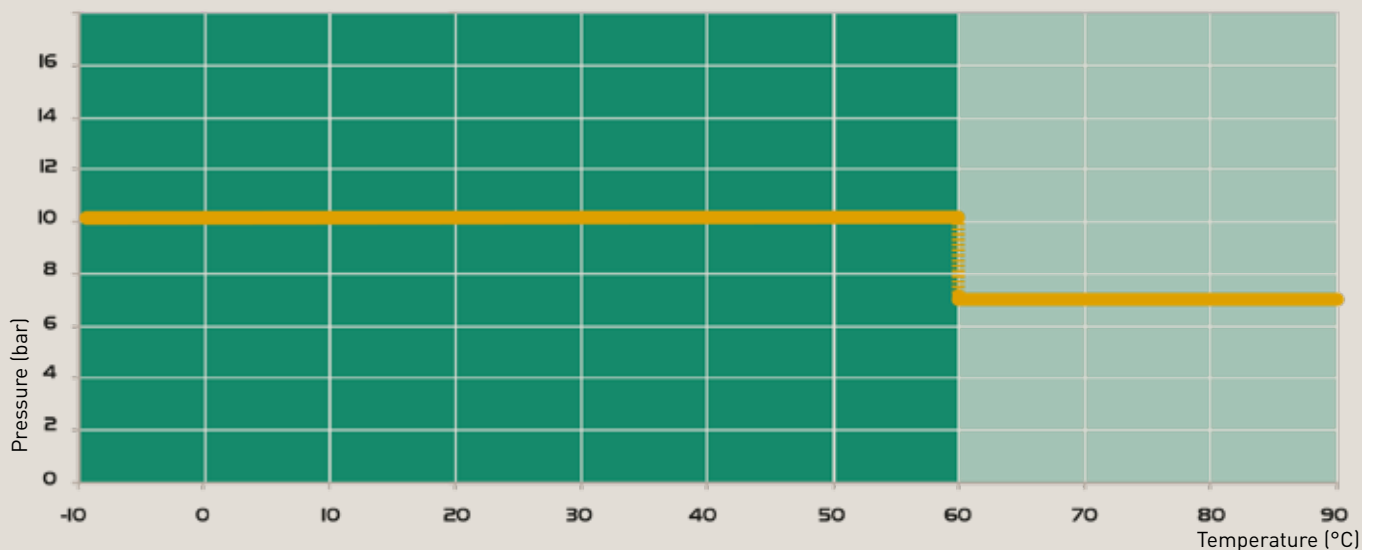


Technical Specifications

Fluids

- Industrial water
- System compatible with additives (glycol or inhibitors) which prevent the formation of algae or fungus (list available upon request)
- Lubricating oils
- Compressed air (dry, wet, lubricated)
- Vacuum
- Inert gas (argon, nitrogen)
- Others: please consult us

Maximum Working Pressure According to the Temperature



Working Pressure

- 10 bar from -20°C to +60°C
- 7 bar from -20°C to +90°C

Expansion Coefficient

- Expansion coefficient of Transair® stainless steel pipe: 0.016 mm per metre per degree celcius

Resistance

- to corrosion
- to aggressive environments
- to mechanical shocks
- to thermal variations
- to U.V.

Environment and Sustainable Development

Transair® materials are 100 % recyclable.

Water Hammer

Ø22, Ø28: comply with standard BS, 7291 part 1
 Ø42, Ø60, Ø76, Ø100: comply with standard NF T54-091

EPDM or FKM: how to choose the right seal

Fittings with EPDM seal	Fittings with FKM seal
Ø22 - Ø28 - Ø42 - Ø60 Ø76 - Ø100	Ø22 - Ø28 - Ø42 - Ø60 Ø76 - Ø100
	
RP0x xx 01 RP0x xx 01	RP0x xx 02 RP0x xx 02
10bar @ -20°C/+60°C	10 bar @ -10°C/+60°C 7bar @ -10°C/+90°C
Cooling water with additives Not compatible with petroleum derivatives (oil, etc.)	Oils, compressed air, inert gas, water, acids

