

# Transair® Standards and Certifications

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



## Standards Related to Transair® Stainless Steel Pipe

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 101
<b>MANUFACTURING STANDARDS</b>	EN 10217-7	EN 10217-7	EN 10217-7
<b>GRADE</b>	EN 10088-2, 4404, AISI 316L	1.4301 / AISI 304	1.4301 / AISI 304
<b>WELDING STANDARD</b>	DIN 17 452, EN 10217-7	DIN 17 452, EN 10217-7	DIN 17 452, EN 10217-7
<b>TOLERANCES</b>	DVGW - W541	EN 1127D4T3	EN 1127D4T3

The quality of the raw materials used in Transair stainless steel pipes allows for them to be bent according to best practices.



## Applications

### FDA Certificate – CFR 21

Transair® stainless steel drops diameter 22mm conform to FDA – CFR 21 requirements.



## Safety

### 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.

The above mentioned certificates are available upon request.

# 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																																	
M3/h	L/s	L/min	CFM	32.8 FT		65.6 FT		98.4 FT		131.2 FT		164 FT		196.8 FT		229.6 FT		262.4 FT		295.2 FT		328 FT		360.8 FT		393.6 FT		426.4 FT		459.2 FT		492 FT					
				10 M	20 M	30 M	40 M	50 M	75 M	100 M	150 M	200 M	300 M	400 M	500 M	750 M	1000 M	1500 M	2000 M	3000 M	4000 M	5000 M	7500 M	10000 M	15000 M	20000 M	30000 M	40000 M	50000 M	75000 M	100000 M						
0.5	0.14	8	0.3	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22			
1	0.28	17	0.6	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22		
2.5	0.69	42	1.5	22	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
3.5	0.97	58	2.1	28	28	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	
5	1.39	83	3	28	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	
10	2.77	167	6	42	42	42	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
15	4.17	250	9	42	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
20	5.56	333	12	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
30	8.33	500	18	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
40	11.11	667	24	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
50	13.89	833	29	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
75	20.83	1250	44	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
80	22.22	1333	47	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
100	27.78	1667	59	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	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 System Linear Length (Closed Loop): 164ft
- Required Flow Rate: 9cfm
- Working Pressure: 58psi
- Pressure Drop < 10%
- Velocity: 13.1ft/s
- The most suitable Transair Stainless Steel Diameter is: 60mm (2")

### 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.



**Transair: Advanced Pipe Systems**  
Stainless Steel Quick Reference Guide  
February 2019



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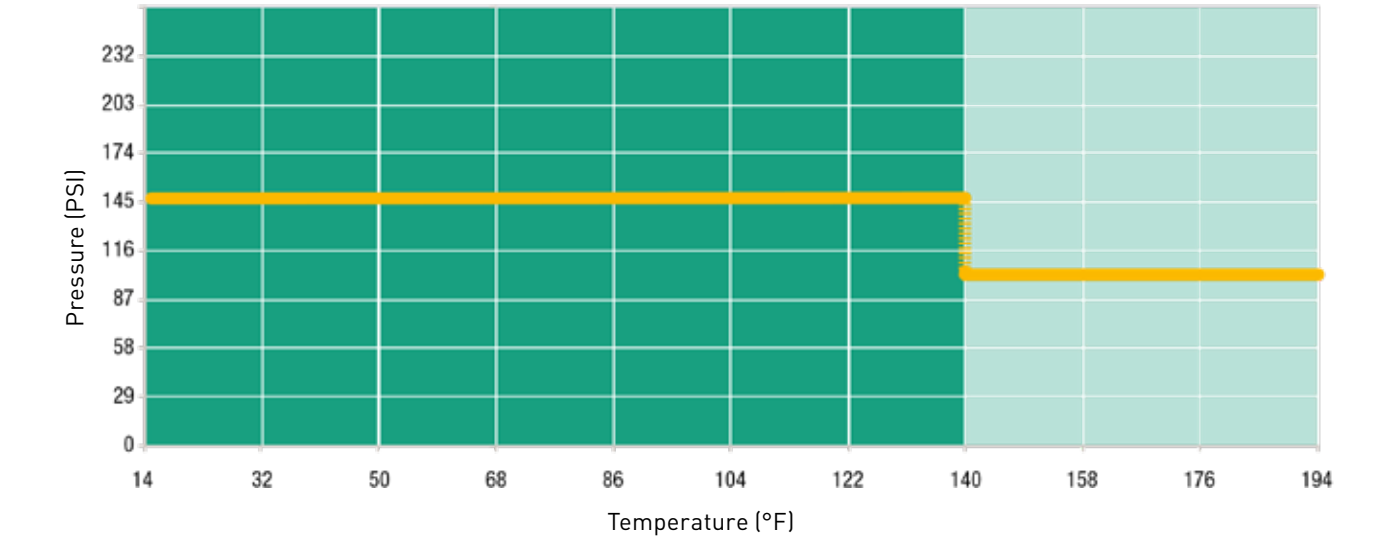
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# Technical Specifications

