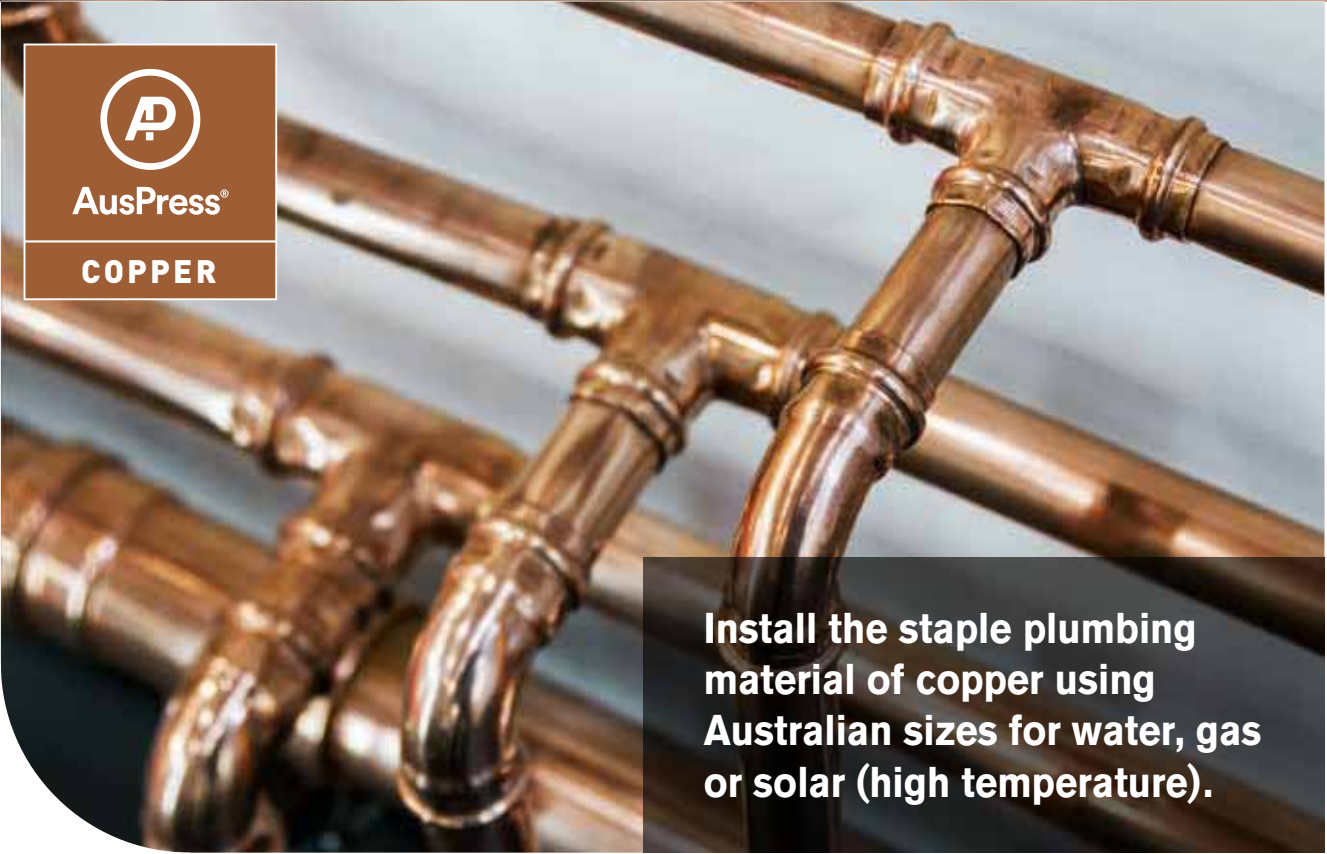




AusPress®

COPPER



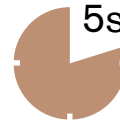
Install the staple plumbing material of copper using Australian sizes for water, gas or solar (high temperature).



profile



DN15 to 100



Press a DN25 fitting onto copper tube in under 5 seconds. Join done.

Faster to Install

AusPress press-fit offers large time savings compared to soldering, threading, grooving or glueing.

Quality to Install

Approved for water and gas applications to Australian & International standards.

Safer to Use

- One button tool operation.
- Lightweight battery tools.
- No flames or hot work permits.
- No heavy gas tanks.
- No hazardous fumes.
- Less risk - no waiting.

Reliable Design

- Suits a wide range of applications.
- Permanent high strength with the **'V' press** join profile.
- Consistent low profile join look & quality each time.

Experience Counts

We were the first to supply press-fit stainless in Australia & New Zealand.

We work with consultants & installers on specialised complex projects regularly.

Environmental Choice

- Long service life.
- Closed loop material (completely recycled to make more copper).
- Efficient and waste free install.

Installing AusPress®



DN15 to 50

Start to install quicker...

AusPress Copper is installed easily & quickly using a Press Tool to form a permanent 'V' profile pressed joint between tube and fitting.



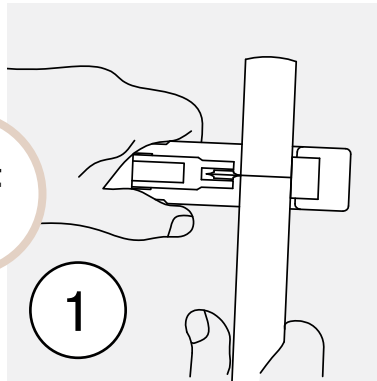
Start here

Check for suitability...

Both the piping material (eg copper) and the elastomer (eg rubber ring seal) must be checked if suitable for the possible fluids and exterior environments.

Installation only by qualified and licensed plumber in accordance with AS3500.

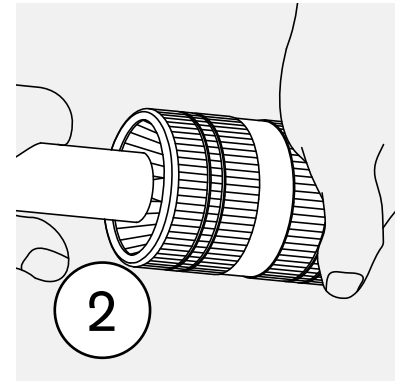
If in doubt, ask us!



Cut to Length

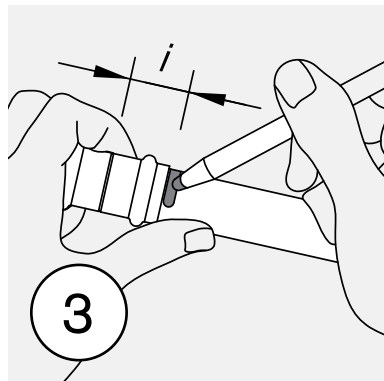
Cut the tube at right angles using a tube cutter or fine tooth saw.

Note: Using the same cutting tool on different metals can lead to corrosion.



Deburr Tube

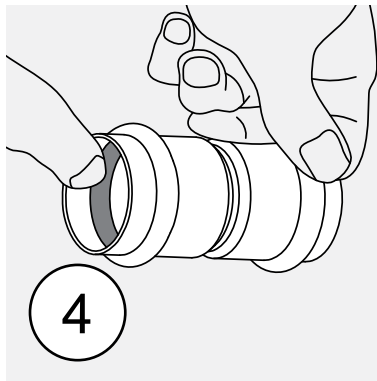
Deburr both inside & outside edges of tube to prevent damage to the ring seal of the fitting.



Mark the Insertion Depth "i"

Measure or use a depth gauge to mark the insertion depth (socket depth) onto the tube end.

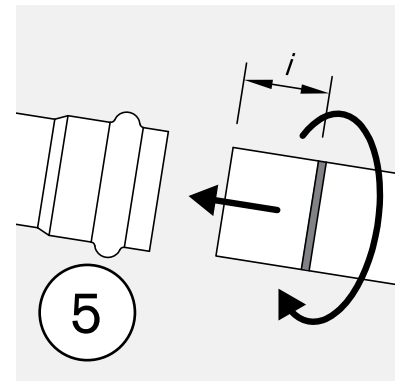
This is a visual quality control mark to ensure the tube is fully inserted.



Inspect Fitting & Ring Seals

Check that the rubber ring seal is:

- The correct material type (colour) of seal is used.
- The seal is not damaged.
- Both fitting & seal are free of debris.



Join the Tube & Fitting

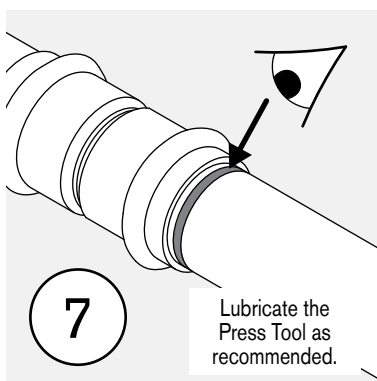
Insert the tube into the fitting press socket, turning slightly until it reaches the previously marked insertion depth.

Soapy water can be used if joining is difficult.



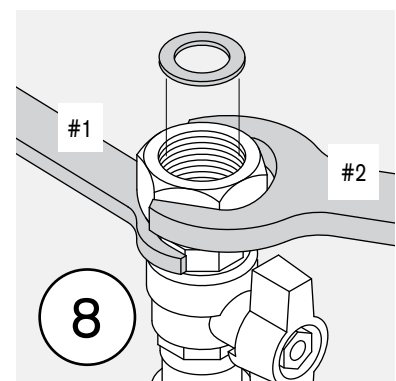
Press the Joint

Using a suitable press tool and V-profile jaw or collar, align the press jaw with the fitting and join following the tool manufacturer's instructions.



Check the Press

Visually inspect the pressed fitting & that the insertion mark is aligned with the end of the socket.



Threaded Ends

Tighten threads with the fitting supported, don't tighten against a pressed joint alone.



Installing AusPress®



DN DN65 to 100

Start to install quicker...
AusPress Copper is installed easily & quickly using a Press Tool to form a permanent 'V' profile pressed joint between tube and fitting.

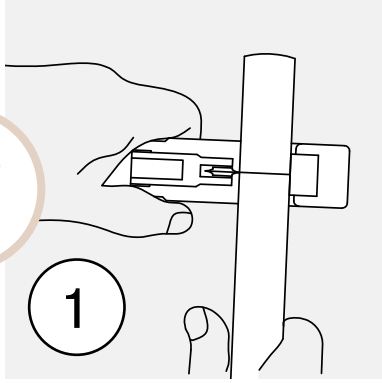


Start here

Check for suitability...
Both the piping material (eg copper) and the elastomer (eg rubber ring seal) must be checked if suitable for the possible fluids and exterior environments.

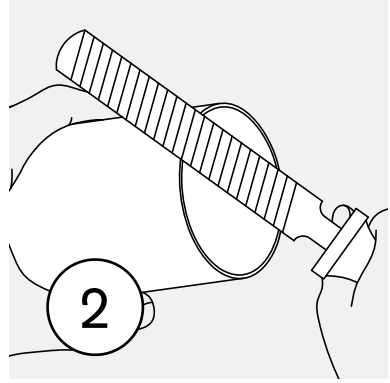
Installation only by qualified and licensed plumber in accordance with AS3500.

If in doubt, ask us!

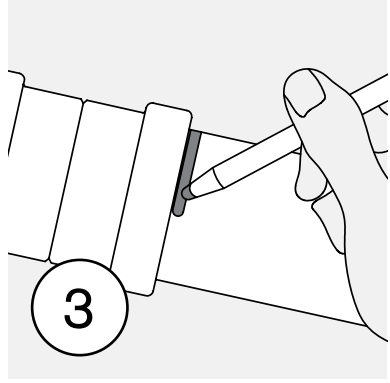


Cut to Length
Cut the tube at right angles using a tube cutter or fine tooth saw.

