



# TECHNICAL SPECIFICATIONS

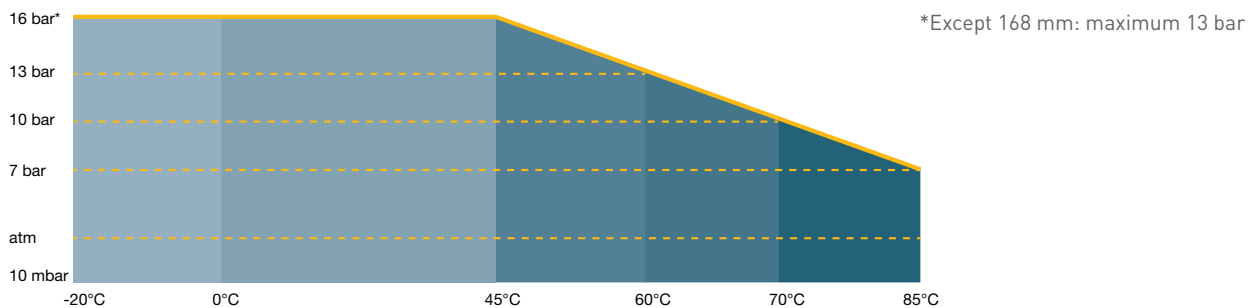
## Transair® Main Features

### I Applications

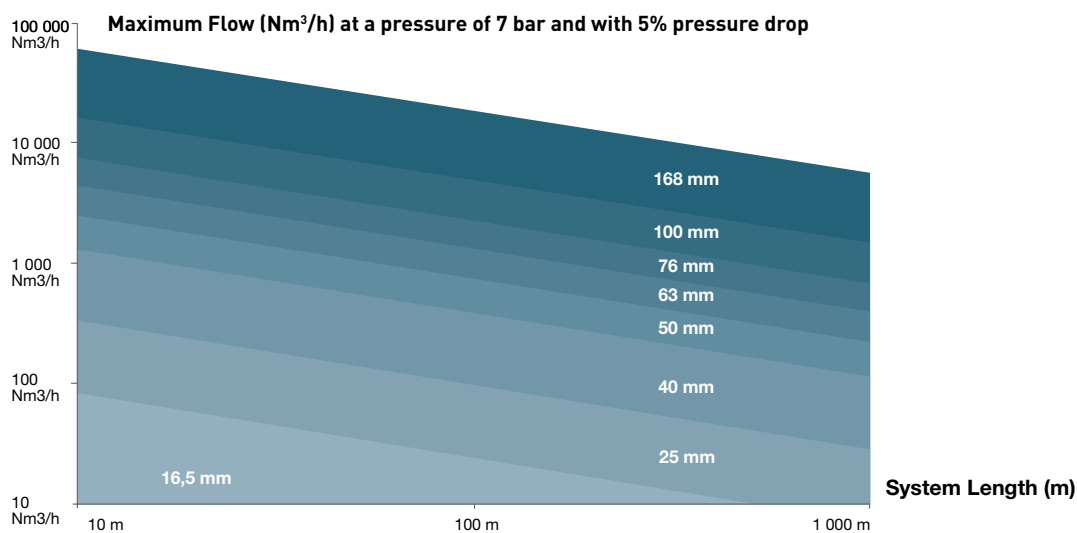
Transair® is adapted for compressed air applications (dry, lubricated or with water condensation), for inert gas applications like nitrogen, argon or CO<sub>2</sub> (for purity up to 99.99%) and for vacuum applications (performance and compatibility described page 19 of this catalogue).

