

# TRANSAIR® STAINLESS STEEL RANGE

## INSTALLATION GUIDE

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# | THE GOLDEN RULES OF INSTALLATION

## Installation Instructions

### | General

When maintaining or modifying a Transair® system, the relevant section should be purged prior to the commencement of any work.

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

### | Commissioning the Installation

Once the Transair® system has been installed and prior to commissioning, the installer should complete all tests, inspections and compliance checks as stated in any contract and according to sound engineering practice and current local regulations.

### | Transair® Pipe and Hoses

Transair® pipe should be protected from mechanical impact, particularly if exposed to potential 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.

NB: For bending a Transair® stainless steel pipe, please refer to page 149 of this catalogue.

### | 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.

### | Transair® Installations - Prohibited Situations

- Installation within a solid mass (concrete, foam, etc.), especially underground
- The suspension of any external equipment from Transair® pipe
- The use of Transair® for earthing, or as a support for electrical equipment
- Exposure to chemicals that are incompatible with Transair® components (please contact us for further details).
- Use of components not approved by Transair®

## Best Practices

**| When installing a Transair® system, work should be performed in accordance with good engineering practice.**

**| Bends and bypasses represent sources of pressure drops.**

**| Keep in-line pipe diameter reductions to a minimum.**

**| 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 network in a hard solid mass, in order to facilitate maintenance or servicing.**

**| To insulate Transair® industrial water systems thermally, we recommend insulating the Transair® stainless steel pipes.**

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

# TRANSAIR® STAINLESS STEEL PIPE

## General

### PRESENTATION

Transair® stainless steel pipe is supplied “ready for use”. No particular preparation (cutting, deburring, chamfering, etc.) is required. Thanks to the rigidity of Transair® stainless steel pipe, temperature-related expansion / contraction phenomena are reduced to a minimum. The Transair® network retains its straightness, and hence its performance, over time (reduction of pressure drop caused by surface friction). Transair® stainless steel pipe is calibrated and fits perfectly onto all Transair® components. Each connection is automatically secured and sealing is, thus, optimized. The use of Transair® stainless steel pipe minimises corrosion.

Ø 22



DEBURRED AND  
CHAMFERED PIPE

Ø 28



DEBURRED AND  
CHAMFERED PIPE

Ø 42



PIPE LUGGED AT EACH END  
DEBURRED  
AND CHAMFERED

Ø 60



PIPE LUGGED AT EACH END  
DEBURRED  
AND CHAMFERED

Ø 76



PIPE LUGGED AT EACH END  
DEBURRED  
AND CHAMFERED

Ø 100



PIPE LUGGED AT EACH END  
DEBURRED  
AND CHAMFERED

### STANDARDS

	Ø 22 - Ø 28	Ø 42 - Ø 60	Ø 76 - Ø 100
<b>Manufacturing Standards</b>	EN 10217-7	EN 10217-7	EN 10217-7
<b>Grade</b>	EN 10088-2, 1.4404 / AISI 316 L	1.4301 / AISI 304	1.4301 / AISI 304
<b>Welding Standards</b>	DIN 17 457, EN 10217-7	DIN 17 457, EN 10217-7	DIN 17 457, EN 10217-7
<b>Tolerances</b>	DVGW - W541	EN 1127 D4 / T3	EN 1127 D4 / T3

### VOLUME AND MASS

		Value for 1 metre of pipe		
Ø ext (mm)	Ø int (mm)	Volume (l)	Pipe Mass (kg)	Mass of the Network Full of Water(kg)
22.0	19.6	0.30	0.627	0.929
28.0	25.6	0.51	0.808	1.323
42.3	39.1	1.20	1.616	2.817
60.3	57.1	2.56	2.331	4.892
76.1	72.9	4.17	2.958	7.132
101.6	97.6	7.48	4.944	12.425

# Pipe Section

<p>Ø 22 Ø 28</p>	<div data-bbox="485 544 729 678"></div> <div data-bbox="502 732 649 784"> <p>PIPE-CUTTER 6698 03 01</p> </div> <div data-bbox="786 551 912 685"></div> <div data-bbox="823 732 970 806"> <p>CHAMFERING TOOL 6698 04 01</p> </div> <div data-bbox="986 495 1265 689"></div> <div data-bbox="1046 732 1241 784"> <p>DEBURRING TOOL 6698 04 02</p> </div> <div data-bbox="1337 465 1441 689"></div> <div data-bbox="1310 732 1409 779"> <p>MARKER PEN</p> </div>
<p>TOOLS</p>	<div data-bbox="453 1173 920 1375"> </div> <div data-bbox="1123 1196 1485 1397"> </div> <div data-bbox="469 1487 860 1612"> </div> <div data-bbox="1163 1431 1402 1657"> <p>Ø22: L = 30.4 Ø28: L = 41.5</p> </div> <div data-bbox="464 1850 927 2000"> <p>1 - Cutting the pipe:</p> <ul style="list-style-type: none"> <li>- place the pipe into the pipe cutter</li> <li>- position the blade onto the pipe</li> <li>- rotate the pipe cutter around the pipe while gently tightening the wheel.</li> </ul> </div> <div data-bbox="999 1850 1465 1939"> <p>2 - Carefully chamfer the outer edges</p> <p>3 - Also deburr the interior end of the pipe</p> <p>4 - Mark the connection indicator.</p> </div>
<p>PROCEDURE</p>	

