



# 1 PRODUCT 10 STRONG POINTS

1

**Thermal insulation:** constant and continuous in all duct sections. Special closed-cell insulation guarantees low thermal conductivity and limit the risk of condensation.

2

**Friction loss:** the low number of flanges and limited surface roughness keep linear friction losses at very low levels.

3

**Airtight seal:** airtightness of P3ductal ducts is eight times more than traditional ducts

4

**Energy saving:** perfect thermal insulation and optimum airtight seal allow for maximum exploitation of air handling unit capacity, increasing efficiency and reducing operating costs.

5

**Hygiene and air quality:** the use of aluminium for the internal surfaces of the ducts ensures hygiene and cleanliness. The problem of ageing of the insulation and consequent release of particles is non-existent.

6

**Safety:** P3ductal ducts have a **low participation in fire**, do not drop and smokes have a reduced opacity and toxicity. P3ductal is in conformity with the requirements of the most restrictive international regulations.

7

**Light weight:** the very light weight allows a reduction of weight on the structures, supporting points, workmanship costs and materials necessary for the installation.

8

**Silent operations:** the sandwich structure (aluminium – insulating material – aluminium) guarantees a **good acoustic behaviour**. **Vibration and reverberation are stopped by the insulating material**, contributing to a higher comfort in the environment where P3ductal is installed.

9

**Duration:** the outer aluminium coating coupled with the insulating material provides sturdiness, rigidity and good resistance to corrosion, erosion and deformation even in special applications.

10

**Construction easiness:** possibility of manufacturing ducts in the work shop or directly at job site with considerable advantages on transport costs.

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automatic equipment



job site equipment

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## Each phase has its colour

1. plotting  
2. cutting  
3. bending  
4. gluing  
5. duct closing  
6. accessories application  

for single-phase focus see automatic equipment introduction pages (page 18) and the introduction to the workshop equipment (page 30)

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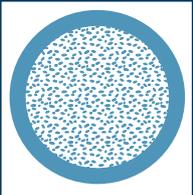


"L'Isola di Peter Pan" complex - Avellino - Italy

**[ PANELS ]**

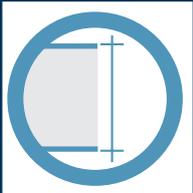
# [ THREE CHARACTERISTICS, MANY PANELS, ONE SOLUTION ]

## DENSITY



P3ductal ducts are produced with a density range comprehended between 45 and 52 kg/m<sup>3</sup>. In this range the best physical-mechanical performances are verified (referring to rigidity, thermal conductivity, dimensional stability, etc.)

## THICKNESS



Nominal production thicknesses are 20 or 30 mm depending on the insulating levels required, working pressure or the possible use in outdoors applications.

## SHEETS



Aluminium sheets used for the coating depend on the thickness and finishing, nominal thickness are 80 and 200 my while the finishing can be smooth or embossed.

### The P3 commitment: clean air... continuously

In an era in which quality is synonymous of progress, P3 has always tried to improve its products to conform them to the growing requirements of the market. Piral HD Hydrotec panel is the fruit of this effort; it is in fact produced by P3 using, the international patent EP 1115771 B1, for which P3 has obtained exclusive rights, that allows the **countersigning of Hydrotec panel with the mark ODP=0** (ozone depletion potential = 0), as to say not harmful for the ozone. Environmental compatibility is ensured by the **use of water as the foaming agent instead of cfc and hcfc or the hydrocarbons usually used in insulation foams**, responsible for the destruction of the ozone layer of the atmosphere.



### Hydrotec panel conformity to European standards

P3 preceded the application of European Standards regulating the use of CFC and HCFC gas that banished the use of stiff polyurethane (PUR) as of January 1st, 2003 by as much as 3 years.

The **water-based foaming process eliminates both ODP and VOC** (the release of volatile organic substances into the atmosphere during the production of the panel and its working life) and **makes the "greenhouse effect" or GWP (global warming potential) insignificant with a value of 0.0001.**

**P3ductal respects the environment with water**

### Hydrotec, innovative technology!

When reaching the atmosphere, chlorinated gases like CFC and HCFC are struck by ultraviolet radiation that leads to the release of radical chlorine through photodissociation. The radical chlorine then reacts with the ozone and causes its destruction. Traditional polyurethane foaming technology exploits the heat of the exothermic reaction between polyol and isocyanate to evaporate a liquid with a low boiling point previously added to the mixture. Most of these gases remain trapped inside the cellular structure of the polyurethane polymer being formed. With the passage of time, the composition of the gas contained in the cells may vary due to the natural tendency to reach equilibrium with the outdoor surroundings. This process is significantly influenced by the type of external facing given to the foam and its density, operating temperature, formulation, and the type of gas, etc. In the new P3 technology, foaming is

obtained only by the gas generated through the reaction between isocyanate and water during the polyol/isocyanate reaction process with the consequent formation of the polyurethane chain just the same.

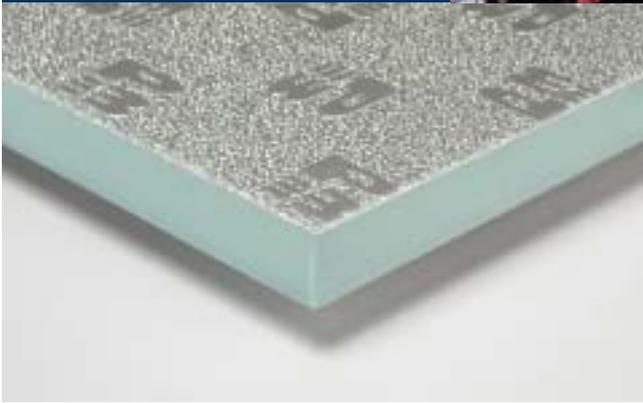
### Hydrotec quality pays off all the time

The exclusive water-based foaming technology developed by P3 permits the creation of **an ecologically-compatible panel** in conformity with European standards while **significantly reducing the cost of the product at no expense to the fundamental features and advantages of P3 panels**: compared to traditional P3 panels, the thermal insulation capacity  $\lambda_{10^{\circ}\text{C}} = 0,024 \text{ W/(m } ^{\circ}\text{C)}$  remains the same, as do **dimensional stability, adhesion, workability and the elevated percentage of closed cells**. Even **Fire reaction** is left unchanged, and with **Class 0-1 rating** ranks among the best as prescribed by D.M. 26/6/84 and D.M. 31/3/03



**code 15HP21**

Piral HD Hydrotec Panel

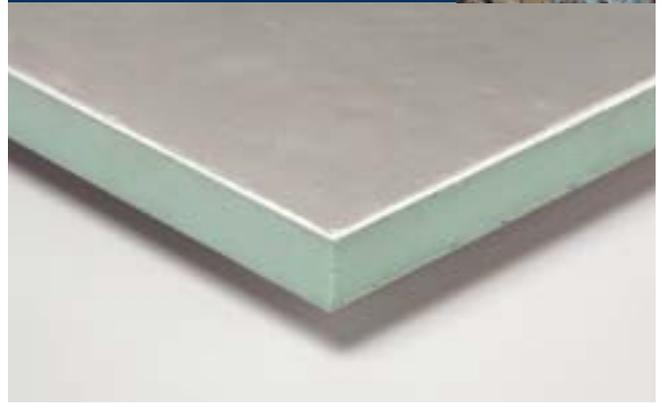


Polyurethane foam panel with  $52 \pm 2 \text{ Kg/m}^3$  density, 20 mm thickness, coated on both sides with 80-micron thick aluminium foil. The aluminium foil is embossed on both sides and coupled with a  $2 \text{ g/m}^2$  layer of corrosion-resistant polyester paint. This panel is especially suited for use in air-conditioning and heating system installations. 48 m<sup>2</sup> pack.

Panel dimension	4000 x1200 mm	Panel thickness	20,5 mm
Foam density	$52 \pm 2 \text{ kg/m}^3$	Aluminium thickness	80/80 micron
Thermal conductivity	$\lambda_v = 0,022 \text{ W/(m}^\circ\text{C)}$	Aluminium foil	embos./embos.

**code 15HL21**

Piral HD Hydrotec smooth panel

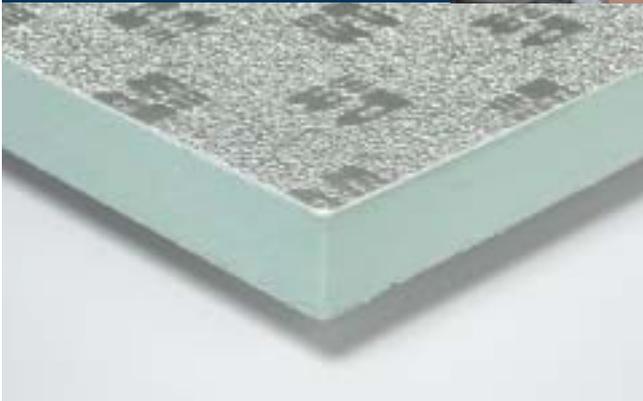


Polyurethane foam panel with  $52 \pm 2 \text{ Kg/m}^3$  density, 20 mm thickness, coated with 80-micron thick aluminium foil. The aluminium foil is embossed on one side and smooth on the other and coupled with a  $2 \text{ g/m}^2$  layer of corrosion-resistant polyester paint. This panel is especially suited for use in air-conditioning and heating system installations where strict hygiene standards are required. 48 m<sup>2</sup> pack.

Panel dimension	4000 x1200 mm	Panel thickness	20,5 mm
Foam density	$52 \pm 2 \text{ kg/m}^3$	Aluminium thickness	80/80 micron
Thermal conductivity	$\lambda_v = 0,022 \text{ W/(m}^\circ\text{C)}$	Aluminium foil	smooth./embos.

**code 15HS31**

Piral HD Hydrotec Panel Outsider



Polyurethane foam panel with  $48 \pm 2 \text{ Kg/m}^3$  density, 30 mm thickness, coated with  $200\mu$  thick aluminium on one side and  $80\mu$  on the other. The aluminium foil is embossed on both sides and coupled with a  $2 \text{ g/m}^2$  layer of corrosion-resistant polyester paint. The combination of the panel's overall thickness (30 mm), the Gum Skin waterproof coating and the  $200\mu$  thickness of the external aluminium coating, gives an extraordinary rigidity and mechanical resistance against accidental damages which makes the panels suitable for outdoor installations.

Panel dimension	4000 x1200 mm	Panel thickness	30,5 mm
Foam density	$48 \pm 2 \text{ kg/m}^3$	Aluminium thickness	200/80 micron
Thermal conductivity	$\lambda_v = 0,022 \text{ W/(m}^\circ\text{C)}$	Aluminium foil	embos./embos.

**code 21GS01**

Gum skin waterproof coating



Gum Skin is a rubbery waterproofing agent with elastomeric properties, UV radiation resistance and excellent freezing/thawing performance. The special fungicide, bactericide and internal-action plasticization agents added ensure that the product remains unaltered over the years even in conditions of average industrial pollution. Gum Skin is supplied ready to use. Yield:  $500 \div 800 \text{ cc/m}^2$ . Application and cross-linking temperature: from  $+5$  to  $+35 \text{ C}^\circ$ . Standard colour: white; other colours available on request. Packaging: 15 litre drum.

code 15HE21



Piral HD Hydrotec panel coupled with polyester film



Polyurethane foam panel with  $52 \pm 2 \text{ Kg/m}^3$  density, 20 mm thickness, coated on both sides with 80-micron thick aluminium foil. The aluminium foil is embossed on both sides and coupled with a 13-micron thick corrosion-resistant polyester layer. This panel is especially suited for use in air-conditioning and heating system installation in particularly aggressive atmospheres (cheese seasoning rooms, salty air, swimming pools, etc.). 48 m<sup>2</sup> pack.

Panel dimension	4000 x1200 mm	Panel thickness	20,5 mm
Foam density	52±2 kg/m <sup>3</sup>	Aluminium thickness	80/80 micron
Thermal conductivity	$\lambda_v = 0,022 \text{ W/(m }^\circ\text{C)}$	Aluminium foil	embos./embos.

code 15HP31



Piral HD Hydrotec Panel Big Size



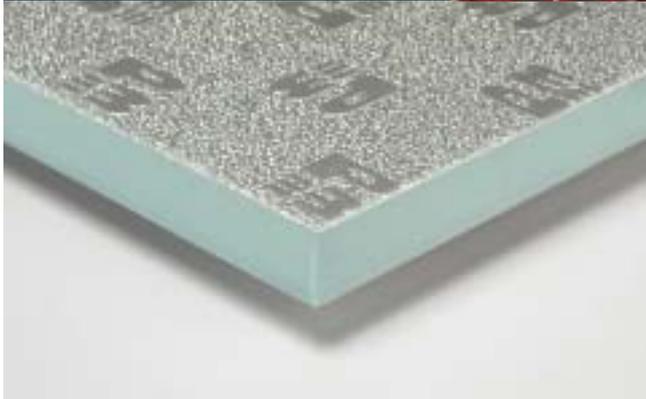
Polyurethane foam panel with  $48 \pm 2 \text{ Kg/m}^3$  density, 30 mm thickness, coated with 80-micron thick aluminium foil. The aluminium foil is embossed on both sides and coupled with a 2 g/m<sup>2</sup> layer of corrosion-resistant polyester paint. The panel's overall thickness (30 mm), gives to the panel an extraordinary rigidity which makes the panels suitable for the construction of big size ducts reducing the number of reinforcements needed.

