

PIR-plates 60 μ type PIR-CRX AI6 2035

Polyisocyanurate (PIR) fire retardant rigid foam panel, coated centesimal aluminium foil on both sides.

Application

- Duct construction in air distribution, Heating, Ventilation and Air Conditioning systems (HVAC)
- Visible installation with little loading on the building structure
- Ducting of small and medium sizes
- PIR plates are only for inside use

Composition

- Density 35 kg/m³
- Thickness Aluminium: 60 μ m
- Standard thickness is 20 mm
- Dimensions: 2000 x 1200 mm
- Fire class: B - s2, d0 according to EN 13501-1

Chemical and physical characteristics

- The polyisocyanurate (PIR) rigid foam is made from the polyaddition reaction between first quality polyols and polyisocyanates. The chemical reaction involves the polymerisation of the raw materials, with the transition from liquid to solid state. The polymer obtained is physiologically and chemically inert, insoluble and unable to be metabolized.
- The coating of the panel consists of an embossed aluminium (60 μ) foil with a protective lacquer on both sides
- The blowing agent is CFC and HCFC-free
- The panel is a fiber-free product

Mechanical characteristics

- The compressive strength is tested according to EN 13403 standard, duct resists at the maximum pressure of 3750 Pa.

Thermal conductivity

- Thanks to the high number of closed cells (exceeding 95%) the panel has an initial thermal conductivity of 0.021 W/m.K at 10°C, according to EN 13165 standard Annex A and C

Fire reaction

- Fire certificate according to EN 13501-1, EN 11925-2, EN 13823
- Class B - s1, d0

Smoke opacity

- The panel smoke toxicity according to British Naval Engineering Standard NES 713 < 4.5
- Release

Rigidity

- 160.000 Nmm² (R3) - according EN 13403 standard

Water permeability

- Due to the thickness of the aluminium (>50μ) the product can be considered as a vapor barrier

Operating temperature

Range -40°C to +110°C , constantly without any substantial differences in the thermo-ventilating insulting specifications.

Accessories

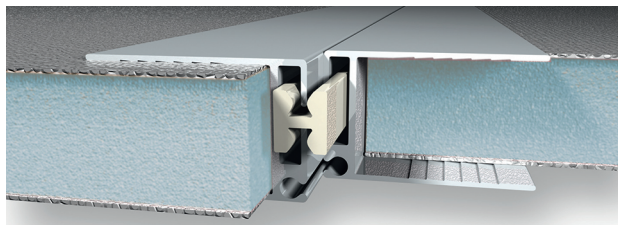
- Tool case , type **STC**
- Aluminium tape, type **Alutape**
- Aluminium profiles, type **21 PRO1, 21 PRO2, 21 PRO3** or **21 PRO6**
- Bayonet for flanges, type **21 FN/BAJ**
- PVC corner pieces, type **21 FN05**
- Silicone, type **NEU**

Text for tender

- Pre-insulated aluminium ducts shall be built with four separate faces, lengthwise glued, sealed with silicone inside angle and with aluminium tape for the exterior angle.
- Cross-joints with glued male and female fit
- ATC **Type PIR-PL1** or **PIR-PL2**

