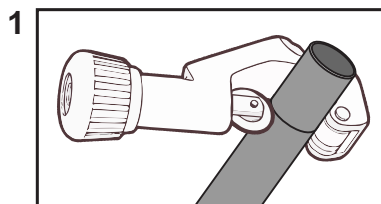


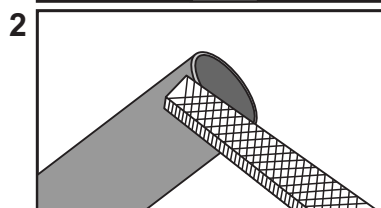
# INSTALLATION INSTRUCTIONS

## BMI CARBON PRESS FITTINGS

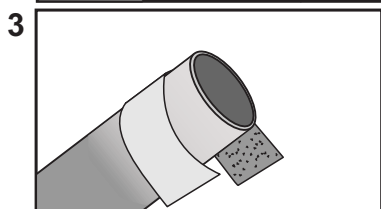
**Compatible references:** All pipes must comply with the ASTM A53, A106, A135, A795 standards schedule 10~40.



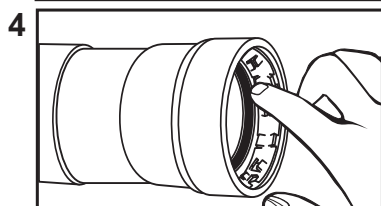
Step 1: Cut the pipe at a square angle using a rotary pipe cutter or a fine tooth metal saw blade.



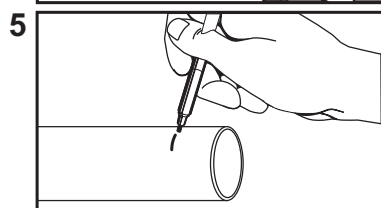
Step 2: Remove any burr from inside and outside of the pipe with a deburring tool or a fine file to prevent damage on the sealing rubber o-ring.



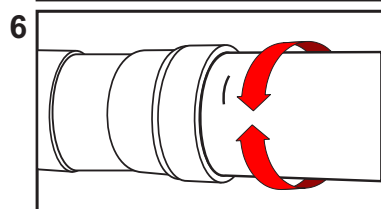
Step 3: Clean the pipe surface if necessary; see page 3 for instructions.



Step 4: Check each of the seal and grip ring for any damages before insertion. Make sure you have the proper sealing ring for the usage (ex. yellow for gas connection).

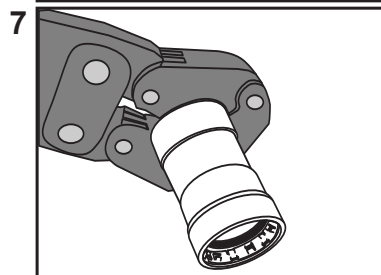


Step 5: Mark the proper insertion depth on the pipe as indicated by the depth chart below. It's important to reach the recommended depth mark to get a properly sealed joint.



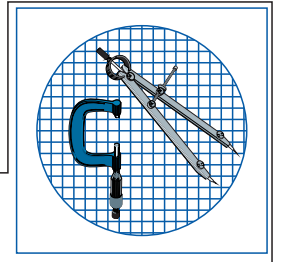
Step 6: Insert the fitting over on the pipe while turning slightly left & right, and make sure to insert up to the mark on the pipe.

*Note: The depth mark should be near the edge of the fitting when the tube hits the stop inside the fitting.*



Step 7: For 1/2" to 1", insert and secure the appropriate jaw on the tool for the size of fitting you want to press. For 1 1/4" to 4", install the appropriate jaw saddle on the fitting for the size you want to press. Use the pincer tool on the saddle to press the fitting.

Nominal Tube Size	Tube Insertion Depth	
	Inches	mm
1/2"	1 1/16	27
3/4"	1 3/16	29
1"	1 3/8	34
1 1/4"	1 13/16	46
1 1/2"	1 7/8	48
2"	2	50
2 1/2"	1 13/16	46
3"	2 5/16	59
4"	3 1/8	80







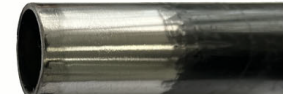



# INSTALLATION INSTRUCTIONS

## BMI CARBON PRESS FITTINGS

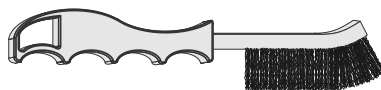
### Carbon steel pipe preparation for press connection

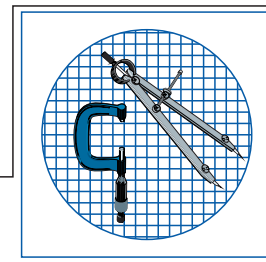
Compatible references: All pipes must comply with the ASTM A53, A106, A135, A795 standards schedule 10~40.