### I Working Pressure and Temperature

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



### I Maximum Flow



# Sizing

## Sizing a Network

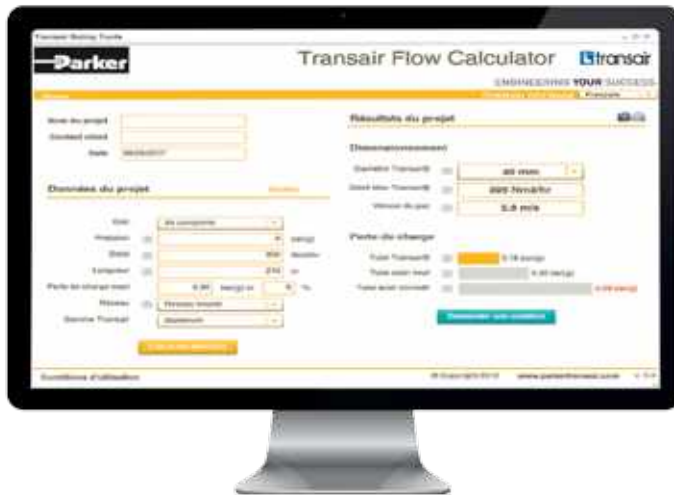
Select the Transair® diameter for your application based on required flow and length. Estimated values for a closed loop network, a pressure of 8 bar with 5% pressure drop. Velocity is not taken into account.

Flow			Length										Compressor (kw)
			164ft	328ft	492ft	984ft	1640ft	2460ft	3280ft	4265ft	5249ft	6561ft	
Nm³/h	NI/min	cfm	50m	100m	150m	300m	500m	750m	1000m	1300m	1600m	2000m	
10	167	6	16.5	16.5	16.5	16.5	25	25	25	25	25	25	1
30	500	18	16.5	25	25	25	25	40	40	40	40	40	3
50	833	29	25	25	25	40	40	40	40	40	40	40	5.5
70	1167	41	25	25	25	40	40	40	40	40	40	40	7.5
100	1667	59	25	40	40	40	40	40	40	50	50	50	11
150	2500	88	40	40	40	40	40	50	50	50	50	63	15
250	4167	147	40	40	40	50	50	63	63	63	63	76	25
350	5833	206	40	40	50	50	63	63	63	76	76	76	30
500	8333	294	40	50	50	63	63	76	76	76	100	100	45
750	12500	441	50	63	63	76	76	100	100	100	100	100	75
1000	16667	589	50	63	76	76	100	100	100	100	100	168	90
1250	20833	736	63	76	76	100	100	100	100	168	168	168	110
1500	25000	883	63	76	76	100	100	100	168	168	168	168	132
1750	29167	1030	76	76	100	100	100	168	168	168	168	168	160
2000	33333	1177	76	76	100	100	168	168	168	168	168	168	200
2500	41667	1471	76	100	100	100	168	168	168	168	168	168	250
3000	50000	1766	100	100	100	168	168	168	168	168	168	168	315
3500	58333	2060	100	100	100	168	168	168	168	168	168	168	355
4000	66667	2354	100	100	168	168	168	168	168	168	168	168	400
4500	75000	2649	100	100	168	168	168	168	168	168	168	168	450
5000	83333	2943	100	168	168	168	168	168	168	168	168	168	500
5500	91667	3237	100	168	168	168	168	168	168	168	168	168	550
6000	100000	3531	100	168	168	168	168	168	168	168	168	168	600
6500	108333	3826	168	168	168	168	168	168	168	168	168	168	650
7000	116667	4120	168	168	168	168	168	168	168	168	168	168	700



# TRANSAIR® SIZING TOOLS

## Transair® Flow Calculator (TFC) and Transair® Vacuum Calculator (TVC)



TFC and TVC sizing tools are simple, quick and easy to use.

**When entering:**

- the flow of the compressor or pump
- the length of the main ring (closed loop yes/no)
- the working pressure

**Your network is immediately sized with the most suitable Transair® diameter for your project.**

The calculation includes an estimation of pressure losses and, in the case of a compressed air or inert gas network, a recommendation of maximum flow.



**These tools are available at [www.parkertransair.com](http://www.parkertransair.com):**

[www.parkertransair.com/TFC](http://www.parkertransair.com/TFC)

[www.parkertransair.com/TVC](http://www.parkertransair.com/TVC)

or upon request to [transair@parker.com](mailto:transair@parker.com)

**Very easy to use:**

These tools allow to obtain in just 3 steps the most appropriate Transair® pipe diameter for your network.

Both TFC and TVC include all diameters of Transair® aluminium range: 16.5 - 25 - 40 - 50 - 63 - 76 - 100 and 168mm.