Chemical Compatibility

1 Compatible
2 Compatible (except for diameters 22-28 mm in bronze)
3 Do not use

CHEMICAL PRODUCT	SYMBOL	SEAL SELECTION		CHEMICAL PRODUCT	SYMBOL	SEAL SELECTION	
		EPDM	FKM			EPDM	FKM
• Acetaldehyde, Aldehyd acid	C ₂ H ₄ O	2	3	• Methanol, methyl alcohol (MKB, MEK, MIBK)		1	3
• Acetic acid (10%, 20°C)	CH ₃ COOH	2	3	• Methyl Alcohol	CH ₄ O	1	3
• Acetic acid (50%, 20°C)	CH ₃ COOH	3	3	• Mineral oil		3	1
• Acetone, Propan-2-one, Dimethyl cetone	C ₃ H ₆ O	1	3	• Motor oil		3	1
• Air (dry)		1	1	• MPG, mono propylen glycol	C ₃ H ₈ O ₂	2	2
• Air (lubricated)		3	1	• Naphta		3	1
• Ammonia liquid	NH ₃ + H ₂ O	2	3	• Nitric acid	HNO ₃	3	3
• Ammonium hydroxide	NH ₄ OH	3	3	• Nitrogen (gas)	N	1	1
• Ammonium nitrate		2	2	• Oil ASTM n°1		3	1
• Ammonium phosphate		3	2	• Oil ASTM n°2		3	1
• Argon (gas)	Ar	1	1	• Oil ASTM n°3		3	1
• Boric acid (23°C)	H ₃ BO ₃	1	1	• Oxalique acid (10%, 23°C)	HOOC-COOH	2	2
• Brine	NaCl + H ₂ O	2	2	• Oxygen (>20%)	O	3	3
• Calcium hydroxide, Slaked lime	Ca(OH) ₂	1	1	• Ozone	O	2	2
• Carbolic acid		3	3	• Perchloric acid (70%)		3	3
• Carbon monoxide (60°C)	CO ₂	1	1	• Phosphate ester hydraulic fluid, Skydrol		1	3
• Carbon dioxide (dry)	CO ₂	1	1	• Phosphoric acid, Orthophosphoric acid	H ₃ PO ₄	2	2
• Carbon dioxide (wet or 60°C)	CO ₂	3	2	• Potassium hydroxide (50%, 85°C)	KOH	2	3
• Carbon sulfite		3	2	• Sea water	H ₂ O, NaCl	2	2
• Chlorine (sea chlorinated fluid)		3	3	• Silicon emulsions		1	1
• Citric acid (50%)	C ₆ H ₈ O ₇	2	2	• Sodium bicarbonate, baking soda (23°C)		1	1
• Diacetone alcohol	C ₆ H ₁₂ O ₂	1	3	• Sodium carbonate		1	1
• Ethane-diol, monoethylene glycol, MEG	C ₂ H ₆ O ₂	2	2	• Sodium hydroxide, caustic soda (50%)	NAOH	2	3
• Ethylene glycol	C ₂ H ₄ (OH) ₂	1	1	• Sodium nitrite		2	2
• Formic acid, methanoic acid	CH ₂ O ₂	3	3	• Sodium peroxide	Na ₂ O ₂	3	3
• Gallic acid (5%)	C ₇ H ₆ O ₅	1	1	• Sodium phosphate	NA ₃ PO ₄	2	2
• Glycol	C ₂ H ₆ O ₂	1	1	• Sodium sulphate	Na ₂ SO ₄	1	1
• Glycolic acid (50%)		3	3	• Aqueous solution of detergent		2	2
• Helium (gas)	He	1	1	• Sulfuric acid (10%, 20°C)	H ₂ SO ₄	3	3
• Hydraulic fluid - mineral oil	-	3	1	• Tartric acid (50%, 23°C)		3	2
• Hydraulic fluid - petroleum based	-	3	1	• Trichlorethylene, Trichloride ethylene	C ₂ HCl ₃	3	3
• Hydraulic fluid - silicone based	-	1	1	• Triethanolamine, TEA	C ₆ H ₁₅ O ₃ N	2	3
• Hydrofluoridric acid	HF	3	3	• Water demineralised	H ₂ O	2	2
• Hydrogen bromide (20%)	HBr	3	3	• Water drinkable	H ₂ O	3	3
• Hydrogen peroxide (30%)	H ₂ O ₂	3	1	• Water industrial	H ₂ O	1	1
• Hydrogen sulfide	H ₂ S	3	3	• Water with chlorine (5%, 23°C)	H ₂ O, Cl, NaOCl	3	3
• Hydrolchloric acid (3%), Hydrogen chloride	HCl	3	3				

