Advanced Industrial Water Pipe System

1/2” to 4”

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

Parker legris transair

ENGINEERING YOUR SUCCESS.

The Benefits of Transair

In addition to our innovative line of air and inert gas piping products, Transair offers a complete line of industrial water piping solutions in stainless steel.

Due to its reusable connection technology, Transair is the only pipe distribution system for industrial water with the ability to quickly install and modify.

Furthermore, the use of stainless steel has many advantages. Stainless steel provides excellent resistance to corrosion, fire, thermal variation, mechanical shocks and ultraviolet rays; is easy to clean; requires low maintenance; and has a lower total cost of ownership.

Transair provides a fast, efficient, clean and reusable means for installing ½" to 4" stainless piping systems.

Significant Savings

Labor accounts for only 20 percent of the cost of installing Transair. By comparison, labor accounts for 60 to 80 percent of a threaded steel system and 50 to 70 percent of a copper system.

The materials and modular design of a Transair pipe system makes it easier and less expensive to install than traditional systems. Transair's stainless steel pipe is supplied ready for use. Transair components are removable, interchangeable and allow for easy layout modifications, unlike other connection technologies that are permanently crimpled or welded.

Transair's stainless steel pipe is calibrated and fits perfectly with all Transair components. Each connection is automatically secured and the seal is optimized, which eliminates corrosion to the internal surface.

System Benefits

The key benefits of Transair's stainless steel pipe system are:

- Energy Efficiency
- Modular Design
- Simple Installation
- Lower Install Costs
- Push-to-Connect Technology
- No Corrosion
- Immediate Pressurization
- Leak-Free Guarantee
- Removable and Reusable
- "Full Bore" Design

Industries and Applications

Transair's stainless steel pipe system has been specially designed for the creation of primary and secondary networks for industrial chilled water applications.

Some of the typical applications of industrial chilled water include injection molding, automotive assembly/parts manufacturing, printing, laser cutting, and many more. Transair is perfect for new construction, extensions, modifications and renovations.

Technical specifications

Suitable Fluids:

- Industrial water
- System compatible with additives (glycol or inhibitors) which prevent the formation of algae or fungus (list available upon request).
- Consult us for other fluids and compressed air.

Working Pressure:

- 1/2", 3/4": 145 psi from -4°F to +185°F
- 1 1/2", 2", 3", 4": 145 psi from -4°F to +140°F

Working Temperature:

- 1/2", 3/4": from -4°F to +185°F
- 1 1/2", 2", 3", 4": from -4°F to +140°F

Safety and Guarantee:

- Electrical Conductivity:
  In areas of potential risk, grounding and electrical continuity of metallic components should be considered. The Transair system can be used in such environments by undertaking the appropriate precautions. For more information, please consult us.

- Fire Resistance:
  All Transair components are non-flammable with no propagation of flame. Pipe-to-pipe and threaded connectors, ball valves and butterfly valves: conform to the UL94HB standard.

- CE Conformity:
  Transair conforms to European standard 97/23 CEE - §3.3 (equipment under pressure).

- Compliances:
  The pipe conforms to ASTM A-269, the brass fittings conform to ASTM B-283 and the stainless steel fittings conform to ASTM A-774 .

- Guarantee:
  All Transair components are guaranteed for 10 years.

Certifications and Guarantees

AFAQ ISO 9001 VERSION 2000

TÜV

ASME

ASME B31.1

Environment:

- Materials are 100% recyclable.
- For silicone free applications: please consult us.

Water Hammer:

- 1/2", 3/4": comply with norm BS. 7291 part 1
- 1 1/2", 2", 3", 4": comply with norm NF T54-094

Storage Temperature:

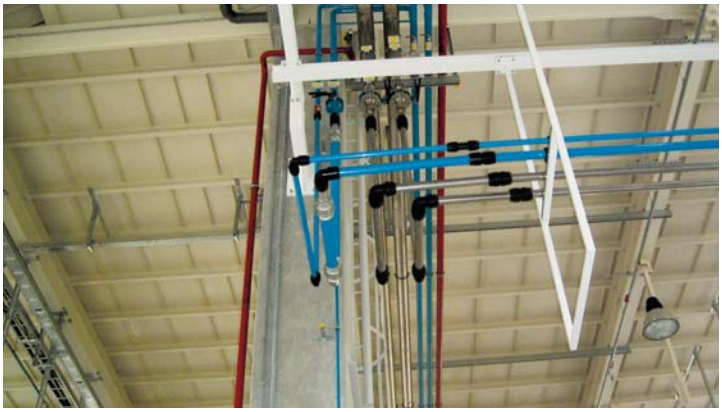
- Expansion coefficient of Transair stainless steel pipe: 0.016 inches per foot per degree fahrenheit

Excellent Resistance To:

- Ultraviolet rays, aggressive environments, and thermal variation. For list of fluids, please consult us.