Panel dimension	4000 x1200 mm	Panel thickness	30,5 mm
Foam density	48±2 kg/m <sup>3</sup>	Aluminium thickness	80/80 micron
Thermal conductivity	$\lambda_v = 0,022 \text{ W/(m }^\circ\text{C)}$	Aluminium foil	embos./embos.

code 15HB21



Piral HD Hydrotec Panel



Polyurethane foam panel with  $48 \pm 2 \text{ Kg/m}^3$  density, 20 mm thickness, coated on both sides with 60-micron thick aluminium foil. This coating is protected on one side with 2 g/m<sup>2</sup> antioxidant lacquer based on polyester and on the other by thermo-welding lacquer based on vinyl resin. This panel is especially suited for use in air-conditioning and heating system installations. 48 m<sup>2</sup> pack.

Panel dimension	4000 x1200 mm	Panel thickness	20,5 mm
Foam density	48±2 kg/m <sup>3</sup>	Aluminium thickness	60/60 micron
Thermal conductivity	$\lambda_v = 0,022 \text{ W/(m }^\circ\text{C)}$	Aluminium foil	embos./embos.

code 32SC02

Sturdy cardboard packaging





Coop Distribution Center - S. Vito al Tagliamento (PN) - Italy



**[ AUTOMATIC EQUIPMENT ]**

# [AUTOMATIC WORKSHOP]

## CONSTRUCTION PHASES with automatic equipment



### 1 • plotting

In this phase, the perimeter of the single piece that will compose the finished duct (linear or fitting) after cutting and assembly is plotted on the panel.



### 2 • cutting

Using the appropriate tools (manual or automatic) in this phase, the single pieces to be used in the fabrication of the duct are cut from the panel.



### 3 • bending

In this phase (required only for the production of duct fittings), indentations are applied to the piece of panel allowing the panel to be adapted to the shapes of the finished duct.



### 4 • gluing

During gluing, all the pieces produced above are assembled with the use of special glues and the finished duct takes shape.



### 5 • closing

In this phase, the duct is trimmed and finished through pressing and taping.



### 6 • accessories application

Using specific tools and glues, the section bars required are applied to the finished duct. When the duct is installed, these section bars permit easy connection of the single pieces for the completion of the air distribution system.



• BravoP3 software  
(code 22PT09)

### 1 • plotting



For the correct construction of duct by means of the automatic equipment it is necessary to have, further to the machinery, also a working table with matting (see page 34), squares (see page 34), rulers (see page 35), a tool box (see page 32)



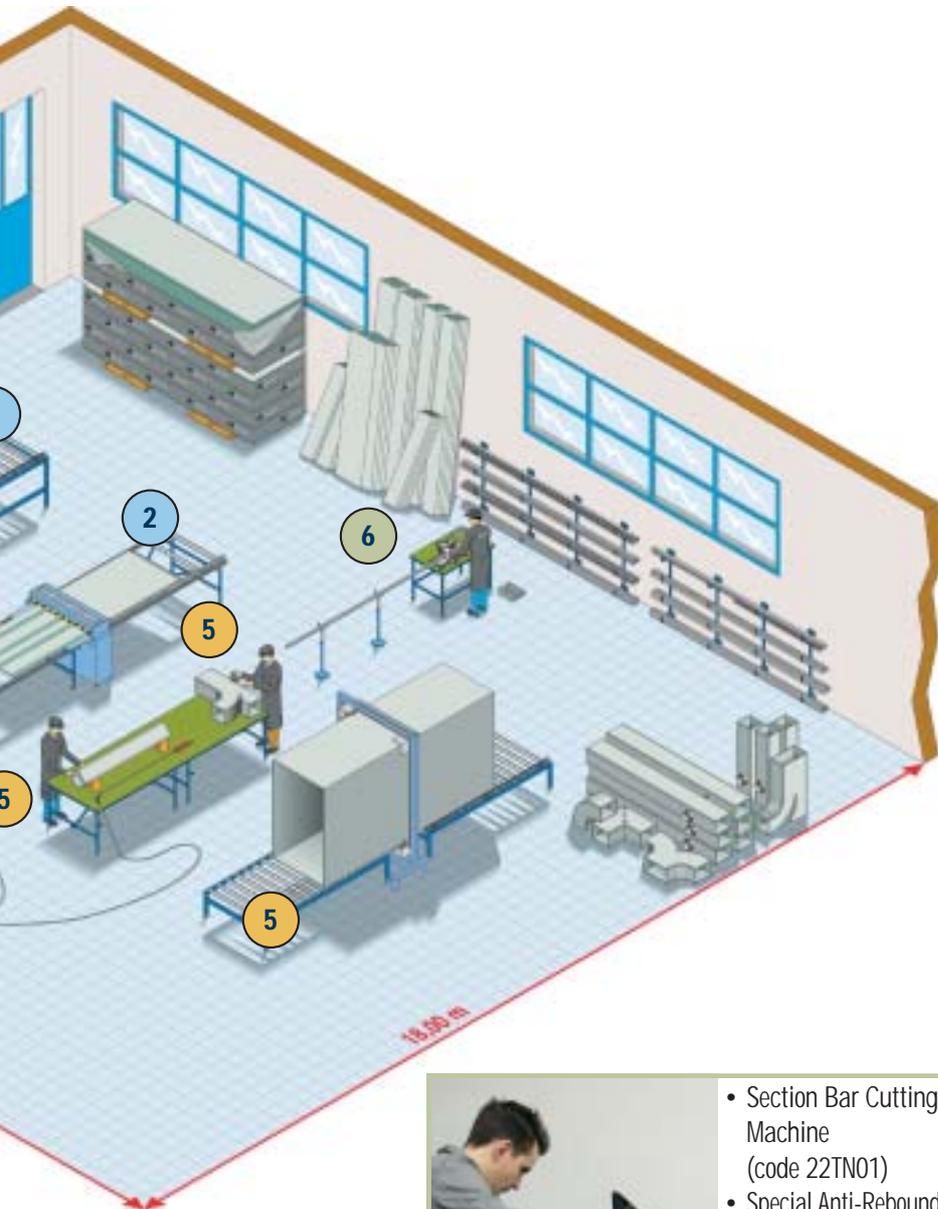
- Computerized Cut System Machine (CAM) (code 22PT01)
- Automatic Straight Cut Machine (code 22LN30)

2 • cutting



- Electric Plate Bending Roll width 1200 mm (code 22CL05)
- Electric Plate Bending Roll width 2000 mm (code 22CL06)

3 • bending



- Hydroglue spray system (code 22IS01)

4 • gluing



- Ducts closing machine (code 22MC01)



- Soft spatula (code 22SL01)
- Adjustable tape marker (code 22SG01)
- Cutter (code 22CT01)



- Silicone pneumatic rifle (code 22PS05)

5 • closing



- Section Bar Cutting Machine (code 22TN01)
- Special Anti-Rebound Hammer (code 22ML01)
- Plier For Invisible Flange Joint (code 22PN01-02)

6 • accessories application





## code 22PT01 COMPUTERIZED CUT SYSTEM MACHINE

The P3ductal automatic cut system allows the plotting of the cutting increasing its velocity and precision. The plotter, furthermore, allows the numbering and identification of the parts to bend thanks to a made on purpose marking unit with a pencil. For a correct aspiration of dust generated by the cutting, the plotter has to be connected with a made on purpose aspiration plant (code 22FC01). *(More details in technical sheet).*

### Standard supply 22PT01

- 22PT02 - computerized cut machine
- 22PT04 - floppy disk drive
- 22PT08 - milling 45° and 90°
- 22PT09 - BravoP3 software
- 22PT16 - input table



Focus on cutting output panel

## ACCESSORIES AND COMPLEMENTS



**code 22FC01 - DUST EXHAUST SYSTEM** Assures the complete aspiration of dust generated by the plotter cutting. Residuals are automatically stored in made on purpose sacks directly disposable. *(More details in technical sheet).*



**code 22PT08 - MILLING CUTTER MACHINE 45° and 90° cutting**



**code 22PT15 - SPARE DRILL**



**code 22PT16 - INPUT TABLE FOR COMPUTERIZED CUT SYSTEM MACHINE**

It makes the supply of the cutting machine with the P3ductal panels easier .



# cutting - straight ducts



cutting

22

## code 22LN30 AUTOMATIC STRAIGHT CUT MACHINE

Automatic panel cutting machine permits 45° inclined cuts, 90° cuts or double 45° cuts on panels of both 20 and 30 mm thickness. A 4 m long duct can be created ready for gluing with just one single passage.

The machine is equipped with both a panel entry roller system and a panel outlet roller system.

The roller lifting and lowering system permits rapid shifting from 20 to 30 mm panel width. The locking of the planes for the cutting of both the 20 and 30 mm thick panels permits rapid positioning to the measurement required. *(More details in technical sheet).*

## ACCESSORIES AND COMPLEMENTS



### code 22LN31 - UNIVERSAL JACK PLANE FOR AUTOMATIC STRAIGHT CUT MACHINE

Permits 45°, 90° or double 45° inclined cuts



### code 22PL05 - 30 mm JACK PLANE SPARE BLADES



Focus on cut panel exiting the automatic straight cut machine



## code 22CL05 ELECTRIC PLATE BENDING ROLL 1200 WIDTH

Automatic bending roll in painted aluminium complete with sturdy base.

Equipped with reference square for quick and perfectly uniform and circular bending. Toothed roller permits perfectly equidistant reinforcement ribbing.

Equipped with two motors: one for the lifting of the toothed roller and one for feed. The electric plate bending roll has been designed for the shaping and bending of 20 mm or 30 mm P3ductal sandwich panels faces with aluminium sheet on both sides at either different radii or with perfect circumference.

*(More details in technical sheet).*



## code 22CL06 ELECTRIC PLATE BENDING ROLL 2000 WIDTH



Focus on bending with electric plate bending roll



# gluing



## code 22IS01 HYDROGLUE SPRAY SYSTEM

The Hydroglue spray system is composed of two tanks, one with a wide mouth for the Hydroglue and one with a narrow mouth for the "Hydrocat" catalyst, and a spray-gun. The spray-gun is built in appropriate materials for contact with both Hydroglue and Hydrocat catalyst in corrosion-proof aluminium provided with hard anodised oxidation treatment and stainless steel respectively. The spray-gun is equipped with special regulators for easy adhesive and catalyst flow variation. The spray-gun also features a particular nozzle that permits the adjustment of spray pattern. The external mixing of Hydroglue and Hydrocat catalyst occurs during the atomisation phase. *(More details in technical sheet).*



## ACCESSORIES AND COMPLEMENTS



### code 21CL10 - P3DUCTAL HYDROGLUE

New bi-component water-based adhesive developed specifically for the gluing of Piral HD Hydrotec panels. The advantages of using Hydroglue are total absence of solvents, elevated thermal resistance, non-flammability and easy and fast application (application with spray system and not with brush). 10 kg pack.



### code 21CL11 - HYDROCAT, HYDROGLUE CATALYST

Catalyst for using with Hydroglue. 10 kg pack.



## code 22MC01

**DUCTS CLOSING MACHINE** The duct closing machine allows a precise and constant pressing on the edges of straight ducts throughout their length. This allows the rapid obtaining of a perfect adhesion between glued parts compared to the normal operations performed by means of the use of the rigid spatula.  
*(More details in technical sheet).*



Focus on closing automation and remote control



## closing - taping



### code 22SG01 ADJUSTABLE TAPE MARKER



### ACCESSORIES AND COMPLEMENTS



#### code 21NS02 - P3DUCTAL 75 mm ALUMINIUM TAPE

Self-adhesive aluminium tape to use in the construction of the ducts.

Supply: 50 meters roll and 16 rolls pack.



#### code 21NS01 - 75 mm ALUMINIUM TAPE

Self-adhesive aluminium tape to use in the construction of the ducts.

Supply: 50 meters roll and 4 rolls pack

### code 22SL01 SOFT SPATULA



#### code 22CT01 - CUTTER

With retractable blade and lock device, this cutter is useful for cutting the aluminium tape.



#### code 22LM01 - CUTTER SPARE BLADES



## code 22PS05

### SILICONE RIFLE

Gun for the easy application of the silicone sealant on ducts of considerable length. It is provided with a special fitting that allows the inclination of the nozzle, directing the silicone on the edges of the duct and it presents, furthermore, a made on purpose guide that makes it easier the use within the duct itself.