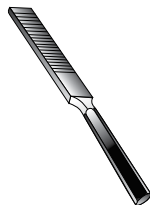
# TRANSAIR® STAINLESS STEEL PIPE

## Pipe Section

Ø 42 - Ø 60  
Ø 76 - Ø 100



PIPE-CUTTER



FILE



DEBURRING TOOL



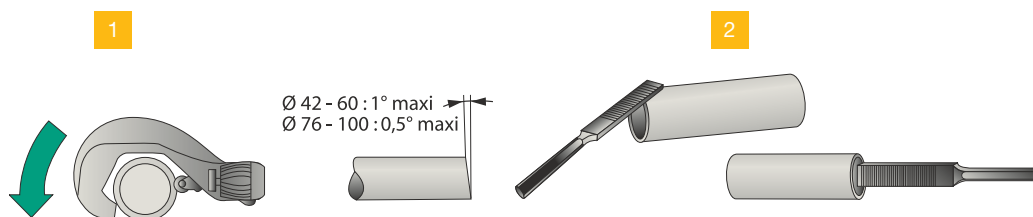
PORTABLE TOOL KIT REF.  
EW01 00 01 (220V) OR  
EW01 00 03 (110V)



PIPE FORMING JAW SET REF.  
EW02 M4 00 (Ø 42)  
EW02 M6 00 (Ø 60)  
EW02 L1 00 (Ø 76)  
EW02 L3 00 (Ø 100)

### TOOLS

### 1 - PIPE SECTION



### PROCEDURE

- 1 - Cutting the pipe:
- place the pipe into the pipe cutter
  - position the blade onto the pipe
  - rotate the pipe cutter around the pipe while gently tightening the wheel

- 2 - Carefully chamfer and deburr the end of the pipe with a file.

PROCEDURE

## 2 - PREPARATION OF THE PORTABLE TOOL KIT



Open the retaining pin at the front of the machine by pressing the jaw to release button\*.



Place the jaws in the housing.



Lock in position by closing the retaining pin.

## 3 - HOW TO CREATE THE LUGS



Manually open the jaws of the clamp and insert the stainless steel pipe into the clamp as far as it will go.



Release the jaws. Press the trigger and crimp the tube until a 'snap' sound is heard.



Re-open the two jaws to remove the pipe and rotate the pipe slightly.



Renew the operation until the required minimum number of lugs for each diameter is achieved

	Ø 42	Ø 60	Ø 76	Ø 100
Min. Number of Lugs	4	4	6	7

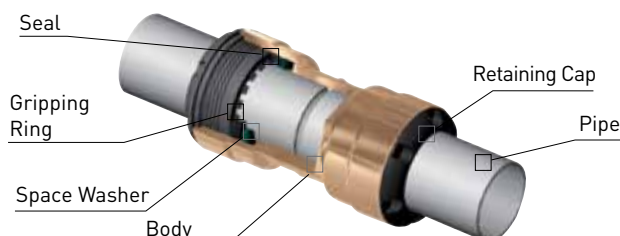
**IMPORTANT: DO NOT OVERLAP THE LUGS!**

# TRANSAIR® CONNECTORS

## General

Ø 22  
Ø 28

### INSTANT CONNECTION BY MEANS OF A GRIPPING RING



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.

Ø 42  
Ø 60

### DOUBLE-CLAMP QUICK-FIT CONNECTION

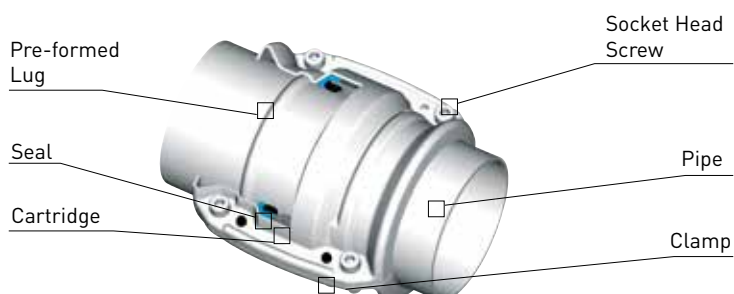


Pipe-to-pipe and stud connectors in Ø42 and Ø60 can be quickly connected to Transair® stainless steel pipe by means of a double clamp ring. This

secures the connection between the nut and the pipe – tightening of the nuts secures the final assembly.

Ø 76  
Ø 100

### CLAMP QUICK-FIT CONNECTION



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.



