Press System Copper Fittings

PRESS FITTINGS FOR PLUMBING AND MECHANICAL APPLICATIONS

JOB NAME	**CONTRACTOR**
JOB LOCATION	**WHOLESALER**
ENGINEER	**STREAMLINE PRS™ REP**

PRODUCT DESCRIPTION:

Streamline PRS™ mechanical press copper fittings for use in plumbing or mechanical applications. Available sizes ranging from 1/2" to 4" in diameter. Product is designed to join ASTM B88 (Types K, L, M) hard-drawn copper tube (1/2" to 4") and soft copper tube (1/2" to 1-1/4").

Integral leak featured design, allows for quick and easy identification of connections which have not been pressed prior to putting the system in operation.

Streamline PRS™ mechanical press fittings are compatible with most common pressing tools and jaws.

50 – Year Limited Warranty

MATERIAL:

Streamline PRS™ components in a mechanical press copper fitting are: UNS C12200 Copper / C69300 low-lead brass for the body, EPDM o-ring, silicone o-ring lubrication, and stainless steel grip ring with a nylon spacer (2-1/2"-4" only).

KEY SPECIFICATIONS:

Streamline PRS™ shall conform to material requirements of ASME B16.22, ASME B16.51, or ASME B16.18. Performance criteria of Streamline PRS™ mechanical press copper fittings shall conform to IAPMO PS-117 or ASME B16.51.

INSTALLATION:

Streamline PRS™ fittings are approved for installations in both above and below ground applications, as allowed by local code. Product installation shall comply with the latest applicable building codes for the local jurisdiction and manufacturer's instructions.

REFERENCES:

NSF/ANSI 61	Drinking Water System Components
NSF/ANSI 372	Lead Content Compliance
IAPMO PS-117	Press and Nail Connection
ASME B16.51	Copper and Copper Alloy Press-Connect Pressure Fittings
UPC	Uniform Plumbing Code
CSA TIL-MSE-13	

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TOOLS & INSTALLATION GUIDELINES

TOOL & JAW COMPATIBILITY

1/2" — 2"

Milwaukee M12 Tool w/Compact Jaws 1/2" — 1-1/4"
Milwaukee M18 Tool w/Standard Jaws 1/2" — 2"
NIBCO Mini Tool w/Mini Jaws 1/2" — 1"
NIBCO Standard Tool w/Standard Jaws 1/2" - 2"
REMS Mini Tool w/Mini Jaws 1/2" — 1-1/4"
REMS Standard Tools w/Standard Jaws 1/2" — 2"
Ridgid Compact Tools w/Compact Jaws 1/2" — 1-1/4"
Ridgid Standard Tools w/Standard Jaws 1/2" — 2"
Rothenberger Compact Tool w/Compact Jaws 1/2" — 1"
Rothenberger Standard Tools w/Standard Jaws 1/2" — 2"
Klauke UPA Tool w/Standard Jaws 1/2" — 2"
Klauke MAP Tool w/Mini Jaws 1/2" — 1-1/4"

2-1/2" — 4"

Milwaukee M18 Tools w/Rings & Ring Jaw
REMS Standard Tools w/Rings & Z5 Adapter Tong
Ridgid Standard Tools w/ Rings & V2 Actuator Jaw

DISTANCE BETWEEN JOINTS PRESSING NEAR AN EXISTING PRESS CONNECTION

MINIMUM DISTANCE BETWEEN STREAMLINE PRS™ JOINTS		
TUBE DIAMETER	MINIMUM DISTANCE REQUIRED	
NOMINAL INCH	INCH	MM
1/2"	—	—
3/4"	—	—
1"	—	—
1-1/4"	7/16"	10
1-1/2"	5/8"	15
2"	3/4"	20
2-1/2"	5/8"	15
3"	5/8"	15
4"	5/8"	15

SOLDERING OR BRAZING NEAR AN EXISTING PRESS CONNECTION

The installer should take precautions to keep the press connection cool. These methods may include 1) wrapping the press connection with a cold wet cloth, 2) fabricating solder connections prior to installing the press fitting, or 3) applying spray-type cooling gels.