A tongue in harmonic steel, adjustable in the length allows the application of the sealant in a uniform way.

*(More details in technical sheet).*

## ACCESSORIES AND COMPLEMENTS



### code 21SL01 - SEALANT ALUMINIUM COLOUR

Single-component silicone sealant with acetic reaction applied in a semi-dense paste that in just a few hours transforms into a rubbery substance resistant to atmospheric agents and high and low temperatures alike. 280 cc stick. Product subject to expiration.

### code 21SL02 - SPECIAL SEALANT, SANITARY USE, WHITE COLOUR

Single-component rapid-polymerisation silicone sealant with an efficient fungicide that prevents mildew formation. This product is indicated in the construction of ducts that convey particularly humid air. Product subject to expiration.





# accessories application



accessories application

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## code 22TN01 - SECTION BAR CUTTING MACHINE

Machine for the cutting of aluminium or plastic section bars.

## code 22ML01 - ANTI REBOUND HAMMER



## code 22PN01 - INVISIBLE FLANGE JOINT STRAIGHT PLIER

## code 22PN02 - 90° INVISIBLE FLANGE JOINT STRAIGHT PLIER



## ACCESSORIES AND COMPLEMENTS



### code 21CL08 - PROFILES GLUE

Medium-viscosity adhesive for the gluing of aluminium and Polymer section bars. 500 gr pack. Product subject to expiration.



### code 21CL09 - PROFILES OUTDOOR GLUE

Special polyurethane mono-component adhesive. It offers excellent tightness performance also in situation of high humidity and direct exposure to water. Bottles of 310 cc. Product subject to expiry.



### code 21CL06 - ULTRA RAPID GLUE 50 gr code 21CL07 - ULTRA RAPID GLUE 500 gr

Medium-viscosity "super-glue" to glue aluminium section bars to the panels in just a few seconds. Product subject to expiration.



### code 22CT02 - HACK-SAW



### code 22CT03 - ADJUSTABLE ROUND CUTTER FOR COLLARS

code 22CT04 - SPARE PART BLADE th. 20mm  
code 22CT05 - SPARE PART BLADE th. 30mm



**[ JOB SITE EQUIPMENT ]**

# [JOB SITE EQUIPMENT]

## CONSTRUCTION PHASES with job site equipment



### 1 • plotting

In this phase, the perimeter of the single piece that will compose the finished duct (linear or fitting) after cutting and assembly, is plotted on the panel.



### 2 • cutting

Using the appropriate tools (manual or automatic) in this phase, the single pieces to be used in the fabrication of the duct are cut from the panel.



### 3 • bending

In this phase (required only for the production of duct fittings), indentations are applied to the piece of panel allowing the panel to be adapted to the shapes of the finished duct.



### 4 • gluing

During gluing, all the pieces produced above are assembled with the use of special glues and the finished duct takes shape.



### 5 • closing

In this phase, the duct is trimmed and finished through pressing and taping.



### 6 • accessories application

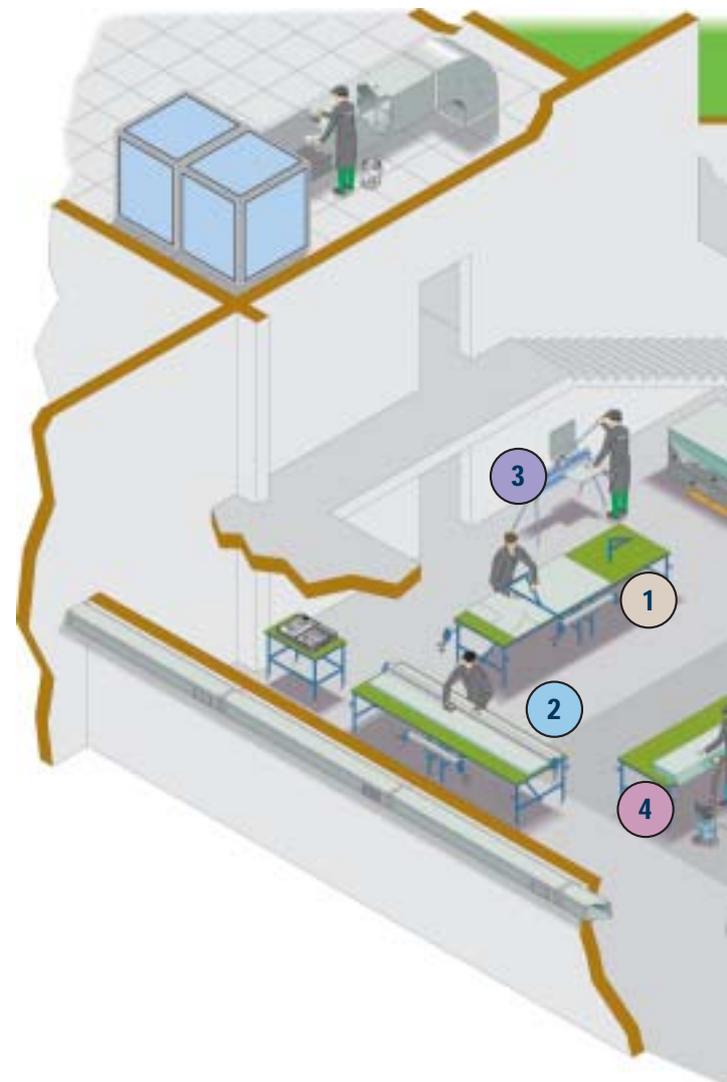
Using specific tools and glues, the section bars required are applied to the finished duct. When the duct is installed, these section bars permit easy connection of the single pieces for the completion of the air distribution system.



### 1 • plotting



- Folding work table w/matting (code 22TV01)
- Marking pencil (code 22MT01)
- Folding ruler and tape-measure (code 22MR01-02)
- 700/1200 mm square (code 22SQ07-12)
- Template (code 22DM01)
- Telescopic compass (code 22CM04)





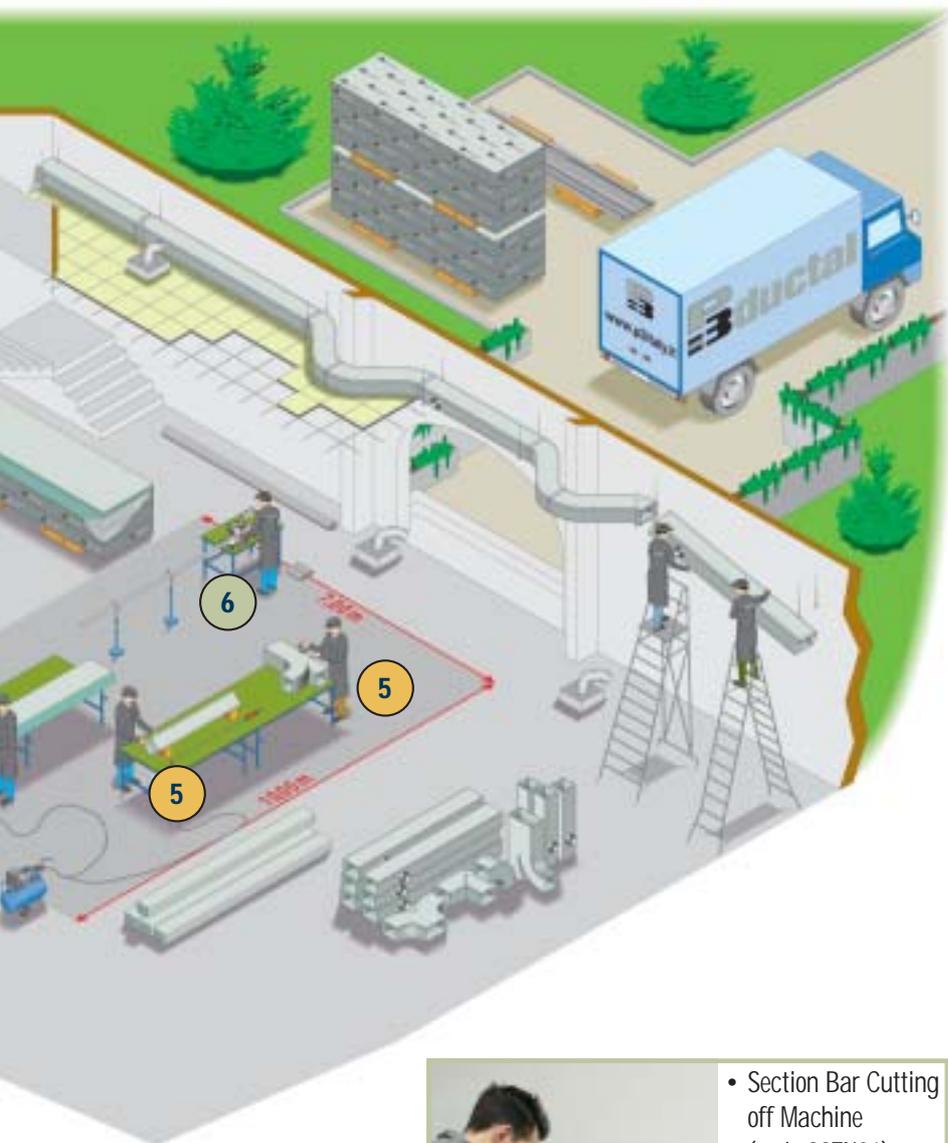
- Ruler 1200/4000 mm (code 22ST12-40)
- 45° left/right jack plane (code 22PL01-02)
- 90° jack plane (code 22PL03)
- Tool slide (code 22PD01)
- Double 45° blade- holder cartridge (code 22PD46)
- "T" hexagonal wrench (code 22BR04)

2 • cutting



- Bending machine (code 22PG01)

3 • bending



- Pneumatic glue spreader (code 22SP01)
- File w/abrasive surface (code 22LB01)
- Panel brush (code 22SZ01)

4 • gluing



- Stiff spatula (code 22SL02)



- Soft spatula (code 22SL01)
- Adjustable tape marker (code 22SG01)
- Cutter (code 22CT01)



- Silicone pneumatic rifle (code 22PS05)

5 • closing



- Section Bar Cutting off Machine (code 22TN01)
- Special Anti-Rebound Hammer (code 22ML01)
- Plier For Invisible Flange Joint (code 22PN01-02)

6 • accessories application







code 22CM04



code 22SZ01



code 22ML01



code 22PL01-02-03



code 22SL02



code 22DM01



code 22MR01



code 22PD01



code 22SG01



code 22SM01



code 22LB01



code 22MR02



code 22PD16-23-46



code 22SL01



code 22CT02

code	item	q.ty 22VL06	q.ty 22VL08	code	item	q.ty 22VL06	q.ty 22VL08
22BR04	"T" hexagonal wrench	1	1	22PD23	double 22,5° blade-holder cartridge	1	1
22CM04	telescopic compass	1	-	22PD46	d.ble 22,5° blade-holder cart.	1	1
22CT01	cutter	1	-	22PL01	45° left jack plane	1	1
22CT02	hack-saw	1	-	22PL02	45° right jack plane	1	1
22DM01	template	1	1	22PL03	90° straight jack plane	1	1
22LB01	file w/abrasive surface	1	-	22PL04	20 mm jack plane blades	5	5
22ML01	anti-rebound hammer	1	-	22PL05	30 mm jack plane blades	5	5
22MR01	folding ruler	2	-	22PN01	straight plier for invisible flange joint	1	-
22MR02	tape-measure	1	-	22PN02	90° plier for invisible flange joint	1	-
22MT01	marking pencil	4	-	22SG01	adjustable tape marker	2	-
22SM01	manual glue spreader	2	-	22SL01	soft spatula	5	-
22PC46	double 45° blade-holder cartridge, 30mm	1	1	22SL02	stiff spatula	2	-
22PD01	tool slide	2	1	22SZ01	panel brush	1	-
22PD16	double 15° blade-holder cartridge	1	1				





# plotting



## code 22TV01 - FOLDING WORK TABLE W/MATTING

Table built in painted steel with varnished plywood. 4 meters long (composed of 2 meter folding semi-tables). Supplied with matting. The support brackets permit the handy storage of both the 4 and the 1.2 meter rulers.



- code 22SQ07 - 700 mm ALUMINIUM SQUARE
- code 22SQ12 - 1200 mm ALUMINIUM SQUARE



## ACCESSORIES AND COMPLEMENTS

### code 22TV02 - SPARE MATTING

This is the green "miniature-golf"-type polypropylene matting for the (22TV01) work table.



### code 22CM04 - TELESCOPIC COMPASS

Aluminium compass made of three sliding elements which permit to plot radii from 12 to 130 cm. The cursor has a marking tip which prevents damage to the panel coating.



### code 22DM01 - P3DUCTAL TEMPLATE

Aluminium compass made of three sliding elements which permit to plot internal fitting ducts radii.