This information is given for information only.

For further information and specific conditions of use, please contact our technical department.

Sizing a Network

Select the Transair® diameter for your application, based on required flow against pressure drop.

Estimated values for a closed loop network, a pressure of 4 bar with less than 10% pressure drop.
Velocity: 4 m/s.

Estimated Flow Rate				Equivalent Length									
				32.8 ft	65.6 ft	98.4 ft	131.2 ft	164 ft	246 ft	328 ft	492 ft	656 ft	984 ft
m³/h	l/s	l/min	cfm	10 m	20 m	30 m	40 m	50 m	75 m	100 m	150 m	200 m	300 m
0.5	0.14	8	0.3	22	22	22	22	22	22	22	22	22	28
1	0.28	17	0.6	22*	22*	22*	22*	22*	28	28	28	28	42
2.5	0.69	42	1.5	22*	28*	28*	28*	42	42	42	42	42	42
3.5	0.97	58	2.1	28	28	42	42	42	42	42	42	42	60
5	1.39	83	3	28*	42*	42*	42*	42*	42*	42*	60	60	60
10	2.77	167	6	42*	42*	42*	60*	60*	60*	60*	60*	76	76
15	4.17	250	9	42*	60*	60*	60*	60*	60*	76	76	76	76
20	5.56	333	12	60*	60*	60*	60*	60*	76*	76*	76*	100	100
30	8.33	500	18	60*	60*	76*	76*	76*	76*	100*	100*	100*	100*
40	11.11	667	24	76*	76*	76*	76*	76*	100*	100*	100*	100*	
50	13.89	833	29	76*	76*	76*	100*	100*	100*	100*			
75	20.83	1250	44	100*	100*	100*	100*	100*					
80	22.22	1333	47	100*	100*	100*	100*	100*					
100	27.78	1667	59	100*	100*	100*	100*						

* These results should be taken into account in order to ensure the best practice for industrial water networks.
An anti-water hammer device is necessary for the protection of regulation components of other fragile elements.

Example (with the above values)

- Main network length (main ring): 50 metres
- Required flow rate: 15 m³/h
- Working pressure: 4 bar
- Pressure drop < 10 %
- Velocity: 4m/s
- The most suitable Transair® diameter is: Ø60.

DIN 1988

The pressure drop per diameter is stated for a flow rate and a velocity, at a temperature of 20°C.
Technical data sheet available upon request.

I Transair® Standards and Certifications

Transair® stainless steel range certifications fall within the standard and regulation universe described on pages 8 and 9 of this catalogue.

Standards Related to Transair® Stainless Steel Pipe



I Transair® stainless steel range conforms to the standards below related to mechanical and chemical properties per diameter.

	Ø 22 - Ø 28	Ø 42 - Ø 60	Ø 76 - Ø 100
Specifications	EN 10217-7 / DIN 17 457		
Grade	EN 10088-2, 1.4404 / AISI 316 L	1.4301 / AISI 304	
Tolerances	DVGW - W541	NF EN ISO 1127 (04 / T3)	

The quality and consistency of the stainless steel grade used allow to bend Transair® stainless steel pipe according to the best practice, as described in page 150 of this catalogue.

Applications



I FDA Certificate – CFR 21

Transair® stainless steel drops diameter 22mm presented on pages 152 and 153 of this catalogue conform to FDA – CFR 21 requirements.

Safety

I UL94 HB Grade Certificate

All Transair® components are non-flammable with no propagation of flame. Pipe-to-pipe connectors, ball valves and butterfly valves conform to UL 94 HB Grade standards.



