<A> Press Copper

<A> Press Copper Technical Brochure

Conex Bänninger

an IBP GROUP company

<A> Press Copper

Contents

1.1. General

<A> Press fittings are quick and easy to install and are available in copper and copper alloy. This flame-free range is designed with a 2-point press system featuring an unpressed joint indicator.

1.1.1 Quality and certifications

Conex Bänninger has over 115 years of experience in manufacturing innovative products and operates an accredited Quality Management System to EN ISO 9001.

<A> Press copper and copper alloy fittings are tested and certified by independent national certification bodies confirming its suitability and reliability for use with potable water applications. <A> Press is certified by the following bodies:

Table 1

International certifications	
<A> Press 12 to 54 mm	
Germany	DVGW
United Kingdom	WRAS

1.1.2 Features and benefits

- Suitable for potable water, hot and cold water installations, chilled water, compressed air and vacuum.
- Quick and easy to install, saving on labour time.
- Permanent, flame-free connection - no hot works permit required.
- Suitable for use with hard, half-hard and soft copper tubes to EN 1057. See tube compatibility table in section 2.1.5 for <A> Press
- Unpressed joint indicator identification of unpressed joints.
- Manufactured using high quality materials to applicable standards.
- Tested and approved by national and international standard authorities.
- Maximum operating pressure 16 bar.
- Maximum operating temperature 110 °C.
- No soldering or brazing consumables required.
- Compatible with m profile jaws 12 to 54mm (Please see section 2.2)
- Compatible with commonly available press tools (see section 2.2 for <A> Press).
- Suitable for in built water installations
- Twenty five year product guarantee, for full terms and conditions (please see section 5).

1.1.3 Materials and threads

<A> Press fitting bodies are produced from copper and copper alloy materials.

Copper fittings are made from oxygen-free copper CU-DHP (material number EN 12165 CW024A).

All components in contact with water are manufactured from low lead materials complying with the European requirements for materials in contact with drinking water.

The materials meet the requirements of the 'UBA/4MS list of hygienically suitable materials for drinking water', and are ideal for all types of drinking water systems without restriction.

Threaded connections

<A> Press 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 parallel.

1.1.4 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.

1.1.5 Black EPDM sealing elements

<A> Press EPDM O-ring's are peroxide cured rubber seals with high elasticity, excellent cold and heat performance.

Please refer to section 1.2 for the fitting operating parameters for the different applications.

1.1.6 Unpressed Joint Indicator

<A> Press benefits from patented 'unpressed joint indicator" O-ring technology (12 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).

1.1.7 System testing

Pressure testing should be carried out to the appropriate standard (e.g. EN 806 1.1 x maximum working pressure) or to the satisfaction of the supervising engineer with a maximum test pressure of 1.5 times the operating pressure. For further information please see section 1.6.

1.1.8 Electrical continuity

<A> Press copper fittings maintain earth continuity without the need for additional continuity straps.

1.1.9 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.

1.1.10 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. Copper and copper alloy fittings are considered non-hazardous under normal circumstances.

1.1.11 Tube compatibility

<A> Press fittings can be used on hard, half-hard and soft copper tube to EN 1057.

1.2 Applications

<A> Press copper 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	95 max
		16	25 max
Hot water heaters EN 12828	Heating water	6	110 max
Local and district heating tubes	Heating and district heating water	10	110 max
Chilled water and cooling water systems	Water and water-glycol mixtures mixing ratio max. 50/50 %	10	-10 min
Rainwater harvesting systems	Rainwater from cisterns	10	25
Compressed air (oil-free)	Compressed air classes 1-3 as per ISO 8573-1	10	25
Industrial and processing water	Prepared, softened, partially and partially de-ionized water with a pH of 6.5 ≤ Ph 6.5 ≤ 9.5***	10	95 max
		16	25 max
Vacuum piping for non-medical purpose	N/A	-0.8	Ambient
Field test pressure	Water with 6.5 ≤ Ph 6.5 ≤ 9.5	16	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.

1.3 Product Suitability

The application parameters referred to in section 1.2 and the tube compatibility must be adhered to when using and connecting <A> Press copper and copper alloy fittings.

1.3.1 Drinking water installations

Drinking water installations must be planned and operated in accordance with local regulations, codes of practice, 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.

<A> Press copper and copper alloy fittings have several accreditations for use in drinking water systems see section 1.1.1.

A variety of tube materials including copper, internally tin-plated copper and stainless steel may all be combined in one system.

1.3.2 Heating and cooling systems

In closed heating, cooling and chilled water systems, there is generally an absence of oxygen which greatly reduces the likelihood of corrosion. This means a range of metallic materials may be used without the risk of corrosion; flow direction does not need to be taken into consideration.

Whilst, oxygen entry cannot always be fully prevented in extensive tube systems. EN 806 part 2 and 4 provide instructions for the measures to be taken in this case (chemical oxygen binding).

In the case of open vented systems, appropriate precautions should be taken with mixed metals to avoid any bi-metallic corrosion issues. You must ensure copper is installed downstream from galvanized steel components.

1.3.3 Local and district heating tube

<A> Press can be used in local and district heating tube systems with the operating parameters referred to in section 1.2. Please contact our technical team first if special additives need to be added to the hot water for corrosion protection or sealing purposes.