Connection/Disconnection Technology:

- Innovative technology is at the heart of Transair, which enables rapid and easy assembly/disassembly. This technology takes into account the specific requirements of each diameter and provides the user with an optimum safety coefficient and easy connection.

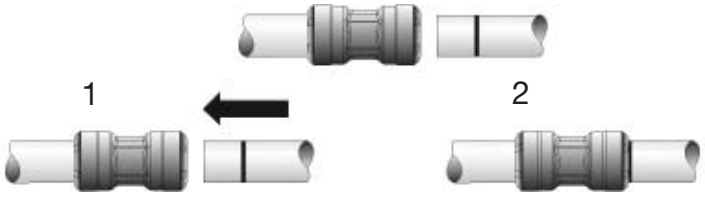


Technology and installation

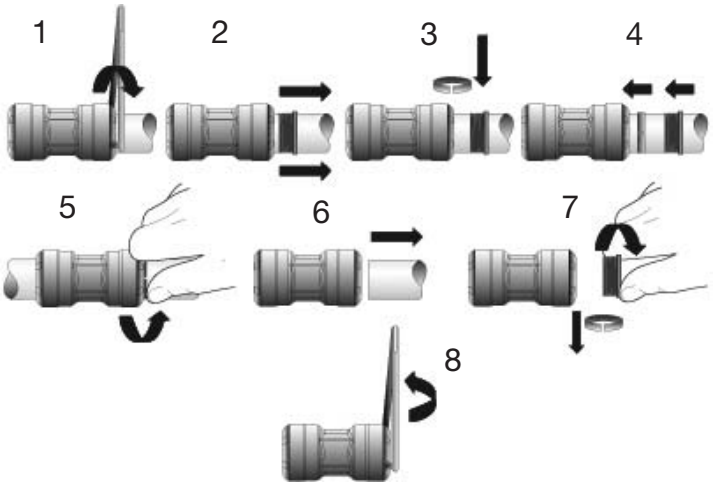
Transair's stainless steel pipe is supplied ready for use. Thanks to the rigidity of Transair's stainless steel pipe, temperature-related expansion/contraction is reduced to a minimum. The Transair system retains its straightness, and hence its performance over time (reduction of pressure drop caused by surface friction). Transair's stainless steel pipe is calibrated and fits perfectly with all Transair components.

> 1/2"- 3/4"

Connection

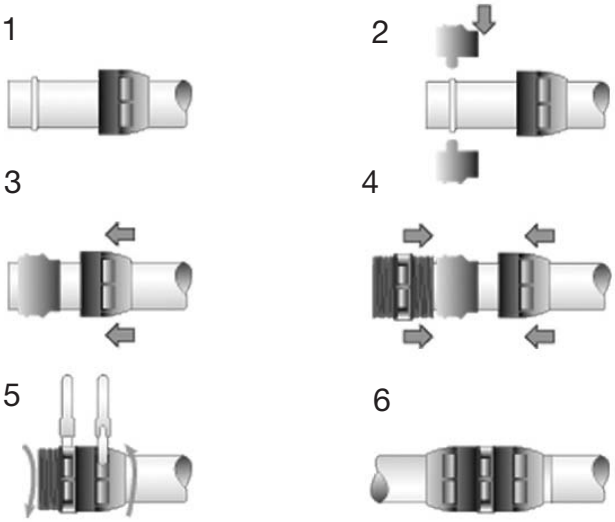


Disconnection



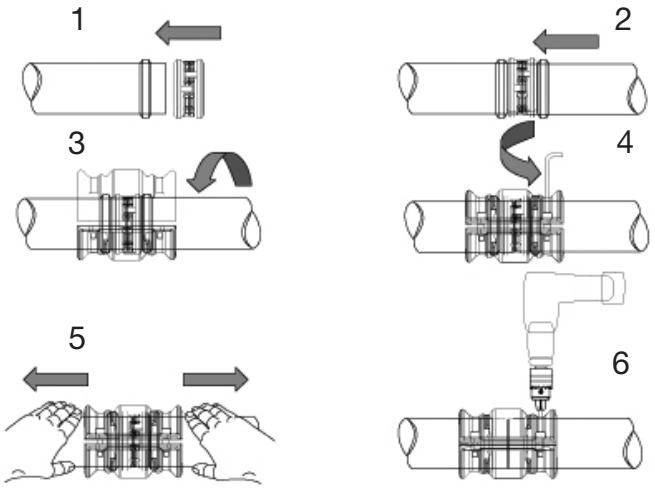
> 1 1/2"- 2"

