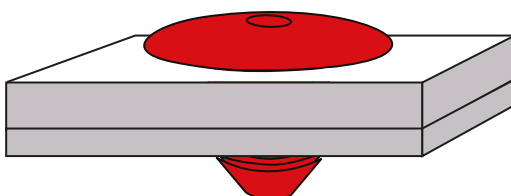


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Hole diameter (Ø R)	Head diameter (Ø d)	Head thickness (h)	Height (h1)	Material*	Carton quantity
015009000	1,5-17	9,5	22	5,5	21,5	PE-Gr	2 300
015009001	1,5-17	9,5	22	5,5	21,5	PE-BI	2 300
018000000	2-13	10,2	35	4	22	PE-BI	1 300
016293002	2,7-6,7	10,5	23	2,8	16,2	PE-Wh	2 800
012911001	3-6,5	8	27	3,5	14	PE-BI	2 500
012911008	3-6,5	8	27	3,5	14	PE-Gr	2 500
015081000	3-6,5	8	20	2,75	9,5	PE-BI	6 000
016512000	3-6,5	M10	31	3,5	14	PE-Gr	2 000
016512001	3-6,5	9,5	31	3,5	14	PE-BI	2 000
012301010	3-14	8-8,5	20	2,75	20	PE-Gr	4 000
012301011	3-14	8-8,5	20	2,75	20	PE-BI	4 000
012271004	3,5-11	6-6,2	17	3	15	PE-BI	6 500
012271015	3,5-11	6-6,2	17	3	15	PE-Gr	6 500
012574002	5,5-13,5	9,5-9,7	22	4	17	PE-BI	3 000
011620000	6,5-13,5	7	17	4	30	PE-BI	3 500
012631006	7,5-22,5	7	30	4	30	PE-Na	1 500
012631010	7,5-22,5	7	30	4	30	PA12-BI	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix a flexible cover/ trim piece to a panel
- To fill holes
- Not suitable for high shear forces
- Not disassemblable

ALTERNATIVE PRODUCTS



Panel Pins
p. 72



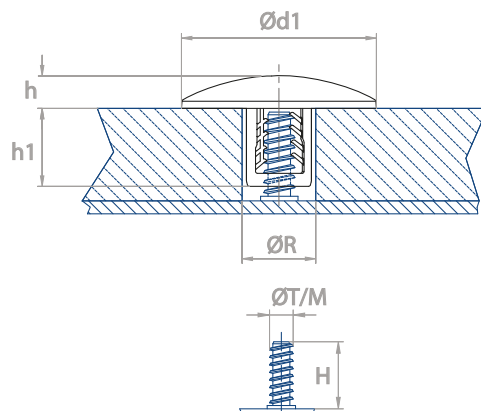
Panel Pins
p. 70

A specific need ? Contact us, p.122



Stud Panel Clips

For insulation fixing

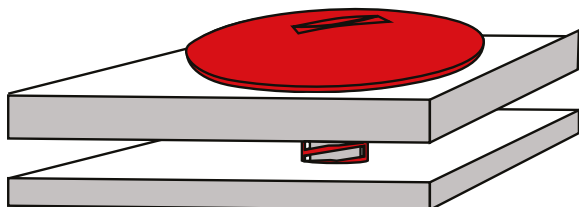


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Stud size (ØT x H)	Hole diameter (Ø R)	Head diameter (Ø d1)	Head thickness (h)	Minimum depth (h1)	Material*	Carton quantity
204367001	M6x9	10,2-15	30	5	8	PA66-Gr	850
200139000	M6x14	10,2-15	30	5	12	PP-BI	1 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To hold insulation or a trim piece to a panel with welded studs
- Installed by pushing onto the stud, and then tightening with a straight bladed screwdriver to clamp up
- Disassemblable by unscrewing with a straight bladed screwdriver (screwdriver impression in cap)



A specific need ? Contact us, p.122

Assembling Shaft Clips & Nuts



In Panel holes

Shaft Retainers



Clip for grooved shafts



p.80



Circular push on fix - Light duty



p.81



Circular push on fix - Heavy duty



p.82



Rectangular push on fix



p.84



Circular push on threaded studs



p.85



In Panel holes

Stamped Nuts



Self-Threading - For smooth pins



p.86



Self-locking - For threaded studs



p.87



In Panel holes

Metal Snap in Nuts



For metric bolts



p.88



For ST screws



p.89



Metric cage nuts



p.90



In Panel holes

Plastic Snap in Nuts



For square holes



p.91



For oblong holes



p.92



On Panel edges

Metal Snap on Nuts



Universal - For metric bolts



p.93



For metric bolts



p.94



Universal - For ST screws



p.95



For ST screws



p.96



For ST screws / With retaining tab

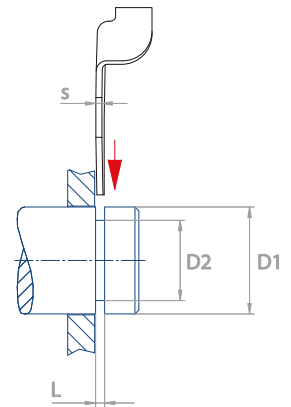
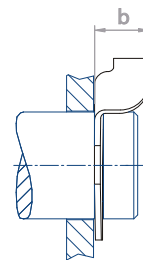
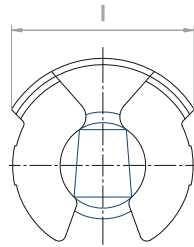


p.98



Shaft Retainers

C clip for grooved shafts

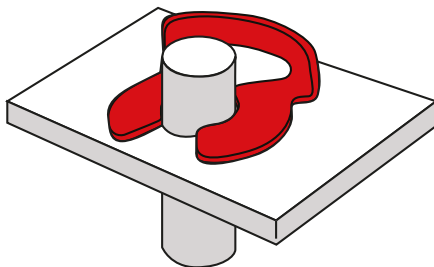


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Shaft diameter (D1)	Groove diameter (D2)	Groove width (L)	Clip size (lxb)	Material thickness (s)	Material*	Carton quantity
054518005		6	5	0,74-0,75	11 x 4	0,5	CS-ZnNi-BI	7 500
013973004		8	6	1,0-1,2	16 x 4	0,5	CS-4001	6 500
151255001		10-12	8	1,05	16 x 5	0,5	CS-5000	6 000
018177003		16	12	1,25-1,45	23,6 x 7	0,8	CS-3250	3 000
054633006		6	5	1,2-1,3	11,2 x 3	0,4	CS-3250	5 000
054516002		8	6	1,1-1,2	14 x 3	0,4	CS-ZnNi	4 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



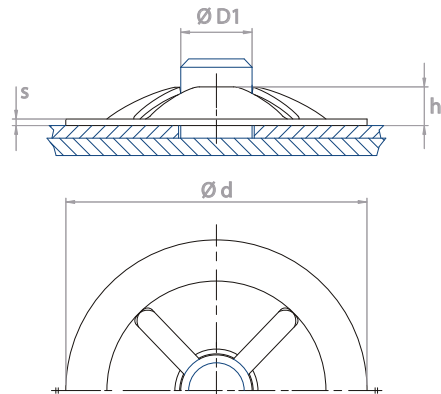
- To lock grooved shafts in panels or any elements with a flat surface
- The clip must be pushed into the groove in the shaft from the side
- The first design for grooves at any position on the shaft
- The second design needs the groove to be at a certain distance from the shaft end

A specific need ? Contact us, p.122



Shaft Retainers

Circular push on fix - Light duty

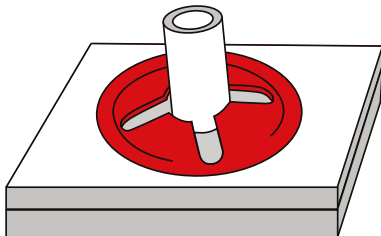


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Stud size (ØD1)	Outside diameter (Ød)	Height (h)	Material thickness (s)	Material*	Carton quantity
011876004	2-2,1	9,5	1,3	0,3	CS-3250	35 000
051856006	2,5-2,7	9,5	1,3	0,25	CS-3250	10 000
051857006	3-3,2	9,5	1,2	0,25	CS-ZnNi	10 000
051858007	3,5-3,7	9,5	1,1	0,25	CS-3250	10 000
051859002	4-4,1	9,5	1	0,25	CS-3250	10 000
051833009	4,5-4,7	13	1	0,35	CS-3350	7 000
052675006	4,9-5,1	13	1,3	0,5	CS-3250	7 500
051834003	5,5	13	1,2	0,35	CS-ZnNi	8 000
051835014	6-6,2	13,1	1,1	0,35	CS-ZnNi	8 000
019236004	6-6,1	22	2,7	0,45	CS-3250	8 000
015212001	6,5-6,7	20,5	2,2	0,25	CS-5410	7 000
014343005	8,41-8,5	20	2,7	0,7	CS-3250	7 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



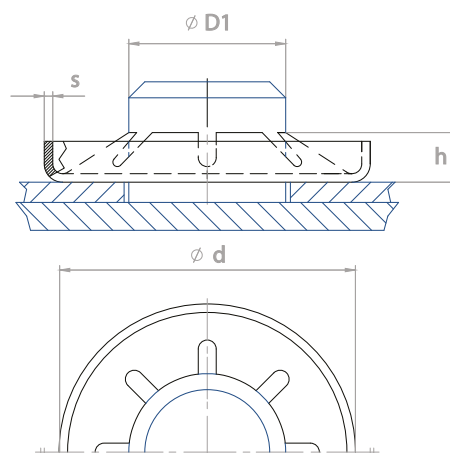
- To lock smooth shafts in panels or any elements with a flat surface
- The clip must be pushed onto the shaft from the top with a magnetic cylindrical hollow tool
- For smooth (not threaded) shafts in metal or plastic
- For light duty applications

A specific need ? Contact us, p.122

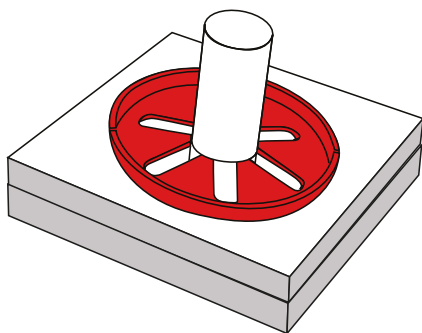


Shaft Retainers

Circular push on fix - Heavy duty



APPLICATION INFORMATION



- To lock smooth shafts in panels or any elements with a flat surface
- The clip must be pushed onto the shaft from the top with a magnetic cylindrical hollow tool
- For smooth (not threaded) shafts in metal
- Designed to reach a higher performance than the regular version



On Studs

Shaft Retainers

Circular push on fix - Heavy duty

All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Stud size (ØD1)	Outside diameter (Ød)	Height (h)	Material thickness (s)	Material*	Carton quantity
011959002		4	9,6	1,6	0,3	CS-3250	26 000
138603002		4	11	1,1	0,25	CS-3250	10 000
138605003		5	16	1,32	0,38	CS-3250	5 000
138608003		6	13,5	1,8	0,41	CS-3250	5 000
138613002		8	15,9	1,8	0,51	CS-5000	5 000
138617000		10	19,1	1,4	0,41	CS-5000	5 000
138618003		12	22,1	2,7	0,86	CS-3250	5 500
020586001		5	12	0,9	0,3	Sst	25 000
054947009		6	13,4	1	0,3	CS-3250	10 000
018572002		6	20,5	2,1	0,45	CS-3250	6 000
019496002		8	17,5	1,8	0,5	CS-3250	8 500