1.4 Thermal Expansion

1.4.1 Effects of expansion

The coefficient of linear expansion for copper is 16.8 x 10^{-6} °C. For example, a 10 m length of copper tube, irrespective of its size, wall thickness or temper, will increase in length by 10.8 mm a temperature rise of 60 °C. 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.

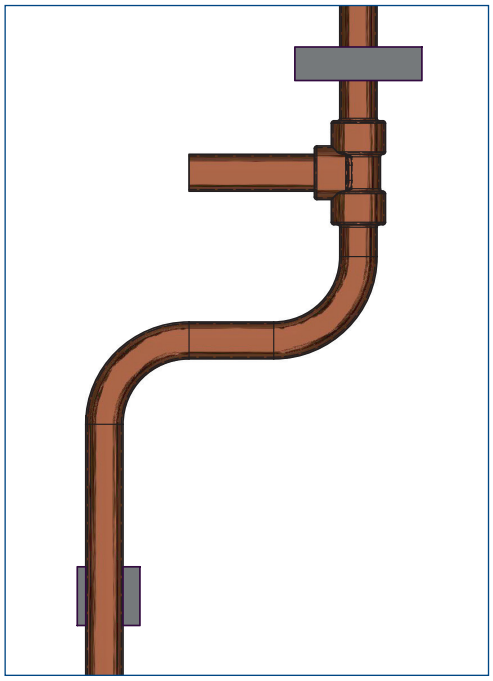
A quick, economic and effective way of accommodating thermal expansion is to simply incorporate the horseshoe or compensating bend to the system design.

1.4.2 Expansion devices

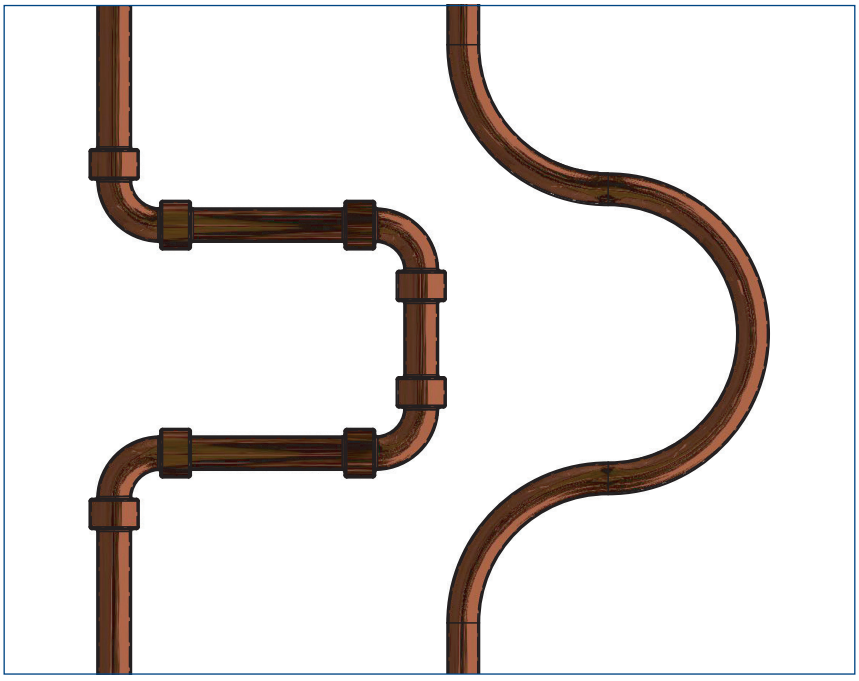
Where copper tubes pass through walls, floors and ceilings, they should be able to move as a result of expansion and contraction. This can be arranged by passing the tube through a sleeve or length of larger diameter tube fixed through the whole thickness of the wall, floor, ceiling, or by means of flexible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

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 bellows type couplers may be necessary.

Table 3 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.



By change of direction



Horseshoe or compensating bend

Table 3

Tube length m	Change in length mm with temperature difference Δt °C							
	Δt=30°	Δt=40°	Δt=50°	Δt=60°	Δt=70°	Δt=80°	Δt=90°	Δt=100°
0.1	0.05	0.07	0.08	0.10	0.12	0.13	0.15	0.17
0.2	0.10	0.13	0.17	0.20	0.24	0.27	0.30	0.34
0.3	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
0.4	0.20	0.27	0.34	0.40	0.47	0.54	0.60	0.67
0.5	0.25	0.34	0.42	0.50	0.59	0.67	0.76	0.84
0.6	0.30	0.40	0.50	0.60	0.71	0.81	0.91	1.01
0.7	0.35	0.47	0.59	0.71	0.82	0.94	1.06	1.18
0.8	0.40	0.54	0.67	0.81	0.94	1.08	1.21	1.34
0.9	0.45	0.60	0.76	0.91	1.06	1.21	1.36	1.51
1.0	0.50	0.67	0.84	1.01	1.18	1.34	1.51	1.68
2.0	1.01	1.34	1.68	2.02	2.35	2.69	3.02	3.36
3.0	1.51	2.02	2.52	3.02	3.53	4.03	4.54	5.04
4.0	2.02	2.69	3.36	4.03	4.70	5.40	6.05	6.72
5.0	2.52	3.36	4.20	5.04	5.88	6.72	7.56	8.40
10.0	5.04	6.72	8.40	10.80	11.76	13.44	15.12	16.80
15.0	7.56	10.80	12.60	15.12	17.64	20.16	22.68	25.20
20.0	10.08	13.44	16.80	20.16	23.52	26.88	30.24	33.60
25.0	12.60	16.80	21.00	25.20	29.40	33.60	37.80	42.00

Δt dimensional increase is stated in mm

1.5 Corrosion Resistance, Frost / Heat Protection

1.5.1 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.

