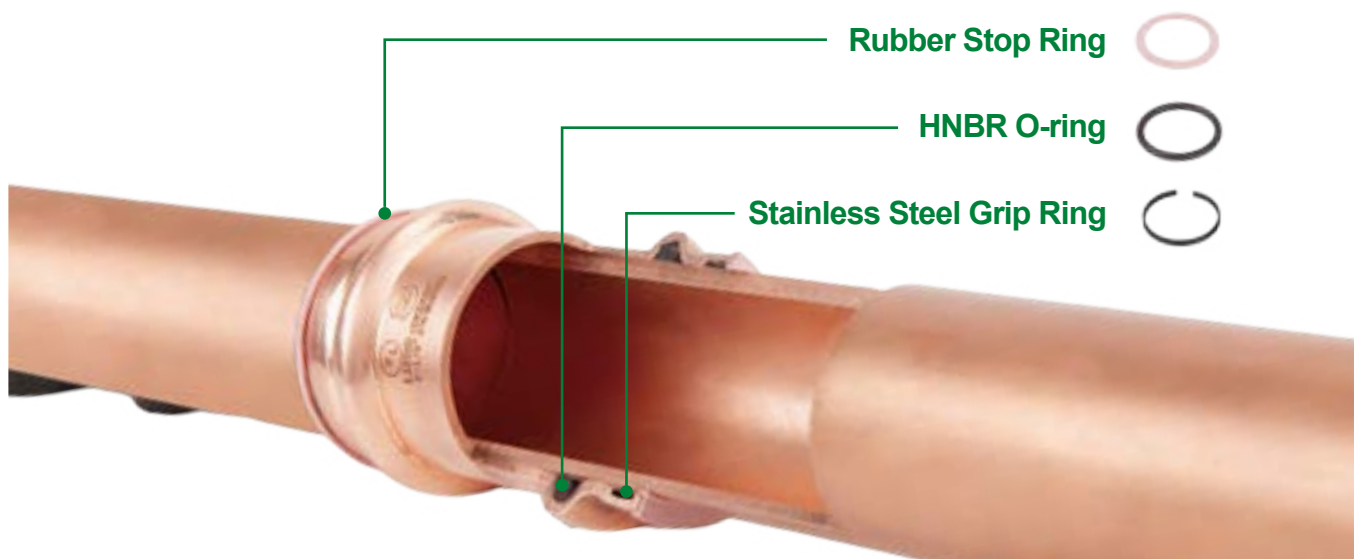


► Introduction

COOL PRESS system is a copper press connection system designed for the air conditioning and refrigeration markets. It allows contractors to make secure leak-free connections in seconds. COOL PRESS utilizes a rubber stop ring, coated stainless steel grip ring and black HNBR sealing element to provide permanent leak-proof connections from 1/4" to 1 1/8".

► Features and Benefits

- **Flame-free:** Flame-free installation avoids the need for a fire permit and the risk of fire on site.
- **No Nitrogen Purge:** COOL PRESS is a mechanical joint, thus eliminating the need for nitrogen purge during the jointing process.
- **Lower Installed Cost:** A professional fitting which is quick and simple to install, saving time and money.
- **Higher Productivity, Improved Flexibility:** Work may be completed during working hours / public access, by a single employee.
- **Site Access:** Easy access to work sites, no gas bottles required.
- **Quality Designed In:** Reliable, repeatable, permanent, tamper-proof connections every time.
- **3-Point Press:** Three press points, one each side of the bead, and one press compressing the O-ring. This provides a secure joint.
- **High Quality O-ring:** High quality HNBR O-ring forms a secure leak-free joint when pressed.
- **Protected O-ring:** Lead-in edge design aids tube insertion and helps protect the O-ring from damage or displacement.
- **Electrical Continuity:** Maintains ground continuity without the need for additional ground continuity straps.
- **Field Proven:** Press fit technology, field proven over two decades and millions of installed fittings worldwide.
- **Compact Tooling:** Light compact tooling provides easy access to tightly spaced tube runs.
- **WARRANTY:** 15-year product warranty.