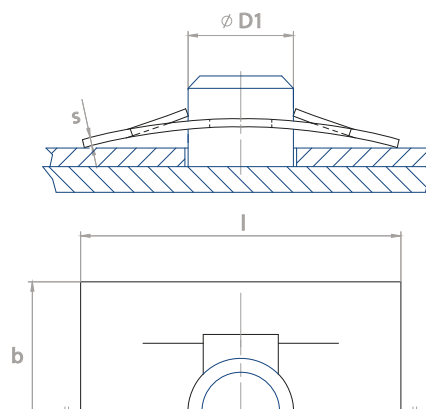
* For material description see the flap at the end of the catalog

Shaft
Clips & Nuts



Shaft Retainers

Rectangular push on fix

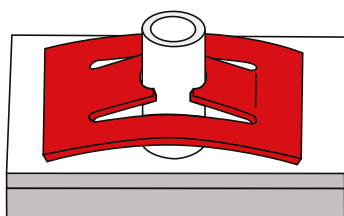


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Stud size ($\varnothing D1$)	Length (l)	Width (b)	Material thickness (s)	Material*	Carton quantity
011513001		2	10	6	0,25	CS-5000	40 000
011245004		4,75	20	13,5	0,5	CS-3250	8 000
011330002		6	20	13	0,5	CS-3250	8 000
011204003		8	24	16	0,5	CS-3250	6 500
011748003		2,5	11	7	0,3	CS-3250	32 000
013730002		3	11	11	0,3	CS-3250	26 000
011182005		4	15	10	0,35	CS-3250	10 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



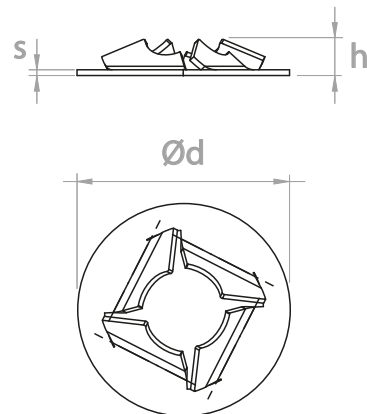
- To lock smooth shafts in panels or any elements with a flat surface
- The clip must be pushed onto the shaft from the top by hand or with a magnetic cylindrical hollow tool
- For smooth (not threaded) shafts in metal and plastic
- For light duty applications

A specific need ? Contact us, p.122



Shaft Retainers

Circular push on threaded studs

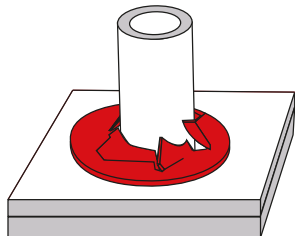


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Thread size	Outside diameter (Ød)	Height (h)	Material thickness (s)	Material*	Carton quantity
138642003	M5	11,1	1,65	0,3	CS-5000	5 000
151769002	M6	17	1,9	0,25	CS-3250	7 000
135209004	M8	15,9	2,1	0,36	CS-5000	15 000
138646006	M10	19,9	2,74	0,8	CS-3250	8 500
151857003	M12	21,4	2,9	0,38	CS-4050	3 250
151924001	M14	21,5	2,9	0,38	CS-4051	6 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



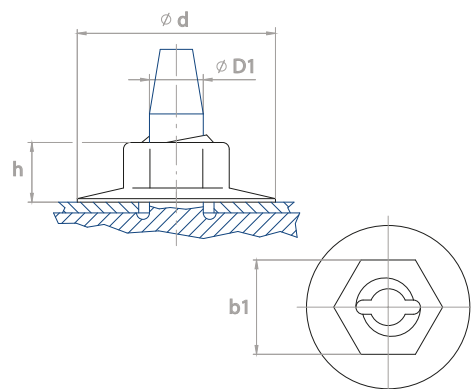
- To lock threaded metric shafts/bolts in panels or any elements with a flat surface
- The clip must be pushed onto the shaft from the top with a magnetic cylindrical hollow tool
- For metric threaded shafts in metal

A specific need ? Contact us, p.122



Stamped Nuts

Self-Threading- For smooth pins

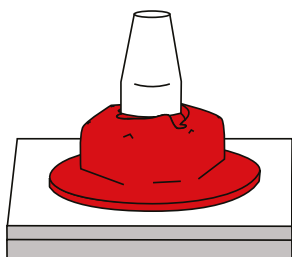


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Stud size (ØD1)	Outside diameter (Ød)	Height (h)	Nut size (b1)	Material* thickness	Material*	Carton quantity
011914007		3	13,5	4,25	8	0,5	CS-3250	6 500
011993004		4	14,5	4,5	9	0,5	CS-3250	5 500
012269005		5	14,5	4,5	9	0,5	CS-3250	5 500
052835008		6	15,1	5,8	11	0,5	CS-3250	8 000
138786013		5	15	5,4	10	0,4	CS-ZnNi	10 000
138802005		8	13	7,9	20	0,6	CS-3250	4 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To lock smooth shafts in panels or any elements with a flat surface
- To be screwed onto smooth metal studs/shafts with a hardness of 50kg/mm² max

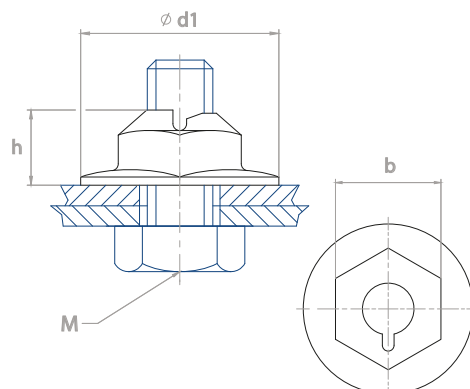


A specific need ? Contact us, p.122



Stamped Nuts

Self-Locking - For threaded studs

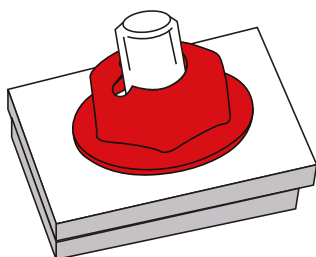


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Thread size (M)	Outside diameter ($\phi d1$)	Height (h)	Nut size (b)	Material* thickness	Material*	Carton quantity
012604001	M4	13	5,2	9	0,4	CS-5000	7 000
138100000	M5	14	5,8	10	0,38	CS-Co	5 000
138101003	M5	14	6,4	10	0,46	CS-3250	5 000
012470003	M5	14,5	5	9	0,45	CS-3250	5 500
012148004	M6	15	6,5	11	0,55	CS-3250	7 000
138104000	M6	24	7,8	11	0,46	CS-3250/Al	3 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To lock threaded metric shafts, studs or bolts in panels or any elements with a flat surface
- For installation with open ended or ring spanners



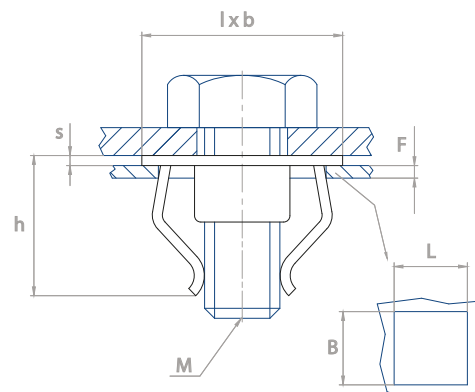
A specific need ? Contact us, p.122



In Panel
holes

Metal Snap in Nuts

For metric bolts

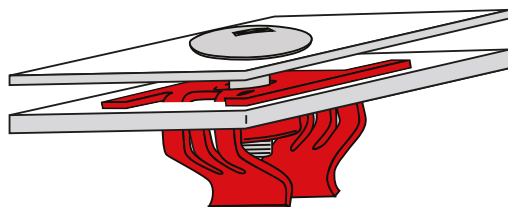


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Thread size (M)	Panel thickness (F)	Hole size (LxB)	Length x Width (lxb)	Height (h)	Material thickness (s)	Material*	Carton quantity
212657001		M5	0,7-0,9	12x12	16x20	9,7	0,6	CS-5451	3 000
018709002		M6	0,8-2	13x9	16x20	11	0,8	CS-5500	2 800
020235001		M6	0,8-2	16x9 *Hole: specific shape	18x22	13,2	1	CS-5410	2 000
137808001		M6	1,2-2	15,3-15,3	20x14,8	11	0,86	CS-G3	2 000
135200002		M6	2,2-3	14,9x14,9	22,2x14,7	15,5	0,86	CS-5410	2 500
213591000		M6	3	12,2x13,2	18x14	14,2	0,8	CS-5410	1 600
203245000		M6	2,5-3	12,2x13,5	18x14	14,2	0,8	CS-5440	1 600

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements to a panel with holes using metric bolts
- The nut must be pushed in the hole, then the element is positioned above the nut, and lastly, put the bolt (and washer if needed) through it and screw
- Permits blind assembly and prevents nut rotation



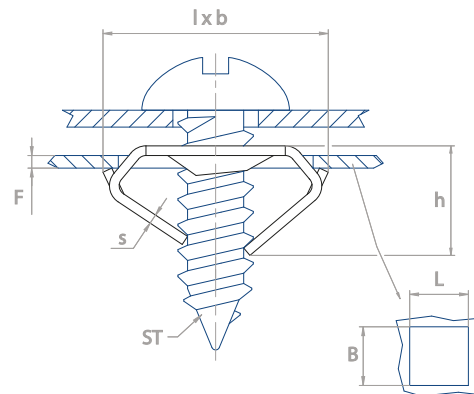
A specific need ? Contact us, p.122



In Panel
holes

Metal Snap in Nuts

For ST screws

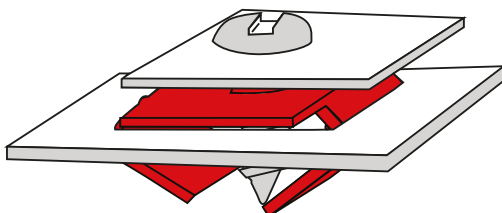


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Screw size (ST)	Panel thickness (F)	Hole size (LxB)	Length x Width (lxb)	Height (h)	Material thickness (s)	Material*	Carton quantity
012036005		4,2	0,75-2	11x13	15,75x18	6,8	0,6	CS-3250	4 000
012415004		4,8	0,75-1	9x9	8x15	6,3	0,55	CS-3250	8 500
011463004		4,8	0,75-2	11x13	16x18	7	0,6	CS-3250	4 000
012991003		4,2	1,5-2	9x9	8x15	6	0,4	CS-3250	9 000
015548003		4,2	0,8-1,5	7x9	8,6x11	5,6	0,5	CS-3250	7 000
207999001		4,8	1,5-2	12x15	16x26	17,6	0,6	CS-4004	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements to a panel with square or oblong holes with metric ST screws
- The nut must be pushed in the hole, then the element is positioned over the nut and lastly the screw (and washer if needed) is put through it and tightened
- Permits blind assembly and prevents nut rotation

