Transair: Advanced Air Pipe Systems

1/2” to 6” Installation Pocket Guide

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Parker

ENGINEERING YOUR SUCCESS.

Parker Hannifin manufactures a robust piping system with superior operational efficiency perfectly suited for all industrial applications.

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, which enables immediate and easy layout modifications. Unlike the performance of steel or copper, which degrades over time due to corrosion, Transair provides clean air quality with optimum flow rate performance.

Available in 1/2" to 6" pipe sizes, Transair features quick-connect technology that offers a secure connection with a leak-free guarantee. The aluminum pipe is corrosion resistant, ensuring the longevity of equipment and avoiding frequent changes of filtration elements. Transair can also be integrated into existing copper and steel piping systems without compromising performance, making it perfect for upgrades or expansion projects.

transair

TECHNICAL SPECIFICATIONS

Suitable fluids

- compressed air (dry, wet, lubricated)
- vacuum
- inert gases
  (argon, nitrogen, helium, arcal)

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

AFAQ ISO 9001 VERSION 2000

TÜVRheinland

QUALICOAT

ISO8573

ASME

10 YEARS GUARANTEE 10 YEARS

CE

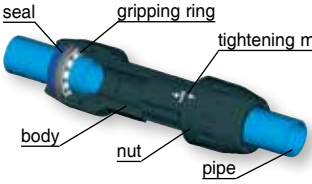
SIZING

Select the Transair diameter for your application based on required flow against pressure drop. Estimated values for: a closed loop system, a pressure of 115 psi with 5% pressure drop.

Flow Rate			Main Ring Length						compressor hp
Nm3/h	Nl/min	cfm	500	1000	2000	3000	4000	5000	
16.99	283.2	10	16.5	16.5	16.5	25	25	25	<15
42.475	708	25	25	25	25	25	25	25	
84.95	1416	50	25	25	25	40	40	40	
127.43	2124	75	25	40	40	40	40	40	15 to 40
169.9	2832	100	25	40	40	40	40	40	
254.85	4248	150	40	40	40	40	63	63	
424.75	7080	250	40	40	63	63	63	63	41 to 125
594.65	9912	350	40	63	63	63	63	63	
849.5	14160	500	63	63	63	63	76	76	
1274.3	21240	750	63	63	76	76	76	76	126 to 250
1699	28320	1000	76	76	76	100	100	100	
2123.8	35400	1250	76	76	100	100	100	100	125 to 500
2548.5	42480	1500	100	100	100	100	100	100	
2973.3	49560	1750	100	100	100	100	100	168	
3398	56640	2000	100	100	100	100	168	168	
3822.8	63720	2250	100	100	100	168	168	168	501 to 1000
4247.5	70800	2500	100	100	100	168	168	168	
4672.3	77880	2750	168	168	168	168	168	168	
5097	84960	3000	168	168	168	168	168	168	
5521.8	92040	3250	168	168	168	168	168	168	
5946.5	99120	3500	168	168	168	168	168	168	
6796	113280	4000	168	168	168	168	168	168	
7645.5	127440	4500	168	168	168	168	168	168	1001 to 1400
8495	141600	5000	168	168	168	168	168	168	
9344.5	155760	5500	168	168	168	168	168	168	

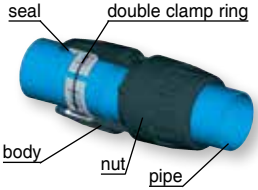
QUICK CONNECTION TECHNOLOGY

Transair's innovative technology takes into account the specific requirements of each diameter and provides the user with an optimum safety coefficient and easy connection.



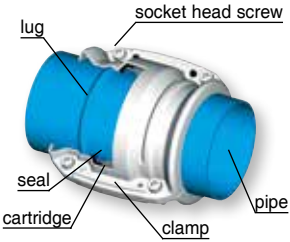
Ø 16.5 - Ø 40 mm

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 63 mm

Transair's double clamp ring secures the connection between the nut and the pipe - tightening of the nuts secures the final assembly.