TUBE DIAMETER NOMINAL INCH	SOLDERING		BRAZING	
	MINIMUM DISTANCE		MINIMUM DISTANCE	
	INCH	MM	INCH	MM
1/2"	1-1/2"	38	4-1/2"	114
3/4"	2-1/4"	57	6-3/4"	172
1"	3"	76	9"	229
1-1/4"	3-3/4"	95	11-1/4"	286
1-1/2"	4-1/2"	114	13-1/2"	343
2"	6"	153	18"	457
2-1/2"	7-1/2"	191	22-1/2"	572
3"	9"	229	27"	686
4"	12"	305	36"	915

PRESSING NEAR AN EXISTING SOLDERED OR BRAZED CONNECTION

TUBE DIAMETER NOMINAL INCH	MINIMUM DISTANCE	
	INCH	MM
1/2"	1/4"	7
3/4"	1/4"	7
1"	7/16"	11
1-1/4"	7/16"	11
1-1/2"	5/8"	16
2"	3/4"	19
2-1/2"	1/4"	7
3"	1/4"	7
4"	1/4"	7

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APPROVED APPLICATIONS FOR 1/2" TO 4" STREAMLINE PRS™:

Types of Service	Comments	Pressure	Temperature	Compatible with EPDM Seal
FLUIDS/WATER POTABLE				
Hot and Cold Water	—	200 PSI	32°F to 250°F	√
Rainwater / Grey Water	—	200 PSI	-20°F to 250°F	√
Chilled Water	Ethylene Glycol / Propylene Glycol	200 PSI	-20°F to 250°F	√
Hydronic Heating	Ethylene Glycol / Propylene Glycol	200 PSI	-20°F to 250°F	√
Cooling Water	Up to 50% Ethylene Glycol or Propylene Glycol solution	200 PSI	-20°F to 250°F	√
Low-Pressure Steam	—	UP TO 15 PSI	248°F	√
FUEL, OIL AND LUBRICANT				
Ethanol	Pure Grain Alcohol	200 PSI	—	√
GASES				
Compressed Air	Less than 25mg/m^3 oil content	200 PSI	Up to 140°F	√
Oxygen - O_2 (non medical)	Keep oil and fat free/non-liquid O_2	140 PSI	Up to 140°F	√
Nitrogen - N_2	—	200 PSI	Up to 140°F	√
Argon	Welding Use	200 PSI	Up to 140°F	√
Hydrogen - H_2	—	125 PSI	Up to 140°F	√
Vacuum	—	Max 29.2 inches of Mercury	Up to 140°F	√
Carbon Dioxide - CO_2	Dry	—	Up to 140°F	√

STREAMLINE PRS™ RECOMMENDED PRESSURE TESTING:

Unpressed connections are located by pressurizing the system with air or water. When testing with water the proper pressure range is 15 PSI to 50 PSI maximum. Leak testing with air can be dangerous at high pressures. When testing with compressed air the proper pressure range up to 15 PSI maximum. Following a successful leak test, the system may be pressure tested up to 200 PSI if required by local code requirements or project specifications.

SPECIFICATION LANGUAGE:

Press Fitting: Shall conform to material requirements of ASME B16.22, ASME B16.51, or ASME B16.18. Performance criteria of mechanical pressed copper fittings shall conform to IAPMO PS-117 or ASME B16.51

a. Operating pressure: 200 PSI CWP Max
b. Temperature range: -20°F to 250°F
c. EPDM sealing element, factory installed

-OR-

Mechanical pressed copper fittings. Jointing piping similar to Mueller Industries Streamline PRS™, Viega ProPress, or approved equal may be used.

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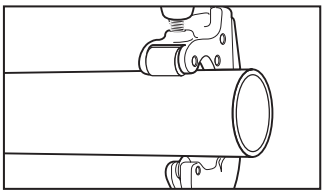
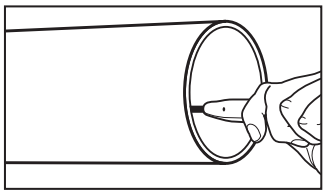
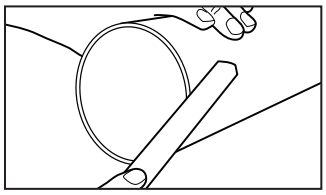
Installation Instructions (1/2" - 2")



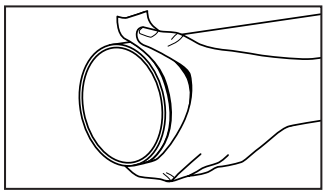
1. Cut tube square using a tube cutter or fine tooth saw.