► Listings and Certifications

- UL 207 SA46123
 - UL Listed: Approved use for field and factory installations with A1 refrigerants
 - UL Recognized: Approved use for factory installations with A2, A2L, and A3 refrigerants
- UL 109 - 8 Vibration test, compliant
- UL 1963 - 79 Tests of gaskets and seals used in refrigerant systems, compliant
- ISO 14903 - 7.4 Tightness test, compliant
- ISO 14903 - 7.6 Pressure temperature vibration tests (PTV), compliant
- ISO 14903 - 7.8 Freezing test, compliant
- ISO 5149-2:2014, Refrigerating systems and heat pumps
 - Safety and environmental requirements
 - Part 2: Design, construction, testing, marking and documentation compliant
- ISO 5149-2, 5.3.2.2.3 Strength pressure test, compliant
- ASME B31.5 - 2016 Refrigeration Piping and Heat Transfer Components, compliant

► Technical Data

Maximum Rated Operating and Abnormal Pressure
700 psi / 48 bar / 4800 kPa

Continuous Operating Temperature
-40°F to 284°F / -40°C to 140°C

Vacuum Pressure Capability
200 Microns

Leak Tightness:
Helium $\leq 7.5 \times 10^{-7}$ Pa.m³/s at +20°C, 10 bar

Burst Pressure
>3X Maximum operating and abnormal pressure
>2,100 psig / >14400 kPa / >144 bar

Size Availability (Inches):
1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1-1/8



Applications: COOLPRESS fittings are designed for the following applications

- Refrigeration
- Air Conditioning
- Heat Pump (Refrigeration side)
- VRF and VRV

Fitting Materials
Fitting Body Refrigerant Grade Copper (UNS C12200 min 99.9% pure)
O-Ring HNBR
Fitting Warranty
15-year warranty

Compatibility
Approved Lubricants POE, PAO, PVE, AB and MO
Approved Connections Copper to Copper
Approved Tube Copper tube conforming to ASTM B280, ASTM B88, or ASTM B743
Approved Copper Tubing Hard Copper (Drawn)- Type ACR, L, K Soft Copper (Annealed)- Type ACR, L, K

Approved Refrigerants

R32	R125	R134a	R290	R404A
R407A	R407C	R407F	R407H	R410A
R454A	R454B	R438A	R448A	R449A
R454C	R452A	R452B	R507A	R600A
R452C	R1234yf	R1234ze		

► Installation Instructions



1. Cut the Tube: Tube should be cut completely square and there should be no defects and scratches on the tube which may affect the integrity of joints.



2. Deburr the Tube: Using the deburring tool to make sure both inside and outside of the tube end are free from any burrs or sharp edges to avoid damaging the sealing element.

3. Clean the tube end: Thoroughly clean the tube end using a general purpose hand pad or sand cloth in a rotating motion. Tube ends must be free from scratches, oxidation, dirt and debris.



4. Check for defects: If deep scratches are still visible, cut the tube back to a clean section and repeat steps 2 - 3.



5. Ensure the O-ring is seated: Check the fitting is the correct size for the tube. Check the O-rings are present and correctly seated.



6. Insert the tube into the fitting and mark the insertion depth. Tube needs to be fully inserted into the fittings stop end. Marking the tube will allow any movement of the fitting to be seen before pressing.



7. Align jaws squarely on the fitting: 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 over the o-ring. The o-ring on the fitting should fit centrally in the groove of the jaw.



8. Depress and hold the button to complete the pressing cycle. Pressing is complete when the jaws are fully closed and the piston retracts. Complete the press cycle once only - do not repress.



9. Release the jaw.



10. Mark the completed joint: Mark the completed joint after pressing. This enables joints to be inspected easily before testing and insulating the pipework.

► Flares Installation Instructions



1. Align the centers of both flares and tighten the flares by hand.



2. Fully tighten using an open end wrench and torque wrench to the torque values set out in the table. Do not overtighten.