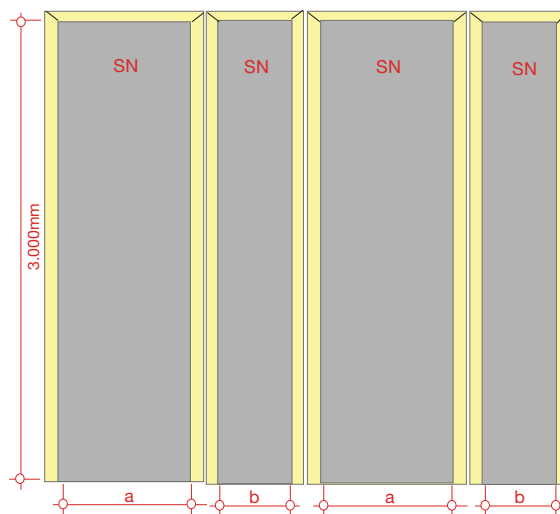
Order example

PIR-CRX AI6 -20-35-60-60 3.6mp

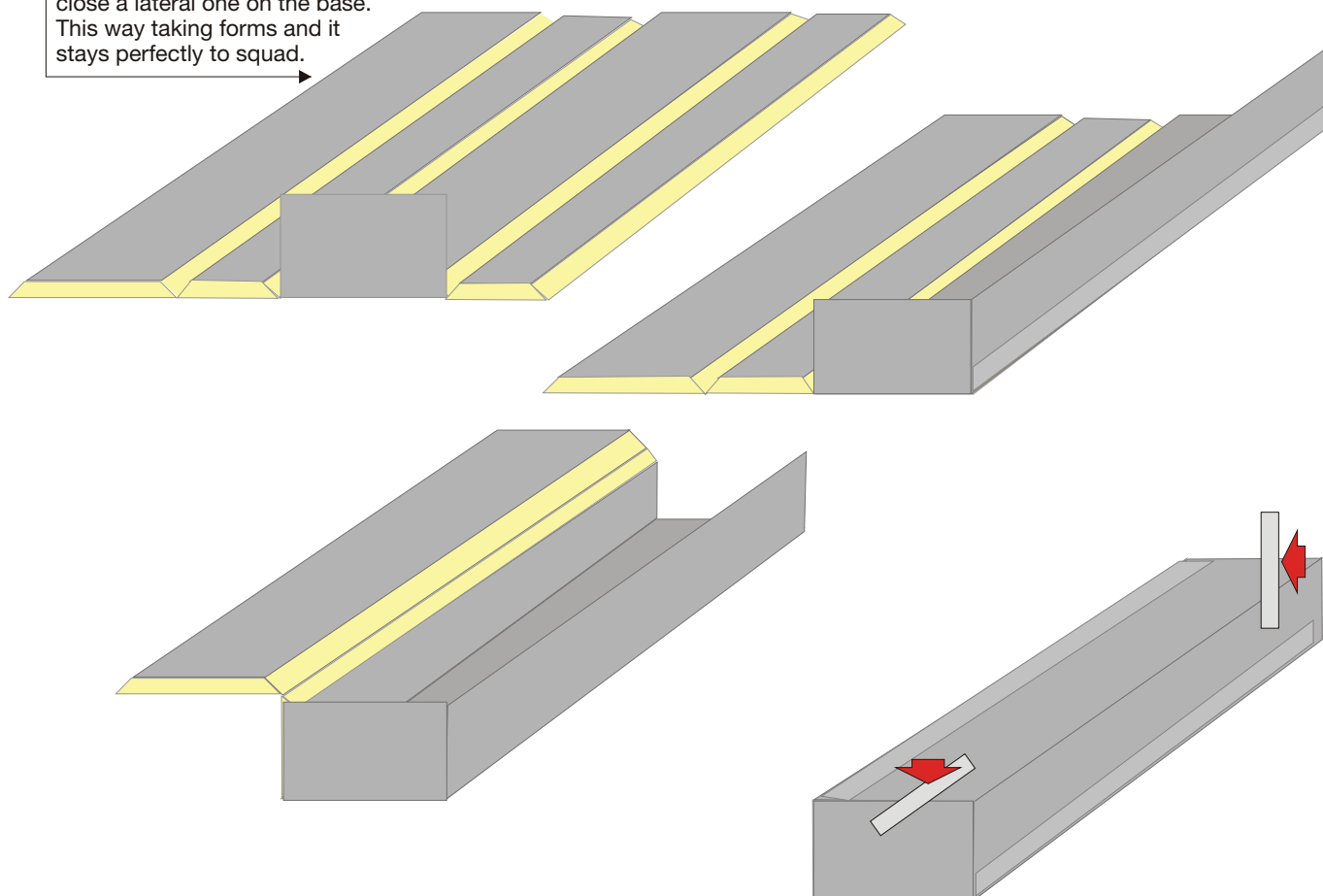


Installation

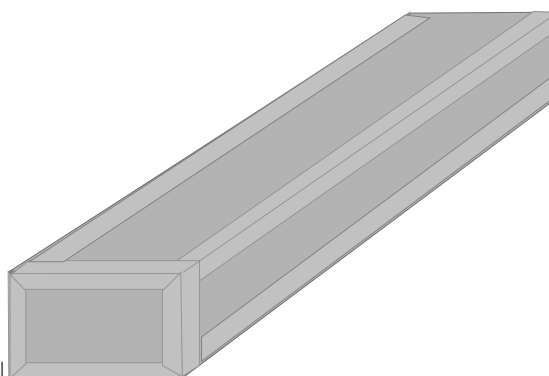
Rotate the duct on the table so that it is with the external face up to proceed to the assembling.