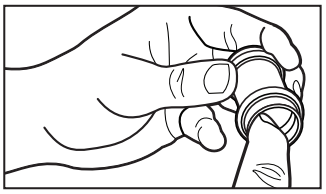
2. Deburr tube ID using a deburring tool.



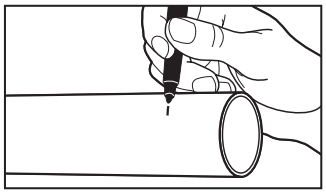
3. Deburr tube OD using half round file.



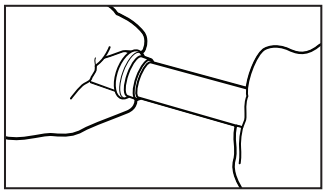
4. Sand tube with OD sand cloth. Tube surface should be free of indentation, scratches, and deformations.



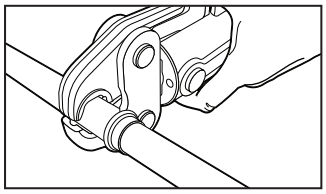
5. Check fitting bead to ensure seal is present. Do not use any type of oil lubrication.



6. Mark tube to proper fitting insertion depth (see Insertion Depth Chart below).



7. Turn slightly while sliding press fitting onto tube. Slide all the way to insertion mark and make contact with stop.

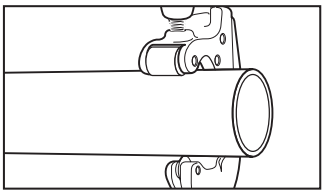


8. Place press tool at a right angle over fitting bead. Start the pressing process. Please see specific tool manufacturer for tool instruction.

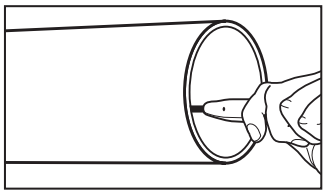
Streamline PRS Fitting Insertion Depth Chart (1/2" - 2")						
Tube Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Insertion Depth	3/4"	7/8"	7/8"	1"	1-7/16"	1-9/16"

Streamline PRS fittings must be connected with approved press tool.
Please see specific tool manufacturer for tool instruction.

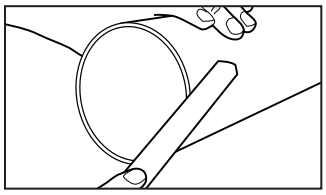
Installation Instructions (2-1/2" - 4")



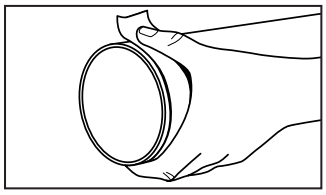
1. Cut tube square using a tube cutter or fine tooth saw.



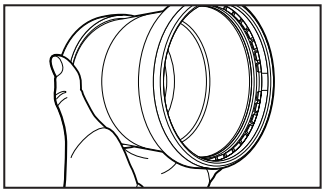
2. Deburr tube ID using a deburring tool.



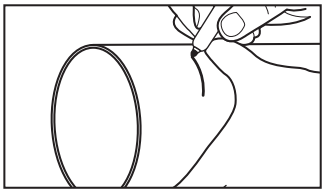
3. Deburr tube OD using half round file.



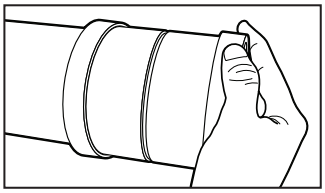
4. Sand tube with OD sand cloth. Tube surface should be free of indentation, scratches, and deformations.



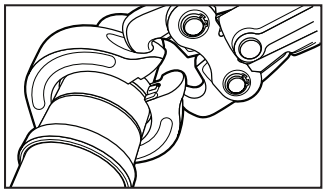
5. Check fitting ends to ensure seal, grip ring and nylon spacer are present Do not use any type of oil lubrication.