Note: Using the same cutting tool on different metals can lead to corrosion.

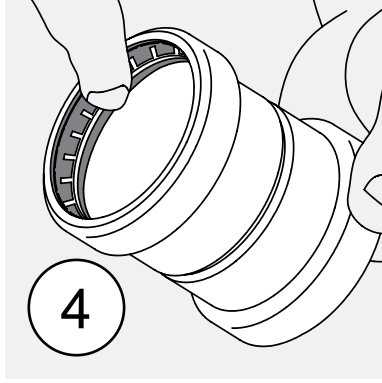


Deburr Tube
Deburr both inside & outside edges of tube to prevent damage to the ring seal of the fitting.



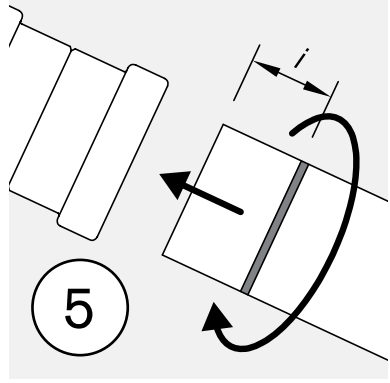
Mark the Insertion Depth "l"
Measure or use a depth gauge to mark the insertion depth (socket depth) onto the tube end.

This is a visual quality control mark to ensure the tube is fully inserted.



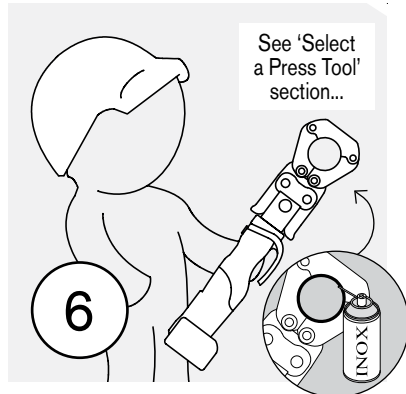
Inspect Fitting & Ring Seals
Check that the socket end has:

- The correct material type (colour) of ring seal is used.
- The parts are not damaged.
- The fitting, grab ring & seal are free of debris.

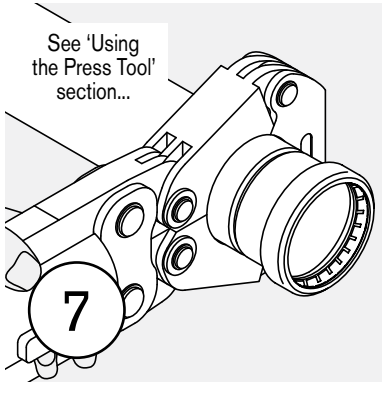


Join the Tube & Fitting
Insert the tube into the fitting press socket, turning slightly until it reaches the previously marked insertion depth.

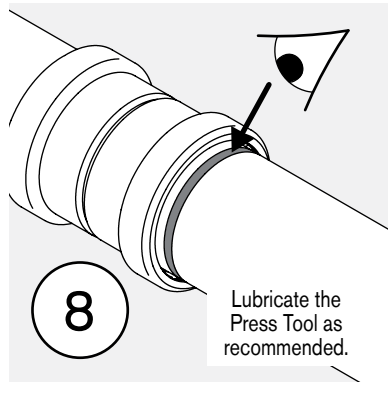
Soapy water can be used if joining is difficult.



Press Tool Selection
Select the correct press tool, jaw or collar to suit the fitting, dimension and application pressures. Ensure press zone is lubricated each press with Inox spray.



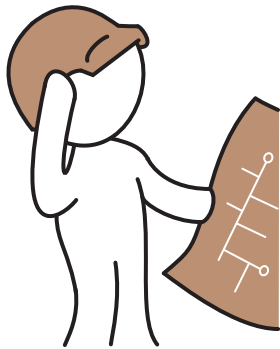
Press the Join
Align the press jaw or collar with the press socket and start the press to join the fitting & tube.



Check & Complete
Visually inspect the pressed fitting & that the insertion mark is aligned with the end of the socket.

Select a Type & Press Tool

Read with 'Using the Press Tools' section.



Let's Start...

Our range of Copper Press Fittings are supplied with a different ring seal pre-fitted depending on the application - Water, Solar (High Temp) or Gas.

Start here

AusPress Copper



We supply a complete range of press tools & press jaws for copper, stainless steel, PEX and multi-layer systems too.

Application & Ordering Code:

Water
CUW

Natural & LPG Gas
CUG

Solar (HT)
CUS

CUS: Intended for solar hot water installations.

Temperature Range:

-20 to +100°C

-40 to +70°C

-20 to +170°C

For other applications (such as steam) please contact us first.

Allowance must be provided for expansion in areas where pipework may freeze.

Max Working Pressure*:

1,600 kPa 16 bar 232 psi

Subject to applicable approval and regulation maximum pressures (eg Natural Gas up to 2 bar for AS 5601).

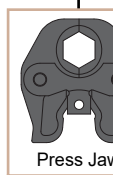
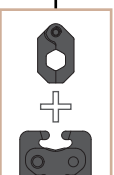
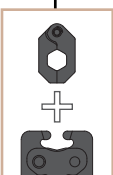


Press-Fit Diameters:

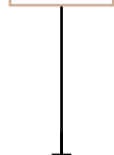
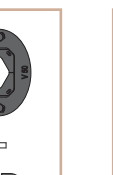
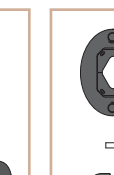
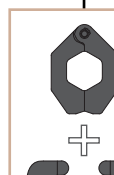
DN15 - 32
1/2" - 1.1/4"

DN40 & 50
1.1/2" & 2"

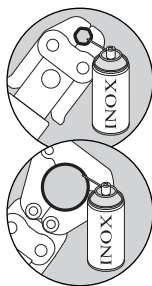
DN65 - 100
2.1/2" - 4"



† See note below



- Other brand tools:
- R'berger Romax Compact
 - Kembla KPS
 - Viega Pressgun Picco
 - Novopress ACO152
 - Milwaukee M12 Force Logic

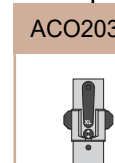


Ensure the inner press surfaces are lubricated with Innox for a smooth consistent press. Reapply as needed.

† Note: Confirm the suitability of the various branded DN40 & DN50 Jaws with V-Profile Copper fittings before commencing work.



6 sec press



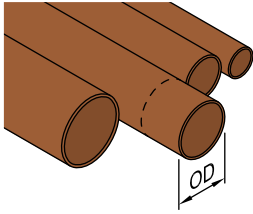
- Plus...
- Vetec CPN700
 - Novopress AFP202
 - R'berger Romax 3000
 - Viega Pressgun 4B
 - Viega Pressgun 5
 - Rems Akku-Press
 - Kembla KPL †
 - Kembla KPLx †
 - Milwaukee M18 Force Logic
 - Milwaukee M18 Force Logic Long Throw
 - Klauke UAP3L
 - Klauke UAP4L
 - Rems Akku-Press
 - Rems Akku-Press XL

Please Note:
This chart is a guide and full specifications and instructions are available on request. Confirm with tool manufacturers for compatibility as their specifications may be changed.

* This value is the maximum working pressure, not the safety or testing pressure of the system.



Copper Tube Type A

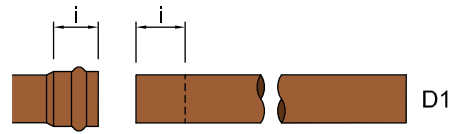


AusPress Copper Fittings are compatible with copper tube complying with AS1432, Type A or B.

Fittings are from Type A.

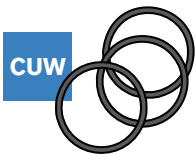
Hard drawn tubes are recommended. Annealed tube must be true round, inserted straight and square into the fitting.

i = insertion depth. Tube must be inserted into the press socket a minimum distance to ensure the joint is pressed successfully.

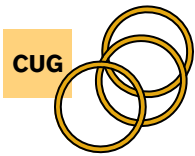


D1 (DN)	OD (mm)	i depth	Type A t	Type B t
15	12.70	19	1.02	0.91
18	15.88	21	1.22	1.02
20	19.05	22	1.42	1.02
25	25.40	23	1.63	1.22
32	31.75	26	1.63	1.22
40	38.10	32	1.63	1.22
50	50.80	40	1.63	1.22
65	63.50	42	1.63	1.22
80	76.20	48	2.03	1.63
100	101.60	60	2.03	1.63

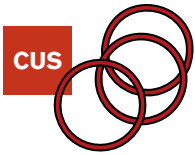
Ring Seals



Water
Colour: Black
Material: EPDM
Range: -20°C to +100°C



Gas
Colour: Yellow
Material: NBR
Range: -40°C to +70°C



Solar (High Temp)
Colour: Red
Material: FKM (Viton)
Range: -20°C to +170°C

Each press-fit socket is pre-fitted with a rubber ring seal. Sizes 15 to 50 have the ring seal alone, larger sizes have the ring seal and a stainless steel grab ring as part of the socket end.

Ring seals are not interchangeable - for example you cannot swap a water ring seal for a gas ring seal.

Refer to our relevant Technical Media Chart for suitability or contact us for more information.

Press-Fit Installation Plate

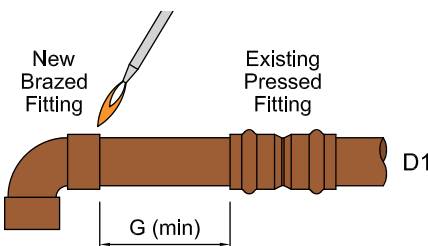
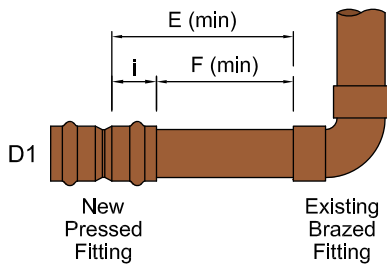


Product No	Colour: Yellow	Pack Qty
AP.CTAG.1Y	90 x 55mm	1x
AP.CTAG.10Y	90 x 55mm	10x

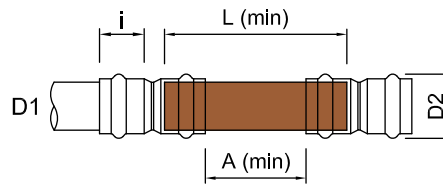
As required by some authorities for gas and other installations using press-fit connections.

Fitting Installation Clearances

Confirm sizes and clearance distances before installing and also refer to the tool installation clearances.



We recommend to wrap the closest existing press join fitting(s) with a wet cloth while brazing.



For specific information, please contact us.

D1	Profile	i	L	A	D2	E	F	G
15	V	19	51	13	20	32	13	1000
18	V	21	55	13	24	34	13	1000
20	V	22	57	13	27	35	13	1000
25	V	23	61	15	34	38	15	1000
32	V	26	67	15	41	41	15	1000
40	V	32	84	20	49	52	20	1000
50	V	40	105	25	61	65	25	1300
65	V	42	109	25	79	67	25	1600
80	V	48	126	30	90	78	30	2000
100	V	60	150	30	116	90	30	2500

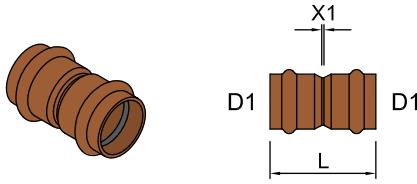
V-Profile fittings shown (eg DN15 - 50), AusPress Copper sizes over DN50 are measured from the end of the fitting.