Pipework may need to be protected from external corrosion causing construction materials, corrosive environments or abrasion. A variety of solutions are available, ducting, insulation, corrosion resistant paint finishes and anti-abrasive tape, the most effective solution should be chosen.

Systems containing copper tube with copper and copper alloy fittings generally have a high resistance to internal corrosion. However, it is recommended when systems have been hydrostatically pressure tested and are not going into immediate service, they are fully drained down and blown out with dry air. Alternatively, if this is impracticable, the system should be left 'wet', and flushed at regular intervals prior to being commissioned to reduce carbon film cold water pitting and the potential for legionella in stagnant water.

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, <A> Press 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.

1.6 Pressure Testing

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

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

Typically, when testing systems containing <A> Press fittings, all joints shall remain uncovered and visible, the system shall be filled with clean potable 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 be closed and the system topped up. At that stage testing can be completed between 1 to 2 bar and a full inspection made to ensure any un-pressed joints are identified. Any identified joints that have not been pressed and are 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 slowly raised 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.

1.7 System Commissioning

To ensure the quality and safety of hot and cold-water supply systems always follow best practice techniques in their design, installation, commissioning, and maintenance.

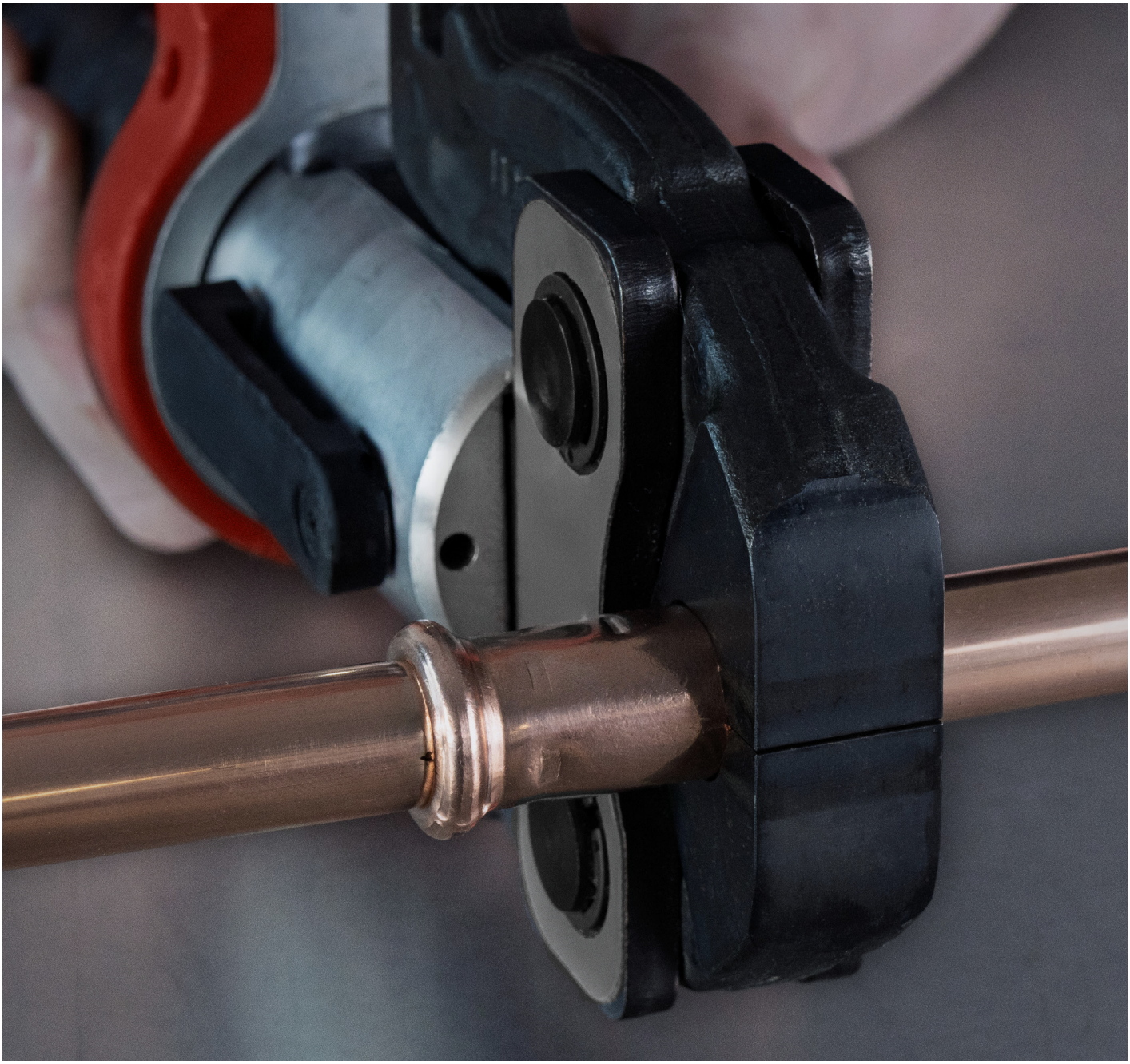
A reliable and predictive regime of commissioning that does not have any detrimental effect on the longevity of the system should be in place as required by national, regional and local laws and regulations.

