

Transair: Advanced Pipe Systems

Pocket Installation Guide

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ENGINEERING YOUR SUCCESS.

Certifications and guarantees



Offering a full range of diameters to fit your design needs.

Transair is a fast, flexible and easy to modify aluminum pipe system for compressed air, vacuum and inert gas applications. Transair components are reusable and interchangeable – and easily integrated into existing copper and steel piping systems – which enables immediate and easy layout modifications.

Available in a full range of diameters to meet market requirements, from 1/2" to 6", the Transair system features quick connect technology that secures connections with a simple push and provides a leak-free guarantee. The aluminum pipe is corrosion resistant, ensuring the longevity of equipment and avoiding frequent changes of filtration elements.

Transair's quick connections reduce labor costs to only 20 percent of an installation, instead of 50 to 80 percent of steel or copper installations. Transair's innovative aluminum pipe system also significantly reduces plant energy costs by increasing efficiency and reducing pressure drops by eliminating leaks.



Technical specifications

Suitable fluids

- compressed air
(dry, wet, lubricated)
 - vacuum
 - inert gases
- (Please consult us for other fluids)

Max. working pressure

188 psi from -4°F to +140°F
232 psi from -4°F to +115°F
(*Max. working pressure for 6" is 188 psi)

Resistance to

- corrosion
- mineral compressor oils
- aggressive environments
- synthetic compressor oils
- mechanical shocks
- compressor oil carry over
- thermal variations
- ultraviolet (UV)

Temperature range

Working: -4°F to +140°F
Storage: -40°F to +176°F

Vacuum level

98.7% (29.6" Hg)

Certifications and guarantees

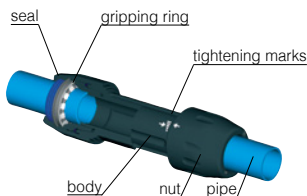


Sizing: Select the Transair diameter for your application based on required flow against pressure drop. Estimated values: Closed loop system at 100 psi with 5% pressure drop.

Flow Rate	Main Ring Length (ft)						Compressor hp
SCFM	500	1000	2000	3000	4000	5000	
10	1/2"	1/2"	1/2"	1"	1"	1"	<15
25	1"	1"	1"	1"	1"	1"	
50	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	
75	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	
100	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	15 to 40
150	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	
250	1 1/2"	1 1/2"	2"	2"	2 1/2"	2 1/2"	
350	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	41 to 125
500	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	
750	2 1/2"	2 1/2"	3"	3"	4"	4"	126 to 250
1000	3"	3"	3"	4"	4"	4"	
1250	3"	3"	4"	4"	4"	4"	
1500	4"	4"	4"	4"	4"	4"	125 to 500
1750	4"	4"	4"	4"	4"	4"	
2000	4"	4"	4"	4"	4"	6"	
2250	4"	4"	4"	6"	6"	6"	
2500	6"	6"	6"	6"	6"	6"	501 to 1000
2750	6"	6"	6"	6"	6"	6"	
3000	6"	6"	6"	6"	6"	6"	
3250	6"	6"	6"	6"	6"	6"	
3500	6"	6"	6"	6"	6"	6"	
4000	6"	6"	6"	6"	6"	6"	
4500	6"	6"	6"	6"	6"	6"	
5000	6"	6"	6"	6"	6"	6"	1001 to 1400
5500	6"	6"	6"	6"	6"	6"	

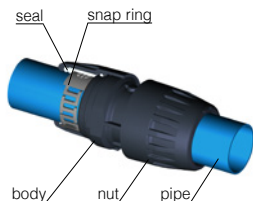
Quick connection technology

Transair's innovative technology enables rapid and easy assembly with quick connection of components to the aluminum pipe. This technology takes into account the specific requirements of each diameter and provides the user with an optimum safety coefficient and easy connection.



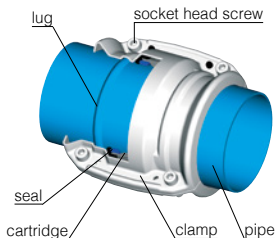
Ø 1/2" (16.5mm) – Ø 1" (25mm) – Ø 1 1/2" (40mm)

Pipe-to-pipe and male connectors in Ø 1/2", Ø 1" and Ø 1 1/2" can be immediately connected to Transair pipe – simply push the pipe into the connector up to the connection mark. The gripping ring of each fitting is then automatically secured and the connection is safe.