Connection/Disconnection

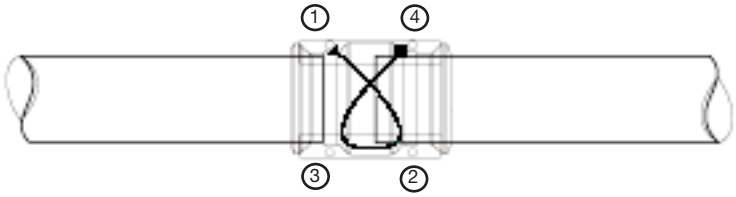


> 3”- 4”

Connection/Disconnection



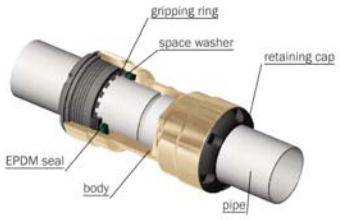
For effective clamp sealing, screw tightening should be performed on alternate sides of the clamp as shown below. To disconnect, perform the same operations in reverse order.



Instant connection

> 1/2”
> 3/4”

Pipe-to-pipe and threaded connectors in 1/2” and 3/4” can be immediately connected to Transair’s stainless steel pipe – simply push the pipe into the connector up to the connection mark. The gripping ring of each fitting is then automatically sealed and the connection is secure.



Double-clamp quick-fit connection

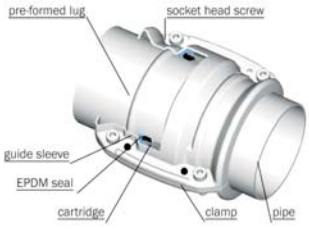
> 1 1/2”
> 2”

Pipe-to-pipe and threaded connectors in 1 1/2” and 2” can be quickly connected to Transair’s stainless steel pipe by means of a double clamp ring. This secures connection between the nut and the pipe. Tightening the nuts secures the final assembly.

Clamp quick-fit connection

> 3”
> 4”

Pipe-to-pipe and threaded connectors in 3” and 4” can be quickly connected to Transair’s stainless steel pipe. Position the pipes to be connected within the Transair cartridge and close/tighten the Transair clamp.



Stainless steel pipe

TX16 1/2” and 3/4” Stainless steel pipe

Dia. (in)	Transair	L (ft)
5/8	TX16 H3 00	20
7/8	TX16 H5 00	20

TX16 1 1/2” and 2” Stainless steel pipe

Dia. (in)	Transair	L (ft)
1 1/2	TX16 M4 00	20
2	TX16 M6 00	20

TX16 3” and 4” Stainless steel pipe

Dia. (in)	Transair	L (ft)
3	TX16 L1 00	20
4	TX16 L3 00	20

Norms

	1/2” - 3/4”	1 1/2” - 2”	3” - 4”
Manufacturing norms	ASTM A-269	ASTM A-269	ASTM A-269
Grade	304L	304L	304L
Welding norm	DIN 17 457, NFA 49 147	DIN 17 457, NFA 49 147	DIN 17 457, NFA 49 147
Tolerances	DVGW - W541	EN 1127 D4 / T3	EN 1127 D4 / T3

Tolerances

Length	External Diameter		Thickness	
Standard pipe	**in**	**Tolerance (including non-roundness)**	**mm**	**Tolerance**
20 ft	5/8	± 0.11 mm	1.2	± 0.10 mm
20 ft	7/8	± 0.14 mm	1.2	± 0.10 mm
20 ft	1 1/2	± 0.45 mm	1.6	± 0.16 mm
20 ft	2	± 0.45 mm	1.6	± 0.16 mm
20 ft	3	± 0.38 mm	1.6	± 0.16 mm
20 ft	4	± 0.51 mm	2.0	± 0.20 mm

Volume and Mass

		Value for 1 meter of pipe		
Dia. (in)	**Dia. (mm)**	**Volume (gal)**	**Pipe mass (lbs)**	**Mass of network full of water (lbs)**
5/8	15.9	0.08	1.38	2.05
7/8	22.2	0.13	1.78	2.92
1 1/2	39.1	0.32	3.56	6.21
2	57.1	0.68	5.14	10.79
3	72.9	1.10	6.52	15.72
4	97.6	1.98	10.90	31.80