The chemicals used in the pre-commissioning, if incorrectly administered can have a serious effect on the systems' life, therefore the choice of chemicals is dependent on the particular site conditions, the materials used and the method(s) of construction.

Where a temporary mains supply(s) is to be used it should be cleaned and chlorinated in accordance with national regulations before being used for system filling and flushing.

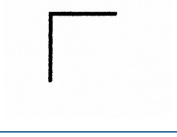
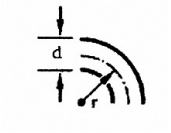
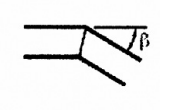
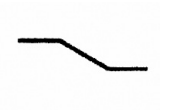
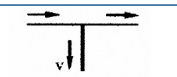
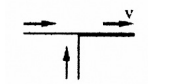
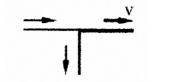
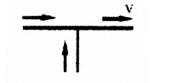
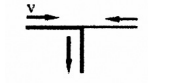
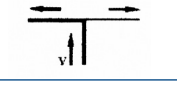
For more information on chlorination, please refer to document 'pre-commissioning of systems' available at www.conexbanninger.com.

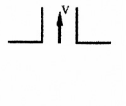
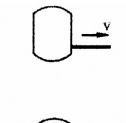
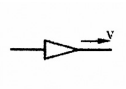
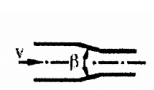
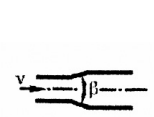
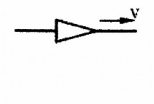
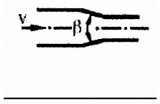
Note: Commercial anti-corrosion chemicals must not to be used on potable water systems.

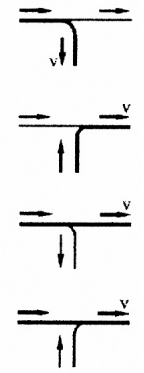
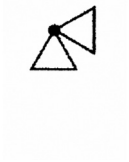
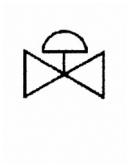
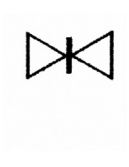
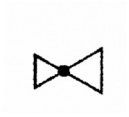


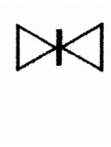
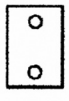
1.8 Loss Coefficients

Table 4

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

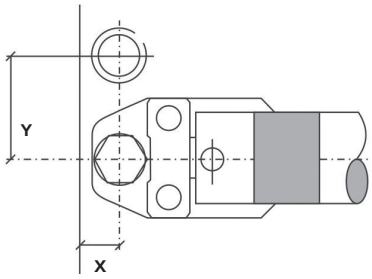
Symbol	Designation	ζ	Application	
			DW	H
	Branch, curved flow separation	0,9	X	X
	Flow merging	0,4	X	X
	Clearance at flow separation	0,3	X	X
	Clearance a flow merging	0,2	X	X
	Angle valves DN 10 DN 15 DN 20 to DN 50 DN 65 to DN 100	 7,0 4,0 2,0 3,5 4,0	 X X X X X	 X X X X X
	Diaphragm valves DN 15 DN 20 DN 25 to DN 32 DN 40 to DN 100	 10,0 8,5 7,0 6,0 5,0	 X X X X X	 X X X X X
	Shutter valves Piston valves Ball valves DN 10 to DN 15 DN 20 to DN 25 DN 32 to DN 150	 1,0 0,5 0,3	 X X X	 X 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 DN20 DN25 DN32 DN40 to DN100 Angle seat valve DN 15 DN20 DN 25 to DN50 DN65	 10,0 8,5 7,0 6,0 5,0 3,5 2,5 2,0 0,7	 X X X X X X X X X	 X X X X X X X X X
	Return flow inhibitor DN 15 to DN 20 DN 25 to DN 40 DN 50 DN 65 to DN 100	 7,7 4,3 3,8 2,5	 X X X X	
	Control valve with return flow inhibitor DN 20 DN 25 to DN 50	 6,0 5,0	 X X	
	Valve tapping sleeve DN 25 to DN 8O	 5,0	 X	
	Boiler	2,5		X
	Heating radiator	2,5		X
	Panel radiator	3,0		X

2.1 Installation Requirements

2.1.1 Space required for the pressing process

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



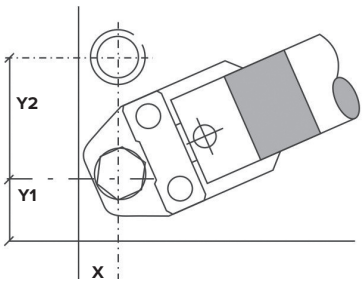


Table 5

Space required for the pressing process between fittings and wall.		
External tube	X	Y
Size mm	mm	mm
12	26	53
15	26	53
22	26	56
28	33	69
35	33	73
42	75	115
54	85	120