Ø 2" (50mm) – 2 1/2" (63mm)

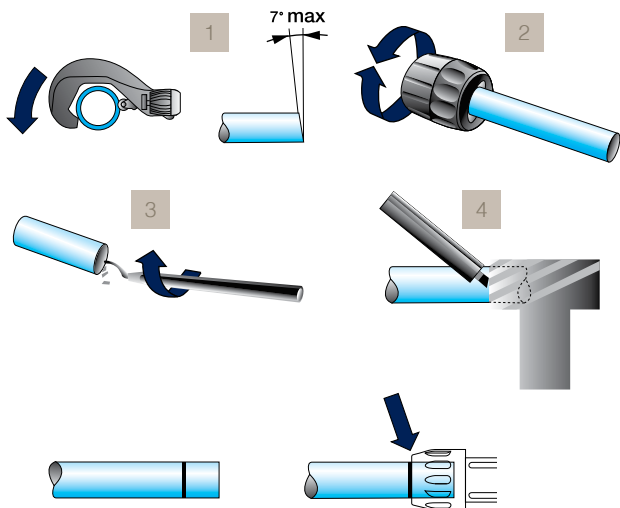
Pipe-to-pipe and male connectors in Ø 2" and Ø 2 1/2" can be quickly connected to Transair aluminum pipe by means of a snap ring. This secures the connection between the nut and the pipe – tightening of the nuts secures the final assembly.



Ø 3" (76mm) – Ø 4" (100mm) – Ø 6" (168mm)

Pipe-to-pipe and male connectors in Ø 3", Ø 4" and Ø 6" can be quickly connected to Transair aluminum pipe. Position the pipes to be connected within a Transair cartridge and close/tighten a Transair clamp.

Ø 1/2" – Ø 1 1/2" installation



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

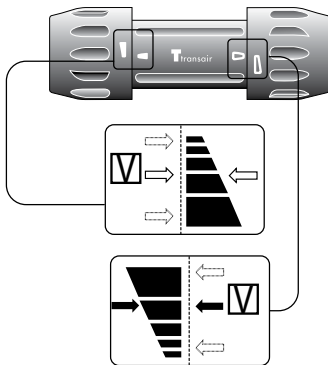
2. Carefully chamfer the outer edges

3. Deburr the inner end of the pipe
4. Trace the connection indicator using the marking tool

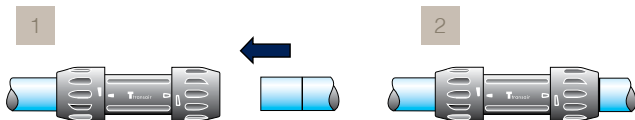
The insertion lengths for Ø 1/2", Ø 1" and Ø 1 1/2" connectors are 25 mm, 27 mm and 45 mm respectively, with the exception of the end cap (6625), for which the insertion lengths are of 39 mm, 42 mm and 64 mm respectively.

Ø 1/2" – Ø 1 1/2" connection

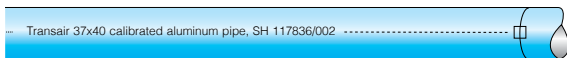
There are important visual markings on the bodies and nuts of Transair Ø 1/2", Ø 1" and Ø 1 1/2" connectors. These are represented by solid and empty arrows and indicate the optimum torque. When assembling Transair connectors, the nuts are tightened to a pre-defined torque on the body of the connector. This torque guarantees the seal and safety of each connection.



Before using Ø 1/2", Ø 1" or Ø 1 1/2" connectors, ensure that the arrow marks are correctly aligned with each other.



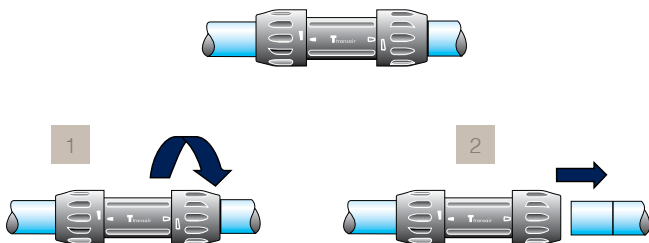
To connect, simply insert the pipe into the connector up to the connection mark.



Connection indicator

Ø 1/2" – Ø 1 1/2" disconnection

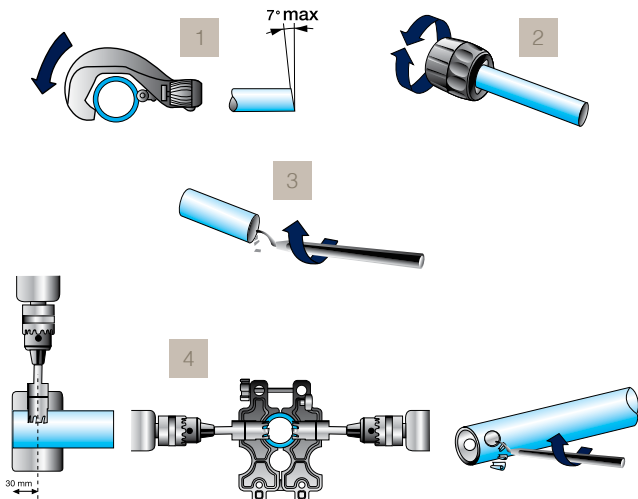
To disconnect, unscrew the nut by one half turn and remove the pipe.