To close the duct following the described process.
First put the end cap and after close a lateral one on the base.
This way taking forms and it stays perfectly to squad.

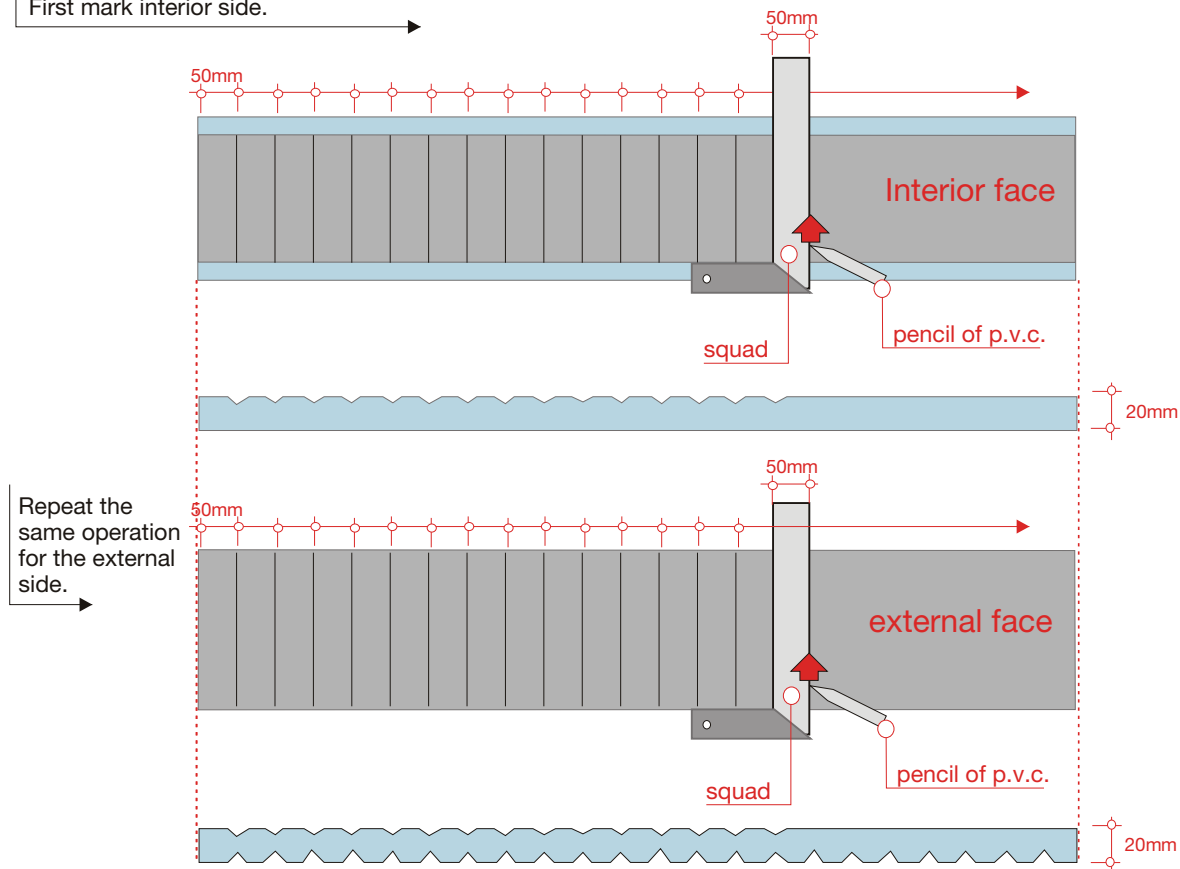


With the help a piece of PVC pipe, press the angles of close the piece, in vertical position and then in horizontal along the joint so that it acts well the glue. Put the aluminium tape. Seal the four internal angles lengthwise with silicone.