## 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 gases (argon, nitrogen)
- Others: please consult us

## Maximum Working Pressure According to the Temperature



## Working Pressure

- 145 psi from 14°F to 140°F
- 100 psi from 14°F to 194°F

## Expansion Coefficient

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

Environment and Sustainable Development Transair® materials are 100% recyclable.

## Water Hammer

- Ø22, Ø28: comply with standard BS, 7291 part 1
- Ø42, Ø60, Ø76, Ø101: comply with standard NF T54-091

# Stainless Steel Drops

Used for compressed air or vacuum drops in harsh environments where aggressive cleaning chemicals are used. Stainless steel drops can be connected to Transair aluminum pipe. Transair stainless steel products are FDA-CR121 compliant which permits permanent food contact.

## Technical Specifications:

- Pipe Diameter: 22mm
- Material: 316L Stainless Steel
- Seal Material: FKM
- Pressure: 0 to 145 PSI (0 to 10 bar)
- Temperature -4° to 248° F (-20° to +120° C)
- Vacuum: 29.6" Hg (10 mbar)

## Features / Benefits:

- Full Bore Design
- Push to connect technology
- Removable and Reusable
- Modular Design
- Extensive Chemical Compatibility

## Instructions for Assembly and Disassembly of a Stainless Steel Drop

- Assembly:** simply push the pipe into the fitting.
- Disassembly 1:** Manually unscrew the nut and slide the nut along the pipe.
- Disassembly 2:** Put the red dismounting ring on the pipe and re-screw the nut on the fitting.
- Disassembly 3:** Pull the pipe from the fitting.
- Disassembly 4:** Manually unscrew the nut and remove the red dismounting ring.
- Disassembly 5:** Re-screw the nut on the fitting without the red ring; it is ready for assembly.

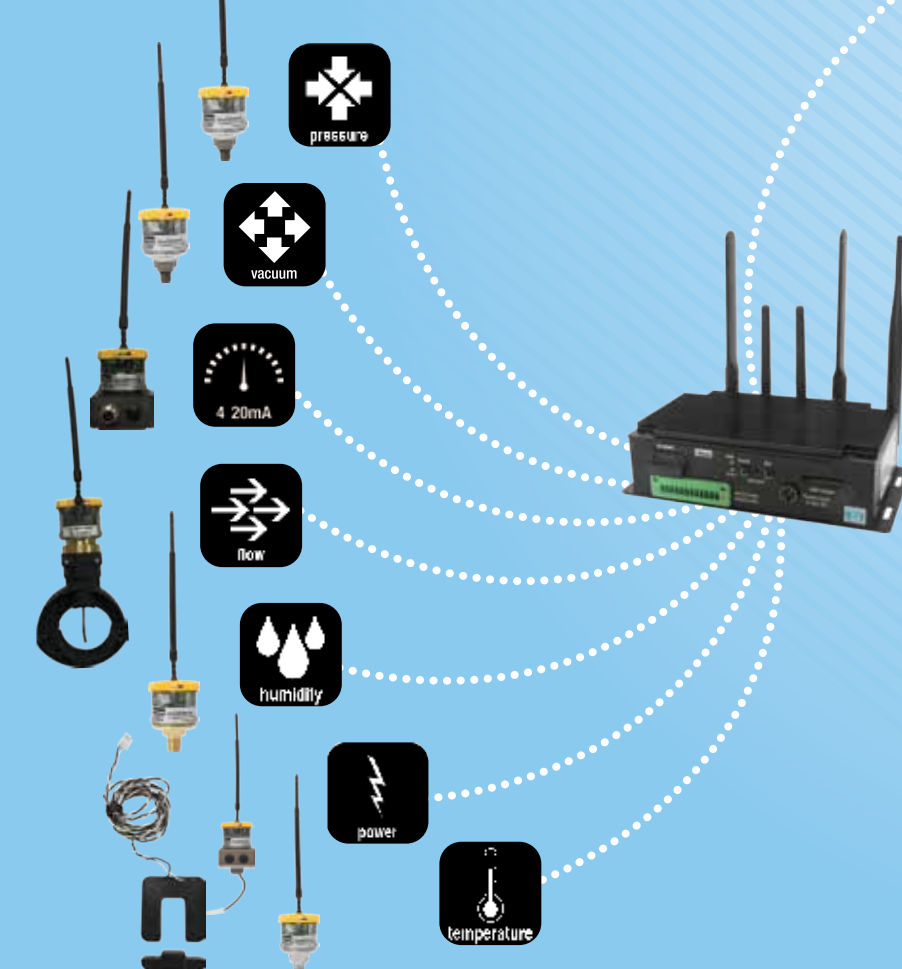
These drops can be connected to quick assembly brackets of Transair® aluminum range (pages 40/41 in this catalog) and to quick assembly brackets of Transair® stainless steel range (page 129).

