

Product Instructions

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Copper Manifolds – Valveless

Applications

Commonly used in commercial heating, cooling and snow-ice melting applications, Viega Valveless Copper Manifolds are available in 2", 1-1/2" and 1" configurations. Made out of Type "L" copper. 2" and 1-1/2" Copper Manifolds are Copper (male) headers that are designed to utilize Viega's ProPress fittings on the inlet and outlet to connect to primary loop (boiler loop). 1" Copper Manifolds are Copper (male) and Copper (female) for solder connections to boiler loop.

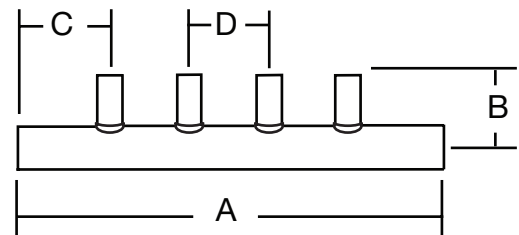
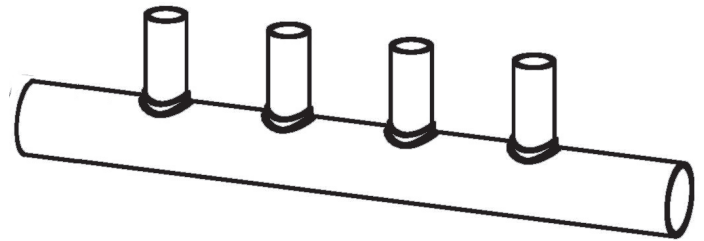
Features

- 2", 1-1/2" Copper (male) Headers
- 1" Copper (female) x Copper (male) Headers
- Copper (male) outlets
- Type "L" Copper Tube
- All copper (male) connections are suitable for ProPress or solder attachment

Specifications

Copper: Type "L" ASTM B88
 Min Temp: 36°F
 Max Temp: 250°F
 Max pressure: 200 psi
 Maximum Glycol Mix: 50%

1" Copper Manifolds max. flow: 13 gpm
 1-1/2" Copper Manifolds max. flow: 32 gpm
 2" Copper Manifolds max. flow: 45 gpm



Part Number	Dimensions	Length with end cap and ball valve	A	B	C	D
17100	2" CM x 3/4" CM - 18	69.25"	57"	2.38"	3.0"	3.0"
17120	1-1/2" CM x 3/4" CM - 18	68.0"	57"	2.13"	3.0"	3.0"
17143	1" CM x CM, 1/2" CM - 12	35.25"	26"	1.95"	2.0"	2.0"
17140	1" CF x CM, x 1/2" CM - 2	16.0"	6.75"	1.95"	2.375"	2.0"
17141	1" CM x CM, x 1/2" CM - 3	18.0"	8.75"	1.95"	2.375"	2.0"
17142	1" CF x CM, 1/2" CM - 4	20.0"	10.75"	1.95"	2.375"	2.0"

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Valves and Adapter Options for Valveless- Copper Manifolds

Part Number	Valve Type	Connection Type	Attached Sleeve	Loose Sleeve	Part Number	Connection Type
17163	Shut-Off Balancing	1/2" PEX Press x 1/2" Copper female		X	92021	1/2" PEX Press x 1/2" Copper female adapter
17263	Shut-Off Balancing	1/2" PEX Press x 1/2" Copper female	X		92026	1/2" PEX Press x 3/4" Copper female adapter
17164	Shut-Off Balancing	5/8" PEX Press x 3/4" Copper female		X	82027	5/8" PEX Press x 1/2" Copper female adapter
17264	Shut-Off Balancing	5/8" PEX Press x 3/4" Copper female	X		82031	5/8" PEX Press x 3/4" Copper female adapter
17165	Shut-Off Balancing	3/4" PEX Press x 3/4" Copper female		X	92036	3/4" PEX Press x 1/2" Copper female adapter
17265	Shut-Off Balancing	3/4" PEX Press x 3/4" Copper female	X		92041	3/4" PEX Press x 3/4" Copper female adapter
17160	Shut-Off	1/2" PEX Press x 1/2" Copper female		X	99620	1/2" PEX Press x 1/2" ProPress adapter
17260	Shut-Off	1/2" PEX Press x 1/2" Copper female	X		99626	1/2" PEX Press x 3/4" ProPress adapter
17161	Shut-Off	5/8" PEX Press x 3/4" Copper female		X	99630	3/4" PEX Press x 1/2" ProPress adapter
17261	Shut-Off	5/8" PEX Press x 3/4" Copper female	X		99640	3/4" PEX Press x 3/4" ProPress adapter
17162	Shut-Off	3/4" PEX Press x 3/4" Copper female		X		
17262	Shut-Off	3/4" PEX Press x 3/4" Copper female	X			