Installation Guidelines

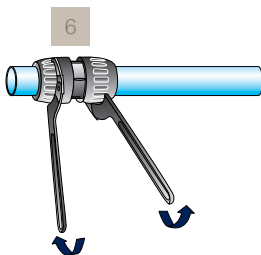
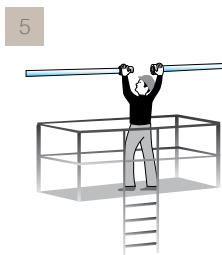
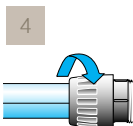
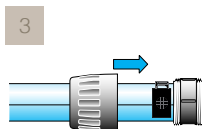
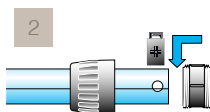
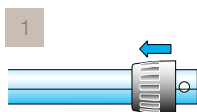
1. Transair pipe and hoses: Transair pipe should be protected from mechanical impact, particularly if exposed to collision with fork-lift trucks or when sited in an environment with moving overhead loads. Similarly, rotation of the pipe and pipe supports should be avoided. Transair pipe must not be welded.
2. Expansion and contraction: Expansion and contraction of the system should be calculated prior to installation. The system designer and installer should calculate the elongation or retraction of each Transair line according to the recommendations in this installation guide.
3. Situation to avoid: Installation within a solid mass (concrete, foam, etc.), the hanging of any external equipment to Transair pipe, the use of Transair for grounding or as a support for electrical equipment, and exposure to chemicals that are incompatible.
4. When assembling Transair connectors, do not interchange the nuts with different Transair bodies due to our calibration process.

Ø 2" – Ø 2 1/2" installation



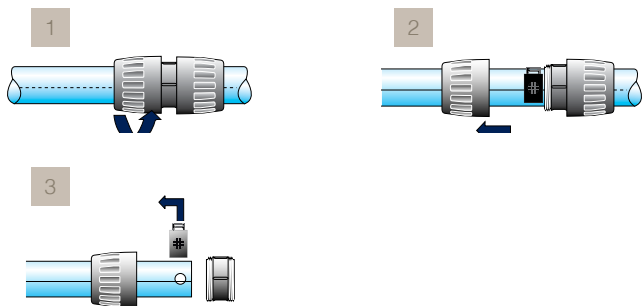
1. Cutting the pipe:
 - place the pipe in the pipe cutter
 - position the blade on the pipe
 - rotate the pipe cutter around the pipe while gently tightening the wheel
2. Carefully chamfer the outer edges
3. Deburr the inner end of the pipe
4. Drill the two clamp holes using the drilling jig (6698 01 03) and the Ø 1" 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 burrs and potential sharp edges.

Ø 2" - 2 1/2" connection



1. Unscrew one of the connector nuts and fit over the pipe
2. Position the double clamp ring in the appropriate housings (two holes at the end of the pipe)
3. Bring the nut towards the body, which were 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)

Ø 2" - 2 1/2" disconnection



1. Initiate disassembly with a 1/2 rotation with Transair tightening spanners (ref. 6698 05 03)
2. Unscrew the nut away from the body
3. Remove the snap ring and slide the connector nut over the pipe to remove

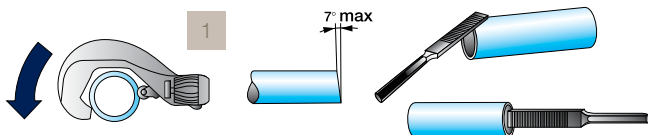
Tool Kit



This tool case simplifies the use and transportation of tools for Ø 2" and Ø 2 1/2". It contains all the tools necessary for completing an installation:

- Drilling jigs
- Drilling tools
- Cutter for rigid pipe
- Chamfer tool
- Deburring tool
- Set of tightening spanners
- Marking tool

Ø 3" – Ø 6" installation



1. Cut pipe to required length:

- 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
- ensure cut is no more than 7° from a nominal 90°

