TRANSAIR® ALUMINIUM RANGE

INSTALLATION GUIDE

THE GOLDEN RULES OF INSTALLATION

Installation Instructions

General

Prior to the installation of a Transair® compressed air distribution system, plan to install an adequate air filtration and drying system. Flexible Transair® hose can be installed at the start of the system in order to eliminate any sources of vibration and to facilitate maintenance operations.
When maintaining or modifying a Transair® system, the relevant section should be vented prior to the commencement of any work.
Installers should only use Transair® components and accessories, in particular Transair® pipe clips and fixture clamps.
The technical properties of the Transair® components, as described in the Transair® catalogue, must be respected.

Commissioning the Installation

Once the Transair® installation has been installed and prior to commissioning, the installer should complete all tests, inspections and compliance checks as stated in any contract and according to sound engineering practice and current local regulations. Final commissioning instructions are described on page 111 of this catalogue.

Transair® Pipe and Hoses

Transair® pipe should be protected from mechanical impact, particularly if exposed to potential collision with fork-lift trucks or when sited in an environment with moving overhead loads.
Similarly, rotation of the pipe and pipe supports should be avoided.
Transair® pipe must not be welded.
Flexible Transair® hoses should be used in accordance with the recommendations of the installation guidelines of this catalogue (pages 93 to 97).
NB: for bending a Transair® aluminium pipe, please refer to page 110 of this catalogue.

Expansion / Contraction

Expansion and contraction of the system are automatically catered for by correct installation. The system designer and installer should calculate the expansion or contraction of each Transair® line according to the recommendations in this installation guide.

Component Assembly

Transair® components are provided with assembly instructions for their correct use - simply follow the methods and recommendations stated in this document.

Transair® Installations - Prohibited Situations

- Installation within a solid mass (concrete,foam, etc.), especially underground
- The hanging of any external equipment on Transair® pipe
- The use of Transair® for earthing or as a support for electrical equipment
- Exposure to chemicals that are incompatible with Transair® components (please contact us for further details)
- The use of components not approved by Transair®

Best Practices

When installing a Transair® system, the work should be performed in accordance with good engineering practices.

- **Bends and bypasses represent sources of pressure drop.**
- **To avoid excessive pressure loss, use modular consoles to offset the network and to bypass obstacles.**
- **Keep in-line pipe diameter reductions to a minimum.**

Maintain a consistent level of good quality air by use of adequate filtration at the compressor outlet.

- **The diameter of the pipe will influence pressure drop and the operation of point-of-use equipment.**
- **Select the diameter according to the required flow rate and acceptable pressure drop at the points of use.**

Never encase the network in order to facilitate maintenance or servicing.

- **Position drops as close as possible to the point of use.**

TRANSAIR® ALUMINIUM PIPE

General

PRESENTATION

Ø 16.5

DEBURRED AND CHAMFERED PIPE

Ø 25

DEBURRED AND CHAMFERED PIPE

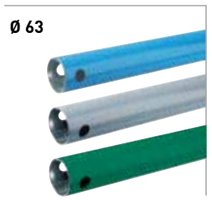
Ø 40

DEBURRED AND CHAMFERED PIPE

Ø 50

PIPE PRE-DRILLED AT EACH END WITH TWO 22 MM DIAMETER HOLES, DEBURRED AND CHAMFERED

Ø 63

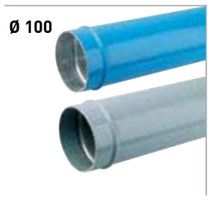


PIPE PRE-DRILLED AT EACH END WITH TWO 22 MM DIAMETER HOLES, DEBURRED AND CHAMFERED

Ø 76

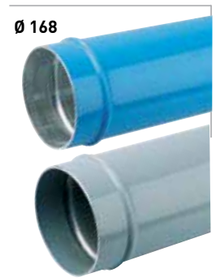
PIPE LUGGED AT EACH END, DEBURRED AND CHAMFERED

Ø 100



PIPE LUGGED AT EACH END, DEBURRED AND CHAMFERED

Ø 168



PIPE LUGGED AT EACH END, DEBURRED AND CHAMFERED

Transair® aluminium pipe is supplied "ready for use".
No particular preparation (cutting, deburring, chamfering, etc.) is required.
Thanks to the rigidity of Transair® aluminium pipe, temperature-related expansion / contraction phenomena are reduced to a minimum. The Transair® network retains its straightness, and hence its performance, over time (reduction of pressure drop caused by surface friction).
Transair® aluminium pipe is calibrated and fits perfectly with all Transair® components. Each connection is automatically secured and the seal is optimized.
The use of Transair® aluminium pipe minimises corrosion to the internal surface (self-protection of the pipe by the formation of alumina oxide).

Transair® aluminium pipe has a protective lacquer coating (QUALICOAT certified) and is thus protected from external aggression.
Its colour allows the network to be immediately identified and gives a clean and aesthetic overall appearance.
Standard colours available:
- blue (RAL 5012/BS1710)
- grey (RAL 7001)
- green (RAL 6029)

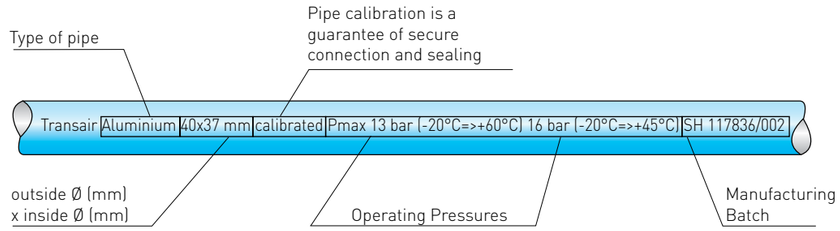
(please contact us for other colours)

Transair® aluminium pipe is available in 8 diameters and 2 lengths: 3 metres and 6 metres (4.5 metres for Ø16.5 - please contact us for other lengths).

APPLICATIONS

Transair® Ø16.5 - Ø25 - Ø40 - Ø50 - Ø63 - Ø76 - Ø100 - Ø168 aluminium pipe has been specially designed for the creation of primary and secondary networks for compressed air, vacuum and inert gases (argon, nitrogen, CO_2) - please contact us for other fluids

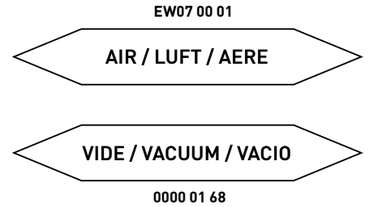
MARKING



IDENTIFICATION

The conveyed fluid can be instantly identifed by the colour of the pipe.
Example :
Blue Pipe → Compressed Air Network
Grey Pipe → Vacuum Network
Green Pipe → Nitrogen

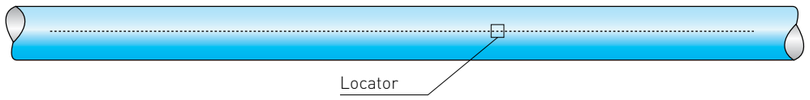
This identification may also be done by applying adhesive labels directly onto the pipe.



CONNECTION INDICATOR

ONLY ON Ø 16.5 - Ø 25 - Ø 40 ALUMINIUM PIPE

DRILLING LOCATOR : "MARK" LINES FOR CORRECT DRILLING



Drilling locator is used to correctly position Transair brackets onto the pipe.
There are two locators on each pipe.
The second locator is used to position extra brackets perpendicular to eachother.

TRANSAIR® ALUMINIUM PIPE

Aluminium Pipe Section

Ø 16.5
Ø 25 - Ø 40

TOOLS

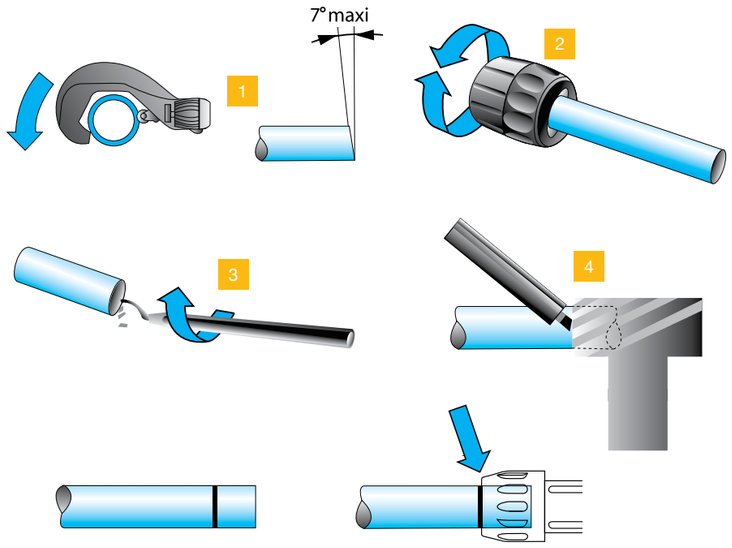
PIPE-CUTTER
FOR ALUMINIUM PIPE
6698 03 01

CHAMFER TOOL
FOR ALUMINIUM PIPE
6698 04 01

DEBURRING TOOL
FOR ALUMINIUM PIPE
6698 04 02

MARKING TOOL
FOR ALUMINIUM PIPE
6698 04 03

PROCEDURE



1 - Cutting the pipe:
- place the pipe in the pipe cutter
- position the blade onto the pipe
- rotate the pipe cutter around the pipe while gently tightening the wheel.

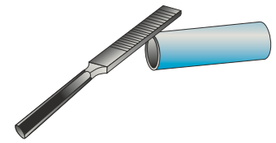
2 - Carefully chamfer the outer edges.
3 - Also deburr the inner end of the pipe
4 - Trace the connection indicator using the marking tool.

The insertion lengths for Ø16.5 - Ø25 - Ø40 connectors are 25mm, 27mm and 45mm respectively, with the exception of the end cap, ref. 6625, for which the insertion lengths are of 39mm, 42mm and 64mm respectively.

Ø 50 - Ø 63

TOOLS

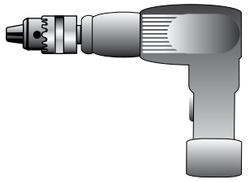
PIPE-CUTTER
6698 03 01



DEBURRING TOOL
FOR ALUMINIUM PIPE
6698 04 02

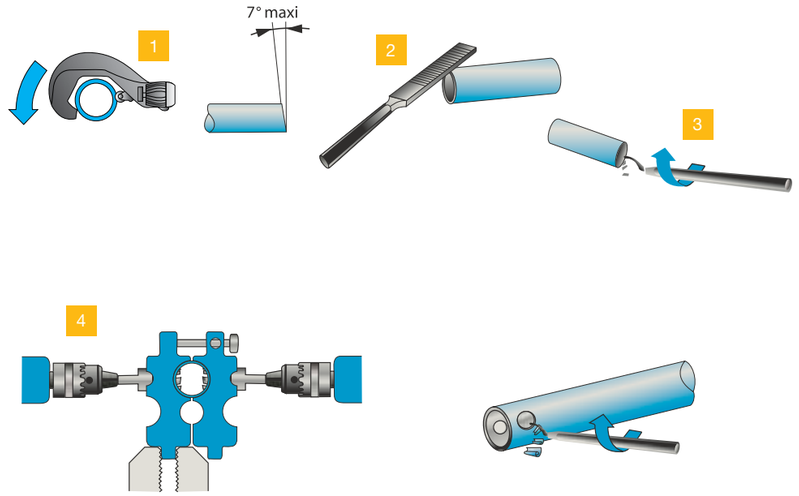
DRILLING JIG
FOR ALUMINIUM PIPE
6698 01 03

DRILLING TOOL
FOR ALUMINIUM PIPE
6698 02 01



DRILL

PROCEDURE



1 - Cutting the pipe:
- place the pipe in the pipe cutter
- position the blade on the pipe
- rotate the pipe cutter around the pipe while gently tightening the wheel.

2 - Carefully chamfer the outer edges.
3 - Also deburr the inner end of the pipe
4 - Drill the two holes using the drilling jig (6698 01 03) and the Ø22 mm drilling tool (6698 02 01). Loosen the jig, release the pipe, then deburr both holes. Ensure that all outer and inner surfaces are smooth and clear of swarf and potential sharp edges.

TRANSAIR® ALUMINIUM PIPE

Aluminium Pipe Section

Ø 76 - Ø 100 - Ø168

TOOLS

PIPE-CUTTER
FOR ALUMINIUM PIPE
6698 03 01 (Ø76)
EW08 00 03
(Ø100 AND Ø168)

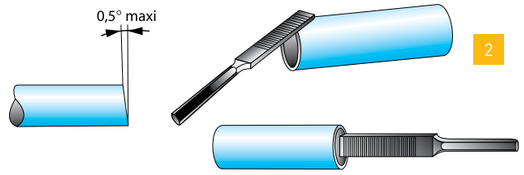
FILE

PORTABLE TOOL KIT
REF.
EW01 00 01 (220V) OR
EW01 00 03 (110V)

PIPE FORMING JAW SET
REF.
EW02 L1 00 (Ø 76)
EW02 L3 00 (Ø 100)
EW02 L8 00 (Ø 168)

PROCEDURE

1 - Cutting the pipe :
- place the pipe in the pipe cutter
- position the blade on the pipe
- rotate the pipe cutter around the pipe while gently tightening the wheel.

