



CarbonPress® FAQs

By Merit Brass Co.



How does a press fitting seal? A special tool physically “presses” the fittings onto the tube creating a mechanically sound joint. Hydraulic tightness is insured by a sealing element within the press fitting.

How does a press fitting compare to other joining methods? Press fit technology allows pipe/tubes to be joined mechanically without threading or soldering. This means no solvents, thread sealants or open flames are required. Pressing is a comparably fast joining method requiring less technical skill to install than other means. Press installations typically cost 30% - 50% less than those made with other joining methods due to labor and auxiliary material savings.

Where can Merit's line of CarbonPress® fittings be used? Anywhere traditional fittings and valves are used - plumbing and heating, commercial, and industrial applications where gas, low-pressure steam, liquids or oils are conveyed.

What types of press fittings & valves does Merit carry? Merit offers a complete line of CarbonPress® fittings including elbows, tees, couplings, caps, adapters, unions, and flanges in sizes 0.5" – 2". Additionally, Merit carries a full line of CopperPress® fittings 0.5" – 4" (CopperPress® Ball Valves 0.5" – 2"), as well as a full line of StainlessPress® fittings and Ball Valves 0.5" – 2".

What type of piping can the CarbonPress® fittings be used with? CarbonPress® fitting systems are suitable for use on steel pipes conforming to ASTM A53, A106, A135, A795 (schedule 10 to 40) or constructed of black iron, or epoxy coated or galvanized steel.

What are the CarbonPress® fittings made of? ASTM A420 Carbon Steel with a Zn-Ni plating.

How does the Zn-Ni Plating maintain its corrosion resistance? Zinc-nickel plating is used across a wide range of industries. It combines the sacrificial coating properties of zinc with the strength, ductility, and corrosion resistance of nickel.

How can I be assured that a joint has been pressed in an installation? Merit's CarbonPress® fittings are designed to leak before press, giving a visual indication of a connection that has not been pressed. In addition, all of Merit's press fittings include our patented Visual Indicator Press Ring® (VIPR®) to allow for a visual indication if the joint has been correctly pressed.

Why should I use press products instead of those joined by traditional methods (soldering, brazing, welding, threading, etc.)? Press connections can be made in the fraction of the time required by other joining methods, and no open flame or flame permit is required. Faster installations translate into significant labor savings. Connections made by pressing are sound, simple, clean and provide an economical alternative to other means of joining pipe or tube.

Are press connections secure? Press connections are as secure as any other joining method.

How long does it take to make a press connection? A press connection can be made in seconds - literally the time it takes to insert the pipe and cycle the tool, and unlike other methods, full structural integrity and sealing capability is realized immediately.

Can a joint be adjusted after pressing? Slight torsional adjustments (generally 5 degrees or less) can be made after pressing. More significant rotations require that the joint be repressed.

What press tools should I use when making a press connection? CarbonPress® fittings can be pressed with Milwaukee, Rigid or Viega tools and associated jaws/rings for carbon steel applications. *Please refer to Merit's tooling page.*

What applications are Carbonpress® fittings best suited for? The sealing element selected determines suitability for a given service, but Merit's CarbonPress® fittings can be used anywhere other traditionally joined carbon steel products are specified - including but not limited to fluids & water, gases, oils & lubricants.

TYPES OF SERVICE		SYSTEM OPERATING CONDITIONS	PRESSURE	TEMPERATURE	CARBONPRESS® SEALS	
					EPDM (WATER)	HNBR (GAS)
FLUIDS & WATER	Chilled Water	Ethylene Glycol, Propylene Glycol	230PSI	Min. -40°F	✓	
	Fire Sprinkler	Compliant with UL & FM for NFPA 13, 13D & 13R	175PSI	Ambient	✓	
	Hydronic Heating	Ethylene Glycol, Propylene Glycol	230PSI	0°F to 300°F	✓	
	Low-Pressure Steam		15PSI Max.	Max. 300°F	✓	
GASES	Argon		230PSI	Max. 140°F	✓	✓
	Carbon Dioxide		230PSI	Max. 140°F	✓	✓
	Compressed Air	Oil Concentrate <25mg/m3	230PSI	Max. 140°F	✓	✓
		Oil Concentrate >25mg/m3	230PSI	Max. 140°F		✓
	Natural Gas, LP Gas and Fuel Oil		125PSI Max.	-40°F to 180°F		✓
	Nitrogen		230PSI	Max. 140°F	✓	✓
Vacuum		29in Hg Max.	Max. 140°F		✓	
OILS & LUBRICANTS	Diesel Fuel	Compliant with NFPA 30 & 30A	125PSI			✓
	Engine Oil		150PSI	Ambient		✓
	Heating Fuel Oil		125PSI	-40°F to 180°F		✓
	Hydraulic Fluid	Mineral Based	230PSI	Ambient		✓
	Transmission Fluid		230PSI	Ambient		✓

What is the pressure & temperature ranges for Carbonpress® fittings?

- **Working Pressure Range from Full Vacuum to 250 psi Water/125 psi Gas**
- **Temperature Range:** EPDM -40°F to 300°F (-40°C to 148°C)
- **Temperature Range:** HNBR -40°F to 200°F (-40°C to 93°C)

Which sealing element should I select? Merit's brand of press fittings has two sealing element options that cover a wide variety of applications, but it is important to specify the correct one for a given service. The black EPDM sealing element is recommended for plumbing, hydronic heating/cooling as well as other applications such as air lines, and other non-medical gases. The yellow nitrile sealing element is recommended for use in gas and oil systems, as well as air and other non-medical gases.

What pipe hanger and support requirements should my installation follow? Support hanger spacing should correspond to the ASME B31.1 Power Piping Code, ASME B31.3 Process Piping Code, ASME B31.9 Building Services Piping Code, or MSS SP-58 Pipe Hanger and Supports, as appropriate. Consult the local authority having jurisdiction for possible additional requirements. Proper bearing and spacing of supports is necessary to prevent excessive bending or sagging. The weight of the conveyed material should also be considered.

Can Merit's Carbonpress® fittings be used in compressed air applications? Yes, provided the correct sealing element is selected. *(Please refer to our compatibility chart, page 2)*

Can Merit's Carbonpress® fittings be insulated? Yes, as long as all the insulation used is allowed by any local authority having jurisdiction.

Are Carbonpress® fittings warranted? Yes, CarbonPress® fittings carry a 15-year limited warranty.

Is Carbonpress® rated for steam? Yes, CarbonPress® with EPDM Sealing Elements can be used in low pressure steam applications (Max. 15psi, and 300°F).