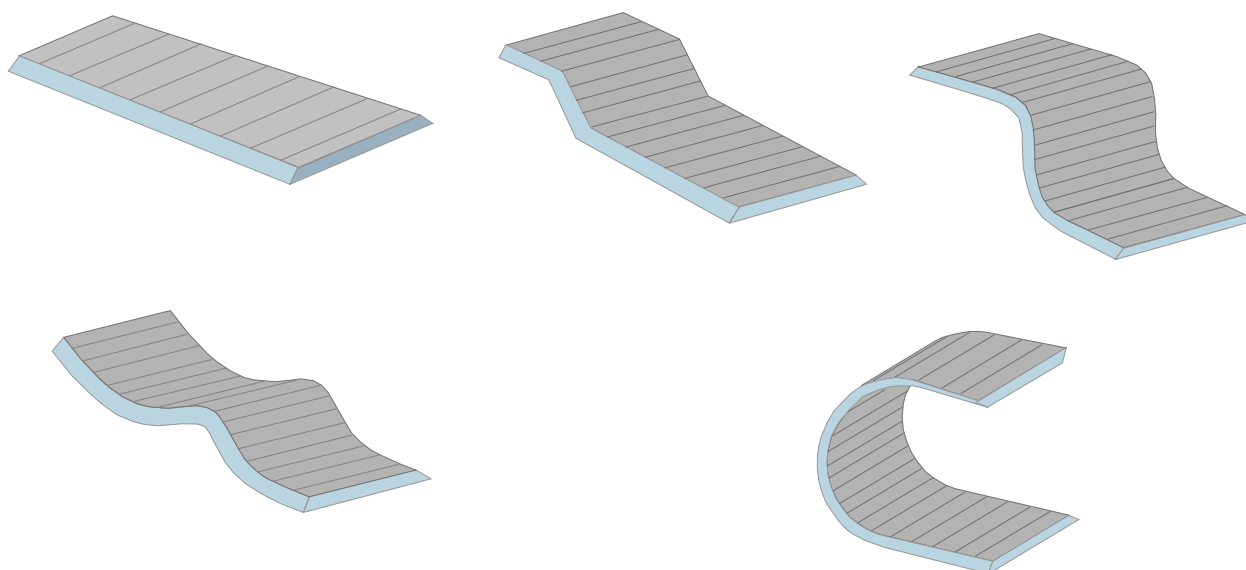
Installation

With the help of an squad 50mm width and with intervals of 50mm, mark pressing with a plastic pencil without breaking the aluminium. It is very important to make perfectly parallel and square. First mark interior side.



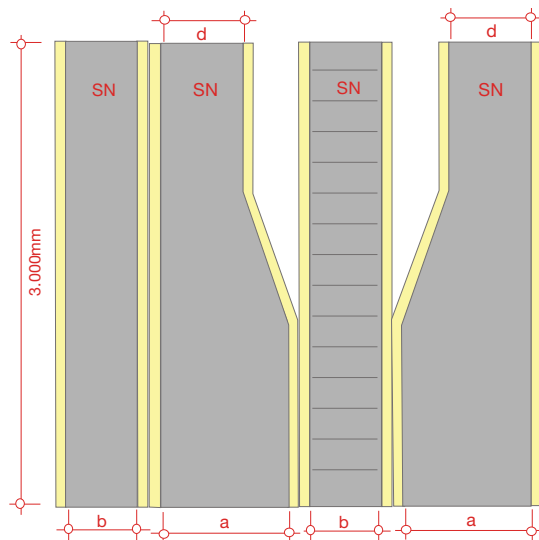
Repeat the
same operation
for the external
side.

Application examples:

