POLIISO® AIR

PRE-INSULATED AIR DUCTS

EDILTEC®
THERMAL INSULATION

INSTALLATION MANUAL

INTRO

For 30 years Ediltec produces polyurethane foams and it is a point of reference in the Italian market for the thermal insulation of civil and industrial buildings.

POLIISO AIR is born from this experience, a system for the realization of pre-insulated air-ducts. This system is not only based on pre-insulated aluminium coated polyurethane panels but also on accessories, machinery, tools and know-how necessary for the construction and installation of the air-ducts.

The air-duct sector is therefore innovated by replacing the traditional galvanized steel ducts with the aluminium pre-insulated duct system.

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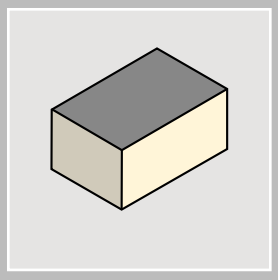
POLIISO AIR SYSTEM

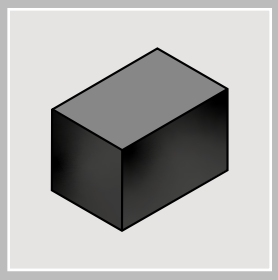
MAIN CHARACTERISTICS

The POLIISO AIR DUCT is a system used for transporting air in conditioning and thermo-ventilation plants. The POLIISO AIR system born from specific technical and economic needs, allows to realize aeraulic plants which guarantee the highest standards of efficiency and numerous advantages, including:

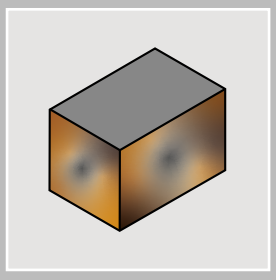
- **LIGHTNESS**
  POLIISO AIR pre-insulated ducts are extremely light and weigh roughly a 70% less than traditional sheet metal ducts. An important advantage in economic, environmental and safety terms. This lightness with consequent weight reduction on structures, brings significant benefits from the seismic point of view, limiting the anchoring points and the type of materials needed for installation. furthermore the panels are provided of high flexural stiffness, they allow deformations, limited displacements and limited risks of crushing due to low falls.
- **DURABILITY**
  The POLIISO AIR panels, thanks to the closed cell polyurethane foam, coated with aluminium, guarantee durability of the entire system, for well over 50 years of useful life estimated for buildings. In particular, the range of panels POLIISO AIR OUTDOOR are indicated for outdoor installation.
- **HYGIENE AND AIR QUALITY**
  The aluminum coatings of the POLIISO AIR panels guarantee a high hygiene system making it also suitable for applications in the food sector. Thanks to special antimicrobial treatments, the range of panels POLIISO AIR CARE, are suitable for the use in environments with particular hygienic needs (operating rooms, clean rooms, etc.).
- **ECONOMICITY AND APPLICATION VERSATILITY**
  Pre-insulated ducts are built on site and can be easily modified to suit any variations of the plan. POLIISO AIR panels are extremely light, then will be necessary lower handling and transport costs, shorter installation time is needed, so less labor hours are required for the installation of the ducts as well as the less number of hangle brackets required. In addition to the pre-insulated panels, are available all the accessories and equipment needed for the construction of the whole duct system.
- **THERMAL INSULATION**
  The high insulating capacity of POLIISO AIR panels allows lower operating costs during the functioning of the ducting. The thermal conductivity λi equal to 0.020 W / mK guarantees excellent thermal insulation even with reduced thicknesses (20 and 30 mm). This feature allows to limit significantly the energy consumption of the system. In addition, the aluminum coatings, present on both sides of the panel, ensures the system excellent water and vapor impermeability performance. As can be seen from the following images, used as reference the POLIISO AIR pre-insulated panel, that is more performant, which has a significant reduction of thickness to achieve the same thermal insulation performance, respect to other insulating materials with worse performance.



Poliiso Air 20mm



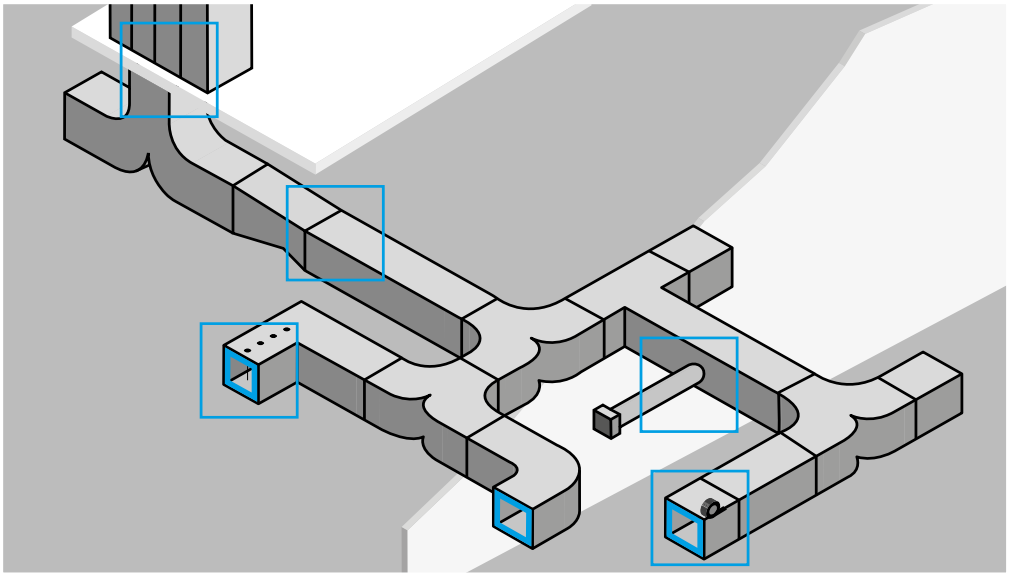
Rubber Duct 33mm



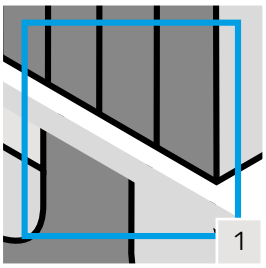
Glass wool Duct 35mm

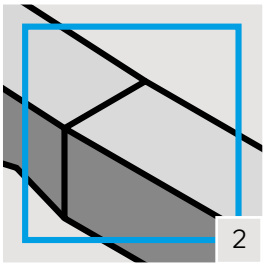
AIR DUCT COMPOSITION

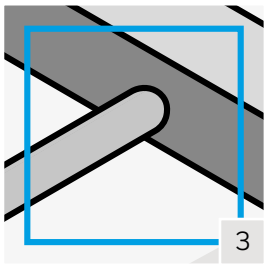
An air duct is composed of a main duct, anti-vibration joints to connect it to the Air Handiling Unit (AHU), branches, elements for narrowing the section of the ducts, elbows, from air grilles, from dampers to regulate the air flows, from fireproof systems in case of fire, from inspection doors for maintenance, from filters and systems to regulate the flow of external air introduced into the system for the air exchange, etc.
Not all the elements mentioned above must necessarily be present in a duct system, but the ducts should be adpatable to be compatible with them.