TRANSAIR® PART NUMBERS	DESCRIPTION
TF16 N7 00	3/4" (22MM) 316L STAINLESS STEEL PIPE (LENGTH: 20")
RF06 N7 02	3/4" (22MM) 316L STAINLESS STEEL UNION CONNECTOR W/ FKM SEAL
RF02 N7 00	3/4" (22MM) 316L STAINLESS STEEL 90° BENT PIPE ELBOW
RF02 N7 02	3/4" (22MM) 316L STAINLESS STEEL 90° BENT PIPE ELBOW W/ FKM SEAL
RF04 06N00	3/4" (22MM) 316L STAINLESS STEEL FEMALE THREADED 3/4" NPT TEE
RF05 N7N06	3/4" (22MM) 316L STAINLESS STEEL MALE THREADED 3/4" NPT ADAPTER
RF36 06N04	3/4" (22MM) 316L STAINLESS STEEL 3 PORT 3/4" NPT WALL BRACKET (PLUGS NOT INCLUDED)
EF27 00N04	3/4" (22MM) 316L STAINLESS STEEL NPT PLUG W/ FKM SEAL
VF502SS-12	3/4" (22MM) 316L STAINLESS STEEL 3/4" NPT FEMALE TO FEMALE LOCKABLE BALL VALVE
EX01 N7 01	3/4" (22MM) STAINLESS STEEL FIXING CLIP
EW11 N7 00	3/4" (22MM) DISMOUNTING RING



# Architecture Overview

## TCM Cloud



Through the easy-to-use, web-based interface you have convenient access to your system status and analytics from any location at any time. Customizable alerts save valuable time by pushing the right information to you and your team via text or email. You can also discover new insights by viewing sensor measurements presented in trend charts that allow for historical trending and direct data download

Being confident & informed about your compressed air system empowers you to make intelligent system improvements that reduce your energy costs and increase your productivity and uptime.