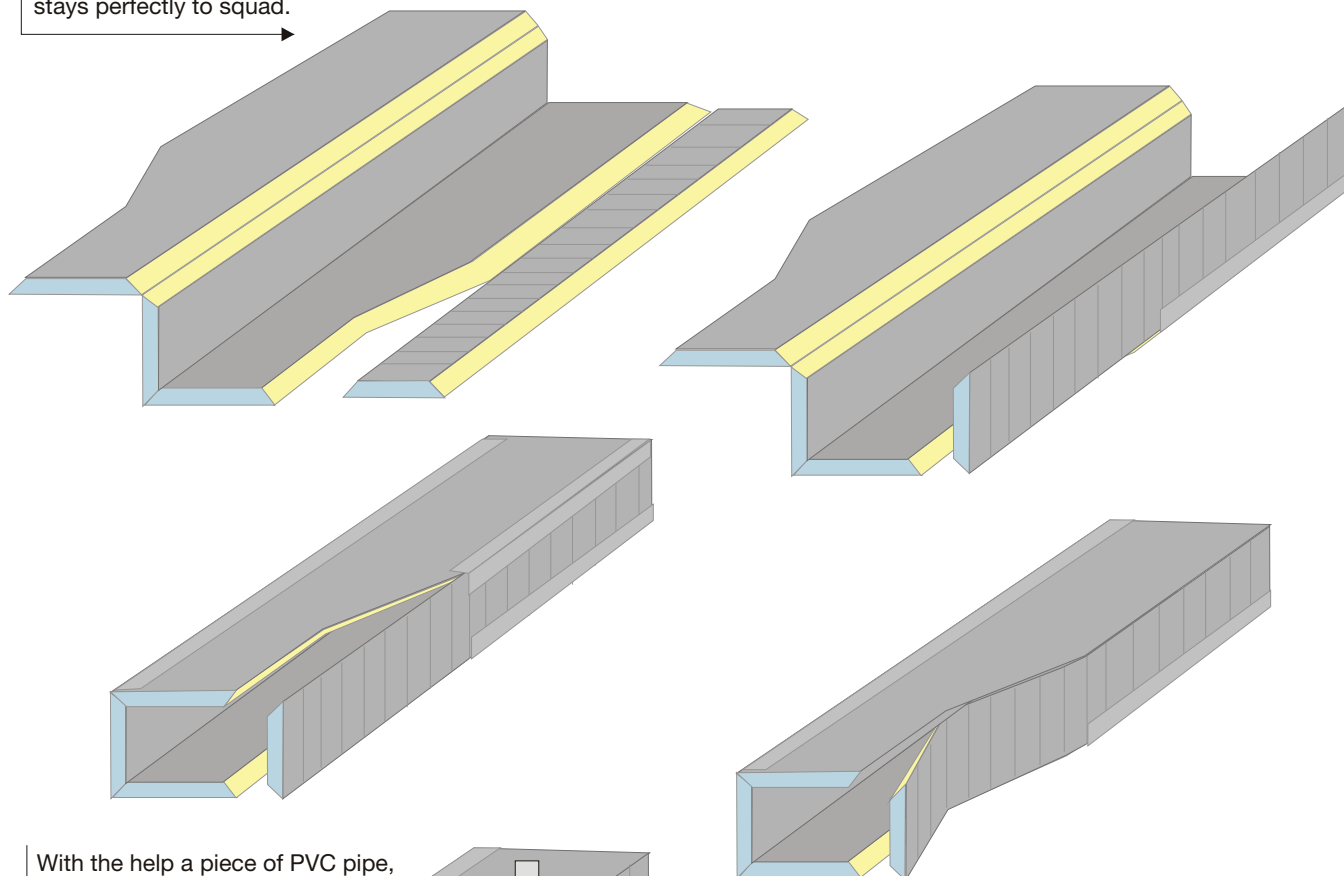


Installation

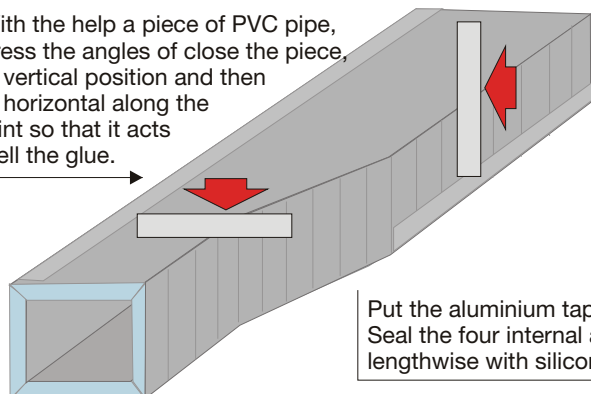
Rotate the duct on the table so that it is with the external face up to proceed to the assembling.