2

2. Carefully deburr the outer and inner edges of the pipe using deburring tool.



3



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

3. Creating the lugs for Ø 3", Ø 4" or Ø 6" cut pipe.

Min. number of lugs:

Ø 3" (5 lugs)

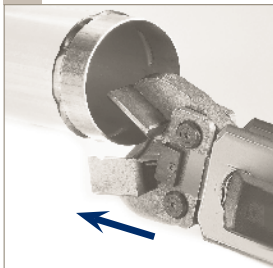
Ø 4" (6 lugs)

Ø 6" (10 lugs)

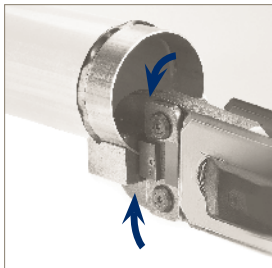
Do not overlap the lugs!

Ø 3" – Ø 6" installation

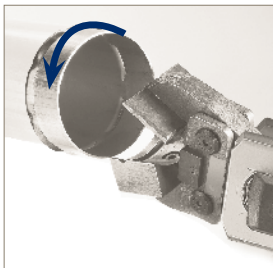
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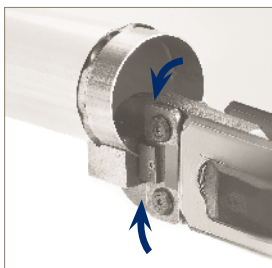
Manually open the jaws of the clamp and insert the aluminum pipe into the clamp as far as it will go



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

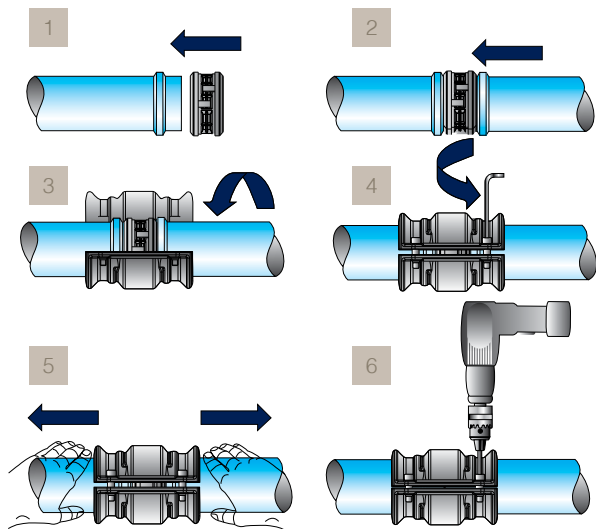


Re-open the two jaws to remove the pipe and rotate the pipe slightly



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

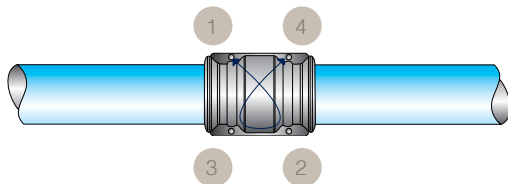
Ø 3" - Ø 4" - Ø 6" connection



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
5. Pull the pipes fully back towards the outside of the clamp
6. Fully tighten the clamp screws (maximum tightening torque: final closure of clamps)

Ø 3" - Ø 4" - Ø 6" disconnection

For effective clamp sealing, screw tightening should be performed on alternate sides of the clamp as shown below:



A 6mm Allen bit is used to tighten 3" and 4" clam shells and an 8mm bit is used for 6". The torque range is 7.38 lb-ft and 17.5 lb-ft for all sizes. For 3" and 4" assemblies, the clam shell halves should be flush with each other when tight. For 6" assemblies, it is acceptable to have a small gap between the clam shell halves.

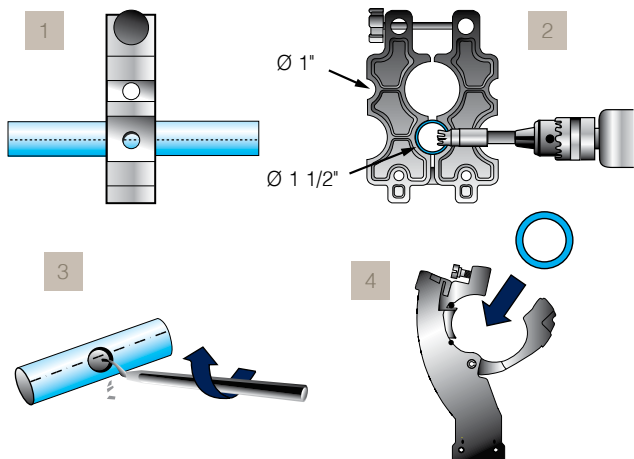
To disconnect, perform the same operations in reverse order.

