

Conex | Bänninger

>B< Press Inox



 >B< Press Inox Technical Brochure
15 to 54 mm

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1. General

>B< Press Inox is a quick and simple to install flame-free press fitting, manufactured using high quality hygienic stainless steel material, suitable for multiple applications. >B< Press Inox is designed with an innovative 3-point press system to ensure a leak-free, secure and permanent joint.

1.1 Quality and certifications

Conex Bänninger has 110 years of experience in manufacturing innovative products and operates an accredited Quality Management System to EN ISO 9001.

>B< Press Inox press fittings are tested and certified by independent national certification bodies confirming their suitability and reliability for water applications.

>B< Press Inox is certified by the following bodies:

Table 1

International certifications	
>B< Press Inox 15 to 54 mm	
France	ACS
France	CSTB
Germany	DVGW
Hungary	EMI
Poland	PZH
Poland	ITB
Switzerland	SVGW
Sweden	KIWA Sweden
UK	WRAS

1.2 Features and benefits

- Suitable for hot and cold water installations, drinking water, local and district heating, rainwater harvesting, oil-free compressed air and vacuum. For additional applications please refer to section 2.
- Quick and easy to install, saving on labour time.
- Permanent, flame-free connection – no brazing or soldering consumables or hot works permit required.
- 3-point press safety feature for added security.
- Leak before press indicator assists identification of unpressed joints.
- Maximum continuous operating temperature 110 °C.
- Manufactured using high quality materials to applicable standards.
- Suitable for in-built water installations
- Tested and approved by national and international standard authorities.
- Twenty-five-year product guarantee, for full terms and conditions please see section 13.
- Comprehensive range of fittings – sizes from 15 to 54 mm.
- Suitable for use with stainless steel tubes to EN 10312 Series 1 and 2. See tube compatibility table in section 9.5.
- Compatible with commonly available press tools (see Table 4 and 5 in section 7).

1.3 Materials and threads

>B< Press Inox fittings are made from solution-treated molybdenum-steel 1.4404 (AISI 316L) in accordance with EN 10088. These fittings are type tested and approved for drinking water by WRAS and DVGW.

>B< Press Inox tubes are available in the material 1.4404 (AISI 316L). The tubes correspond in properties and dimensions with the requirements of EN 10312, Series 1 and 2.



Threaded connections

>B< Press Inox fittings are available with male and female threaded connections to the following standards:

- Jointing threads are to ISO 7-1 and EN 10226-1.
Female are parallel and male are taper.
- Fastening threads are to ISO 228-1 parallel.

1.4 Storage and handling

Store in a cool and dry place to protect the fittings from contamination, damage and dirt. Keep out of direct sunlight. Fittings should be left in their packaging to preserve the lubrication on the O-rings prior to installation.

1.5 Black EPDM sealing elements

>B< Press Inox EPDM O-rings are peroxide-cured rubber seals with high elasticity, excellent cold and heat performance.

Please refer to section 2 for the fitting operating parameters for the different applications.

1.6 Leak before press indicator

>B< Press Inox benefits from patented 'leak-before-press' O-ring technology (15 to 54 mm) which indicates if a joint has not been pressed. The O-ring contains two in-built water pathways that allows water to pass through and create a noticeable leak when the system is tested at low pressure (0.1 to 6.0 bar). Any un-pressed joints can be pressed without draining down the system.

**1.7 Cold bending of stainless steel tubes**

Stainless steel tubes up to 28 mm comply with EN 10312 Series 1 and 2. Tubes can be bent cold with suitable bending equipment, with a minimum bend radius of 3.5 times the tube diameter.

1.8 System testing

Pressure testing should be carried out to the appropriate standard (e.g. EN 806 specifies 1.1 x maximum design pressure) or to the satisfaction of the supervising engineer with a maximum test pressure of 1.5 times the operating pressure.

1.9 Electrical continuity

>B< Press Inox fittings maintain earth continuity without the need for additional continuity straps.

1.10 Recommended water velocities

Please note the maximum allowances for water velocities are per the relevant national standards and codes, which includes EN 806 part 2 and part 3.

1.11 COSHH**(Control of substances hazardous to health)**

It is the responsibility of the end user to ensure that adequate protection is available where required and the necessary information regarding possible health and safety regulations is adhered to. Stainless steel fitting is considered non-hazardous under normal circumstances.

1.12 Tube compatibility

>B< Press Inox fittings can be used on stainless steel tubes manufactured in accordance with EN 10312 Series 1 and 2. Please refer to section 9.5 for the full tube compatibility table.



2. Applications

>B< Press Inox fittings are suitable for use in the following applications.

Table 2

Application	Flow medium	Pressure bar	Temp °C
Drinking water installations EN 806	Drinking water	10 max	95
		16 max	25
Hot water heaters EN 12828	Heating water	10	110 max
Local and district heating tubes	Heating and district heating water	10	110 max
Thermal solar systems with operating temperatures $\leq 110^{\circ}\text{C}$ EN 12975 /12976	Water and water-glycol mixtures. Mixing ratio max 50/50%	6	-35 to +110
			180 \leq 30 h/a*
			200 \leq 10 h/a*
Water based air conditioning systems	Water and water-glycol mixtures. Mixing ratio max 50/50%	6	-10 min
Rainwater harvesting systems	Rainwater from cisterns	10	25
Oil-free compressed air	Compressed air classes 1 - 3 in accordance with ISO 8573-1	10	25
Industrial and process water	Treated, softened, partially de-ionized water with a pH of $6.5 \leq \text{pH} \leq 9.5^{**}$	10	95 max
		16	25 max
Vacuum lines for non-medical purposes	N/A	-0.8	Ambient

*h/a – Hours per annum

** In the event of deviating parameters, please contact the technical department, technical@ibpgroup.com.

For applications outside those stated in the table above, please contact the technical department: technical@ibpgroup.com.

3. Product Suitability

The application parameters referred to in section 2 and the tube compatibility must be adhered to when using and connecting to a >B< Press Inox system.

3.1 Drinking water installations

Drinking water installations must be planned and operated in accordance with local regulations, codes of practice and by laws and standards governing the installation e.g. EN 806: parts 1 to 4: Specifications for installations inside buildings conveying water for human consumption.

- >B< Press Inox 316L fittings have several accreditations for use in drinking water systems see section 1.1

3.2 Heating and cooling systems

>B< Press Inox fittings are suitable for closed circuit and open vented heating and cooling systems.

They can be combined with a variety of materials such as copper, brass or carbon steel in a closed circuit heating or cooling system, without the risk of bimetallic corrosion.

>B< Press Inox fitting can also be combined in an open vented system with copper, and brass materials, but should not be connected to galvanised steel tube as bimetallic corrosion may occur.

3.3 Local, district and solar heating

>B< Press Inox system can be used in local, district and solar heating systems with the operating parameters referred to in section 2. Please contact our technical team first if special additives need to be added to the hot water for corrosion protection or sealing purposes.

4. Thermal Expansion

4.1 Effects of expansion

Using the general equation for change in length (linear expansion) which is:

$$\Delta L = L \times \Delta t \times \alpha$$

where

ΔL = change in length in mm

L = length in m

Δt = change in temperature °C

α = coefficient of linear expansion.