6. Mark tube to proper fitting insertion depth (see Insertion Depth Chart below).

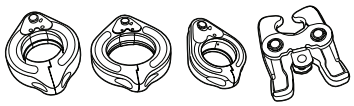


7. Turn slightly while sliding press fitting onto tube. Slide all the way to insertion mark and make contact with stop.



8. Place press-ring at a right angle over fitting bead and check for proper engagement. Start the pressing process. Please see specific tool manufacturer for tool instruction.

Streamline PRS Fitting Insertion Depth Chart (2-1/2" - 4")			
Tube Size	2-1/2"	3"	4"
Insertion Depth	1-3/4"	1-7/8"	2-1/8"



Large diameter (2-1/2" – 4") Streamline PRS fittings must be connected with approved press tool and press-rings. Please see specific tool manufacturer for tool instruction.

⚠ WARNING

Failure to follow all instructions could affect joint/system integrity and may lead to property damage. Call Customer Service at 1-800-FITTING if you have any questions or need assistance.

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TESTING INSTRUCTIONS FOR FITTINGS WITH LEAK DETECTION

Pressure Testing

When installing Streamline PRS™ fittings it is recommended to perform a leak test in order to locate any un-pressed fittings. To assist in making that testing more reliable, Streamline PRS™ fittings come with a leak detection feature. The following procedures allow installers to detect un-pressed fittings in a system under pressure prior to concealment.

Leak Testing with Air

1. When the system, or portion of the system, is installed and isolated, pressurize to 15 PSI maximum using dry clean air, carbon dioxide or nitrogen charge
2. The system should stabilize over the next several hours and the pressure should be monitored with a pressure gauge.
3. If the pressure has dropped, add more pressure to bring the system back up to the 15 PSI desired initial test level. Bleed off excess pressure.
4. Allow time for complete system stabilization. If upon inspection the system pressure has dropped below 15 PSI test level, there is likely an un-pressed fitting leaking.
5. Leaks are easily identified either by use of commercial leak test solution or soap and water mixture, which will form bubbles identifying an un-pressed leak point.
6. Once any un-pressed connection has been tested and repaired, repeat the testing process until 15 PSI pressure is maintained for 24 hours or for the duration of time and pressure specified by local authority codes.

Leak Testing with Water

1. When the system, or portion of the system, is installed and isolated, pressurize to 50 PSI maximum using clean potable water.
2. The system should stabilize over the next several hours and the pressure should be monitored with a pressure gauge.
3. If the pressure has dropped, add more pressure to bring the system back up to the 50 PSI desired initial test level. Bleed off excess pressure.
4. Allow time for complete system stabilization. If upon inspection the system pressure has dropped below 50 PSI test level, there is likely an un-pressed fitting leaking.
5. Leaks are easily identified by leaking water.
6. Once any un-pressed connection has been tested and repaired, repeat the testing process until 50 PSI pressure is maintained for 24 hours or for the duration of time and pressure specified by local authority codes.

Once either testing procedure has been completed and verified, water/air pressure can be increased to the working pressure design of the system, not to exceed the maximum rated pressure.

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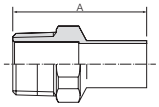
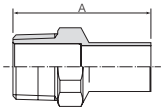
ADAPTER • MALE • STREET • SMALL
FTG x MPT



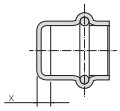
Item No.	Diameter	A	Wgt.	Inner	Viega No.
PF 01431	1/2"	1.75	0.10	5	79380
PF 01446	3/4"	2.02	0.17	5	79395
PF 01463	1"	2.15	0.27	5	79405
PF 01471	1-1/4"	2.44	0.41	1	79410
PF 01479	1-1/2"	2.90	0.59	1	79415
PF 01487	2"	3.15	0.89	1	79420

ADAPTER • MALE • STREET • REDUCING • SMALL
FTG x MPT



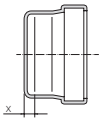
Item No.	Diameter	A	Wgt.	Inner	Viega No.
PF 01434	1/2" x 3/4"	2.05	0.18	5	79385
PF 01447	3/4" x 1/2"	1.95	0.16	5	79390
PF 01464	1" x 3/4"	2.03	0.20	5	79400