Pipe-to-pipe and threaded connectors

RR06 1/2” and 3/4” pipe-to-pipe connector

Dia. (in)	Transair
5/8	RR06 H3 01
7/8	RR06 H5 01

RP06 1 1/2” and 2” pipe-to-pipe connector

Dia. (in)	Transair
1 1/2	RP06 M4 01
2	RP06 M6 01

RR01 Connector (clamp + cartridge assembly)

Dia. (in)	Transair
3	RR01 L1 01
4	RR01 L3 01

RR02 1/2” and 3/4” 90° elbow

Dia. (in)	Transair
5/8	RR02 H3 01
7/8	RR02 H5 05

RP02 1 1/2” and 2” 90° elbow

Dia. (in)	Transair
1 1/2	RP02 M4 01
2	RP02 M6 01

RX02 3” and 4” 90° elbow

Dia. (in)	Transair
3	RX02 L1 00
4	RX02 L3 00

RX12 1 1/2” and 2” 45° elbow

Dia. (in)	Transair
1 1/2	RX12 M4 00
2	RX12 M6 00

RX12 3” and 4” 45° elbow

Dia. (in)	Transair
3	RX12 L1 00
4	RX12 L3 00

RX32 1 1/2” and 2” 180° elbow

Dia. (in)	Transair
1 1/2	RX32 M4 00
2	RX32 M6 00

RR04 1/2” and 3/4” equal tee

Dia. (in)	Transair
5/8	RR04 H3 01
7/8	RR04 H5 01

RP04 1 1/2” and 2” equal tee

Dia. (in)	Transair
1 1/2	RP04 M4 01
2	RP04 M6 01

RX04 3” and 4” equal tee

Dia. (in)	Transair
3	RX04 L1 00
4	RX04 L3 00

RR04 1/2” and 3/4” reducing tee

Dia.1 (in)	Dia.2 (in)	Transair
7/8	5/8	RR04 H5 H3 01

RX04 1/2” and 3/4” reducing tee

Dia.1 (in)	Dia.2 (in)	Transair
3	1 1/2	RX04 L1 M4
3	2	RX04 L1 M6
4	1 1/2	RX04 L3 M4
4	2	RX04 L3 M6
4	3	RX04 L3 L1

RR23 1/2” and 3/4” threaded tee

Dia. (in)	C (in)	Transair
5/8	1/2	RR23 H3N04 01
7/8	3/4	RR23 H5N06 01

RX20 3” and 4” threaded tee

Dia. (in)	Transair
3	RX20 L1N04
4	RX20 L3N04

RR06 1/2” and 3/4” plug-in reducer

Dia.1 (in)	Dia.2 (in)	Transair
7/8	5/8	RR06 H5 H3 01

RR65 1/2” and 3/4” plug-in reducer

Dia.1 (in)	Dia.2 (in)	Transair
1 1/2	7/8	RR65 M4N06
2	7/8	RR65 M6N06

RX66 1 1/2”, 2”, 3” and 4” plug-in reducer

Dia.1 (in)	Dia.2 (in)	Transair
2	1 1/2	RX66 M6 M4
3	2	RX66 L1 M6
4	3	RX66 L3 L1

RR25 1/2” and 3/4” end cap

Dia. (in)	Transair
5/8	RR25 H3 01
7/8	RR25 H5 01

RR25 1 1/2” and 2” end cap

Dia. (in)	Transair
1 1/2	RR25 M4 00
2	RR25 M6 00

RX25 3” and 4” end cap

Dia. (in)	Transair
3	RX25 L1 00
4	RX25 L3 00

RR05 Male stud fitting, NPT

Dia. (in)	C (in)	Transair
5/8	1/2	RR05 H3N04 01
5/8	3/4	RR05 H3N06 01
7/8	1/2	RR05 H5N04 01
7/8	3/4	RR05 H5N06 01

RR05 1 1/2” and 2” male adapter, NPT

Dia. (in)	C (in)	Transair
1 1/2	1 1/4	RR05 M4N10
1 1/2	1 1/2	RR05 M4N12
2	2	RR05 M6N16
2	2 1/2	RR05 M6N20