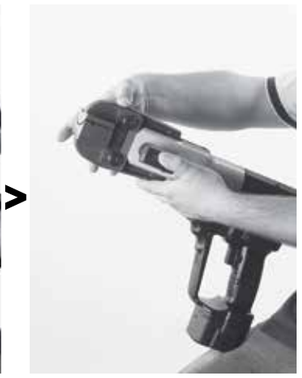


2 – Carefully deburr and chamfer the outer and inner edges of the pipe with a file.

3 Creating the lugs for Ø76, Ø100 or Ø168 cut pipe

Open the retaining pin at the front of the machine by pressing the jaw release button*

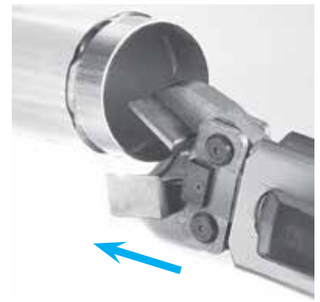
Place the jaws in the housing.



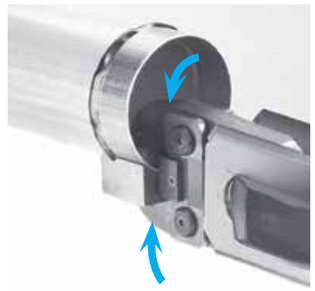
Lock in position by closing the retaining pin.

PROCEDURE

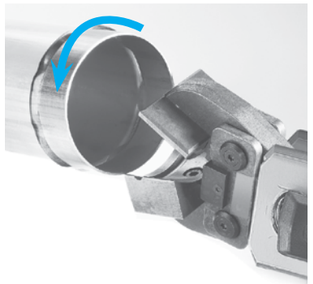
4



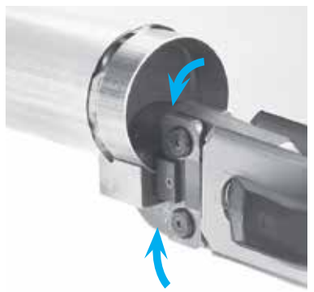
Manually open the jaws of the clamp and insert the aluminium pipe into the clamp as far as it will go.



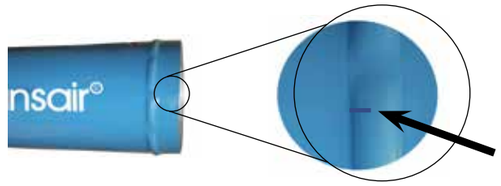
Release the jaws. Press the trigger and crimp the tube until a 'snap' sound is heard.



Re-open the two jaws to remove the pipe.
Position the clamp end next to the lug mark: this will avoid the lugs overlapping.
Rotate the pipe slightly.



Repeat the operation until the required minimum number of lugs for each diameter is achieved.



	Ø 76	Ø 100	Ø 168
Number of lugs	6	7	10

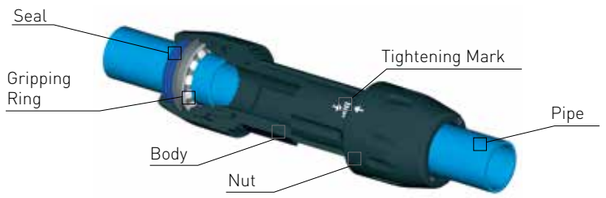
IMPORTANT: DO NOT OVERLAP THE LUGS!

TRANSAIR® PIPE-TO-PIPE & STUD CONNECTORS

General

Ø 16.5
Ø 25
Ø 40

INSTANT CONNECTION BY MEANS OF A GRIPPING RING



Ø16.5, Ø25 and Ø40 connectors secure instantly to Transair® aluminium pipe. Simply insert the pipe into the connector up to the connector insertion mark.

The internal gripping ring is then automatically secured and the connection is complete.

Ø 50
Ø 63

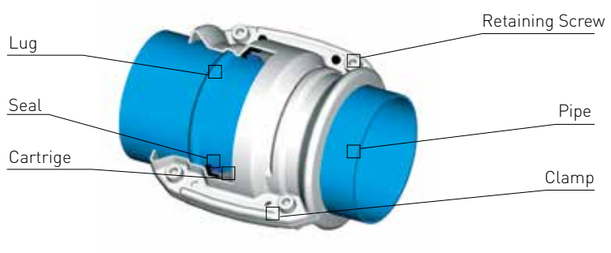
SNAPRING QUICK-FIT CONNECTION

Ø50 and Ø63 connectors are quickly secured to Transair® aluminium pipe by means of a SnapRing which makes the connector fully integrated with the pipe.

Connection is achieved by simply tightening the nut.

Ø 76
Ø 100
Ø 168

LUG & CLAMP QUICK-FIT CONNECTION



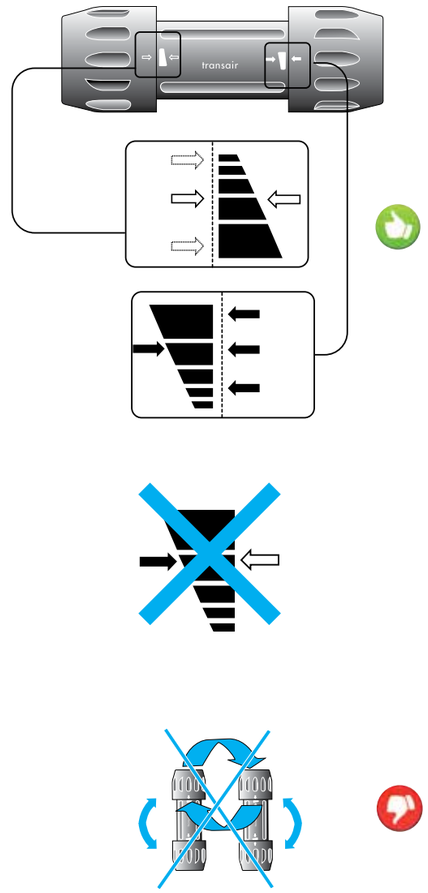
Ø76, Ø100 and Ø168 clamps secure instantly to Transair® aluminium pipe.
Simply position the formed pipe within the Transair® cartridge, which acts as a seal.

Close the Transair® clamp to secure the connection and finally tighten the 4 retaining screws.

PRE-ASSEMBLED TIGHTENING INDICATORS FOR
Ø 16.5
Ø 25
Ø 40
CONNECTORS

There are important visual markings on the bodies and nuts of Transair® Ø16.5, Ø25 and Ø40 connectors. These are represented by solid and empty arrows and indicate the optimum torque.
When assembling Transair® connectors, the nuts are tightened to a pre-defined torque on the body of the connector.

This torque guarantees the seal and safety of each connection.
Before using Ø16.5, Ø25 or Ø40 connectors, ensure that these arrow marks are correctly aligned with each other.

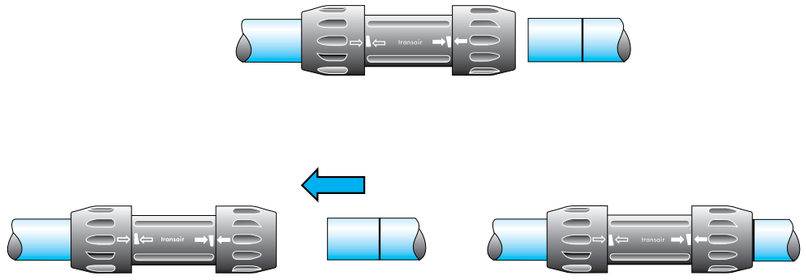


There is no need to loosen the nuts prior to joining Ø16.5, Ø25 and Ø40 connectors to Transair® aluminium pipe.
Do not exchange the nuts.
Do not use a nut on another connector.

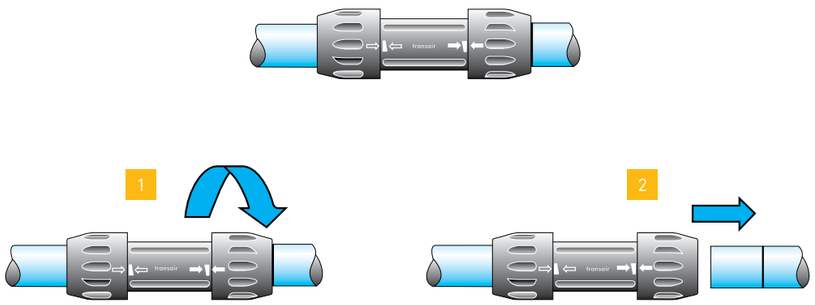
Connection / Disconnection

Ø 16.5
Ø 25
Ø 40

CONNECTION



DISCONNECTION



Simply insert the pipe into the connector up to the connection mark.
To disconnect, unscrew the nut by one half turn and remove the pipe.

Lateral dismantling: see page 84 of this catalogue.

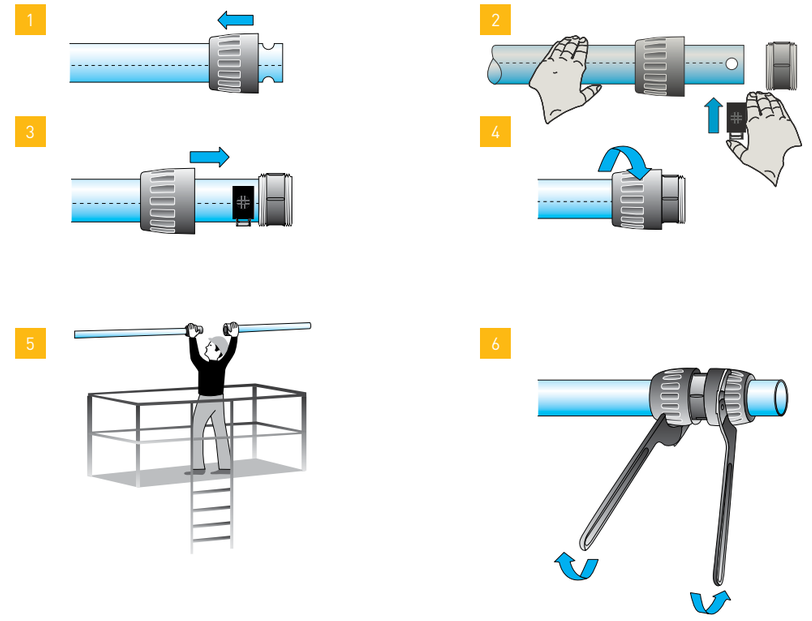
NB – when using end caps (6625)

The insertion length is greater for end caps than for other Transair® connectors. The connection mark should be applied to the pipe by means of a marker and tape measure, using the following values:

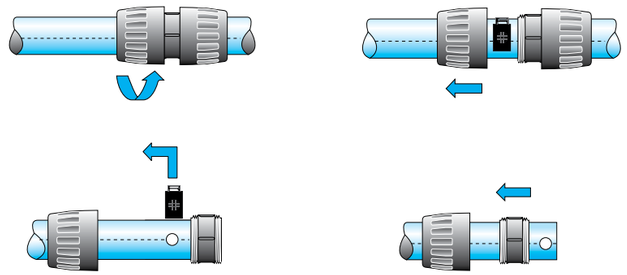
- Ø16.5: 39mm
- Ø25: 42mm
- Ø40: 64mm

Ø 50
Ø 63

CONNECTION



DISCONNECTION



1 - Unscrew one of the connector nuts and fit over the pipe.
2 - Position the SnapRing in the appropriate housings (2 holes at the end of the pipe). Position the SnapRing manually **with one hand.**
3 - Bring the nut towards the body, that has been previously positioned at the end of the pipe, until it stops against the double clamp.
4 - Tighten the nut by hand.
5 - Bring the two pipes together.
6 – Complete the assembly by 1/2 rotation with Transair® tightening spanners ref. 6698 05 03.
7 - To disconnect, perform the same operations in reverse order.