- Possibility to size the diameters for compressed air, inert gases, nitrogen, dry CO<sub>2</sub> and vacuum networks.
- Intuitive tool with help tips at each step
- For compressed air and inert gases, comparison of results with a traditional steel network
- Possibility to print the outcome report



# TRANSAIR® PAYBACK TOOL

## Transair® Energy Efficiency Calculator (TEEC)

### Energy Efficiency with Transair®

The Transair® Energy Efficiency Calculator software determines the savings and the ROI (Return On Investment) timeframe using compressor data (pressure, power, annual service hours, type of dryer), plus data from the network (length of the main ring, type of open or closed loop, pipe material used) and the local cost of electricity, including an inflation factor.

The results demonstrate that Transair® is the most efficient solution and the best option in the long term.

Whether you are extending or renovating an existing system or installing a new one, you can contribute to your company's performance and help to protect the environment by choosing Transair®.

**TRANSAIR ENERGY EFFICIENCY CALCULATOR**

PROJECT ESTIMATOR | FINANCIAL REPORT | OPTION UNITS | JOINT | English

**PROJECT INPUT DATA**

Project Name: [ ] 2016-10-13

**COMPRESSOR ROOM**

Pressure: [ 7 ] bar  
 Compressor power: [ 120 ] kW  
 Annual operating hours: [ 8000 ] hours/year  
 Type of dryer: [ by refrigeration ]

**COMPRESSED AIR NETWORK**

Flow in the main ring: [ 900 ] Nm<sup>3</sup>/hr  
 Length of the main ring: [ 500 ] m  
 Closed man ring: [ yes ]

**TRADITIONAL SOLUTION**

Pipe material: [ Black Steel ]  
 Internal diameter of the pipe: [ 50 ] mm  
 Age of the network: [ 15 ] years  
 % of leakage: [ 12 ] %  
 Quotation (products and labour): [ 8 ] EUR

**TRANSAIR**

Diameter of the Transair pipe: [ T6 ] mm  
 Quotation (products and labour): [ 20000 ] EUR

**ECONOMIC DATA**

Electricity cost per kWh: [ 0.28 ] EUR  
 Annual electricity inflation: [ 3 ] %  
 Electricity carbon emission factor: [ 0.58 ] kg CO<sub>2</sub> / kWh

**ESTIMATION OUTPUT DATA**

PAYBACK TIME OF THE TRANSAIR SYSTEM: **29 MONTHS**

**TRANSAIR BENEFIT YEAR AFTER YEAR**  
 due to the difference of cost between Transair and traditional solution.

Bar chart showing annual benefits from Year 1 to Year 10. Year 1 shows a negative value (cost), while subsequent years show positive values (benefit).

**TRANSAIR PROFIT FOR 5 YEAR(S): 39 552 EUR**

For information, the estimated pressure drop and leakage volume saved each year with Transair is equivalent to 40 593 kg CO<sub>2</sub>

Black Steel	transair
0,16 bar	Pressure drop 0,07 bar
552 EUR	Pressure drop cost per year 224 EUR
690 560 Nm <sup>3</sup>	Leakage volume per year 0 Nm <sup>3</sup>
7 221 EUR	Leakage cost per year 0 EUR
301 EUR	estimated repair cost per year 0 EUR
<b>8 134 EUR</b>	<b>Total Annual Cost 224 EUR</b>

This tool is available at [www.parkertransair.com](http://www.parkertransair.com):

[www.parkertransair.com/TEEC](http://www.parkertransair.com/TEEC)

or upon request to [transair@parker.com](mailto:transair@parker.com)

# TRANSAIR® STANDARDS AND CERTIFICATIONS

Transair® aluminium range certifications fall within the standards and regulations universe described on pages 8 and 9 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 <sup>3</sup>	Water		Oil
	Maximum number of particles per m <sup>3</sup>				Vapour Pressure Dewpoint	Liquid g/m <sup>3</sup>	
	0.1 – 0.5 µm	0.5 – 1 µm	1 – 5 µm				Total Oil (aerosol liquid and vapour) mg/ m <sup>3</sup>
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 <sub>2</sub> )	Compatible
Argon	Compatible
Carbon Dioxide (CO <sub>2</sub> )	Compatible
Helium (He <sub>2</sub> )	Compatible
Mix Argon (Ar <sub>2</sub> ) + Carbon Dioxide (CO <sub>2</sub> )	All ratios
Oxygen (O <sub>2</sub> )	Up to 22%
Hydrogen (H <sub>2</sub> )	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 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.