For example, a 10 m length of stainless steel tube, irrespective of its size, wall thickness or temper, will increase in length by 9.6 mm with a temperature rise of 60 °C where the coefficient of linear expansion for 316L stainless steel

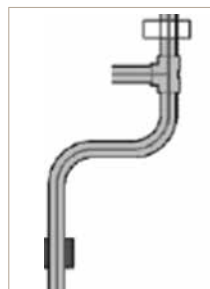
0.016 i.e. $9.6 = 10 \times 60 \times 0.016$. Tubes installed on hot water services must be free to accommodate this expansion; otherwise stresses will build up in the pipework that may lead to joints being pulled apart and/or tubes fracturing. Clearly the magnitude and frequency of such changes in length will determine the life of the joint or failure of the tube.

Table 3 shows the amount of tube expansion for a given temperature rise. In the case of tube in domestic hot water and heating installations the limited size of rooms and hence straight tube runs, together with the many bends and offsets that normally occur, will result in thermal movement being accommodated automatically. However, where long straight tube runs, exceeding 10 m, are encountered, allowance for expansion should be made.

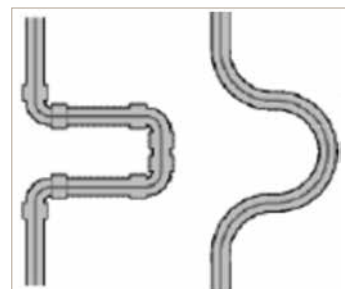
A quick, economic and effective way of accommodating thermal expansion is to simply incorporate the horseshoe or compensating bend to the system design.

4.2 Expansion devices

Where stainless steel tubes pass through walls, floors and ceilings, they should be able to move as a result of expansion and contraction. This can be arranged by passing the tube through a sleeve or length of larger diameter tube fixed through the whole thickness of the wall, floor or ceiling, or by means of flexible joints on either side of the wall.



By change of direction



Horseshoe or compensating bend

Short stubs to and from radiators, connected to relatively long straight runs should also be avoided. This can usually be achieved by introducing an expansion loop, thereby increasing the length of pipework fixed between the flow/return legs and the radiator connection. However, expansion accommodation techniques such as the use of loops and horseshoes may not be sufficient to accommodate large expansions and in such cases the use of the bellow type couplers may be necessary.

The table below shows the increase in length due to thermal expansion as a function of change in temperature Δt and the length of the tube, irrespective of diameter, temper or wall thickness.

Table 3

Thermal Expansion - Stainless Steel 316L - Coefficient of Expansion = 0.016								
Tube length m	Change in length mm with temperature difference Δt °C							
	$\Delta t=30^\circ$	$\Delta t=40^\circ$	$\Delta t=50^\circ$	$\Delta t=60^\circ$	$\Delta t=70^\circ$	$\Delta t=80^\circ$	$\Delta t=90^\circ$	$\Delta t=100^\circ$
0.1	0.048	0.064	0.08	0.096	0.112	0.128	0.144	0.16
0.2	0.096	0.128	0.16	0.192	0.224	0.256	0.288	0.32
0.3	0.144	0.192	0.24	0.288	0.336	0.384	0.432	0.48
0.4	0.192	0.256	0.32	0.384	0.448	0.512	0.576	0.64
0.5	0.24	0.32	0.4	0.48	0.56	0.64	0.72	0.8
0.6	0.288	0.384	0.48	0.576	0.672	0.768	0.864	0.96
0.7	0.336	0.448	0.56	0.672	0.784	0.896	1.008	1.12
0.8	0.384	0.512	0.64	0.768	0.896	1.024	1.152	1.28
0.9	0.432	0.576	0.72	0.864	1.008	1.152	1.296	1.44
1	0.48	0.64	0.8	0.96	1.12	1.28	1.44	1.6
2	0.96	1.28	1.6	1.92	2.24	2.56	2.88	3.2
3	1.44	1.92	2.4	2.88	3.36	3.84	4.32	4.8
4	1.92	2.56	3.2	3.84	4.48	5.12	5.76	6.4
5	2.4	3.2	4	4.8	5.6	6.4	7.2	8
10	4.8	6.4	8	9.6	11.2	12.8	14.4	16
15	7.2	9.6	12	14.4	16.8	19.2	21.6	24
20	9.6	12.8	16	19.2	22.4	25.6	28.8	32
25	12	16	20.00	24	28	32	36	40

Δt dimensional increase is stated in mm

5. Corrosion Resistance, Frost / Heat Protection

5.1 Frost protection and heat gain

Regulations require that all water services (except warning or overflow pipes) shall be protected from freezing temperatures and heat gain. This is best achieved by protecting the system by use of a suitable thickness of insulation or in the case of particular situations such as unheated roof spaces that require special care, a self-regulating trace heating tape.

5.2 Internal corrosion

Within a stainless steel pipework system a passive layer, mostly formed from chromic oxide is created upon contact with oxygen or oxygenated water (i.e. drinking water). This layer restricts corrosion

from occurring and provides high levels of hygiene, durability and water quality.

If there are chloride levels above those deemed acceptable, a breakdown of the passive layer may occur allowing corrosion to occur in the form of pitting, crevice or stress corrosion. Maximum acceptable chloride level is 1000 ppm for 316L material in supply and waste water systems.

It has also been proved that crevice and pitting corrosion increases with temperature, however for drinking water systems, everyday temperatures and chloride levels should not be a problem. On the other hand borehole water may have increased levels of chlorine meaning more care should be taken to make sure levels are within the tolerable range.

5.3 Disinfection and sterilisation

For the sterilisation process, chlorine of concentrations up to 25ppm during a 24 hour period is acceptable, providing that the lines are comprehensively flushed with fresh water and that residual chlorine is restricted to <1ppm. It is recommended that this is verified by analysis.

5.4 External corrosion

External corrosion of stainless steel systems is likely to occur when exposed to high levels of chloride. >B< Press Inox fittings should not be installed in this situation. However, if there are parts of the system where this is unavoidable, appropriate precautions must be taken to minimise the risk.

5.5 Connecting to other materials

Stainless steel, copper and copper alloys can easily be combined without the risk of corrosion. Please note carbon steel should not be directly connected to stainless steel as this will cause corrosion. A spacer connector of brass material should be used to separate the two dissimilar materials by at least 50 mm. Flow of water should be in the direction of carbon steel to stainless steel and not visa versa.

Precautions against freezing must also be undertaken. This is particularly important in new build housing when properties are not occupied for extended periods.

For heating and cooling applications, >B< Press Inox fittings can be used with glycol-water mixtures up to a mixing ratio of 50:50 without affecting the product quality and the sealing element.

If a frost protection inhibitor is to remain in the pipelines permanently, at least one concentration test must be carried out annually. All chemical additions must be agreed before use to rule out negative interactions with materials and sealing elements (O-rings). For more information, please contact Conex Bänninger technical department.

6. Pressure Testing

Pressure testing on >B< Press Inox fittings should normally be carried out using clean drinking water. Only in exceptional circumstances should pneumatic pressure testing using compressed inert gas or air be used, and then only under carefully controlled conditions.

Pressure testing should be carried out in accordance with national regulations and appropriate specifications drawn up and a risk assessment must be completed prior to testing.