# Chemical Compatibility

CHEMICAL PRODUCT	SYMBOL	SEAL SELECTION	
		EPDM	FKM
ACETALDEHYDE, ALDEHYD ACID	CH4HO	2	3
ACETIC ACID (10%, 20%)	CH3COOH	2	3
ACETIC ACID (50%, 20%)	CH3COOH	3	3
ACETONE, PROPAN-2-ONE, DIMETHYL KETONE	C3H6O	1	3
AIR (DRY)		1	1
AIR (LUBRICATED)		3	1
AMMONIA LIQUID	NH3 + H2O	2	3
AMMONIUM HYDROXIDE	NH4OH	3	3
AMMONIUM NITRATE		2	2
AMMONIUM PHOSPHATE		3	3
ARGON (GAS)	AR	1	1
BORIC ACID (23%)	H3BO3	1	1
BRINE	NaCl + H2O	2	2
CALCIUM HYDROXIDE, SLAKED LIME	Ca(OH)2	1	1
CARBOLIC ACID		3	3
CARBON DIOXIDE (60%)	CO2	1	1
CARBON DIOXIDE (DRY)	CO2	1	1
CARBON DIOXIDE (WET OR 60%)	CO2	3	2
CARBON SULFITE		3	2
CHLORINE (SEA CHLORINATED FLUID)		3	3
CITRIC ACID (50%)	C6H8O7	2	2
DIACETONE ALCOHOL	C6H12O2	1	3
ETHANE DIOL, MONOETHYLENE GLYCOL, MEG	C2H6O2	2	2
ETHYLENE GLYCOL	C2H4(OH)2	1	1
FORMIC ACID, METHANOIC ACID	CH2O2	3	3
GALLIC ACID (5%)	C7H6O5	1	1
GLYCOL		1	1
GLYOXIC ACID (50%)		3	3
HELIUM (GAS)	HE	1	1
HYDRAULIC FLUID - MINERAL OIL	-	3	1
HYDRAULIC FLUID - PETROLEUM BASED	-	3	1
HYDRAULIC FLUID - SILICONE BASED	-	1	1
HYDROFLUORIC ACID	HF	3	3
HYDROGEN BROMIDE (20%)	HBR	3	3
HYDROGEN PEROXIDE (30%)	H2O2	3	1
HYDROGEN SULFIDE	H2S	3	3
HYDROCHLORIC 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.

# Stainless Steel Pipe

PART NO.	OD (IN)	L (FT)	MATERIAL
TF16 N7 00	3/4	20	316L
TF16 N9 00	1	20	316L
TX16 M4 00	1 1/2	20	304
TX16 M6 00	2	20	304
TX16 L1 00	3	20	304
TX16 L3 00	4	20	304

# Fixtures & Accessories

PART NO.	OD (IN)	THD SIZE (IN)
EX01 N7 01	3/4	3/8-16
EX01 N9 01	1	3/8-16
EX01 M4 01	1 1/2	3/8-16
EX01 M6 01	2	3/8-16
EX01 L1 00	3	3/8-16
EX01 L3 00	4	3/8-16

Maximum admitted static load: 200 daN

# Pipe-to-Pipe and Stud Connectors

### Union Connector

PART NO.	SEAL	OD (IN)
RR06 N7 01	EPDM	3/4
RR06 N7 02	FKM	3/4
RR06 N9 01	EPDM	1
RR06 N9 02	FKM	1

### 90° Elbow

PART NO.	SEAL	OD (IN)
RP02 M4 01	EPDM	1 1/2
RP02 M4 02	FKM	1 1/2
RP02 M6 01	EPDM	2
RP02 M6 02	FKM	2

### Equal Tee

PART NO.	SEAL	OD (IN)
RP04 M4 01	EPDM	1 1/2
RP04 M4 02	FKM	1 1/2
RP04 M6 01	EPDM	2
RP04 M6 02	FKM	2

### Female Threaded NPT Tee

PART NO.	OD (IN)	THD SIZE (IN)
RX20 L1N04	3	3/4
RX20 L3N04	4	3/4

### End Cap

PART NO.	OD (IN)
RR25 M4 00	1 1/2
RR25 M6 00	2

### Male Threaded NPT Adapter

PART NO.	OD (IN)	THD SIZE (IN)
RR21 L1N20	3	2 1/2
RR21 L1N24	3	3

### Union Connector

PART NO.	SEAL	OD (IN)
RP06 M4 01	EPDM	1 1/2
RP06 M4 02	FKM	1 1/2
RP06 M6 01	EPDM	2
RP06 M6 02	FKM	2

### 90° Elbow

PART NO.	OD (IN)
RX02 L1 00	3
RX02 L3 00	4

### Equal Tee

PART NO.	OD (IN)
RX04 L1 00	3
RX04 L3 00	4

### Female Threaded NPT Plug-In Reducer

PART NO.	OD (IN)	THD SIZE (IN)
RR65 M6N06	1 1/2	3/4
RR65 M6N08	1 1/2	1
RR65 M4N06	2	3/4
RR65 M4N08	2	1

### End Cap

PART NO.	OD (IN)
RX25 L1 00	3
RX25 L3 00	4

### Flange Adapter

PART NO.	OD (IN)	STANDARD
RX30 M4 00	1 1/2	DIN
RX30 M6 00	2	DIN
RX30 L1 00	3	DIN
RX31 L1 00	3	ANSI
RX30 L3 00	4	DIN
RX31 L3 00	4	ANSI