Flares Tightening Torque

Tube Diameter	Recommended Torque (ft.lbs)	Recommended Torque (N.M)
1/4"	11-13	14-18
3/8"	25-31	33-42
1/2"	37-45	50-62
5/8"	47-56	63-77
3/4"	67-81	90-110

COMPATIBLE	PRESS TooLS	32 kN	24 kN	19 kN
ROTHENBERGER	ROMAX 3000	✓	–	–
	ROMAX 3000 AC	✓	–	–
	ROMAX4000	✓	–	–
	ROMAXAC ECO	✓	–	–
	Twin Turbo US (TT US)	–	✓	–
	ROMAX@Compact TT	–	–	✓
	ROMAX@Compact	–	–	✓
DEWALT	DCE200	✓	–	–
KLAUKE	UAP2/UNP2	✓	–	–
	UAP3L/UAP4L	✓	–	–
	UP2EL14	✓	–	–
	MAP2L19	–	–	✓
	MAP219	–	–	✓
MILWAUKEE	M12 Force Logic	–	✓	–
	M18 Force Logic	✓	–	–
HILTI	NPR 019	–	–	✓
NIBCO	PC-100	✓	–	–
	PC-280	✓	–	–
REMS	Power-Press	✓	–	–
	Akku-Press	✓	–	–
RIDGID	320-E	✓	–	–
	CT400	✓	–	–
	RP 241	–	✓	–
	RP 240	–	✓	–
	RP 210-B	–	✓	–
	RP 200-B	–	✓	–
	RP 330-B	✓	–	–
	BP 330-C	✓	–	–
	RP 340	✓	–	–
	RP 350	✓	–	–
VIRAX	Viper P25+	✓	–	–
	Viper P25+	✓	–	–



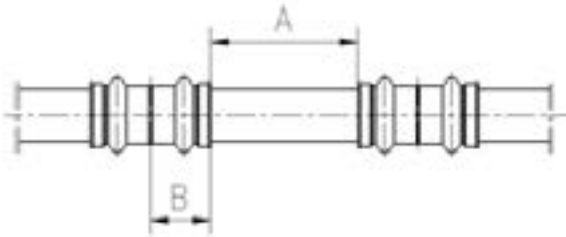
► Installation Requirements

1.1 Brazing or soldering near to press joints should be avoided as this may cause the seal to degrade due to heat transfer. Following table states the minimum distance away from the press joint which is acceptable to braze. If this distance cannot be maintained then adequate precautions must be taken such as fabricating the brazed 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 brazing.



Tube OD	Minimum Distance A (inches)	Minimum Distance A (mm)
1/4"	10	250
3/8"	12	300
1/2"	14	350
5/8"	18	450
3/4"	20	500
7/8"	24	600
1-1/8"	28	700

1.2 Minimum distance between pressings and insertion depth. Due to the reforming of the tube profile when pressed, it is advised that a minimum distance is allowed between each fitting.



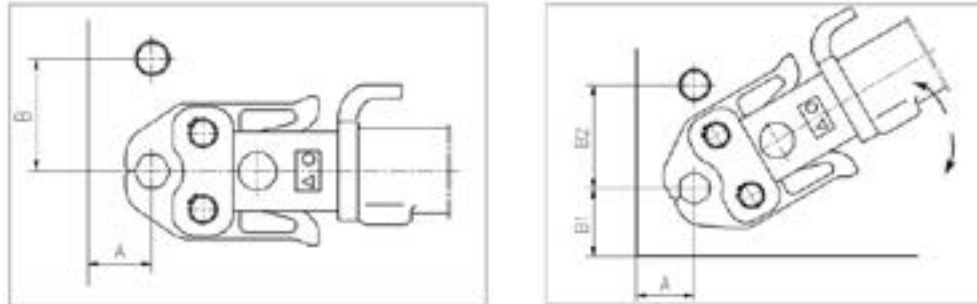
TUBE OD	Insertion Depth (inches)	Insertion Depth (mm)	Minimum Distance (inches)	Minimum Distance (mm)
1/4"			3/8"	10
3/8"			3/8"	10
1/2"			3/8"	10
5/8"			5/8"	15
3/4"			7/8"	22
7/8"			7/8"	22
1-1/8"			7/8"	22