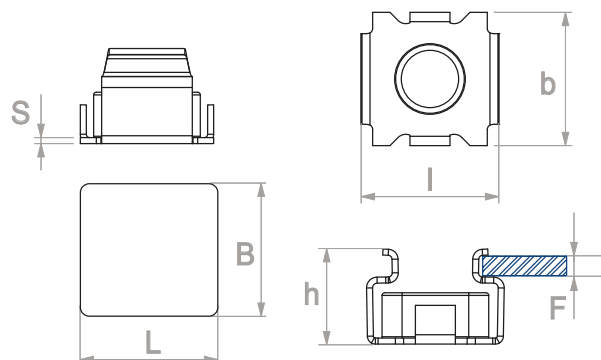
A specific need ? Contact us, p.122



In Panel
holes

Metal Snap in Nuts

Metric cage nuts

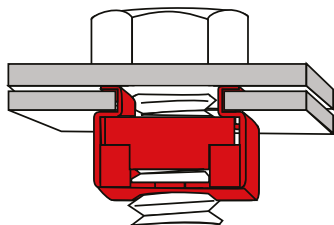


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Thread size	Panel thickness (F)	Hole size (LxB)	Height (h)	Length (l)	Width (b)	Material thickness (s)	Material*	Carton quantity
230285000	M3	0,3-0,9	6,7x6,7	5,2	9,7	9,3	0,3	CS-3250	10 000
230286000	M3	1,0-1,6	6,7x6,7	5,9	9,7	9,3	0,3	CS-3250	10 000
230287000	M4	0,5-1,6	6,7x6,7	7,1	10,3	10	0,45	CS-3250	5 000
230288000	M5	0,7-1,6	9,5x9,5	8,6	13,5	13,1	0,5	CS-3250	3 000
230289000	M5	1,7-2,7	9,5x9,5	9,6	13,5	13,1	0,5	CS-3250	3 000
230290000	M6	0,7-1,6	9,5x9,5	8,6	13,5	13,1	0,5	CS-3250	3 000
230291000	M6	1,7-2,7	9,5x9,5	9,6	13,5	13,1	0,5	CS-3250	3 000
230292000	M8	0,7-1,7	12,7x12,7	10,4	17,5	16,7	0,6	CS-3250	1 500
230293000	M8	1,8-3,0	12,7x12,7	11,6	17,5	16,7	0,6	CS-3250	1 500
230294000	M10	0,7-1,7	12,7x12,7	10,4	17,5	16,7	0,6	CS-3250	1 500
230295000	M10	1,8-3,0	12,7x12,7	11,6	17,5	16,7	0,6	CS-3250	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements to panels with square holes using metric bolts
- The nut must be pushed in the hole, then the element is positioned over it, and lastly the bolt (and washer if needed) is installed and tightened
- Permits blind assembly and prevents nut rotation



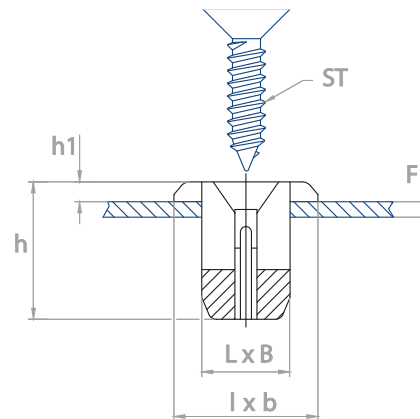
A specific need ? Contact us, p.122



In Panel
holes

Plastic Snap in Nuts

For square holes



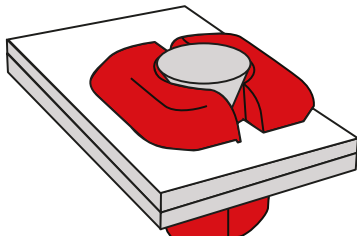
All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Screw size (ST)	Panel thickness (F)	Hole size (LxB)	Length x Width (lxb)	Height (h)	Head thickness (h1)	Material*	Carton quantity
053853001		4,2	0,5-3	7,2x7,2	9,5x9,5	8,3	1,2	PA66-BI	5 500
207747000		4,2/4,8/5,2	0,7-1	7x7	12x12	12	1	PA66-Na	10 000
015197002		Hi-Lo 5,8	0,8-1,2	8,2x8,2	11x11	12	0,8	PA6-Na	2 000
019503000		Hi-Lo 5,8	1,2-1,6	8,2x8,2	11x11	10	0,8	PA6-Na	2 000
055995000		4,2	0,6-3	8,2x8,2	12,8x12,8	12,2	2,2	PA66-Na	2 500
055995001		4,2	0,6-3	8,2x8,2	12,8x12,8	12,2	2,2	PA66-BI	2 500

* For material description see the flap at the end of the catalog

Shaft
Clips & Nuts

APPLICATION INFORMATION



- To fix elements with metric screws to a panel with holes
- The nut is snapped into the hole, the hole in the element is positioned above the nut and finally the screw (and washer if needed) is inserted through the element into the nut and tightened
- The nut tapping is done by the screw
- Permits blind assembly and prevents nut rotation

A specific need ? Contact us, p.122

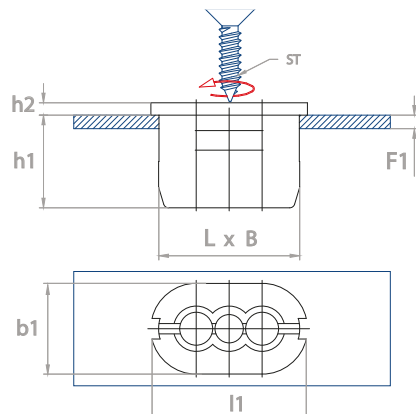


In Panel
holes



Plastic Snap in Nuts

For oblong holes

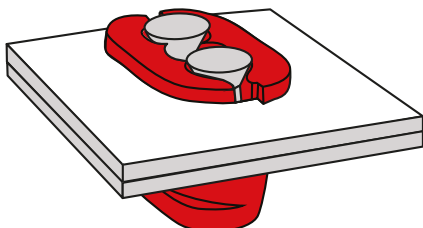


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Screw size (ST)	Panel thickness (F1)	Hole size (LxB)	Length (l1)	Width (b1)	Height (h1)	Head thickness (h2)	Material*	Carton quantity
055975000		4,2	0,6 - 3	7,2x14	15,2	8,8	10,2	1,2	PA66-Na	10 000
053670002		4,2/4,8	0,5 - 1,2	14,2 x 7,2	20	13	17	2	PA66-BI	1 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements with metal ST screws to a panel with oblong holes
- Permits blind assembly and prevents nut rotation
- With different screw positions absorb assembly tolerances
- For higher performance, use metal snap in nuts



A specific need ? Contact us, p.122



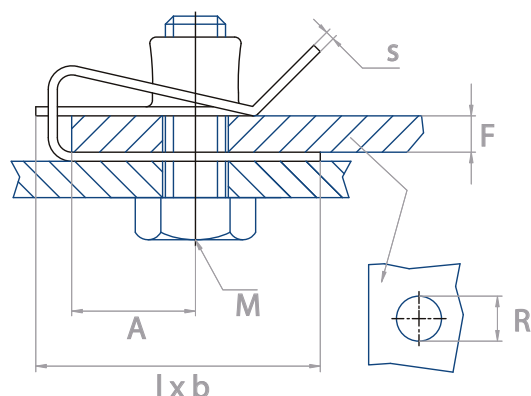
ASSEMBLING Shafts, Screws & Bolts



On Panel
edges

Metal Snap on Nuts

Universal- For metric bolts

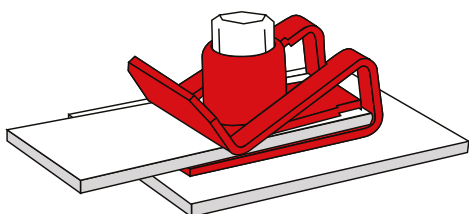


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Thread size (M)	Panel thickness (F)	Length x Width (lxb)	Max distance (A)	Hole diameter (R)	Material thickness (s)	Material*	Carton quantity
054044011		M5	0,5-4	15,2x12	6,8	6	0,6	CS-5440	5 000
054044024		M5	0,5-4	15,2x12	6,8	6	0,6	CS-3250	5 000
206960004		M5	0,5-4	19,9x13,8	10	7,5	0,6	CS-3250	2 000
013176010		M6	0,5-4	24,1x16	11,5	7	0,8	CS-5451	1 500
013176016		M6	0,5-4	24,1x16	11,5	7	0,8	CS-3250	1 500
013965006		M8	0,8-4	28x18	13	9	1	CS-3250	1 200
013965008		M8	0,8-4	28x18	13	9	1	CS-5412	1 200
016205003		M5	0,8-4,3	20,8x15	10,5	7,5	0,6	CS-5440	2 300
016205004		M5	0,8-4,3	20,8x15	10,5	7,5	0,6	CS-3250	2 300
130793007		M6	0,5-4	22,3x15	11	8,5	0,8	CS-3250	1 800
053313010		M8	0,5-4	25,5x17	13	11,2	1	CS-3250	1 000
151854000		M6	0,8-4	24,3x15	12,5	10	0,8	CS-5410	2 000
151838002		M6	0,8-4	30,3x15	18,5	10	0,8	CS-4003	1 600
138330004		M8	1,5-5,5	24,9x17	13	11,7	1	CS-3250	1 200
138331003		M10	1,5-5,5	32,5x24,5	17,5	15	1,4	CS-5000	700
015371003		M4	0,8-4,3	16,9x15	7	7	0,5	CS-5410	3 000
015463001		M4	0,8-4,3	16,9x15	7	7	0,5	Sst	3 000
015501003		M5	0,8-4,3	16,9x17	7	8	0,6	CS-3250	2 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements with metric bolts in a panel with holes
- The nut is slid onto the panel edge and over the panel hole (or through a second hole when fitted mid panel)
- The element is positioned over the nut and finally the bolt (and washer if needed) is inserted the element into the nut and tightened
- Design allows variable panel thickness with the thread remaining parallel to the surface
- If nut to be pre-assembled, use the version with the retaining tab (to prevent the nut from moving during transport for example)

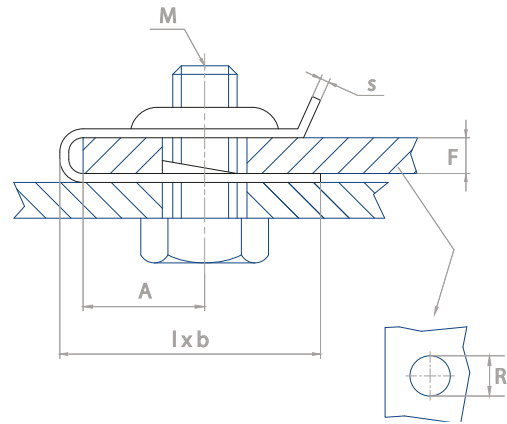
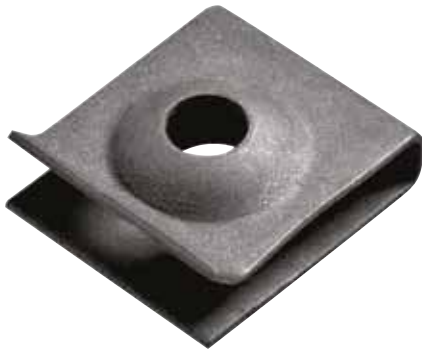
A specific need ? Contact us, p.122



On Panel
edges

Metal Snap on Nuts

For metric bolts

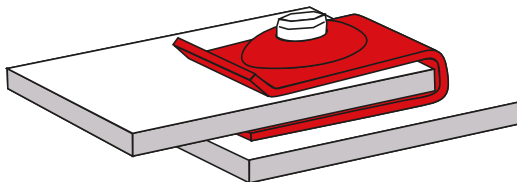


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Thread size (M)	Panel thickness (F)	Length x Width (l x b)	Max distance (A)	Hole diameter (R)	Material thickness (s)	Material*	Carton quantity
015095002	M4	0,5-1,5	13 x 11	6	6,5	0,5	CS-4001	9 500
014885002	M4	1,5 - 2	12,75 x 11	6	6,5	0,5	CS-5000	9 000
015617002	M5	0,6-1,7	15,7 x 14,5	7,5	8	0,7	CS-4001	5 000
015617003	M5	0,6-1,7	15,7 x 14,5	7,5	8	0,7	CS-3250	5 000
016770001	M6	2	24,8 x 16	11	8,7	0,8	CS-5410	2 800