Typically, when testing systems containing >B< Press Inox fittings, all joints shall remain uncovered and visible, the system shall be filled with clean drinking water against an open high point valve allowing all trapped air to be removed from the network. Once free of trapped air, the high-level valve should closed and the system topped up, at that stage testing be completed between 1-2 bar to ensure any un-pressed joints are identified. Any identified joints that have not been pressed and leaking water can be pressed without draining down however it is essential the tube is fully inserted to the tube stop prior to pressing.

Once it is confirmed there are no un-pressed joints, the pressure can be raised slowly to the system test pressure. The recommended system test pressure should be in accordance with the requirements of EN 806 part 4 (1.1 x maximum design pressure). Full test pressure should be maintained for a minimum of 30 minutes without any sign of pressure drop. A full inspection should then be carried out to identify any leaks. This needs updating to test up to 2 bar for leak before press then gradually raise to full test pressure.

6.1 Flushing of water installations

It is essential to flush the systems with water after installation to remove dust, and debris. Commissioning should be carried out in accordance with EN 806-4.

If installations are not used immediately after commissioning, they should be flushed at regular intervals, at least once a week. After an extended time, the system should be disinfected to comply with legionella guidelines.

6.2 Water softening

Hard water may be softened to avoid excessive deposits of scale in hot water services. >B< Press Inox system is fully compatible with reverse osmosis and ion exchange treatment methods and highly resistant to corrosions with softened decarbonised water or desalinated water.

7. Compatible Press Tools

7.1 Tool chart

Table 4

12 to 35 mm Compact 19kN machines			
Manufacturer	Press machine	Press jaws	Jaw profile
Rothenberger	Romax Compact	Rothenberger - Compact	SV
	Romax Compact TT	Rothenberger - Compact	SV
Rems	Mini Press ACC	Rems - Mini	V
Klauke	MAP1/MAP2L/MAP215	Klauke - SBM	KSP4
	MAP219/MAP2L19	Klauke - SBMX	KSP4
Novopress	ACO102/ACO103	NovoPress - V-PB1	V
Milwaukee	M12	Milwaukee - J12	V
Hilti	NPR 019 IE-A22	Hilti - NPR PM V	V
Ridgid	RP 200/210/240/241	Ridgid - Compact Series	V
Conel	PM 1	Conel - V-PB1	V
Viega	Picco	Viega Picco	PT2

Table 5

12 to 54 mm Standard 32 kN machines			
Manufacturer	Press machine	Press jaws	Jaw profile
Rothenberger	Romax 3000/4000	Rothenberger - Standard*	SV
Rems	Power-Press/ Akku-Press	Rems - Standard*	V
Novopress	ECO/ACO202/203	Novopress - V-PB2*	V**
Conel	PM 2	Conel - V-PB2*	V
Klauke	UAP2/UAP3L/UAP332	Klauke - Standard SB*	KSP4
Ridgid	RP 320/330/340	Ridgid - Standard Series*	V
Hilti	NPR 032 IE-A22	Hilti - NPR PS V*	V
Milwaukee	M18	Milwaukee - J18*	V**
Viega	Pressgun 5/6	Viega Standard*	PT2

* Press Jaw only - not press slings, collars, chains or rings.

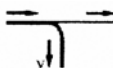
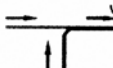
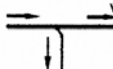
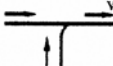




** Novopress & Milwaukee jaws with the  marking only




For inter tool compatibility please refer back to the manufacturer.

8. Loss Coefficients

Table 6

Symbol	Designation	ζ	Application		Symbol	Designation	ζ	Application	
			DW	H				DW	H
	Angle or elbow reference value in accordance with DIN 1988 T3	0,70	X	X		Distributor outlet	0,5	X	X
						Collective inlet	1,0	X	X
	Angle 90° r/d = 0,5	1,0	X	X		Reservoir outlet	0,5	X	
	(r/d = 1,2 = 1,0	0,35	X	X		Inlet	1,0	X	X
	with fittings = 2,0	0,20	X	X					
	complying with DIN EN 1254) = 3,0	0,15	X	X					
	Angle $\beta = 90^\circ$ $= 60^\circ$ $= 45^\circ$	1,3 0,8 0,4	X X X	X X X		Reducer	0,4	X	X
	Crossover	0,5	X	X		Constriction β - constant = 30° 45° 60°	0,02 0,04 0,07	X X X	X X X
	Branch, square flow separation	1,3	X	X		Expansion β - constant = 10° 20° 30° 40°	0,10 0,15 0,20 0,20	X X X X	X X X X
	Flow merging	0,9	X	X		Expansion bends	1,0	X	X
	Clearance at flow merging	0,3	X	X		Compensator	2,0	X	X
	Clearance at flow merging	0,6	X	X		Compensator	2,0	X	X
	Counter-flow at flow merging	3,0	X	X					
	Counter-flow at flow separation	1,5	X	X					

Symbol	Designation	ζ	Application	
			DW	H
	Branch, curved flow separation	0,9	X	X
	Flow merging	0,4	X	X
	Clearance at flow separation	0,3	X	X
	Clearance a flow merging	0,2	X	X
	Angle valves			
	DN 10	7,0	X	X
	DN 15	4,0	X	X
	DN 20	2,0	X	X
	to DN 50	3,5	X	X
	DN 65 to DN 100	4,0	X	X
	Diaphragm valves			
	DN 15	10,0	X	X
	DN 20	8,5	X	X
	DN 25	7,0	X	X
	to DN 32	6,0	X	X
	DN 40 to DN 100	5,0	X	X
	Shutter valves			
	Piston valves			
	Ball valves			
	DN 10 to DN 15	1,0	X	X
	DN 20 to DN 25	0,5	X	X
	DN 32 to DN 150	0,3	X	X
	Radiator valves	4,0		X
	Control valve	2,0		X
	Pressure regulator fully open	30,0		X

Symbol	Designation	ζ	Application	
			DW	H
	Shut-off valve			
	Straight seat valve			
	DN15	10,0	X	X
	DN20	8,5	X	X
	DN25	7,0	X	X
	DN32	6,0	X	X
	DN40 to DN100	5,0	X	X
	Angle seat valve			
	DN 15	3,5	X	X
	DN20	2,5	X	X
DN 25 to DN50	2,0	X	X	
DN65	0,7	X	X	
	Return flow inhibitor			
	DN 15 to DN 20	7,7	X	
	DN 25 to DN 40	4,3	X	
	DN 50	3,8	X	
	DN 65 to DN 100	2,5	X	
	Control valve with return flow inhibitor			
	DN 20	6,0	X	
	DN 25 to DN 50	5,0	X	
	Valve tapping sleeve			
	DN 25 to DN 80	5,0	X	
	Boiler	2,5		X
	Heating radiator	2,5		X
	Panel radiator	3,0		X

9. Installation Requirements

9.1 Space required for the pressing process

The following minimum clearances are required from structural components to allow operation of tool for press fitting.