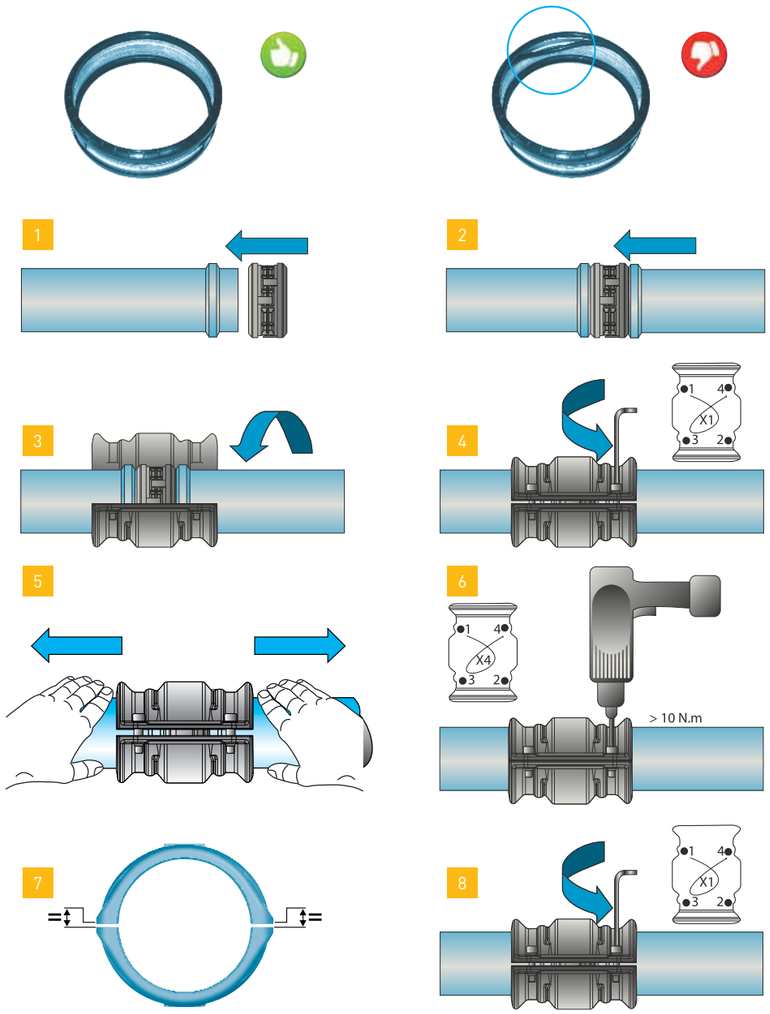
Lateral dismantling: see page 84 of this catalogue.

TRANSAIR® PIPE-TO-PIPE & STUD CONNECTORS

Connection / Disconnection

Ø 76
Ø 100
Ø 168

CONNECTION



See Assembly Guide

1 - Slip the cartridge over the end of the first pipe fully up to the shoulder.
2 - Bring the second pipe to the cartridge and slide fully up to the shoulder.
3 - Position the clamp over the cartridge / pipe assembly.
4 - Hand tighten the pre-fitted screws with an Allen key (6 mm for Ø76 and Ø100, 8mm for Ø168).
5 - Pull the pipes fully back towards the outside of the clamp.
6 - Fully tighten the clamp screws.
Mini tightening torque:10Nm
Maximum tightening torque: 40m.N
7 - For effective clamp sealing, screw tightening should be performed on alternate sides of the clamp as shown above.
8 - Check manually with an Allen key that the screws are correctly tightened.

To disconnect, perform the same operations in reverse order.

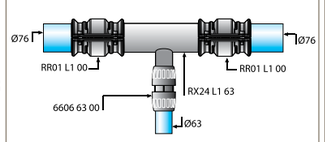
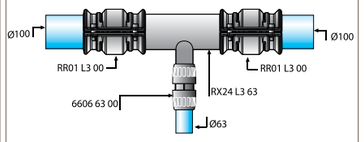
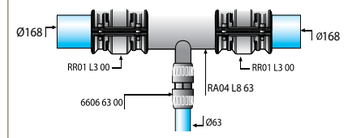
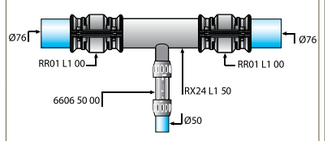
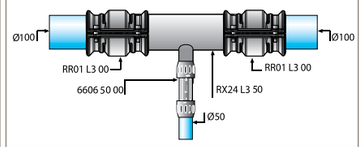
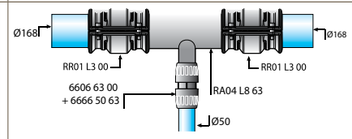
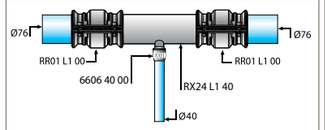
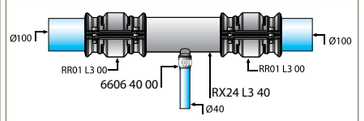
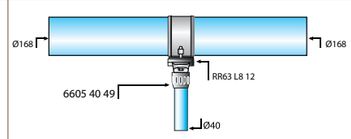
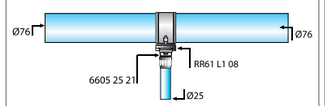
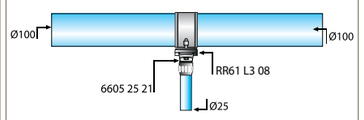
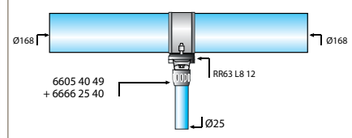
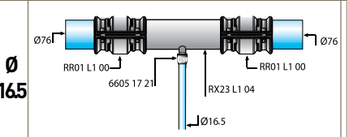
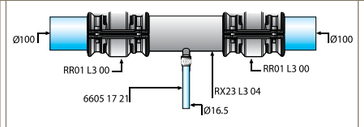
Practical Examples

VARIOUS Ø76, Ø100 AND Ø168 CONFIGURATIONS	
CHANGING DIRECTION WITH A 90° ELBOW	= 1 x RX02 / RA02 + 2 x RR01
CHANGING DIRECTION WITH A TEE PIECE	= 1 x RX04 / RA04 + 3 x RR01
CONNECTING AN END CAP	= 1 x RA25 + 1 x RR01
CONNECTING A CIRCULAR FLANGE AND A CONNECTOR	= 1 x EW05 + 1 x EW06 + 1 x RA30 / RA31 + 1 x RR01
REDUCTION	Ø 100 / Ø 168 Ø 76 / Ø 100 = 1 x RR01 + 1 x RX66 / RA66 + 1 x RR01
CONNECTING A BUTTERFLY VALVE	= 1 x RR01 + 1 x RA30 / RA31 + 1 x VR02 N x EW06 + 1 x RA30 / RA31 + 1 x RR01
CONNECTING A FLEXIBLE HOSE AND A CIRCULAR FLANGE	= 1 x EW05 + 1 x RA30 / RA31 N x EW06 + 1 x RR01 + 1 x FP01 / FX01
ONLY FOR RX24 L1 40 RX24 L3 40 AND RA26 L1 40. USE A BALL VALVE INSTEAD OF A PLUG TO CLOSE THE OUTLET	RX24 L1 40 RX24 L3 40 RA26 L1 40 — 6625 40 00 ; RX24 L1 40 RX24 L3 40 RA26 L1 40 — 4092 40 00

TRANSAIR® PIPE-TO-PIPE & STUD CONNECTORS

Practical Examples

CONNECTING A TRANSAIR® Ø76, Ø100 OR Ø168 NETWOK TO A TRANSAIR® Ø63, Ø50, Ø40, Ø25, Ø16.5 NETWORK

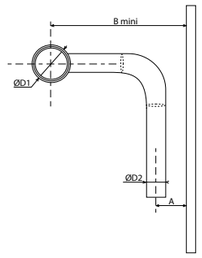
	Ø 76	Ø 100	Ø 168
Ø 63			
Ø 50			
Ø 40			
Ø 25			
Ø 16.5			—

Minimum pipe centre-to-centre mounting distances for Ø76 - Ø100 - Ø168 tees

Ø D1 (mm)	Ø D2 (mm)	A (mm)	B mini (mm)
100	100	90	470
100	76	80	470
100	63	90	327
100	40	46	225
100	25	46	215
100	16.5	46	200
76	76	80	420
76	63	90	314
76	40	46	212
76	25	46	202
76	16.5	46	187

Minimum pipe centre-to-centre mounting distances for Ø76 - Ø100 - Ø168 brackets

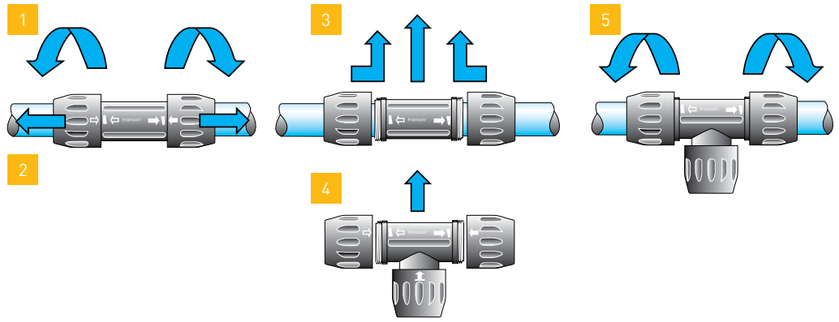
Ø D1 (mm)	Ø D2 (mm)	A (mm)	B mini (mm)
168	50	90	510
168	40	46	410
100	25	46	250
76	25	46	240



SYSTEM MODIFICATION

FOR DIAMETERS Ø16.5 - Ø25 - Ø40 ONLY

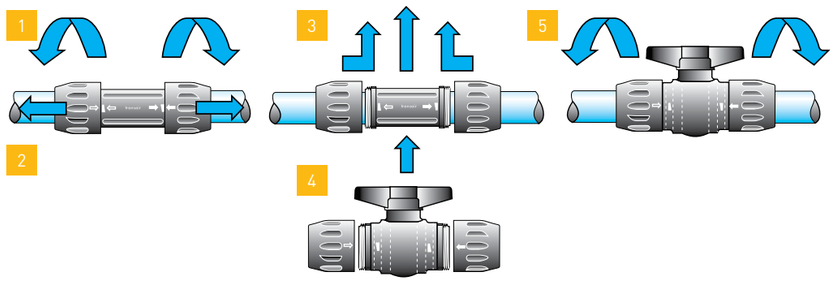
REPLACING A PIPE-TO-PIPE CONNECTOR WITH A TEE



1 - Loosen the 2 nuts.
2 - Slide them along the pipe on either side of the connector.
3 - Remove the body of the connector, together with the nuts. Re-tighten the nuts on the body of the connector for a further use.
4 - Slide the nuts of the tee and position the body of the tee between the 2 pipes such that the solid and empty arrows are facing each other.
5 - Re-tighten the nuts until the empty and solid arrows are aligned with each other.

REPLACING A PIPE-TO-PIPE CONNECTOR WITH A BALL VALVE

FOR DIAMETERS Ø16.5 - Ø25 - Ø40 ONLY



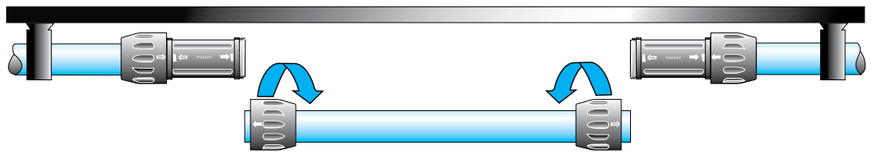
1 - Loosen the 2 nuts.
2 - Slide them along the pipe on either side of the connector.
3 - Remove the body of the connector, together with the nuts. Re-tighten the nuts on the body of the connector for a further use.
4 - Slide the nuts of the valve and position the body of the valve between the 2 pipes so that the empty and solid arrows are facing each other
5 - Re-tighten the nuts until the empty and solid arrows are aligned with each other.

TRANSAIR® PIPE-TO-PIPE & STUD CONNECTORS

Practical Examples

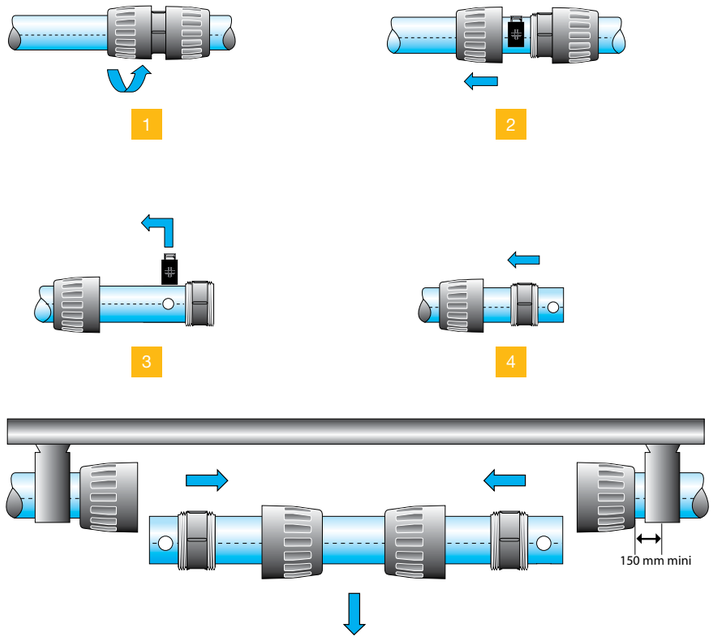
LATERAL DISMANTLING

Ø 16.5
Ø 25
Ø 40



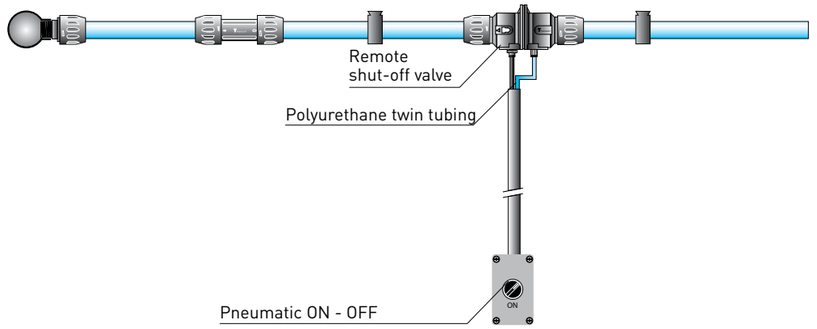
Loosen the nuts located on the side of the pipe to be removed and slide them along the pipe.
Then remove the pipe.