Table 6

Space required for the pressing process between fittings and wall corner.			
External tube	X	Y1	Y2
Size mm	mm	mm	mm
12	31	45	73
15	31	45	73
22	31	45	76
28	38	55	80
35	38	55	85
42	75	75	115
54	85	85	140

2.1.2 Insertion depth and minimum distances between pressings

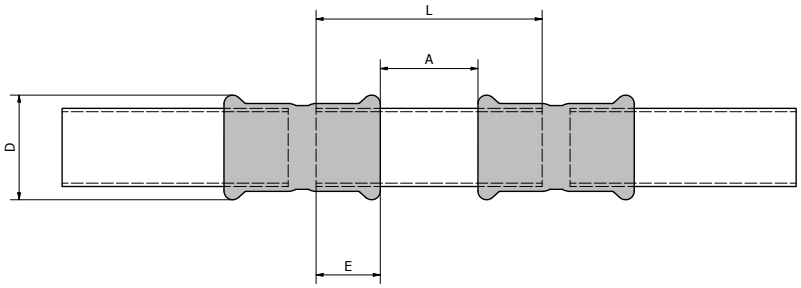


Table 7

Insertion depth and minimum distance between pressings				
Size	External - Ø pressing bead	Minimum distance	Minumum tube length	Insertion depth
mm	D - mm	A - mm	L - mm	E - mm
12	18.5	10	44	17
15	22	10	50	20
18	25	10	55	20
22	23	20	62	21
28	35.5	20	66	23
35	42.5	25	77	26
42	51	30	90	30
54	62.7	35	105	35

2.1.3 Minimum distance for press fittings from an existing welded joint

To ensure proper sealing of both the welded and <A> Press fitting, the following minimum distances must be maintained between the two fittings. Please see Table 8 for further information.

Table 8

Minimum distance from a welded joint	
Tube size	mm
12	5
15	5
22	5
28	5
35	10
42	15
54	20

2.1.4 Minimum welding distance to an existing pressed fitting

Caution: Welding near <A> Press joints should be avoided as this may cause the seal to degrade due to heat transfer. Table 9 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 9

Minimum distance welding	
Tube size	mm
12	450
15	450
22	600
28	700
35	900
42	1200
54	1500

2.1.5 <A> Press tube compatibility table

<A> Press fittings can be used on hard, half-hard and soft copper tube to EN 1057 with the wall thicknesses stated below.

Table 10

Tube wall thickness (mm)						
Tube O/D	Copper - R220		Copper - R250		Copper - R290	
12	0.6	–	0.9	1.0	1.0	–
14	1.0	–	1.0	1.0	1.0	–
15	1.0	–	0.7	1.0	1.0	–
16	1.0	–	1.0	1.0	1.0	–
18	1.0	–	0.8	1.0	1.0	–
22	1.0	1.2	0.9	1.1	1.0	1.5
28	–	–	0.9	1.2	1.0	1.5
35	–	–	1.2	–	1.0	1.5
42	–	–	1.2	–	1.0	1.5
54	–	–	1.2	–	1.2	2.0

2.2. Compatible Press Tools

2.2.1 Tool chart

Table 11

12 to 35 mm Compact 19kN machines				
Manufactuer	Press machine	Press jaws	Size range (mm)	Profile
Geberit Mapress	ACO102/ACO103	Geberit - Press jaws [1 series] M12 to M35 (Black colour)	12 to 35	M
Klauke	MAP219/MAP2L19	Klauke - SBMX	12 to 28	M
Milwaukee	M12HPT	J12	12 to 35	M
Novopress	ACO102/ACO103	NovoPress - Press jaw M12 to M35	12 to 35	M
Pegler XPress	ACO102/ACO103	Pegler SB211 PB1 series	12 to 35	M
Rems	Mini Press ACC	Rems - Mini	12 to 35	M
Rothenberger	Compact 3	Compact jaw	12 to 35	M

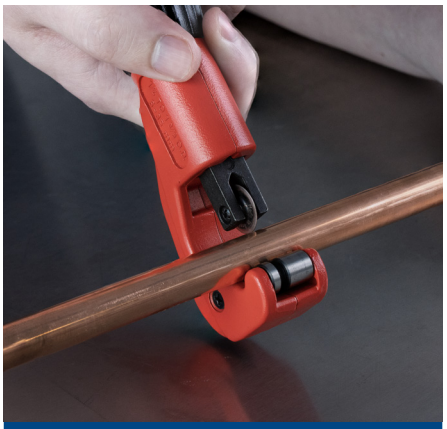
Table 12

12 to 54 mm Standard 32kN machines				
Manufactuer	Press machine	Press jaws	Size range (mm)	Profile
Geberit Mapress	ECO202/ACO202	Geberit - Press jaws [2 series] M15 to M35	15 to 35	M
		Geberit - Press Collars - M42, M54 plus ZB203A Adapter	42 to 54	M
			42 to 54	M
Klauke	UAP2/UAP3L/UAP332	Klauke - Standard SB	15 to 35	M
		Klauke - Press Collars + SBKQC Adapter jaw	42 to 54	M
Milwaukee	M18	J18	12 to 35	M
		Ring jaw + RJA Adapter	42 to 54	M
Novopress	ECO202/ACO202	Novopress - Press jaws M15 to M35	15 to 35	M
	ECO203/ACO203	Novopress - Press Collars - M42, M54 + ZB203 Adapter	42 to 54	M
Pegler Xpress	ECO202/ACO202	Pegler S227 ECOTEC series	15 to 35	M
	ECO203/ACO203	Press Jaws	15 to 35	M
	ACO202XI/ACO203XL	Pegler S228 series Press Collars + ZB203 Adapter	42 to 54	M
			42 to 54	M
Rems	Power-Press/ Akku-Press	Rems - Standard	15 to 35	M
		Rems - Press rings (PR-3S) + Z2 Adapter	42 to 54	M
Rothenberger	Romax 4000	Standard jaw	15 to 35	M
		Press Rings + ZBS1 Adapter	42 to 54	M

