MERIT PRESS

TECHNOLOGY

StainlessPress

IsoTubi-USA, By Merit Brass Co.

FAQs

Directing the Flow of Quality

Innovative Solutions Driven to Provide Value to Your System

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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 an o-ring seal.

How does a press fitting compare to other joining methods?

Press fit technology allows 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 costs 30% - 50% less than those made with other joining methods due to labor and auxiliary material savings.

Where can Merit's line of stainless steel press fittings and valves be used?

Anywhere traditional fittings and valves are used - plumbing and heating, commercial, and industrial applications where gas, steam, liquids or vacuums are conveyed.

What type of press fittings and valves does Merit carry?

Check out our line card for stainless steel press in IPS ranges from 1/2" - 2".

What type of piping can these stainless steel press fittings and valves be used with?

Schedule 5 or 10 Type 304/304L or 316/316/L stainless steel pipe conforming to ASTM A-312.

What are these stainless steel press fittings and valve made of?

Constructed of 316L as per the ASTM AISI specification.

Why is stainless steel a better choice than PEX (cross-linked polyethylene), PVC or CPVC?

Plastic piping and fittings can burn and distort during a fire event, and in many cases will give off toxic smoke. Stainless Steel is not flammable. Stainless Steel is also more dimensionally stable than plastics when exposed to thermal fluctuations.

How can I be assured a joint has been pressed in an installation?

Merit's stainless steel press fittings are designed to leak before press, so any unpressed joint can be quickly identified.

Some other manufacturers use 304 or 304L Stainless Steel. Why do you use 316L?

316L stainless steel exhibits better corrosion resistance and is stronger at elevated temperatures than 304. This is primarily due to the addition of molybdenum which is not contained in 304 stainless steel. The 316L stainless steel is hygienic, exceptionally durable and corrosion resistant, not affected by UV radiation, resistant to erosion corrosion and is visually attractive. The 316L material costs more than 304, but it results in a superior product.

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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 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 tube and cycle the tool, and unlike other methods, full structural integrity and sealing capability is realized immediately.

Can Merit's line of stainless steel press fittings be used in combination with copper plumbing systems?

Yes. Both copper and stainless steel have similar corrosion potentials in potable water.

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 to be repressed.

What press tools should I use when making a press connection?

Click here to access our tool page.

Can stainless steel press fittings be used with deionized water?

Yes. These stainless steel press fittings have a long track record of use in many types of conditioned waters including softened and deionized.

What applications are stainless steel press fittings and valves suited for?

The o-ring selected determines suitability for a given service, but Merit's stainless steel press fittings can be used anywhere other traditionally joined stainless steel products are specified - including but not limited to water, gases, air (wet or dry), hydraulic fluids, lubricants, oil vapors, acids, alkalies, vegetable and mineral oils, hydrocarbons, and automotive fluids. Additionally, the hygienic characteristics of our fittings and valves make them a good choice for use in the food, beverage, and pharmaceutical industries. Learn more about our applications here.

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What are the pressure and temperature ranges for stainless steel press fittings and valves?

This line has a working pressure range from a full vacuum (internal absolute pressure of 0 PSI) to 300 PSI on Schedule 5 and 10 Stainless Steel Pipe. Valves have a maximum working pressure of 300 PSI and can be used in vacuum service down to an internal absolute pressure 7.3 PSI.

Temperature ranges are o-ring dependent:

EPDM O-Ring (Black), Grade E	-4˚F to 230˚F
Nitrile O-Ring (Gray), Grade T	-13˚F to 230˚F
Fluoro-Elastomer O-Ring (Green), Grade O	-22˚F to 300˚F

Which o-ring should I select?

Merit's brand of press fittings has three o-ring options that cover a wide variety of applications, but it is important to specify the correct one for a given service.

The black EPDM o-ring has excellent oxidation resistance and is recommended for use with drinking water, hot water, dilute acids, alkalies, oil free air and many chemical services. **DO NOT USE WITH HYDROCARBONS.**

The gray nitrile o-ring is recommended for use with drinking water, petroleum products, vegetable oils, mineral oils and air with oils. **DO NOT USE IN HOT AIR OR WATER.**

The green fluoro-elastomer o-ring is recommended for use with oxidizing acids, petroleum products, hydraulic fluids, lubricants, and halogenated hydrocarbons.

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, or ASME B31.9 Building Services Piping Code 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 stainless steel press fittings be used in compressed air applications?

Yes. Since most compressed air systems contain finely distributed lubricants, the gray nitrile o-ring should be specified for this service.

Can Merit's stainless steel press fittings be insulated?

Yes. Insulating material with a maximum level of soluble chloride ions of 0.05% should be specified. Avoid use of insulating materials that may collect and hold moisture such as felt. Closed cell foam insulation is preferred. Protecting the fittings and valves from chemical attack should be considered when installations are made in particularly harsh environments (i.e. paint shops, open tank chemical processing, etc.).

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