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements with metric screws to a panel with holes
- The nut is slid onto the panel edge and over the panel hole (or through a second hole when fitted mid panel)
- The element is positionned over the nut and finally the bolt (and washer if needed) is inserted the element into the nut and tightened
- Version with retaining tab, ideal for pre-assembly
- Metric snail gives good torque resistance but less than metric tapped barrel impression

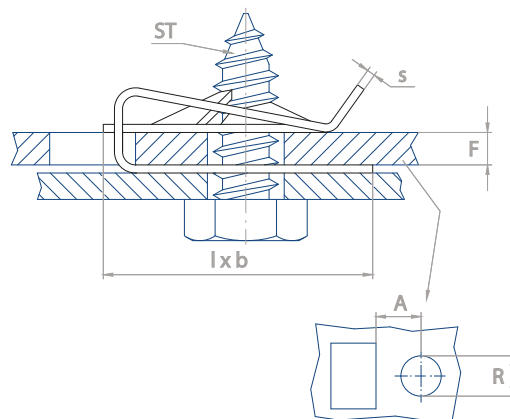
A specific need ? Contact us, p.122



On Panel
edges

Metal Snap on Nuts

Universal- For ST screws

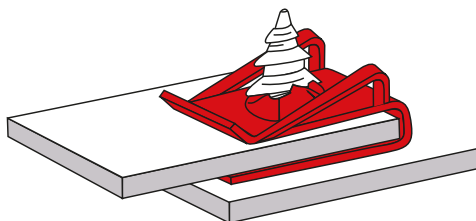


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Screw size (ST)	Panel thickness (F)	Length x Width (lxb)	Max distance (A)	Hole diameter (R)	Material thickness (s)	Material*	Carton quantity
014519003	4,2	0,5 - 4,5	20 x 15	10,5	6	0,6	CS-5412	3 500
014519005	4,2	0,5 - 4,5	20 x 15	10,5	6	0,6	CS-3250	3 000
014043008	4,8	0,5 - 4,5	21 x 15	10,5	6	0,6	CS-3250	3 000
018594002	4,8	0,5 - 4,5	21 x 15	10,5	6	0,7	CS-5451	2 700

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements to a panel with holes with metal ST screws
- The nut is slid onto the panel edge and over the panel hole (or through a second hole when fitted mid panel)
- The element is positionned over the nut and linally the bolt (and washer if needed) is inserted the element into the nut and tightened
- Design allows variable panel thickness with the thread remaining parallel to the surface



A specific need ? Contact us, p.122



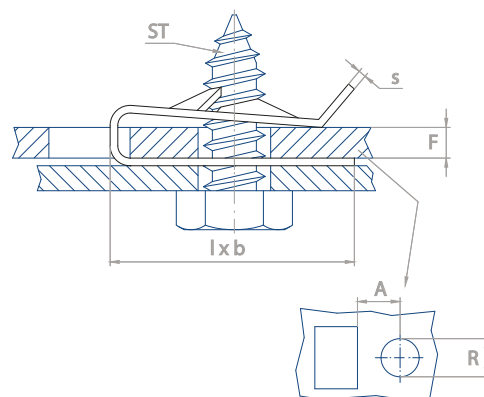
ASSEMBLING Shafts, Screws & Bolts



On Panel
edges

Metal Snap on Nuts

For ST screws

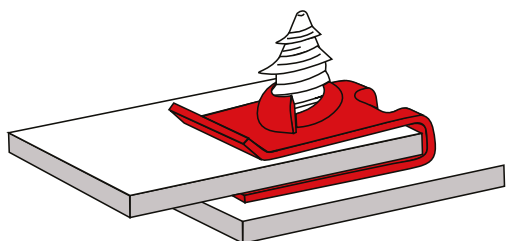


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Screw size (ST)	Panel thickness (F)	Length x Width (lxb)	Max distance (A)	Hole diameter (R)	Material thickness (s)	Material*	Carton quantity
011912002	3,5	2,5	12,5x11	5,8	6	0,5	CS-3250	8 000
013199003	3,5	3-4	15,5x11	6,5	6	0,5	CS-5000	6 000
013695002	3,5	3,75-5,2	12x11	5	5	0,5	CS-3250	7 500
014105002	3,9	2,3-2,8	13x11	8	5	0,5	CS-3250	7 000
013778002	4,2	0,7 - 1,75	16,5 x 8	7,5	5	0,5	CS-5410	7 500
013778003	4,2	0,7 - 1,75	16,5 x 8	7,5	5	0,5	CS-3250	7 500
012893006	4,2	1,5 - 2	12,7 x 11	6	6	0,7	CS-3250	6 000
012893007	4,2	1,5 - 2	12,7 x 11	6	6	0,7	CS-5500	6 000
013699001	4,2	1,75 - 2,25	19,1 x 16	11	6	0,6	Sst	3 500
151658004	4,8	1-3	19,5 x 12,5	9	6	0,5	CS-3250	5 000
012763003	4,8	1,5 - 2	25 x 20,5	14	6	0,5	CS-5440	3 000
211439000	4,8	2 - 3,5	15x12	7	6	0,7	CS-3250	4 000
054649001	4,8	3-4	15,5x11	6	6,2	0,5	Sst	4 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To fix elements with metal ST screws to a panel with holes
- The nut is slid onto the panel edge and over the panel hole (or through a second hole when fitted mid panel)
- The element is positionned over the nut and finally the bolt (and washer if needed) is inserted the element into the nut and tightened
- If nut to be pre-assembled, use the version with the retaining tab (to prevent the nut from moving during transport for example)

A specific need ? Contact us, p.122

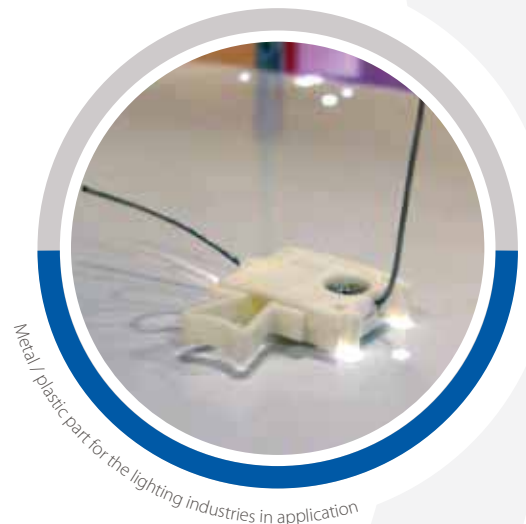
Securing lighting units

- *Optimize your products?*
- *Add value to your products?*
- *Create competitive advantage?*

We've invested in advanced technologies to be able to provide you with systems for fastening and assembling all types of materials: metal-to-metal, plastic-to-plastic and plastic-to-metal. Our full catalog includes more than 20,000 references. But we are still open to working with you to design the part that will give your equipment the added value you're looking for.

For the lighting industries, we've developed a metal/plastic part to secure suspended lighting units.

Since the company was founded, nearly 150 years ago, our development has been shaped by innovations, from the press-stud to plastic injection moulding. Today, we spend 6% of our turnover on R&D, 3% on staff training, and we have 22 production sites world-wide. We make it our business to design advanced products to help you boost your productivity.

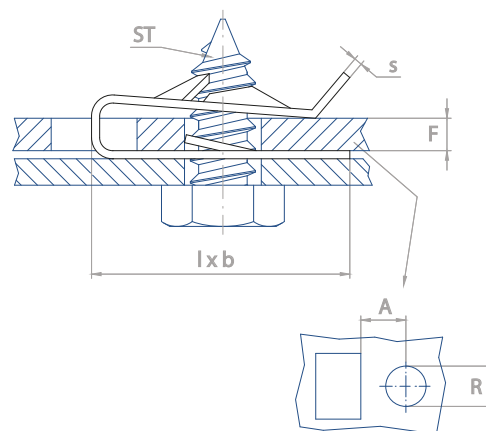




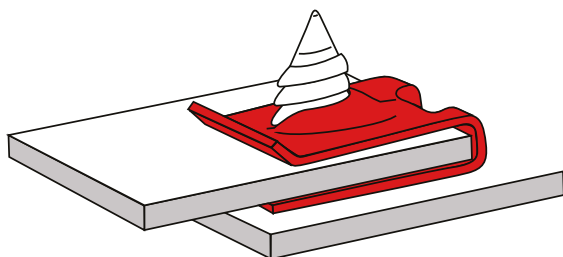
ASSEMBLING Shafts, Screws & Bolts

Metal Snap on Nuts

For ST screws / With retaining tab



APPLICATION INFORMATION



- To fix elements with metal ST screws to a panel with holes
- The nut is slid onto the panel edge and over the panel hole (or through a second hole when fitted mid panel)
- The element is positionned over the nut and finally the bolt (and washer if needed) is inserted the element into the nut and tightened
- Version with retaining tab, ideal for pre-assembly

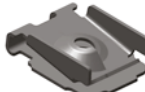


On Panel
edges

Metal Snap on Nuts

For ST screws / With retaining tab

All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Screw size (ST)	Panel thickness (F)	Length x Width (lxb)	Max distance (A)	Hole diameter (R)	Material thickness (s)	Material*	Carton quantity
013825003		3,5	2-2,75	12,5x11	5,8	6,8	0,5	CS-3250	4 500
014333002		3,5	2,5	12,5x11	5,8	5,5	0,5	CS-5451	4 000
011347002		3,9	1-3,0	16x11	7	7,2	0,5	CS-3250	7 000
012240005		4,2	0,5-1,5	13x11	6	6,8	0,5	CS-5450	10 000
012240004		4,2	0,5-1,5	13x11	6	6,8	0,5	CS-3250	6 500
012757003		4,2	0,5-1,75	16,6x11	7,5	7,2	0,6	CS-3250	8 000
012367002		4,2	1-2,5	12,6x8	5,5	5	0,6	Sst	8 000
215635001		4,2	1,25-2	20,7x13	10,8	8	0,7	CS-3250	4 500
055111000		4,2	1,5-2,5	13,5x10	6,5	6,2	0,5	Sst	5 000
055639007		4,2	2-3	13,8x13	6,8	6	0,5	CS-4004	5 000
013219004		4,8	0,5-1,7	24,9x11	16	7,2	0,5	CS-3250	3 000
013219005		4,8	0,5-1,7	24,9x11	16	7,2	0,5	CS-4001	3 000
013133005		4,8	0,6-1,7	14,7x11	7,2	7,2	0,7	CS-3250	8 000
013133006		4,8	0,6-1,7	14,7x11	7,2	7,2	0,7	CS-4001	8 000
015954002		4,8	1,7-2,3	16,6x11	7,2	7,2	0,6	CS-5440	7 000
011967002		4,8	2-3	16x11	6,75	7,2	0,5	CS-5410	7 000
013806004		5,5	3-4	23,7x16	12	8,7	0,7	CS-5451	1 400
020857003		4,2	2-3,5	16x12	8	6,5	0,5	CS-3250	5 000