Measurements are dependant on the actual fitting dimensions and the Press Tool used to join. Confirm clearances with your particular installation as these may change.



■ Coupling Socket - Socket

Material: Copper, Type A.

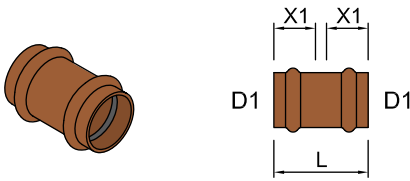


Solar (HT) Also available: DN15, 20 & 25.

D1	L	X1	Water	Gas	Bag Qty
			Ring Seal: EPDM x2	Ring Seal: HNBR x2	
15	40	2	CUW.21.015	CUG.21.015	10x
20	48	4	CUW.21.020	CUG.21.020	10x
25	51	5	CUW.21.025	CUG.21.025	10x
32	54	2	CUW.21.032	CUG.21.032	5x
40	67	3	CUW.21.040	CUG.21.040	-
50	83	3	CUW.21.050	CUG.21.050	-
65	113	29	CUW.21.065	CUG.21.065	-
80	122	26	CUW.21.080	CUG.21.080	-
100	143	23	CUW.21.100	CUG.21.100	-

■ Slip (Repair) Coupling Socket - Socket

Material: Copper, Type A.

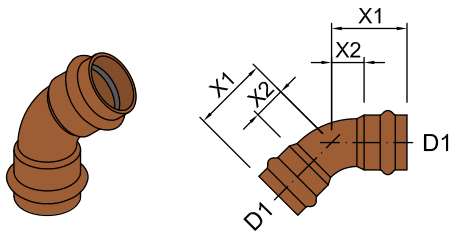


Note: No stopper - ensure tube reaches the insertion depth X1.

D1	L	X1	Water	Gas	Bag Qty
			Ring Seal: EPDM x2	Ring Seal: HNBR x2	
15	40	19	CUW.22.015	CUG.22.015	10x
20	48	22	CUW.22.020	CUG.22.020	10x
25	51	23	CUW.22.025	CUG.22.025	10x
32	54	26	CUW.22.032	CUG.22.032	5x
40	67	32	CUW.22.040	CUG.22.040	-
50	83	40	CUW.22.050	CUG.22.050	-
65	111	42	CUW.22.065	CUG.22.065	-
80	123	48	CUW.22.080	CUG.22.080	-
100	138	60	CUW.22.100	CUG.22.100	-

■ 45 Bend Socket - Socket

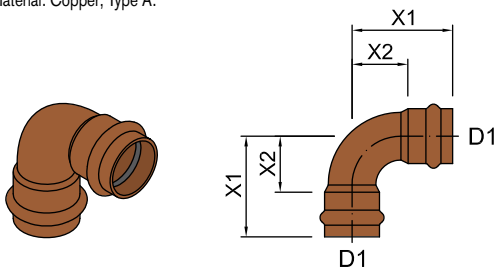
Material: Copper, Type A.



D1	X1	X2	Water	Gas	Bag Qty
			Ring Seal: EPDM x2	Ring Seal: HNBR x2	
15	32	13	CUW.31.045.015	-	10x
20	29	7	CUW.31.045.020	CUG.31.045.020	10x
25	34	11	CUW.31.045.025	CUG.31.045.025	10x
32	41	15	CUW.31.045.032	CUG.31.045.032	10x
40	51	19	CUW.31.045.040	CUG.31.045.040	5x
50	64	24	CUW.31.045.050	CUG.31.045.050	-
65	80	38	CUW.31.045.065	CUG.31.045.065	-
80	85	37	CUW.31.045.080	CUG.31.045.080	-
100	114	54	CUW.31.045.100	CUG.31.045.100	-

■ 90 Bend Socket - Socket

Material: Copper, Type A.

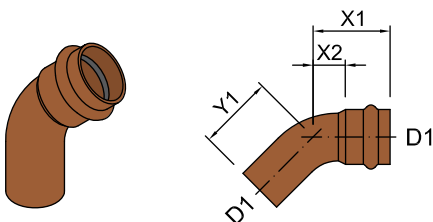


Solar (HT) Also available: DN15, 20 & 25.

D1	X1	X2	Water	Gas	Bag Qty
			Ring Seal: EPDM x2	Ring Seal: HNBR x2	
15	33	14	CUW.31.090.015	CUG.31.090.015	10x
20	36	14	CUW.31.090.020	CUG.31.090.020	10x
25	45	22	CUW.31.090.025	CUG.31.090.025	10x
32	52	26	CUW.31.090.032	CUG.31.090.032	5x
40	76	44	CUW.31.090.040	CUG.31.090.040	-
50	92	52	CUW.31.090.050	CUG.31.090.050	-
65	110	68	CUW.31.090.065	CUG.31.090.065	-
80	135	87	CUW.31.090.080	CUG.31.090.080	-
100	187	127	CUW.31.090.100	CUG.31.090.100	-

■ 45 Bend Tube End - Socket

Material: Copper, Type A.

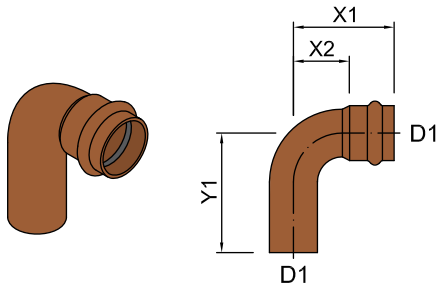


D1	X1	X2	Y1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	-	
25	34	11	34	CUW.32.045.025	-	10x
32	41	15	41	CUW.32.045.032	-	10x
40	51	19	51	CUW.32.045.040	-	5x
50	64	24	64	CUW.32.045.050	-	-



■ **90 Bend Tube End - Socket**

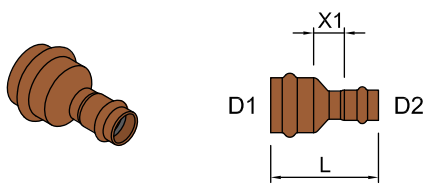
Material: Copper, Type A.



D1	X1	X2	Y1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	33	14	34	CUW. 32.090.015	CUG. 32.090.015	10x
20	36	14	46	CUW. 32.090.020	CUG. 32.090.020	10x
25	45	22	51	CUW. 32.090.025	CUG. 32.090.025	10x
32	52	26	45	CUW. 32.090.032	CUG. 32.090.032	5x
40	76	44	71	CUW. 32.090.040	CUG. 32.090.040	5x
50	92	52	93	CUW. 32.090.050	CUG. 32.090.050	-
65	110	68	126	CUW. 32.090.065	-	-
80	135	87	147	CUW. 32.090.080	-	-
100	187	127	176	CUW. 32.090.100	-	-

■ **Socket Reducer Socket - Socket**

Material: Copper, Type A.

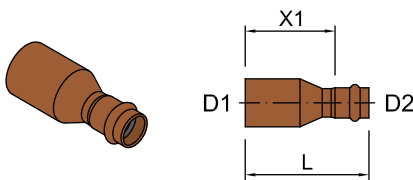


Solar (HT) Also available: DN20x15.
DN25x15.
DN25x20.

D1	D2	L	X1	Water	Gas	Bag Qty
				Ring Seal: EPDM x2	Ring Seal: HNBR x2	
18	15	44	4	CUW. 29.018.015	-	10x
20	15	52	11	CUW. 29.020.015	CUG. 29.020.015	10x
20	18	47	4	CUW. 29.020.018	-	10x
25	15	54	12	CUW. 29.025.015	CUG. 29.025.015	10x
25	20	55	10	CUW. 29.025.020	CUG. 29.025.020	10x
32	20	61	13	CUW. 29.032.020	CUG. 29.032.020	10x
32	25	57	8	CUW. 29.032.025	CUG. 29.032.025	10x
40	20	73	19	CUW. 29.040.020	CUG. 29.040.020	-
40	25	69	14	CUW. 29.040.025	CUG. 29.040.025	-
40	32	69	11	CUW. 29.040.032	CUG. 29.040.032	-
50	20	91	29	CUW. 29.050.020	CUG. 29.050.020	-
50	25	87	24	CUW. 29.050.025	CUG. 29.050.025	-
50	32	84	18	CUW. 29.050.032	CUG. 29.050.032	-
50	40	86	14	CUW. 29.050.040	CUG. 29.050.040	-
65	25	92	27	CUW. 29.065.025	CUG. 29.065.025	-
65	32	94	26	CUW. 29.065.032	CUG. 29.065.032	-
65	40	99	25	CUW. 29.065.040	CUG. 29.065.040	-
65	50	104	22	CUW. 29.065.050	CUG. 29.065.050	-
80	40	110	30	CUW. 29.080.040	CUG. 29.080.040	-
80	50	110	22	CUW. 29.080.050	CUG. 29.080.050	-
80	65	114	24	CUW. 29.080.065	CUG. 29.080.065	-
100	50	132	32	CUW. 29.100.050	CUG. 29.100.050	-
100	65	131	29	CUW. 29.100.065	CUG. 29.100.065	-
100	80	131	23	CUW. 29.100.080	CUG. 29.100.080	-

■ **Spigot Reducer Tube End - Socket**

Material: Copper, Type A.

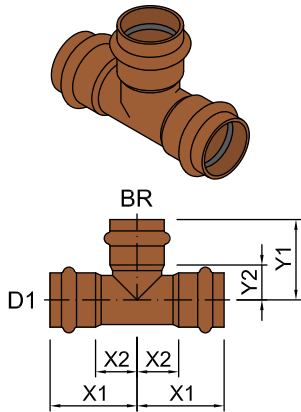


D1	D2	L	X1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	Ring Seal: HNBR x1	
20	15	50	31	CUW. 23.020.015	CUG. 23.020.015	10x
25	15	65	46	CUW. 23.025.015	CUG. 23.025.015	10x
25	20	53	31	CUW. 23.025.020	CUG. 23.025.020	10x
32	20	60	38	CUW. 23.032.020	CUG. 23.032.020	10x
32	25	56	33	CUW. 23.032.025	CUG. 23.032.025	10x
40	25	70	47	CUW. 23.040.025	CUG. 23.040.025	-
40	32	67	41	CUW. 23.040.032	CUG. 23.040.032	-
50	25	85	62	CUW. 23.050.025	-	-
50	32	83	57	CUW. 23.050.032	CUG. 23.050.032	-
50	40	87	55	CUW. 23.050.040	CUG. 23.050.040	-
65	40	113	81	CUW. 23.065.040	-	-
65	50	107	67	CUW. 23.065.050	CUG. 23.065.050	-
80	40	133	101	CUW. 23.080.040	-	-
80	50	128	88	CUW. 23.080.050	CUG. 23.080.050	-
80	65	125	83	CUW. 23.080.065	CUG. 23.080.065	-
100	50	154	114	CUW. 23.100.050	CUG. 23.100.050	-
100	65	152	110	CUW. 23.100.065	CUG. 23.100.065	-
100	80	147	99	CUW. 23.100.080	CUG. 23.100.080	-



■ Tee Equal Socket x3

Material: Type A Copper.