# Connection / Disconnection

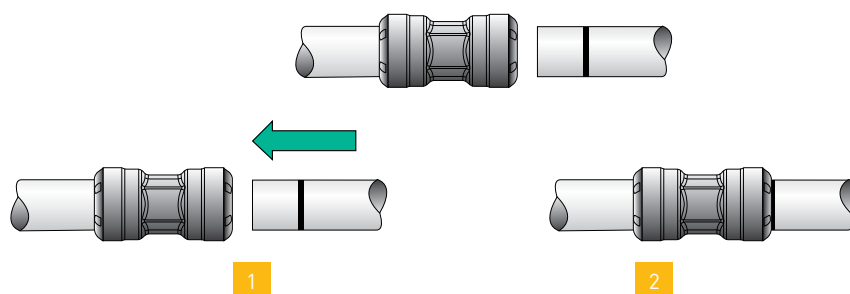
Ø 22-28

## TOOLS

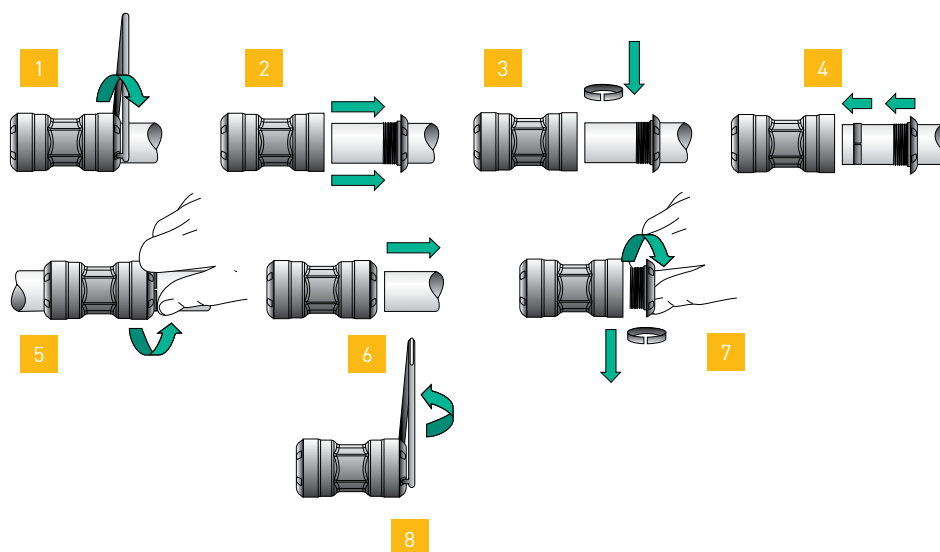


DISMOUNTING TOOL  
EW11 00 01

## CONNECTION



## DISCONNECTION

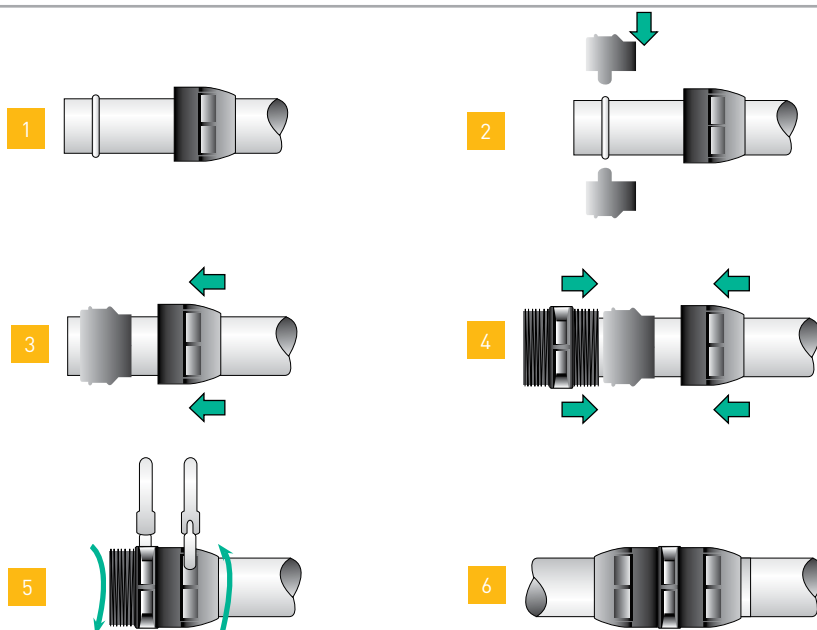


## PROCEDURE

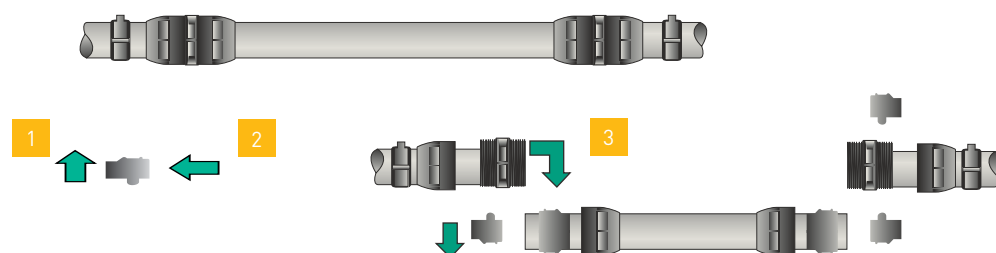
# TRANSAIR® CONNECTORS

Ø 42  
Ø 60

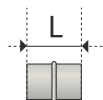
## CONNECTION / DISCONNECTION



## LATERAL DISMOUNTING

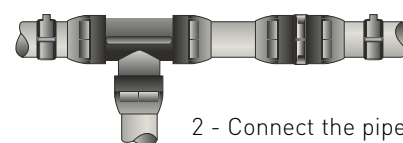


### REPLACE 1 CONNECTOR BY A TEE



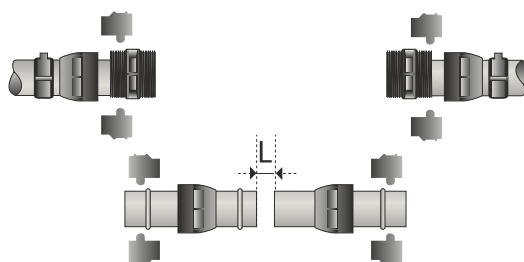
1 - Cut the pipe and create the lugs  
(cf pages 141)

Ø	L (mm)
42	105
60	123



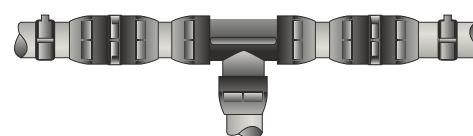
2 - Connect the pipe

### ADD 1 TEE



1 - Cut the pipe and create the lugs  
(cf pages 141)