- code 22MR01 - FOLDING RULE
- code 22MR02 - TAPE MEASURE



### code 22MT01 - MARKING PENCIL

- code 22GN01 - STAINLESS STEEL GONIOMETER





**code 22PD01**

## TOOL SLIDE

The tool slide allows the slot of relevant blade folder cartridges for the "V" cut at 45° of the foam



**code 22ST40 - 4000 mm  
ALUMINIUM RULER**

**code 22ST12 - 1200 mm  
ALUMINIUM RULER**

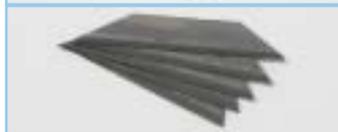
## ALUMINIUM RULER

Aluminium ruler with locking system for an easy and fast locking of the panel (20 and 30 mm) to the work table (22TV01).

The ruler serves as a guide for the jack planes and permits to make precise and straight cuts.



## ACCESSORIES AND COMPLEMENTS



**code 22PD46 - DOUBLE 45° BLADE-HOLDER  
CARTRIDGE**

**code 22PC46 - DOUBLE 45° BLADE-HOLDER  
CARTRIDGE (th. 30 mm)**

It permits double 45° inclined V cuts to manufacture rectangular section ducts.

**code 22PL04 - JACK PLANE SPARE BLADES  
(th. 20mm)**

**code 22PL05 - JACK PLANE SPARE BLADES  
(th. 30mm)**

**code 22BR04 - "T" HEXAGONAL WRENCH No. 3**

To permit an easy replacement, positioning and adjustment of the blades.



# fittings ducts cutting



## code 22PL01 - 45° LEFT JACK PLANE

Cast aluminium jack planes have a special ergonomic shape that permits 45° left cuts to be made with speed and precision. Jack planes have an internal lodge in which you can find 5 blades together with one hexagonal wrench. Different blade lengths permit the cutting of both 20 and 30 mm panels.

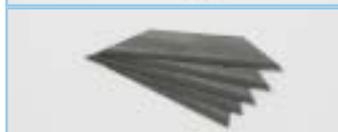
## code 22PL02 - 45° RIGHT JACK PLANE

Cast aluminium jack planes have a special ergonomic shape that permits 45° right cuts to be made with speed and precision. Jack planes have an internal lodge in which you can find 5 blades together with one hexagonal wrench. Different blade lengths permit the cutting of both 20 and 30 mm panels.

## code 22PL03 - 90° JACK PLANE

Cast aluminium jack planes have a special ergonomic shape that permits 90° cuts to be made with speed and precision. Jack planes have an internal lodge in which you can find 5 blades together with one hexagonal wrench. Different blade lengths permit the cutting of both 20 and 30 mm panels.

## ACCESSORIES AND COMPLEMENTS



code 22PL04 - JACK PLANE SPARE BLADES (th. 20mm)

code 22PL05 - JACK PLANE SPARE BLADES (th. 30mm)

code 22BR04 - "T" HEXAGONAL WRENCH No. 3  
To permit an easy replacement, positioning and adjustment of the blades.





## code 22PG01

### BENDING MACHINE

This painted steel bending machine is suitable for easy and precise panel bending. An eccentric cam lever system facilitates the bending of both 20 mm and 30 mm thick panels up to 1200 mm wide with any curvature angle. Its compact dimensions and weight facilitate transport.



45° and 30° cut with double 15-22,55° blade-holder cartridge

## ACCESSORIES AND COMPLEMENTS



### code 22PD01 - TOOL SLIDE

The correct blade used with jack plane permits V cuts in the panels.



### code 22PD23 - DOUBLE 22,5° BLADE-HOLDER CARTRIDGE

It permits to obtain 45° external angles in the panels.



### code 22PD16 - DOUBLE 15° BLADE-HOLDER CARTRIDGE

It permits to obtain 30° external angles in the panels.



### code 22PL04 - JACK PLANE SPARE BLADES



### code 22BR04 - "T" HEXAGONAL WRENCH No. 3

To permit an easy replacement, positioning and adjustment of the blades.



# gluing



## code 22SP01 PNEUMATIC GLUE SPREADER

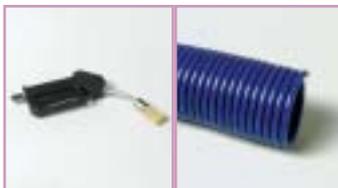
Paint glue spreader (21CL01/02). The large capacity tank easily stores a 15 kg tin of glue. The wide filling hole facilitates glue loading and is equipped with an anti-spray closing system. The glue spreader is supplied with a hand pump to pressurize the tank whenever a compressor is not available. The safety valve eliminates the risk of overpressure. Big size brush facilitates the glue distribution on the panels. For a correct cleaning of both brush and spreader you can use the made on purpose for paint glue (code 21CL00).

## code 21CL01-02 PAINT GLUE (5-15 kg)

Special glue formulated to obtain perfect adhesion on P3ductal panels foam. The product is supplied ready-to-use. Product subject to expiration.



## ACCESSORIES AND COMPLEMENTS



- code 22SP02 - SPARE GUN FOR PNEUMATIC GLUE SPREADER
- code 22SP03 - SPARE FLEXIBLE HOSE FOR PNEUMATIC GLUE SPREADER



- code 22SP04 - SPARE BRUSH PIPE SUPPORT FOR PNEUMATIC GLUE SPREADER
- code 22SP05 - SPARE BRUSH FOR PNEUMATIC GLUE SPREADER



- code 22SM01 - MANUAL GLUE SPREADER With 250 gr. tank and interchangeable brush.
- code 22SM02 - SPARE BRUSH FOR MANUAL GLUE SPREADER



- code 21LB01 - FILE W/ABRASIVE SURFACE
- code 22SZ01 - PANEL BRUSH



- code 21CL00 - SOLVENT FOR PAINT GLUE Solvent specific mixture for the possible dilution of paint glue to the proportion of 10/15% maximum. Suitable for accessories cleaning.



**code 22SL02**  
**STIFF SPATULA**



**code 22SG01**  
**ADJUSTABLE TAPE MARKER**



**code 22SL01**  
**SOFT SPATULA**



## ACCESSORIES AND COMPLEMENTS



**code 21NS02 - P3DUCTAL 75 mm**  
**ALUMINIUM TAPE**

Self-adhesive aluminium tape to use in the construction of the ducts.

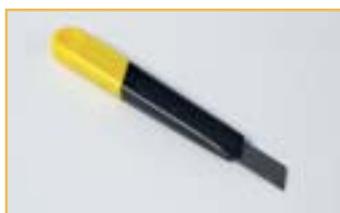
Supply: 50 meters roll and 16 rolls pack.



**code 21NS01 - 75 mm ALUMINIUM TAPE**

Self-adhesive aluminium tape to use in the construction of the ducts.

Supply: 50 meters roll and 4 rolls pack



**code 22CT01 - CUTTER**

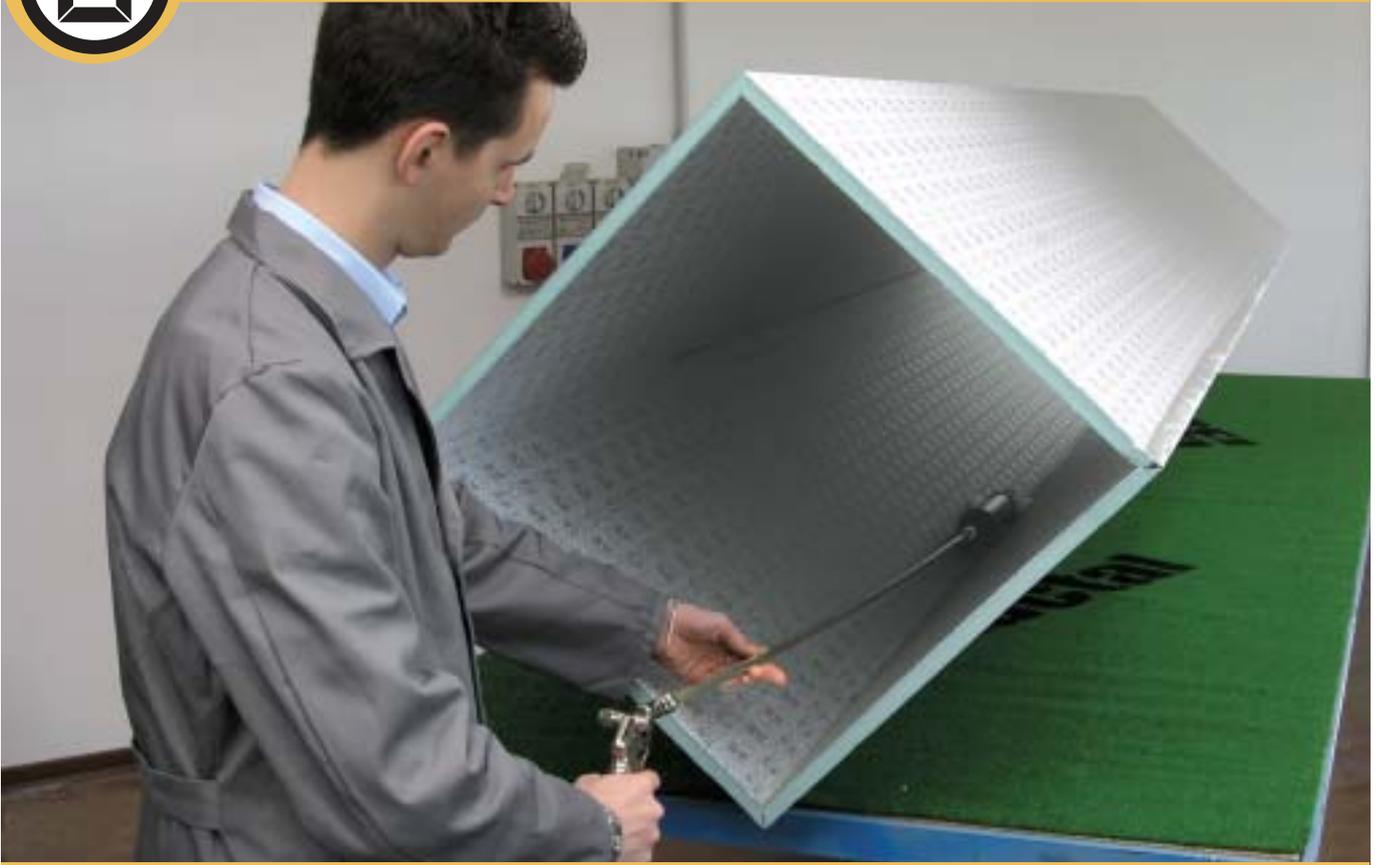
With retractable blade and lock device, this cutter is useful for cutting the aluminium tape.



**code 22LM01 - CUTTER SPARE BLADES**



## closing - silencing



### code 22PS05 SILICONE RIFLE

Gun for the easy application of the silicone sealant on ducts of considerable length. It is provided with a special fitting that allows the inclination of the nozzle, directing the silicone on the edges of the duct and it presents, furthermore, a made on purpose guide that makes it easier the use within the duct itself.

A tongue in harmonic steel, adjustable in the length allows the application of the sealant in a uniform way.

*(More details in technical sheet).*

### ACCESSORIES AND COMPLEMENTS



#### code 21SL01 - SEALANT ALUMINIUM COLOUR

Single-component silicone sealant with acetic reaction applied in a semi-dense paste that in just a few hours transforms into a rubbery substance resistant to atmospheric agents and high and low temperatures alike. 280 cc stick.

Product subject to expiration.

#### code 21SL02 - SPECIAL SEALANT, SANITARY USE, WHITE COLOUR

Single-component rapid-polymerisation silicone sealant with an efficient fungicide that prevent mildew formation. This product is indicated in the construction of ducts that convey particularly humid air. Product subject to expiration.





**code 22TN01 - SECTION BAR CUTTING MACHINE** Machine for the cutting of aluminium or plastic section bars.

**code 22ML01 - ANTI REBOUND HAMMER**



**code 22PN01 - INVISIBLE FLANGE JOINT STRAIGHT PLIER**

**code 22PN02 - 90° INVISIBLE FLANGE JOINT STRAIGHT PLIER**



## ACCESSORIES AND COMPLEMENTS



**code 21CL08 - PROFILES GLUE**  
Medium-viscosity adhesive for the gluing of aluminium and Polymer section bars. 500 gr pack. Product subject to expiration.



**code 21CL09 - PROFILES OUTDOOR GLUE**  
Special polyurethane mono-component adhesive. It offers excellent tightness performance also in situation of high humidity and direct exposure to water. Bottles of 310 cc. product subject to expiry.



**code 21CL06 - ULTRA RAPID GLUE 50 gr**  
**code 21CL07 - ULTRA RAPID GLUE 500 gr**  
Medium-viscosity "super-glue" to glue aluminium section bars to the panels in just a few seconds. Product subject to expiration.