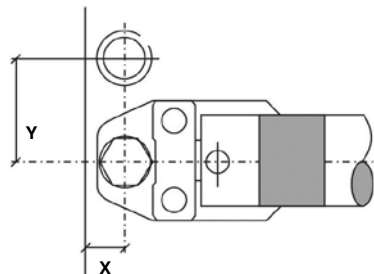


Table 7

Space required for the pressing process between fittings and wall.		
External tube	X	Y
Size mm	mm	mm
15	26	53
22	26	56
28	33	69
35	33	73
42	75	115
54	85	120

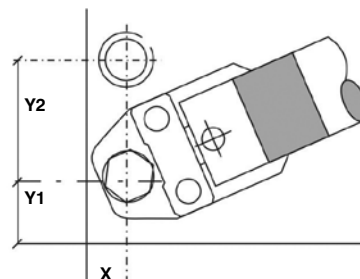


Table 8

Space required for the pressing process between fittings and wall corner.			
External tube	X	Y1	Y2
Size mm	mm	mm	mm
15	31	45	73
22	31	45	76
28	38	55	80
35	38	55	85
42	75	75	115
54	85	85	140

9.2 Insertion depth and minimum distances between pressings

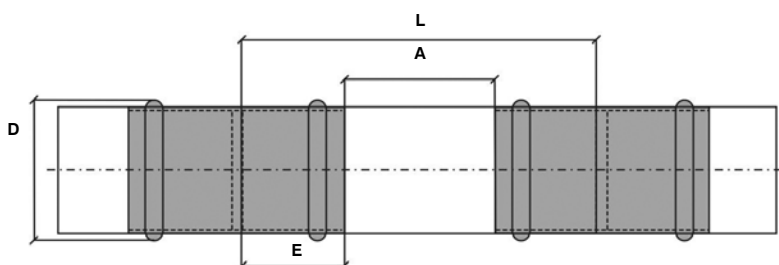


Table 9

Insertion depth and minimum distance between pressings				
Size	External - Ø pressing bead	Minimum distance	Minimum tube length	Insertion depth
mm	D - mm	A - mm	L - mm	E - mm
15	23	10	54	22
22	31.5	20	66	23
28	37.0	20	68	24
35	44.2	25	79	28
42	54.4	30	102	36
54	65.4	35	116	41

9.3 Minimum distance for press fittings from an existing welded joint

To ensure proper sealing of both the welded and >B<Press Inox fitting, the following minimum distances must be maintained between the two fittings. Please see Table 10 for further information.

Table 10

Minimum distance from a welded joint	
Tube size	mm
15	5
22	5
28	5
35	10
42	15
54	20

9.4 Minimum welding distance to an existing pressed fitting

Caution: Welding near >B< Press Inox joints should be avoided as this may cause the seal to degrade due to heat transfer. Table 11 states the minimum distance away from the press joint which is acceptable to weld. If this distance cannot be maintained then adequate precautions must be taken such as fabricating the welded section prior to assembly with the press fittings, wrapping in a wet rag or applying a hot block to prevent heat transfer to the press fitting during welding.

Table 11

Minimum distance welding	
Tube size	mm
15	450
22	600
28	700
35	900
42	1200
54	1500

9.5 >B< Press Inox tube compatibility table

The dimensions of light stainless steel tube, to be used with >B< Press Inox need to be to standard EN 10312 Series 1 or Series 2.

Table 12

Tube O/D	Tube wall thickness (mm)	
	Wall thickness (Series 1)	Wall thickness (Series 2)
15	0.6	1.0
18	0.7	1.0
22	0.7	1.2
28	0.8	1.2
35	1.0	1.5
42	1.1	1.5
54	1.2	1.5

10. Tube Preparation

To ensure a secure and permanent joint the tube must be correctly prepared prior to installation. Incorrect tube preparation can result in damaging the O-ring and causing the fittings to leak.

Note: Avoid grinding wheels, fast cutting saws and hacksaws as they are not suitable for cutting tube. If the tube ends become distorted, remove the damaged section by using the appropriate cutting method.

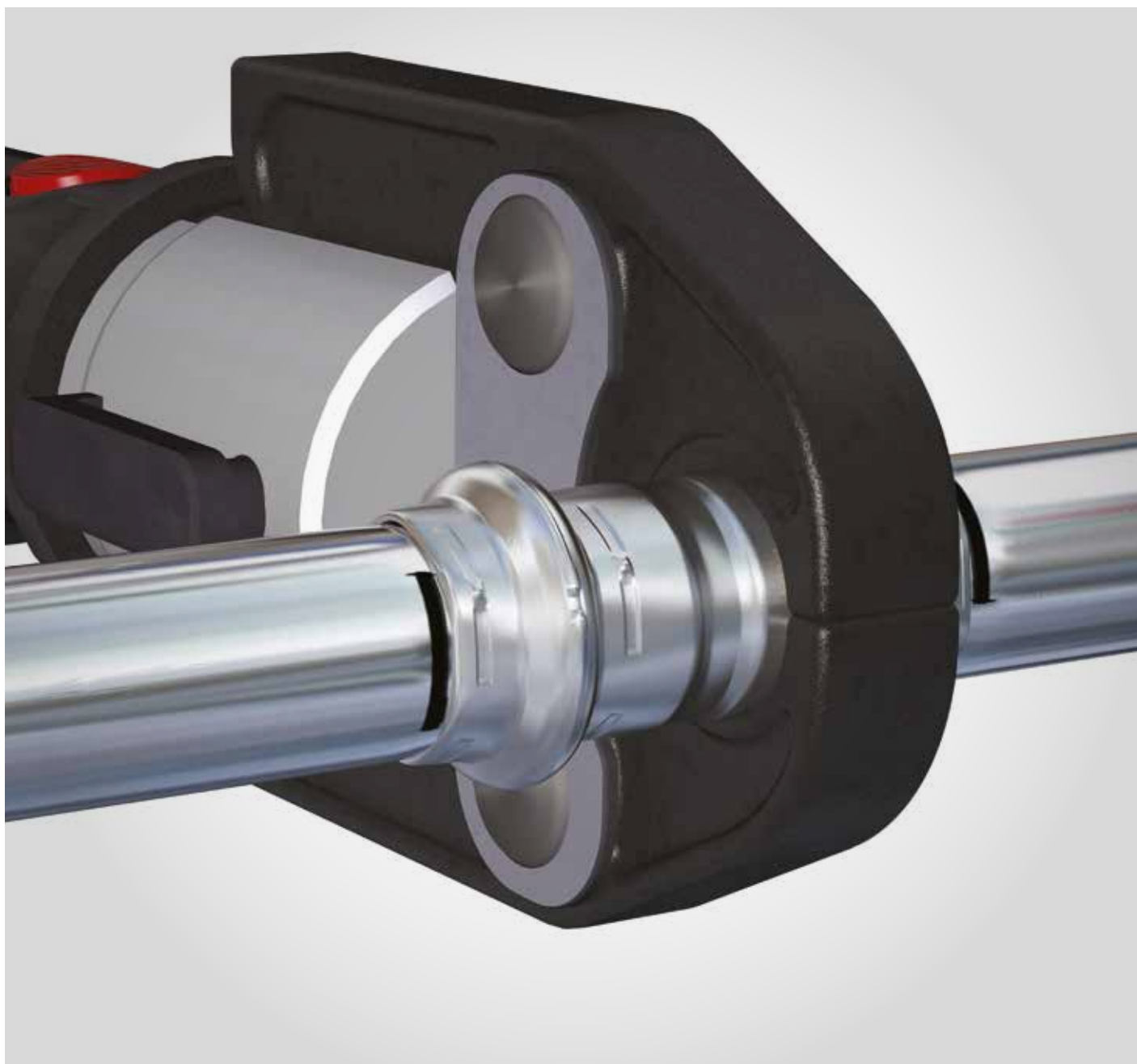
When preparing tube ensure that the tube is correctly supported and eye protection is worn. If using

power tools, great care must be taken. Refer to the manufacturers instructions before use.