* For material description see the flap at the end of the catalog

Shaft
Clips & Nuts

Protecting & Finishing Spring Rings, Caps & Grommets



Metal Spring Rings



In Panel holes

For round holes



p.102

For oblong holes



p.104

Caps



In Panel holes

For round holes



p.105

For oblong holes



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Grommets



In Panel holes

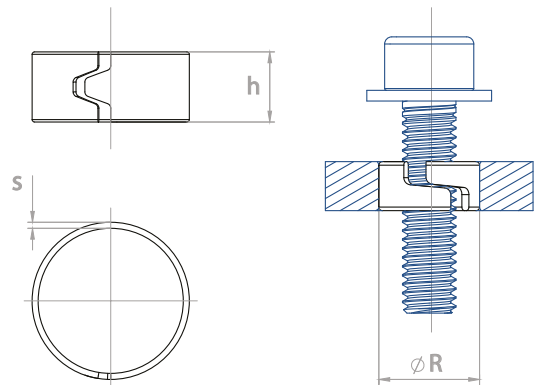
For round holes



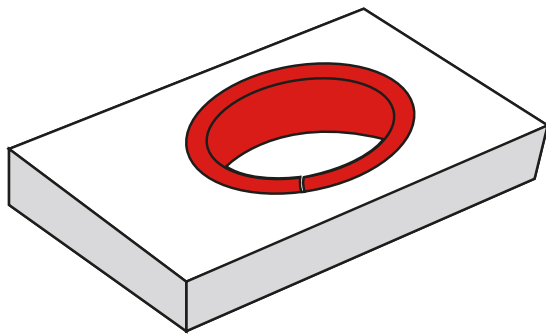
p.107

Metal Spring Rings

For round holes



APPLICATION INFORMATION



- To prevent soft panels (plastic) from creeping when fastened
- To be inserted into the panel hole before screwing through it
- Can be pre-assembled into the hole (Self-retaining through spring tension)
- Choose ring height according to panel thickness
- For use with flat head screws (and washer if necessary)



In Panel
holes

Metal Spring Rings

For round holes

All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Mounted internal diameter (Ø)	Hole diameter (Ø R)	Ring height (h)	Spring thickness (s)	Material*	Carton quantity
202527000		6,2	7,2	3,1	0,5	CS-3200	7 500
131473003		6,2	8,6	4	1,2	CS-5440	5 000
130037002		6,7	8,7	3	1	CS-ZnNi	5 000
204303000		7,9	9,5	5,1	0,8	CS-ZnNi	10 000
202105000		8	10	3	1	CS-ZnNi	5 000
215481000		8,1	10,1	4	1	CS-5440	10 000
204803000		8,5	10,1	4,7	0,8	CS-ZnNi-BI	10 000
207073000		8,8	9,8	3	0,5	CS-ZnNi	5 000
129754002		8,8	9,8	5,5	0,5	CS-5440	8 000
202515000		13,4	15,4	3	1	CS-5412	5 000
210701000		14	16	5	1	CS-ZnNi	5 000
055438006		7,1	8,1	6	0,5	CS-G2	10 000
055533002		9,6	10,8	6,3	0,6	CS-G2	5 000
128689004		9,4	11	7,8	0,8	CS-ZnNi	5 000
220003000		10,2	11,2	10	0,5	CS-ZnNi	4 500
055439002		10,4	12	6	0,8	CS-ZnNi	5 000
213504003		10,7	12,3	6	0,8	CS-ZnNi	5 000
213505000		11,5	12,5	5,8	0,5	CS-G3	4 000
203970000		12,4	14	7,8	0,8	CS-ZnNi	4 500
055404002		12,7	13	5,8	0,5	CS-G3	4 000
132644004		17	18,6	6,3	0,8	CS-ZnNi	2 000

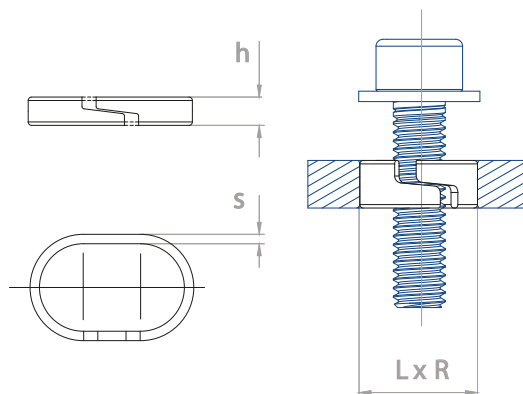
* For material description see the flap at the end of the catalog



In Panel holes

Metal Spring Rings

For oblong holes

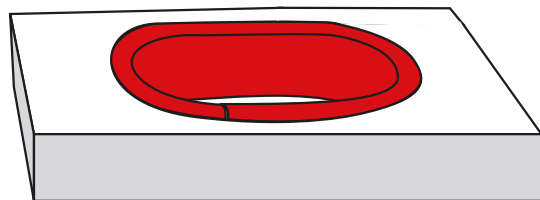


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Mounted internal diameter (Ø)	Hole size (LxR)	Ring height (h)	Spring thickness (s)	Material*	Carton quantity
130562001		12,3x7,6	14,2x10	4	1,2	CS-3250	8 000
206444000		13,3x7	15,2x9,4	4	1,2	CS-ZnNi	10 000
209874000		14,1x7,8	15,2x9,4	4	0,8	CS-ZnNi-BI	10 000
218080000		14,6x9,4	16,5x11,8	4,8	1,2	CS-ZnNi	4 500
203758000		15,3x11,9	17,2x14,3	4	1,2	CS-3250	4 000
128949006		15,4x9,8	16,9x11,8	3	1	CS-5412	6 000
131459001		16x7	17,9x9,4	4	1,2	CS-ZnNi	6 000
131474001		16x10,5	17,9x12,9	4	1,2	CS-5440	8 000
207543000		16,8x11,3	17,9x12,9	4	0,8	CS-ZnNi	4 500
209013000		18,3x7,9	19,8x9,9	3	1	CS-ZnNi	5 000
218079000		21,6x9,4	23,5x11,8	4,8	1,2	CS-ZnNi	3 000
202409000		22x12,5	22,2x13,5	4,1	0,5	CS-ZnNi	5 000
208723000		22,2x15,1	23,4x17,1	3	1	CS-ZnNi	3 700
213933000		12,9x7	14,4x9	7	1	CS-5440	5 000
214278000		15,3x11,3	16,8x13,3	10	1	CS-5440	2 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



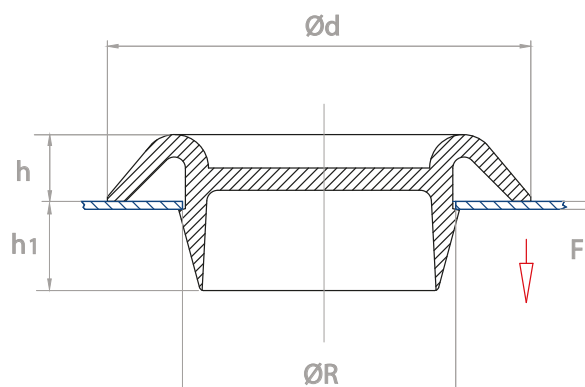
- To prevent soft panels (plastic) from creeping when fastened
- To be inserted into the panel hole before screwing through it
- Can be pre-assembled into the hole (Self-retaining through spring tension)
- Choose ring height according to panel thickness
- For use with flat head screws (and washer if necessary)
- Oblong shape absorbs assembly tolerances

A specific need ? Contact us, p.122



Caps

For round holes

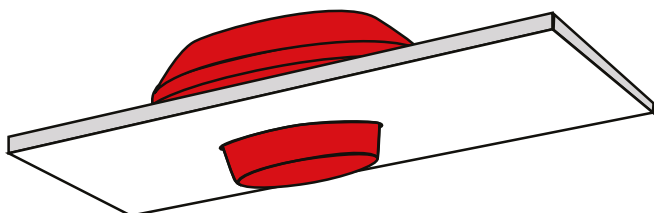


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Hole diameter (Ø R)	Head diameter (Ø d)	Head thickness (h)	Depth (h1)	Material*	Carton quantity
053054002	0,5-1,5	12	19	3	4	PE LD-Na	1 000
053054004	0,5-1,5	12	19	3	4	TPE-BI	2 400
052213000	0,5-2,5	18	30	4	5	PE LD-BI	1 800
052213001	0,5-2,5	18	30	4	5	PE LD-Wh	1 800
053296000	0,5-3	20,5	29,6	3,7	2,4	PE LD-BI	1 500
053296001	0,5-3	20,5	29,6	3,7	2,4	PE LD-Wh	1 500
175155000	0,6	6,5	10,5	2,2	2,8	TPE-BI	5 000
053188000	0,6-2	28	39,5	4,8	5,2	PE LD-BI	1 000
053188007	0,6-2	28	39,5	4,8	5,2	EPDM-Na	1 000
211111000	0,7-2,5	14	24,1	6,5	7	SEBS-BI	3 500
207249000	3-4	22-24	31,4	6,1	6,8	PP/EPDM 60S-BI	2 000
112019001	3	24,5-25	34	3	7	PP/EPDM 70S-BI	2 500

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- To seal round holes
- Avoids water damp and dust ingress

ALTERNATIVE PRODUCTS



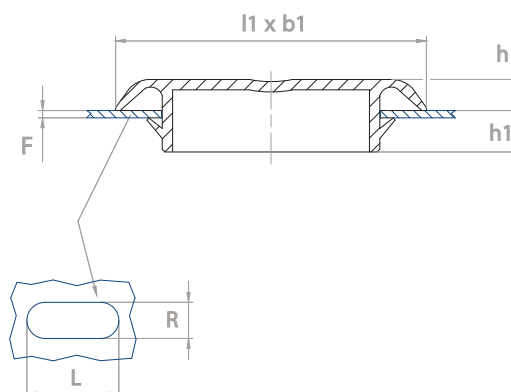
Panel Pins
p. 70



In Panel
holes

Caps

For oblong holes

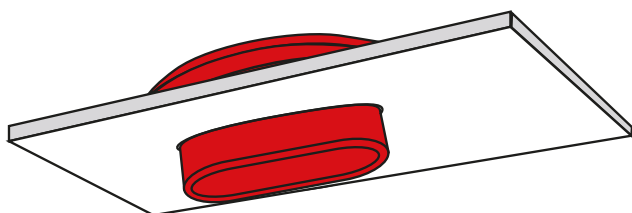


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Panel thickness (F)	Hole size (LxR)	Head size (l1 x b1)	Head thickness (h)	Depth (h1)	Material*	Carton quantity
020758001	0,7-0,9	22x16	30x23,85	3	4	PE-BI	3 000
202395000	0,7-1,5	40x12	46x18	4,3	6	PP/EPDM 60S-BI	2 300
016673000	0,8-1,5	70x30	74x34	2,2	6,8	PE-BI	550
112064000	1-1,2	50x30	62x42	3	3,7	PVC 60Sa-BI	1 400
210121000	1-4,3	60x48	75,6x63,7	7	6,7	PP/EPDM 60S-BI	500
207308000	3	16,7x13,1	26,7x23,1	6	8	PP/EPDM 60S-BI	2 300
214672000	5	22,3x16,3	31,3x25,3	4	11,2	SEBS-BI	2 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