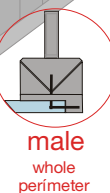
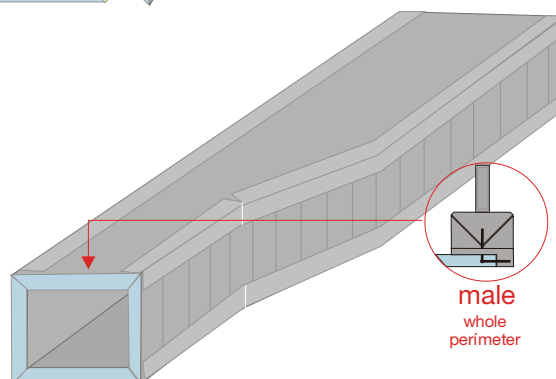
To close the duct following the described process and alone the straight part, underrating the reduction.
This way taking forms and it stays perfectly to squad.



With the help a piece of PVC pipe, press the angles of close the piece, in vertical position and then in horizontal along the joint so that it acts well the glue.

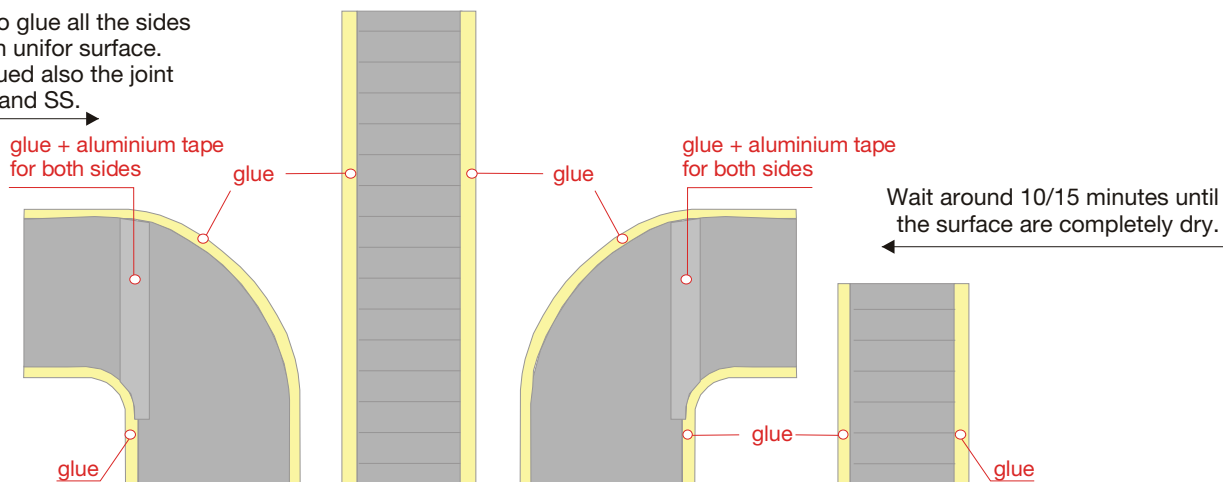


Put the aluminium tape.
Seal the four internal angles lengthwise with silicone.

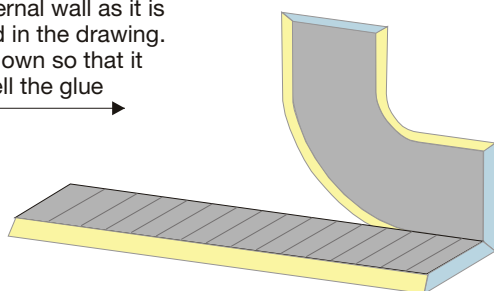


Installation

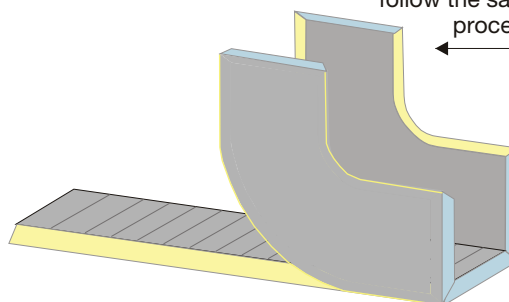
With a brus to glue all the sides at 45° with an unifor surface. Should be glued also the joint between SN and SS.