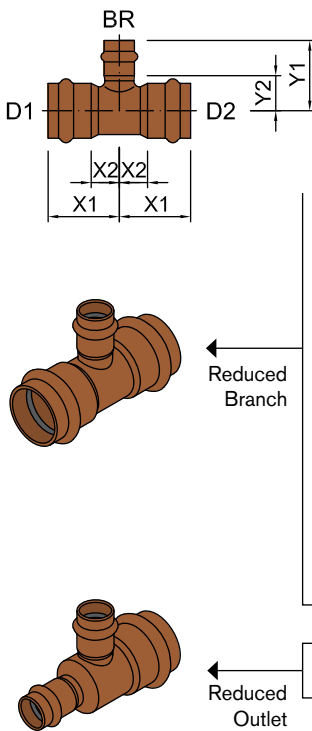


D1	BR	D1	X1	X2	Y1	Y2	Water	Gas	Bag Qty
							Ring Seal: EPDM x3	Ring Seal: HNBR x3	
15	15	15	33	14	29	10	CUW.51.015	CUG.51.015	10x
20	20	20	43	21	36	14	CUW.51.020	CUG.51.020	10x
25	25	25	46	23	44	21	CUW.51.025	CUG.51.025	10x
32	32	32	55	29	48	22	CUW.51.032	CUG.51.032	5x
40	40	40	60	28	58	26	CUW.51.040	CUG.51.040	-
50	50	50	73	33	75	35	CUW.51.050	CUG.51.050	-
65	65	65	93	51	92	50	CUW.51.065	CUG.51.065	-
80	80	80	102	54	103	55	CUW.51.080	CUG.51.080	-
100	100	100	125	65	125	65	CUW.51.100	CUG.51.100	-

Solar (HT) Also available: DN15, 20 & 25.

■ Tee Reduced Socket - Branch - Socket

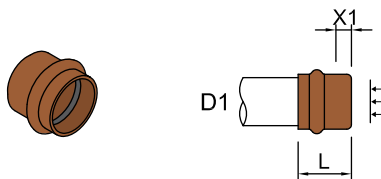
Material: Type A Copper.



D1	BR	D2	X1	X2	Y1	Y2	Water	Gas	Bag Qty
							Ring Seal: EPDM x3	Ring Seal: HNBR x3	
20	15	20	38	16	32	13	CUW.52.020.015.020	CUG.52.020.015.020	10x
25	15	25	40	17	35	16	CUW.52.025.015.025	CUG.52.025.015.025	10x
25	20	25	43	20	40	18	CUW.52.025.020.025	CUG.52.025.020.025	10x
32	15	32	37	11	38	19	CUW.52.032.015.032	-	5x
32	20	32	37	11	42	20	CUW.52.032.020.032	-	5x
32	25	32	43	17	44	21	CUW.52.032.025.032	CUG.52.032.025.032	5x
40	20	40	49	17	50	28	CUW.52.040.020.040	-	-
40	25	40	50	18	50	27	CUW.52.040.025.040	-	-
40	32	40	56	24	51	25	CUW.52.040.032.040	CUG.52.040.032.040	-
50	20	50	58	18	54	32	CUW.52.050.020.050	-	-
50	25	50	61	21	56	33	CUW.52.050.025.050	-	-
50	32	50	61	21	59	33	CUW.52.050.032.050	-	-
50	40	50	68	28	66	34	CUW.52.050.040.050	CUG.52.050.040.050	-
65	50	65	78	36	84	44	CUW.52.065.050.065	CUG.52.065.050.065	-
80	50	80	90	42	90	50	CUW.52.080.050.080	-	-
80	65	80	96	48	100	58	CUW.52.080.065.080	CUG.52.080.065.080	-
100	50	100	101	41	104	64	CUW.52.100.050.100	-	-
100	65	100	107	47	118	76	CUW.52.100.065.100	-	-
100	80	100	114	54	125	77	CUW.52.100.080.100	CUG.52.100.080.100	-
20	15	15			32	13	CUW.52.020.015.015	CUG.52.020.015.015	10x
20	20	15			36	14	CUW.52.020.020.015	CUG.52.020.020.015	10x

■ End Cap Socket End

Material: Copper, Type A.



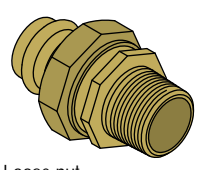
D1	L	X1	Water	Gas	Bag Qty
			Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	21	2	CUW.24.015	CUG.24.015	10x
20	26	4	CUW.24.020	CUG.24.020	10x
25	28	5	CUW.24.025	CUG.24.025	10x
32	30	4	CUW.24.032	CUG.24.032	10x
40	36	4	CUW.24.040	CUG.24.040	-
50	47	7	CUW.24.050	CUG.24.050	-
65	52	10	CUW.24.065	CUG.24.065	-
80	57	9	CUW.24.080	CUG.24.080	-
100	66	6	CUW.24.100	CUG.24.100	-

These End Caps are supplied with F1 (Rp) BSP 3/4" nut at end (add 26mm to 'L' length).

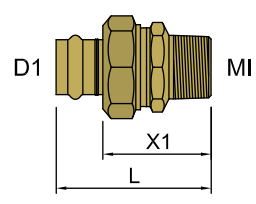


■ **MI Union Socket - MI (R) BSP**

Material: Brass.



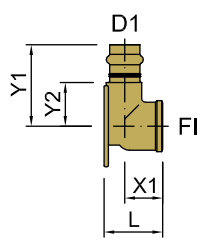
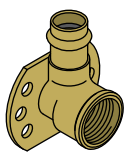
Loose nut.



D1	MI	L	X1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	59	40	CUW. 82 .015.015	CUG. 82 .015.015	10x
20	3/4"	69	47	CUW. 82 .020.020	CUG. 82 .020.020	5x
25	1"	78	55	CUW. 82 .025.025	CUG. 82 .025.025	5x
32	1.1/4"	83	57	CUW. 82 .032.032	CUG. 82 .032.032	-
40	1.1/2"	93	61	CUW. 82 .040.040	CUG. 82 .040.040	-
50	2"	113	73	CUW. 82 .050.050	CUG. 82 .050.050	-

■ **90 FI Bend Wall Fix Socket - FI (Rp) BSP**

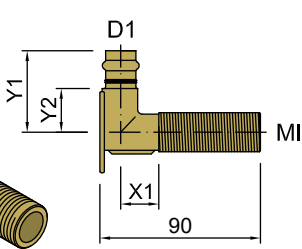
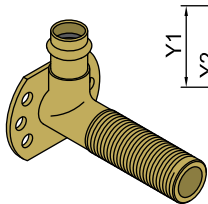
Material: Brass.



D1	FI	L	X1	Y1	Y2	Water	Gas	Bag Qty
						Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	39	26	35	16	CUW. 36 .015.015	CUG. 36 .015.015	5x
20	3/4"	47	30	42	20	CUW. 36 .020.020	CUG. 36 .020.020	5x

■ **90 MI Bend Wall Fix Socket - MI (R) BSP**

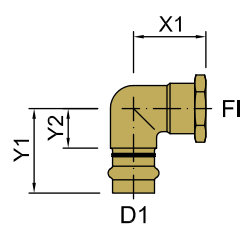
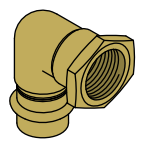
Material: Brass.



D1	MI	X1	Y1	Y2	Water	Gas	Bag Qty
					Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	15	36	17	CUW. 37 .015.015	CUG. 37 .015.015	5x
20	1/2"	28	35	13	CUW. 37 .020.015	CUG. 37 .020.015	5x
20	3/4"	35	43	21	CUW. 37 .020.020	CUG. 37 .020.020	5x

■ **90 FI Bend Socket - FI (Rp) BSP**

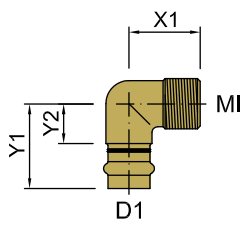
Material: Brass.



D1	FI	X1	Y1	Y2	Water	Gas	Bag Qty
					Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	27	34	15	CUW. 34 .015.015	CUG. 34 .015.015	10x
20	3/4"	30	42	20	CUW. 34 .020.020	CUG. 34 .020.020	5x
25	3/4"	33	44	21	CUW. 34 .025.020	CUG. 34 .025.020	5x
25	1"	36	47	24	CUW. 34 .025.025	CUG. 34 .025.025	5x

■ **90 MI Bend Socket - MI (R) BSP**

Material: Brass.

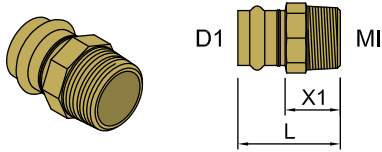


D1	MI	X1	Y1	Y2	Water	Gas	Bag Qty
					Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	27	34	15	CUW. 35 .015.015	CUG. 35 .015.015	10x
20	3/4"	31	42	20	CUW. 35 .020.020	CUG. 35 .020.020	5x
25	1"	40	46	23	CUW. 35 .025.025	CUG. 35 .025.025	5x



MI Adaptor Socket - MI (R) BSP

Material: Brass.

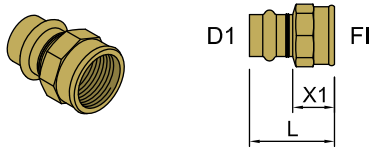


Solar (HT) Also available: DN15, 20 & 25.

D1	MI	L	X1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	43	24	CUW.74.015.015	CUG.74.015.015	10x
20	1/2"	47	25	CUW.74.020.015	CUG.74.020.015	10x
20	3/4"	48	26	CUW.74.020.020	CUG.74.020.020	5x
25	3/4"	51	28	CUW.74.025.020	CUG.74.025.020	5x
25	1"	55	32	CUW.74.025.025	CUG.74.025.025	5x
32	1.1/4"	57	31	CUW.74.032.032	CUG.74.032.032	-
40	1.1/2"	65	33	CUW.74.040.040	CUG.74.040.040	-
50	2"	79	39	CUW.74.050.050	CUG.74.050.050	-

FI Adaptor Socket - FI (Rp) BSP

Material: Brass.

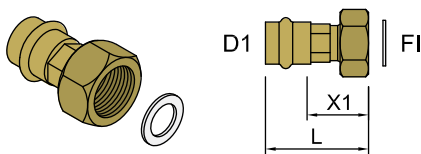


Solar (HT) Also available: DN15 & 20.

D1	FI	L	X1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	1/2"	41	22	CUW.73.015.015	CUG.73.015.015	10x
20	3/4"	46	24	CUW.73.020.020	CUG.73.020.020	5x
25	1"	50	27	CUW.73.025.025	CUG.73.025.025	5x
32	1.1/4"	54	28	CUW.73.032.032	CUG.73.032.032	-
40	1.1/2"	61	29	CUW.73.040.040	CUG.73.040.040	-
50	2"	74	34	CUW.73.050.050	CUG.73.050.050	-

FI Adaptor Socket - FI (G) BSP Loose Nut

Material: Brass.

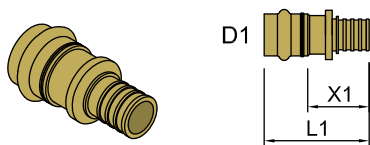


D1	FI	L	X1	Water	Bag Qty
				Ring Seal: EPDM x1	
20	3/4"	54	32	CUW.44.020.020	5x
25	1"	57	34	CUW.44.025.025	5x

Flat gasket included.

Adaptor PEX: Slide Socket - PEX (PN20)

Material: Brass.