**code 22CT02 - HACK-SAW**



**code 22CT03 - ADJUSTABLE ROUND CUTTER FOR COLLARS**  
**code 22CT04 - SPARE PART BLADE th. 20mm**  
**code 22CT05 - SPARE PART BLADE th. 30mm**



Interspar supermarket - Pordenone - Italy



**[ ACCESSORIES ]**



# accessories application and duct ins

shaped disk  
page 51

reinforcement  
section bar - page 51

Self threading  
screws - page 51

"F" section bar - page 53

rivets - page 53

angle bracket for "F" bar page 56

invisible flange joint - page 46

H bayonet - page 46

steel angle bracket - page 46

covering angle - page 46

shaped disk - page 49

turning vanes - page 49

hooked and adhesive bracket - page 50

saddle section bar - page 50

shaped disk - pag. 51

panel turning vanes

bracket - page 47

antivibration sheet - page 47

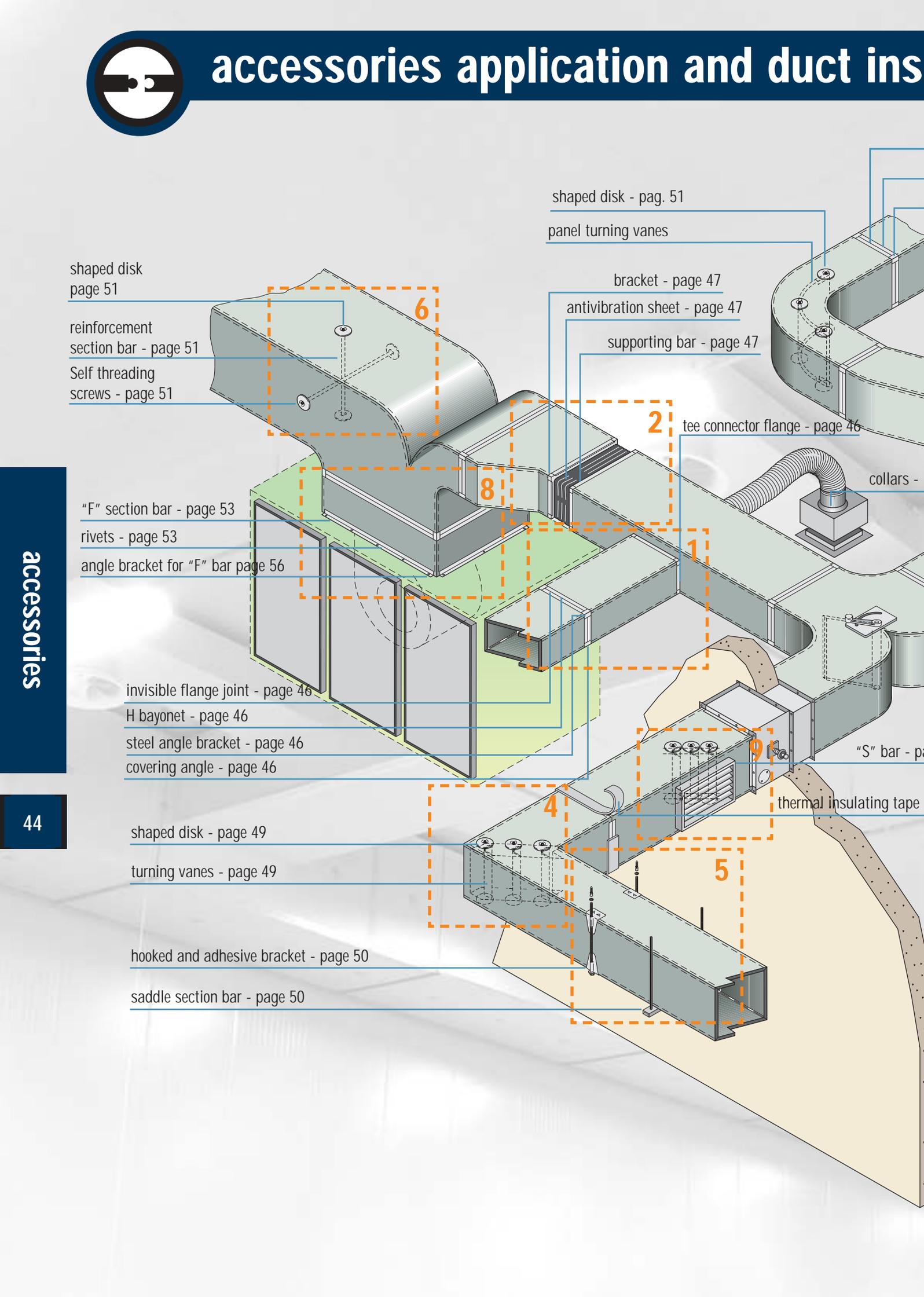
supporting bar - page 47

tee connector flange - page 46

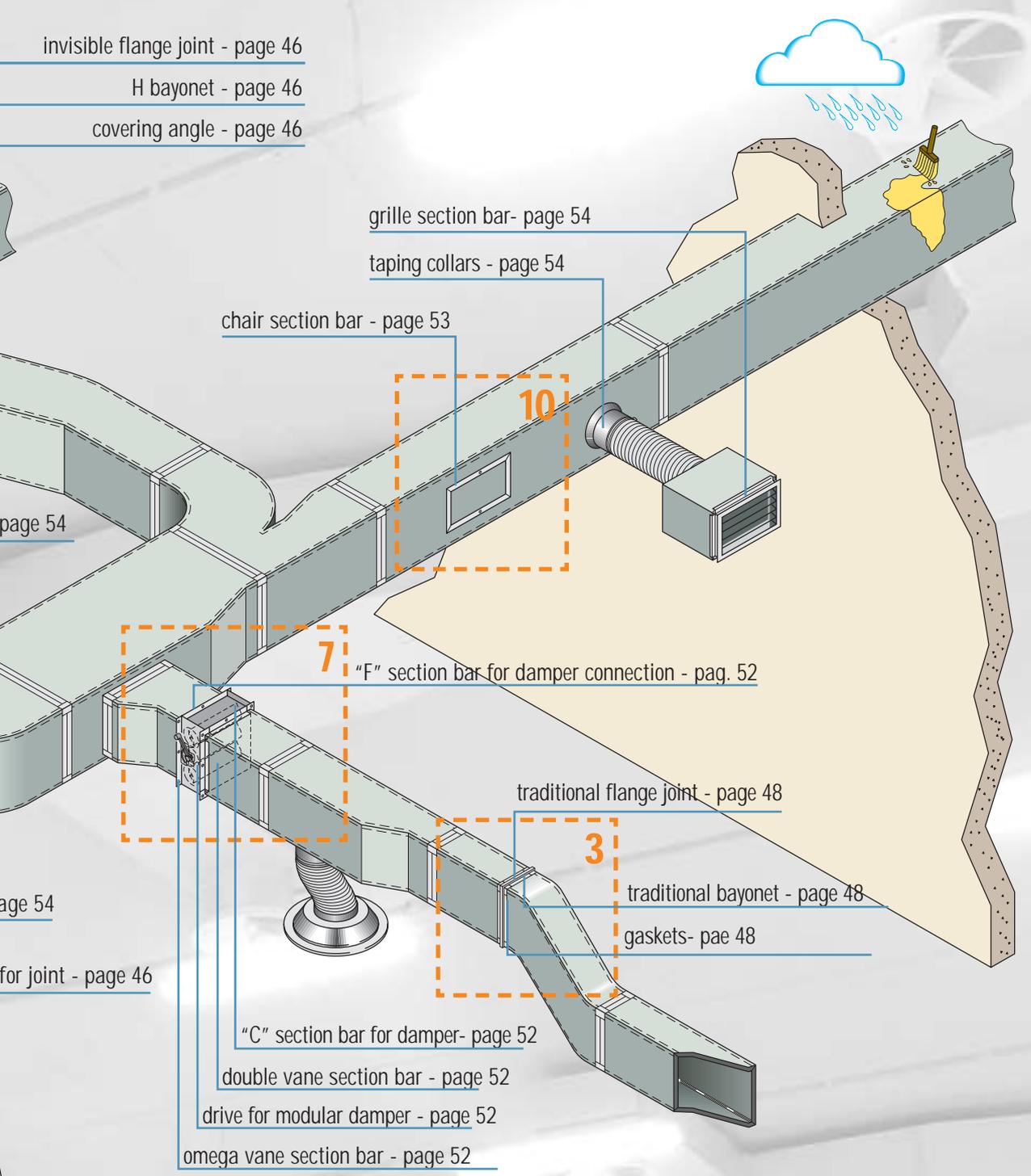
collars -

"S" bar - p

thermal insulating tape



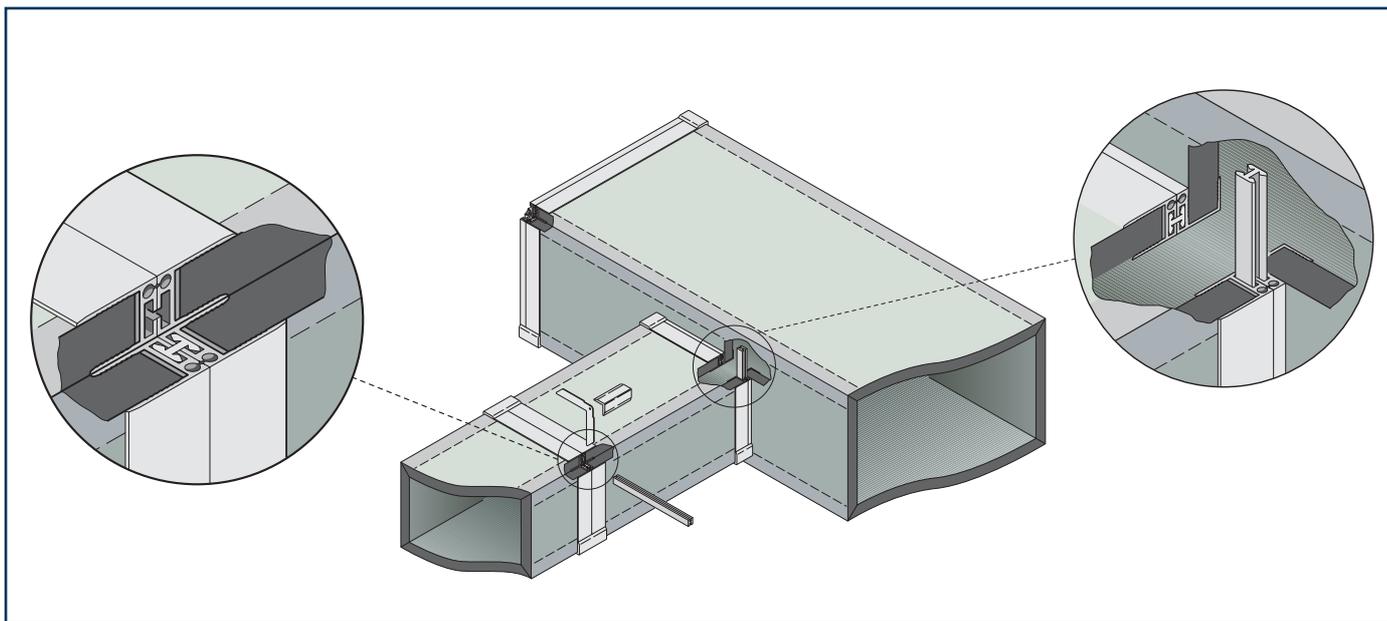
# Installation: a general view



1.	invisible flange joint and tee connector flange	page 46
2.	anti-vibration joint	page 47
3.	traditional flange joint	page 48
4.	turning vanes	page 49
5.	saddler	page 50
6.	reinforcement	page 51
7.	dampers	page 52
8.	AHU connection	page 53
9.	grilles	page 54
10.	inspection doors	page 55

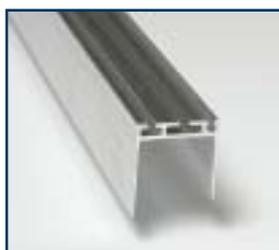


# 1. invisible flange joint and tee connector



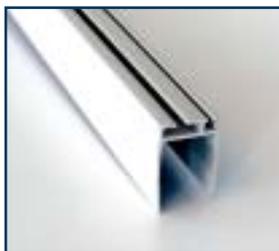
**code 21FN01 - Invisible flange joint - aluminium 20 mm**

This special patented aluminium flange permits 20 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



**code 21FN06 - Invisible flange joint - aluminium 20 mm**

This special patented aluminium flange permits 30 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



**code 21FN02 - Invisible flange joint - polymer 20 mm**

This special patented polymer flange permits 20 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



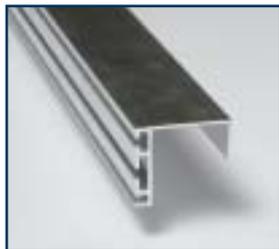
**code 21FN09 - Invisible flange joint - polymer 30 mm**

This special patented polymer flange permits 30 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



**code 21FN04 - H polymer bayonet**

Built in shock-resistant polymer, this piece permits "invisible flanges" to be connected. Supplied in 2 meter rods.