1.3 Minimum distance for press fittings from an existing brazed joint.



Tube OD	Minimum Distance A (inches)	Minimum Distance A (mm)
1/4"	3/8"	10
3/8"	3/8"	10
1/2"	3/8"	10
5/8"	5/8"	15
3/4"	7/8"	22
7/8"	7/8"	22
1-1/8"	7/8"	22

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



Tube OD	Minimum Distance A (inches)	Minimum Distance A (mm)	Minimum Distance B (inches)	Minimum Distance B (mm)
1/4"	3/4"	19	1-5/8"	41
3/8"	3/4"	19	1-5/8"	41
1/2"	3/4"	19	1-5/8"	41
5/8"	7/8"	22	1-5/8"	41
3/4"	7/8"	22	2-1/8"	54
7/8"	7/8"	22	2-1/8"	54
1-1/8"	1"	26	2-1/8"	54

Tube OD	Minimum Distance A (inches)	Minimum Distance A (mm)	Minimum Distance B1 (inches)	Minimum Distance B1 (mm)	Minimum Distance B2 (inches)	Minimum Distance B2 (mm)
1/4"	7/8"	22	1-3/8"	35	2-1/2"	64
3/8"	7/8"	22	1-3/8"	35	2-1/2"	64
1/2"	7/8"	22	1-3/8"	35	2-1/2"	64
5/8"	7/8"	22	1-3/8"	35	2-1/2"	64
3/4"	1"	26	1-1/2"	38	2-1/2"	64
7/8"	1"	26	1-1/2"	38	2-1/2"	64
1-1/8"	1-1/8"	29	1-3/4"	45	3"	76

1.5 Pressure drop table with standard and long radius elbows

Elbow Equivalent length of tube				
Tube OD	Standard Radius (Inch)	Standard Radius (mm)	Long Radius (Inch)	Long Radius (mm)
1/4"	0.7	17.78	*	*
3/8"	0.8	20.32	*	*
1/2"	1.26	29.15	0.7	17.78
5/8"	1.31	33.32	0.8	20.32
3/4"	1.64	41.66	1	25.4
7/8"	1.79	45.82	1.1	27.94
1-1/8"	2.31	58.31	1.4	35.56

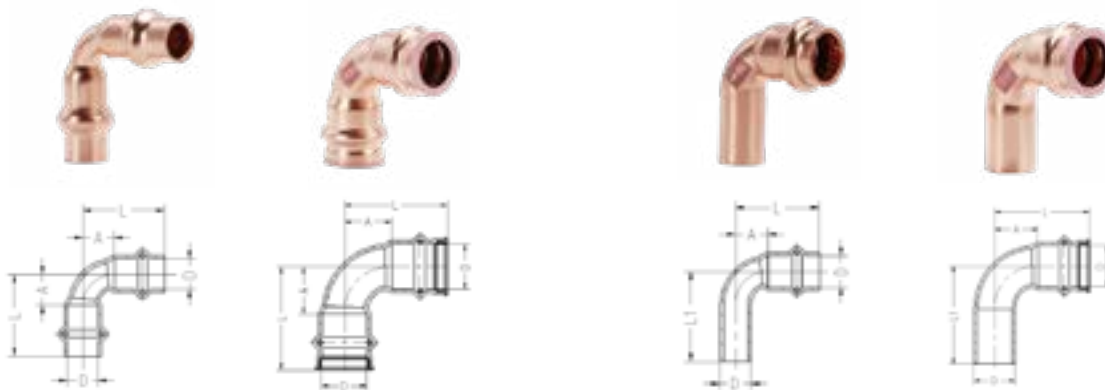
Equal Tee PxPxP



PT Part No	Size D	L	L	A	A	L1	L1	A1	A1
		Inch	mm	Inch	mm	Inch	mm	Inch	mm
100517	1/4"	1.77	45.00	0.26	6.50	0.85	21.50	0.22	5.50
100518	3/8"	1.97	50.00	0.35	9.00	0.98	25.00	0.35	9.00
100519	1/2"	2.36	60.00	0.47	12.00	1.10	28.00	0.39	10.00
100520	5/8"	2.83	72.00	0.59	15.00	1.32	33.50	0.49	12.50
100521	3/4"	3.07	78.00	0.61	15.50	1.48	37.50	0.55	14.00
100522	7/8"	3.35	85.00	0.71	18.00	1.56	39.50	0.59	15.00
100523	1 1/8"	3.88	98.50	0.96	24.50	1.75	44.50	0.79	20.00