# TRANSAIR® FOR INDUSTRIAL VACUUM

## Transair® system is particularly suited for vacuum applications:

- Diameters up to 168mm to meet all requirements
- Full flow connection for a better aspiration
- Big diameters for a maximum flow on the machine connections
- Optimum sealing to guarantee the proper functioning of the machines
- Different colours of pipe for easy network identification
- Sizing tool to ease the project study (TVC)

### Certificates:

- Vacuum Performance, 10 mbar in absolute pressure
- Air Quality ISO 8573: 2001 & 2010 Class 1.1.1

### OPTIMISED PRODUCTS FOR INDUSTRIAL VACUUM APPLICATIONS:



# TRANSAIR® FOR INERT GASES

## Transair® advantages for inert gases applications:

- Transair® materials allow to maintain the quality of the conveyed gases.
- Optimum sealing of Transair® connectors allow to maintain gases purity.
- 3 port threaded wall bracket to be used with column flowmeters
- Different colours of pipe for easy network identification
- Sizing tool for inert gases (TFC)

### Certificates:

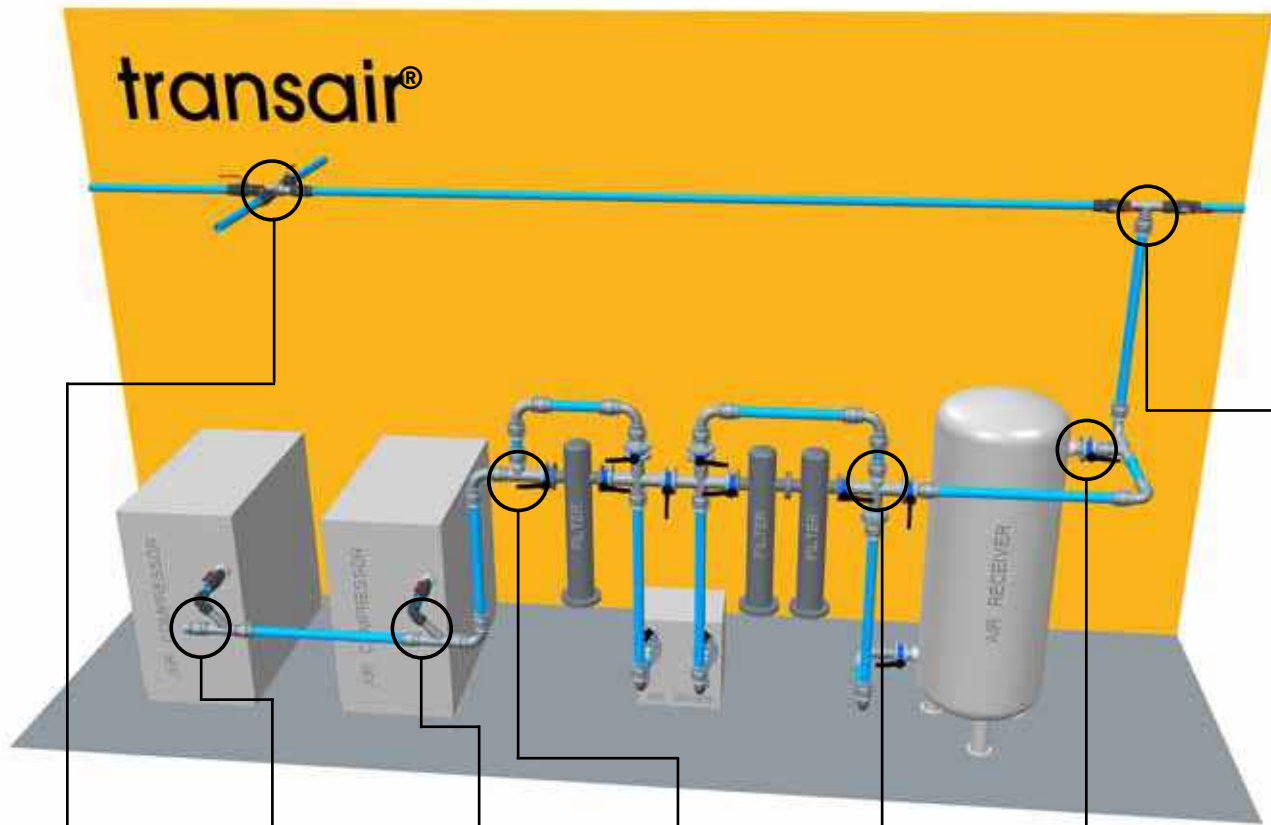
- Suited for applications with: nitrogen, argon, CO<sub>2</sub> and their mix (exhaustive list upon request)
- 99,99 % purity with nitrogen (100 ppm oxygen)
- Air Quality ISO 8573: 2001 & 2010 Class 1.1.1