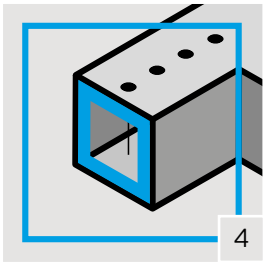


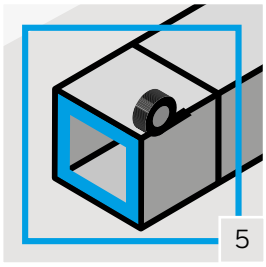
1. Connection to the plant
2. Flanging by means of profiles
3. Aluminium collars for flexible tubes
4. Internal reinforcement profiles
5. Taping of the duct



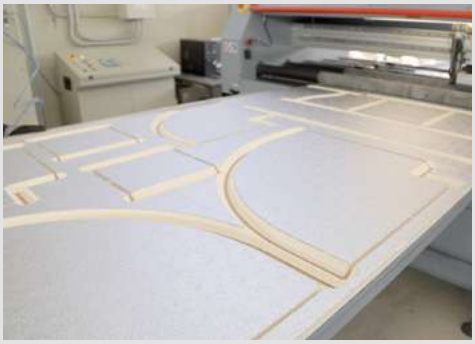








2. REALIZATION



2.1 HOW TO CONSTRUCT A DUCT

Starting from the design, the ventilation duct is built referring to the following instructions:

› Dispose the POLIISO AIR panels on a surface in way that the internal side of the panel is facing upwards; this detail is important because there are panels with different aluminum thickness (example: 80/200 µm), different for the aspect smooth or embossed surface, and different for the type of lacquer (example: antimicrobial).

› Once the panels have been positioned, proceed with the tracing, following the suggested schemes mentioned below, remembering that when tracing the internal lines of the length and the width of the sides that make up the internal section of the duct must be added:
  - 40 mm for panels 20mm thick,
  - 60 mm for panels 30mm thick.

The tracing of the surfaces that will make up the ducts have to be optimized in order to reduce the computerized management of the same tracing and the following cut. Automated equipment greatly simplifies these first stages of processing, in particular the tracing phase, thanks to the optimized and automatic realization of the panels dimensions.

2.2 TRACING

It's made with appropriate Nylon pencils and with the help of rulers, squares, compasses, meters, templates, optimizing spaces, reducing waste and following any indications of the programs for the cutting optimization.

Aluminum square

Stiff compass

2.3 MANUAL CUTTING OR WITH AUTOMATIC MACHINE CUTTER

With the help of special rulers and manual cutters proceed with the cutting of the panels paying particular attention to the cutting blade inclination that makes the carving for the folding and subsequent closure of the ducts.

On the market exist mechanical cutters capable of optimizing the cut by increasing its speed and precision by means of a special automatic system.

Double 45° cutter

Right 45 ° single cutter

Left 45 ° single cutter

Aluminium rulers

2.4 SMOOTHING AND GLUING OF PANELS

Once finished the cutting phase of the POLIISO AIR panels, check the same by folding the panels, giving the shape of the duct:

- In case of slight excess of the foam, proceed with the smoothing of the engraved surface, in order to make the cut, match with the perpendicularity of the duct surfaces.
- Once the cuts of the panels have been smoothed and optimized, proceed with the elimination of the dust with a soft brush or compressed air.
- Then proceed with applying the glue for panels, indicative quantity 100g / m2, avoiding to spread it on the aluminum surfaces. Wait about 5-10 minutes for the adhesive to dry.
- Close the sides of the ducts to obtain the final shape. With the help of a rigid spatula, press the edges to optimize the gluing.
- To close the open edges with an appropriate aluminum tape, first has to be made a guideline by means of the tape marker, for the application of the aluminum tape.
- Then apply the aluminium tape along the guideline using the soft spatula; with the rounded part, apply the tape on the edge of the panel.
- Spread the tape on the second face of the duct, proceeding from the center towards the heads, to reduce the formation of wrinkles.
- Remove any tape in excess from the duct heads by means of a cutter.

2.5 APPLICATION OF SILICONE

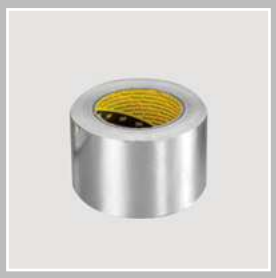
Seal the 4 edges of the duct, apply the silicone with the appropriate gun in the internal edges and bring it to the end of the duct, even in the edges of the profile.
Once connected the ducts apply the silicone in the 4 angles.

Glue for panels

Manual Glue spreader

Soft spatula

Tape marker



Aluminum tape

3. CONSTRUCTION OF STRAIGHT DUCTS

3.1 INITIAL INDICATIONS

The POLIISO AIR panel has a standard size of 1200 mm x 4000 mm and is available in thicknesses of 20 and 30 mm.

- h = height referred to the internal dimension of the duct.
- w =width referred to the internal dimension of the duct.
- l = length referring to the size of the duct.

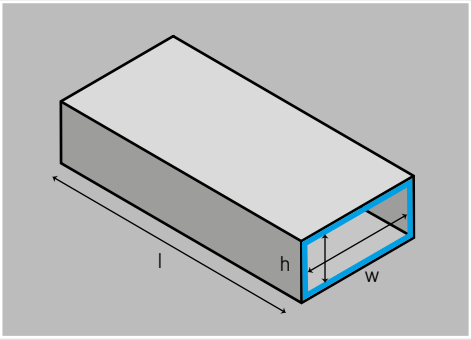


Figure 1: POLIISO AIR Panel

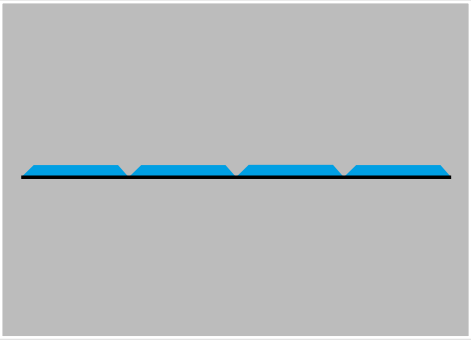


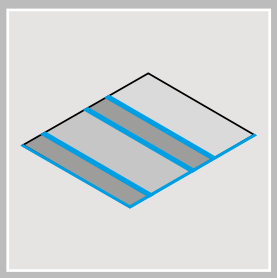
Figure 2: POLIISO AIR Panel section

3.2 CUTTING METHOD FOR RETANGULAR DUCTS

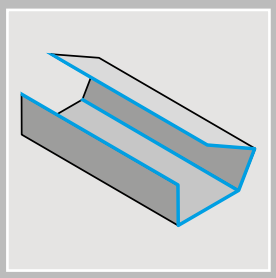
The pieces that form the duct can be obtained by cutting the panel in all directions, both in length and width and from both sides.

Make attention to the surfaces of the panels that have different coatings (e.g. 80/200 µm or smooth/ embossed/antimicrobial treatment) because the external or internal surfaces must have the specific coating as per design. The aim is to optimize the manufacturing of the duct reducing the waste, different cutting methods can be considered, each with a measure limit.

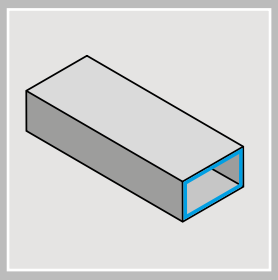
As example a cutting method for the POLIISO AIR panel is shown below.



Phase 1



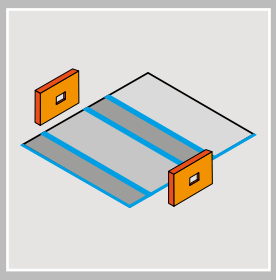
Phase 2



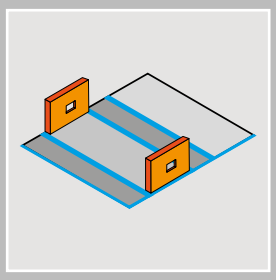
Phase 3

3.3 ASSEMBLY ADVICE

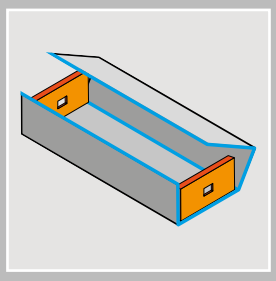
The template for the ducts heads is an additional useful tool for making extremely precise sections of the ducts. These are elements that can be easily made, even with the waste of the panels, they should be made with a section equal to the duct that has to be manufactured, but with rounded edges to avoid that the duct can be damaged during the removal and with handles / holes to simplify the extraction once the duct is glued.
These templates will lay on the side of the panel that leanes on the worktop at the end of assembling (phase 2), they will close around the other sides already prepared with polyurethane foam glue (phase. 3 and 4); once the panels are glued and taped the templates can be removed and then reused.
The advantage of this technique is that the ducts made will have exactly the same section, so it will be easy to join them.