Safety note: When using press tools, care must be taken to ensure hands are kept away from the jaw during the pressing process. Always wear ear and eye protection.

Sizes 15 mm - 54 mm

For instructions on how to cut the tube please refer to section 11.



11. Fitting Installation Instructions

Leave the fittings in the packaging prior to final installation to protect them from contamination and to preserve the lubrication of the O-rings. Please note the space required for pressing tools (see section 9).



1. Cut tube to length

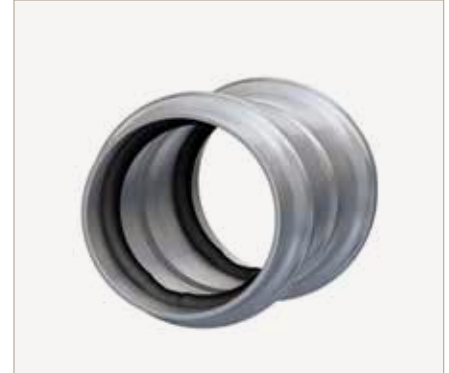
- Use a rotary tube cutter.
- Ensure that the tube is cut square.
- Check the tube has maintained its shape and is damage free.



2. Deburr

- Deburr the tube both internally and externally.
- Where possible angle the tube downwards to prevent filings entering the tube.
- Make sure the internal and external surfaces of the tube ends are smooth and free from burrs and sharp edges.

Caution: Please ensure that the tube surface is free from any deep score or scratches.



3. Check the fittings

- Check the fitting is the correct size for the tube.
- Check the O-rings are present and correctly seated.
- It is good practice to add a small amount of Conex Bänninger press fitting lubricant to the O-rings to aid tube insertion.



4. Assemble and mark the insertion depth

- The tube must be fully inserted into the fitting until it reaches the tube stop.
- To reduce the risk of dislodging the O-ring, rotate the tube (if possible) while slipping it into the fittings.
- Mark the insertion depth on the tube.
- Prior to pressing ensure the tube has not moved out from the fitting socket.



5. Complete the joint with the press tool

- Ensure pipework is correctly aligned prior to pressing.
- Ensure the correct size jaw is inserted into the tool.
- The jaws must be placed squarely on the fitting, locating the groove on the bead.
- The bead on the fitting should fit centrally in the groove of the jaw.
- Depress and hold the start button on the press tool to complete the pressing cycle.
- Pressing is complete when the jaws are fully closed.

Caution: The >B< Press Inox joint is complete after one full cycle of the tool. Do not press any >B< Press Inox fitting more than once.



6. Mark the completed joint

- Mark the completed joint after pressing.
- This enables joints to be inspected easily before testing.

12. The Range

PS4001G

90° Bend with Male Thread



PS4002G

90° Bend with Female Thread



PS4090G

90° Elbow with Female Thread



PS4092G

90° Elbow with Male Thread



PS4130G

Tee with Female Branch



PS4243G

Male Straight Coupler



PS4270G

Female Straight Coupler



PS4275

Slip Coupler



PS4330G

Female Straight Union Connector



PS4331G

Male Straight Union Connector



PS4355

Flat Face Union



PS4771G

90° Wall Plate Elbow



PS5001

90° Street Elbow



PS5002

90° Elbow



PS5030

Male Street Bend



PS5040

45° Obtuse Street Elbow



PS5041

45° Obtuse Elbow



PS5087

Short Crossover



PS5088

Long Crossover



PS5130

Equal Tee



PS5130 RB

Reduced Branch Tee



PS5243

Fitting Reducer



PS5270

Straight Coupler



PS5301

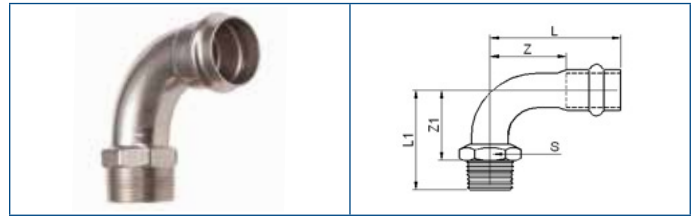
Stop End



MPABPSOIL100ML

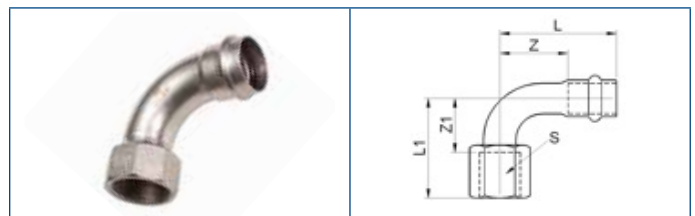
Fitting Lubricant for O-ring





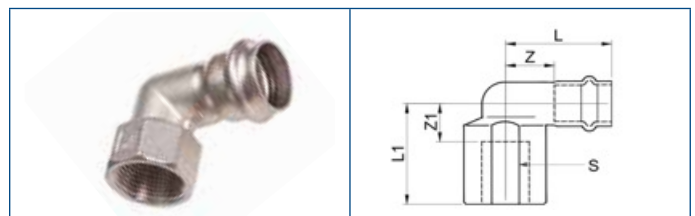
PS4001G 90° Bend with Male Thread

Code	Fitting size	L	L1	Z	Z1	S
PS4001G0150400	15 x 1/2"	46	47	24	34	22
PS4001G0180400	18 x 1/2"	50	52	28	39	22
PS4001G0180600	18 x 3/4"	50	54	28	39	28
PS4001G0220600	22 x 3/4"	55	56	32	41	28
PS4001G0280800	28 x 1"	66	66	42	49	36
PS4001G0351000	35 x 1 1/4"	78	78	51	59	43
PS4001G0421200	42 x 1 1/2"	100	86	64	67	50
PS4001G0541600	54 x 2"	120	107	79	83	62



PS4002G 90° Bend with Female Thread

Code	Fitting size	L	L1	Z	Z1	S
PS4002G0150400	15 x 1/2"	46	43	24	28	26
PS4002G0180400	18 x 1/2"	50	46	28	31	26
PS4002G0180600	18 x 3/4"	50	48	28	32	31
PS4002G0220600	22 x 3/4"	55	53	32	36	31
PS4002G0280800	28 x 1"	66	66	42	47	39
PS4002G0351000	35 x 1 1/4"	78	79	51	57	48
PS4002G0421200	42 x 1 1/4"	100	88	64	67	55
PS4002G0541600	54 x 2"	120	107	79	81	67



PS4090G 90° Elbow with Female Thread

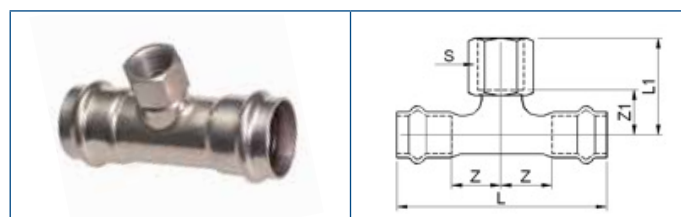
Code	Fitting size	L	L1	Z1	Z	S
PS4090G0150400	15 x 1/2"	46	30	24	15	26
PS4090G0180400	18 x 1/2"	46	30	24	15	26
PS4090G0220400	22 x 1/2"	47	30	24	15	26
PS4090G0220600	22 x 3/4"	56	36	33	20	31
PS4090G0280800	28 x 1"	56	43	32	23	39
PS4090G0351000	35 x 1 1/4"	66	49	39	28	48

*All above measurements are in mm unless stated differently.



