

Technical Specifications

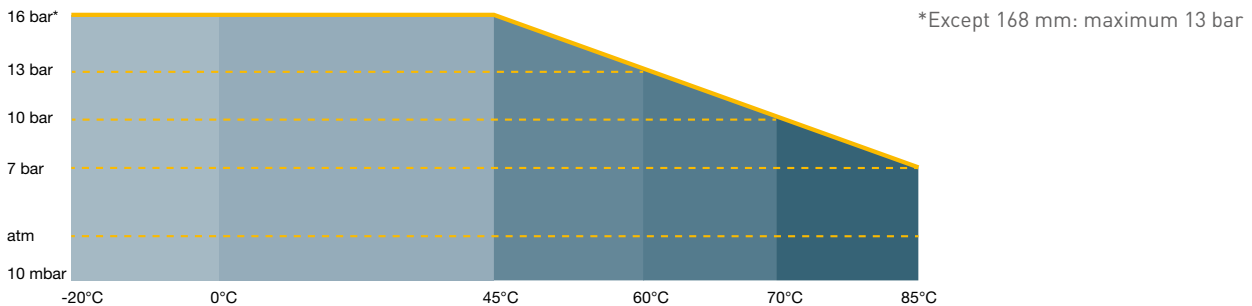
Transair® Main Features

Applications

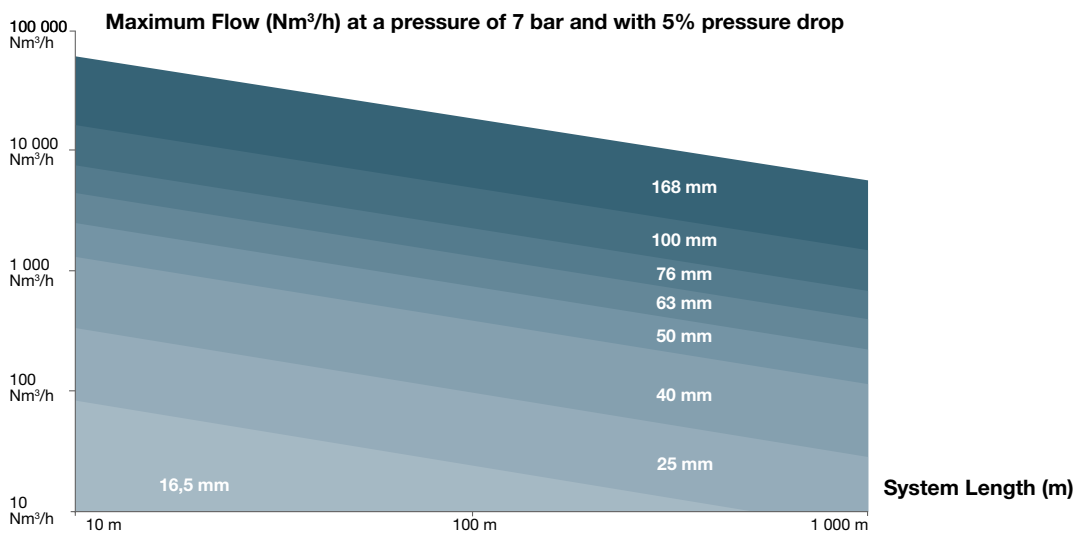
Transair® is adapted for compressed air applications (dry, lubricated or with water condensation), for inert gas applications like nitrogen, argon or CO₂ (for purity up to 99.99%) and for vacuum applications (performance and compatibility described page 20 of this catalogue).

Working Pressure and Temperature

The maximum working pressure of Transair® system, versus operating temperature, is according to the diagram below.



Maximum Flow



Sizing

Sizing a Network

Select the Transair® diameter for your application based on required flow and length. Estimated values for a closed loop network, a pressure of 8 bar with maximum 3% pressure drop (= 0,24 bar). Velocity is not taken into account.