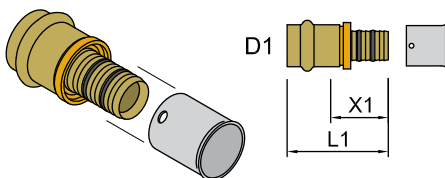


D1	PEX	L	X1	Water	Bag Qty
				Ring Seal: EPDM x1	
15	16	48	29	CUW.67.015.016	5x
20	20	56	34	CUW.67.020.020	5x

Sleeve not included.
 Confirm PEX system suitability before installation.
 PEX pipe: PEX-A PN20 16mm (16.3x2.2-2.6)
 PEX-A PN20 20mm (20.3x2.8-3.2)

Adaptor PEX-Al: Crimp Socket - PEX Multilayer (PN20)

Material: Brass, EPDM seals on barb with Stainless Sleeve.



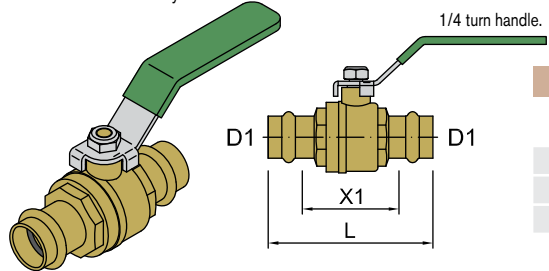
D1	PEX	L	X1	Water	Gas	Bag Qty
				Ring Seal: EPDM x1	Ring Seal: HNBR x1	
15	16	50	31	CUW.66.015.016	CUG.66.015.016	10x
20	20	55	33	CUW.66.020.020	CUG.66.020.020	10x
25	25	65	42	CUW.66.025.025	CUG.66.025.025	5x
32	32	66	40	CUW.66.032.032	CUG.66.032.032	5x

Sleeve included.
 U-Profile jaw for PEX crimping. Confirm PEX system suitability before installation.
 PEX Pipe: PEX-AL PN20 16mm (16x2.2)
 PEX-AL PN20 20mm (20x2.8)
 PEX-AL PN20 25mm (25x3.5)
 PEX-AL PN20 32mm (32x4.4)



■ **Ball Valve Socket - Socket**

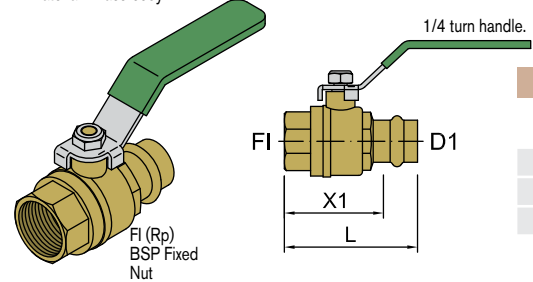
Material: Brass body.



D1	D1	L	X1	Max: 1,050kPA		Bag Qty
				Water	Gas	
				Ring Seal: EPDM x1 Handle Colour: Green	Ring Seal: HNBR x1 Handle Colour: Yellow	
15	15	71	33	CUW. 46 .015.015	CUG. 43 .015.015	x10
20	20	87	43	CUW. 46 .020.020	CUG. 43 .020.020	x8
25	25	100	54	CUW. 46 .025.025	CUG. 43 .025.025	x5

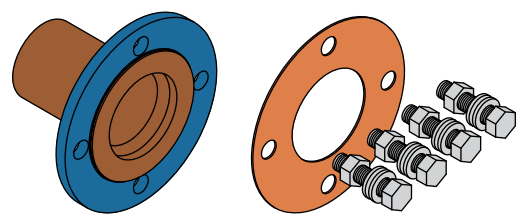
■ **Ball Valve Socket - FI (Rp) Fixed Nut**

Material: Brass body.



D1	FI	L	X1	Max: 1,050kPA		Bag Qty
				Water	Gas	
				Ring Seal: EPDM x1 Handle Colour: Green	Ring Seal: HNBR x1 Handle Colour: Yellow	
15	1/2"	61	42	CUW. 45 .015.015	CUG. 41 .015.015	x10
20	3/4"	70	48	CUW. 45 .020.020	CUG. 41 .020.020	x8
25	1"	88	65	CUW. 45 .025.025	CUG. 41 .025.025	x5

■ **Adaptor Flange Tube End - Slip On Flange**



Painted Flange & Copper Stub

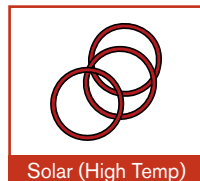
Bolt & Flat Face Gasket Kit

D1	Flange	MWP	Flange & Stub	Bolt & Gasket Kit
				FKM gasket material
40	D/E	2,300	CUF. E .040	CUF. GBKE .040
50	D/E	1,170	CUF. E .050	CUF. GBKE .050
65	E	1,370	CUF. E .065	CUF. GBKE .065
80	E	1,520	CUF. E .080	CUF. GBKE .080
100	E	1,200	CUF. E .100	CUF. GBKE .100

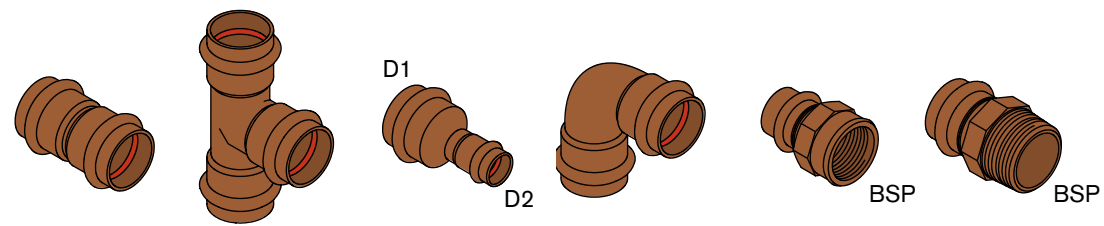
Bolt & gasket kits sold separately from the flange product code. These items available on request and other flange types also available. AS2129-2000 -Max 1,400 kPPa; 2100 kPa test pressure.

■ **High Temperature Range Pre-fitted FKM ring seal fittings**

These fittings are pre-fitted with a 'High Temperature' or 'Solar' ring seal intended for hot water service pipework. For other applications (such as steam) please consult with us first.



Solar (High Temp)
Material: FKM (Viton)
Red
-20°C to +170°C



D1	BSP	D2	Solar (HT)	Solar (HT)	Solar (HT)	Solar (HT)	Solar (HT)	Solar (HT)
			Ring Seal: FKM x2	Ring Seal: FKM x3	Ring Seal: FKM x2	Ring Seal: FKM x2	Ring Seal: FKM x1	Ring Seal: FKM x1
15	-	-	CUS. 21 .015	CUS. 51 .015	-	CUS. 31 .090.015	-	-
20	-	-	CUS. 21 .020	CUS. 51 .020	-	CUS. 31 .090.020	-	-
25	-	-	CUS. 21 .025	CUS. 51 .025	-	CUS. 31 .090.025	-	-
20	-	15	-	-	CUS. 29 .020.015	-	-	-
25	-	15	-	-	CUS. 29 .025.015	-	-	-
25	-	20	-	-	CUS. 29 .025.020	-	-	-
15	1/2"	-	-	-	-	-	CUS. 73 .015.015	CUS. 74 .015.015
20	3/4"	-	-	-	-	-	CUS. 73 .020.020	CUS. 74 .020.020
25	1"	-	-	-	-	-	CUS. 73 .025.025	CUS. 74 .025.025

Tech Data Sheet: AusPress Copper Press-Fit



V-Profile System



Water, Gas & Solar



Aus Sizes DN15 - 100

What is Press-Fit?

A quick, flame free and consistent process using a press tool fitted with matching profiled jaw or collar to form a permanent and consistent joint between tube and fitting.

Applications:

Common applications include:

- Potable, Chilled and Hot Water.
- Compressed Air.
- Chemical lines.
- Fire services (subject to AS 2419.1).
- Fuels & Oils (excluding Diesel).
- Gases - Inert & Flammable.
- Steam (wet) to 100°C.
- Vacuum.
- Not suitable for sewer or stormwater.
- Other applications on request.

Refer to our Media Chart, Technical Catalogue or contact us directly for specific information and suitability.

Key Features

- Very fast installation process.
- No need for hot-work permits.
- Simple process to train users to install using a press tool.
- One system suits a wide range of applications.
- Fittings stocked in Australia.
- Large range of fitting types including flanged adaptors and threaded fittings.
- Long service life and recyclable product (closed reuse loop).
- Efficient and waste free install.

FAQ:

- Deburr the tube inside and out to prevent damage to the ring seal is best practice.
- Ensure minimum distance between pressed fittings is observed.
- Protect press fittings from the transferred heat of brazing new fittings.
- Chemicals? Ask us to confirm suitability for stainless and ring seal.
- Expansion? Calcs available.

Copper Tube

- Type A and Type B copper tube manufactured to AS 1432 is suitable to use with our fittings.
- Hard drawn tube is recommended; annealed tube to be used straight and true round before pressing.
- Chromed tube? Ok (if to AS 1432) but some splitting of the plating may occur at the press area.

Tube DN	Tube OD	Thickness	
		A	B
15	12.70	1.02	0.91
18	15.88	1.22	1.02
20	19.05	1.42	1.02
25	24.50	1.63	1.22
32	31.75	1.63	1.22
40	38.10	1.63	1.22
50	50.80	1.63	1.22
65	63.50	1.63	1.22
80	76.20	2.03	1.63
100	101.60	2.03	1.63

Press Fittings

- Type A copper.
- DZR brass (selected fittings).
- Australian sizing **DN15 to 100**.
- **V-Profile** socket (with ring seal, diameters 65+ ring seal and stainless steel grab ring).
- Ring seal pre-fitted to socket ends.
- Markings – laser etched.

Ring Seals (Elastomers)

- Pre-fitted, not to be interchanged.
- Contain no softening agents or other fillers which lead to embrittlement.
- Pre-lubricated seals from the manufacturer, don't use oil or spray.
- Water seals feature "leak before press" detection; identifies unpressed joints between 100-500kPa up to 54mm diameter.
- Slow aging process.
- Maintain a low compression set value, even at higher temps.
- Low oxygen permeation rate; this is critical in avoiding corrosion effects due to the intrusion of oxygen.

Seal Type*	Temp Range
Water	-20 to +100°C
Gas	-40 to +70°C
Solar (HT)	-20 to +170°C

*Refer to our Media Chart & contact us for suitability before installation.

Pressure Ratings:

The maximum working pressure depends on the application being used. Contact AusPress for specific chemical or application consideration.

Working pressures (kPa)*:		
Tube DN	Potable Water 85°C	Natural Gas
15 to 100	1,600	200

* Figures noted are maximum. Natural Gas limit per AS 5601. Higher pressures on request.

Pressure test to AS 3500 or AS 5601 as applicable. Generally, test potable water services to 1.5x the working pressure.

Tooling

- The jaw/collar profile must match the fitting profile: V-Profile on V-Profile.
- Lubricate the jaw & collar 'press zone' regularly with Inox spray.
- Most press tools are recognised by AusPress as suitable including Romax 4000, Viega Pressgun and Novopress tools – ask for suitability.

Warranty

- 50 year design life, standard 25 year product warranty – refer to our Tech Note TN.06 for details.

System Approvals & Compliance:

- WaterMark AS 3688
- WaterMark AS 5601.1

Technical Assistance

- Suitability checks for projects & applications on request.
- Tech Notes and Media Chart product reference material.
- AusPress staff available across Australia & New Zealand.