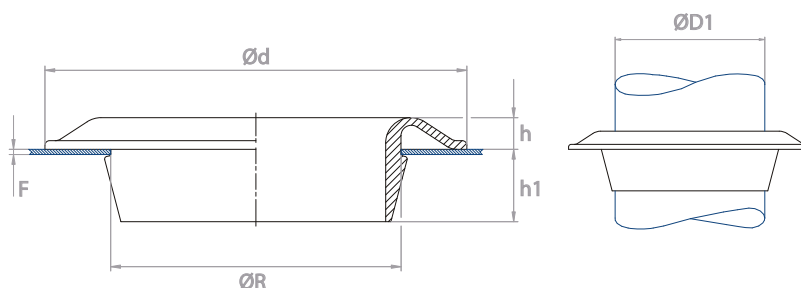
- To seal oblong holes
- Prevents water damp and dust ingress

A specific need ? Contact us, p.122



Grommets

For round holes

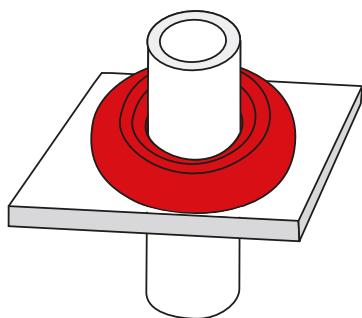


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Tube diameter (Ø D1)	Hole diameter (Ø R)	Head diameter (Ø d)	Head thickness (h)	Depth (h1)	Material*	Carton quantity
015509000		0,5-1,5	7,2-7,8	10	17	3	4	PE-BI	9 500
017960000		0,5-2	25	28	40	4	6	PE-Na	1 000
056750000		0,5-2,5	12	16	18x26	4,3	4,9	PE LD-Na	1 000
017289000		0,5-2	7	28	39	4,8	5,2	PE-BI	1 000
208071000		0,5-2	14	28	39	4,8	5,2	PE-BI	270
056873001		1-1,5	4,8-5,05	40	53	5	5	PP/EPDM-BI	400
206858000		1,2	18	30	49,7	12	4,4	SEBS-BI	300

* For material description see the flap at the end of the catalog

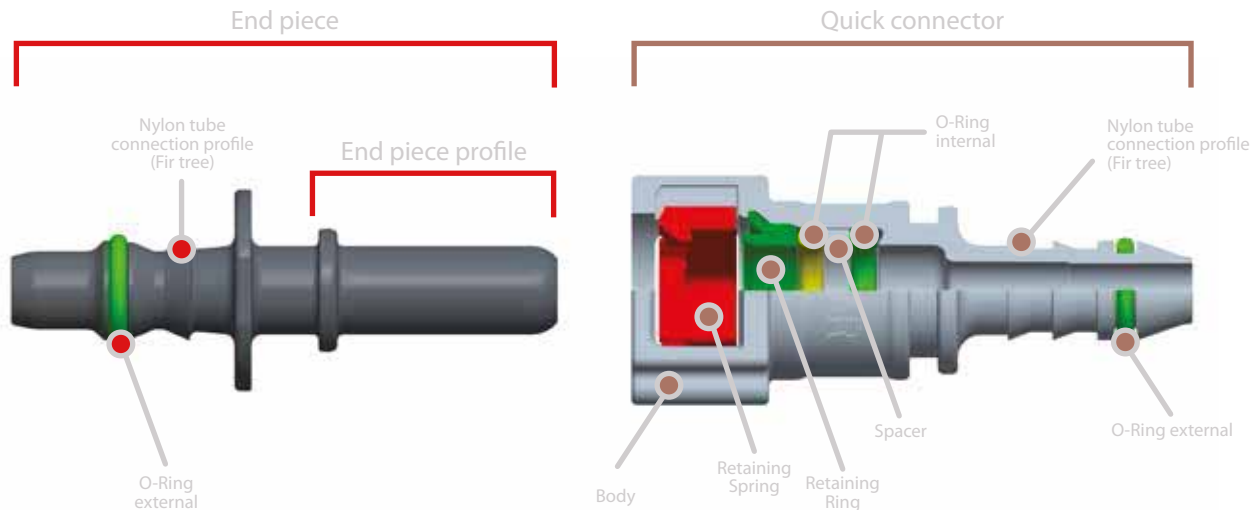
APPLICATION INFORMATION



- To prevent wires/tubes being damaged when passing through a panel hole
- When adjusted to fit the wire/ tube diameter, it also prevents, water and dust ingress
- Grommets for oblong holes also available, contact us

A specific need ? Contact us, p.122

COMPONENTS DESCRIPTION



ADVANTAGES

- Manufactured in plastic for reduced weight and corrosion resistance
- Helps meet environmental requirements/ Emissions.
- A very compact and short connector, easy for use.
- Reduces assembly cycle time and increases productivity: no tool required to disconnect in aftermarket applications.
- Variety of angles (0° - 30° - 35° - 45° - 55° - 65° - 90° - 3 way QCs), diameters (from 6,3 to 56mm), fluids (fuel, water, oil, air & vacuum...).
- Variety of performances which depend on type of fluid, diameter, temperature (from -40 to +125°) and pressure (from -1 to +10 bars).
- Versatility of our quick connectors: Integrated functions such as shut-off valve, calibrated valve, one-way-valve, pressure regulator valve, integrated pressure check valve.
- Critical cleanliness guaranteed on all quick connectors.
- Assembly proofing devices.

> *Our wide range of products is bringing technical solutions for fluid connection*

Connecting Quick Connectors



Hose QC



On / To
Cables or Tubes



For rubber hoses



p.110

Pipe QC



On / To
Cables or Tubes



For polyamid pipes

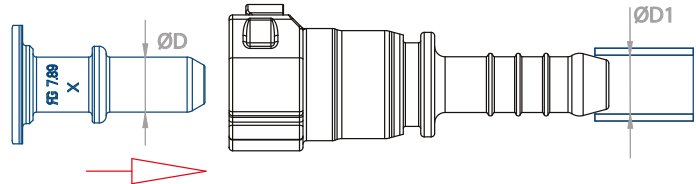


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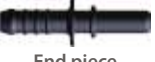


Hose Quick Connectors

For rubber hoses



All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Connection diameter (ØD)	Tube diameter (ØD1)	Geometry	Application
B30	 1 button QC	7,89mm - 5/16" SAE	7,5	0°	Fuel*
B31	 1 button QC	7,89mm - 5/16" SAE	7,5	90°	Fuel*
B56	 1 button QC	7,89mm - 5/16" SAE	7,5	65°	Fuel*
B49	 End piece	7,89mm - 5/16" SAE	7,5	0°	Fuel*
S5	 Adapter	-	7,5	3 ways	Fuel*

*These products are subject to automotive safety standards according to the specification SAE J2044 , please specify the destination of the product when you make the order.
Special studies are possible to adapt the parts design to your application (material, temperature, pressure, fluid application...)

APPLICATION INFORMATION

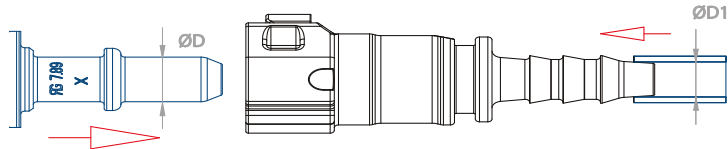
- Hose to fix on the bead shape with a clamp
- Tube material: rubber
- Tube connection shape: Bead
- To respond to your need, we must have specifications and information on your operating conditions: please contact us to obtain the product corresponding to your application.
- The Quick connectors are not on stock and have to be manufactured on demand.

 A specific need ? Contact us, p.122



Pipe Quick Connectors

For polyamid pipes



All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Connection diameter (ØD)	Tube diameter (ØD1int & ØD1ext)	Geometry	Application	Added function
B21	 2 button QC	7,89mm - 5/16" SAE	6x8	0°	Fuel*	-
B24	 2 button QC	7,89mm - 5/16" SAE	6x8	0°	Fuel*	Shut off valve **
B22A	 2 button QC	7,89mm - 5/16" SAE	6x8	45°	Fuel*	-
B22	 2 button QC	7,89mm - 5/16" SAE	6x8	90°	Fuel*	-
B69	 End piece	7,89mm - 5/16" SAE	6x8	0°	Fuel*	-
J19	 2 button QC	16 mm	10x12,5	0°	Fuel*	Shut off valve **
020492000	 End piece	16 mm	10x12	0°	Fuel*	-
215319000	 2 button QC	7,89mm - 5/16" SAE	6x8	0°	Water / Drinking water	-

*These products are subject to automotive safety standards according to the specification SAE J2044, please specify the destination of the product when you make the order.
Special studies are possible to adapt the parts design to your application (material, temperature, pressure, fluid application...)

APPLICATION INFORMATION

- Polyamid pipe to fix on the fir tree shape in force with or without expansion process
- Tube material: Polyamides
- Tube connection shape: Fir tree
- Shut off valve ** is specified to allow flow when connected to an end piece and no flow when disconnected.
- To respond to your need, we must have specifications and information on your operating conditions: please contact us to obtain the product corresponding to your application.
- The Quick connectors are not on stock and have to be manufactured on demand.

 A specific need ? Contact us, p.122

Connecting Grounding Clips



Grounding Wire Connectors



On Panel edges



For electric wires with sheath



p.114

Lugged Grounding Connectors



On Panel edges



For electric wires with lugs

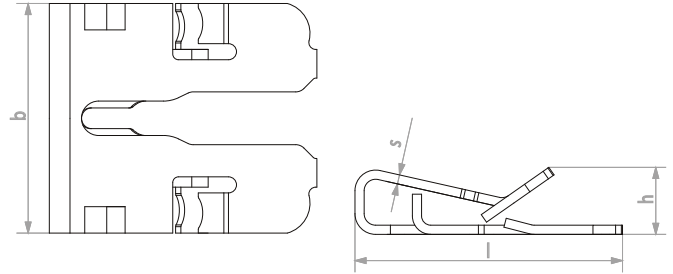


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Grounding Wire Connectors

For electric wires with sheath

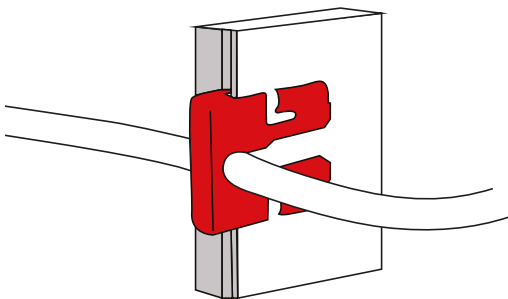


All dimensions in mm, angles in ° / Other dimensions and variants on request

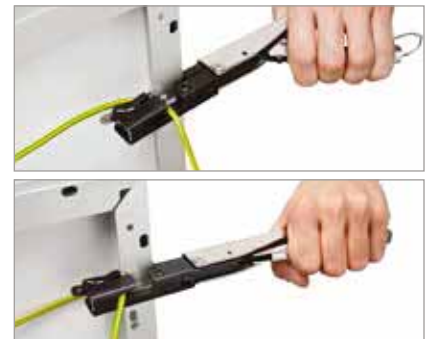
References	Panel thickness (F)	Wire type	Length (l)	Width (b)	Height (h)	Material* thickness (s)	Material*	Carton quantity
220492000	1,2-2,5	H07V-K6	23,3	20,0	5,84	0,8	CS-5410	2 000
222717000	ARaymond installation tool							

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- Use on aluminium frames panels
(For examples: solar panels)
- To ensure conductivity between an Aluminium edge and a grounding wire type H07V-K6
- One single action to cutting the wire insulation, connecting the wire and fixing it to the frame
- For use with AR installation tool, reference 222717000.