Ø 50
Ø 63



1 - Loosen the connector nuts on the ends of the pipe to be removed
2 - Slide them along the pipe.
3 - Remove the SnapRing from its housings.
4 - Slide the SnapRing and the connector body along the pipe which is to be removed.
5 - Repeat the operation at the other end of the pipe and laterally remove the pipe, complete with the assembly components.

TRANSAIR®
Ø 40
SHUT-OFF VALVE



APPLICATION

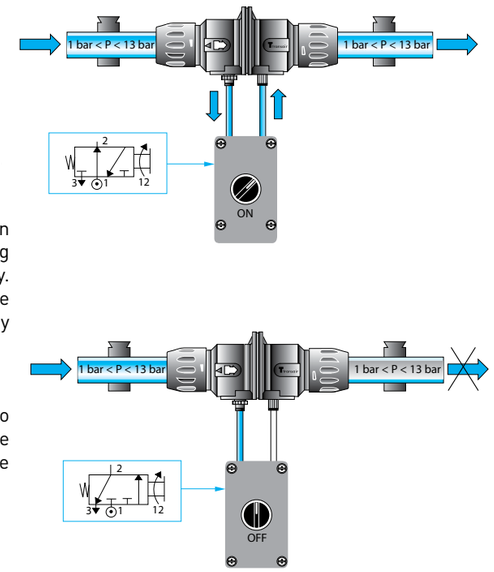
Assembled by simple and fast connection to aluminium pipe, the Transair® Ø40 remote shut-off valve allows network supply to be rapidly and safely opened and closed either at ground level or by remote control.
The Transair® remote shut-off valve thus guarantees :
- Personal safety, by eliminating all hazards related to working at heights.
- Servicing speed, by removing the need for special access equipment (ladder, platform etc)

OPERATING PRINCIPLE

Single acting valve - normally closed.

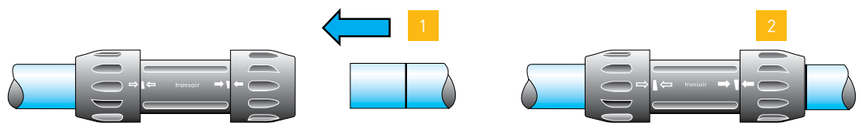
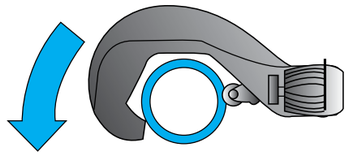
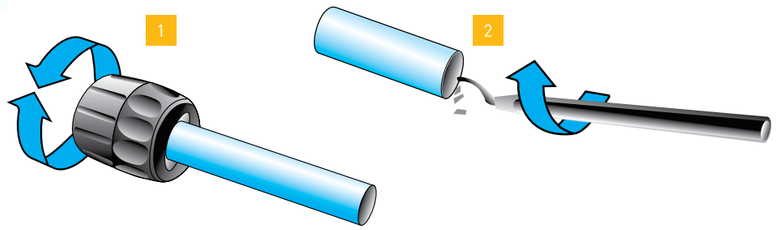
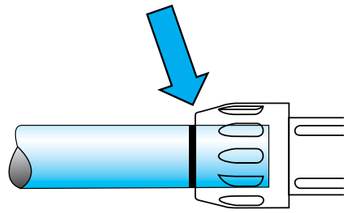
For compressed air networks:
the valve control pressure can be taken upstream of the isolating valve, with no external power supply. Control is performed through the control unit connected to the valve by means of a push-in connector.

For vacuum networks:
a compressed air supply external to the control unit is required, and the corresponding valve port must be closed in order to prevent loss.

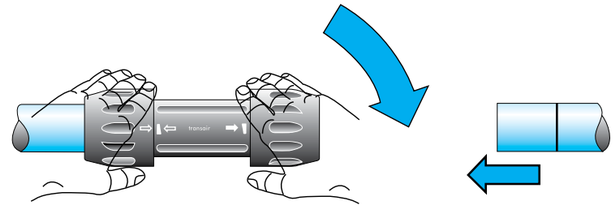
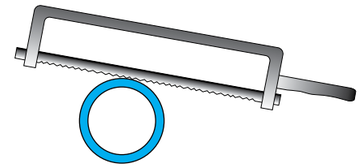
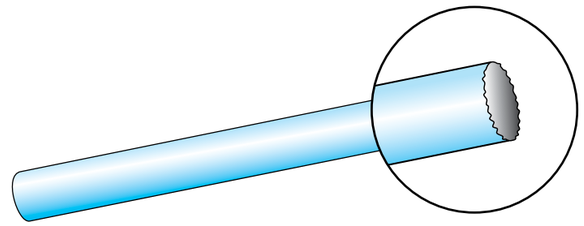
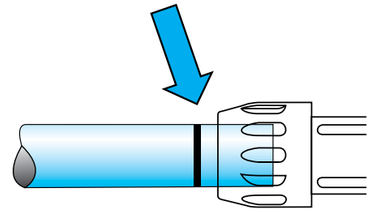
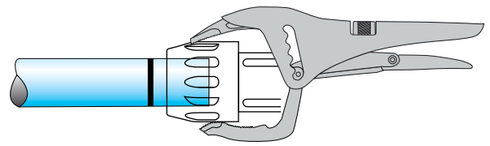


TRANSAIR® PIPE-TO-PIPE & STUD CONNECTORS

Do's

Ø 16.5 - Ø 25 - Ø 40	
CONNECTION	
USE A PIPE CUTTER	
CAREFULLY CHAMFER AND DEBURR THE PIPE AFTER CUTTING OR DRILLING	
CHECK THAT THE PIPE IS CORRECTLY POSITIONED IN THE CONNECTOR	

Don'ts

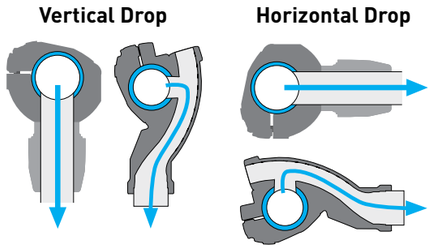
Ø 16.5 - Ø 25 - Ø 40	
DON'T LOOSEN THE NUTS DURING ASSEMBLY	
DON'T CUT THE PIPE WITH A SAW	
DON'T USE NON-DEBURRED PIPE	
DON'T FAIL TO MAKE THE PIPE SECURE	
DON'T OVERTIGHT WITH PLIERS DON'T SCREW BEYOND THE MARKS	
DON'T SWOP THE NUTS OF A CONNECTOR DON'T USE A NUT ON ANOTHER CONNECTOR	

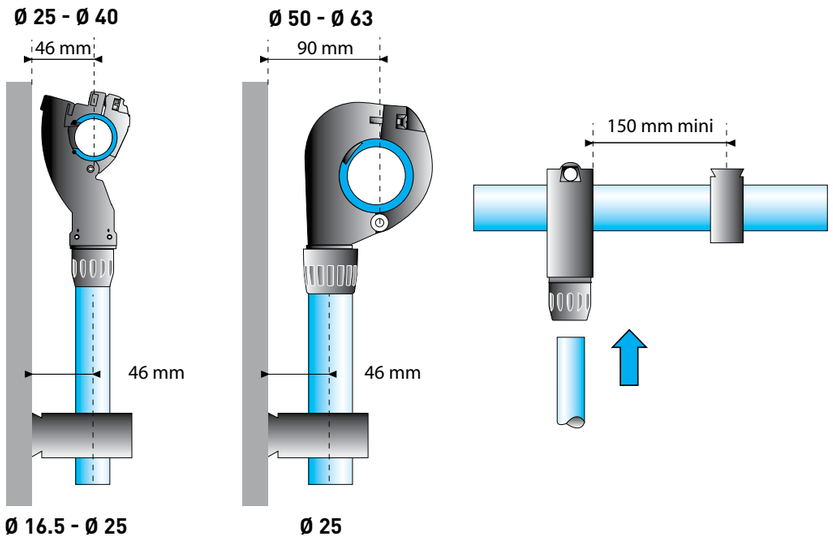
TRANSAIR® QUICK ASSEMBLY BRACKETS

General

SPECIFIC INSTRUCTIONS FOR FITTING A BRACKET TO Ø 25 Ø 40 Ø 50 Ø 63 PIPE

The easy addition of a new drop or bypass onto an existing length of pipe is an important consideration for any air pipework system.
Transair® quick assembly brackets are designed for this very purpose, without the need to cut the pipe.
A "swans neck" built into the brackets retains condensate water in the main line. Thanks to its small size, the Transair® quick assembly bracket facilitates new additions in the tightest places and can be used for connecting horizontal branch lines and vertical drops..





For Ø25 and Ø40 Transair® quick assembly brackets, the pipe centre to wall distance is equal to the bracket centre to wall distance, i.e. 46mm.

For Ø50 and Ø63 Transair® quick assembly brackets the pipe centre to wall distance is 90mm and the Ø25 and Ø40 bracket centre distance is 46mm.

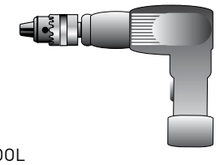
Furthermore, Transair® clips should be fitted at a distance of at least 150mm from a quick assembly bracket in order to allow for the expansion / contraction of aluminium pipe

Fitting a Quick Assembly Bracket

TO Ø 25 Ø 40 Ø 50 Ø 63 PIPE

TOOLS REQUIRED

DRILLING TOOL FOR ALUMINIUM PIPE 6698 02 02 FOR Ø25 AND 6698 02 01 FOR Ø40, Ø50 AND Ø63.



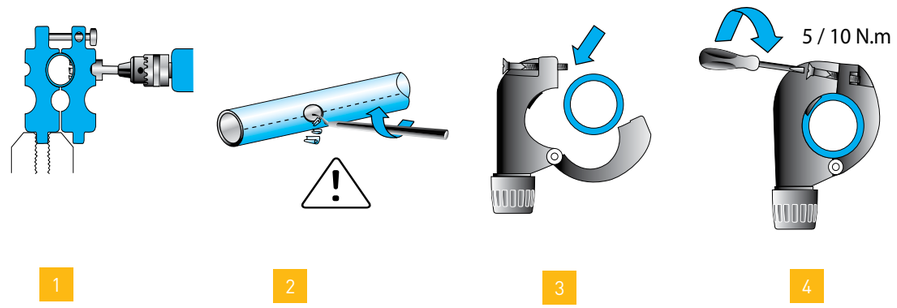
DRILL

DRILLING JIG FOR ALUMINIUM PIPE 6698 01 03

DEBURRING TOOL FOR ALUMINIUM PIPE 6698 04 02

PERMANENT MARKER PEN

PROCEDURE



1 - Mark the pipe at the desired position for the bracket, using the same locator mark when several take-off points need to be aligned uniformly. Place the drilling jig ref. 6698 01 01 in a vice or on the floor.
To drill a Ø40 hole, remove the retaining bolt in the jig using an allen key and place the pipe in the jig. The locator mark on the pipe should be aligned with the appropriate guide marks on the side of the jig.
Two guide lines on either side of the jig provide a rapid indication of whether the pipe is correctly positioned (the guide lines match the locator marks on the pipe).
Close the jig and drill a hole using the appropriate drilling tool:
- Ø25: Ø16 hole > ref. 6698 02 02 drilling tool
- Ø40 - Ø50 - Ø63: Ø 22 hole >ref. 6698 02 01 drilling tool

Recommended rotation speed: 650 rpm
NB: drill without lubrication.

2 - Release the pipe, deburr and remove any swarf and the cut circular piece of pipe. Repeat the operation for the number of brackets that you wish to fit.

3 - Position the quick assembly bracket using its location pin.

4 - Tighten the nut with an Allen key 5mm.