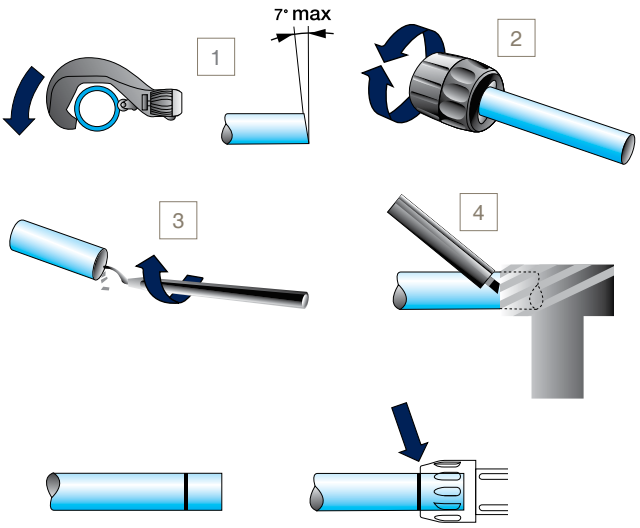


Ø 76 - Ø 168

Position the pipes to be connected within the Transair cartridge and close/ tighten the Transair clamp.

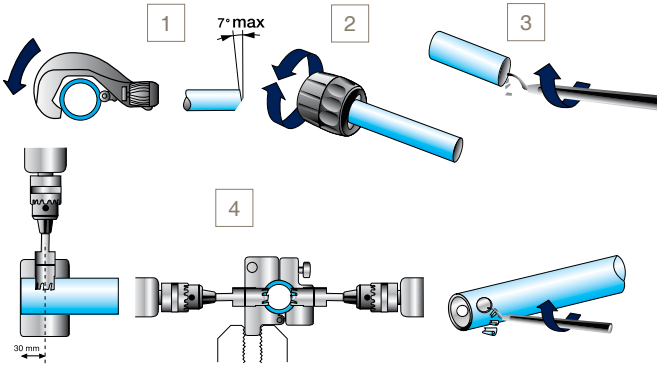
Pipe sizes:	16.5 mm (1/2") 25 mm (7/8") 40 mm (1 1/2") 63 mm (2 1/2")	76.3 mm (3") 101.8 mm (4") 168.3 mm (6")

Ø16.5 - Ø40 MM 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

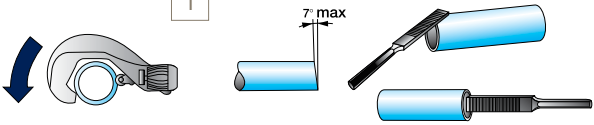
The insertion lengths for Ø16.5 - Ø25 - Ø40 connectors are 25 mm, 27 mm and 45 mm respectively,with the exception of the end cap (6625), for which the insertion lengths are of 39 mm, 42 mm and 64 mm respectively.



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 02) 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 burrs and potential sharp edges.

Ø76 - Ø168 MM INSTALLATION

1



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

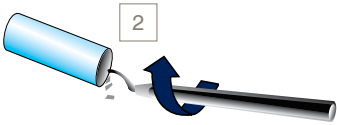
3

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

Place the jaws in the housing

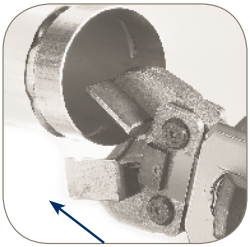
Lock in position by closing the retaining pin

3. Creating the lugs for Ø76, Ø100 or Ø168 cut pipe.
   Min. number of lugs:
   Ø76 (5 lugs)
   Ø100 (6 lugs)
   Ø168 (10 lugs)
   Do not overlap the lugs!