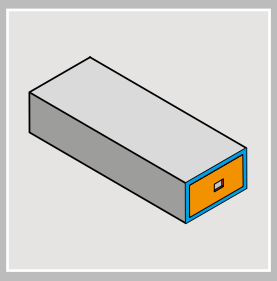
Phase 1



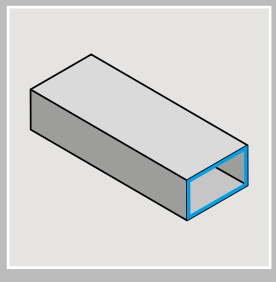
Phase 2



Phase 3



Phase 4



Phase 5

4. CONSTRUCTION OF ELBOWS

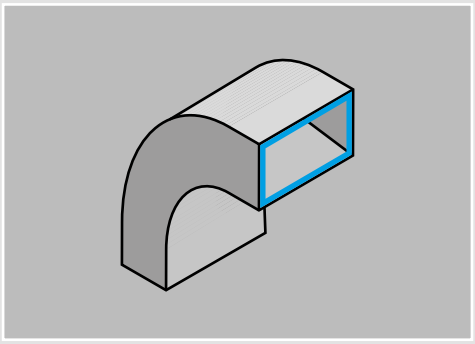


Figure 3 : Elbow with radius

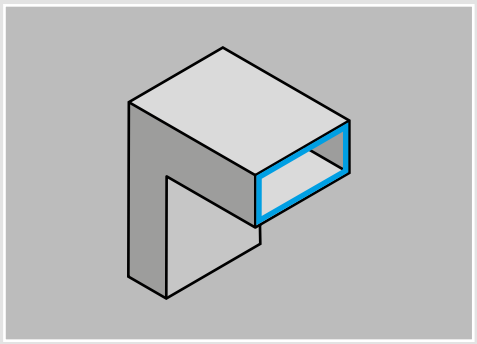


Figure 4: Square Elbow

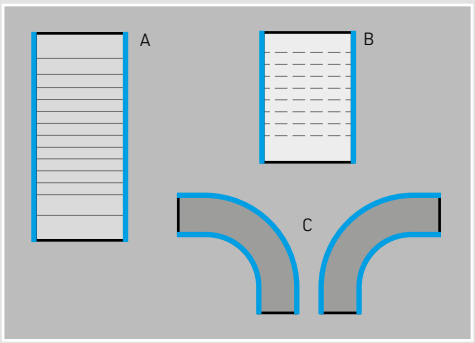


Figure 5: Symmetric Elbow section

4.1 ELBOWS AND SPECIAL PIECES

Among the many components of a duct system, elbows are probably the most common. Below are two examples of elbows:

- Elbow with radius
- Square elbow

An elbow with a radius, is a component where the air passes easily through the rounded trajectory, with a minimum of noise and resistance. The elbows can be made in two types: symmetrical or asymmetrical.
The symmetrical elbow is an elbow where the input and output dimensions are the same, instead the asymmetrical elbow is where the input and output dimensions are different.
In a square elbow, the air is deflected brusquely, causing greater noise and resistance, this is the reason why, in this type of elbow is suggested the use of deflectors.

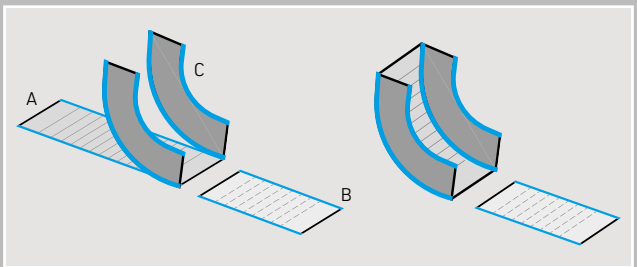
4.2 CONSTRUCTION OF THE SYMMETRIC ELBOW

Begin with cutting 4 separate pieces, based on the size of the input and output, the length of the neck and the radius requirements. The suggested minimum length of the neck is 150 mm. The suggested internal radius of an elbow is 150 mm. The distance between the folds of the internal and external strips must not be less than 50 mm. All cuts are made using a cutter with a correct inclination of the blade.
The four pieces are: external strip (A), internal strip (B) and side pieces (C). All measurements must be made from the internal part of the duct. A nominal amount must be added when measuring the internal strip and the external strip, to compensate the flexion folds that will occur during the bending of strip; these folds could be made with a manual or mechanical bending machine, and will be made on the surface of the panel at the center of the elbow.
Then the external strip (a) will have the folds (highlighted in black in the drawing) on the side that faces inside the elbow, and the internal strip(b) will have the folds on the surface that faces outside the elbow (highlighted in red and outlined because they are present on the other side of the panel shown).

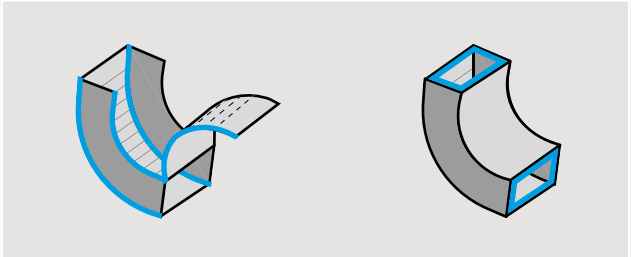
The assembly process is as follows:

1. After following the manufacturing process, including the folding process, the external strip (A) is placed on the table and attach the neck portions of the side pieces (C) aligning them to the edge of the elbow and attaching them following the previous instructions. Continue the coupling of the external radius until the portions of the neck, placed at the opposite end of the elbow adhere.
2. The internal strip will be glued on the internal side of the elbow starting from the same mouth from which the laying of the external strip began, aligning it to the edge of the elbow and applying it gradually until the neck of the opposite mouth is glued.
3. With the rigid spatula, compress the folded edges to ensure proper adhesion and cut any excess pieces (A) and (B) with a straight cutter.

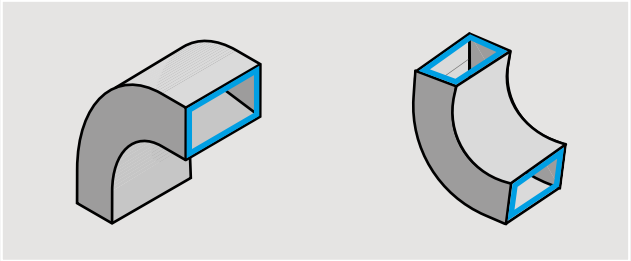
Continue with the procedure of silicone sealing and with the application of the adhesive tape as described in previous chapters. When applying the tape on the edges, first glue the curved side and then, after making perpendicular cuts on the tape every 50 mm, glue it to the flat surface.