TRANSAIR® QUICK ASSEMBLY BRACKETS

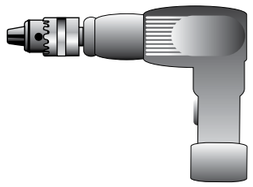
Fitting a Bracket

ON
Ø 76
Ø 100
Ø 168
PIPE

TOOLS REQUIRED

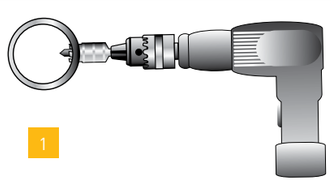
DRILLING TOOLS
FOR ALUMINIUM PIPE
EW09 00 30
EW09 00 51
EW09 00 64
EW09 00 70
EW09 00 90

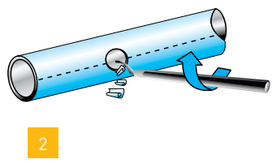
DEBURRING TOOL
FOR ALUMINIUM PIPE
6698 04 02

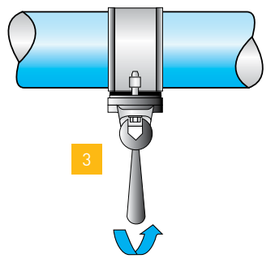


DRILL

PROCEDURE







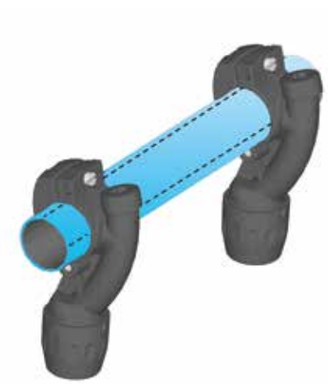
1 - Drill the aluminium pipe at the desired position using drilling tool:
- Ø76 - Ø 100: female thread 1"
  > drilling tool **EW09 00 30**
- Ø168: female thread 1"1/2
  > drilling tool **EW09 00 51**
- Ø168: female thread 2"
  > drilling tool **EW09 00 64**
- Ø168: female thread 2"1/2
  > drilling tool **EW09 00 70**
- Ø168: female thread 3"
  > drilling tool **EW09 00 90**

2 - Carefully deburr the pipe and remove the aluminium cut and the chips.
3 - Position bracket RR61 / RR63 and fully tighten the 2 screws.

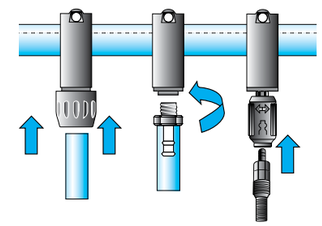
Tightening torque 50 N.m

CREATING VERTICAL AND HORIZONTAL TAKE-OFF POINTS

USING THE SAME LOCATOR MARK

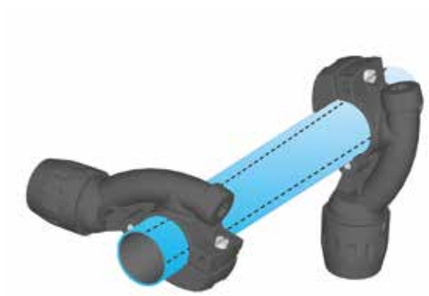


ADDING A VERTICAL BRACKET



ADDING AN OFF-SET BRACKET

USING 2 LOCATOR MARKS

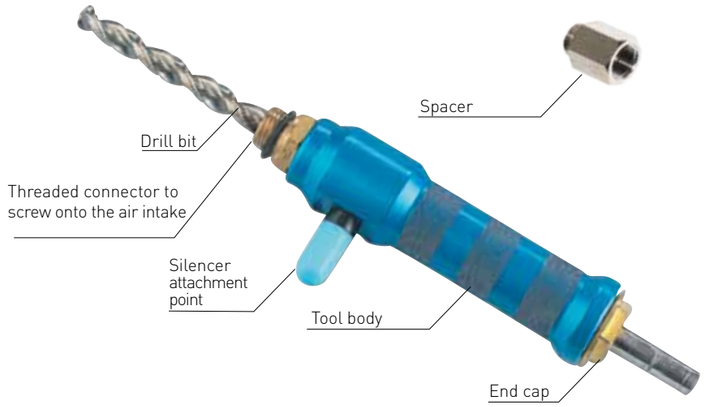


TRANSAIR® QUICK ASSEMBLY BRACKETS

Practical Examples

FITTING A BRACKET TO A PRESSURISED SYSTEM

TOOLS REQUIRED



Use the under pressure drilling tool (EA98 06 00) to fit a bracket to an existing pressurised system. This can be simply done with use of a standard drill.

PROCEDURE

1 - Position the pressurised system bracket and tighten with the recommended tightening torque.
2 - Screw the drilling tool onto the ball valve. Drill fully.
3 - Remove the drill and close the ball valve immediately.
4 - Dismantle the drilling tool.

NB: For DN25 and DN40 brackets, an additional manipulation is required between step 1 and step 2.

1-1 Screw the assembly onto the ball valve. Ensure that the valve is open.

Under pressure bracket with 1/2" ball valve
Ø25: EA98 06 01
Ø40: EA98 06 02
Ø50: EA98 06 04
Ø63: EA98 06 03

TRANSAIR® FLEXIBLE HOSES

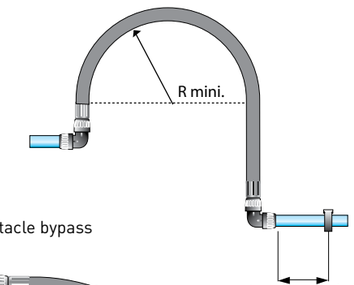
General

APPLICATIONS

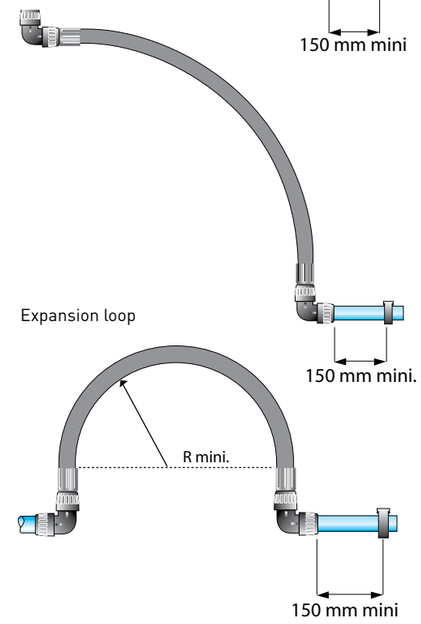
Transair® flexible hose can be easily connected to other Transair® components and can be rapidly installed without prior preparation or cutting.
Thanks to is small bend radius, it requires minimum space and avoids mechanical stress within the network.
Robust, Transair® flexible hose is resistant to both compressor oils and to fire.

Ø (mm)	Length (mm)	Part Numbers	Rmini (mm)
25	570	**1001E25 00 01**	100
25	1500	**1001E25 00 03**	100
25	2000	**1001E25 00 04**	100
40	1150	**1001E40 00 02**	400
40	2000	**1001E40 00 04**	400
40	3000	**1001E40 00 05**	400
50	1270	**1001E50 00 09**	280
50	2000	**1001E50 00 04**	280
63	1400	**1001E63 00 08**	300
63	3000	**1001E63 00 05**	650
63	4000	**1001E63 00 06**	650
76	1500	**FP01 L1 01**	350
76	2000	**FP01 L1 02**	350
100	2000	**FP01 L3 02**	450
100	3000	**FP01 L3 03**	450
168	3200	**FX01 L8 02**	900

Level change



Obstacle bypass



Expansion loop

SAFETY

Anti-whiplash straps

In order to avoid the risk of whiplash accidents, Transair® recommends the use of anti-whiplash straps, placed on either side of the connection.

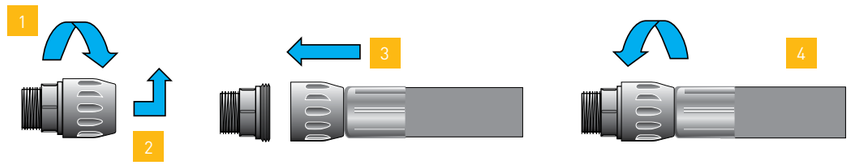
Ø25 to 100: 6698 99 03
Ø168: 6698 99 07

If Transair® flexible hose is exposed to tear, the anti-whiplash assembly prevents it from snaking (safety device in accordance with ISO 4414 standard).

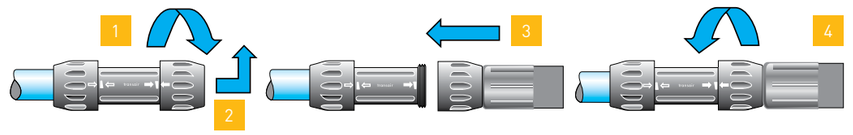
Network Connection

Ø25 Ø40 — USING A MALE STUD FITTING

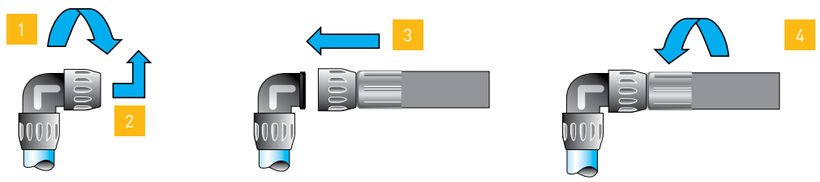
1 - Loosen the nut on the stud fitting.
2 - Remove it.
3 - Move the swagged end of the hose onto the exposed stud thread.
4 - Tighten the nut.



USING A PIPE-TO-PIPE CONNECTOR



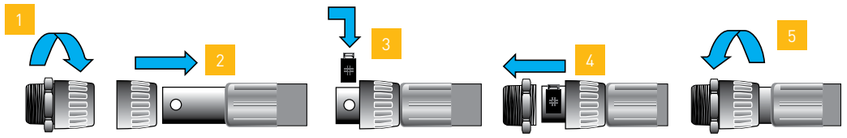
USING A 90° ELBOW



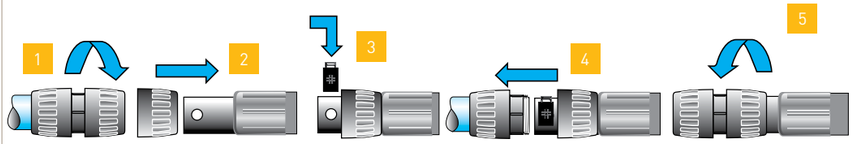
Network Connection

Ø50 - Ø63 — USING A MALE STUD FITTING

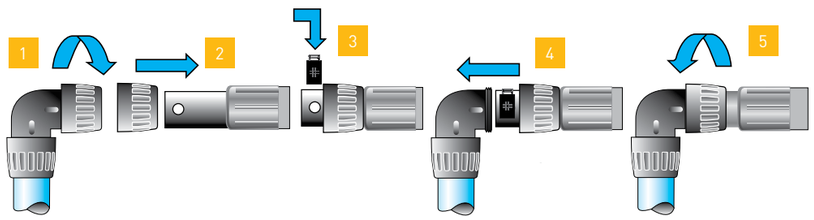
1 - Loosen the nut on the stud fitting and remove it.
2 - Place the nut over the swaged end of the flexible hose.
3 - Place the pipe connector clamps in the housings on the hose.
4 - Slide the nut forward to the end of the flexible hose, and assemble onto the male thread.
5 - Tighten the nut using 6698 05 03 spanner set.