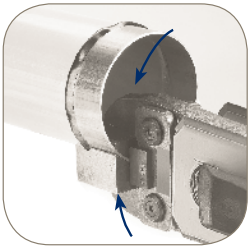


2. Carefully deburr the outer and inner edges of the pipe

4

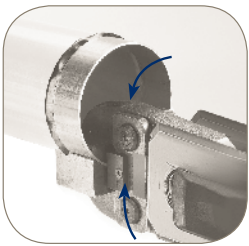


Manually open the jaws of the clamp and insert the aluminum pipe into the clamp as far as it will go



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

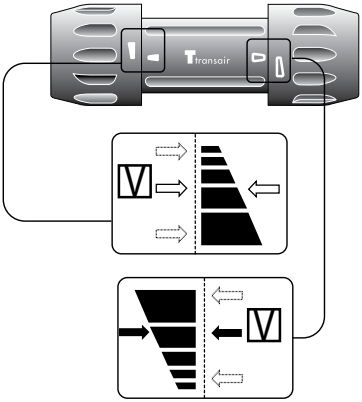
Re-open the two jaws to remove the pipe and rotate the pipe slightly



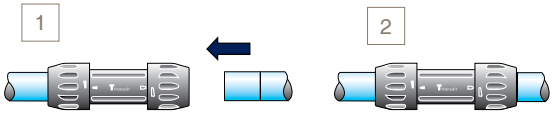
Renew the operation until the required minimum number of lugs for each diameter is achieved

Ø16.5 - Ø40 MM CONNECTION

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. There is no need to loosen the nuts prior to joining Ø16.5, Ø25 and Ø40 connectors to Transair aluminum pipe.



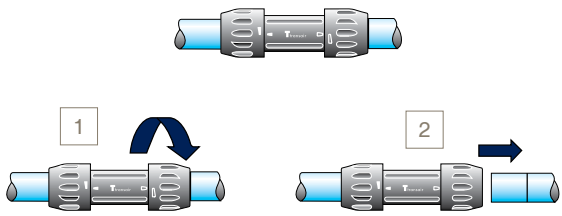
Before using Ø16.5, Ø25 or Ø40 connectors, ensure that the arrow marks are correctly aligned with each other.



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

Ø16.5 - Ø40 MM DISCONNECTION

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



INSTALLATION GUIDELINES

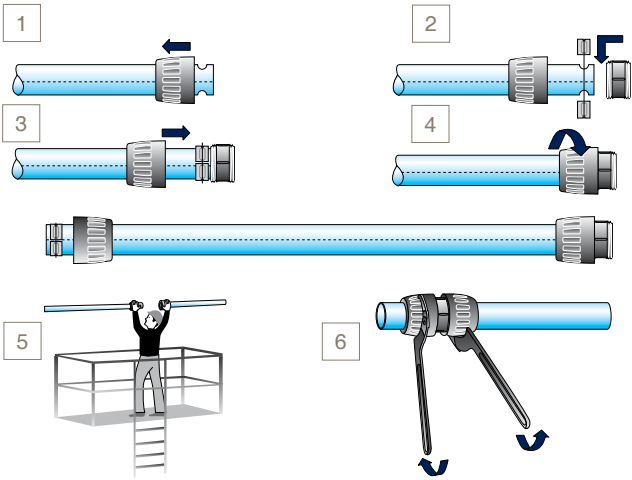
1. Transair pipe and hoses: Transair pipe should be protected from mechanical impact, particularly if exposed to collision with fork-lift trucks or when sited in an environment with moving overhead loads. Similarly, rotation of the pipe and pipe supports should be avoided.Transair pipe must not be welded.

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.

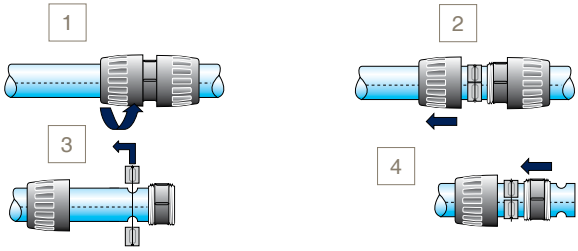
4. When assembling Transair connectors, do not interchange the nuts with different Transair bodies due to our calibration process.