Need More Information?

Please contact us for product support, technical advice or your project specific requirements:

- Phone: 1300 287 773
- Email: sales@auspress.com.au

Visit auspress.com.au for the latest product information, tech notes & catalogues.



The Strength of Press-Fit

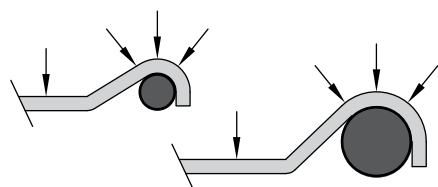
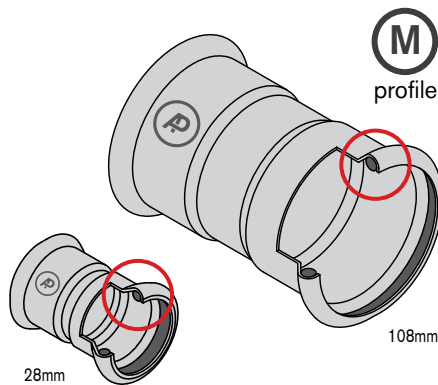
It's All In The Join

The socket on each press fitting is fitted with a rubber ring seal, engineered to provide both a strong and sealed joint after being pressed with a press tool.

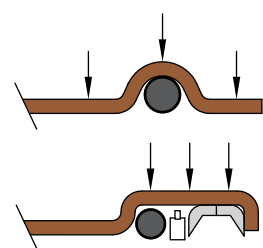
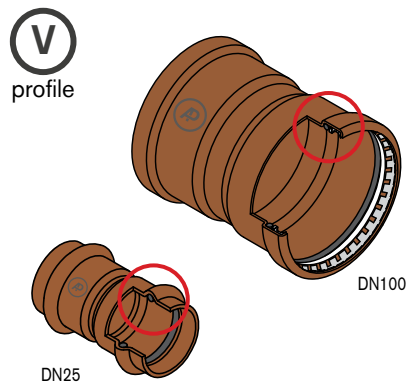
By using a calibrated press tool, each joint is permanent and uniform as the joint is deformed in two ways;

The engineered shaping of the fitting against the tube to provide strength to the join as the primary seal plus,

The deformation of the rubber ring seal to form the secondary seal in the encapsulated pocket between the fitting and tube.



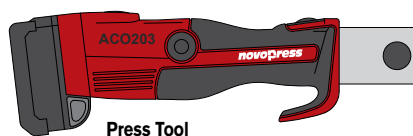
M-Profile: All diameters from 10 to 168.3mm feature the same turned down end that the ring seal is seated.



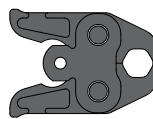
V-Profile: Diameters DN50 and smaller have a flat tail continuing past the ring seal.

V-Profile: Diameters DN65 and above feature a flat socket lip that a grab ring, spacer and ring seal are seated.

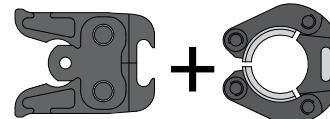
The press jaw (or collar) determines the shape and it is important to ensure the jaw (or collar) used with the press tool matches not only the diameter but also the fitting profile to ensure a successful pressed joint.



Press Tool
Available in a range of sizes and abilities.



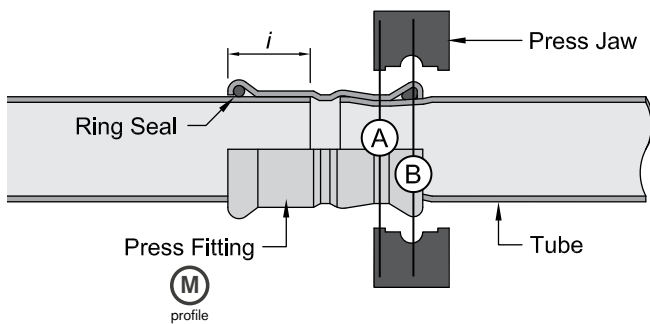
Press Jaw
Insert into tool directly.



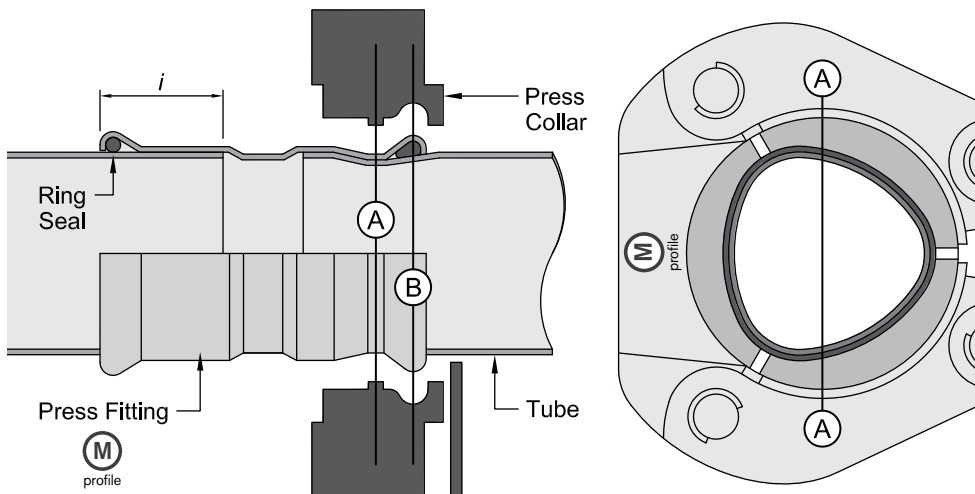
Adaptor Jaw + Press Collar
Insert jaw into the tool, jaw clamps onto collar.

Above: Press Tools are fitted with an interchangeable jaw or, adaptor jaw and collar combination depending on the fitting material, system diameter and fitting press profile to be pressed. All must match for the press to be successful.

Since the original M-Profile was invented by Larsson, other profiles have been developed based on his design. Although appearing to be similar, each profile performs with different strength, deformation and ability characteristics.



Above: Hexagonal shape section profile - Before pressing (fitting left), after pressing (fitting right) & Section A through pressed join.



Above: Lemon shape section profile - Before pressing (fitting left), after pressing (fitting right) & Section A through pressed join.

Did You Know?
Originally designed in 1962 by Swedish engineer Gunther Larsson, the first press fittings were manufactured by German company Mannesmann from 1969.

Two different cross section shapes are pressed depending on the tube diameter - the hexagonal and the lemon shape.

Section A:
This forms the mechanical strength of the pressed joint.

Section B:
The deformation of the rubber ring seal ensures a permanently tight joint.

Using a Press Tool

The Tool Does All The Work

Press Tools are designed specifically for the installation of press fittings and come in a range of shapes and sizes. They often have an on-board computer that controls the press pressure, duration and other quality control parameters that is recorded on the press tool.

Press fittings can only be pressed with a press tool that is fitted with the correct jaw or collar that matches the profile type and diameter of the fitting. After a successful press, a permanent joint between the fitting and the tube is made.

Different press tools have different abilities and determine the working pressure of the completed system so use the 'Select a Press Tool' charts at the start of each section to check for suitability.

Every press tool is slightly different so check with the tool manufacturer for their specifications and operating instructions.

Read in conjunction with the Installing AusPress guide at the start of each catalogue section.

- 1 Check the press jaw (A) or collar (B+C) matches the profile and diameter of the fitting and is suitable for the press tool.
- 2 Retract the retaining pin (RP) of the tool and insert the jaw into the press tool. Once seated, close the retaining pin.
- 3 Open the press jaw and align the inner groove of the jaw with the raised profile of the fitting.
- 4 Check the fitting is fully engaged by the insertion depth mark and if so, press and hold the start button (GO) to begin the press.
- 5 Once complete the tool will 'click' and retract the internal roller pins. Open the press jaw and move away from the fitting.
- 6 An occasional spray with Inox lubricant on the jaw moving parts and press zone will ensure ongoing smooth operation.

Tool, Jaw & Collar Calibration

Tool calibration show when next due for calibration.



Example shows due 08/2022

Half or Cancelled Press?

If the press tool operation is stopped before completing a full press cycle, the press tool must reset before removing the jaws. **Press fittings cannot be re-pressed.**

Tool Training & Safety

For OH&S and product warranty reasons, before using a press tool you must of completed the relevant AusPress Tool Training.

Use the Right Tool...

The Press Tool used determines the maximum working pressure of the installation.

Use the 'Select a Press Tool' chart to check suitability.



Safety & Tool Training

We offer on-site tool training and maintain records of attendees for OH&S and Quality Assurance.

Tool Servicing

We're authorised press tool repair & service centre for our Novopress & Vetec tools.

Tool Maintenance Every 10x Presses:

Lightly lubricate inside press zone groove of jaws & collars with an Inox spray.

Weekly:

Lubricate and inspect press jaws and collars for wear or damage.

Regular Servicing:

Refer to manufacturer's tool manual for service interval & warranty details.

Tool Not Working?

Press the Reset Button?
LED status?
Contact Us...

Green LED

Off = Tool is on standby or press is in progress.
Steady = Tool is ready.
Flash = Check retaining pin or Battery Charge.

Red LED

Steady = Fault / Service.
Flash (x3) = Extreme temperatures or tool fault.

Red & Green LEDs

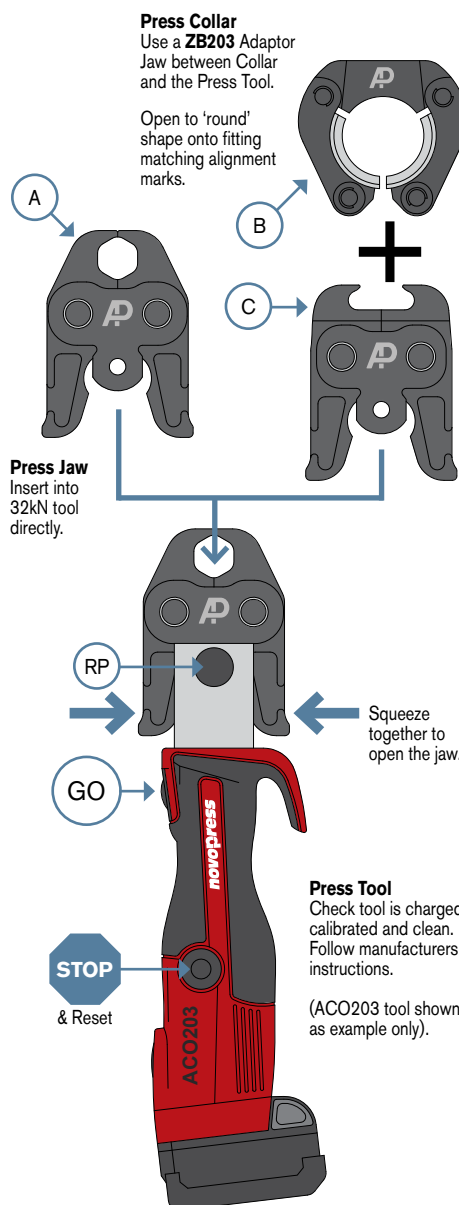
Flash = Service.

Generators

Please contact us before using generators with the 240V Press Tools.