Flow			Length										Compressor (kw)
			164ft	328ft	492ft	984ft	1640ft	2460ft	3280ft	4265ft	5249ft	6561ft	
Nm³/h	NI/min	Scfm	50m	100m	150m	300m	500m	750m	1000m	1300m	1600m	2000m	
10	167	6	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	25	25	1
30	500	18	16.5	16.5	16.5	25	25	25	25	25	25	25	3
50	833	29	16.5	25	25	25	25	25	25	40	40	40	5.5
70	1 167	41	25	25	25	25	25	40	40	40	40	40	7.5
100	1 667	59	25	25	25	40	40	40	40	40	40	40	11
150	2 500	88	25	25	40	40	40	40	40	40	40	50	15
250	4 167	147	25	40	40	40	40	40	50	50	50	50	25
350	5 833	206	40	40	40	40	50	50	50	63	63	63	30
500	8 333	294	40	40	40	50	50	63	63	63	63	76	45
750	12 500	441	40	50	50	63	63	63	76	76	76	76	75
1000	16 667	589	50	50	50	63	76	76	76	76	100	100	90
1250	20 833	736	50	50	63	63	76	76	100	100	100	100	110
1500	25 000	883	50	63	63	76	76	100	100	100	100	100	132
1750	29 167	1 030	50	63	63	76	100	100	100	100	100	100	160
2000	33 333	1 177	63	63	76	76	100	100	100	100	168	168	200
2500	41 667	1 471	63	76	76	100	100	100	100	168	168	168	250
3000	50 000	1 766	63	76	76	100	100	168	168	168	168	168	315
3500	58 333	2 060	76	76	100	100	100	168	168	168	168	168	355
4000	66 667	2 354	76	100	100	100	168	168	168	168	168	168	400
4500	75 000	2 649	76	100	100	100	168	168	168	168	168	168	450
5000	83 333	2 943	76	100	100	168	168	168	168	168	168	168	500
5500	91 667	3 237	76	100	100	168	168	168	168	168	168	168	550
6000	100 000	3 531	100	100	100	168	168	168	168	168	168	168	600
6500	108 333	3 826	100	100	100	168	168	168	168	168	168	168	650
7000	116 667	4 120	100	100	168	168	168	168	168	168	168	168*	700
10000	166 667	5 886	100	168	168	168	168	168	168*	168*	168*	168*	1000
11000	183 333	6 474	100	168	168	168	168	168	168*	168*	168*	168*	1100
12000	200 000	7062	100	168	168	168	168	168*	168*	168*	168*	168*	1200

*Pressure loss >3%

Transair® Standards and Certifications

Transair® aluminium range certifications fall within the standards and regulations universe described on pages 14 and 15 of this catalogue.

Standards Related to Transair® Aluminium Pipe



I Qualicoat Label

Transair® aluminium piping system complies with the QUALICOAT label, which guarantees the quality of the painting process, the chemicals used, the finished quality and the coating resistance of the aluminium pipe.



I Material Certificate

Transair® aluminium piping system complies with EN 755.2, EN 755.8, EN 573.3 standards, which define mechanical and chemical properties of pipes. The quality and consistency of the aluminium alloy used allow to bend Transair® aluminium pipe as described on page 110 of this catalogue.

Applications

I Air Quality - ISO 8573 Certification: 2001 & 2010 Classes 1.1.1



Transair® aluminium range conforms to ISO 8573: 2001 & 2010 Classes 1.1.1 certification. ISO 8573 certification establishes the different quality classes of compressed air for the 3 main components present in any compressed air system: dust, water and grease. Transair® aluminium range has been successfully tested to reach the highest expectation of this standard. A Transair® distribution network guarantees a constant quality of the conveyed fluids, from the production point to the point of use.