For full machine/tool compatibility please refer to the website - www.conexbanninger.com

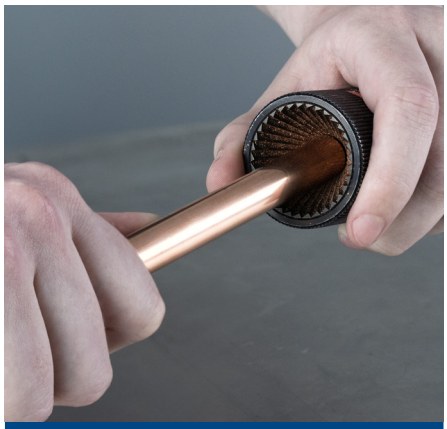
3. Fitting Installation Instructions

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 2.1).



1. Cut tube to length

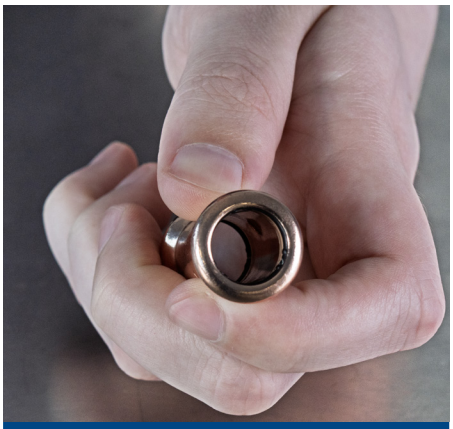
- Use a rotary tube cutter.
- Ensure that the tube is cut square.
- Check the tube has maintained its shape and is damage free



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 fittings 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 <A> Press joint is complete after one full cycle of the tool. Do not crimp any <A> Press fitting more than once.

6. Completed joint

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

<A> Press Copper

4. The Range

APW5001
90° Street Bend

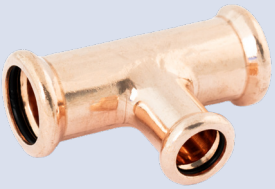
APW5002
90° Bend

APW5040
45° Obtuse Street Bend

APW5041
45° Obtuse Bend

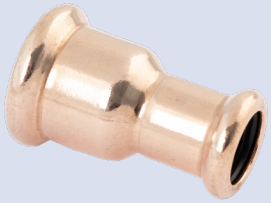
APW5130
Equal Tee

APW5130RB
Tee - Reduced Branch



APW5130REB
Tee - Reduced End and Branch

APW5240
Reduced Coupler



APW5243
Fitting Reducer

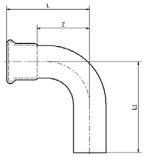
APW5270
Straight Coupler

APW5270S
Slip Coupler

APW5301
Cap

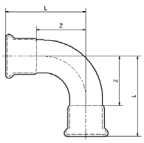
Fitting Lubricant for O-ring

APW5001
90° Street Bend



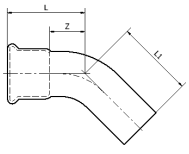
Code	Fitting size	L	L1	Z
APW5001 0120000	12	31	38	12
APW5001 0150000	15	37.5	46	17.5
APW5001 0180000	18	43	46	13
APW5001 0220000	22	51	60	30
APW5001 0280000	28	57	69	33.5
APW5001 0350000	35	68.0	81	42
APW5001 0420000	42	78	96	47
APW5001 0540000	54	97	112	61.5

APW5002
90° Bend



Code	Fitting size	L	Z
APW5002 0120000	12 x 12	31	15
APW5002 0150000	15 x 15	37.5	17
APW5002 0180000	18 x 18	43	23
APW5002 0220000	22 x 22	50.6	29
APW5002 0280000	28 x 28	57	33.5
APW5002 0350000	35 x 35	67	41
APW5002 0420000	42 x 42	78	47
APW5002 0540000	54 x 54	97	61.5

APW5040
45° Obtuse Street Bend

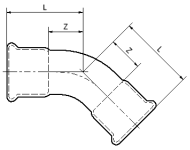


Code	Fitting size	L	L1	Z
APW5040 0120000	12	25.5	27	9
APW5040 0150000	15	28	35	8
APW5040 0180000	18	32	33	12
APW5040 0220000	22	33	44.0	11
APW5040 0280000	28	35	48	11.5
APW5040 0350000	35	42.0	54	16
APW5040 0420000	42	48	58	17
APW5040 0540000	54	57	70	21.5

*All above measurements are in mm unless stated differently.