Ø63 MM 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

Ø63 MM DISCONNECTION



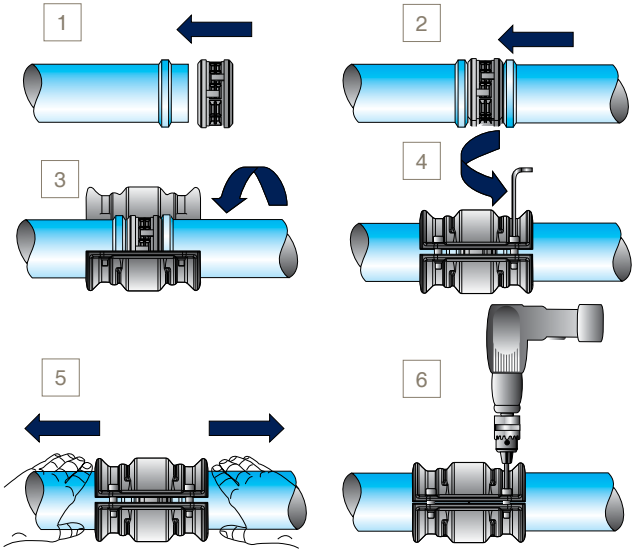
1. Initiate disassembly with a 1/2 rotation with Transair tightening spanners ref. 6698 05 03
2. Unscrew the nut away from the body
3. Remove the double clamp ring
4. Slide the connector nut over the pipe to remove

TOOL KIT

This tool case simplifies the use and transportation of tools for Ø63 mm. 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

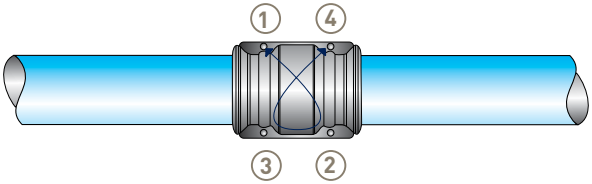
Ø76 - Ø168 MM CONNECTION



1. After creating the lugs, 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)

Ø76 - Ø168 MM 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 17.7 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.

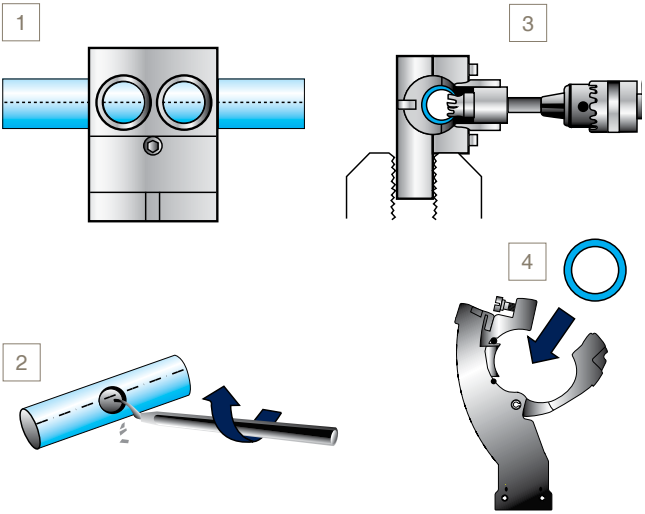
To disconnect, perform the same operations in reverse order.

INSTALLATION GUIDELINES

	Ø 76	Ø 100	Ø 168
Min. number of lugs	5	6	10

Important: Do not overlap the lugs!