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Installation

1. 2" and 1-1/2" Viega Copper Manifolds are copper (male) on the inlet and outlet of the header, which can be connected to the Primary loop (boiler loop) with ProPress or solder cup.
2. 1" Viega Copper Manifolds are 1" Copper (female) x 1" Copper (male) headers with 1/2" Copper (male) circuit connections. Solder cup fittings can be used to connect to the Primary Loop (boiler loop).
3. On all Copper Manifolds the length of the header is in accordance with ProPress insertion depths and ProPress minimum clearance to existing solder connection. Copper Manifolds should be installed using isolation valves (ball valves) on the supply and return headers. End caps should also be used on at least the return manifold for ease of pressurizing and purging.
4. Soldering Viega's Copper Manifolds should be done prior to the connection of ViegaPEX Barrier or FostaPEX. Excessive heat can cause the PEX Press connections and outlet connections to leak.
5. When using ProPress the PEX Press connections can be made at any time during installation.
6. For more information on Viega ProPress System see according Product Instructions.
7. For more information on Viega PEX Press System see according Product Instructions.

Solder Installation

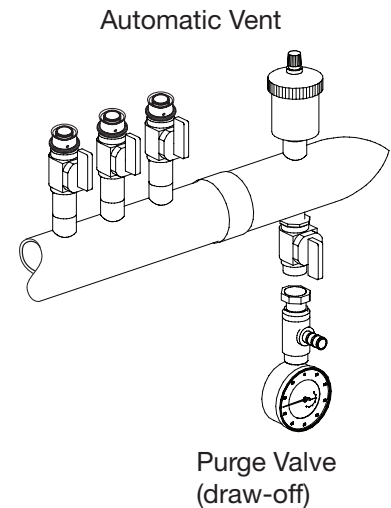
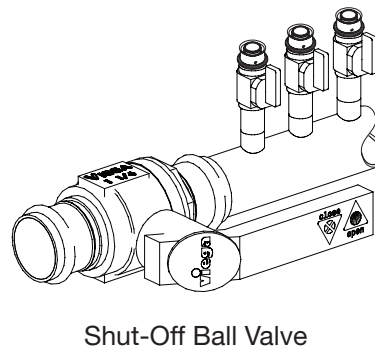
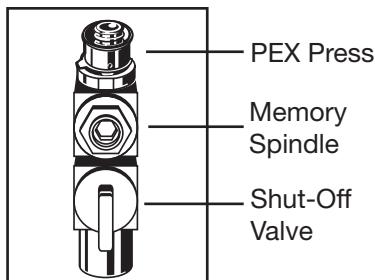
1. Cut copper tubing cleanly with tube cutter.
2. Ream and debur cut copper tubing.
3. Clean the inside of the Copper End Cap and copper tubing (fitting brush / emery cloth). The copper should shine.
4. Brush an even layer of flux over the copper tubing and Copper End Cap.
5. Push the joint together until the copper tube seats full depth. Wipe off excess flux.
6. Heat the joint with a torch, moving the flame back and forth to heat evenly. Hold the solder against the joint on the side opposite the flame until it melts and flows into the joint. Touch the solder 360° around the tubing. The joint should appear full on all sides. The solder hardens as it cools.
7. Avoid overfeeding the joint with solder. The amount of solder required is equivalent to the diameter of copper tubing being soldered.

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Purging and Pressurization

1. Open the supply and return isolation valve (ball valve) and all supply and return circuits to fill the copper manifold from the heat source (n/a for valveless manifolds).
2. Connect drain hose (i.e. washing machine hose) to hose thread on the return manifold copper end cap purge valve (draw-off).
3. Open purge valve (draw-off)
4. Close supply isolation valve and leave the return isolation valve open. Purge the return line.
5. Close return isolation valve and open the supply isolation valve. Purge the supply.
6. Close supply and return shut-off / balancing valves on manifold, leaving the memory spindle on the balancing valves fully open.
7. Open the supply manifold circuit and return manifold circuit that is furthest from the draw-off; push air through the entire circuit and out the draw-off eliminating air from that circuit.
8. Once the air has been purged, close the supply and return circuits.
9. Move onto the next circuit; watch the pressure gauge on the heat source; do this for each circuit: open, purge, close.
10. Once purging is complete, close draw-off and disconnect hose; open circuits and balance if necessary.
11. Open the return isolation valve.



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