Phase 1



Phase 2



Phase 3

5. CONSTRUCTION OF REDUCTIONS

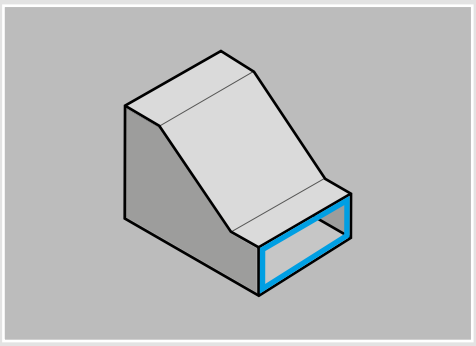


Figure 6: Eccentric Reduction

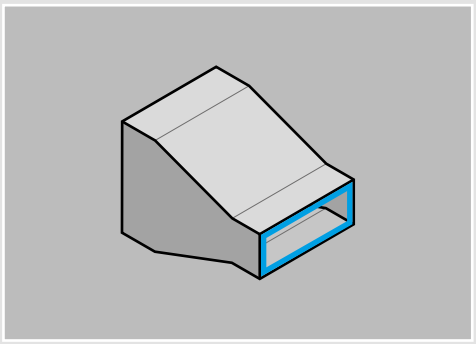


Figure 7: Concentric Reduction

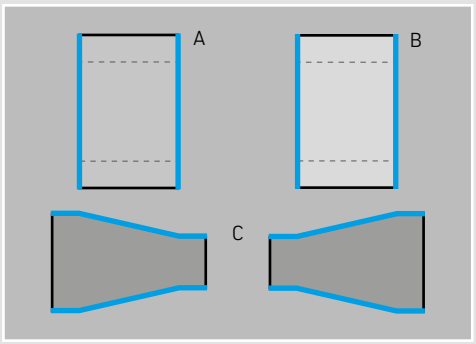


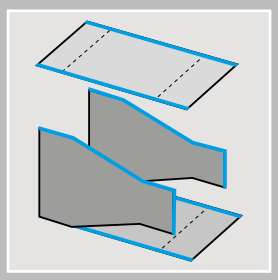
Figure 8: Concentric Reduction Section

5.1 REDUCTIONS

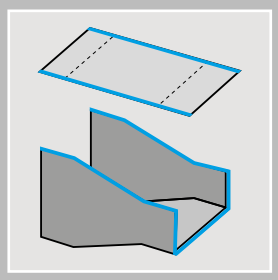
Reductions can reduce on one side of the duct which is classified as an eccentric reduction, or they can reduce on both sides, in this case is classified as a concentric reduction.

5.2 CONSTRUCTION OF CONCENTRIC REDUCTIONS

The construction of a reduction begins by cutting four seperate pieces from a POLIISO AIR panel according to the input and output measurements. Considering a neck length minimum of 200 mm before reduction begins and after the reduction finishes.
The angle of the funnel must not exceed 20°. The four pieces consist in two sides, a base and a cover, as shown. Assembling begins with connecting the side pieces to the base, and then to the cover. In the concentric reduction, the base and cover must have a minimum of 2 folds each, made by engraving the panel. These folds should be made, one for each side of the panel which will be bended, as shown in the following image.
If you do not want to engrave the panels inside the duct, the folds can also be made with help of a special bending machine (manual or automatic).



Phase 1



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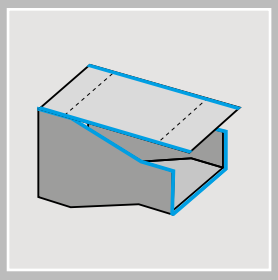
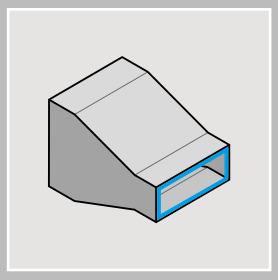


Phase 3



Phase 4

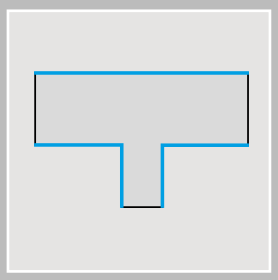
6. DERIVATION AND TEE BRANCHES

The derivations can be classified into two main categories: static derivations and dynamic derivations:

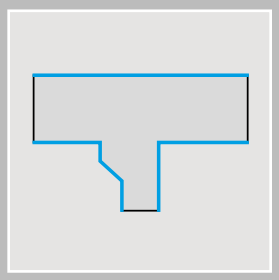
- Static derivations are usually placed on the side of the main duct and are of a smaller section of the main duct;
- the dynamic derivations are normally placed in the change of section of the main duct, with the same section of the main duct.

6.1 STATIC DERIVATION

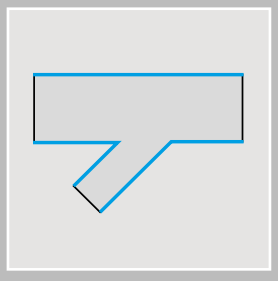
Static derivations are generally divided into: straight derivation, tee branch derivation and angle derivation.
Static derivations can be made with profiles when joining pieces of larger / longer ducts or with heavy accessories (e.g. air diffusers, air grilles or control valve).
The connection with profiles is made with the use of "U" profiles on the derivation and" F "profiles on the main duct. A gasket is applied to the facing surface of the "U" profile and once the derivation has been inserted on the in the "F" profiles, it will be blocked all with self-tapping screws for aluminum (minimum 2 each side, maximum distance between the screws 200 mm).



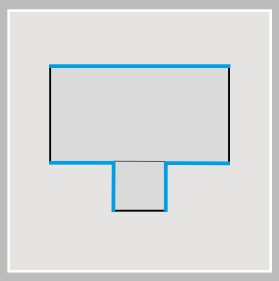
Straight derivation section



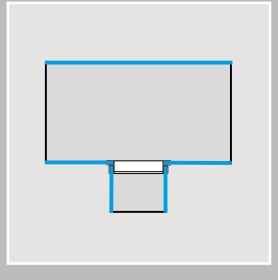
Angle derivation section



Tee branch derivation section



Male/Female connection



Connection with profiles

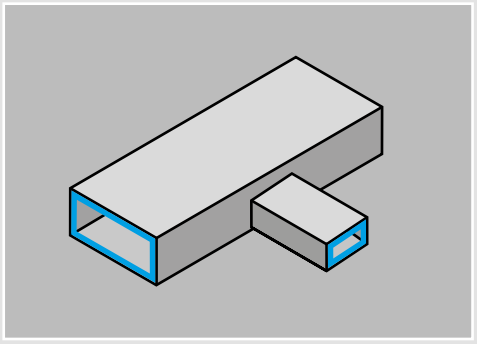


Figure 9: Straight derivation

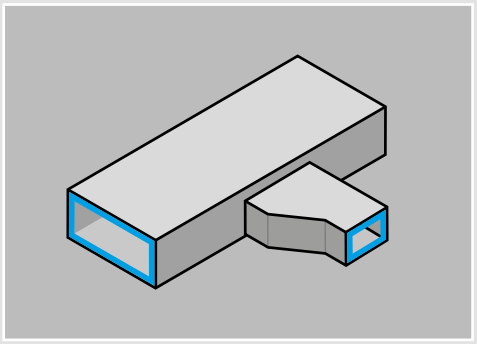


Figure 10: Tee branch derivation

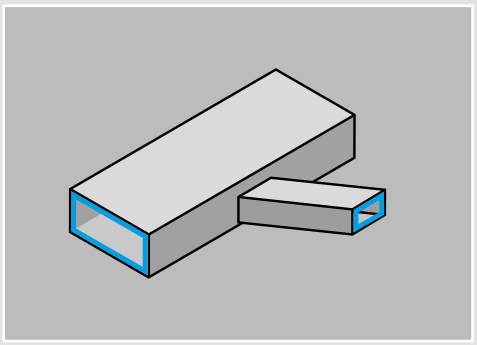


Figure 11: Angle derivation

6. DERIVATION AND TEE BRANCHES

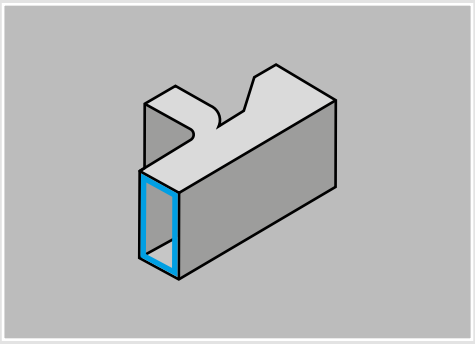


Figure 12: Derivation with elbow and duct

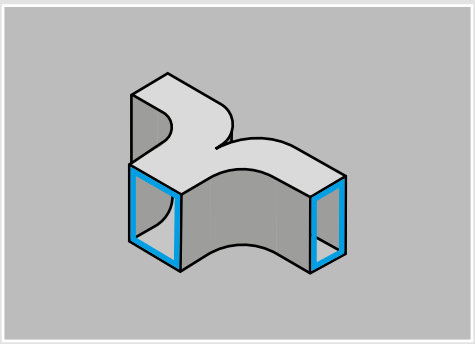


Figure 13: Two way elbow derivation

6.2 DYNAMIC DERIVATION

Dynamic derivations are used to direct the air stream flow.