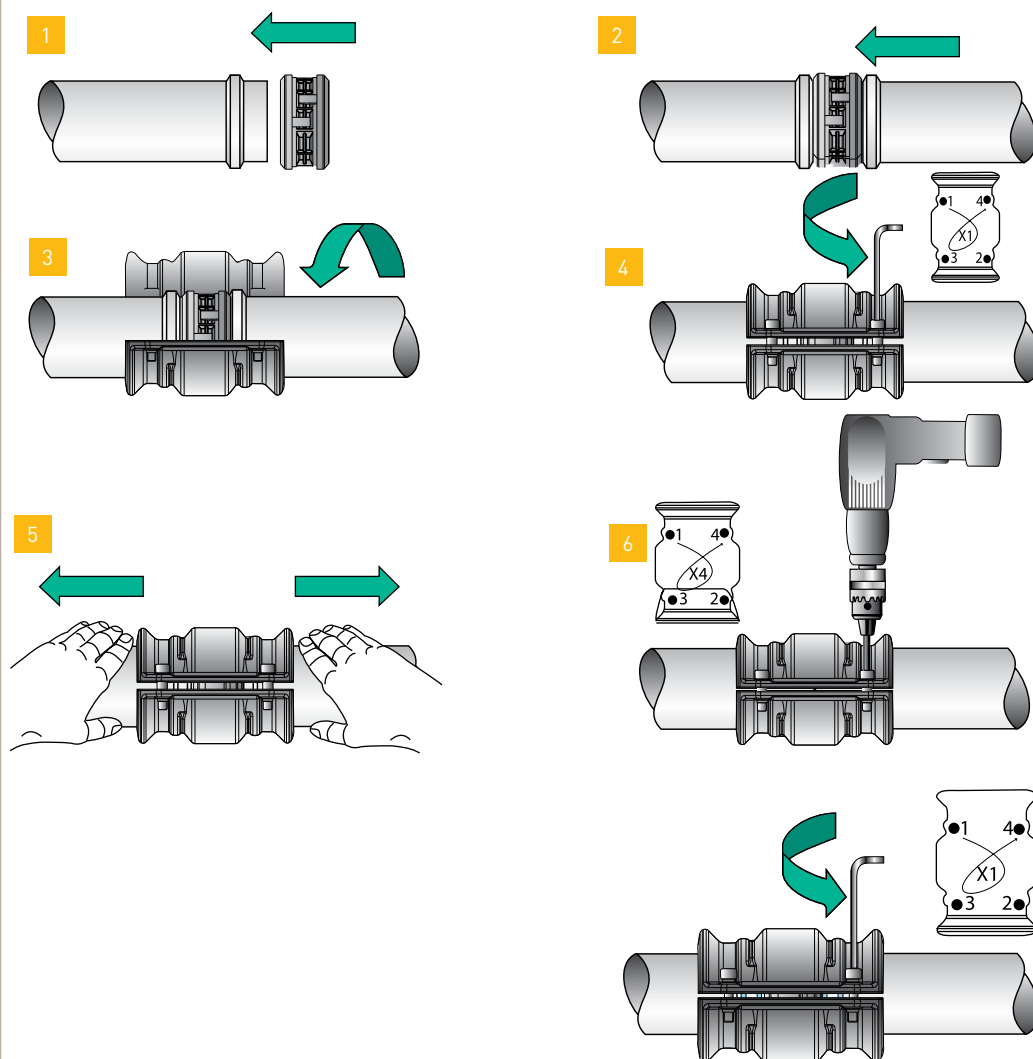
Ø	L (mm)
42	110
60	128



2 - Connect the pipe

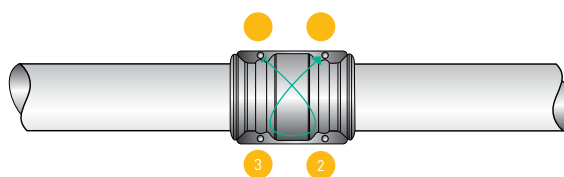
# Connection / Disconnection

Ø 76  
Ø 100



- 1 - Slip the cartridge over the end of the first pipe fully up to the shoulder.
- 2 - Bring the second pipe to the cartridge and slide fully up to the shoulder.
- 3 - Position the clamp over the cartridge / pipe assembly.
- 4 - Hand tighten the pre-fitted screws with a 6mm Allen key.
- 5 - Pull the pipes fully back towards the outside of the clamp.
- 6 - Tighten the clamp screws as follows:
  - mini tightening torque: 10 N.m
  - maxi tightening torque: make the 2 clamps touch together
- 7 - For effective clamp sealing, screw tightening should be performed on alternate sides of the clamp as shown above.

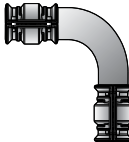
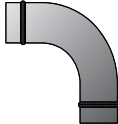

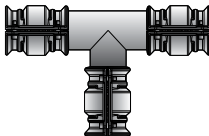
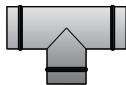