90° Elbow PxP

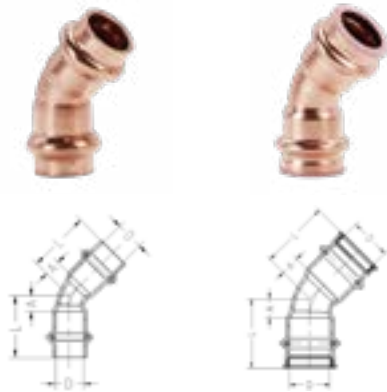
90° Street Elbow FTGxP



PT Part No	Size D	L	L	A	A
		Inch	mm	Inch	mm
100531	1/4"	0.94	24.00	0.31	8.00
100532	3/8"	1.02	26.00	0.39	10.00
100533	1/2"	1.20	30.50	0.49	12.50
100534	5/8"	1.40	35.50	0.57	14.50
100535	3/4"	1.28	32.50	0.79	20.00
100536	7/8"	1.75	44.50	0.79	20.00
100537	1 1/8"	2.09	53.00	1.12	28.50

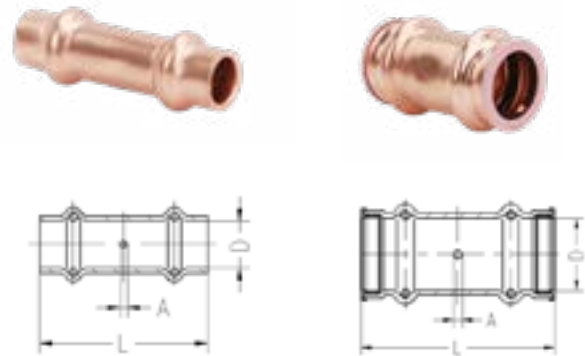
PT Part No	Size D	L	L	L1	L1	A	A
		Inch	mm	Inch	mm	Inch	mm
100538	1/4"	0.94	24.00	1.00	25.50	0.31	8.00
100539	3/8"	1.02	26.00	1.10	28.00	0.39	10.00
100540	1/2"	1.16	29.50	1.28	32.50	0.45	11.50
100541	5/8"	1.40	35.50	1.56	39.50	0.57	14.50
100542	3/4"	1.28	32.50	1.77	45.00	0.79	20.00
100543	7/8"	1.75	44.50	2.01	51.00	0.79	20.00
100544	1 1/8"	2.09	53.00	2.32	59.00	1.12	28.50

45° Elbow PxP



PT Part No	Size D1	L	L	A	A
		Inch	mm	Inch	mm
100524	1/4"	0.81	20.50	0.18	4.50
100525	3/8"	0.85	21.50	0.22	5.50
100526	1/2"	0.87	22.00	0.16	4.00
100527	5/8"	1.12	28.50	0.30	7.50
100528	3/4"	1.28	32.50	0.35	9.00
100529	7/8"	1.42	36.00	0.45	11.50
100530	1 1/8"	1.44	36.50	0.49	12.50