I Euroclasses EN 13501-2 and Brandschutz Certificate

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.

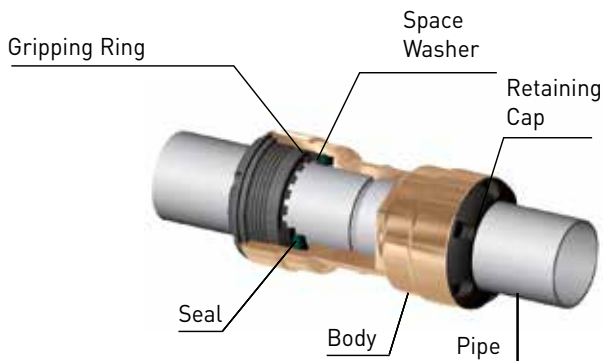
The above mentioned certificates are available upon request.

Material Stainless Steel Range

	Ø22 - Ø28	Ø42 - Ø60	Ø76 - Ø100
PIPE	316L Stainless Steel	304 Stainless Steel	304 Stainless Steel
CONNECTOR	Body: bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	Body: HR Polymer Nut: HR Polymer Clamp: HR Polymer	Clamp: treated steel Cartridge: HR Polymer and stainless steel
90° ELBOW	Body: bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	Body:HR Polymer Nut: HR Polymer	304 Stainless Steel
45° ELBOW	-	304 Stainless Steel	304 Stainless Steel
TEE	Body: bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	Body:HR Polymer Nut: HR Polymer	304 Stainless Steel
REDUCING TEE	Body:bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	-	304 Stainless Steel
IN-LINE REDUCER	Body: bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	Treated Brass	304 Stainless Steel
END-CAP	Body: bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	304 Stainless Steel	304 Stainless Steel
MALE STUD FITTING	Body: bronze Gripping Ring: stainless steel Retaining cap: HR Polymer	-	-
MALE ADAPTOR	-	Treated Brass	Treated Brass
WALL BRACKET	Treated Brass	-	-
BUTTERFLY VALVE	-	Body: iron / Handle: aluminium	Body and handle: iron Disc and shaft: stainless steel /Handle: aluminium
QUICK ASSEMBLY BRACKET	-	Iron and treated steel	Iron and treated steel
FLANGE	-	304 Stainless Steel	304 Stainless Steel
BALL VALVE	Body: nickel-plated brass Seal: PTFE		
FIXING CLIP	304 Stainless Steel		
NON SLIP CLIP	Collar: zinc-plated steel Lining: elastomer		
THREADED ROD	Steel		
SCREW TYPE BEAM CLAMP	Formed Steel		

All seals are available in EPDM or FKM (unless otherwise stated).

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



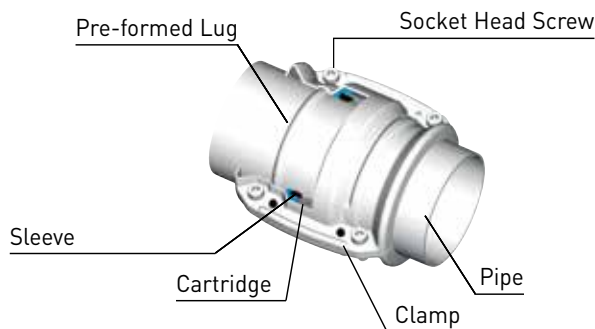
Ø22 - Ø28mm

Pipe-to-pipe and stud connectors in Ø22 and Ø28 can be immediately connected to Transair® stainless steel -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.



Ø42 - Ø60mm

Pipe-to-pipe and stud connectors in Ø42 and Ø60 can be quickly connected to Transair® stainless steel pipe by means of a double clamp ring. This secures the connection between the nut and the pipe – tightening of the nuts secures the final assembly.



Ø76 - Ø100mm

Pipe-to-pipe and stud connectors in Ø76 and Ø100 can be quickly connected to Transair® stainless steel pipe. Position the pipes to be connected within the Transair® cartridge and close/tighten the Transair® clamp.