USING A PIPE-TO-PIPE CONNECTOR



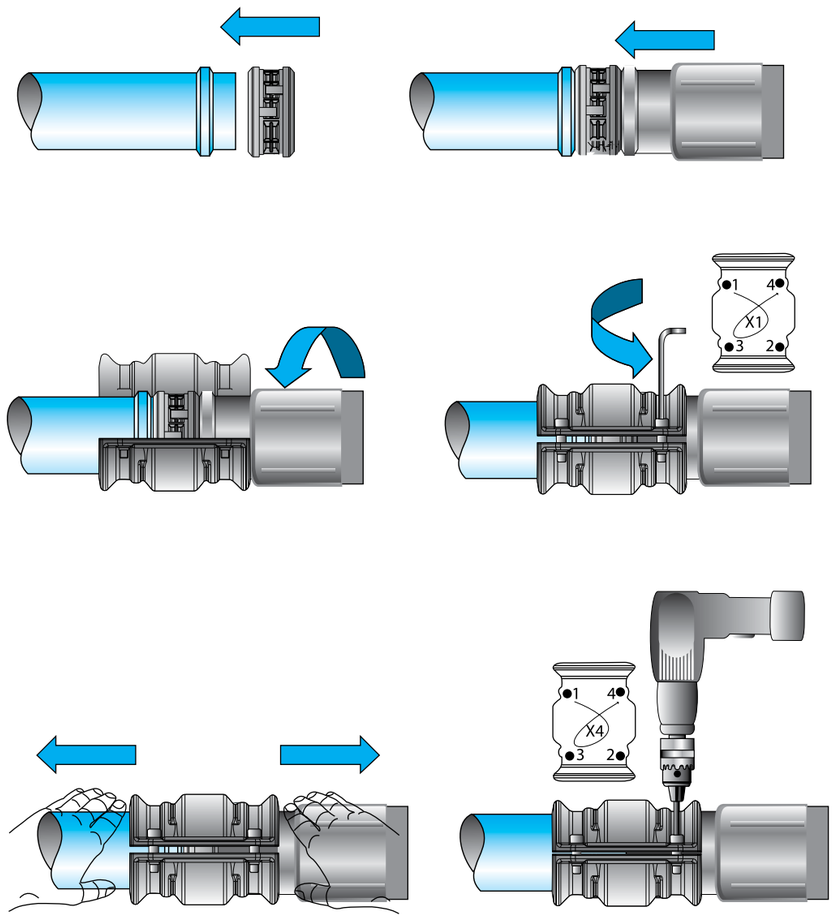
USING A 90° ELBOW



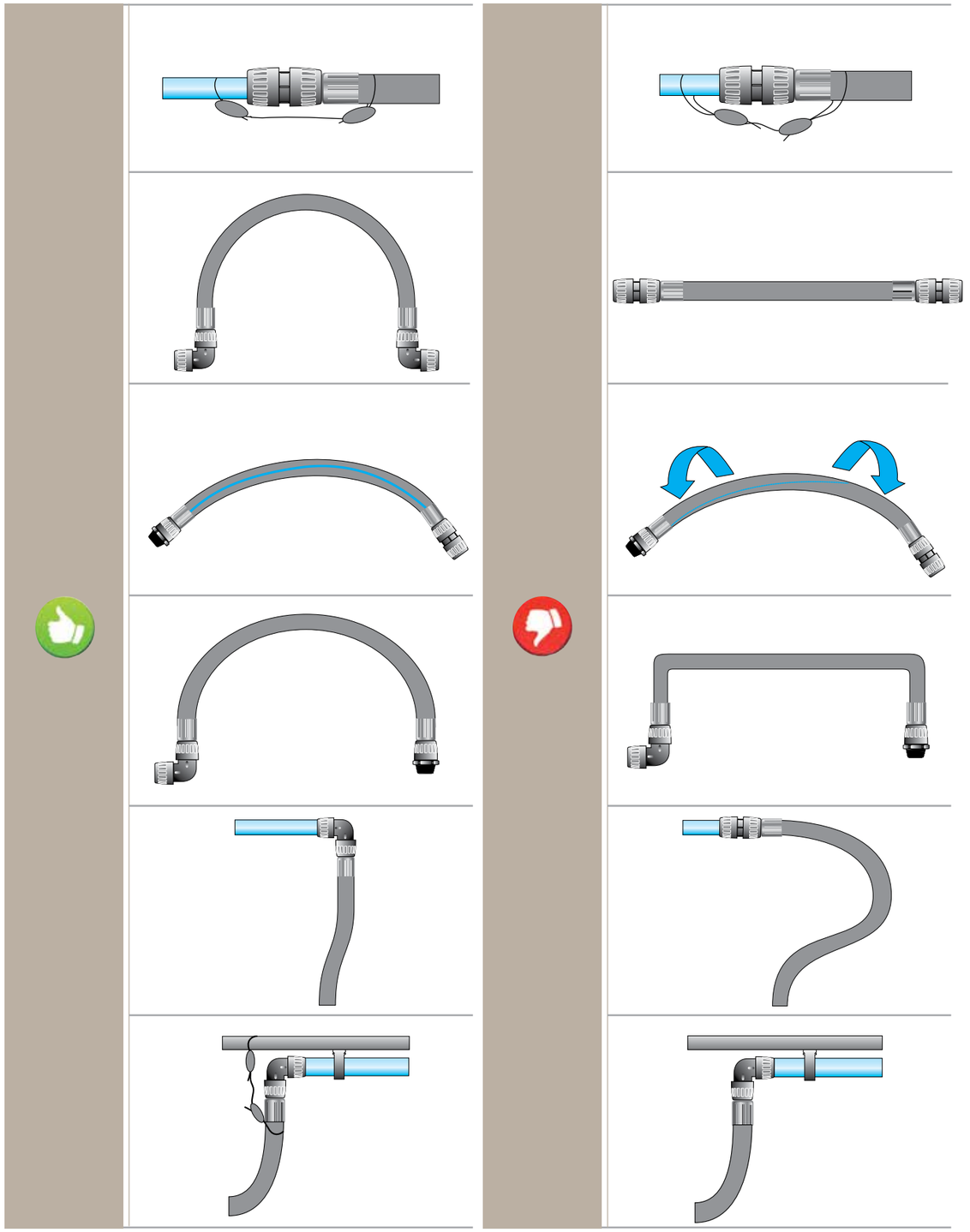
Network Connection

Ø 76 - 100 - 168

USING A CLAMP



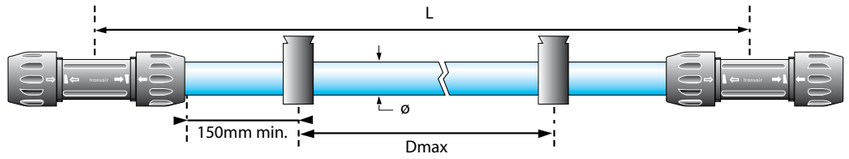
Do's / Don'ts



ATTACHMENT AND SUPPORT

Transair® Attachment

TRANSAIR® CLIP FOR Ø 16.5 Ø 25 Ø 40 Ø 50 Ø 63 RIGID PIPE



The Transair® fixing clip is the basic component for mounting pipe when installing. Ø16.5 – Ø25 – Ø40 – Ø50 - Ø63 Transair® aluminium networks. Only this clip should be used since it since it allows expansion and contraction of the pipe to occur freely.

To ensure good system stability, we recommend the use of at least 2 clips per pipe.
Transair® aluminium pipe should only be mounted using these clips. They should not be substituted by any other type of clip or fixing.

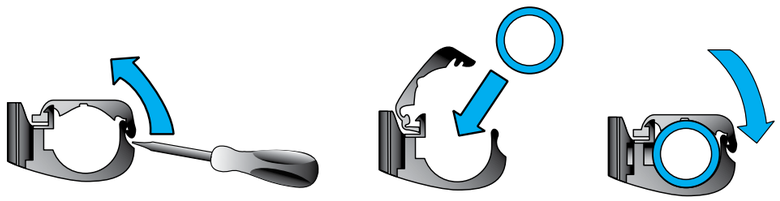
Ø	L (m)	Dmax (m)
16.5	3	2.5
16.5	4.5	3
25	3	2.5
25	6	3
40	3	2.5
40	6	4
50	3	2.5
50	6	4
63	3	2.5
63	6	4

PROPERTIES

- Transair® fixing clips for Ø16.5 - Ø25 - Ø40: M8 nuts
- Transair® fixing clips for Ø50 - Ø63: M10 nuts

The Transair® threaded rod adaptor 6697 00 02 allows Transair® ˙pipe clips Ø16.5 - Ø25 - Ø40 to be easily suspended under M10 threaded rod.

PROCEDURE



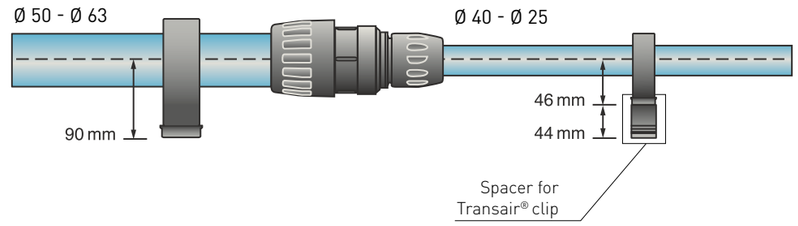
1 - Place the clip as required and open it using a screwdriver.
2 - Insert the pipe into the clip.
3 - Close the clip.

Transair® Attachment

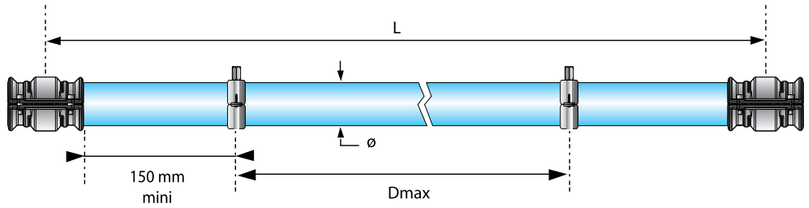
SPACER FOR Ø16.5 Ø25 Ø40

The Transair® 6697 00 03 spacer is used for fitting a run of Transair® pipe using different diameters.

EXAMPLE:



TRANSAIR® FIXING CLIP FOR Ø 76 Ø 100 Ø 168 NETWORKS



Ø	L (m)	Dmax (m)
76	3	2.5
76	6	5
100	3	2.5
100	6	5
168	3	2.5
168	6	5

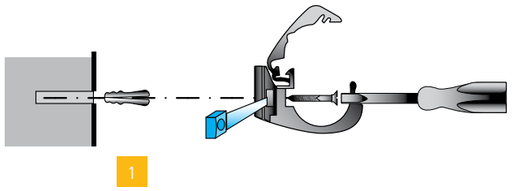
To ensure good network stability, we recommend the use of at least 2 fixing clips per length of pipe. Transair® fixing clips for Ø76, Ø100 and Ø168 networks: M8/M10 thread

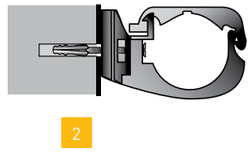
ATTACHMENT AND SUPPORT

Supporting a Transair® System

DIRECTLY ONTO A WALL

OFFSET FROM A WALL

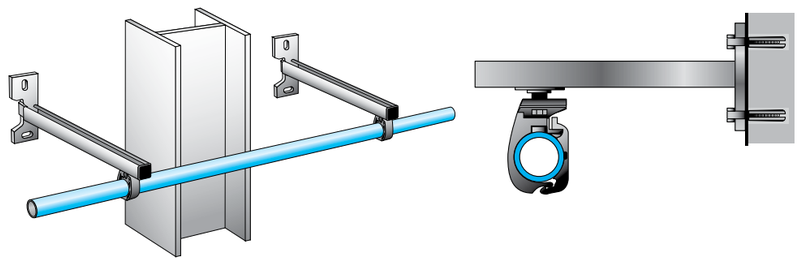




1 - Remove the nut at the base of the pipe clip using a screwdriver. Insert the screw by passing it through the clip.

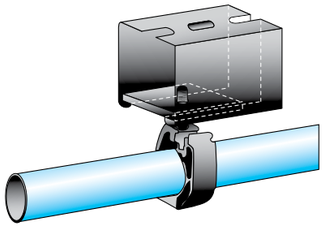
2 - Tighten the screw.

U-CHANNEL TYPE MOUNTING BRACKET

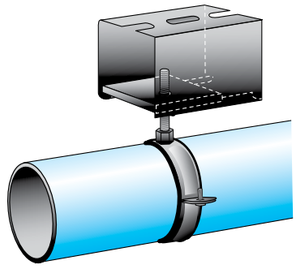


Transair® U-channel assemblies are used to offset networks and to bypass obstacles. They comprise sectional rail ref. 6699 01 01 and a series of attachment accessories 6699 01 02.
For offsetting a Ø63 / Ø76 and Ø100 air system, we recommend the use of the rail clip attachment assembly ref. 6699 01 03. .

Ø16.5, Ø25, Ø40 > Fixation clip on rail 6699 01 04
Ø50, Ø63, Ø76, Ø100 and Ø168 > Fixation clip on rail 6699 01 03



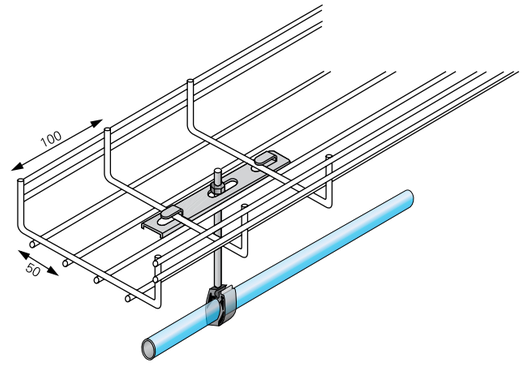
Ø50 - Ø63



Ø76 - Ø100 - Ø168

Supporting a Transair® System

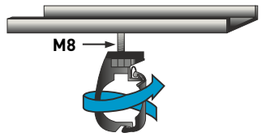
BENEATH A CABLETRAY



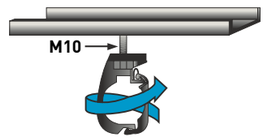
Use the under-cabletray attachment ref. 6699 10 30 and suspend with threaded rod up to M10 diameter.

This attachment can be used to suspend networks from Ø16.5 to Ø100.