PS4092G 90° Elbow with Male Thread

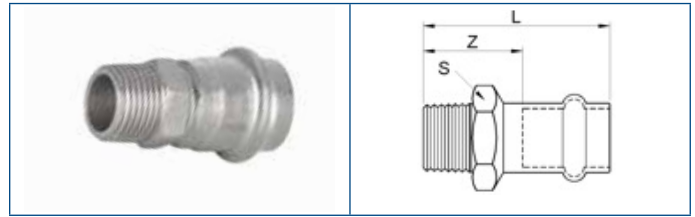
Code	Fitting size	L	L1	Z	Z1	S
PS4092G0150400	15 x 1/2"	50	34	20	45	22
PS4092G0180400	18 x 1/2"	50	34	20	45	22



PS4130G** Tee with Female Branch

Code	Fitting size	L	L1	Z	Z1	S
PS4130G0150415	15 x 1/2"	82	34	19	19	26
PS4130G0180418	18 x 1/2"	82	37	19	22	26
PS4130G0180618	18 x 3/4"	82	39	19	23	31
PS4130G0220422	22 x 1/2"	88	39	21	24	26
PS4130G0220622	22 x 3/4"	88	40	21	24	31
PS4130G0280428	28 x 1/2"	96	41	24	26	26
PS4130G0280628	28 x 3/4"	96	43	24	27	31
PS4130G0280828	28 x 1" x 28	97	47	24	28	39
PS4130G0350435	35 x 1/2"	108	44	27	29	26
PS4130G0350635	35 x 3/4"	108	46	27	28	31
PS4130G0351035	35 x 1 1/4"	108	54	27	33	48
PS4130G0420442	42 x 1/2"	134	48	31	33	26
PS4130G0420642	42 x 3/4"	134	50	31	34	31
PS4130G0421242	42 x 1 1/2"	134	59	31	38	55
PS4130G0540454	54 x 1/2"	159	54	36	39	26
PS4130G0540654	54 x 3/4"	159	56	36	40	31
PS4130G0541654	54 x 2"	159	70	36	44	67

** Size sequence is end, branch, end.



PS4243G Male Straight Coupler

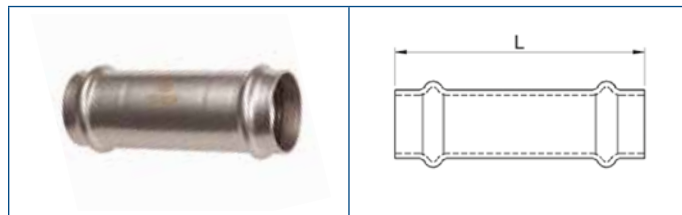
Code	Fitting size	L	Z	S
PS4243G0150400	15 x 1/2"	54	32	22
PS4243G0180400	18 x 1/2"	55	32	22
PS4243G0180600	18 x 3/4"	56	34	28
PS4243G0220400	22 x 1/2"	56	32	22
PS4243G0220600	22 x 3/4"	57	34	28
PS4243G0220800	22 x 1"	60	37	36
PS4243G0280600	28 x 3/4"	58	34	28
PS4243G0280800	28 x 1"	61	37	36
PS4243G0351000	35 x 1 1/4"	71	41	43
PS4243G0421200	42 x 1 1/2"	79	44	50
PS4243G0541600	54 x 2"	92	51	62



PS4270G Female Straight Coupler

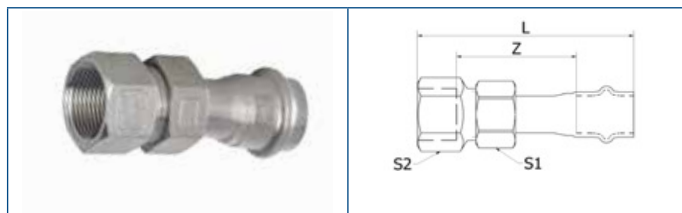
Code	Fitting size	L	L1	Z	S
PS4270G0150400	15 x 1/2"	50	15	13	26
PS4270G0180400	18 x 1/2"	50	15	13	26
PS4270G0180600	18 x 3/4"	52	16	14	31
PS4270G0220400	22 x 1/2"	51	15	13	26
PS4270G0220600	22 x 3/4"	53	16	14	31
PS4270G0220800	22 x 1"	57	19	15	39
PS4270G0280600	28 x 3/4"	53	16	13	31
PS4270G0280800	28 x 1"	58	19	15	39
PS4270G0351000	35 x 1 1/4"	67	21	17	48
PS4270G0421200	42 x 1 1/2"	77	21	20	55
PS4270G0541600	54 x 2"	88	26	20	67

*All above measurements are in mm unless stated differently.



PS4275G Slip Coupler

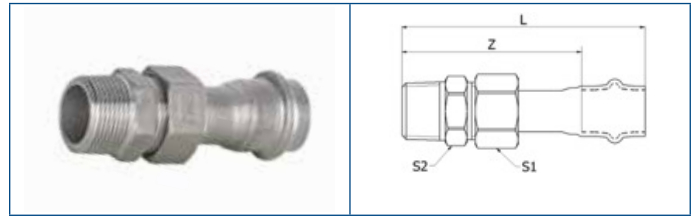
Code	Fitting size	L
PS4270150000	15	80
PS4270180000	18	80
PS4270220000	22	85
PS4270280000	28	95
PS4270350000	35	105
PS4270420000	42	120
PS4270540000	54	135



PS4330G Female Straight Union Connector

Code	Fitting size	L	Z	S1	S2
PS4330G0150400	15 x 1/2"	79	46	26	26
PS4330G0150600	15 x 3/4"	87	45	31	31
PS4330G0180400	18 x 1/2"	80	46	26	26
PS4330G0180600	18 x 3/4"	82	44	31	31
PS4330G0220600	22 x 3/4"	84	50	31	31
PS4330G0220800	22 x 1"	91	48	39	39
PS4330G0280800	28 x 1"	92	49	39	39
PS4330G0351000	35 x 1 1/4"	103	47	48	48
PS4330G0421200	42 x 1 1/2"	117	63	55	55
PS4330G0541600	54 x 2"	131	63	67	67

*All above measurements are in mm unless stated differently.