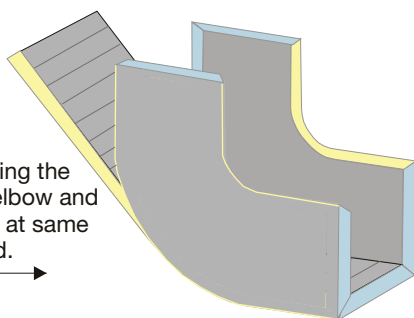
Place the bottom cover up the external wall as it is detailed in the drawing. Press down so that it acts well the glue



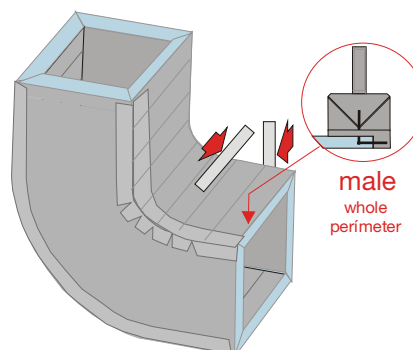
Always beginning from from the same end of the elbow, follow the same process.



Rotate the two covers on the external wall. Slowly, controlling the interior of the elbow and the two covers at same time and speed.

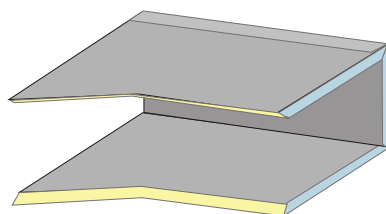
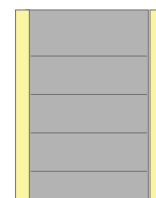
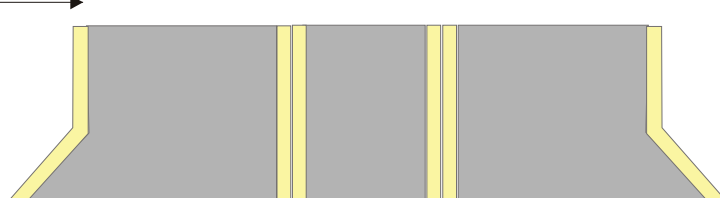


With the help a piece of PVC pipe, press the angles of close the piece, in vertical position and then in horizontal along the joint so that it acts well the glue. Put the aluminium tape. Seal the four internal angles lengthwise with silicone.

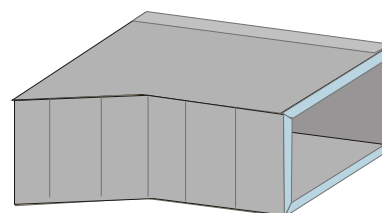


Installation

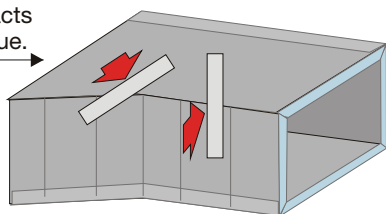
Rotate the square elbow on the table so that it is with the external face up to proceed to the assembling.



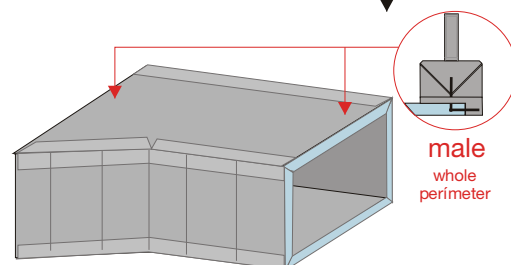
Close the piece following the drawn process.



With the help a piece of PVC pipe, press the angles of close the piece, in vertical position and then in horizontal along the joint so that it acts well the glue.