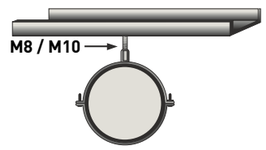
THREADED ROD ADAPTER



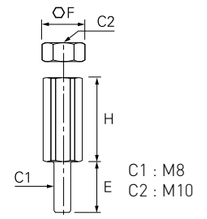
Ø 16.5 - Ø 25 - Ø 40



Ø 50 - Ø 63



Ø 76 - Ø 100 - Ø 168



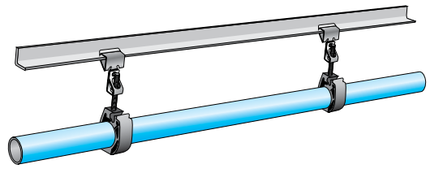
Handy!
The Transair® threaded rod adaptor 6697 00 02 allows Ø16.5, Ø25 and Ø40 Transair® pipe clips to be easily suspended under M10 threaded rod.

ATTACHMENT AND SUPPORT

Supporting a Transair® System

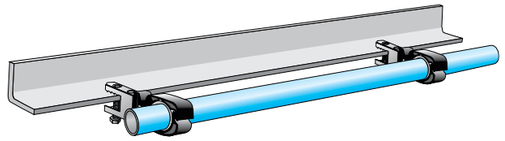
ON A METAL BEAM

USING BEAM CLAMPS



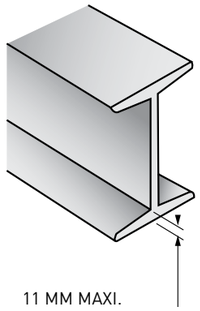
PUSH-ON TYPE BEAM CLAMP

Position the clamps ref. 6699 02 xx or ref. 669903 xx onto the RSJ or beam in accordance with the minimum recommended number of attachments per length of pipe and the required distance between attachments, according to the diameter of the pipe.

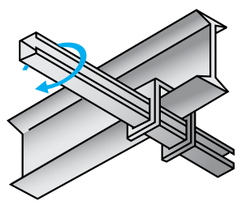


SCREW TYPE BEAM CLAMP

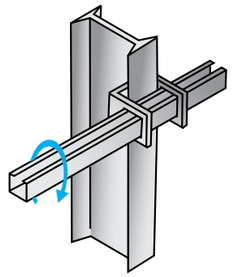
U-CHANNEL BRACKETS



11 MM MAXI.



HORIZONTAL ASSEMBLY



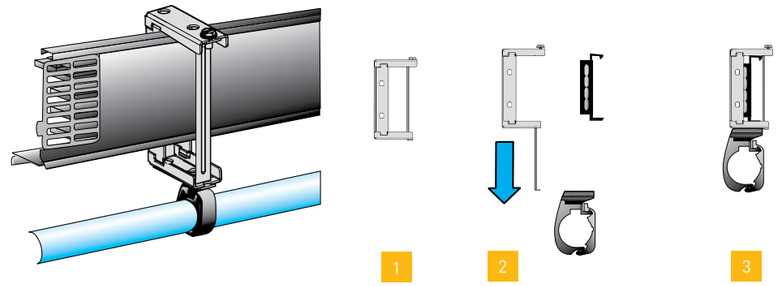
VERTICAL ASSEMBLY

Position the RSJ brackets ref. 6999 03 02 on either side of the girder profile, then slide through the U-channel sectional rail.

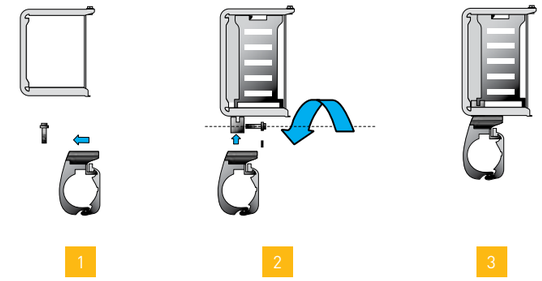
Supporting a Transair® System

UNDER CANALIS

Canalis KN



Canalis KS



1 - Mount the Transair® pipe clip onto the KS attachment.
2 - Suspend the attachment from the Canalis® network and secure with a screw.
3 - The support is ready.

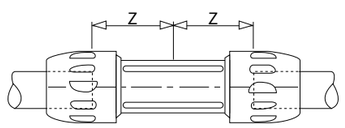
Canalis KN: fixture 6699 10 01
Canalis KS: fixture 6699 10 02

PRACTICAL INFORMATION

Z Dimensions

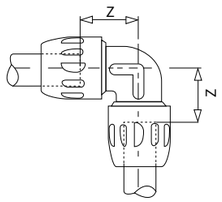
6606/6676	Z (mm)
Ø 16.5	35
Ø 25	48
Ø 40	57
Ø 50	25
Ø 63	25

6606/6676

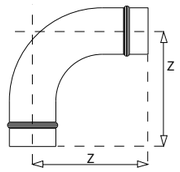


6602/RX02/RA02	Z (mm)
Ø 16.5	31
Ø 25	40
Ø 40	62
Ø 50	56
Ø 63	61
Ø 76	189
Ø 100	221
Ø 168	185

6602

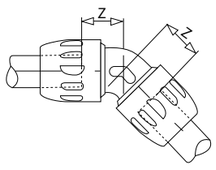


RX02/RA02

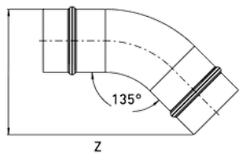


6612/RX12/RA12	Z (mm)
Ø 25	32
Ø 40	45
Ø 50	38
Ø 63	37
Ø 76	122
Ø 100	138
Ø 168	147

6612

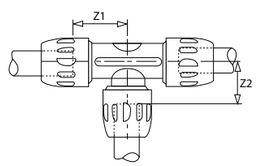


RX12/RA12



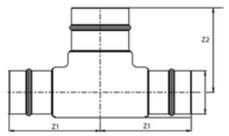
6604	Z1 (mm)	Z2 (mm)
Ø 16.5	34	31
Ø 25	48	40
Ø 40	57	57
Ø 50	56	56
Ø 50 -> Ø 25	56	111
Ø 50 -> Ø 40	56	107
Ø 63	61	61
Ø 63 -> Ø 40	61	116
Ø 63 -> Ø 50	61	117

6604

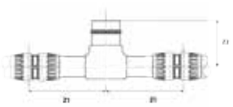


RA04	Z1 (mm)	Z2 (mm)
Ø 76 -> Ø100	161	149
Ø 100 -> Ø168	194	161

RA04



RA04 + 6606

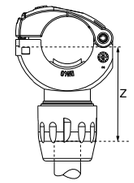


RA04 + 6606	Z1 (mm)	Z2 (mm)
Ø 63-> Ø76	224	142

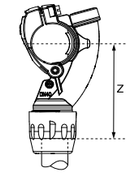
RA69	Z (mm)
Ø 25 -> Ø 16.5	47
Ø 40 -> Ø 25	63
Ø 50 -> Ø 25	66
Ø 63 -> Ø 25	72

6662	Z (mm)
Ø 25 -> Ø 16.5	82
Ø 25 -> Ø 25	74
Ø 40 -> Ø 16.5	89
Ø 40 -> Ø 25	82
Ø 50 -> Ø 25	58
Ø 63 -> Ø 25	65

RA69



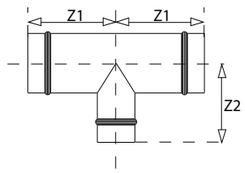
6662



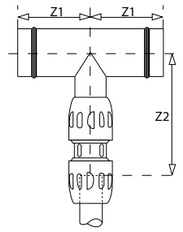
RX04/RA04	Z1 (mm)	Z2 (mm)
Ø 76	146	146
Ø 100	156	136
Ø 168	180	185
Ø 100 -> Ø 76	156	136
Ø 168 -> Ø 76	180	185
Ø 168-> Ø 100	180	185

RX24/RA04 + 6606	Z1 (mm)	Z2 (mm)
Ø 76 -> Ø 40	146	219
Ø 76 -> Ø 50	146	210
Ø 76 -> Ø 63	146	213
Ø 100 -> Ø 40	156	232
Ø 100 -> Ø 50	156	223
Ø 100 -> Ø 63	156	226
Ø 168 -> Ø 63	180	220

RX24/RA04



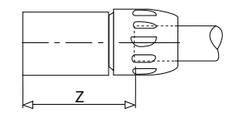
RX24/RA04 + 6606



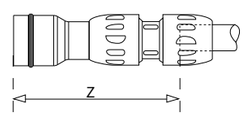
6666	Z (mm)
Ø 25 -> Ø 16.5	51
Ø 40 -> Ø 25	71
Ø 50 -> Ø 25	70
Ø 50 -> Ø 40	66
Ø 63 -> Ø 40	75
Ø 63 -> Ø 50	65

RX64/RA66	Z (mm)
Ø 76 -> Ø 50	270
Ø 76 -> Ø 63	280
Ø 100 -> Ø 50	393
Ø 100 -> Ø 63	300
Ø 100 -> Ø 76	193
Ø 168 -> Ø 76	210
Ø 168 -> Ø 100	210

6666



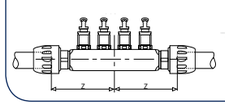
RX64-RA66



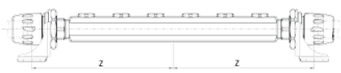
6651	Z (mm)
Ø 25	107
Ø 40	61

6652	Z (mm)
Ø 25	204
Ø 40	217

6651



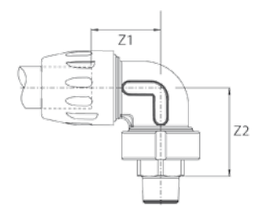
6652



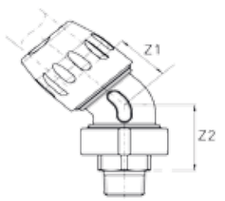
6609	Z1 (mm)	Z2 (mm)
Ø 16.5 - > 1/4	31	41
Ø 16.5 - > 1/2	31	46
Ø 25 - > 1/2	40	53
Ø 25 - > 3/4	40	53
Ø 25 - > 1"	40	55
Ø 40 - > 1"	62	75
Ø 40 - > 1"1/4	62	81
Ø 40 - > 1"1/2	62	81
Ø 40 - > 2"	62	81
Ø 50 - > 1"1/2	56	97
Ø 50 - > 2"	56	99
Ø 63 - > 2"	61	105
Ø 63 - > 2"1/2	61	104

6619	Z1 (mm)	Z2 (mm)
Ø 16.5 - > 1/4	32	42
Ø 16.5 - > 1/2"	32	42
Ø 25 - > 1/2"	32	44
Ø 25 - > 3/4	45	58
Ø 25 - > 1"	45	64
Ø 40 - > 1"	45	64
Ø 40 - > 1"1/4	45	64
Ø 40 - > 1"1/2	38	80
Ø 40 - > 2"	38	82
Ø 50 - > 1"1/2	37	81
Ø 50 - > 2"	37	82

6609



6619

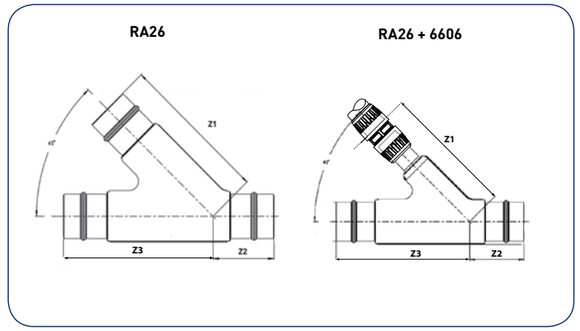


PRACTICAL INFORMATION

Z Dimensions

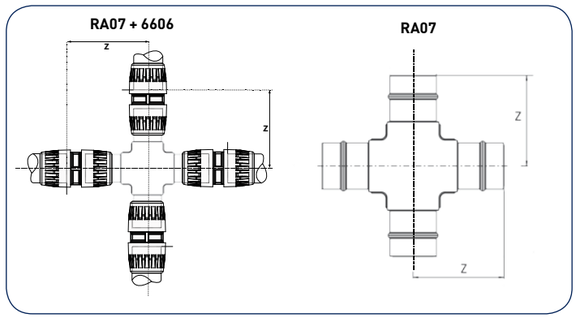
RA26	Z1 (mm)	Z2 (mm)	Z3 (mm)
Ø 63	280	252	280
Ø 76	260	106	260
Ø 100	280	116	280
Ø 100 - > Ø 76	280	116	280
Ø 168	350	126	350
Ø 168 -> Ø 100	330	86	306

RA26 + 6606	Z1 (mm)	Z2 (mm)	Z3 (mm)
Ø 76 -> Ø 40	344	106	260
Ø 76 -> Ø 50	330	106	260
Ø 76 -> Ø 63	330	106	260
Ø 100 - > Ø 63	330	116	280



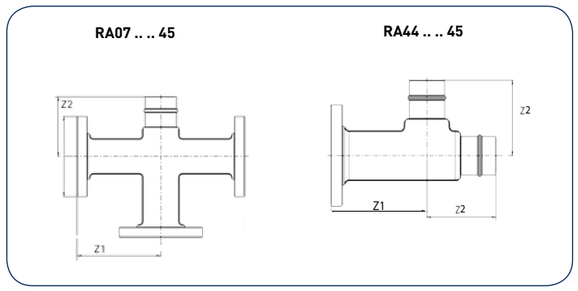
RA07 + 6606	Z (mm)
Ø 40	240
Ø 50	228
Ø 63	232

RA07	Z (mm)
Ø 76	149
Ø 100	161
Ø 168	191



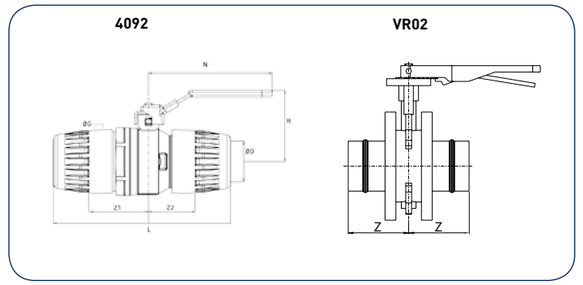
RA07 45	Z1 (mm)	Z2 (mm)
Ø 76 -> DN80	207	149
Ø 100 -> DN100	219	161
Ø 168 -> DN150	258	191

RA44 45	Z1 (mm)	Z2 (mm)
Ø 76 -> DN80	207	149
Ø 100 -> DN100	219	161
Ø 168 -> DN150	258	191



4092	Z1 (mm)	Z2 (mm)
Ø 16,5	29	43
Ø 25	41	57
Ø 40	56	58
Ø 50	43	60
Ø 63	66	77

VR02	Z (mm)
Ø 76	100
Ø 100	103
Ø 168	128



Expansion / Contraction

In order to compensate for the effects of expansion and contraction due to variations in temperature, any fluctuations in the length of the Transair® aluminium pipe network should be calculated.