CAP • SMALL
P



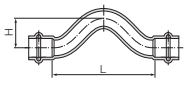
Item No.	Diameter	X	Wgt.	Inner	Viega No.
PF 07007	1/2"	0.10	0.05	10	77712
PF 07009	3/4"	0.11	0.08	10	77717
PF 07011	1"	0.11	0.10	5	77722
PF 07012	1-1/4"	0.11	0.15	1	77727
PF 07013	1-1/2"	0.12	0.28	1	77732
PF 07014	2"	0.13	0.41	1	77737

CAP • LARGE
P



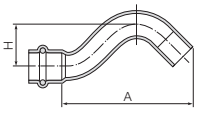
Item No.	Diameter	X	Wgt.	Inner	Viega No.
PF 07015	2-1/2"	0.33	0.68	1	20833
PF 07016	3"	0.33	0.97	1	20843
PF 07018	4"	0.39	1.68	1	20848

COUPLING • CROSS OVER • SMALL
P x P



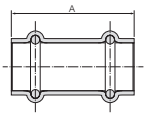
Item No.	Diameter	H	L	Wgt.	Inner	Viega No.
PF 02535	1/2"	0.94	3.33	0.21	10	77742
PF 02583	3/4"	1.28	4.84	0.39	10	77747

COUPLING • CROSS OVER • STREET • SMALL
FTG x P



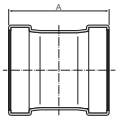
Item No.	Diameter	A	H	Wgt.	Inner	Viega No.
PF 12535	1/2"	3.78	0.94	0.15	10	-
PF 12583	3/4"	5.31	1.28	0.31	10	-

COUPLING • NO STOP • SMALL
P x P



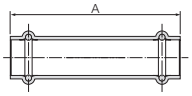
Item No.	Diameter	A	Wgt.	Inner	Viega No.
PF 01903	1/2"	1.50	0.08	10	78172
PF 01905	3/4"	1.81	0.13	10	78177
PF 01906	1"	1.81	0.16	5	78182
PF 01907	1-1/4"	2.05	0.22	1	78187
PF 01908	1-1/2"	2.83	0.46	1	78192
PF 01909	2"	3.15	0.61	1	78197

COUPLING • NO STOP • LARGE
P x P



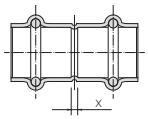
Item No.	Diameter	A	Wgt.	Inner	Viega No.
PF 01910	2-1/2"	3.54	1.09	1	20743
PF 01911	3"	3.86	1.45	1	20748
PF 01913	4"	4.49	2.43	1	20753

COUPLING • NO STOP • EXTENDED • SMALL
P x P



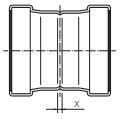
Item No.	Diameter	A	Wgt.	Inner	Viega No.
PF 01950	1/2"	2.95	0.13	5	79005
PF 01952	3/4"	3.41	0.20	5	79010
PF 01955	1"	3.94	0.30	5	79015
PF 01956	1-1/4"	4.13	0.38	1	79020
PF 01957	1-1/2"	4.72	0.70	1	79025
PF 01958	2"	5.31	0.95	1	79030

COUPLING • STAKED STOP • SMALL
P x P



Item No.	Diameter	X	Wgt.	Inner	Viega No.
PF 10145	1/2"	0.08	0.08	10	78047
PF 10146	3/4"	0.08	0.13	10	78052
PF 10147	1"	0.08	0.16	5	78057
PF 10148	1-1/4"	0.08	0.22	1	78062
PF 10149	1-1/2"	0.08	0.46	1	78067
PF 10150	2"	0.08	0.61	1	78072

COUPLING • STAKED STOP • LARGE
P x P



Item No.	Diameter	X	Wgt.	Inner	Viega No.
PF 10151	2-1/2"	0.16	1.09	1	20728
PF 10152	3"	0.16	1.45	1	20733
PF 10154	4"	0.16	2.43	1	20738