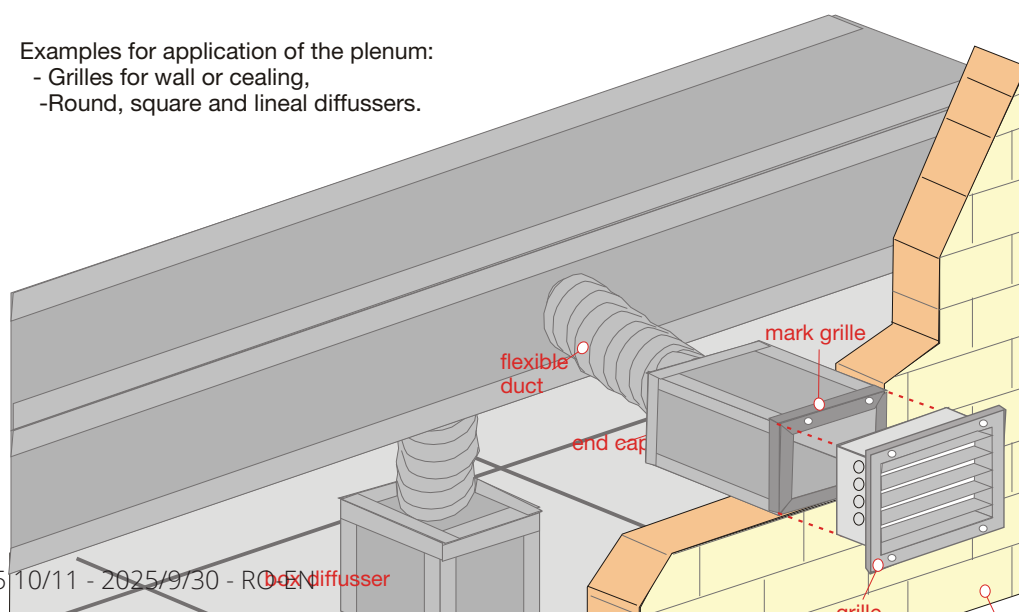
To be able to insert in the main duct it is necessary to make "MALE" in both sides.



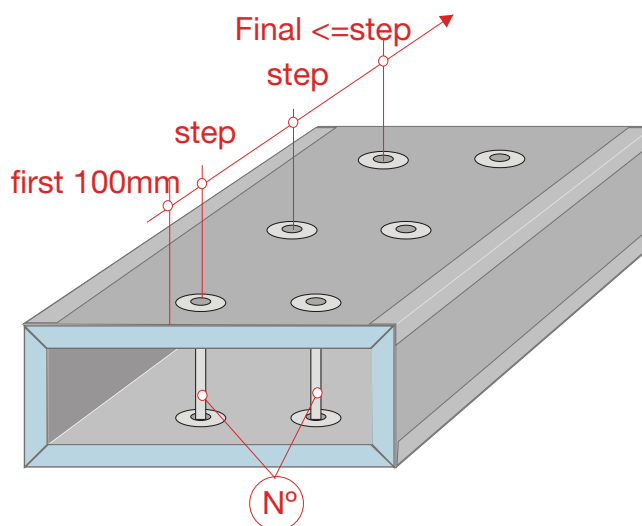
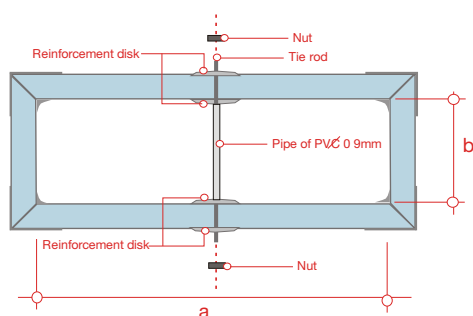
Put the aluminium tape. Seal the four internal angles lengthwise with silicone.

Examples for application of the plenum:

- Grilles for wall or ceiling,
- Round, square and lineal diffusers.



Installation



Step: distance between reinforcements.

N°: number of the transversal reinforcements.

		Application of support elements											
Overpressure in system [Pa]		100	150	200	700	300	400	500	600	700	800	900	1000
a [mm]	150	-	-	-	-	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-	-	-	-	-
	500	-	-	-	-	-	-	-	-	1	1	1	1
	600	-	-	-	-	-	-	-	1	1	1	1	1
	800	-	-	-	-	1	1	1	1	1	1	1	1
	1000	-	-	1	1	1	1	1	1	2	2	2	2
	1200	-	1	1	1	1	1	1	2	2	2	2	2
	1400	1	1	1	1	1	1	2	2	3	3	3	3
Step [mm]	1600	1	1	1	1	2	2	2	2	3	3	3	3
	1800	1	1	1	2	2	2	2	3	4	4	4	4
	2200	1	1	2	2	3	3	3	3	4	4	4	4
		1400	110	900	800	700	600	600	500	500	400	400	400