PS4331G Male Straight Union Connector

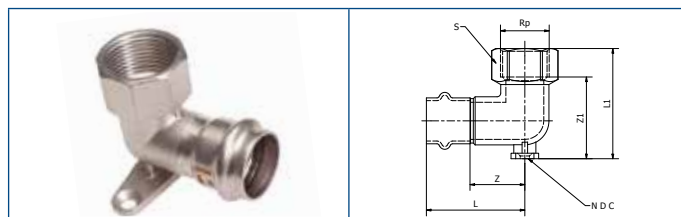
Code	Fitting size	L	Z	S1	S2
PS4331G0150400	15 x 1/2"	85	63	26	22
PS4331G0180400	18 x 1/2"	82	63	26	22
PS4331G0220600	22 x 3/4"	88	65	31	28
PS4331G0280800	28 x 1"	98	75	39	36
PS4331G0351000	35 x 1 1/4"	114	85	48	43
PS4331G0421200	42 x 1 1/2"	123	87	55	50
PS4331G0541600	54 x 2"	139	93	67	62



PS4335 Flat Face Union

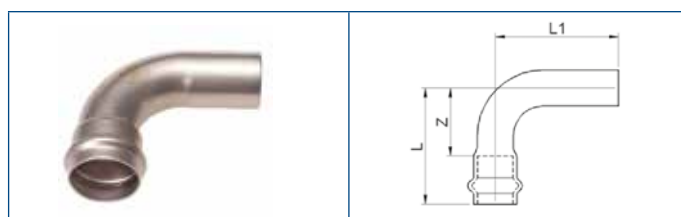
Code	Fitting size	L	L1	Z	S
PS4355 0150600	15 x 3/4"	59	9,5	26	31
PS4355 0180600	18 x 3/4"	62	9,5	25	31
PS4355 0220600	22 x 3/4"	62	9,5	31	31
PS4355 0220800	22 x 1"	62	11	27	39
PS4355 0280800	28 x 1"	65	11	29	39
PS4355 0281000	28 x 1 1/4"	71	11	33	48
PS4355 0351200	35 x 1 1/2"	80	15,5	31.5	55

*All above measurements are in mm unless stated differently.



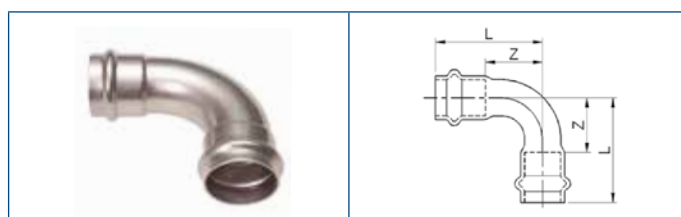
PS4471G 90° Wall Plate Elbow

Code	Fitting size	L	L1	Z	Z1	S	N	D	C
PS4471G0150400	15 x 1/2"	46.00	48.00	21	33	26	2	5	34
PS4471G0180400	18 x 1/2"	46.00	48.00	21	33	26	2	5	34
PS4471G0220600	22 x 3/4	57.00	60.00	30	43	31	2	6	45
PS4471G0280800	28 x 1"	56.00	68.00	28	49	39	2	7	50



PS5001 90° Street Elbow

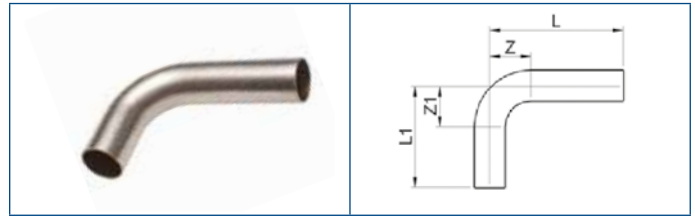
Code	Fitting size	L	L1	Z
PS50010150000	15	46	53	24
PS50010180000	18	50	57	28
PS50010220000	22	55	63	32
PS50010280000	28	66	74	42
PS50010350000	35	78	85	51
PS50010420000	42	100	108	64
PS50010540000	54	120	125	79



PS5002 90° Elbow

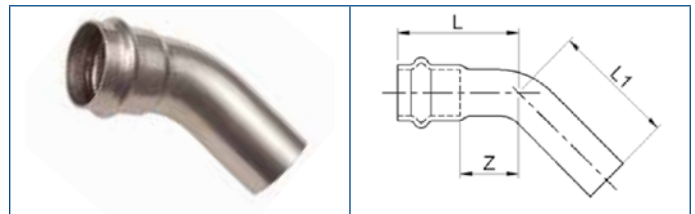
Code	Fitting size	L	Z
PS50020150000	15	46	24
PS50020180000	18	50	28
PS50020220000	22	55	32
PS50020280000	28	66	42
PS50020350000	35	78	51
PS50020420000	42	100	64
PS50020540000	54	120	79

*All above measurements are in mm unless stated differently.



PS5030 Male Street Bend

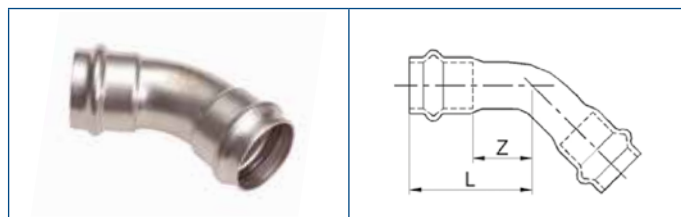
Code	Fitting size	L	L1	Z	Z1
PS50300150000	15	120	70	19	19
PS50300180000	18	120	70	22	22
PS50300220000	22	120	70	27	27
PS50300280000	28	140	90	36	36
PS50300350000	35	140	90	45	45
PS50300420000	42	160	110	53	53
PS50300540000	54	160	110	67	67



PS5040 45° Obtuse Street Elbow

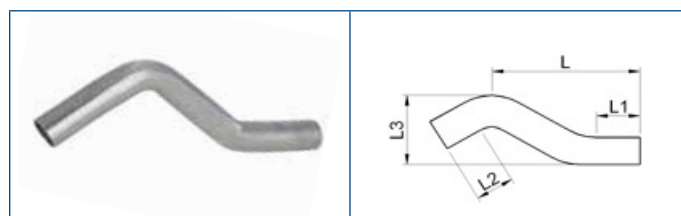
Code	Fitting size	L	L1	Z
PS50400150000	15	35	42	13
PS50400180000	18	37	44	15
PS50400220000	22	40	47	17
PS50400280000	28	45	53	21
PS50400350000	35	52	59	25
PS50400420000	42	70	74	34
PS50400540000	54	80	86	39

*All above measurements are in mm unless stated differently.



PS5041 45° Obtuse Elbow

Code	Fitting size	L	Z
PS50410150400	15	35	13
PS50410180400	18	37	15
PS50410220600	22	40	17
PS50410280800	28	45	21
PS50410351000	35	52	25
PS50410421200	42	70	34
PS50410541600	54	80	39



PS5087 Short Crossover

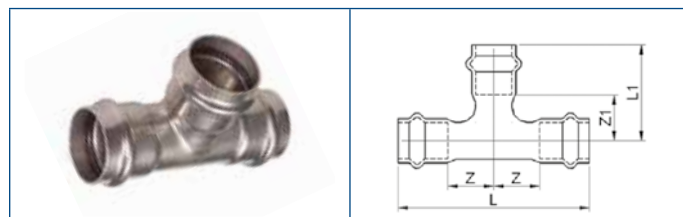
Code	Fitting size	L	L1	L2	L3
PS50870150000	15	97	40	40	42
PS50870180000	18	121	50	50	52
PS50870220000	22	133	55	55	58
PS50870280000	28	155	60	60	71