The general indications that should be applied in the realization of the dynamic derivations are:

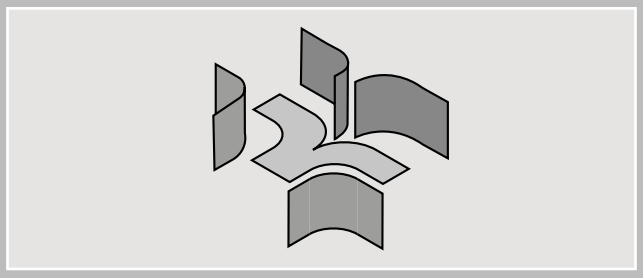
- The length of the neck must be at least 200 mm;
- The internal radius must be at least 200 mm;
- The folds in the curved strips must have a distance of 50 mm between eachother.

6.2.1 TWO WAY ELBOW DYNAMIC DERIVATION

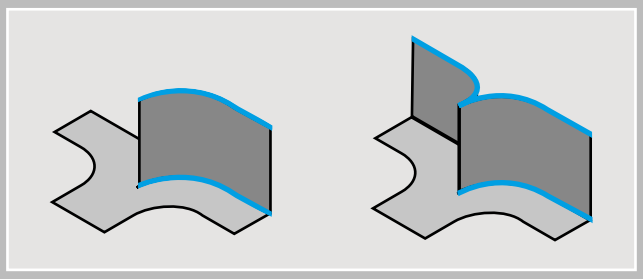
The two way elbow dynamic derivation is a derivation with an input section equal to the measure of the duct and with reduced output sections. It's a double asymmetrical elbow and the technique to make it, is similar to the technique used for elbows.

The asembling sequence is that the derivation begins with the "Y" base and the attachment of the two external strips (phase 1); proceed with the application of the other "Y" base (phase 2) and finally apply the two internal strips (phase3). The taping technique is the same as for the elbows (When applying the tape on the edges, first glue the tape on the curved side and then, after making perpendicular cuts on the tape every 50 mm, glue it to the flat surface).

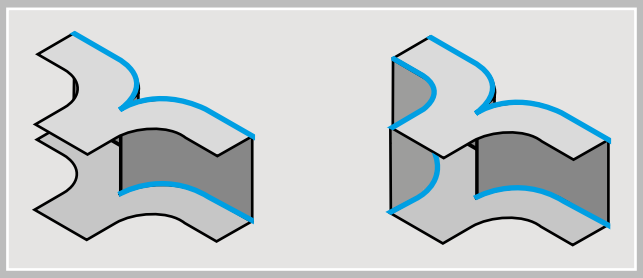
Before sealing the internal edges with silicone, remember to apply tape between the the two joints of the external strips to improve the aerodynamic effect and avoid the accumulation of dust.



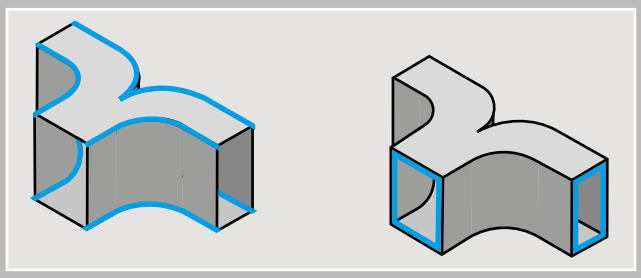
Phase 1



Phase 2



Phase 3



Phase 4

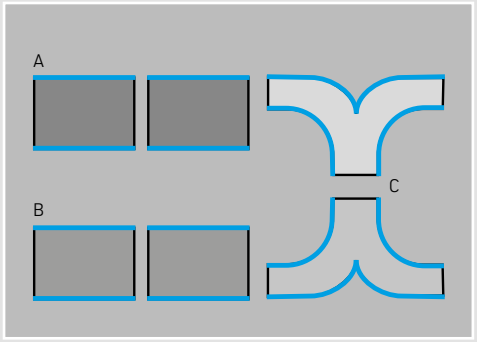


Figure 14: Two way elbow derivation section

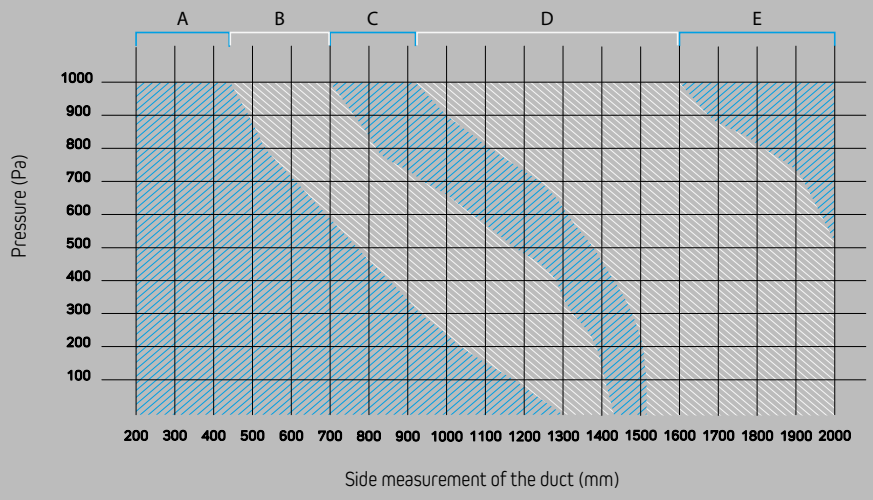
7. DUCT REINFORCEMENT

It is an essential system in the construction of ducts where there is a risk of deformation due to high variations of pressure.

7.1 APPLICATION OF REINFORCEMENTS

The dimensions of the duct, and the Total Pressure System (A / C static pressure of the system) determine the need for the application of these reinforcements (see graph).

7.1.1 REINFORCEMENT GRAPH



A: reinforcement bars not necessary
B: 1 reinforcement bar every 900 mm
C: 1 reinforcement bar every 600 mm
D: 2 reinforcement bars every 600 mm
E: 3 reinforcement bars every 600 mm

7.2 INSTALLATION OF THE REINFORCEMENT BARS

Each bar has to be cut with a length equal to the internal height that has to be reinforced, install 4 reinforcement discs, two inside the duct and two on the external face of the duct. Two holes are made on the duct in the desired position for positioning the bar (see previous table). The diameter of the holes will be about 6 mm, just for the passage of the screw.

We proceed by inserting a screw in a disc, then in a second disc (inside the duct) and finally start to screw to the bar. Before tightening the screw, proceed from the opposite side to insert the second screw in a disc and then in the second disc (inside the duct).

Straighten the bar until it lines up with the second screw.

At this point, the screws can be screwed in, as far as they will go. To simplify the installation it is recommended to hold steady the bar with a useful tool to prevent rotation when tightening the screws.