Batteries

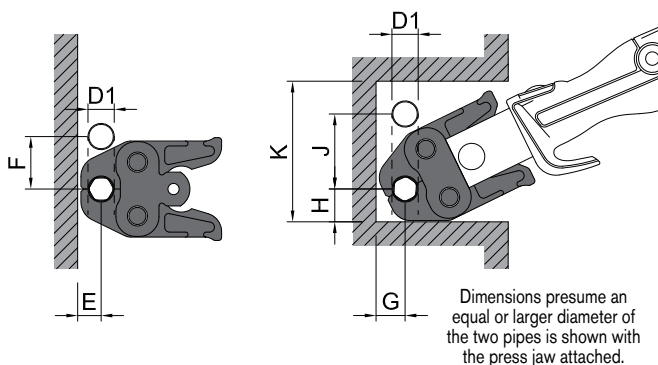
Press tools generally don't commence a press unless there is enough battery charge to complete a press.



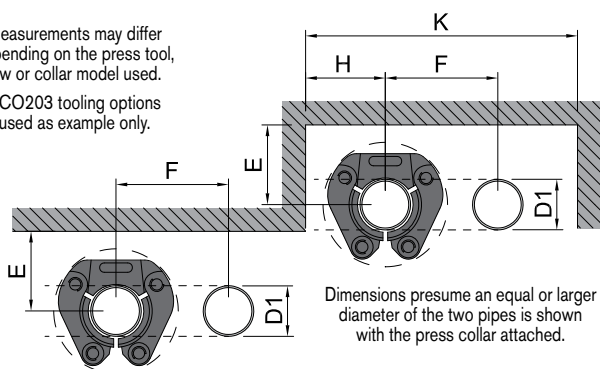


Jaw & Collar Clearances

Measurements are dependant on the actual fitting dimensions and the Press Tool used to join. Confirm clearances before proceeding with your installation.



Measurements may differ depending on the press tool, jaw or collar model used. ACO203 tooling options used as example only.



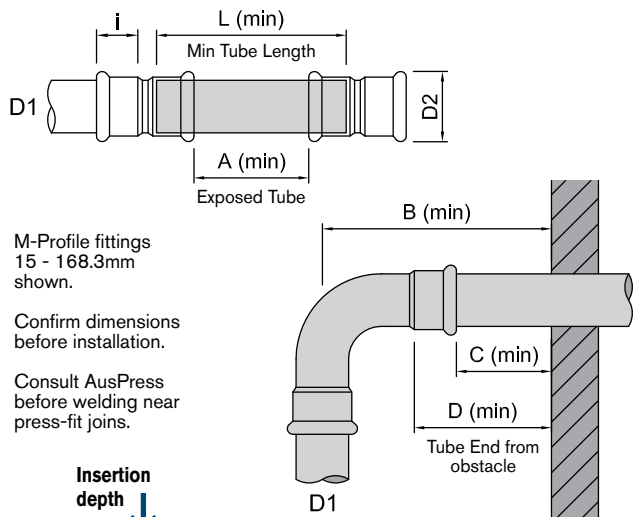
Dimensions for AusPress Metric 316 Stainless, AusPress CuNiFe & AusPress 2205 Fittings

D1	T	E	F	G	H	J	K
15	Jaw	20	56	25	31	75	135
18	Jaw						
22	Jaw	23	65	31	38	80	155
28	Jaw	25	75	31	39	83	160
35	Jaw	30	75	36	45	90	180
42	Collar	75	115	-	75	-	265
54	Collar	85	120	-	85	-	290
66.7	Collar						
76.1	Collar	110	140	-	110	-	360
88.9	Collar	120	150	-	120	-	390
108	Collar	140	170	-	140	-	450
168.3	Collar	200	335	-	200	-	850



Dimensions for AusPress Copper Fittings

DN	T	E	F	G	H	J	K
15	Jaw	20	56	25	31	75	135
18	Jaw	23	65	31	38	80	155
20	Jaw	23	65	31	38	80	155
25	Jaw	25	75	31	39	83	160
32	Jaw	30	75	36	45	90	180
40	Jaw	50	90	68	54	92	265
40	Collar	67	110	-	82	-	274
50	Jaw	64	121	60	90	125	295
50	Collar	71	121	-	90	-	300
65	Collar	110	140	-	110	-	360
80	Collar	120	150	-	120	-	390
100	Collar	140	170	-	140	-	450

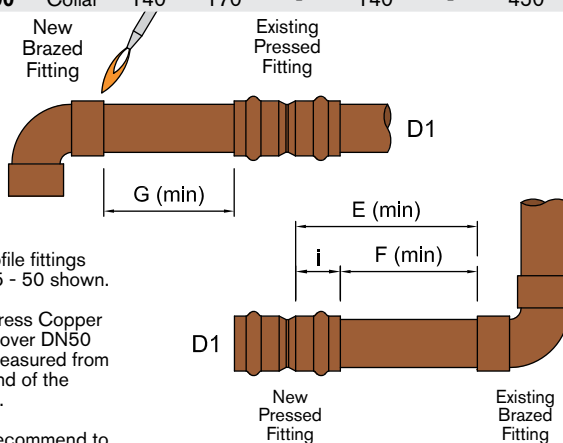


M-Profile fittings 15 - 168.3mm shown.

Confirm dimensions before installation.

Consult AusPress before welding near press-fit joints.

D1	i	L	A	D2	B	C	D
15	20	50	10	23	85	35	55
18							
22	21	52	10	32	95	35	56
28	23	56	10	38	107	35	58
35	26	72	20	45	121	35	61
42	30	80	20	54	147	35	65
54	35	90	20	66	174	35	70
66.7							
76.1	53	126	20	95	223	75	128
88.9	58	136	20	110	249	75	135
108	69	158	20	133	292	75	150
168.3	121	302	60	195	456	70	191



V-Profile fittings DN15 - 50 shown.

AusPress Copper sizes over DN50 are measured from the end of the fitting.

We recommend to wrap the closest existing press fittings with a wet cloth while brazing.

DN	i	L	A	D2	E	F	G
15	19	51	13	20	32	13	1,000
18	21	55	13	24	34	13	1,000
20	22	57	13	27	35	13	1,000
25	23	61	15	34	38	15	1,000
32	26	67	15	41	41	15	1,000
40	32	84	20	19	52	20	1,000
50	40	105	25	61	65	25	1,300
65	42	109	25	79	67	25	1,600
80	48	126	30	90	78	30	2,000
100	60	150	30	116	90	30	2,500

Material Performance

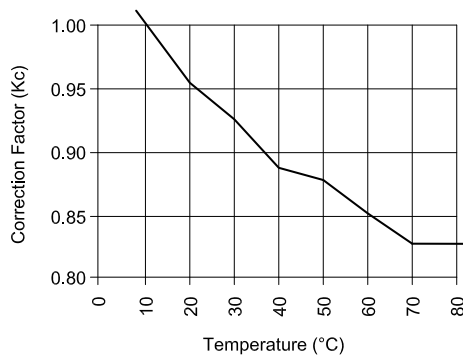
Material Composition



		AISI 316L	AISI 304	90/10	C12200	AISI S31803
Grade No:		1.4404	1.4301	2.1972	C12200	1.4462
Chromium (Cr)	%	16.5 - 18.5	18 - 19.5	-	-	21.0 - 23.0
Carbon (C)	% max	0.03	0.03	0.05	-	0.03
Copper (Cu)	% min	-	-	85.6	99.9	-
Iron (Fe)	%	bal	bal	1.5 - 1.8	-	bal
Lead (Pb)	% max	-	-	0.01	-	-
Manganese (Mn)	% max	2	2	1	-	2
Molybdenum (Mo)	%	2 - 2.5	-	-	-	2.5 - 3.5
Nickel (Ni)	%	10 - 13	8 - 10.5	10 - 11	-	4.5 - 6.5
Nitrogen (N)	%	-	-	-	-	0.08 - 0.20
Phosphorus (P)	% max	0.045	0.045	0.02	0.04	0.03
Silicon (Si)	% max	1	1	-	-	1
Sulphur (S)	% max	0.015	0.03	0.005	-	0.02
Zinc (Zn)	% max	-	-	0.05	-	-
Zirconium (Zr)	% max	-	-	0.01	-	-
PREN	ave	24.9	18.8	-	-	34.2

Temperature Correction Factor

The graph below shows the correction factor (Kc) based on the water temperature.



Batch Numbers (Tube & Fittings)

Our fittings and tubes are marked with a batch (or heat) number identifying the material as part of our 3.1 certifications for our 316, IPS & 2205 ranges.

Tube: '3.1 Cert' Reference starts C-...

Did You Know? WaterMark notation.

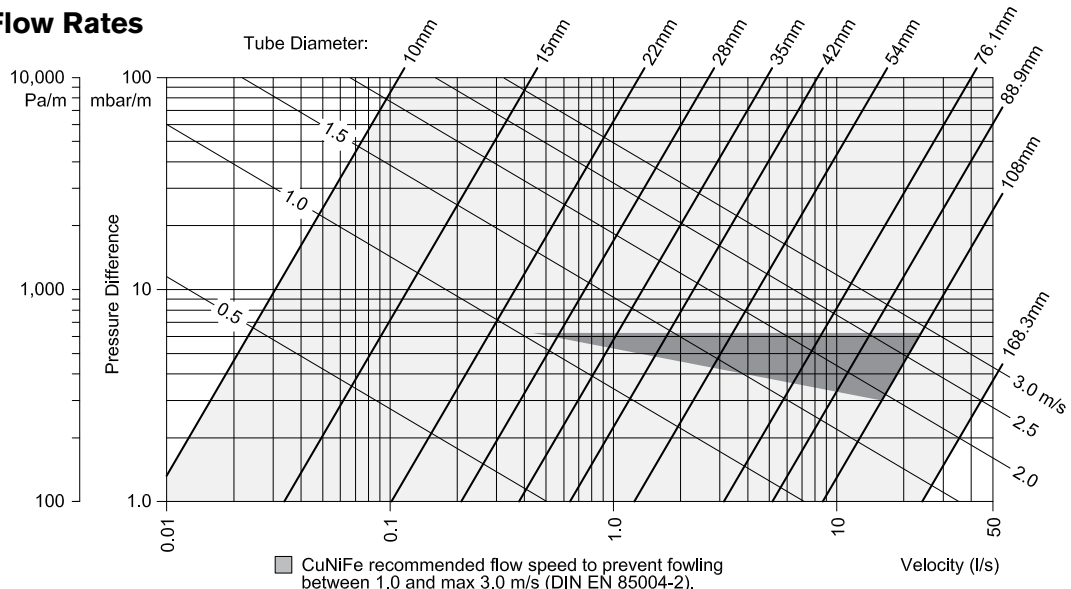
OF = Operation of Fabrication Code
 '17' = raw material coil number,
 '9' = mill number,
 '3' = employee number,
 '8' = test produced material certificate.

Example only

Pressure Loss & Flow Rates

The graph adjacent shows the relationship between pressure loss, flow velocity for each diameter.

Test Details
 Material: Stainless Steel 316L
 Media: Potable Water
 Test Temperature: 10°C
 Surface Roughness Coefficient: 0.0015mm (average)



For further details refer to TN.30



Design for Press-Fit

This information is suitable for 'normal' applications within the abilities of press-fit including potable water and compressed air however some applications require additional consideration; these include (but not limited to) steam, pressurised oil lines and chemical lines. In these instances, contact us before installation for technical assessment.

The following information is a general guide only. For project & application specific assessment, contact us directly.



Tech Notes Available

Contact us for Technical Notes that cover topics in much greater detail.