PS5088 Long Crossover

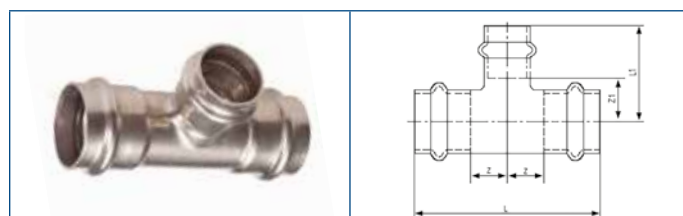
Code	Fitting size	L	L1	L2	H
PS50880150000	15	215	50	50	47
PS50880180000	18	252	55	55	58
PS50880220000	22	283	65	65	64
PS50880280000	28	318	65	65	78

PS5130 Equal Tee



Code	Fitting size	L	Z	L1	Z1
PS51300151515	15	82	22	39	14
PS51300181818	18	82	22	42	17
PS51300222222	22	88	24	45	19
PS51300282828	28	96	28	50	22
PS51300353535	35	111	31	56	25
PS51300424242	42	134	36	71	30
PS51300545454	54	159	41	82	36

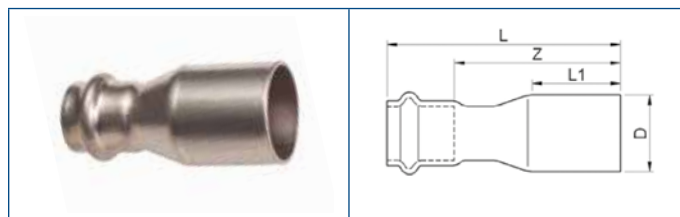
PS5130RB** Reduced Branch Tee



Code	Fitting size	L	Z	L1	Z1
PS51300181518	18 x 15 x 18	82	19	39	17
PS51300221522	22 x 15 x 22	88	21	41	19
PS51300221822	22 x 18 x 22	88	21	41	19
PS51300281528	28 x 15 x 28	96	24	54	32
PS51300281828	28 x 18 x 28	96	24	54	32
PS51300282228	28 x 22 x 28	96	24	44	21
PS51300351535	35 x 15 x 35	111	27	57	35
PS51300351835	35 x 18 x 35	111	27	64	35
PS51300352235	35 x 22 x 35	111	27	48	25
PS51300352835	35 x 28 x 35	111	27	49	25
PS51300422242	42 x 22 x 42	134	30	51	28
PS51300422842	42 x 28 x 42	134	30	52	28
PS51300423542	42 x 35 x 42	134	30	55	28
PS51300542254	54 x 22 x 54	159	36	57	34
PS51300542854	54 x 28 x 54	159	36	58	34
PS51300543554	54 x 35 x 54	159	36	64	34
PS51300544254	54 x 42 x 54	159	36	77	36

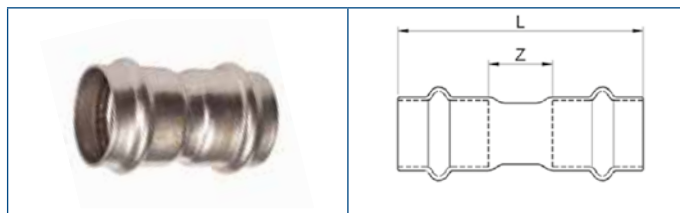
** Size sequence is end, branch, end.

*All above measurements are in mm unless stated differently.



PS5243 Fitting Reducer

Code	Fitting size	L	L1	Z	D
PS52430181500	18 x 15	63	29	41	18
PS52430221500	22 x 15	70	30	48	22
PS52430221800	22 x 18	62	30	40	22
PS52430281500	28 x 15	77	31	55	28
PS52430281800	28 x 18	72	31	50	28
PS52430282200	28 x 22	90	34	67	28
PS5240351800	35 x 18	81	34	59	35
PS5240352200	35 x 22	76	34	53	35
PS5240352800	35 x 28	72	34	48	35
PS5240422800	42 x 28	92	44	68	42
PS5240423500	42 x 35	85	44	58	42
PS5240542800	54 x 28	112	48	89	54
PS5240543500	54 x 35	106	48	79	54
PS5240544200	54 x 42	108	48	70	54



PS5270 Straight Coupler

Code	Fitting size	L	Z
PS52700150000	15	54	10
PS52700180000	18	54	10
PS52700220000	22	56	10
PS52700280000	28	58	10
PS52700350000	35	66	10
PS52700420000	42	87	15
PS527 0540000	54	98	16



PS5301 Stop End

Code	Fitting size	L	L1
PS53010150000	15	34	22
PS53010180000	18	34	22
PS53010220000	22	37	23
PS53010280000	28	38	24
PS53010350000	35	43	27
PS53010420000	42	55	36
PS53010540000	54	59	41



Fitting Lubricant for O-ring

Code	Size
MPABPSOIL100ML	100 ml

13. Product Guarantee

When professionally installed, used and maintained in accordance with the installation and maintenance instructions detailed in the >B< Press Inox technical brochure available on the Conex Bänninger website www.conexbanninger.com.

Conex Universal Ltd. guarantees that >B< Press Inox fittings supplied by Conex Universal Ltd. will be free of material defects resulting from errors in manufacture, for twenty five (25) years from the date of first purchase by an end user. This Guarantee is limited to the repair or replacement of defective product(s) (at the sole discretion of Conex Universal Ltd.). At the request of Conex Universal Ltd. the allegedly defective product(s) must be returned to the address below* and Conex Universal Ltd. reserves the right to inspect and test the alleged defects. This guarantee provided by Conex Universal Ltd. does not affect your statutory rights.

The Guarantee set out above is given by Conex Universal Ltd. and subject to the following conditions:

A. Any alleged defects must be reported to Conex Universal Ltd. within one month of the first occurrence of any such alleged defect, clearly setting out the nature of the claim and the circumstances surrounding it.

B. Conex Universal Ltd. shall be under no liability in respect of any defect in any product arising from:

- defective installation,
- fair wear and tear,
- wilful damage,
- negligence of any party other than Conex Universal Ltd.,
- abnormal working or environmental conditions,
- failure to follow the instructions of Conex Universal Ltd.,
- misuse (which includes any use of the product(s) concerned for a purpose or in a situation / environment or for an application other than that for which it was designed), or
- alteration or repair of any product without the prior approval of Conex Universal Ltd.

C. At the request of Conex Universal Ltd. the person claiming under this guarantee must deliver to Conex Universal Ltd. written evidence of the date of first purchase by an end user of the product(s) concerned.

*** The address for returns is:**

Customer Services at Conex Universal Limited.
Global House, 95 Vantage Point, The Pensnett Estate,
Kingswinford, West Midlands, DY6 7FT,
UNITED KINGDOM

International Contacts

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Email: salesuk@ibpgroup.com		
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Tel: +351 918 805 900		
Email: sales.africa@ibpgroup.com		
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Tel: 0086 4001085686		
Email: nbibp@ibpchina.com		
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>B< Press Carbon

Conex | Bänninger

>B< Press Inox

Conex | Bänninger

<A> Press Inox

Conex | Bänninger

>B< MaxiPro

Conex | Bänninger

>B< ACR

K65

Conex | Bänninger

>B< Push

Conex | Bänninger

>B< Flex

Conex | Bänninger

>B< Oyster

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