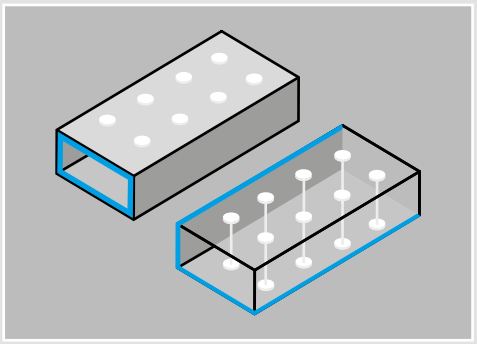


Figure 15: Application of 2 reinforcement bars

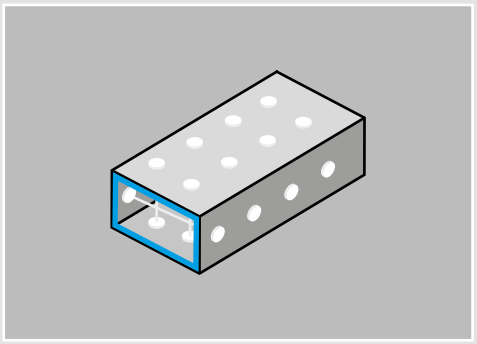


Figure 16: Application of reinforcement bars on all sides

Reinforcement disc

Reinforcement profile

Self-tapping screw

8. CONNECTION SYSTEM

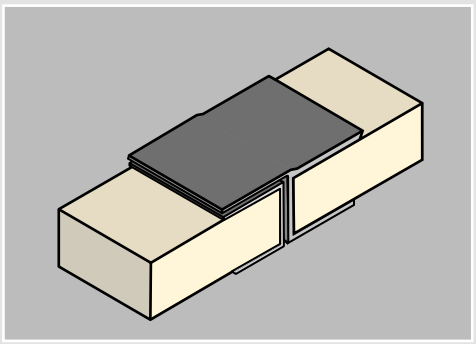
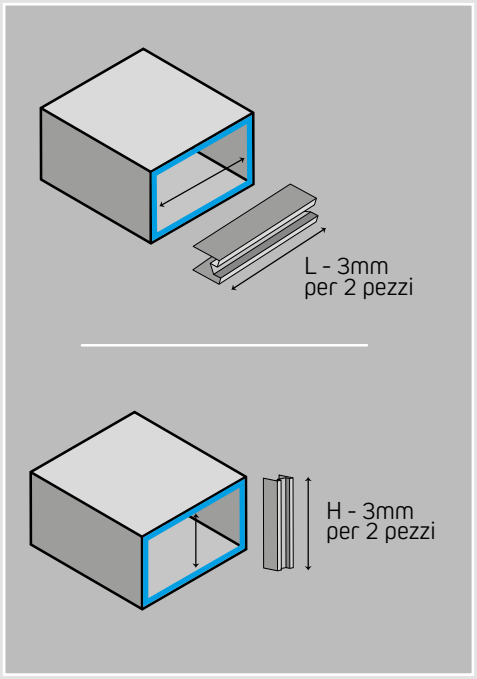


Figure 17: "CHAIR" and "U" profile connection



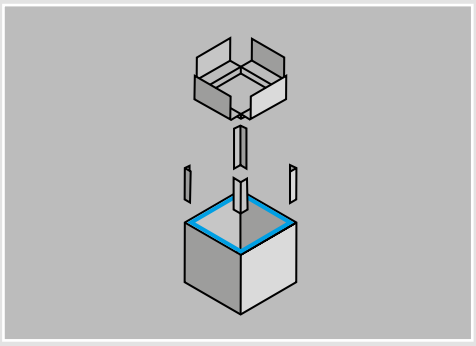


Figura 18: "CHAIR" profile mounting

By means of the connection systems that is given continuity to the ducts in terms of connection, pressure resistance and structural seal. There are various connection systems with different specifications and performances.

8.1 "CHAIR" PROFILE AND "U" PROFILE CONNECTION

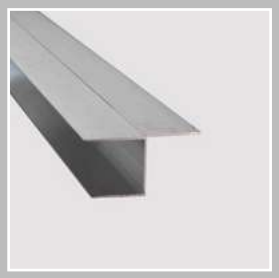
8.1.1 "CHAIR" PROFILE ASSEMBLY PROCEDURE

Once the duct has been assembled, proceed with cutting the profiles 3mm less of the internal measures of the duct; this procedure allows you to compensate the thickness of the profiles inside the duct during the assembly phase.

Check the correctness of the profiles lenght by simulating the assembly. Clean the aluminum profiles to be glued from any oils or lubricants (consequences of production or cut).

Take a "CHAIR" profile and spread a line of glue for profiles along both sides that will be in contact with the aluminium foil of the panel; be careful not to exceed with the glue because during the hardening phase it tends to expand in volume and come out of the glued joint.

Lay a zinc-coated angle, lock it with a head of the glued profile, lay a second zinc-coated angle on the opposite head of the profile and insert the panel into the profile possibly with help of a gum hammer. Repeat the procedure for the head of the second duct.



"CHAIR" profile

Zinc-coated angle

Covering angle

Profile glue

8.1.2 “U” PROFILE ASSEMBLY PROCEDURE

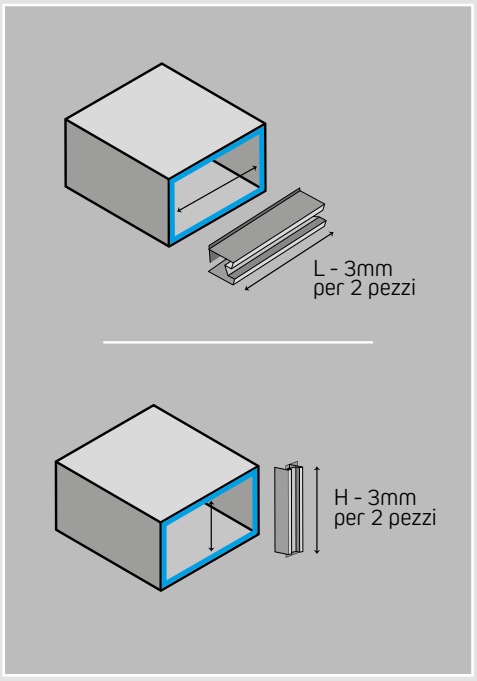
Once the duct has been assembled, proceed with cutting the profiles 3mm less of the internal measures of the duct; this procedure allows you to compensate the thickness of the profiles inside the duct during the assembly phase.
Check the correctness of the profiles lenght by simulating the assembly.
Clean the aluminum profiles to be glued from any oils or lubricants (consequences of production or cut).
Take a “U” profile and spread a line of glue for profiles along both sides that will be in contact with the aluminium foil of the panel; be careful not to exceed with the glue because during the hardening phase it tends to expand in volume and come out of the glued joint.
Before fully inserting each profile inside the duct, insert the corresponding zinc-coated angles, to increase the rigidity of the duct section and ensure a perfect orthogonality.
Repeat the procedure for the head of the second duct.

“U” profile

Zinc-coated angle

Covering angle

Profile glue



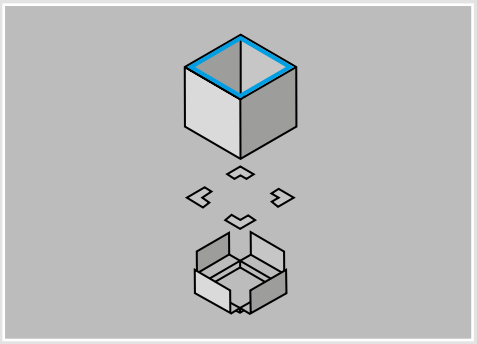


Figure 19: “U” profile mounting

8.1.3 ADHESIVE GASKET ASSEMBLY PROCEDURE

With the profiles assembled and glued to the duct (drying time 24H) make sure that there are no glue smears; if there is excess of glue on the contact surfaces proceed to remove it with a cutter or spatula.
Proceed with the application of the adhesive gasket on the "CHAIR" profile, starting the application from the middle of the two sides; do not start the application from the corners as the overlap of gasket could be ineffective for the air pressure seal.
The gasket must be placed in the special groove of the profile, taking care to bend it without stretching or tearing it in corrispodence of the corner joints.
Apply the gasket along the entire length of the perimeter, finishing it by overlapping the gasket at least 3 cm on the starting point.
At this point the two heads are ready to be connected.

8.1.4 DUCT CONNECTION

Bring near the two heads of the ducts previously prepared with the "CHAIR" and "U" profiles, insert the finished duct head with the "U" profile inside the finished duct head with the "CHAIR" profile; push the two ducts against each other, compressing the gasket until the aluminum heads touch. Keeping the compression of the gasket, proceed to mechanically fix the "CHAIR" and the "U" profile as figured in the picture. Proceed using self-tapping aluminum screws.