RR21 3” male adapter, NPT

Dia. (in)	C (in)	Transair
3	2 1/2	RR21 L1N20
3	3	RR21 L1N24

Wall brackets

6642 — 1 port wall bracket, NPT

C (in)	Degree	Transair
1/2	45	6642 22 22

6688 / 6691 — 2 port wall bracket, NPT

C (in)	Degree	Transair
1/2	90	6688 22 22
1/2	45	6691 22 22

Ball valves and butterfly valves

VR02 — 1 1/2" and 2" butterfly valve

Dia. (in)	Transair
1 1/2	VR02 M4 01
2	VR02 M6 01

VR02 — 3" and 4" butterfly valve

Dia. (in)	Transair
3	VR02 L1 01
4	VR02 L3 01

RX30 / RX31 — 1 1/2", 2", 3" and 4" flange & flange gasket

Dia. (in)	Transair	Assoc. gasket
1 1/2	RX30 M4 00	EW05 M4 01
2	RX30 M6 00	EW05 M6 01
3	RX30 L1 00	EW05 L1 01
4	RX30 L3 00	EW05 L3 01
3	RX31 L1 00	EW05 L1 01
4	RX31 L3 00	EW05 L3 01

EW06 — Flange bolt kit

C	L	Transair
M16	60	EW06 00 01

4962 — Double female valve, NPT

C	Max psi	Transair
1/4	435	4962 60 14
3/8	435	4962 60 18
1/2	435	4962 65 22
3/4	435	4962 70 28
1	435	4962 75 35
1 1/4	362	4962 82 43
1 1/2	362	4962 90 50
2	362	4962 01 44

Tools

EW01 Portable tool kit

Volts	Transair
12	EW01 00 02

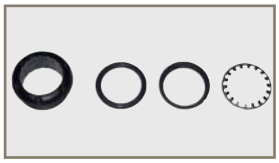
EW11 1/2" and 3/4" dismounting tool

Transair
EW11 00 03

EW02 Jaw for portable tool

Dia. (in)	Transair
1 1/2	EW02 M4 00
2	EW02 M6 00
3	EW02 L1 00
4	EW02 L3 00

EW10 Maintenance set



Dia. (in)	Transair
5/8	EW10 H3 01
7/8	EW10 H5 01

6698 / EW08 Cutter for stainless steel pipe

Transair pipe	Transair
1/2"- 2"	6698 03 01
2"- "	EW08 00 01

6698 1 1/2" and 2" set of tightening spanners

Transair
6698 05 03

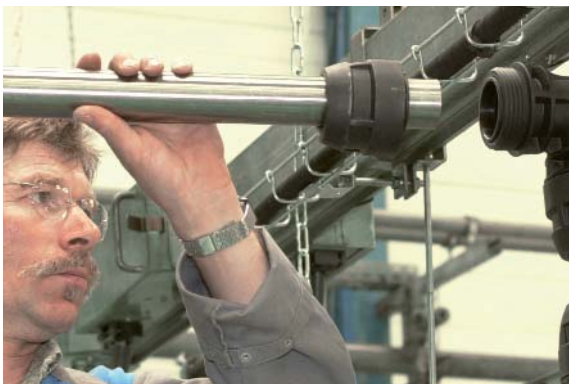
Fixture accessories

ER01 Fixing clip

Dia. (in)	C (in)	Transair
5/8	3/8	ER01 H3 00
7/8	3/8	ER01 H5 00
1 1/2	3/8	ER01 M4 00
2	3/8	ER01 M6 00
3	3/8	ER01 L1 00
4	3/8	ER01 L3 00

EX01 Non slip clip

Dia. (in)	C (in)	Transair
1 1/2	3/8	EX01 M4 00
2	3/8	EX01 M6 00
3	3/8	EX01 L1 00
4	3/8	EX01 L3 00



Materials

	1/2” & 3/4”	1 1/2” & 2”	3” & 4”
Tube	stainless steel 304L		
Connector	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM	body: polyamide with fiberglass, nut: polyamide with fiberglass, clamp: polyamide with fiberglass, seal: EPDM	clamp: treated steel, cartridge: polyamide with fiberglass and 316 stainless steel, seal: pre-lubed EPDM
90˚ Elbow	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM	body: polyamide with fiberglass, nut: polyamide with fiberglass, seal: EPDM	body: stainless steel 304L
45˚ Elbow		body: stainless steel 304L	body: stainless steel 304L
180˚ Elbow		body: stainless steel 304L	
Tee	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM	body: polyamide with fiberglass, nut: polyamide with fiberglass, seal: EPDM	body: stainless steel 304L
Reducing tee	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM		body: stainless steel 304L
Threaded tee	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM		body: stainless steel 304L
In-line reducer	treated brass	treated brass	body: stainless steel 304L
End cap	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM	treated brass	body: stainless steel 304L
Male threaded fitting	body: forged brass, gripping ring: 316 stainless steel, retaining cap: polyamide with fiberglass, o-ring: pre-lubed EPDM		
Male adaptor		treated brass	treated brass
Wall bracket	treated brass		
Butterfly valve		body: cast iron, disc and shaft: stainless steel, handle: aluminum	body and handle: iron, disc and shaft: stainless steel
Flange		stainless steel 304L	stainless steel 304L
Valve	body: nickel-plated brass seal: PTFE		
Fixing clip	stainless steel		
Non slip clip	collar: zinc-plated steel lining: elastomer		