1: Ring Seal (Elastomer) Suitability

The rubber ring seal is an important part of the press fitting join and must be assessed as suitable for the application and media to be used. AusPress fittings are supplied with a pre-fitted EPDM (black) ring seal standard, unless otherwise noted at the time of ordering. We don't recommend the swapping of ring seals from one type to another after the time of ordering.

Refer to our AusPress Suitability Guide for specific ring seal suitability and limits and/or contact us for confirmation before installation by completing a Project Information form available from our website.

2: System Pressures

Maximum working pressure depends on a combination of the press tool used to install, the fitting profile, fitting diameter, the system material, operating temperature and application (use) as approved by AusPress. Some applications are limited to a lesser pressure despite the system able to achieve higher; in these cases, the lesser pressure is used.

Working Pressure – 'normal' operating pressure, designed for and in accordance to relevant standards.

Test Pressure – 1.5x the working pressure, during site test conditions only (see Pressure Testing section).

For suitability of other press tools, applications and limits for



Refer to the 'Select a Press Tool' page at the beginning of each AusPress catalogue section to find the right tool for your project.

AusPress products, please contact us for advice.

3: Insulation & Lagging

Insulating AusPress is suitable however consideration must be given to the piping material and the insulation type to be installed. *Tech Note available.*

For example, insulation materials used with stainless 316 must be specified 'low chloride' (less than 0.05% soluble chloride ion content by weight). This issue is critical to the performance of stainless installations at any temperature. **(For further info refer to TN.04)**

4: Threaded Fittings & Sealants

Support the threaded press fitting using the fixed nut to tighten and prevent torsional forces being applied to the pressed join.

For threads, both thread tapes and liquid/paste sealants must be chloride free and suitable with the material and application.

Contact us for more information.

5: Bracketing

Install bracketing & centres (spans) to AS/NZS 3500 & AS/NZS 4041 as required appropriate to the application.

Bracketing is to be the same material as the pipework or separated with an inert lining such as rubber.

Brackets are not to be positioned directly on a fitting.

Refer to the Expansion & Contraction section for bracket type and positioning. **(For further info refer to TN.20)**

6: Bending Tubes

Tube up to 35mm diameter can be cold bent using a commercial tube bender to a radius no less than 3.5x the tube diameter. Do not heat stainless or CuNiFe to bend.

7: Material Suitability

AusPress is suitable for a range of applications; please complete a Project Info Form and contact us for product suitability based on your project requirements.

Press-Fit for Potable Water

AusPress systems are resistant to potable water meeting the requirements of the Australian Drinking Water Guidelines (ADWG) 2011.

Stainless & copper are resistant due to the protective layer these materials create naturally. The content of water-soluble chloride ions at ambient temperature (including in potable water) should not exceed 250mg/l (250ppm).

Copper Nickel (CuNiFe) is not suitable for potable water applications but can be tested with potable water.

Problems can occur with high chloride content found in some chlorous disinfectants or naturally occurring sources such as bore water. Confirm suitability with AusPress before use.



Stagnant water, low flow periods and dead legs require caution and are not recommended.

Water analysis testing by a NATA certified laboratory is required to confirm the composition of waters.

Press-Fit for Purified Waters

Purified waters such as softened, de-carbonised, fully desalinated, de-ionised, de-mineralised, distilled and pure condensates are suitable. Ultrapure water with a conductivity of > 0.1 µS/cm is also suitable. No additional measures to protect against corrosion are necessary.

Other types are to be confirmed before installation on request.

Water sample and parameters may be required. Note Copper and CuNiFe are not suitable for purified water types.

Press-Fit for Chemicals, Disinfectants and Additives

Please complete a Project Info Sheet with the relevant MSDS and contact us to check the suitability.

Press-Fit for Compressed Air

Dry or wet (lubricated) systems are suitable with AusPress; use the FKM ring seal for wet systems or when oil is possible.

Press-Fit for Wet Steam

Only the Red FKM ring seal is suitable for wet steam. Water quality and additives must be confirmed as suitable. For AusPress stainless, max limits of 75 psi (550 kpa) & 160°C installed with pressure relief valve, temp gauge & suitable press tool. Contact us for advice and the *Tech Note*.

Press-Fit for Oil, Fuels, Grease & Viscous Liquids

Systems must be installed with a thermal expansion safety valve, the pump isolated and system depressurised during non-operational periods. Confirm the ring seal suitability before installation. *Tech Note available*.

Press-Fit for Sewer, Stormwater or Gravity Waters

Press-Fit is not suitable, designed or approved for these applications. Contact us for information about our range of stainless drainage pipes and floor drains.

Press-Fit in Cold Climates

Allowance must be allowed for expansion of water within the pipework that may freeze. Various methods such as trace heating are used, please contact us for specific advice.

8: Protecting External Surfaces

Material Resistance

Despite the robust protective layer to the material formed naturally, the external environment and conditions must be considered; contaminants settling or in contact for a period of time may effect the outside surface of the tube & fittings.

For example;

316 stainless is susceptible to chlorides; coastal areas where the tube is exposed, unwashed or buried;

Building materials in contact such as concrete, galvanised brackets or grinding sparks;

Chemicals (including cleaning), alkaline or acidic environments where AusPress is to be installed;

Underground installation of press-fit is not recommended where protection from damage, interference from plant roots or soil/groundwater conditions is not provided. Refer our Tech Note for more information. **(For further info refer to TN.01)**

Protection of External Surfaces

In areas at risk of unsuitable external conditions, installation of AusPress without protection is not recommended - contact AusPress for advice before installation.

To prevent against direct contact issues, installing press-fit using off-set brackets, material separation (such as inert rubber spacers) and other 'material' solutions is suitable.

Covering the external surface can protect and insulate the surface from contaminants. Care to prepare the press-fit surface before applying the covering is critical to prevent locking any contaminants between the tube and protection.

Protection against external contaminants must be waterproof and non-porous and resistant to heat and ageing and continuous (no gaps or damage). The use of encased or sealed blanket insulation, allowing to drain trapped condensation and barrier wrapping are all recommended. Materials that retain moisture including felts are not recommended.

Effects of Bi-Metal (Mixed) Installations

Caused by the direct connection of different materials or the water passing from one material to another (the flow rule), bimetallic reactions can effect some metals.

AusPress stainless is not effected by the flow rule and with potable water can be used with other nonferrous metals although this is not a preferred method of installation.

Colouring caused by deposits of other metals does not necessarily indicate corrosion.

Materials that do bimetallicly react are separated by an inert section to reduce the reaction.

For example, if stainless is directly connected to galvanised steel pipe, bimetallic reaction will occur to the galvanised steel. This can be prevented by:

Installing an inert separation piece between the two or;

Fitting a ball valve made of non-ferrous material.

9: Flushing the System

It is best practice to avoid the introduction of foreign matter or contaminants during installation including dirt and swarf. Flushing the pipework is recommended to reduce the negative effects contaminants may cause and AS/NZS 3500 has further directions for flushing water supply systems.

Flushing Water Systems: Potable water is recommended.

Flushing Air, Oil & Gas Systems: Use oil-free air or an inert gas such as carbon dioxide or nitrogen. Oxygen or other flammable gasses are not to be used.

Flush main-line separately before connection.

10: Pressure Testing

Conduct the pressure test in accordance with AS/NZS 3500 (and AS/NZS 2419.1 for Fire Hydrant applications).



If the system is to be emptied again after a water pressure test, or not remain completely full, it is advisable to conduct the pressure test with air in order to avoid an increased risk of pitting and corrosion.

Testing with Water: Potable water is recommended.

Testing with Air: Use oil-free air or an inert gas such as carbon dioxide or nitrogen. Oxygen or other flammable gasses are not to be used.

Water Supply Systems:

Flush the system then fill with potable water so that it is free from air pockets before commencing the test. If connecting to an existing water supply, flush any connecting pipework before connection.

Hot and Warm Water Systems:

In addition to the notes above for Water Supply Systems, conduct the preliminary and main tests with cold water first. As soon as possible after a successful cold water test, slowly heat up the system to the full designed hot water temperature and re-inspect for any issues.

Note the system will expand when heated and bracketing should not be fully tightened nor insulation fitted before normal operating temperature has been reached.



LPG and Natural Gas Systems:

Conduct the pressure test of the system in accordance with AS/NZS 5601. Water is not a suitable medium for testing, use the air testing method.

Pressure Test Process:

We recommend using the Test Protocol Form to record the test results as a record that can be downloaded from our website. Use the more stringent requirements of those listed below and the relevant AS/NZS standard to your installation.

	Test Pressure (the greater of):		Minimum Test Time Required:
AS/NZS 3500	1,500 kPa or...	1.5 times the maximum operating working pressure for the system.	45 minutes
AS/NZS 5601	7.0 kPa (pipework only) or...		2 minutes temp stabilisation time + 5 minutes for test
AS/NZS 2419.1	1,700 kPa or...		4 hours
Refer to the relevant standard for specific requirements of testing.			

For hot water systems, the duration may be longer allowing for the water to heat after the first cold water test.

For flange pressures, consult the relevant standard (i.e. AS/NZS 2129 for Table & ASME B16.5 for ANSI).

System considered 'passed' if:

No pressure drop over the test duration (as per relevant AS/NZS for the installation) and a visual inspection confirmation of no leaks or deformation.

11: Disinfecting the System

Prior to commissioning the system or in the event of microbial contamination, the Australian Drinking Water Guidelines (ADWG) recommend the use of hydrogen peroxide to disinfect pipework. Chlorine is also listed as suitable in this context.

Please contact us so we can offer project specific advice before you proceed.

Familiarise the manufacturer's safety precautions of using the chemical and instructions for use, particularly in relation to the contact time, maximum solution concentration and subsequent flushing requirements.

The Australian water regulations allow dosing with up to 1.2ppm of free chlorine in the disinfectant solution, provided a limit of 0.3ppm of free (active) chlorine is not exceeded in the drinking water.

Quantities can be increased to 6ppm and 0.6ppm respectively in exceptional circumstances for example, high or increased micro-bacterial contamination.

To prevent damage to AusPress products during disinfection, do not exceed the maximum chlorine concentration and contact times as tabled:

	Option 1	Option 2
Maximum concentration of free chlorine in water:	100ppm	50ppm
Maximum contact time:	16 hours	24 hours
Thorough flushing with potable (drinking) water:	Residue free chlorine in potable (drinking) water < 1ppm.	
1ppm = 1mg/L		

12: De-Scaling

Limescale on the bore tubes can be caused by a variety of service conditions including high water temperatures or excessively 'hard' water quality.

Additives for de-scaling tubes must be checked for suitability with the pipe material, rubber seal ring and approved for use with AusPress before use.

When using any solution, ensure the system is flushed correctly and the manufacturer's instructions are followed in an accurate and safe manner at all times.

13: Commissioning

Systems must be commissioned in accordance with the applicable standards and regulations.

The installation contractor must familiarise the owners and users with the system. This is to be documented with a hand-over and acceptance documentation.

Completing an *Operation and Maintenance Manual* is recommended to record the actual products installed, the ring seals used and the installer's information for future reference.

14: Operation and Maintenance

The user (or owner) of the system is under an obligation to ensure the system is maintained in a serviceable and safe condition at all times.

The system must be operated in such a way that faults and other factors affecting the reliability of the system are resolved before a hazard or issue occurs.

Ongoing maintenance includes assessing the interior and exterior of the pipework with regular inspections and timely rectification if required.

Avoid damage by keeping the system clean & free of contaminants, protect from sparks, grindings and confirm changes in media before making changes to operating conditions.

The user is advised to enter into a maintenance agreement with an installation contractor.