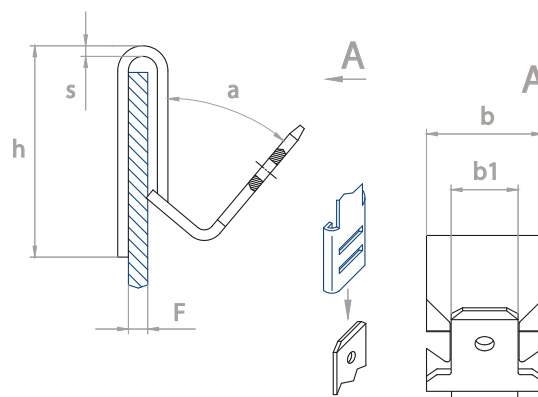


Pictures of the installation of the part on a solar panel, for example



Lugged Grounding Connectors

For electric wires with lugs

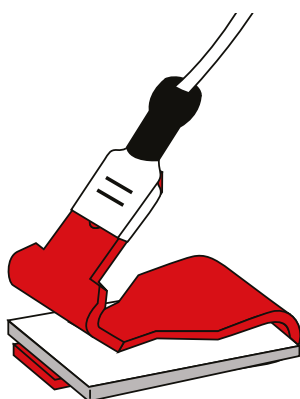


All dimensions in mm, angles in ° / Other dimensions and variants on request

References	Design	Panel thickness (F)	Height (h)	Width (b)	Lug width (b1)	Lug quantity	Lug angle (a)	Material* thickness (s)	Material*	Carton quantity
055625000		0,3-0,5	9	10	6,3	1	40	0,5	CS-3250	10 000
214634001		0,4-1,5	16	11	6,3	1	40	0,8	CS-3250	5 000
014354004		1-2	16	11	6,3	1	40	0,8	CS-3250	5 000
019765003		1-2	16	16	6,3	2	40	0,8	CS-3250	3 000

* For material description see the flap at the end of the catalog

APPLICATION INFORMATION



- For grounding metal panels
- To ensure conductivity between a metal edge and a grounding wire with a lug connector
- For insertion onto the edge by hand or with a mallet
- With sharp teeth to ensure good pull off resistance and a good connection through the surface treatment of panels

A specific need ? Contact us, p.122

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GENERAL TERMS AND CONDITIONS

1 - General information

These General Terms and Conditions apply to the contractual relationship between the supplier ARAYMOND INDUSTRIAL S.L. (hereinafter "Supplier" or "ARAYMOND INDUSTRIAL") and the Customer company (hereinafter "Customer").

The Customer's general terms and conditions expressly agreed by ARAYMOND INDUSTRIAL can apply in addition to the present General Terms and Conditions and the Particular Conditions, insofar as these Customer's general terms and conditions are not in contradiction with these terms and comply with contract law and competition law.

The present General Terms and Conditions apply to all contracts, all orders and all open orders.

It is expressly agreed that all references to Customer's documents on any documents, including on an Internet site, referring to another document, shall not be agreed by ARAYMOND INDUSTRIAL without its written and prior agreement. No website usage agreement or any other click through agreement on a website will have any applicability or binding effect whether or not Supplier clicks on an "ok", "I accept" or similar acknowledgment.

Any derogation to the present General Terms and Conditions shall be confirmed in writing.

The term "writing" means any document drawn up on any paper, electronics medium or by fax.

Conversely any order or any acceptance of the Products constitutes full and entire acceptance of these General terms and all the terms of the ARAYMOND INDUSTRIAL offer including the SPECIFICATIONS. The SPECIFICATIONS mean: (i) the Customer's written requirements specifically accepted in writing by ARAYMOND INDUSTRIAL relating to the Product, or (ii) the ARAYMOND INDUSTRIAL document validated by the Customer containing the characteristics defined as functional with indication of the measurement and testing resources used. The first order from the Customer shall be considered as an acceptance of last SPECIFICATIONS provided by the Supplier.

2 - The contract's scope of application

The following documents are part of the contract in the order shown below:

- (i) The present General Terms and Conditions,
- (ii) The Offer accepted by any means, in particular by acknowledgment of receipt,
- (iii) The SPECIFICATIONS completing the present General Terms and Conditions,
- (iv) The delivery order,
- (v) The invoice.

The following documents are not part of the contract: documents, catalogues, advertising, "Written" fees not mentioned and not expressly agreed by the Parties in the particular conditions.

3 - Method used to place orders

The contract is only valid after express agreement of the order by ARAYMOND INDUSTRIAL in the event that this order will have different terms from the Offer.

The order shall be accepted by any written means.

Any order expressly accepted by ARAYMOND INDUSTRIAL, whether closed or open, will be deemed to entail the Customer's acceptance of ARAYMOND INDUSTRIAL's offer.

Any order strictly in conformity with the Offer could not be the subject of confirmation and will de facto be regarded as accepted.

Any request of the Customer to recover his orders via a portal or any other means shall be subject to the agreement of ARAYMOND INDUSTRIAL. In any event, even though ARAYMOND INDUSTRIAL would have accepted this practice, the Customer will have to make sure that ARAYMOND INDUSTRIAL recovered the aforementioned orders. In this respect, in the absence of verification by the Customer, ARAYMOND INDUSTRIAL will not be held liable.

3.1 - Closed order

The closed order specifies the quantities, prices and timeframes in a closed manner.

3.2 - Open order and Program of delivery

The open order must satisfy the following conditions:

- It is limited in time by the agreed timeframe; and
- It defines the product's characteristics and prices; and
- Minimum and maximum quantities and execution timeframes are stipulated at the time of the open order's conclusion; and
- The pace of delivery orders defines quantities and timeframes that fall within the scope of the open order.

If the corrections to the forecasted estimates expressed by the Customer deviate of more than 20% upward or downward, of the amount of the said estimates, ARAYMOND INDUSTRIAL evaluates the consequences of these variations.

In the event of a variation whether upward or downward, the parties must meet to find a solution to the consequences of this variation, which could modify the contract's balance to ARAYMOND INDUSTRIAL's detriment. In the event of variation upward, ARAYMOND INDUSTRIAL will make all its efforts to fulfil the request of the Customer within quantities and times compatible with its capabilities (production, transport, subcontracting, human capabilities, financial capabilities etc).

3.3 - Amendment of the orders

Any modification to the contract requested by the Customer is conditional upon ARAYMOND INDUSTRIAL's express acceptance.

3.4 - Cancellation of order

The order expresses the Customer's irrevocable consent; the Customer cannot cancel such order without the prior and express consent of ARAYMOND INDUSTRIAL. In this case, the Customer shall indemnify ARAYMOND INDUSTRIAL for all of the expenses incurred (in particular specific equipment, research's costs, labour's and supplying's expenses, tooling) and for all direct and indirect consequences resulting thereof. In addition, the deposit already paid shall remain at ARAYMOND INDUSTRIAL.

4 - The order's preparatory and ancillary work

4.1 - Plans, researches, descriptions

All the technical plans, descriptions, documents or quotations given to the Customer are communicated within the framework of a loan for use whose purpose is the evaluation and the discussion of the commercial offer of ARAYMOND INDUSTRIAL. They will not be used by the Customer for any other purposes. ARAYMOND INDUSTRIAL keeps all of the material and intellectual property rights on the documents loaned. These documents shall be sent back to ARAYMOND INDUSTRIAL upon first request of ARAYMOND INDUSTRIAL.

4.2 - Handing-over of samples

The samples or prototypes transmitted to the Customer are covered by a strict confidentiality. Samples may only be furnished to a third party with ARAYMOND INDUSTRIAL's express authorisation.

4.3 - Conservation of tooling

The expenses incurred by ARAYMOND INDUSTRIAL for the research, the creation of tooling and the adjustment of manufacture shall be the subject of the Customer's financial participation.

Tools which are designed by ARAYMOND INDUSTRIAL and adjusted to its methods and its equipment shall remain ARAYMOND INDUSTRIAL sole property.

The Customer's participation in tooling expense shall not entail any transfer of material or intellectual property rights or know-how.

5 - Characteristics and status of products ordered

5.1 - Usage of the products

The delivered products shall comply with the SPECIFICATIONS at the time of delivery in accordance with the Incoterms (see Article 7.5 - Reception) and with the technical regulation and the technical standards as mentioned in the SPECIFICATIONS.

The Customer is responsible for ensuring that the product is used in normal foreseeable conditions of use and in accordance with safety and environmental legislation in effect at the place of use, as well as

with industry practice.

The Customer is solely responsible for determining whether such product is fit for a particular purpose and suitable for Customer's method of application.

Unless express provision mentioned on the product, the delivered product shall not be intended to be put in use for aeronautical purpose.

5.2 - Packing of the products

Packages not consigned shall not be taken back by ARAYMOND INDUSTRIAL. The Customer undertakes to dispose of packages in accordance with local environmental legislation.

5.3 - Transmission of the information concerning the product

The Customer undertakes to transmit to any sub-buyer any information that is useful to using the product. ARAYMOND INDUSTRIAL shall be responsible for the product's traceability, up to the date of delivery to the Customer.

6 - Intellectual property and confidentiality

6.1 - Intellectual property and know-how of the documents and the products

All drawings, know-how, designs, specifications, inventions, devices, developments, processes, copyrights, trademarks, patents and applications therefore, and other information or Intellectual Property whether registered or not, disclosed, handed over or otherwise provided to the Customer by the Supplier and all rights therein shall be collectively referred as "Intellectual Property" of the Supplier. Intellectual Property will remain the property of Supplier and will be kept confidential by Customer in accordance with these terms and conditions. Customer shall have no claim to, nor ownership interest in, any Intellectual Property and such other information, in whatever form and any copies thereof, shall be promptly returned to Supplier upon written request from Supplier. Customer acknowledges that no license or rights whether express or implied of any sort are granted to Customer hereunder in respect of any Intellectual Property, other than the limited right to use the Supplier's proprietary Products purchased from Supplier. Unless specifically provided for and itemized for payment as agreed to by Supplier, the sale of Products or Services by Supplier to Customer does not include any design, development or related services associated with the Intellectual Property of the Supplier.

Mentioning, incorporating of the Customer's title block, or any other Customer's detail in the drawing shall not be construed as any assignment whatsoever to the Customer of any IP and/or know-how rights attached the Drawing and the norms shown in the Customer's title block shall not in any case represent, or be interpreted as an endorsement by ARAYMOND INDUSTRIAL.

6.2 - Confidentiality

The parties enter into with one another a general obligation of confidentiality concerning the components (documents on any media whatsoever, discussion reports, plans, exchanges of computerised data, etc.) exchanged within the framework of the contract preparation and implementation.

However the following information shall not be subject of an obligation of confidentiality:

- Information belonging to the public domain at the time of the conclusion of the contract
- All information that is already lawfully known by a Party prior to the conclusion of the contract, or prior to the preliminary works to the conclusion of the contract.

These stipulations shall not impede ARAYMOND INDUSTRIAL's option to use its know-how and its own technology developed during the contract, in the absence of a specific agreement concluded between the parties. These provisions shall not impede ARAYMOND INDUSTRIAL's option to protect his achievements.

6.3 - Guarantee in the event of infringement

When design, drawing, technical information ("Data") is provided by the Customer, the Customer guarantees that such Data and their use do / will not infringe third party intellectual property rights or know-how., Customer further warrants that ARAYMOND INDUSTRIAL can use it freely without infringing a contractual or legal obligations.

The Customer shall hold ARAYMOND INDUSTRIAL harmless from direct or indirect consequences of any civil liability proceedings or criminal liability proceedings resulting from infringement or unfair competition proceedings.