Different Type of Pipe Surface	Surface Description	Needs Prep.	Surface After Preparation	Instructions and Comments
	Clean bare pipe	No		If the pipe surface is smooth and clean, without scratches or dents, then no preparation is necessary.
	Pipe with rust	Yes		If the pipe surface has rust, scratches or dents, then it must be cleaned with a metal wire brush or emery cloth strap.
	Pipe with hot dip galvanized	Yes		If the pipe surface is galvanized (dip or plated) then it must be cleaned with a metal wire brush or emery cloth strap.
	Pipe with shellac paint or lacquer	Yes		If the pipe surface has paint, laquer or shellac then it must be cleaned with a metal wire brush or emery cloth strap.
	Pipe with epoxy coating	No		If the pipe surface has an epoxy coating and has the same external diameter then no preparation is necessary.

### Manufacturer recommended tools for pipe cleaning:

- Manual metal wire brush
- Rotary metal wire brush
- Emery cloth strap
- Nylon scrubbing pad





# INSTALLATION INSTRUCTIONS

## BMI CARBON PRESS FITTINGS

### Pressing Distance Recommendations

BMI Carbon Press fittings are packed in individually color coded polybags to keep them clean and free from debris that could affect or damage the sealing element (o-rings) in the handling. It's the installer's responsibility to make the final visual inspection of the fittings prior to installation. All fittings should be handled with care and removed from the bag just prior to use to ensure their cleanliness.

To prevent leaks, minimum distances between pressed joints should be as per the adjacent table.

Pressing Near Another Pressed Connection		
Nominal Tube Size	Minimum Distance	
	Inches	mm
1/2 ~ 1"	1/4	6
1 1/4"~4"	1/2	13

### Pressing a Fitting Near a Wall or a Ceiling

To ensure proper distance for the tool to operate properly, a minimum clearance is required when pressing connections near an obstacle.

Pressing Near a Wall or Ceiling		
Nominal Tube Size	Minimum Distance	
	Inches	mm
1/2 ~ 1"	1 1/2	38
1 1/4" ~ 4"	3/8	10

### Pressing a Fitting Near a Welded Connection

To prevent leaks, the distance between a pressed joint and a welded section should be at a minimum of 4 inches .

### Welding Near a Pressed Connection

A minimum distances of 36 inches between any welding operation on the pipe and a pressed fitting should be respected.

### Pipe Alignment

Since the mechanical pressing force can move the parts involved, it is important to support the alignment of the pipes during the pressing operation to maintain the desired final position.

## Installation Pressure Test

### Pressed Joint Detection Feature

BMI Carbon Press fittings are made with Pressed Joint Detection Feature, providing fast and easy identification of unpressed connections during the pressure testing process in any installation angle possible.

The design feature provides a path for liquids and/or gases from inside the system past the sealing element of an unpressed connection.

When pressed according to instructions, the Pressed Joint Detection Feature is neutralized, creating a leak proof, permanent connection.

Unpressed connections are located by pressurizing the system with air or water. When testing with water, the suggested pressure is 15 to 85 psi maximum. Test with air can be dangerous; manufacturer recommends testing compressed air at 1/2 to 45 psi maximum.

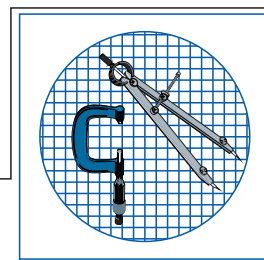
Following a successful test, the system may be pressure tested up to 200 psi maximum with water or non-combustable gases depending on local code requirements.