### Male NPT Stud Connector

PART NO.	SEAL	OD (IN)	THD SIZE (IN)
RR05 N7N06 01	EPDM	3/4	3/4
RR05 N7N06 02	FKM	3/4	3/4
RR05 N9N08 01	EPDM	1	1
RR05 N9N08 02	FKM	1	1

### Plug-In Reducer

PART NO.	OD1 (IN)	OD2 (IN)
RX66 M6 M4	2	1 1/2
RX66 L1 M6	3	2
RX66 L3 L1	4	3

### Male Threaded NPT Adapter

PART NO.	OD (IN)	THD SIZE (IN)
RR05 M4N06	1 1/2	3/4
RR25 N7 01	EPDM	3/4
RR25 N7 02	FKM	3/4
RR25 N9 01	EPDM	1
RR25 N9 02	FKM	1

### EPDM Gasket For Stainless Steel Flange

PART NO.	SEAL	OD (IN)
EW05 M4 01	EPDM	1 1/2
EW05 M6 01	EPDM	2
EW05 L1 01	EPDM	3
EW05 L3 01	EPDM	4

### Bolt Kits for Stainless Steel Flange

PART NO.	THD SIZE (IN)
EW06 00 03	5/8-11
EW10 00 01	5/8-11

### Union Clamp

PART NO.	OD (IN)
RR01 L1 01	3
RR01 L1 02	3
RR01 L3 01	4
RR01 L3 02	4

### 90° Elbow

PART NO.	SEAL	OD (IN)
RR02 N7 01	EPDM	3/4
RR02 N7 02	FKM	3/4
RR02 N9 01	EPDM	1
RR02 N9 02	FKM	1

### Equal Tee

PART NO.	SEAL	OD (IN)
RR04 N7 01	EPDM	3/4
RR04 N7 02	FKM	3/4
RR04 N9 01	EPDM	1
RR04 N9 02	FKM	1

# Ball Valves & Butterfly Valves

### Butterfly Valve

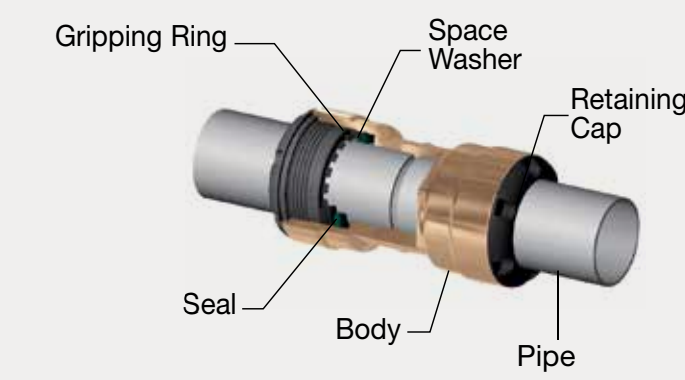
PART NO.	SEAL	FLANGE STD	OD (IN)
VR02 M4 01	EPDM	DIN	1 1/2
VR02 M4 02	FKM	DIN	1 1/2
VR02 M6 01	EPDM	DIN	2
VR02 M6 02	FKM	DIN	2
VR02 L1 01US	EPDM	ANSI	3
VR02 L1 02US	FKM	ANSI	3
VR02 L3 01US	EPDM	ANSI	4
VR02 L3 02US	FKM	ANSI	4

### Ball Valve – Stainless Steel

PART NO.	SEAL	THD SIZE (IN)
VP502SS-4	PTFE	1/4
VP502SS-8	PTFE	1/2
VP502SS-12	PTFE	3/4
VP502SS-16	PTFE	1
VP502SS-24	PTFE	1 1/2
VP502SS-32	PTFE	2