ISO 8573-1:2010 Class	Solid Particulate			Mass Concentration mg/ m ³	Water		Oil
	Maximum number of particles per m ³				Vapour Pressure Dewpoint	Liquid g/m ³	
	0.1 – 0.5 µm	0.5 – 1 µm	1 – 5 µm				Total Oil (aerosol liquid and vapour) mg/ m ³
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	OK*	OK*	OK*	-	OK**	-	OK
2	OK	OK	OK	-	OK	-	OK
3	-	OK	OK	-	OK	-	OK
4	-	-	OK	-	OK	-	OK
5	-	-	OK	-	OK	-	-
6	-	-	-	OK	OK	-	-
7	-	-	-	OK	-	OK	-
8	-	-	-	-	-	OK	-
9	-	-	-	-	-	OK	-
X	-	-	-	OK	-	OK	OK

* : Transair® in line with standard after 1 purge

** : Transair® in line with standard depending on the atmospheric conditions



I Vacuum

Transair® aluminium range can be used for vacuum applications down to 10 mbar absolute pressure.

I Compatibility with Non Flammable Gases

Transair® aluminium range is suitable for distribution of non flammable gases such as: Argon, Nitrogen, Carbon Dioxide and mix of these gases. Based on laboratory purity testing, Transair® (fitting and aluminium piping) is compatible with 99.99% purity Nitrogen applications.



Gas	Compatibility with Transair®
Nitrogen (N ₂)	Compatible
Argon	Compatible
Carbon Dioxide (CO ₂)	Compatible
Helium (He ₂)	Compatible
Mix Argon (Ar ₂) + Carbon Dioxide (CO ₂)	All ratios
Oxygen (O ₂)	Up to 22%
Hydrogen (H ₂)	Up to 4%

Transair® aluminium range is compatible with transportation of above gas, according to all recommendations of uses of Transair® piping system, provided the conveyed fluid is dry (no condensation in the Transair® piping system).

Safety

I Euroclasses EN 13501-1 Certification

Transair® aluminium range is classified B s2 d0 according to EN 13501-1.

EN 13501-1 certification describes the different classes of reaction to fire for the 3 main criteria as follows: energy contribution to the propagation of fire, smoke production and flaming particles.



Energy Contribution to the Propagation of a Fire			Smoke Production		Falling Drops	
B	Contribution limited to fire propagation	Resistant to prolonged attack flames and ardent isolated object while limiting the spread of flame.	s2	Average smoke production	d0	No drops, no flaming particles

I Euroclasses EN 13501-2 and Brandschutz Certificates

The Transair® system, installed with fire protection for duct penetrations, is fire resistant and prevents the spread of any fire.

Transair® is classified **E 120** in accordance with **EN 13501-2**, equivalent to 120 minutes of fire resistance.

The **EN 13501-2** certification assesses the fire resistance and prevents, during the specified time, the propagation of fire, combustion gases and fumes.

I Transair® Blowgun

Transair® blowgun EA59 00 13 complies with regulations OSHA 1910.242 (b) for hand and portable powered tools, OSHA 1910.95 (b), Directive 2003/10/EC.



The above mentioned certificates are available upon request.