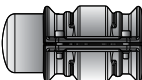


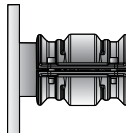


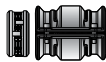




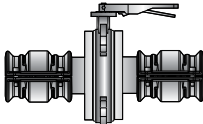


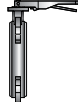


For effective clamp sealing, screw tightening should be performed on alternate sides of the clamp as shown below:



To disconnect, perform the same operations in reverse order.

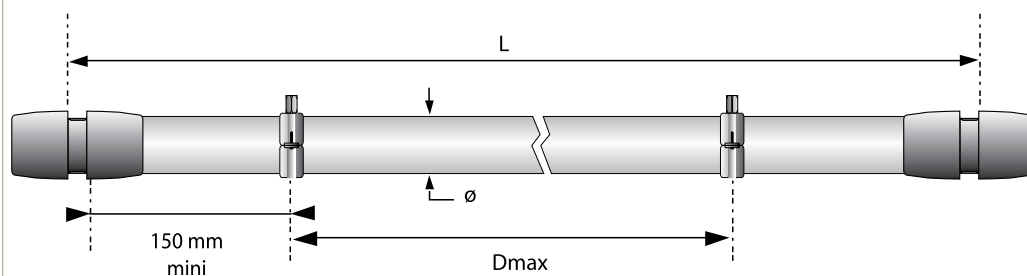
# TRANSAIR® CONNECTORS

## Practical Examples

VARIOUS Ø76 AND Ø100 CONFIGURATIONS											
CHANGING DIRECTION WITH A 90° ELBOW		=	 1 x RX02	+	 2 x RR01						
CHANGING DIRECTION WITH A TEE PIECE		=	 1 x RX04	+	 3 x RR01						
CONNECTING AN END CAP		=	 1 x RX25	+	 1 x RR01						
CONNECTING A CIRCULAR FLANGE AND A CONNECTOR		=	 1 x EW06	+	 1 x RX30	+	 1 x RR01				
REDUCTION		=	 1 x RR01 L3 01/02	+	 1 x RX66 L3 L1	+	 1 x RR01 L1 01/02				
CONNECTING A BUTTERFLY VALVE		=	 1 x RR01	+	 1 x RX30	+	 1 x VR02 N x EW06	+	 1 x RX30	+	 1 x RR01