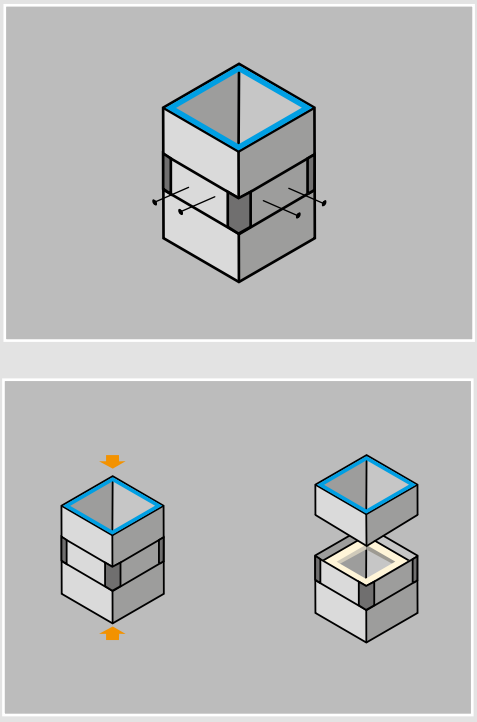


Figure 20 : Duct connection

8.2 INTERNAL BAYONET CONNECTION

8.2.1 INVISIBLE FLANGE ASSEMBLY PROCEDURE

Once the duct has been assembled, proceed with cutting the profiles 3mm less of the internal measures of the duct; this arrangement allows the angles of the profiles to joint perfectly during the assembly phase.
Check the correctness of the profiles lenght by simulating the assembly. Clean the edge of the POLIISO AIR panel in order to remove any dust. Clean the aluminum profiles to be glued from any oils or lubricants (consequences of production or cut).
Take a flange profile and spread a line of glue for profiles along both sides that will be in contact with the aluminium foil of the panel; be careful not to exceed with the glue because during the hardening phase it tends to expand in volume and come out of the glued joint.
Lay a zinc-coated angle, lock it with a head of the glued profile, lay a second zinc-coated angle on the opposite head of the profile and insert the panel into the profile possibly with help of a gum hammer. Repeat the procedure for the head of the second duct.

ATTENTION, the aluminum profile must be applied with the widest fin inside the duct. Proceed in the same way with all the profiles until the perimeter of the duct mouth is created.

Invisble Flange

Zinc-coated angle

Profile Glue

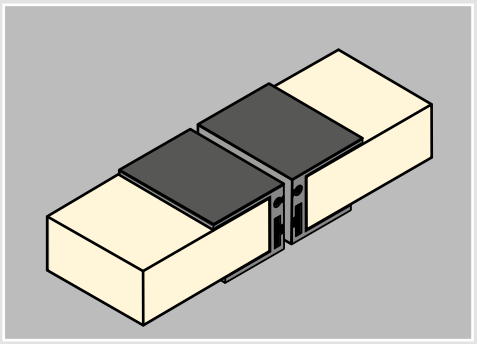
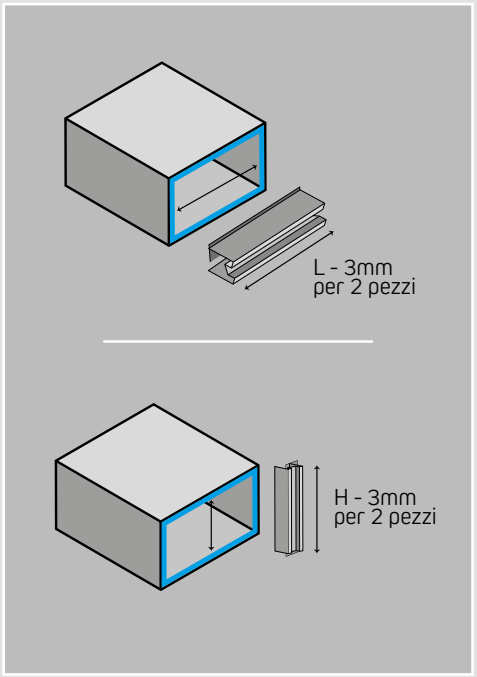


Figure 21 : Internal bayonet connection



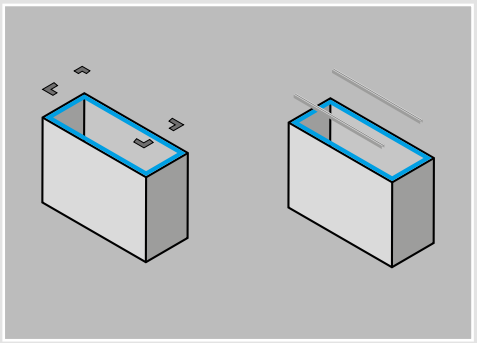


Figure 22: Invisble flange mounting

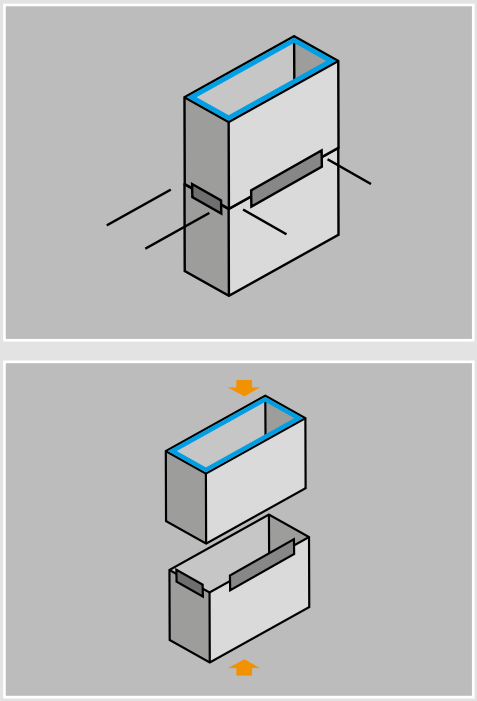


Figure 23: PVC bayonet mounting

8.2.2 PVC BAYONET ASSEMBLY PROCEDURE

Once the profiles are glued (drying time 24H) and assembled to the duct make sure that there are no glue smears; if there is excess of glue on the contact surfaces proceed to remove them with a cutter or a spatula.
Cut the PVC bayonet in pieces equal or slightly longer than the aluminium profiles (the surplus must not exceed 10 mm, otherwise the bayonets that are applied first could obstruct the application of the other bayonets).
In the phase of inserting the bayonets you can help yourself with a beak plier to keep the aluminium profiles close together. If it is particularly difficult to slide the bayonets into place, help yourself with a gum hammer. At this point the two duct heads are coupled, but not yet pneumatically sealed.

ATTENTION, do not cut the bayonets shorter than the metal profiles because the absence of bayonets along part of the profiles would leave points of dispersion in the pneumatic seal of the connection system.

PVC bayonet

Silicone

8.2.3 COVERING ANGLE MOUNTING PROCEDURE

Fill with silicone, the holes in the corners between the connected ducts, taking care to apply it mainly in the corner between the jointing of the profiles. Apply the covering angle, by inserting the fins that are on the middle of the sides, in the aluminum profiles. The POLIISO AIR ducts are now connected.