Material Aluminium Range

Range References	Ø16.5 - Ø25 - Ø40	Ø50 - Ø63
1003A	Lacquered aluminium	Lacquered aluminium
1006A - 1004A	Lacquered aluminium	Lacquered aluminium
CLIP - SPACER	HR Polymer	HR Polymer
1001E	Hose and coating: black SBR Reinforcement: spiral steel wire	Hose and coating: black SBR Reinforcement: synthetic braiding
6606	HR Polymer	Treated aluminium SnapRing: HR Polymer
6676	HR Polymer	Treated aluminium SnapRing: HR Polymer
6602	HR Polymer	Treated aluminium SnapRing: HR Polymer
6612	HR Polymer	Treated aluminium SnapRing: HR Polymer
6604	HR Polymer	Treated aluminium SnapRing: HR Polymer
6666	Body: treated aluminium Nut: HR Polymer	Treated aluminium SnapRing: HR Polymer
6625	Ø16.5 mm: body: brass nut: HR Polymer Ø25 and Ø40 mm: HR Polymer	Treated aluminium SnapRing: HR Polymer
6605	Body: treated brass Nut: HR Polymer	Treated aluminium SnapRing: HR Polymer
6615	Body: brass Plate: treated steel Nut: HR Polymer	Body: aluminium - Plate: treated steel - Nut: aluminium - SnapRing: HR Polymer
6611	Brass	Aluminium
6609	Body: HR Polymer Male stud: brass	Treated aluminium SnapRing: HR Polymer
6619	Body: HR Polymer Male stud: brass	Treated aluminium SnapRing: HR Polymer
6621	Brass	
6651	Body: treated brass Nut: HR Polymer	
4092	Body: brass Nut: HR Polymer	Treated aluminium SnapRing: HR Polymer
RA69	HR Polymer	HR Polymer
RA65	Body: HR Polymer Insert: brass	Body: HR Polymer Insert: brass
6662	HR Polymer	HR Polymer
6661	Body: HR Polymer Insert: brass	Body: HR Polymer Insert: brass
VR03	Body: nickel-plated brass Seal: PTFE	
VR04	Body: nickel-plated brass Seal: PTFE	
EA98	Body: HR Polymer Ball valve: nickel-plated brass/ PTFE	Body: HR Polymer Ball valve: nickel-plated brass/ PTFE
6639 - 6681 6682 - 6695	Body: brass Nut: HR Polymer	
6641 - 6686 6690 - 6635	Treated brass	
6678 - 6693 6637	Body: brass Nut: HR Polymer	

Range References	Ø76 - Ø100 - Ø168
TA03	Lacquered aluminium
TA06	Lacquered aluminium
Collar	Zinc steel Rubber EPDM
FP01	Hose & connector: black SBR/NBR Reinforcement: spiral steel wire
RR01	Clamp: treated steel Cartridge: HR Polymer
RR01 L8	Clamp: aluminium Cartridge: zamak + HR Polymer
RX02	Stainless Steel 304
RA02	Aluminium
RX12	Stainless Steel 304
RA12	Aluminium
RX04	Stainless Steel 304
RA04*	Aluminium
RX24	Stainless Steel 304
RX23	Stainless Steel 304
RA26**	Aluminium
RA07**	Aluminium
RA44	Aluminium
RX64	Stainless Steel 304
RX66	Stainless Steel 304
RA66	Aluminium
RA25	Aluminium
RA30*	Aluminium
RA33	Aluminium
EW05	Seal: elastomer
RR05	Treated brass
VR01	Body: iron Ball: nickel-plated brass
VR02	Handle: HR Polymer Body: iron Disk and shaft: stainless steel
RR61	Body: iron (EN 1563) - Seal:NBR Screw: treated stainless steel Lining: elastomer
RR63	Body: iron (EN 1563) - Seal:NBR Screw: treated stainless steel Lining: elastomer

* + Ø63mm
** + Ø40, Ø50 and Ø63mm

ALL SEALS ARE IN NBR (unless otherwise stated)

- **Adaptator:** brass
- **Fixture accessories:** galvanized steel - brass
- **Composite coupler:**
 - Body: polymer HR / Zamac
 - Sleeve: polymer HR
 - Spring and ball: stainless steel
 - Seal: nitrile
- **Metal coupler:**
 - Body: duralumin anodized
 - Sleeve: treated nickel-plated steel
- Spring: stainless steel
- Seal: nitrile
- Probe: treated brass, treated steel
- **Hose reel:**
 - Case: plastic
 - Fixing: metal
- **Blowgun:**
 - Reinforced polyamid - treated aluminium - insert: brass
- **Connection accessories:** nickel-plated brass
- **Anti-whip lash strap:** steel

Transair® Connection Technologies

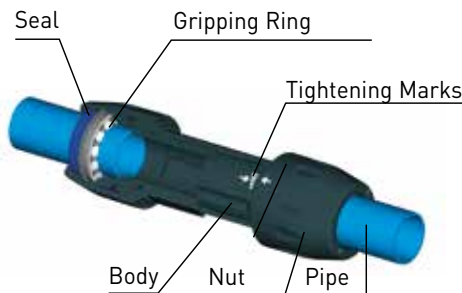
Reliable and Safe Connection Technologies

Because users need versatile but reliable and safe solutions, Transair® has developed different technologies for the best compromise between safety, efficiency and adaptability.