# FIXTURES AND ACCESSORIES

$\varnothing$  22  
 $\downarrow$   
 $\varnothing$  100



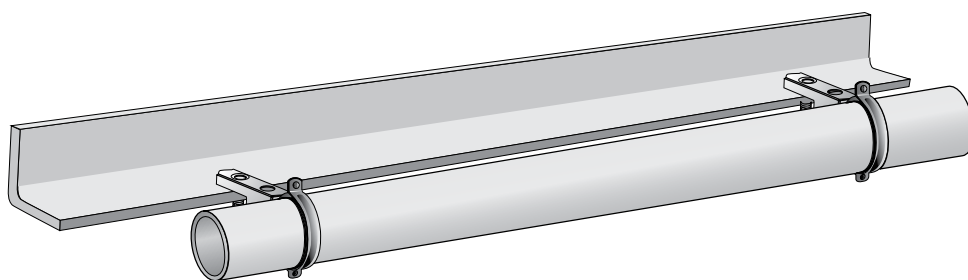
**L = 3 M**

$\varnothing$	Dmax (m)
22	2.5
28	2.5
42	2.5
60	2.5
76	2.5
100	2.5

**L = 6 M**

$\varnothing$	Dmax (m)
22	3
28	3
42	4
60	4
76	5
100	5



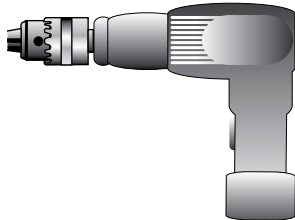
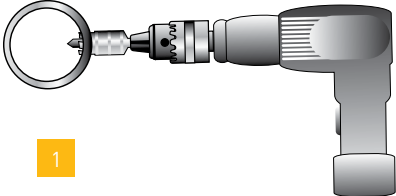
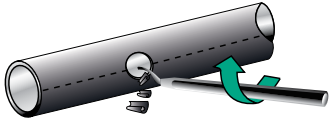
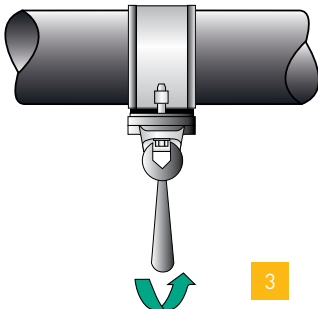
**SCREW TYPE  
 BEAM CLAMP**



Position the clamps ref. ER99 onto the RSJ or beam in accordance with the minimum recommended number of attachments per length of pipe and the required distance between attachments, according to the diameter of the pipe.

# I TRANSAIR® QUICK ASSEMBLY BRACKETS

## Fitting a Bracket

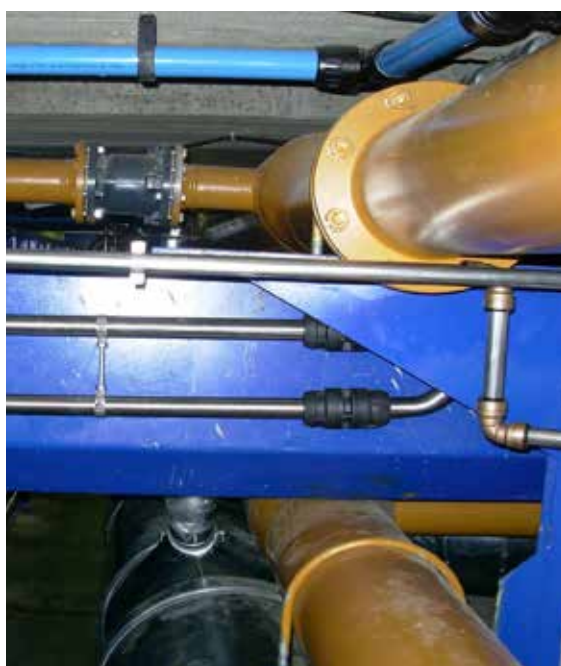
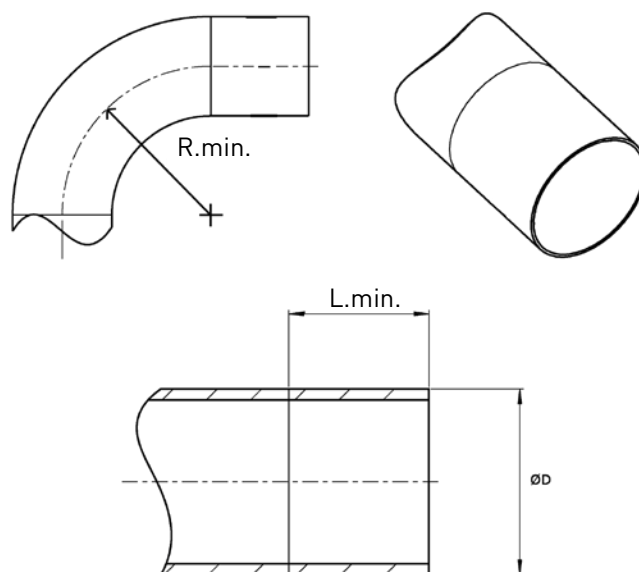
<p>ON Ø 42 Ø 60 Ø 76 Ø 100 PIPE</p>	<div data-bbox="464 539 639 622"></div> <div data-bbox="879 472 954 685"></div> <div data-bbox="1118 501 1414 719"></div> <div data-bbox="485 752 719 875"><p>DRILLING TOOL FOR TRANSAIR® STAINLESS STEEL PIPE EW09 00 22 EW09 00 30</p></div> <div data-bbox="826 752 1061 853"><p>DEBURRING TOOL FOR TRANSAIR® STAINLESS STEEL PIPE 6698 04 02</p></div> <div data-bbox="1350 752 1414 775"><p>DRILL</p></div>
<p>PROCEDURE</p>	<div data-bbox="493 1084 890 1279"></div> <div data-bbox="1139 1070 1469 1189"></div> <div data-bbox="756 1346 1075 1653"></div> <div data-bbox="472 1715 959 1861"><p>1 - Drill the Transair® stainless steel pipe at the desired position using following drilling tools:</p><ul style="list-style-type: none"><li>• Ø42 - Ø60: drilling tool EW09 00 22</li><li>• Ø76 - Ø100: drilling tool EW09 00 30</li></ul></div> <div data-bbox="994 1742 1302 1776"><p>2 - Carefully deburr the pipe.</p></div> <div data-bbox="994 1800 1433 1861"><p>3 - Position the bracket and tighten the 2 screws.</p></div>