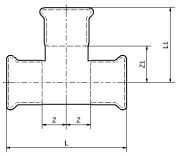
<A> Press Copper

APW5041
45° Obtuse Bend



Code	Fitting size	L	Z
APW5041 0120000	12 x 12	26	9
APW5041 0150000	15 x 15	28	7.5
APW5041 0180000	18 x 18	33	13
APW5041 0220000	22 x 22	33	12
APW5041 0280000	28 x 28	35	11.5
APW5041 0350000	35 x 35	42	16
APW5041 0420000	42 x 42	48	17
APW5041 0540000	54 x 54	57	21.5

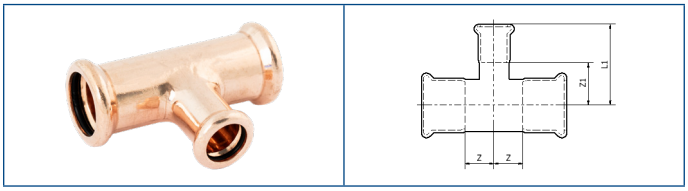
APW5130
Equal Tee



Code	Fitting size	L	Z	L1	Z1
APW5130 0121212	12	57	10.5	28	10
APW5130 0151515	15	66	13	33	13
APW5130 0181818	18	77	16.5	31	11
APW5130 0222222	22	75.5	16.75	37.6	16.6
APW5130 0282828	28	83.5	6.75	41.75	20
APW5130 0353535	35	96.5	22.25	48.5	22.5
APW5130 0424242	42	115	27.5	57.2	27.5
APW5130 0545454	54	137	33.5	68.7	33.7

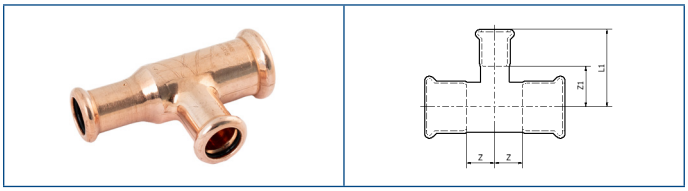
*All above measurements are in mm unless stated differently.

APW5130RB
Tee - Reduced Branch



Code	Fitting size	L	Z	L1	Z1
APW5130 0151215	15 x 12 x 15	65.5	12.75	29.2	12.2
APW5130 0181218	18 x 12 x 18	61.4	10.7	32.9	15.9
APW5130 0181518	18 x 15 x 18	64.5	12.3	32.6	12.6
APW5130 0221222	22 x 12 x 22	64.5	11.3	35.8	18.8
APW5130 0221522	22 x 15 x 22	65	11.5	36	16
APW5130 0221822	22 x 18 x 22	64.5	11.3	34.3	14.3
APW5130 0281528	28 x 15 x 28	68.5	11.3	38	18
APW5130 0281828	28 x 18 x 28	74.5	14.3	40	20
APW5130 0282228	28 x 22 x 28	76	15	39.5	18.5
APW5130 0351535	35 x 15 x 35	74	11	42	22
APW5130 0352235	35 x 22 x 35	81	15	43	22
APW5130 0352835	35 x 28 x 35	88	18	45	22
APW5130 0421542	42 x 15 x 42	83	11.5	49	29
APW5130 0422242	42 x 22 x 42	90.3	15.2	46.2	25.2
APW5130 0422842	42 x 28 x 42	97	18.5	49	26
APW5130 0423542	42 x 35 x 42	105.2	22.6	52.5	26.5
APW5130 0542254	54 x 22 x 54	100	15	49.5	28.5
APW5130 0542854	54 x 28 x 54	107	18.5	55.2	32.2
APW5130 0543554	54 x 35 x 54	114.5	22.3	58.5	32.5
APW5130 0544254	54 x 42 x 54	123	26.5	63.5	33.5

APW5130REB
Tee - Reduced End and Branch

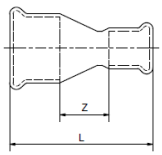


Code	Fitting size	L	Z	L1	Z1
APW5130 0151212	15 x 12 x 12	68.5	14.2	29.1	12.1
APW5130 0152215	15 x 22 x 15	94	26	36	15
APW5130 0181515	18 x 15 x 15	73	15	33	13
APW5130 0221515	22 x 15 x 15	74	16.5	35	14
APW5130 0282222	28 x 22 x 22				

*All above measurements are in mm unless stated differently.

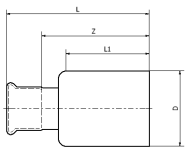
<A> Press Copper

APW5240
Reduced Coupler



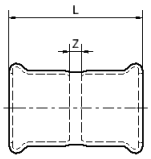
Code	Fitting size	L	Z
APW5240 0151200	15 x 12	43	6
APW5240 0221500	22 x 15	49	8

APW5243
Fitting Reducer



Code	Fitting size	L	L1	Z	D
APW5243 0151200	15 x12	44	24	27	15
APW5243 0181200	18 x 12	53	24	36	18
APW5243 0181500	18 x 15	47	24	27	18
APW5243 0221500	22 x 15	50.6	25	30.6	22
APW5243 0221800	22 x 18	50	25	30	22
APW5243 0281500	28 x 15	59	27	39	28
APW5243 0281800	18 x 22	53.5	27	33	28
APW5243 0282200	28 x 22	53.5	27	32.5	28
APW5243 0352200	35 x 22	63	30	42	35
APW5243 0352800	35 x 28	59	30	35.8	35
APW5243 0422200	42 x 22	74	34	53	42
APW5243 0422800	42 x 28	70	34	47	42
APW5243 0423500	42 x 35	66.4	34	40.4	42
APW5243 0542800	54 x 28	80	39	56.5	54
APW5243 0543500	54 x 35	81.8	39	56	54
APW5243 0544200	54 x 42	81	35	51	54