### OPTIMISED PRODUCTS FOR INERT GASES APPLICATIONS:





# TRANSAIR® FOR TECHNICAL ROOMS



**Equal Cross  
RA07**



**End Cap  
with Plug  
RA25**



**Equal and  
Reducer Y  
RA26**



**1 Flanged Tee  
RA44**



**3 Flanged  
Cross  
RA07**



**Circular Flange  
RA30/RA31**



**Increaser Tee  
RA04**







# 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
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
6625	Ø16.5 mm: body: brass Nut: HR Polymer Ø25 and Ø40 mm: HR Polymer	Treated aluminium
6605	Body: treated brass Nut: HR Polymer	Treated aluminium SnapRing: HR Polymer
6615	Body: brass Plate: treated steel Nut: HR Polymer	Body: brass Plate: treated steel Nut: aluminium
6611	Brass	Brass
6609	Body: HR Polymer Male stud: brass	Body: aluminium Nut: aluminium Male stud: brass
6619	Body: HR Polymer Male stud: brass	Body: aluminium Nut: aluminium Male stud: brass
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: treated iron 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 / Zamak
  - Sleeve: polymer HR
  - Spring and ball: stainless steel
  - Seal: nitrile
- **Metal coupler:**
  - Body: duralumin anodisé
  - Sleeve: treated nickel-plated steel

- Spring: stainless steel
- Seal: nitrile
- Probe: treated brass, treated steel

### • Hose reel :

- Case: plastic
- Fixing: metal

### • Blowgun:

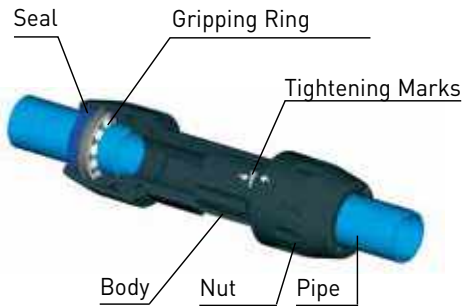
Reinforced polyamid - treated aluminium - insert: brass

### • Connection accessories: nickel-plated brass

### • Anti-whip lash strap: steel

# TRANSAIR® CONNECTION TECHNOLOGIES

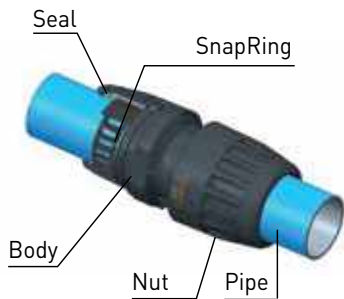
Transair® innovative technology takes into account the specific requirements of each diameter and provides the user with an optimum safety coefficient and easy connection.



Ø16.5 - Ø25 - Ø40 mm

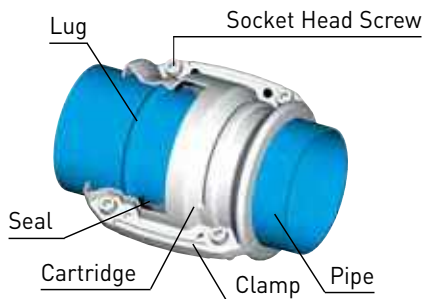
Simply push the pipe into the connector up to the connection mark.

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.

## 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