EXPANSION CALCULATION

L: length of Transair® straight line to be installed (in m)
△T: variation between temperature when installing and maximum operating temperature (in C°)
△L: line length variation (in mm)
For Transair® Ø-16.5 - Ø25 - Ø40 - Ø50- Ø63 - Ø76 - Ø100 aluminium pipe networks:

$$\triangle L = \underset{1}{(a \times L)} + \underset{2}{(0.024 \times L \times \triangle T)}$$

1 - Expansion related to pipe retraction in the connector
2 - Expansion related to temperature variations

	Ø16.5	Ø25	Ø40	Ø50	Ø63	Ø76	Ø100	Ø168
Pipe 3m	a=0.06	a=0.20	a=0.40	a=0.68	a=0.68	a=1.0	a=1.0	a=1.34
Pipe 6m (4.5m for Ø16.5)	a=0.045	a=0.10	a=0.20	a=0.34	a=0.34	a=0.50	a=0.50	a=0.67

DIRECTION CHANGE

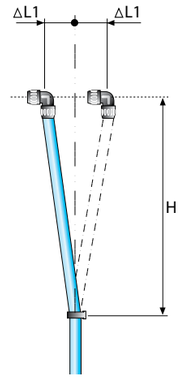
- For Transair® aluminium pipe networks Ø16.5 - Ø25 - Ø40 - Ø50 - Ø63

△L1 = H x 20
H in m, △L1 in mm

USING AN ELBOW

- For Transair® aluminium pipe networks Ø76 - Ø100

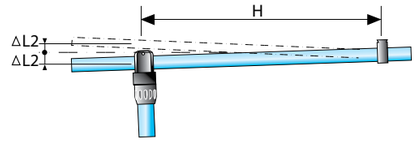
△L1 = H x 13.33

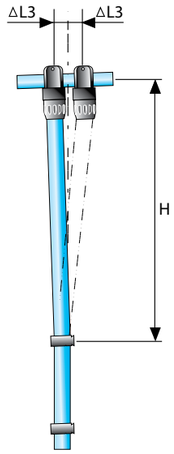


USING A QUICK ASSEMBLY BRACKET

- For Transair® aluminium pipe networks Ø16.5 - Ø25 - Ø40 - Ø50 - Ø63

△L2 = H x 8.67
△L3 = H x 8.67
H in m, △L2 and △L3 in mm

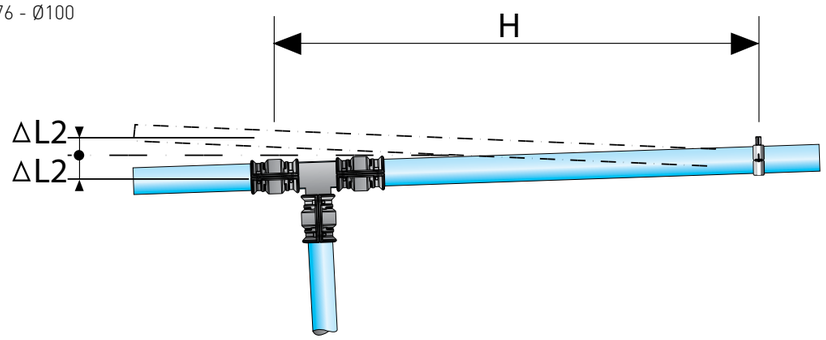


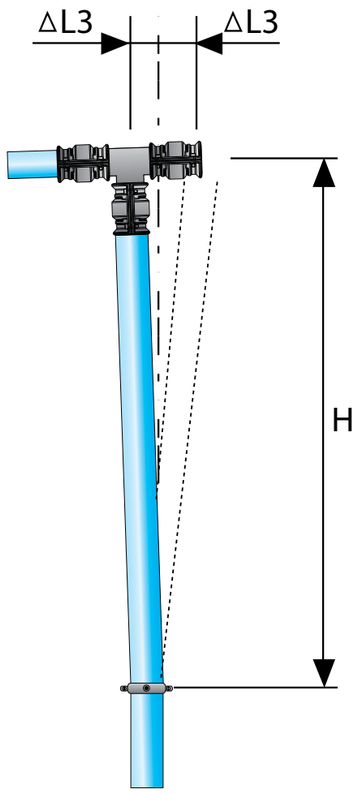


Expansion / Contraction

CHANGING DIRECTION WITH A TEE PIECE

- For Transair® aluminium pipe networks Ø76 - Ø100



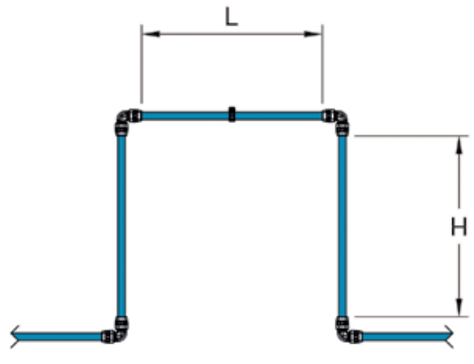


△L2 = H x 6.67
△L3 = H x 6.67
H in m, △L2 and △L3 in mm

EXPANSION LOOP

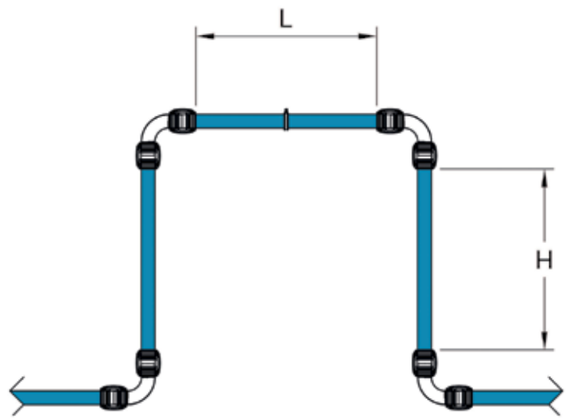
- Maximum compensation: Ø16.5 mm to Ø63 mm:

△L (in mm) = H (in m) x 40



Ø76 mm to Ø168 mm

△L (in mm) = H (in m) x 27

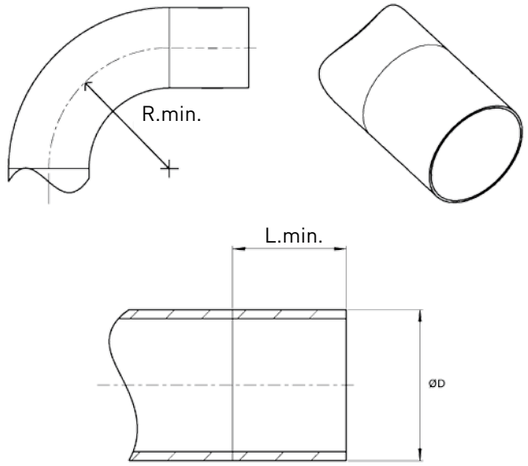


BENDING TRANSAIR® ALUMINIUM PIPE

All Diameters

Thanks to their technical characteristics, Transair® aluminium pipe can be bended according to the following specifications:

Transair®	R min. (mm)	L min. (mm)
Ø 16.5	102	185
Ø 25	154	185
Ø 40	250	185
Ø 50	300	185
Ø 63	394	185
Ø 76	317	185
Ø 100	423	185
Ø 168	700	185



TESTING A NETWORK

Final Commissioning

Transair® Advice for Final Commissioning of a Compressed Air Network

Example - considering a system working at 6 bar pressure

1. Run compressor at 3bar pressure to check integrity of the Transair® system and that the compressors are running correctly.
2. Leave the pipework under pressure for a period of 12 hours overnight. During this period the Transair® system should be isolated from machines and tools (drop valves should be closed).
3. Upon checking of the system after the 12 hour period, the compressor read can show a 0.3 bar pressure loss (from 3 bar to 2.7bar with constant temperature).
4. The system pressure is increased to design pressure (6 bar in this example) for a further 4 hours again (with no leak recorded from the Transair® system).
5. The system is then increased to 9 bar (1.43 x the max operating pressure) for a period of 1 hour with no further issues (NB: for this test, pressure of the system can exceed the maximum working pressure).
6. Purge the system, and you can start to work.

Legal Requirement for Installers according to PED 97/23/EU - ANNEX I Essential Safety Requirements

3.2. 3.2. Final Assessment:
Pressure equipment must be subject to final assessment as described below.
3.2.1. Final Inspection:
Pressure equipment must undergo a final inspection to assess visually and by examination of the accompanying documents compliance with the requirements of the Directive. Test carried out during manufacture may be taken into account.
3.2.2. Proof Test:
Final assessment of pressure equipment must include a test for the pressure containment aspect, which will normally take the form of a hydrostatic pressure test at a pressure at least equal, where appropriate, at the maximum allowable pressure multiplied by the coefficient 1.43.

For category I series-produced pressure equipment, this test may be performed on a statistical basis. For series-produced pressure equipment under the article 4.3, this test is not necessary..

For the Transair® system, the category is defined according to the diameter and the working pressure:

	1 bar	7 bar	10 bar	13 bar	16 bar
Ø16.5	Article 4.3	Article 4.3	Article 4.3	Article 4.3	Article 4.3
Ø25	Article 4.3	Article 4.3	Article 4.3	Article 4.3	Article 4.3
Ø40	Article 4.3	Article 4.3	Article 4.3	Article 4.3	Article 4.3
Ø50	Article 4.3	Article 4.3	Article 4.3	Article 4.3	Article 4.3
Ø63	Article 4.3	Article 4.3	Article 4.3	Article 4.3	Article 4.3
Ø76	Article 4.3	Article 4.3	Article 4.3	Article 4.3	Catégorie I
Ø100	Article 4.3	Article 4.3	Article 4.3	Catégorie I	Catégorie I
Ø168	Article 4.3	Catégorie I	Catégorie I	Catégorie I	Catégorie I

Requested Documentation for Category I Equipment

To comply with the PED here is a list of documents you should provide to the end user and how to get them for Transair®.

- **Assembly Guide**: for every diameter it is delivered with the Transair® pipes or fittings.
- **CE Certificate**: Transair® conforms the European Pressure Equipment Directive 2014/68/UE for article 4.3 and category I. Please contact Parker Transair for the latest version.
- **ISO 9001 Certificate**: this document has a validity date. Please contact Parker Transair for the latest version.
- **Material Certificate B3.1B for Pipes:** it attests the conformity of the aluminium used (according to NF EN 10204). Ask for this document when placing the order. If needed you can also request it after delivery with the batch number marked on the pipes (see example on this picture).

- **Material Certificate for Fittings:** the certificate 2.2 attests the quality checks completed during production (according to NF EN 10204). Ask for this document when placing the order, it can't be issued after as the name of the client and the order number have to be indicated on the certificate.
- **Isometric Plan of the System:** if needed, the Transair® quotation service can help you providing a drawing of the network (transair.quotation@parker.com).
- **Calculation Note:** Transair® aluminium pipes are produced according to EN 755-2, which defines the mechanical characteristics, and the TÜV certificate includes control of the design and of the safety factors. For further information, please contact Parker Transair.