### Additional Features:

- Zinc & nickel coating for corrosion resistance
- 100% factory pressure tested

### Manufacturer Recommended Tools

Milwaukee® M12TM 1/2" to 1"  
Milwaukee® M18TM 1/2" to 1"  
REMS® Compact 1/2" & 3/4"  
REMS® Standard 1/2" to 2"  
Ridgid® Compact 1/2" & 3/4"  
Ridgid® Standard 1/2" to 2"



# INSTALLATION INSTRUCTIONS

## BMI CARBON PRESS FITTINGS

Type of Usage	Comments	Max. Pressure (psig)	Temperature Range	Compatible with:	
				EPDM	HNBR
Water/Liquids					
Chilled Water	≤50% Ethylene / Propylene glycol	200	See note <sup>1</sup>	✓	
Hydronic Heating	≤50% Ethylene / Propylene glycol			✓	
Isopropyl alcohol	-		Ambient <sup>3</sup>	✓	
Fire Sprinkler	NFPA 13, 13D, 13R	175		✓	
Low-Pressure Steam	-	15	Max. 250°F / 121°C	-	-
Residential Steam	-	5	Max. 227°F / 108°C	✓ <sub>2</sub>	
Fuels/Oils/Lubricants					
Mineral Oil	-	200	Ambient <sup>3</sup>		✓
Lube Oil	Petroleum Based		Max. 150°F / 66°C		✓
Propane	-	125	-40°~180°F -40°~82°C		✓ <sub>4</sub>
Butane	-				✓ <sub>4</sub>
Natural Gas	Primarily Methane				✓ <sub>4</sub>
Heating Fuel Oil	-		Max. 100°F / 38°C		✓
Diesel Fuel	-				✓
Gases					
Compressed Air	Oil Concentration ≤25 mg/m <sup>3</sup>	200	Max. 140°F / 60°C	✓ <sub>2</sub>	✓ <sub>2</sub>
	Oil Concentration >25 mg/m <sup>3</sup>				✓ <sub>2</sub>
Argon - Ar	-			✓	✓
Nitrogen - N2	-			✓	✓
Carbon Dioxide - CO <sub>2</sub>	Dry			✓	✓
Oxygen - O <sub>2</sub> (non medical)	Keep free of oil and grease	140	-	-	
Hydrogen - H <sub>2</sub>	-	125	✓	✓	
Acetylene	Test Pressure 350 psi	20	Ambient <sup>3</sup>	✓	✓
Vacuum	Minimum Absolute Pressure	750µm Hg	Max. 160°F / 71°C	✓	✓
	Maximum Differential Pressure	29.2" Hg			

Note 1: System pressure and temperature ranges depend on sealing element. Any ranges listed above will be overruled by the sealing element listed below.

Note 2: System must contain adequate condensate drainage.

Note 3: Ambient temperatures should be taken as normal operating conditions for the applications not to exceed sealing element limitations.

Note 4: Compliant with CSA 6.32 / ANSI LC-4.

Sealing Element	Operating Temperature	Description
<b>EPDM</b>	0°~250°F	Possesses excellent resistance to aging, ozone, sunlight, weathering, environmental influences, most alkaline solutions and chemicals used in a broad range of applications.
Ethylene Propylene Diene Monomer	-18°~121°C	
<b>HNBR</b>	-40°~180°F	Widely known for its physical strength and retention of properties after long-term exposure to heat, oil and chemicals. The unique properties attributed to HNBR have resulted in wide adoption in automotive, industrial and high-performance applications.
Hydrogenated Nitrile Butadiene Rubber	-40°~82°C	

### EPDM

#### Certified and complies with:

- ASTM F3226
- ANSI/CAN/Z1117-22
- UPC, UMC and National Plumbing Code
- ANSI/CAN/UL 213
- FM Class 1920
- CRN
- ISO9001, ISO14001

### HNBR

#### Certified and complies with:

- CSA 6.32
- ANSI/CAN LC4
- CRN
- ISO9001, ISO14001

Technical specifications can be found here:

#### BMI Carbon Press

[https://www.bmicanada.com/products/bmi\\_specs\\_carbon\\_press\\_fittings.pdf](https://www.bmicanada.com/products/bmi_specs_carbon_press_fittings.pdf)

#### BMI Carbon Press Gas

[https://www.bmicanada.com/products/bmi\\_specs\\_carbon\\_press\\_fittings\\_gas.pdf](https://www.bmicanada.com/products/bmi_specs_carbon_press_fittings_gas.pdf)