**code 21FN03/07 - Tee connector flange joint 20/30 mm.**

This patented flange permits the flanging of one duct into the side of another take-offs as tap-in or plenum chamber. The bars are supplied in 4 meter length.



**code 21SQ01/02 - Zinc-coated steel angle bracket 20/30 mm**

1.5 mm thick zinc-coated steel angle bracket.



**code 21FN05/08 - Covering angle 20/30 mm.**

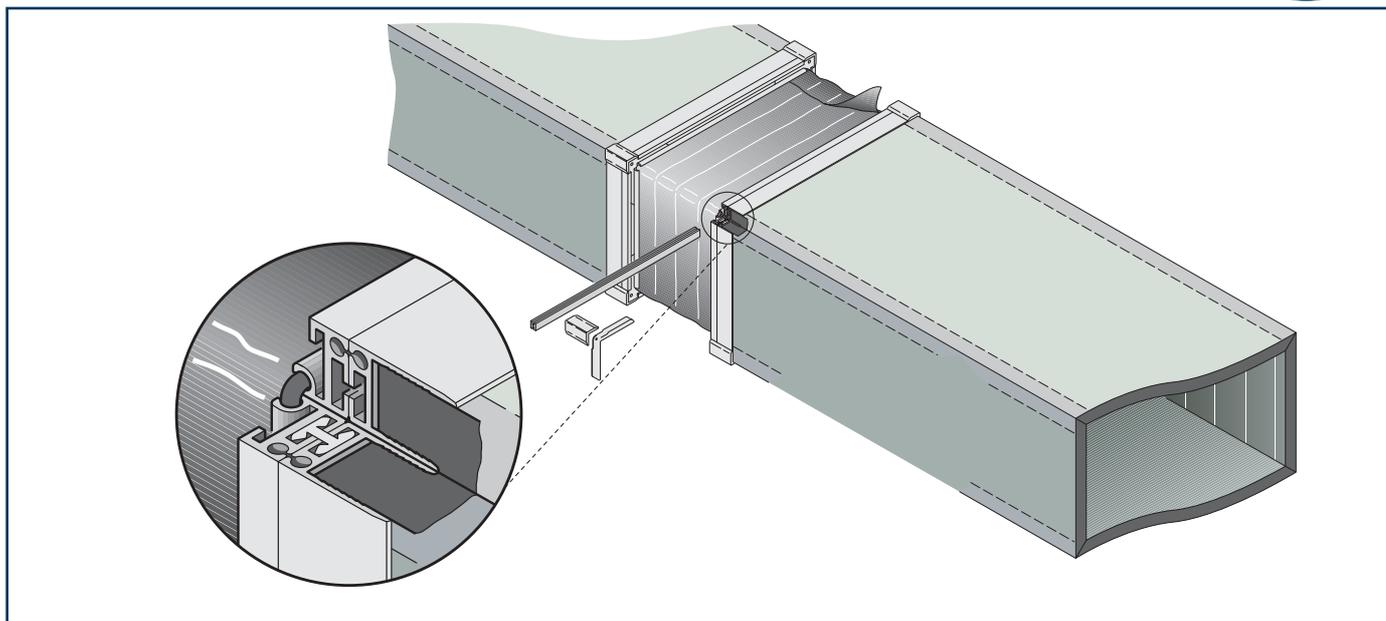
Grey polymer covering angle.



**cod. 21FS03 - Thermal Insulating Tape for Joints**

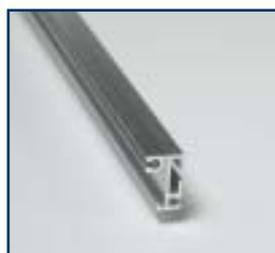
Anti-condensation strip for joints in closed-cell cross-linked polyethylene foam coupled on one side with embossed aluminium, width: 100 mm, length: 30 mm, 12 mm thick.

## 2. anti-vibration joint



**code 21GN05 - Anti vibration sheet 100 mm (25 m roll)**

PVC-coated polyester sheet with rubberised edges for the creation of anti-vibration joints with a perfect seal in combination with the sheet support section bar.



**code 21GN04 - Section bar supporting anti-vibration sheet**

This patented section bar permits to build anti-vibration joints in combination with anti-vibration sheet (21GN05) and the zinc-coated steel angle brackets (21SQ01). Built in UNI 6060 aluminium alloy.



**code 21FN04 - H polymer bayonet**

Built in shock-resistant polymer, this piece permits "invisible flanges" to be connected. Supplied in 2 meter rods.



**code 21SQ01/02 - Zinc-coated steel angle bracket 20/30 mm**

1.5 mm thick zinc-coated steel angle bracket.

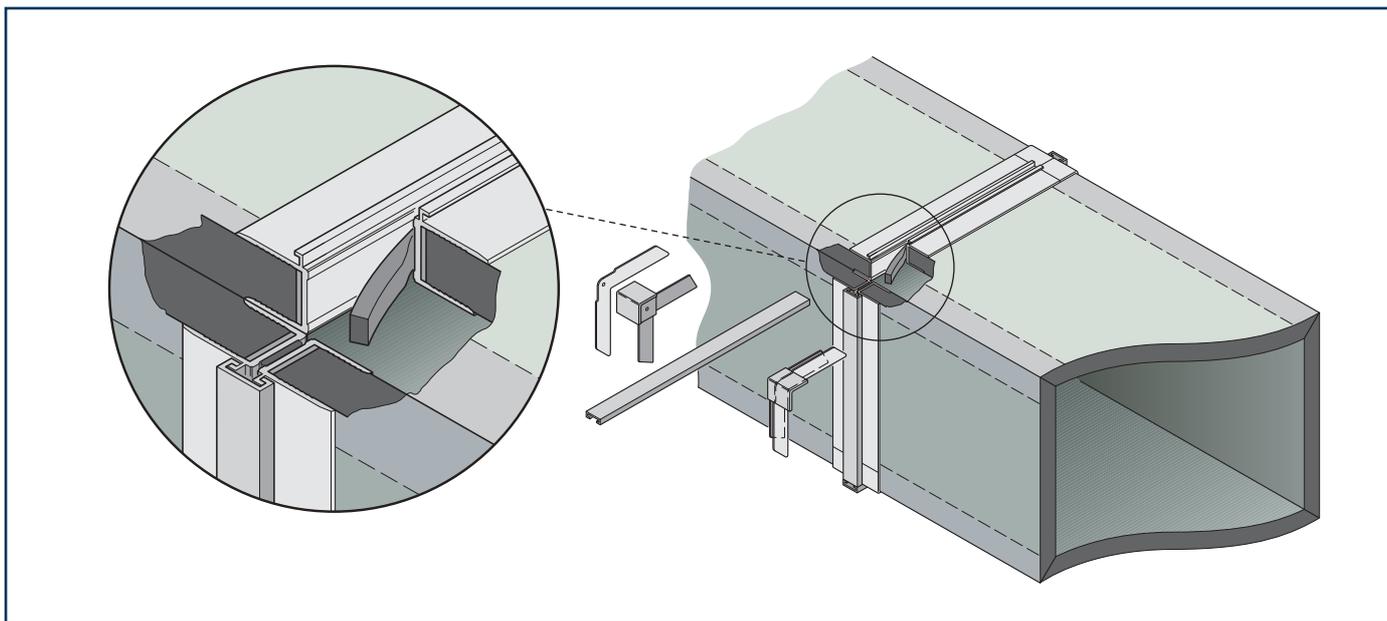


**code 21FN05/08 - Covering angle 20/30 mm.**

Grey polymer covering angle.



## 3. traditional flange



**code 21FT01/06 - Traditional flange joint - aluminium 20/30 mm**

Aluminium flange for the traditional joining of two ducts.



**code 21FT03 - Aluminium traditional bayonet 20/30 mm.**

This bayonet is used to connect traditional flanges. To use with appropriate self-adhesive gasket (21GR01)



**code 21SQ01/02 - Zinc-coated steel angle bracket 20/30 mm**

1.5 mm thick zinc-coated steel angle bracket. Corner version available (21SQ05 - 30 mm model).



**code 21FT05 - Reinforcement Angles In Polyamide-Fibre Glass**

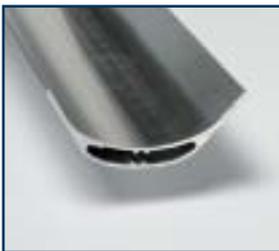
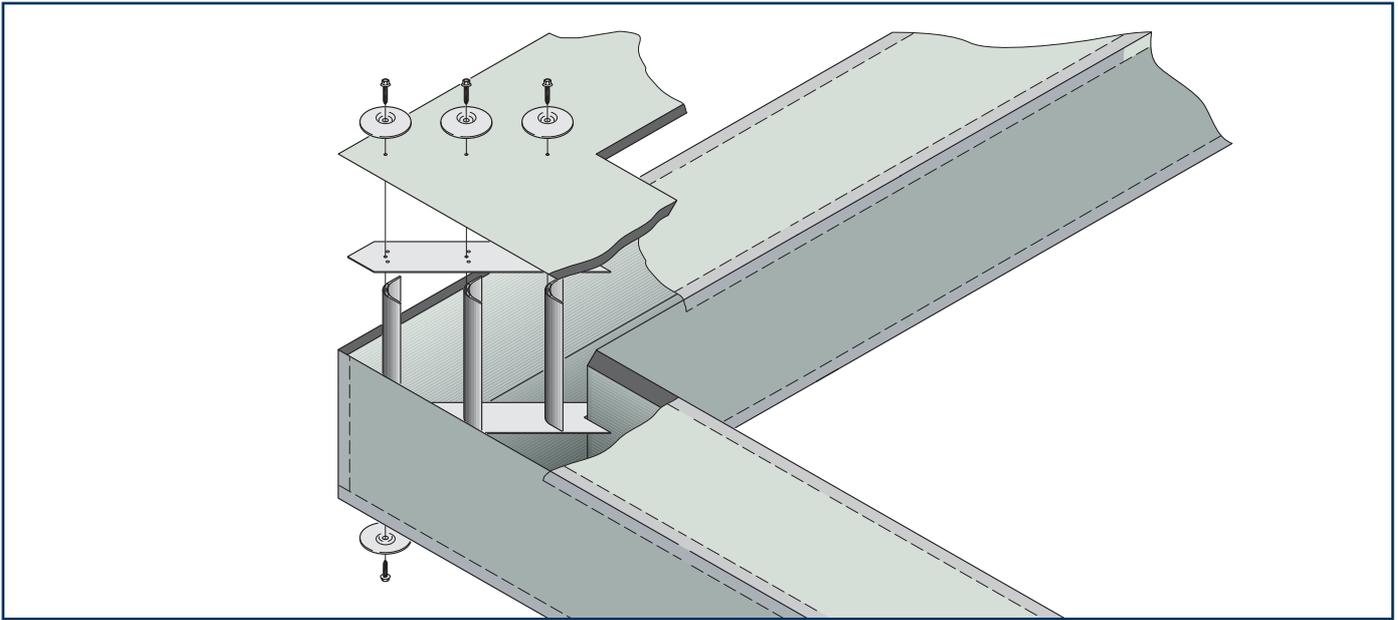
Indicated to reinforce the duct corner and improve external appearance.



**code 21GR01 - Self adhesive duct gaskets**

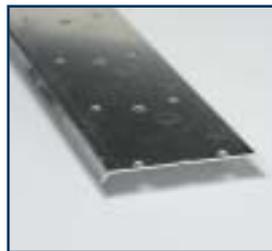
Light grey, self-adhesive polyurethane foam gasket. Indicated for the reduction of air leakage. Width: 15 mm; thickness: 10 mm.

## 4. turning vanes



### code 21CP03 - Turning vanes in aluminium

Turning vane in UNI 6060 aluminium to insert in special flat guide.



### code 21CP04 - Flat guide for turning vane fastening (2 m)

Pre-drilled aluminium strip for the correct positioning of wing-section turning vanes. Supplied in 2 meter stris.



### code 21RF01 - Aluminium shaped disk

Aluminium disk to distribute the pressure created at the centre over a wider surface to prevent damage to the panel, disk diameter 100mm, hole diameter 10 mm.