- **Gripping ring instant connection** for diameters 16.5, 25 and 40mm offers the maximum flexibility.
- **SnapRing quick-fit connection** for diameters 50 and 63mm proposes the most secure technology while maintaining ease of handling: no possible errors during installation.
- **Lug & Clamp quick-fit connection** for diameters 76, 100 and 168mm avoids any disconnection: the internal cartridge works as a fuse if a failure in the network causes an excessive pressure increase.

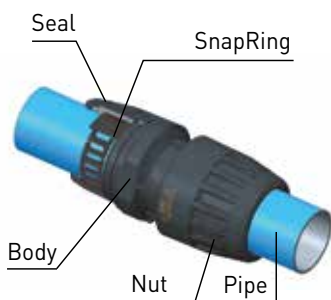
	Mechanical Stress due to Pressure	Frequency of Modifications	Transair® Technology
Ø 16.5, 25 & 40 mm	+ (up to 250 kg)	+++++ (every quarter)	Gripping Ring Instant Connection
Ø 50 & 63 mm	++ (up to 600 kg)	+++ (every year)	SnapRing Quick-fit Connection
Ø 76, 100 & 168 mm	+++++ (up to 3000 kg)	+ (every 3 years)	Lug & Clamp Quick-fit Connection

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



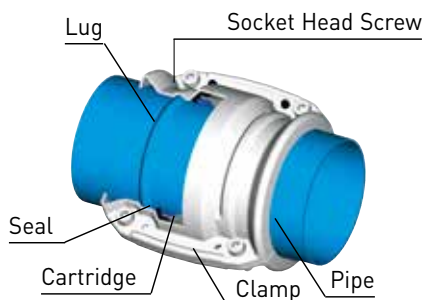
Ø16.5 - Ø25 - Ø40 mm

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.



Ø50 - Ø63 mm

Transair®'s SnapRing secures the connection between the nut and the pipe - tightening of the nuts secures the final assembly



Ø76 - Ø100 - Ø168 mm

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



Ø	Image	Diagram	90° ELBOW					
			Transair®	ØD	ØG	L	Z	Kg
16.5 25 40			6602 17 00	16.5	34	58	31	0.065
			6602 25 00	25	44.5	69.5	40	0.120
			6602 40 00	40	67	103	62	0.410
50 63			6602 50 00	50	80	116	56	0.804
			6602 63 00	63	91	124	61	0.970
76 100 168			RX02 L1 00	76		227	189	1.033
			RX02 L3 00	100		278	227	1.417
			RA02 L8 00	168		269	185	3.074

Use 2 connectors RR01 to connect 90° elbow RX12 and RA02 to Transair® aluminium pipe Ø76, Ø100 or Ø168.

Ø	Image	Diagram	45° ELBOW					
			Transair®	ØD	ØG	L	Z	Kg
25 40			6612 25 00	25	44.5	61.5	32.5	0.115
			6612 40 00	40	67	90	45	0.370
50 63			6612 50 00	50	80	98	38	0.771
			6612 63 00	63	91	100	37	0.906
76 100 168			RX12 L1 00	76		236	151	0.704
			RX12 L3 00	100		271	184	1.309
			RA12 L8 00	168		294	241	2.366

Use 2 connectors RR01 to connect 45° elbows RX12 and RA12 to Transair® aluminium pipe Ø76, Ø100 or Ø168.