# BENDING A TRANSAIR® STAINLESS STEEL PIPE

## All Diameters

Thanks to their technical characteristics, Transair® stainless steel pipe can be bent according to the following specifications:

Transair®	R min. (mm)	L min. (mm)
Ø 22	44	125
Ø 28	56	125
Ø 42	84	125
Ø 60	93	125
Ø 76	114	125
Ø 100	152	125



# PRACTICAL INFORMATION

## Z Dimensions

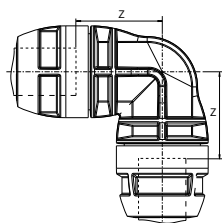
RP02/RR02	Z (mm)
Ø 22	13
Ø 28	15
Ø 42	55
Ø 60	64

RR06	Z (mm)
Ø 22	1.2
Ø 28	1.2
Ø 22 - > Ø 28	1.6
Ø 42	2.6
Ø 60	2.6

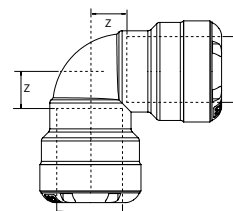
RP04	Z1 (mm)	Z2 (mm)
Ø 42	55	55
Ø 60	64	64

RR04	Z1 (mm)	Z2 (mm)
Ø 22	11.7	11
Ø 28	15	15
Ø 28 - > Ø 22	12	16

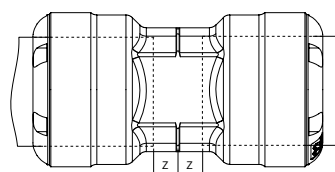
RP02 M4 - RP02 M6



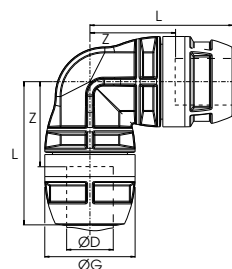
RR02 N7 - RR02 N9



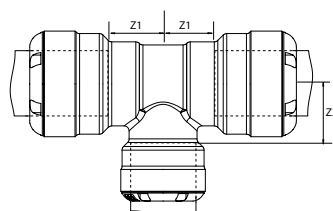
RR06 N7 - RR06 N9



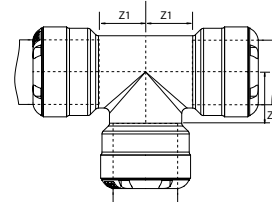
RP04



RR04 N9 N7 01



RR04 N7 01 - RR04 N9





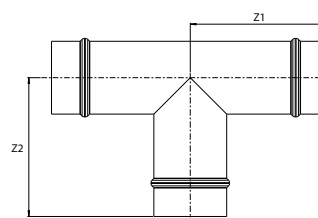
RX04	Z1 (mm)	Z2 (mm)
Ø 76	145	145
Ø 76 - > Ø 42	145	183
Ø 76 - > Ø 60	145	183
Ø 100	155	135
Ø 100 - > Ø 42	155	135
Ø 100 - > Ø 60	155	195
Ø 100 - > Ø 76	155	195

RX02	Z (mm)
Ø 76	189
Ø 100	227

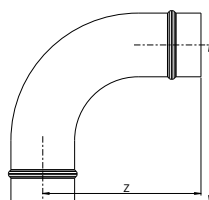
RR05	Z (mm)
RR05 N7 04	21
RR05 N7 06	22
RR05 N9 08	22