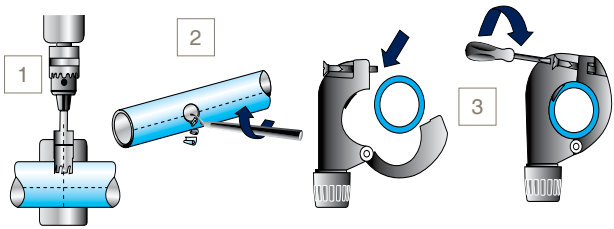
Ø25 - Ø40 BRACKET INSTALLATION



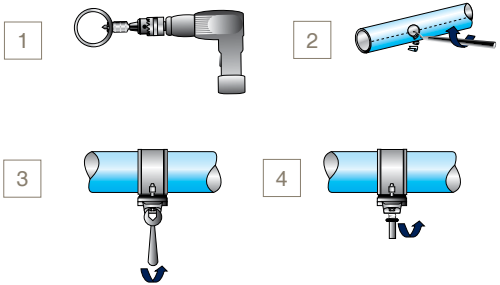
1. Mark the pipe at the desired position for the bracket. Place the drilling jig in a vice or on the floor. To drill Ø40 pipe, remove the retaining bolt in the jig using an Allen key and place the pipe in the jig. The locator mark on the pipe should be aligned with the appropriate guide marks on the jig. Two guide lines on 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 (without lubrication/rotation speed of 650 rpm)
   - Ø25: Ø16 hole > ref. 6698 02 02 drilling tool
   - Ø40: Ø22 hole > ref. 6698 02 01 drilling tool
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.

Ø63 - Ø168 BRACKET INSTALLATION



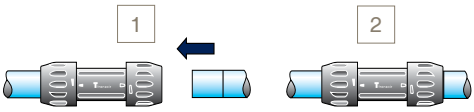
1. Mark the Ø63 pipe at the desired position for the bracket. The mark should be placed on one of the locator marks so that multiple brackets are correctly aligned. Place the Ø63 drilling jig in a vice or on the floor and place the pipe in the jig. Ensure that the line on the pipe is centred within the drilling guide. Tighten the locking clamp and drill using the Ø22 drilling tool. (Recommended rotation speed of 650 rpm/without lubrication)
2. Loosen the locking clamp and release the pipe, remove any chips and deburr the hole. Repeat as needed
3. Position the quick assembly bracket using its location hole and tighten the screw



1. Drill the Ø76 - Ø168 pipe at the desired position using drilling tool
2. Carefully deburr the pipe
3. Position bracket and fully tighten the two screws
4. Screw on male adapter

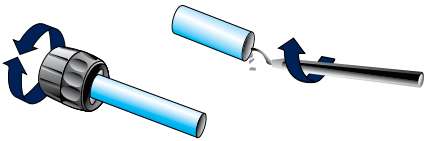
DO'S

Insert pipe and ensure that the arrow marks are correctly aligned

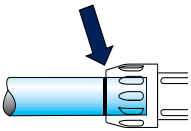


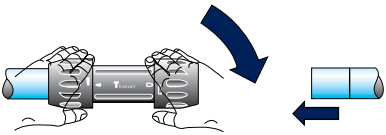
Use a pipe cutter

Carefully chamfer and deburr the pipe after cutting or drilling

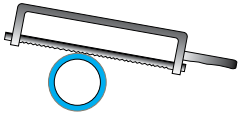


Insert the pipe into the connector up to the connection mark

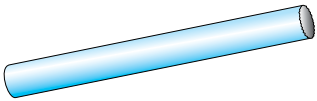




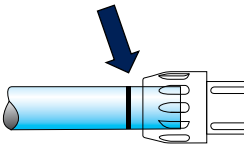
Don't loosen the nuts during assembly



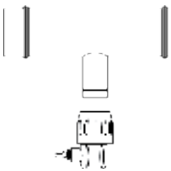
Don't cut the pipe with a saw



Don't use non-duburred pipe



Don't fail to make the pipe secure



Don't connect 40mm end cap to reducing tee

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North American Divisions & Distribution Service Centers

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