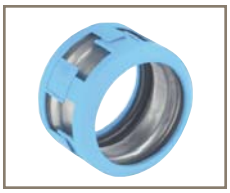
Instructions

RP04 - 90° elbow

RR04 - Equal tee

RR25 - End cap

RR01 - Connector



RR12 - 45° elbow

6698 - Pipe cutter

1. General

Prior to the installation of a Transair cooling water distribution system, the installer should ensure that the installation area complies with any regulations applicable to areas exposed to explosive hazards (in particular the effect of static electricity in a silo area). When maintaining or modifying a Transair system, the relevant section should be purged prior to the comencement of any work.

Installers should use only Transair components and accessories, in particular Transair pipe clips and fixture clamps. The technical properties of the Transair components, as described in the Transair catalog, must be respected.

2. Commissioning the installation

Once the Transair installation has been installed but prior to commissioning, the installer should complete all tests, inspections and compliance checks. The installer needs to abide by sound engineering practices and current local regulations.

3. 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.

Note: In certain situations, Transair stainless steel pipe may be formed with a bend - please contact us for further information.

4. Component assembly

Transair components are provided with assembly instructions for their correct use - simply follow the methods and recommendations stated in this document or separate data sheets.

5. Transair installations - situations to avoid

> Installation within a solid mass (concrete, foam, etc.), especially under ground.

> The suspension of any external equipment from Transair pipe.

> The use of Transair for grounding or as a support for electrical equipment.

> Exposure to chemicals that are incompatible with Transair components (please contact us for further details).

6. Sound engineering practices for the optimization of an industrial water pipework system

> When installing a Transair system, work should be completed in accordance with sound engineering practice.

> Maintain a consistent level of good quality fluid.

> The diameter of the pipe will influence pressure drop and the operation of point-of-use equipment. Select the diameter according to the required flow rate and acceptable pressure drop at the point of use.

> Never encase the system in a hard solid mass in order to facilitate maintenance or servicing.

> Position drops and feeds to take-off points as close as possible to the point of use.

Estimated flow rate				Equivalent length										
				30 ft	50 ft	75 ft	100 ft	150 ft	200 ft	300 ft	450 ft	600 ft	800 ft	1000 ft
m³/h	l/s	gpm	cfm	9.14m	15.24m	22.86m	30.48m	45.72m	60.96m	91.44m	137.16m	182.88m	243.84m	304.8m
0.11	1.89	0.5	0.07	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
0.23	3.79	1	0.13	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4
0.45	7.57	2	0.27	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	1 1/2
0.57	9.46	2.5	0.33	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	1 1/2	1 1/2	1 1/2
1.14	18.93	5	0.67	3/4	3/4	3/4	3/4	3/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
2.27	37.85	10	1.34	3/4	3/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
3.41	56.78	15	2.01	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2
4.54	75.71	20	2.67	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2	2
6.81	113.56	30	4.01	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2	2	2
11.36	189.27	50	6.68	1 1/2	1 1/2	1 1/2	2	2	2	2	3	3	3	3
17.03	283.91	75	10.03	1 1/2	1 1/2	2	2	2	2	3	3	4	4	4
22.71	378.54	100	13.37	2	2	2	2	3	3	4	4	4	4	4
34.07	567.81	150	20.05	2	2	3	3	3	3	4	4	4	4	
45.42	757.08	200	26.74	3	3	3	3	4	4	4	4			
56.78	946.36	250	33.42	3	3	3	4	4	4	4				
68.14	1135.62	300	40.10	4	4	4	4	4	4					
79.49	1324.89	350	46.79	4	4	4	4	4						
90.85	1514.16	400	53.47	4	4	4	4	4						
102.21	1703.44	450	60.16	4	4	4	4							

Parker Hannifin Corporation
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