Covering angle

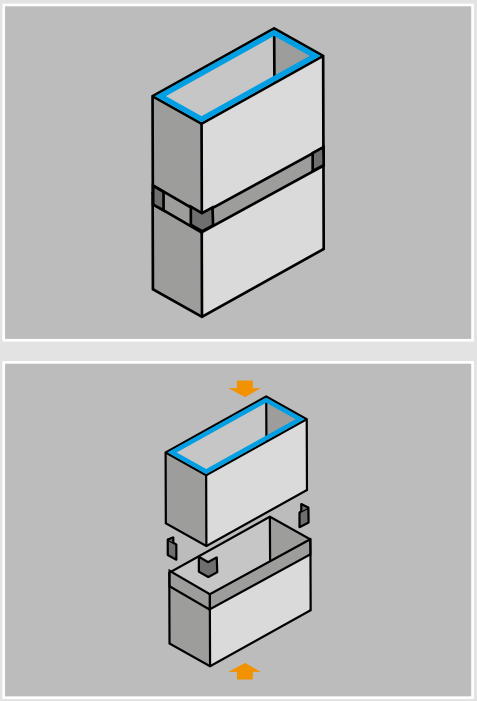


Figure 24: Covering Angle mounting

GENERAL CONDITIONS OF SALE

1. Agreement
1.1 The provisions of the following "Terms and Conditions of Sale" determine and regulate the sale of products by EDILTEC S.r.l. headquartered at Via Giardini no. 474, Modena, VAT no. 01932170366. These terms and conditions are available to customers on the noticeboard at the company's head office, and are published on its website and included in its product catalogue. When the Buyer submits an order to EDILTEC, this implies the full, unconditional and irrevocable acceptance of these Terms and Conditions, and the Buyer's automatic waiver of its own terms and conditions of purchase or standard terms.
1.2 Any condition that differs from these Terms and Conditions will only be binding on Ediltec if expressly accepted and signed; no variations will be permitted, either tacitly or through the acceptance of conditions indicated by other parties.
1.3 The sales contract will be considered concluded only when the order confirmation, stamped and signed for acceptance, is received by EDILTEC. Ediltec S.r.l. expressly reserves the right to recede from the contract and therefore not to carry out the supply or not to complete it, if in the meantime it becomes aware of facts or information relating to the customer, such that would not have induced it to contract or would have determined various conditions.
2. Handover of goods and defects
2.1 Unless agreed otherwise by the parties, the products are sold on a carriage-paid basis, at the risk and peril of the Buyer; the delivery times indicated are only indicative, and are not binding on EDILTEC.
2.2 Any damage, defects and/or flaws which may be externally visible, or any complaints about quantities differing from the transport note must be reported immediately, and only in the form of a reservation on the transport note. Where sales are made ex-works, the acceptance of the goods equates to recognition of the quantities stated on the transport note and the absence of any externally-recognisable defects. It is hereby agreed that the person collecting the goods has this power of representation.
2.3 However, where quality defects are found in the products, the customer must immediately inform the vendor within eight days of discovery, providing a full description/illustration of the defect using any available means and/or support, and they must also demonstrate that the products have been correctly handled and stored. The product will not be replaced if it has already been used and if any defects in the product would, using professional diligence, have been recognised before it was used. Any further, related or consequential direct or indirect damages are also excluded.
3. Sale prices
3.1 If there is any discrepancy in the prices stated in the order and in the order confirmation, those indicated in the document issued by EDILTEC will prevail. EDILTEC reserves the right to increase the prices, giving written notification to the Buyer at least ten (10) days in advance of the date on which the increase will take effect. In such a case the Buyer has the right to cancel the order, notifying EDILTEC by the date on which the increase takes effect. Goods ordered with extended delivery terms will be billed at the price in force on the day of shipment.
4. Payment terms
4.1 In the event of a discrepancy between the terms of payment stated on the order and those indicated in the order confirmation, those indicated in the document issued by Ediltec, and any case, those indicated in the invoice, will prevail.
4.2. Any extended terms of payment granted to the customer, or any form of payment other than instant payment will be forfeited if a payment is missed by the customer, even if of a small amount or on a single occasion; at such time, all invoices payable in the future will be deemed to fall due on the date of the missed payment, and will be claimed immediately.
4.3 If the Buyer does not make the payment for the products according to the agreed terms, EDILTEC may also: (I) demand immediate payment of all the outstanding balances; (II) cancel any orders not yet fulfilled; or (III) suspend fulfilment of the orders until the Buyer has paid the outstanding amounts. EDILTEC may also terminate the sale contract if the Buyer fails to pay the price, in which case late payment interest will be due in any event, without prejudice to compensation for damages.
4.4. The provisions of paragraphs 4.2 and 4.3 above also apply if the customer misses a payment or has amounts outstanding to any of the following companies: Pannelli Termici S.r.l., Decem S.r.l., Algor S.r.l., which are companies affiliated to Ediltec and, like Ediltec, controlled by SBN Group S.r.l.
5. Force majeure
Any delays in delivery which are not attributable to EDILTEC, such as strikes, fires and other situations beyond the control of EDILTEC, shall not give the Buyer any right to an indemnity, with such delays only affecting the start date of the terms of payment. In such a case the Buyer has the right to cancel the order. EDILTEC reserves the right to cancel the order in any event.
6. Warranty and limitation of liability
6.1 EDILTEC warrants to the Buyer that its products conform to the relative specifications and technical sheets, which can all be found on the websites www.ediltec.com and www.poliisoairducts.com. The specifications and technical sheets may be amended at any time. The Buyer accepts full risk and responsibility in relation to the results obtained by using the products, either alone or in combination with other products. This warranty does not extend to products that were subjected to any processing and/or manipulation after the sale.
6.2 All the Buyer's legal and contractual rights are limited to, and shall expire, 12 months from the date of shipment of the goods.
6.3 The Buyer's warranty is in all cases expressly limited to the free repair or replacement of the defective products at the discretion of EDILTEC, with the exclusion of any compensation for any further losses or costs of any kind. Products for which a complaint has been made may not be returned to EDILTEC or otherwise disposed of, processed or transferred without the consent of EDILTEC.
7. Returns
7.1 Authorisation to return the products will be given on condition that the packaging is intact and that the materials are in perfect condition. The customer hereby waives any claims for compensation for further direct and indirect losses that may result from the unavailability of the material during the time needed to investigate the defect and subsequently replace the material. A complaint does not entitle the Buyer to suspend payments, and all the Buyer's claims are to be made in separate legal proceedings, after demonstrating proof of payment for the goods. The "solve et repete" principle applies.
8. Intellectual property
8.1 The drawings, diagrams, specifications, technical and commercial nomenclature, documents, samples, catalogues, brochures, patterns, models, trademarks and any other technical information that EDILTEC may communicate or make available to the Buyer remains the exclusive property of EDILTEC and/or its licensor, who may require the return of such material at any time.
8.2 The Buyer shall not circulate, reproduce or disclose the contents of such information to any third party without the prior written consent of EDILTEC. Further, the Buyer shall inform EDILTEC as quickly as possible of any infringement of rights of intellectual property belonging to or licensed to EDILTEC, of which the Buyer may become aware and it shall, on request, provide EDILTEC with any assistance the latter may require in defending its rights.
9. Discount for early payment
Where discounts are applied on the basis of terms and/or conditions of payment, where those conditions are not respected, the amount of the discount will be charged to the client in a debit note.
10. General characteristics of the products; storage requirements
Ediltec produces products for thermal insulation, mainly for use in the building industry.
These products may deteriorate if in contact with atmospheric agents. The products are sold in packaging that protects them adequately during loading, transport, and initial handling. They should therefore be kept indoors and on site and should only be exposed to atmospheric agents where strictly necessary.
The panels must always be fixed on. As the products are not waterproofing products, a waterproofing layer should always be applied. Under no circumstances will any complaints be accepted where the products have not been secured adequately, or due to water seepage.
11. Assignment of contract
The Buyer may not transfer or assign any part of the sale contract without the prior written consent of EDILTEC.
12. Applicable law and competent Court
The provisions of Italian law shall apply in respect of any matters not expressly governed by these terms and conditions. The Court of Modena shall have sole jurisdiction in respect of any legal actions.
13. Privacy
When a Buyer submits an order to EDILTEC, this implies consent to the processing of any personal data supplied, which will be processed in accordance with the data protection statement published on the websites www.ediltec.com and www.poliisoairducts.com in the "Privacy policy" section. The data will only be used for commercial purposes, and will not be subjected to automatic profiling or transferred to any third parties.

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