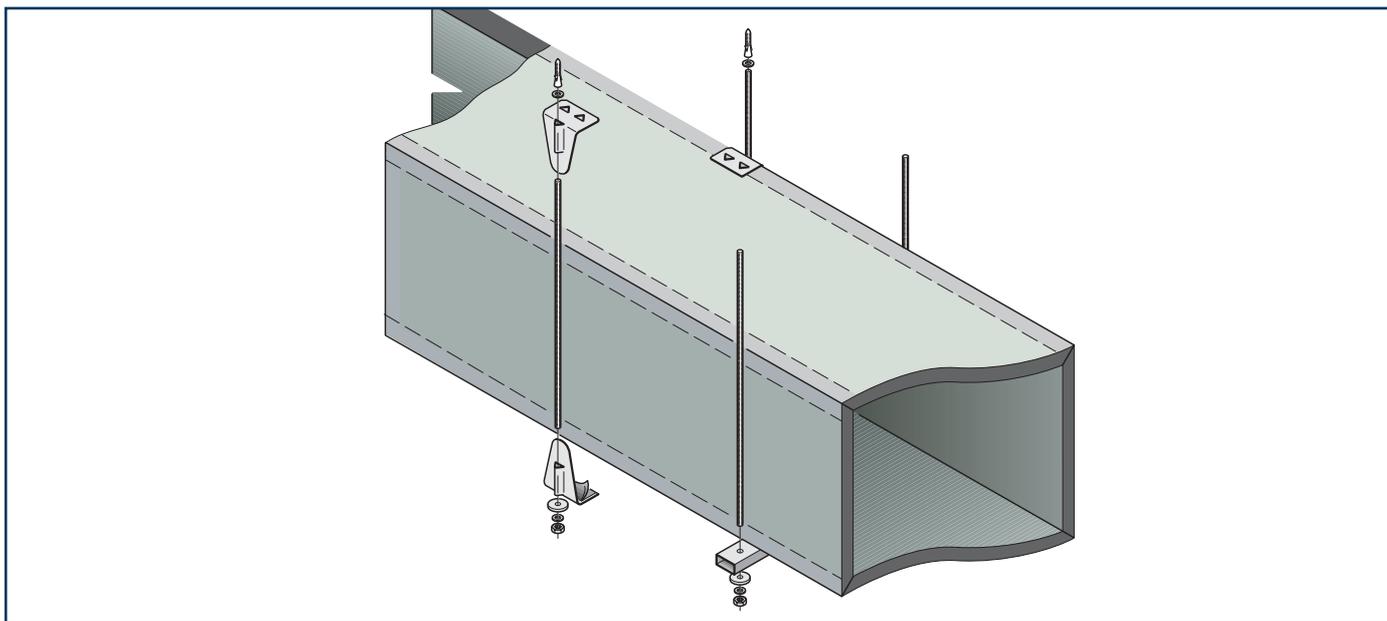
### code 21RF03 - Zinc plated self threading screws 6,3 x 60 mm

Hexagon head self-threading screws with washer. Used to fasten reinforcement section bars, wing-profile turning vanes and splitters in elbows, etc.





## 5. saddler



**code 21PR05 - Saddle section bar - aluminium 20 mm**

Rectangular aluminium tube built in natural aluminium and supplied in 4 meter rods.



**code 21SS05 - Hooked hanger bracket**

This 1.5 mm zinc-coated bracket is used for rapid duct support and hanging. These brackets are equipped with a slot for the insertion of the threaded bar.

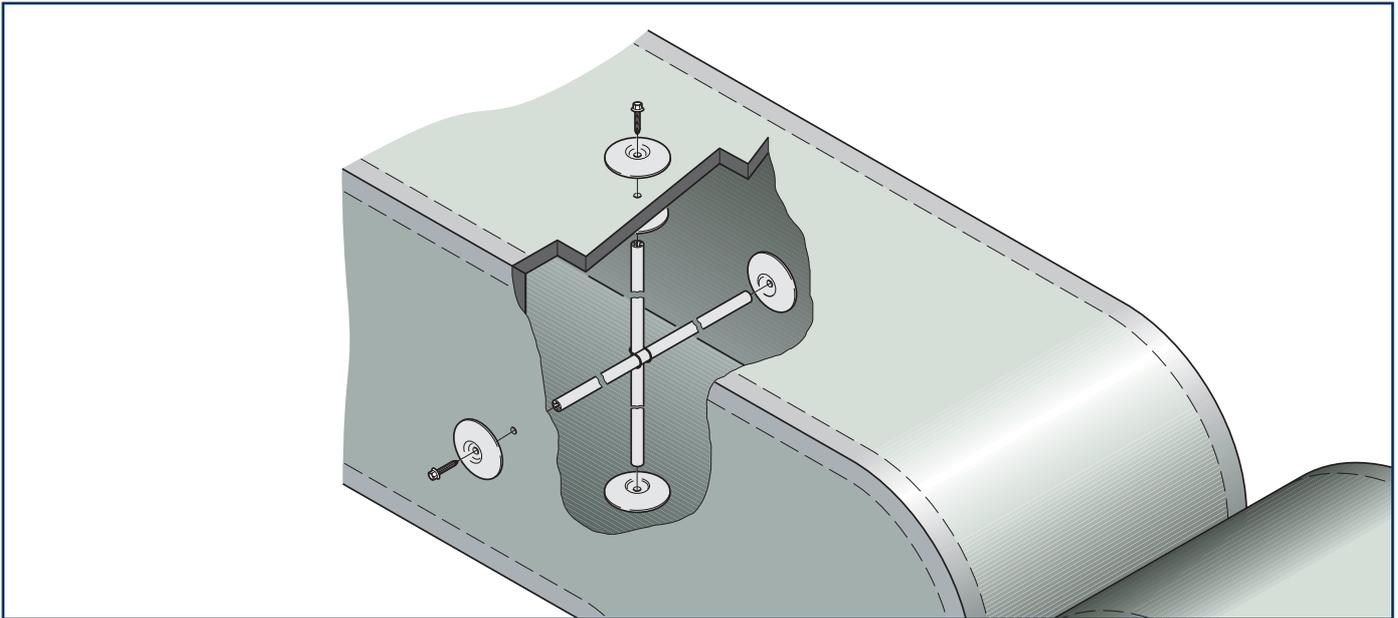


**code 21SS01 - Self-adhesive bracket**

This 1.5 mm zinc-coated bracket is used for rapid duct support and hanging. These brackets are equipped with a slot for the insertion of the threaded bar.



## 6. reinforcement



### **code 21RF02 - Reinforcement section bar in aluminium**

Special high stiffness aluminium alloy reinforcement section bar. Bars are supplied in 4 meters rods.



### **code 21RF01 - Aluminium shaped disk**

Aluminium disk to distribute the pressure created at the centre over a wider surface to prevent damage to the panel. Disk diameter 100mm, hole diameter 10 mm.



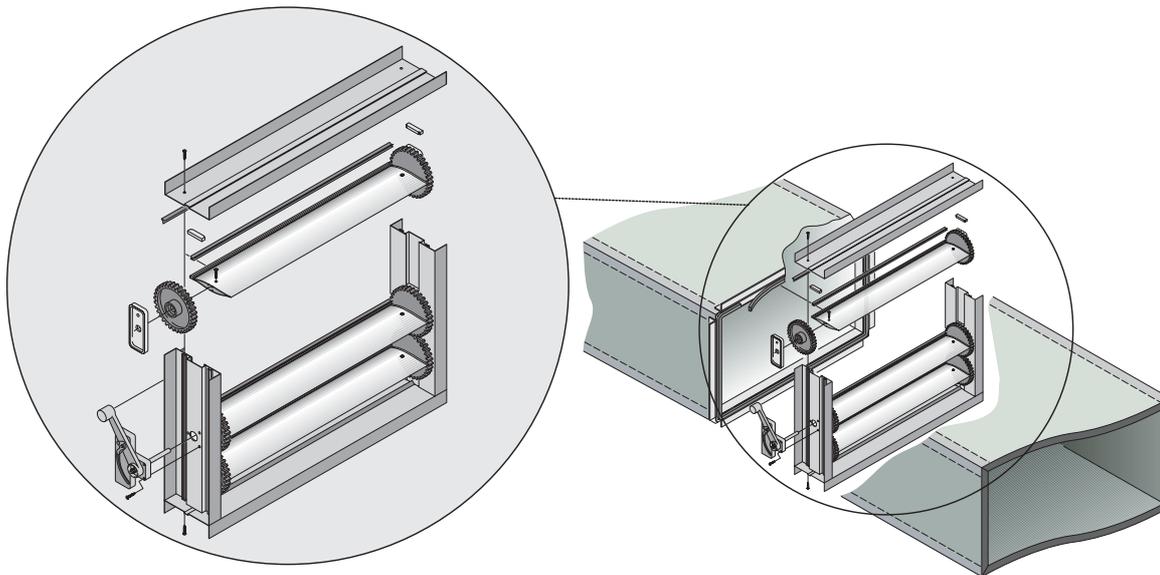
### **code 21RF03 - Zinc plated self threading screws 6,3 x 60 mm**

Hexagon head self-threading screws with washer. Used to fasten reinforcement section bars, wing-profile turning vanes and splitters in elbows, etc.





# 7. damper



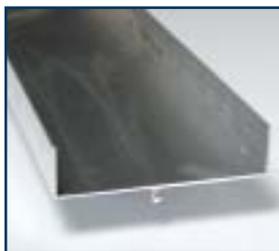
**code 21SR01 - Double vane section bar for modular damper**

Built in UNI 6060 aluminium alloy. Supplied in 3 meter rods.



**code 21SR02 - Omega vane section bar for modular damper**

This section bar in natural UNI 6060 aluminium alloy is used to create the frame that houses the gears in volume dampers and is supplied in 3 meter rods.



**code 21SR03 - "C" section bar for modular damper**

This section bar in natural UNI 6060 aluminium alloy is used to create the frame in volume dampers and supplied in 3 meter rods.



**code 21SR07 - Drive for modular damper**

This drive is used for manufacturing volume dampers.



**code 21SR04 - Gear**

**code 21SR05 - Gear shims**



**code 21SR06 - Gasket**



**code 21SR08 - Screws for damper**

## damper connection



**code 21PR03/07**  
"F" section bar in aluminium 20/30 mm



**code 21PR13**  
"F" section bar in polymer 20 mm



**code 21SQ03/04**  
- Steel angle bracket for "F" bar 20/30 mm

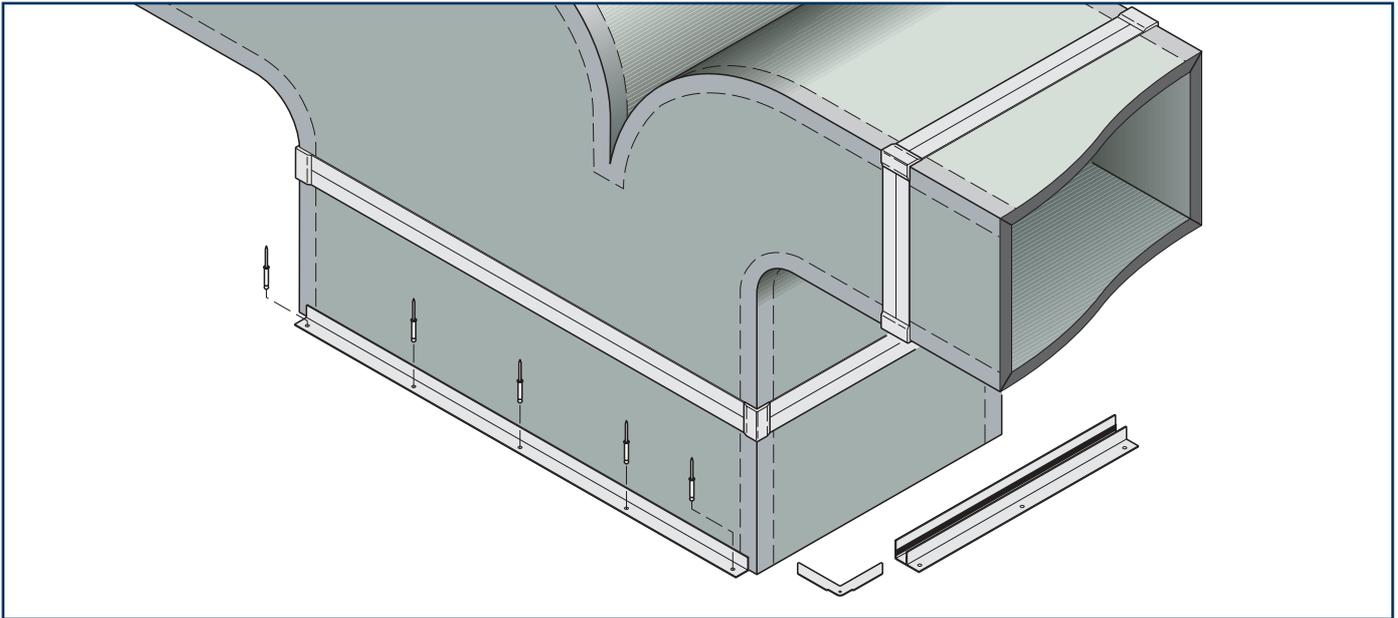


**code 21PR01/14**  
"U" section bar in aluminium 20/30 mm



**code 21PR11**  
"U" section bar in polymer 30 mm

# 8. AHU connection



**code 21PR03/07** - "F" section bar in aluminium - 20/30 mm

Permits all accessories with fastening frames higher than 20 mm to be fastened to the ducts. Supplied in 4 meter rods.