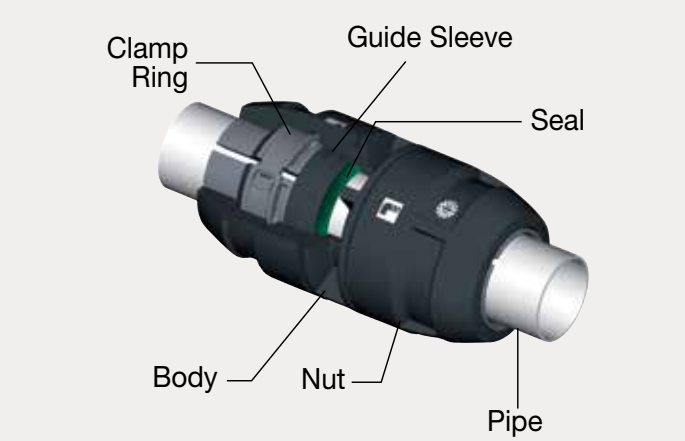
# Transair® Connection Technologies

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



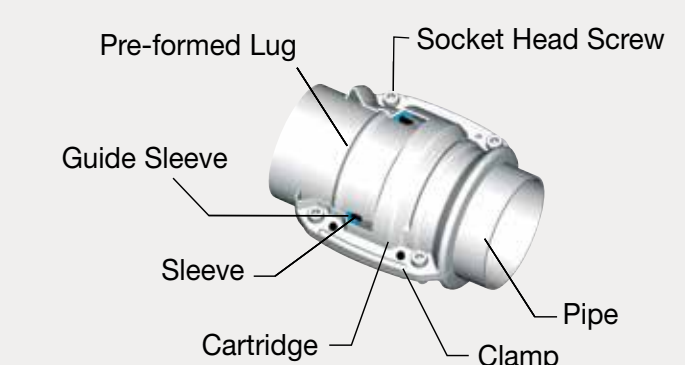
## 22 - 28mm

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.



## 42 - 60mm

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.



## 76 - 101mm

Pipe-to-pipe and stud connectors in Ø76 and Ø101 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.

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# Tools

### Pipe Cutter

PART NO.	USED FOR TRANSAIR® PIPE (IN)
6698 03 01	Ø 3/4 TO 3
EW08 00 03	Ø 4

Includes deburring tool.

### Drilling Tool

PART NO.	OD1 (IN)	OD2 (IN)
6698 02 02	5/8	1/2

Drilling tool 6698 02 02 is required to install Ø 1" Transair® brackets. Recommended to be used with any cordless drill with a 1/2" chuck. Use with Transair drilling jig, 6698 01 03.

### Portable Crimping Tool Kit

PART NO.	VOLTAGE
EW01 00 02	14

This case contains: one portable tool, one 14V battery and battery charger. Jaws sold separately.

### Dismounting Tool

PART NO.
EW11 00 01

Contains 1 key, 5 rings for dismounting Ø22 and 5 rings for dismounting Ø28

### Spanner Wrenches

PART NO.
6698 05 03

Includes two tightening spanners. Used to tighten 50mm and 63mm connectors.

### Jaws for Portable Crimping Tool

PART NO.	USED FOR TRANSAIR PIPE (IN)
EW02 M4 00	1 1/2
EW02 M6 00	2
EW02 L1 00	3
EW02 L3 00	4

### Maintenance Set

PART NO.	SEAL	OD (IN)
EW10 N7 01	EPDM	3/4
EW10 N9 01	EPDM	1
EW10 N7 02	FKM	3/4
EW10 N9 02	FKM	1

### Deburring Tool

PART NO.
6698 04 02

Drilling tool EW09 is required to install Transair® direct feed brackets. After drilling, it is important to deburr and clean the pipe. Recommended to be used with any cordless drill with a 1/2" chuck.

# Drop Brackets

**Quick Assembly Direct Feed Bracket**

PART NO.	SEAL	OD (IN)
RR89 M4N06 01	EPDM	1 1/2
RR89 M6N06 01	EPDM	2
RR89 L1N08 01	EPDM	3
RR89 L3N08 01	EPDM	4
RR89 M4N06 02	FKM	1 1/2
RR89 M6N06 02	FKM	2
RR89 L1N08 02	FKM	3
RR89 L3N08 02	FKM	4

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