When Intellectual Property rights are owned by Supplier, it warrants that the Parts manufactured under the contract do not directly infringe any third party intellectual property rights published at the time of the Supplier's offer and in the place of production. If a claim under this section results, or is likely to result, in an injunction or other order that would prevent Supplier from supplying or Customer from using Parts for their intended purpose, Supplier will at its option and expense either (i) secure a license of the Intellectual Property Right that permits Supplier to continue supplying the Parts to Customer, or (ii) modify the Parts so that they become non-infringing, or (iii) replace the Parts with non-infringing but practically equivalent Part.

Supplier will have no liability under this section unless Customer provides Supplier with full information, cooperation, and assistance regarding, and authority to defend, a claim covered by this section. Supplier will have no liability under this clause if and to the extent that a claim of infringement is based on (1) a Part modification made by Customer or a third party, (2) a Part modification made by Supplier at Customer's request, (3) use or interconnection by Customer of the Part in combination with other products not made or sourced by Supplier.

7 - Delivery, transport, inspection and acceptance of products

7.1 - Delivery timeframe

The delivery timeframe shall commence as of the latest of the following dates:

- the date of the order's acknowledgment of receipt,
- the date of receipt of all of the materials, equipment, tools, and execution details due by the Customer,
- the fulfilment date of prior contractual or legal obligations due by the Customer.

The agreed delivery timeframe is an important element which is specified in the Offer. However, timeframes stipulated are given for information purposes only and can be reconsidered if circumstances that are beyond ARAYMOND INDUSTRIAL's control occur.

7.2 - Delivery terms

The risks are transferred to the Customer upon delivery (Legal Acceptance), without prejudice to ARAYMOND INDUSTRIAL's right to rely on the benefit of the reservation of title clause or to make use of its right of retention.

The delivery is carried out in accordance with the Incoterms (INCOTERMS 2010).

In the event that the Customer has the initiative of the transport and bears the transport's cost, the Customer shall be responsible for all financial consequences for direct action of the carrier against ARAYMOND INDUSTRIAL.

7.3 - Transport, customs, insurance

Unless otherwise agreed, all operations involving transport, insurance, customs, maintenance, and bringing to the site shall be carried out and paid by the Customer, at its own risk. The Customer shall be responsible for the Legal Acceptance and for exercising, if need be, remedies against carriers, even if shipping has been done carriage free.

7.4 - Checking of the products

The Customer must, at its expense and under its responsibility, check or make check the product's conformity to the SPECIFICATIONS Drawing at the delivery time.

Any claim based on defects of quantity, quality or internal defects of the products, shall be made in a written notice to ARAYMOND INDUSTRIAL within the deadlines specified in Articles 336 and 342 of the Commercial Code ARAYMOND INDUSTRIAL.

7.5 - Reception

The Customer is required to carry out the Legal Acceptance of the Products by which it acknowledges said Product's conformity to the SPECIFICATIONS Drawing. The Legal Acceptance is deemed as recognition of the absence of visible defects.

GENERAL TERMS AND CONDITIONS

7.6 - Handling and storage

The Customer shall respect the recommendations relating to storage and handling including, but not limited to, reconditioning of pallets, change of conditioning by the non-utilization of the products fallen on the ground, or the inventory turnover to ensure the availability of the last index in force of the modification of the Products.

8 - Case of hardship and force majeure

8.1 - Clause of hardship

The Parties recognize that the ARAYMOND INDUSTRIAL Offer constitutes a reasonable and equitable basis of their co-operation. If the data on which this contract is based are modified with the result that ARAYMOND INDUSTRIAL encounters serious and unforeseeable difficulties (for example but not limited to the following, significant increases in raw material's prices ...), then ARAYMOND INDUSTRIAL, after prior written notification, will make the adjustments, which are necessary in consequence of the circumstances and which were not reasonably foreseeable at the time of the Offer, in order for the contract to be balanced.

8.2 - Force majeure

The occurrence of an event of force majeure will lead to the suspension of ARAYMOND INDUSTRIAL's obligations with regard to the Customer. However ARAYMOND INDUSTRIAL will inform the Customer as soon as possible of the occurrence of a case of force majeure. ARAYMOND INDUSTRIAL will endeavour to remedy the situation, which has thus arisen, as soon as reasonably possible. It is expressly agreed that the Parties shall meet in order to agree as to the postponement of ARAYMOND INDUSTRIAL's obligations, which are affected by the event of force majeure, and to the rescheduling of the instalment schedule. Should this event continue for a period longer than 10 calendar days, and in the absence of an agreement 15 days following notice of the occurrence of the event of force majeure, either Party may terminate the contract without prior notice. Pursuant to this contract, it is expressly agreed that events of force majeure shall be, in particular: the occurrence of incidents, as upheld by effective legislation or by case law, but also strikes or other blocking labour unrest, paralysing bad weather, blocking road accidents or incidents, fires, shortage of raw materials, or generally, the fact, in spite of all due care taken, of not being able to make the delivery in accordance with the instalment dates as a result of a ban on, or non-receipt, of carriage authorisations by the relevant authorities for all the plants concerned by the issuance.

9 - Establishment of the price

The prices are indicated in the Offer. They are invoiced in the Offer's conditions.

The price corresponds exclusively to the products and services specified in the Offer.

The payments are made in Euros unless specific provisions in the contract.

10 - Payment

10.1 - Term of payment

Unless otherwise expressly agreed in a specific agreement, payments are made in accordance with the payment terms as stated in the Offer. Any negotiation of compensation due to the change of payment term is prohibited.

The dates of payment agreed upon in the contract shall never be unilaterally reconsidered by the Customer for whatever reasons, even in the event of litigation.

The advance payments are made without discount, unless otherwise agreed in a specific agreement.

10.2 - Delay of payment

Any delay in payments will lead to the application of interests which is equal to the interest rate set out in Article 7 of Ley 3/2004 of December the 29th.

At ARAYMOND INDUSTRIAL's sole discretion, any delay in payments within due date will lead ARAYMOND INDUSTRIAL to withhold shipment of products, institute new terms of payment, cancel any order and ARAYMOND INDUSTRIAL will not be liable for direct or indirect consequences arising from such actions. In addition, ARAYMOND INDUSTRIAL shall be entitled to obtain reasonable compensation from the Customer for any recovery costs exceeding that fixed sum and incurred due to the Customers' late payment.

10.3 - Modification of Client's situation

In the event of deterioration of the Customer's situation noticed by a financial institution and attested by a significant delay in payments or when the financial position differs appreciably from the given data, the delivery will have place only in consideration of renegotiated terms of payment.

In the event of delay in payments, ARAYMOND INDUSTRIAL has a right of retention on the manufactured products and its accessories.

In the event of sale, of transfer, of handing-over in security or in the event of capital invested of his goodwill, or of a significant part of his assets or of his material by the Customer, also in the event that the bill did not return with acceptance within the seven days following its sending, ARAYMOND INDUSTRIAL reserves the right without injunction:

- to pronounce the termination of the contractual term and consequently the immediate payability of the sums still due
- to suspend all shipments
- to note on the one hand the annulment of all the current contracts and to practice on the other hand the retention of the received down payments, the held tooling and parts, until the determination of the possible indemnity.

10.4 - Compensation of the payments

The Customer undertakes not to engage into any illicit debiting or crediting or not to invoice ARAYMOND INDUSTRIAL for any amount that has not been expressly acknowledged by the latter as

being its responsibility. Any automatic debit shall constitute an outstanding payment and shall give rise to the application of the provisions of Article 10.2 with respect to delay in payments.

10.5 - Reservation of title

ARAYMOND INDUSTRIAL keeps full ownership of the properties that are the subject of the contract until the effective payment of the entire price in principal and ancillary amounts. The non-payment of any of the due date could lead to the claim of these products. However, as of delivery, the Customer assumes liability for any damages that these properties could suffer or cause.

11 - Responsibility/Liability

11.1 - Definition of ARAYMOND INDUSTRIAL's liability

ARAYMOND INDUSTRIAL's responsibility is strictly limited to complying with the SPECIFICATIONS Drawing.

Indeed, the Customer, as a professional in his field of competency, shall be able to define with precision the specifications according to his own industrial data or data of his Customers and consequently shall be able to appreciate that the SPECIFICATIONS fully corresponds to its expectations.

ARAYMOND INDUSTRIAL shall not be liable:

- for defects resulting from materials furnished by the Customer,
- for defects resulting from design carried out or recommended by the Customer,
- for defects that result partially or completely from normal wear and tear of the product, damages or accidents attributable to the Customer or to a third party,
- in the case of abnormal or atypical use or use that is inconsistent with the product's intended use, industry practice, or ARAYMOND INDUSTRIAL's advice or recommendations, in case of loss of traceability of the product by the Customer.
- If the Customer refuses to participate in a product recall, whether initiated internally or imposed by authorities, it will indemnify and hold ARAYMOND INDUSTRIAL harmless against any expense, claim or legal action resulting from any delay or failure to conduct the recall.

11.2 - Limitation of ARAYMOND INDUSTRIAL's liability

ARAYMOND INDUSTRIAL's liability shall be limited to direct material damages caused to the Customer that result from fault attributable to ARAYMOND INDUSTRIAL in implementing the contract.

ARAYMOND INDUSTRIAL shall not be required to compensate harmful consequences due to the faults of the Customer or of third parties in connection with the implementation of the contract.

ARAYMOND INDUSTRIAL shall not be liable for damages resulting from the Customer's use of technical documents, information or data from the Customer or imposed by the latter. Under no circumstances will ARAYMOND INDUSTRIAL be required to compensate immaterial or indirect damages, included but not limited to: losses in productivity, losses of chance, losses of benefit, commercial damage, shortfall, punitive damages.

If penalties and compensations planned were agreed by mutual agreement, these penalties and compensations have the value of fixed compensation, are in full discharge and are exclusive of any other sanction or compensation.

ARAYMOND INDUSTRIAL's civil liability, all causes taken together except for personal injuries and for gross misconduct liability, is limited to the amount of the selling price of the batch to which belongs the non-conform product.

The Customer guarantees waiver of remedy by its issuers or third parties in a contractual relationship with it, against ARAYMOND INDUSTRIAL or its insurers that is above and beyond the aforementioned limits and exclusions.

Notwithstanding anything contained in this agreement or any other document, Supplier's liability shall not exceed insurance coverage taken by the Supplier.

12 - Termination

12.1 - Supplier's right to terminate for Breach

Supplier reserves the right to terminate all or any part of the order, without any liability of Supplier to Customer or any other third party if Customer repudiates, breaches, or threatens to breach any of the terms.

12.2 - Supplier's right to terminate for Convenience

In addition to any other rights of Supplier to terminate all or any order, Supplier may, at its option, immediately terminate all or any part of the order at any time and for any reason by giving written notice to Customer.

13 - Amicable resolution of disputes

All disputes, controversies or differences that may arise between the parties hereto, out of or in relation to or in connection with contractual relationship or for the breach thereof, shall be settled amicably through negotiations in good faith.

14 - Applicable law - Attribution of jurisdiction

In the absence of amicable agreement, it is expressly agreed that any dispute relating to the contract shall be subjected to the Spanish law and shall be of the exclusive competence of the commercial Court of ARAYMOND INDUSTRIAL's headquarter, even in the event of appeal and of plurality of defendants.

15 - Miscellaneous

In the event that any clause of these Terms and Conditions or other elements of the contract should be or become invalid this shall not affect the validity of the remaining clauses.

None of the terms or conditions of these Terms and Conditions shall be deemed or construed to have been waived by any Party unless such waiver is set forth in a written instrument properly signed by such Party.

DISCLAIMER

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