**code 21PR13** - "F" section bar in polymer - 20 mm

Permits all accessories with fastening frames higher than 20 mm to be fastened to the ducts. Supplied in 4 meter rods.



**code 21SQ03/04** - Steel angle bracket for "F" bar 20/30 mm

1.5 mm thick zinc-coated steel angle bracket.



**code 21SQ01/02** - Zinc-coated steel angle bracket 20/30 mm

1.5 mm thick zinc-coated steel angle bracket.



**code 21PR02/15** - Chair section bar in aluminium - 20/30 mm

Used to fasten ducts to air handling units and in the assembly of linear diffusers. This section bar is supplied in 4 meter rods.



**code 21PR12** - Chair section bar in polymer - 20 mm

Used to fasten ducts to air handling units and in the assembly of linear diffusers. This section bar is supplied in 4 meter rods.

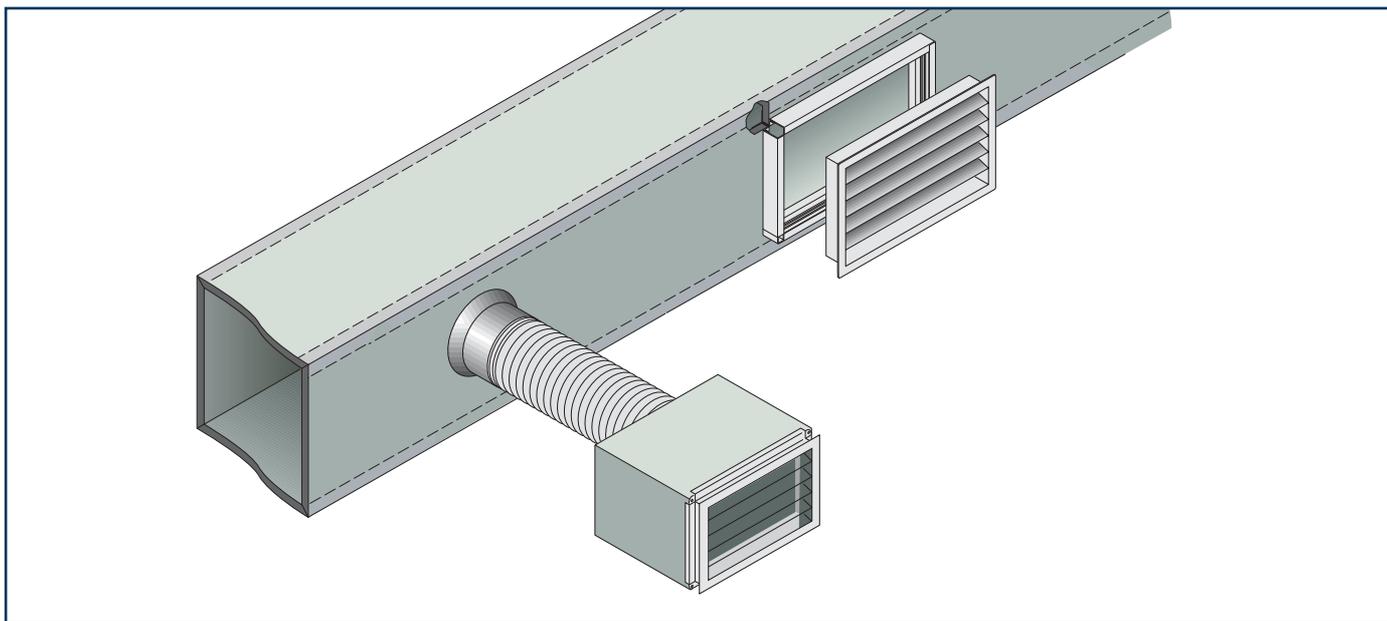


**code 21RV01** - Special aluminium rivets 3,8 x 30 mm

The 30 mm length permits to create fastening to the panels through the section bars.



## 9. grilles



**code 21PR04 - Grille section bar in aluminium 20 mm**

This section bar, finishing with double frame, is built in natural UNI 6060 aluminium alloy and supplied in 4 meter rods.



**code 21PR06 - "S" section bar in aluminium 20 mm**

Built in natural UNI 6060 aluminium alloy and supplied in 4 meter rods.



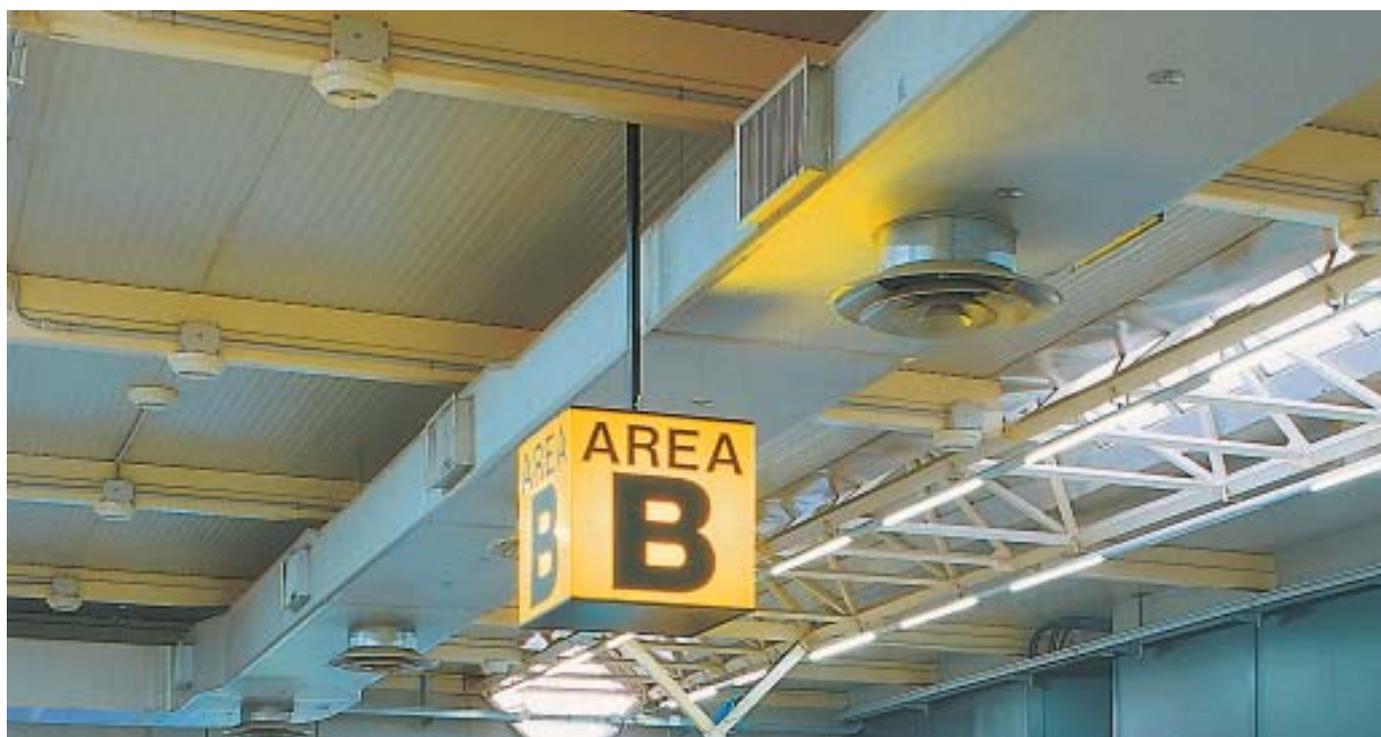
**code 21SQ01/02 - Zinc-coated steel angle bracket 20/30 mm**

1.5 mm thick zinc-coated steel angle bracket.

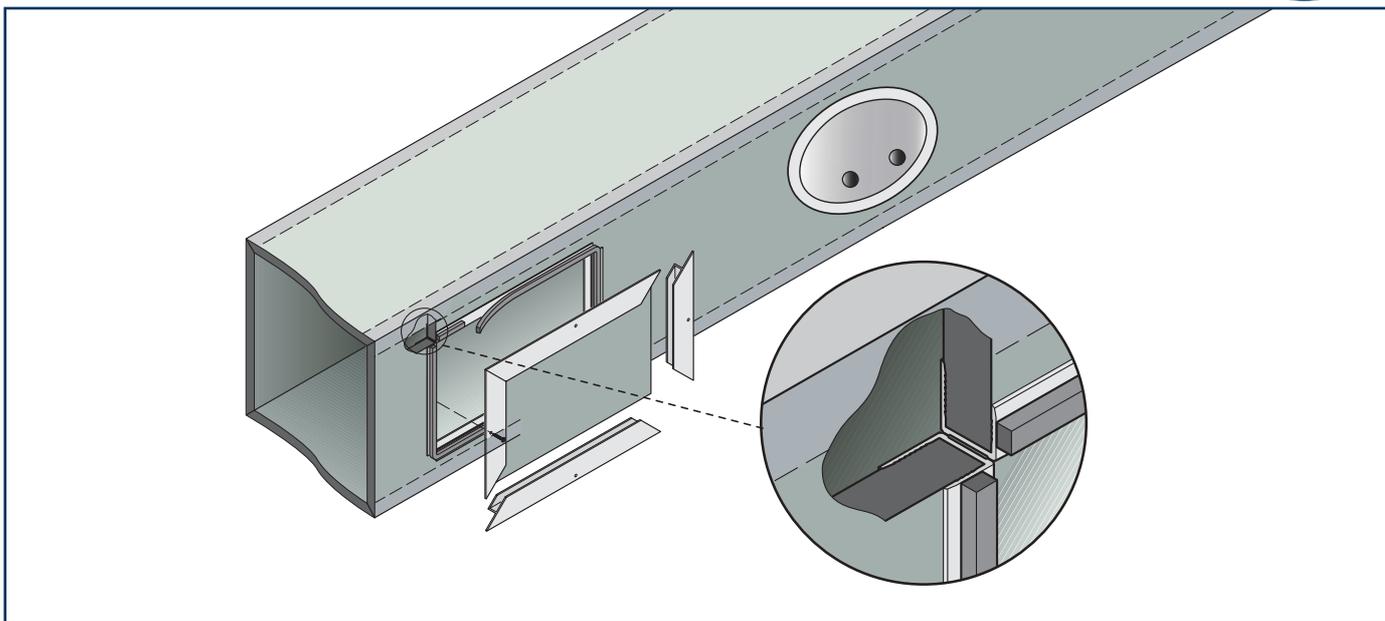


**code 21CRxx - Aluminium tap-in collars**

code 21CR10 Collars D 100 mm.  
code 21CR15 Collars D 150 mm.  
code 21CR20 Collars D 200 mm.  
code 21CR25 Collars D 250 mm.  
code 21CR30 Collars D 300 mm.  
code 21CR35 Collars D 350 mm.



# 10. inspection doors



**code 21PR02 - Chair section bar in aluminium - 20 mm**

This section bar is also used to fasten ducts to air handling units. Together with the "U" section bar, this section bar is used to build access doors. This section bar is supplied in 4 meter rods.



**cod. 21PR15 - Profilo a seggiolina in alluminio 30 mm**

This section bar is also used to fasten ducts to air handling units. Together with the "U" section bar, this section bar is used to build access doors. This section bar is supplied in 4 meter rods.



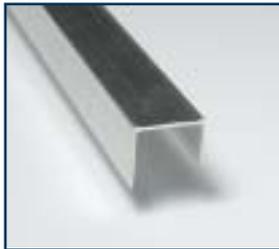
**code 21PR12 - Chair section bar in polymer - 20 mm**

This section bar is also used to fasten ducts to air handling units. Together with the "U" section bar, this section bar is used to build access doors. This section bar is supplied in 4 meter rods.



**code 21PR01 - "U" section bar in aluminium 20 mm**

Extremely versatile aluminium section for fastening of anti-vibration joints, volume dampers, and connection to sheet metal ducts. This section bar is supplied in 4 meter rods.



**cod. 21PR14 - Profilo ad "U" in alluminio 30 mm**

Extremely versatile aluminium section for fastening of anti-vibration joints, volume dampers, and connection to sheet metal ducts. This section bar is supplied in 4 meter rods.



**code 21PR11 - "U" section bar in polymer 30 mm**

Extremely versatile aluminium section for fastening of anti-vibration joints and volume dampers. This section bar is supplied in 4 meter rods.



**code 21IP01 - Access door**

Built in fire resistant plastic material. Use for a easy access into the duct without changing duct performance.



Gymnasium - S. Andrea di Campodarsego - Padova (Italy)