Installation Guidelines

	Ø 3"	Ø 4"	Ø 6"
Min. number of lugs	5	6	10

Important: Do not overlap the lugs!

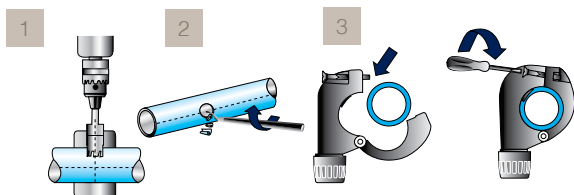
Ø 1" - 1 1/2" bracket installation



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 hole in $\varnothing 1\ 1/2"$ pipe, loosen the retaining bolt in the jig by turning the knob 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, tighten the bolt and drill a hole using the appropriate drilling tool:
 - $\varnothing 1"$: $\varnothing 1/2"$ hole > ref. 6698 02 02 drilling tool
 - $\varnothing 1\ 1/2"$: $\varnothing 1"$ hole > ref. 6698 02 01 drilling toolRecommended rotation speed: 650 rpm
Note: drill without lubrication.
2. Release the pipe, remove any chips and deburr the circular hole. 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 screw

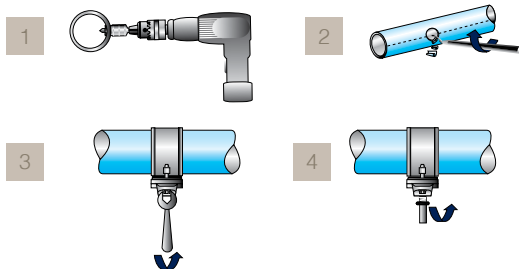
Note: The jig's second drilling guide corresponds to the minimum distance for fitting two adjacent brackets.

Ø 2" - 6" bracket installation



1. Mark the pipe at the desired position for the bracket. The mark should be placed on one of the locator marks so that multiple brackets are correctly aligned, when several take-off points are required. Place the Ø 2 1/2" drilling jig in a vice or on the floor and place the pipe in the jig. Ensure that the line marked on the pipe is centred within the drilling guide: two marks on either side of the jig's upper side provide a rapid indication of the pipe's positioning. Tighten the locking clamp to secure the pipe and drill using the Ø 1" drilling tool. [Recommended rotation speed: 650 rpm]
Note: Drill without lubrication.

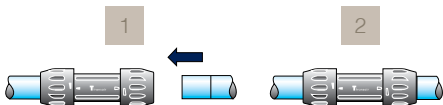
2. Loosen the locking clamp and release the pipe, remove any chips and deburr the hole. Repeat the operation for the number of brackets that you wish to fit.
3. Position the quick assembly bracket using its location hole
4. Tighten the screw



1. Drill the Ø 3" - Ø 6" pipe at the desired position using drilling tool
2. Carefully deburr the pipe
3. Position bracket ref. RR63 and fully tighten the two screws
4. Screw on male adapter

Do's

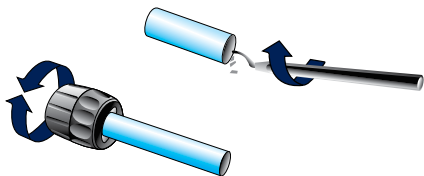
Insert pipe and ensure that the arrow marks are correctly aligned



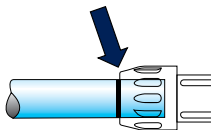
Use a pipe cutter



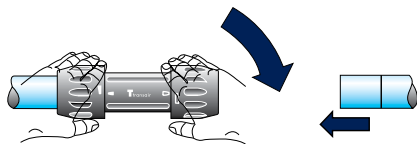
Carefully chamfer and deburr the pipe after cutting or drilling



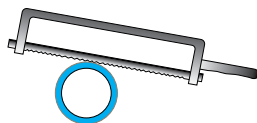
Insert the pipe into the connector up to the connection mark



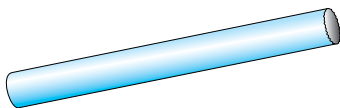
Don'ts



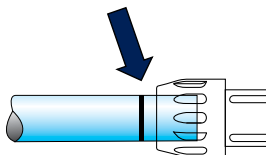
Don't loosen
the nuts
during assembly



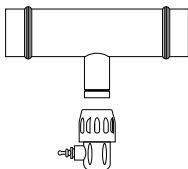
Don't cut
the pipe
with a saw



Don't use
non-deburred
pipe



Don't fail to
make the
pipe secure



Don't connect 1 1/2"
end cap to
reducing tee

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