RR23/RX23	Z1 (mm)	Z2 (mm)
Ø 22	12	14
Ø 76	145	63
Ø 100	155	76

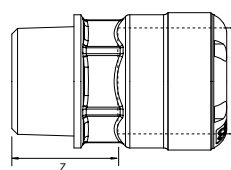
RX04 L1 00 - RX04 L3 00



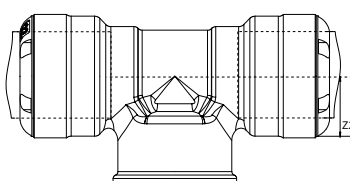
RX02 L1 00 - RX02 L3 00



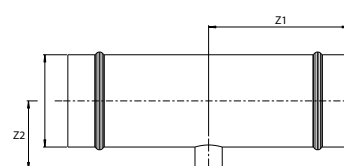
RR05 N7 04 - RR05 N7 06  
RR05 N9 08



RR23 N7 06 01



RX23 L1 04 - RX23 L3 04



# TRANSAIR®: STAINLESS STEEL DROPS

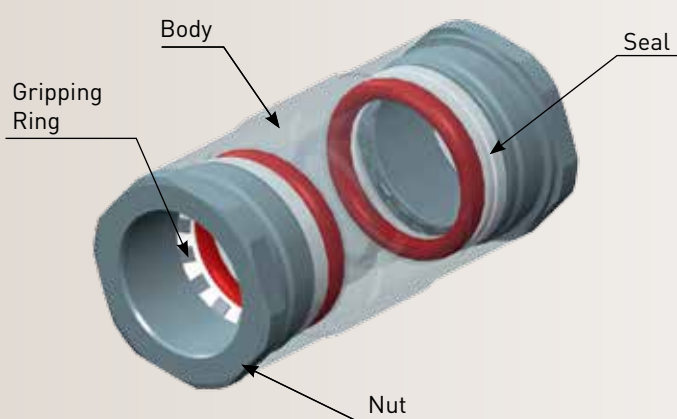
- To meet the requirements of compressed air and vacuum applications in **harsh environments** (food and beverage, pharmaceutical or laboratories), Transair® now proposes a complete range of **Ø22 mm 316L stainless steel drops**,
- These **modular drops with instant connection technology** are very easy to clean and are resistant to **aggressive** chemical agents (list of chemical compatibility available upon request).
- For food and beverage applications, these drops can be used in **food** or **splash zones** as they are compatible with permanent food contact (316L stainless steel complies with **FDA - CFR21 requirements** for food contact applications).

## TECHNICAL SPECIFICATIONS

- Pipe external diameter: 22 mm
- Pipe internal diameter: 19.6 mm
- Full bore design
- Push-in technology
- Material (fitting and pipe): full stainless steel 316L
- Fittings individually packed in a plastic bag
- Sealing: FKM
- Pressure: 0 to 10 bar
- Temperature: - 20°C to + 120°C
- Vacuum: 10 mbar (absolute value)

## ADVANTAGES AND BENEFITS

- Fully dismountable and reusable
- Instant connection and disconnection
- Modular and flexible networks
- Optimisation of cleaning and maintenance operations
- Large chemical compatibility for applications in aggressive chemical environments (See Chemical Compatibility Chart page 115)
- The 3-port wall bracket facilitates the connection to the process.



Example of an application in the Food & Beverage Industry: the user needed a full stainless steel 22mm drop in a wash down zone.



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



Assembly: simply push the pipe into the fitting.



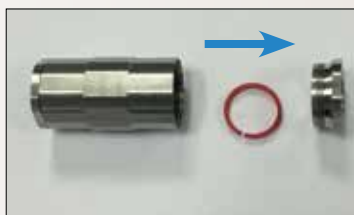
Disassembly: **1.** Manually unscrew the nut and slide the nut along the pipe.



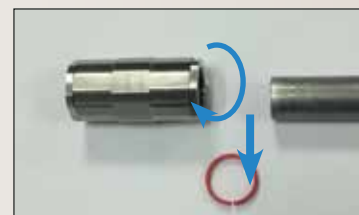
Disassembly: **2.** Put the red dismantling ring on the pipe and re-screw the nut on the fitting.



Disassembly: **3.** Pull the pipe from the fitting.



Disassembly: **4.** Manually unscrew the nut and remove the red dismantling 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® aluminium range (pages 40/41 in this catalogue) and to quick assembly brackets of Transair® stainless steel range (page 129).

	Transair® Part Numbers	Description
	TF03 N7 00 TF06 N7 00	Ø22 Pipe - Stainless Steel 316L - Length: 3 m Ø22 Pipe - Stainless Steel 316L - Length: 6 m
	RF06 N7 02	Pipe-Pipe Connector, Ø22, Stainless Steel 316L FKM
	RF02 N7 00	90° Elbow, Stainless Steel 316L, Ø22 (Bended Pipe)
	RF02 N7 02	90° Elbow, Stainless Steel 316L, Ø22 FKM
	RF04 06 00	Threaded Equal Tee G3/4", Stainless Steel 316L
	RF08 N7 06 02	Male Stud Fitting Ø22, G3/4" FKM, Stainless Steel 316L
	RF35 06 04	G3/4" Wall Bracket > 3 Port G1/2", Stainless Steel 316L (supplied without plug)
	EF25 00 04 02	Stainless Steel Plug, FKM Sealing, for Wall Bracket RF35 06 04
	VF04 00 06	Male Valve R3/4" /Female G3/4", Stainless Steel 316L
	EX01 N7 00	Fixing Clip, Ø22, Stainless Steel 316L
	EW11 N7 00	Red Dismounting Ring, Polymer, Ø22