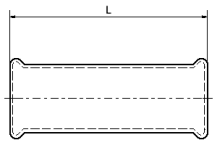
APW5270
Straight Coupler



Code	Fitting size	L	Z
APW5270 0120000	12 x 12	36.2	2.2
APW5270 0150000	15 x 15	42.1	2.1
APW5270 0180000	18 x 18	42.2	2.2
APW5270 0220000	22 x 22	44	2
APW5270 0280000	28 x 28	48	2
APW5270 0350000	35 x 35	54	2
APW5270 0420000	42 x 42	64.7	4.7
APW5270 0540000	54 x 54	74.3	4.3

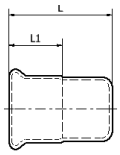
*All above measurements are in mm unless stated differently.

APW5270S
Slip Coupler



Code	Fitting size	L
APW5270S0120000	12 x 12	80
APW5270S0150000	15 x 15	80
APW5270S0180000	18 x 18	80
APW5270S0220000	22 x 22	80
APW5270S0280000	28 x 28	91
APW5270S0350000	35 x 35	101
APW5270S0420000	42 x 42	120.5
APW5270S0540000	54 x 54	140

APW5301
Cap



Code	Fitting size	L	L1
APW5301 0120000	12	19	17
APW5301 0150000	15	23	21
APW5301 0180000	18	23	20.5
APW5301 0220000	22	25	23
APW5301 0280000	28	28	25.5
APW5301 0350000	35	31	28
APW5301 0420000	42	35	32.5
APW5301 0540000	54	39	35.8

Fitting Lubricant for O-ring

Code	Size
MPABPSOIL100ML	100 ml

*All above measurements are in mm unless stated differently.

5. Product Guarantee

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

Conex Universal Ltd. guarantees that <A> Press Copper 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

Notes

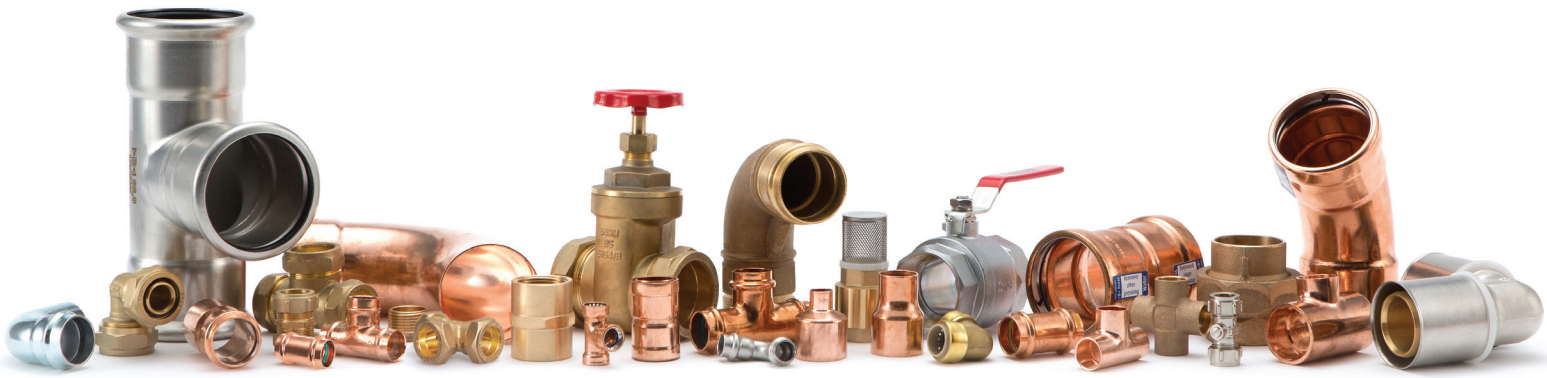
Conex Bänninger

›B‹ Press
›B‹ Press Gas
›B‹ Press Solar
›B‹ Press XL
›B‹ Press Carbon
›B‹ Press Inox
›B‹ Steel

›B‹ MaxiPro
›B‹ ACR
K65
‹A› Press Inox
›B‹ Push
›B‹ Sonic
›B‹ Oyster

›B‹ Flex
Triflow Solder Ring
Delcop End Feed
Delbraze
Medical Gas
Valves

Conex Compression
Series 3000
Series 4000
Series 5000
Series 8000
OEM Solutions



United Kingdom
Conex Universal Limited

Spain
IBP Atcosa SL

Italy
IBP Bänninger Italia srl

USA
IBP Group LLC

Germany
IBP GmbH

France
Conex Bänninger SRL

Poland Sales, Marketing and Logistics
IBP Instalfittings Sp z.o.o.

China
IBP China

Tel: +44 (0)121 557 2831 | Fax: +44 (0)121 557 0185 | Email: salesuk@ibpgroup.com | www.conexbanninger.com