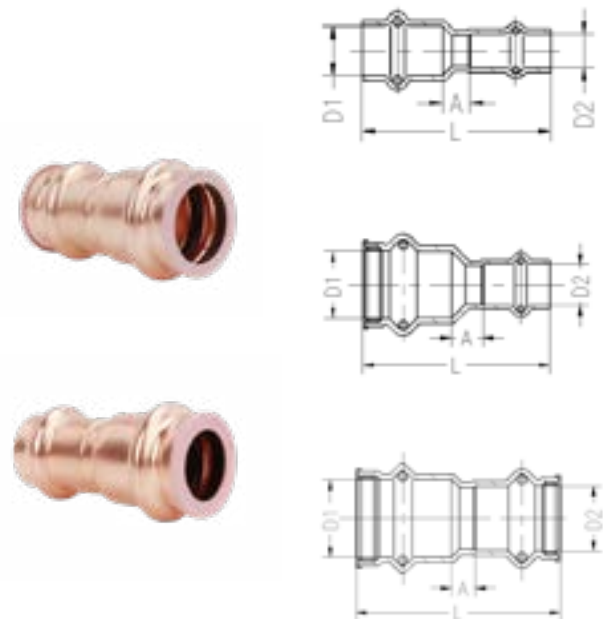
Coupling with Stop PxP



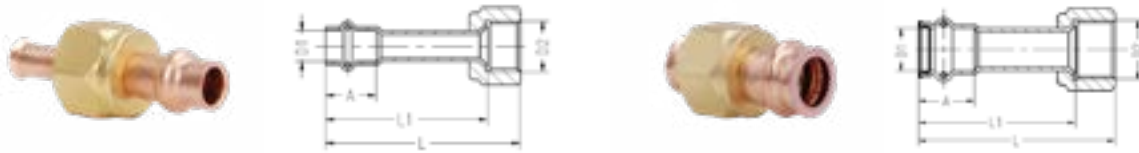
PT Part No	Size D1	L	L	A	A
		Inch	mm	Inch	mm
100545	1/4"	1.38	35.00	0.12	3.00
100546	3/8"	1.38	35.00	0.12	3.00
100547	1/2"	1.57	40.00	0.16	4.00
100548	5/8"	1.65	42.00	0.16	4.00
100549	3/4"	2.01	51.00	0.20	5.00
100550	7/8"	2.09	53.00	0.20	5.00
100551	1 1/8"	2.11	53.50	0.20	5.00

Reducing Coupling PxP

PT Part No	Size D1	Size D2	L	L	A	A
			Inch	mm	Inch	mm
100552	3/8"	1/4"	1.65	42.00	0.31	8.00
100553	1/2"	1/4"	1.57	40.00	0.24	6.00
100554	1/2"	3/8"	1.48	37.50	0.22	5.50
100558	3/4"	1/2"	1.95	49.50	0.31	8.00
100555	5/8"	1/4"	1.91	48.50	0.45	11.50
100556	5/8"	3/8"	1.75	44.50	0.30	7.50
100557	5/8"	1/2"	1.77	45.00	0.24	6.00
100560	7/8"	1/2"	2.05	52.00	0.37	9.50
100559	3/4"	5/8"	1.99	50.50	0.24	6.00
100562	7/8"	3/4"	2.15	54.50	0.26	6.50
100561	7/8"	5/8"	2.15	54.50	0.35	9.00
100564	1 1/8"	3/4"	2.28	58.00	0.39	10.00
100563	1 1/8"	5/8"	2.30	58.50	0.51	13.00



Flare



PT Part No	Size D1	Size D2	L Inch	L mm	L1 Inch	L1 mm	A Inch	A mm
100573	1/4"	UNF 7/16-20	2.13	54.00	1.79	45.50	0.63	16.00
100574	3/8"	UNF 5/8-15	2.40	61.00	1.99	50.50	0.63	16.00
100575	1/2"	UNF 3/4-16	2.50	63.50	2.03	51.50	0.71	18.00
100576	5/8"	UNF 7/8-14	2.91	74.00	2.32	59.00	0.83	21.00
100577	3/4"	UNF 11/16-14	3.21	81.50	2.54	64.50	0.93	23.50

Cap PxCap




PT Part No	Size D1	L Inch	L mm	A Inch	A mm
100566	1/4"	0.71	18.00	0.08	2.00
100567	3/8"	0.71	18.00	0.08	2.00
100568	1/2"	0.81	20.50	0.10	2.50
100569	5/8"	0.96	24.50	0.10	2.50
100570	3/4"	1.02	26.00	0.10	2.50
100571	7/8"	1.06	27.00	0.10	2.50
100572	11/8"	1.08	27.50	0.12	3.00



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