CB SUPPLIES

MECHPRESS
Carbon Steel Press Systems

INSTALLATION GUIDE

CB Supplies Ltd. | cbsupplies.ca | salesinfo@cbsupplies.ca

Table of Contents

This Installation Guide is provided for general informational purposes only. The information is subject to change without notice. Always consult Local Building Codes and Regulations. Improper installation may void warranties and cause system failure. CB Supplies assumes no liability for improper installation.

Overview

MECHPRESS Carbon Steel Press Fittings are designed to be used with Schedule 10 to 40 carbon steel pipe (in accordance with **NFPA 13**, *Standard for the Installation of Sprinkler Systems)* on nominal sizes ½" to 2". MECHPRESS fittings can be connected to most carbon steel systems installed in residential, commercial, and industrial systems, including systems with seamless steel pipe (S) or ERW steel pipe (W).

All MECHPRESS fittings are zinc-nickel coated to protect against corrosion and available with the choice of two sealing elements Ethylene Propylene Diene Monomer (EPDM) for Mechanical and Fire Protection applications, or Hydrogenated Nitrile Butadiene Rubber (HNBR) for Gas and Fuel Oil applications. MECHPRESS and MECHPRESS-G carbon steel press fittings are easily distinguished by unique colour recognition on all fittings, ensuring the proper sealing element is installed every time with shrink wrapped hubs: yellow for HNBR; green for EPDM.

Features & Benefits

- 360° Symmetric design with double row of SS grip rings for superior pull-out resistance
- Smart Leak-Proof Technology – Fittings will leak if not pressed
- Fall away shrink-wrapped fitting hubs, provide visual confirmation that fittings have been pressed before going into service
- Visual Check, with two colour coded (square) dots per fitting located on each side for easy identification after installation:
  - Green for MECHPRESS (Mechanical & Fire Protection Systems)
  - Yellow for MECHPRESS-G (Gas & Fuel Oil Systems)
- Sealing Elements specific for use – EPDM for MECHPRESS and HNBR for MECHPRESS-G
- Almost 300 sizes and configurations available
- Compatible with leading carbon pipe press tools and jaws in the market
- 15-year limited warranty on all MECHPRESS carbon steel press fittings

Operating Parameters

	MECHPRESS	MECHPRESS-G
	Mechanical & Fire Protection	Gas & Fuel Oil
Sealing Element	Ethylene Propylene Diene Monomer (EPDM)	Hydrogenated Nitrile Butadiene Rubber (HNBR)
Operating Pressure	200 psi Max	200 psi Max
Operating Temperature	0°F to 250°F (–18°C to 120°C)	–40°F to 180°F (–40°C to 82°C)

Pipe Compatibility

MECHPRESS connectors are compatible with seamless or longitudinal welded steel pipes, including black, galvanized (for non-potable applications), industrially painted, and powder-coated pipes. The system is designed to work with ASTM A53, A135, A106, and A795 Schedule 5 to Schedule 40 carbon steel pipe. For fuel gas or fuel oil systems, MECHPRESS-G fittings should be used with ASTM A53 schedule 40 carbon steel pipe. If the pipe is coated, ensure that the maximum external diameter specified in the following tables is not exceeded. Please see Tables below.

Schedule 5 Pipe:

Pipe Size (Inches)	Outside Diameter (Inches)	Outside Diameter (mm)	Wall Thickness (Inches)	Wall Thickness (mm)
1/2	0.84	21.3	0.065	1.65
3/4	1.05	26.7	0.065	1.65
1	1.32	33.4	0.065	1.65
1-1/4	1.66	42.2	0.065	1.65
1-1/2	1.9	48.3	0.065	1.65
2	2.375	60.3	0.065	1.65

Table 1: Schedule 5 Pipe Sizing

Schedule 10 Pipe:

Pipe Size (Inches)	Outside Diameter (Inches)	Outside Diameter (mm)	Wall Thickness (Inches)	Wall Thickness (mm)
1/2	0.84	21.3	0.083	2.11
3/4	1.05	26.7	0.083	2.11
1	1.32	33.4	0.083	2.77
1-1/4	1.66	42.2	0.083	2.77
1-1/2	1.9	48.3	0.083	2.77
2	2.375	60.3	0.083	2.77

Table 2: Schedule 10 Pipe Sizing

EPDM Sealing Element

MECHPRESS fittings are manufactured with a high quality black EPDM (Ethylene Propylene Diene Monomer) sealing element installed at the factory. The molded sealing lips also seal pipe surfaces with slightly uneven surfaces.

The EPDM sealing element possesses excellent resistance to aging, ozone, sunlight, weathering, environmental influences, and most alkaline solutions and chemicals used in a broad range of applications.

NOTE: MECHPRESS EPDM sealing elements may be replaced with high-quality FKM (Fluoroelastomer) sealing elements without prior notice.

HNBR Sealing Element

MECHPRESS-G fittings feature a yellow HNBR (Hydrogenated Nitrile Butadiene Rubber) sealing element, factory-installed for high-quality performance. Molded sealing lips ensure effective sealing, even on slightly uneven pipe surfaces.

HNBR offers excellent resistance to aging, ozone, sunlight, weathering, and a wide range of alkaline solutions and chemicals.

Fitting Markings

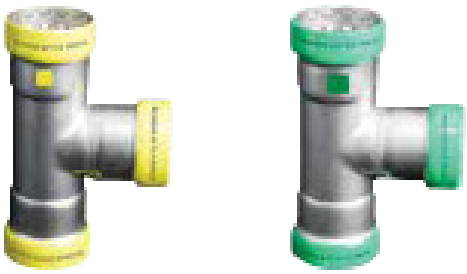
Each MECHPRESS fitting is marked with size, brand, manufacturer date code, product code, and certification mark.

Mech Smart Connect Technology

Utilizes a colour recognition system to distinguish between fittings with different configurations.

Coloured hubs with varying colours aid end users and distributors in identifying the correct products.

Upon installation, the installer removes the label to indicate that the fitting has been pressed. Coloured hubs can be easily removed, protecting the pressed area coating. Provides installers and inspectors with an efficient way to verify if the press fitting is installed or not.



Handling Instructions

All MECHPRESS components and associated pipes must be kept free from dirt, debris, or any items that could interfere with the sealing element and press connection. Before installation, visually inspect MECHPRESS sealing elements, separator rings, and grip rings to ensure the seal is intact and properly positioned within the fitting. Note that these components are not interchangeable between different MECHPRESS systems.

Transport

Avoid pulling or dragging fittings or system components along surfaces. Secure fittings, piping, and system components during transportation to prevent shifting.

Storage

- Store fittings, pipes, and system components in a clean, dry area.
- Avoid storing components directly on the floor.
- Provide at least three points of support for piping storage.
- Preferably, store different sizes separately.
- If separate storage isn't feasible, place smaller sizes on top of larger ones.
- Store fittings, pipes, and system components of different materials separately to prevent contact corrosion.

Pipe Preparation

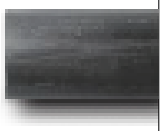
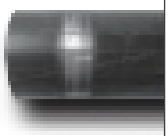
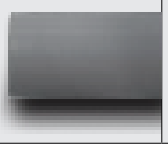
Description	Different Kinds of Pipe Surface	Prep Necessary (Yes/No)	Surface After Prepping	Comments
Clean, Bare Pipe		No		If the pipe has no lacquer and there is no rust on the surface and the surface is smooth, no preparing is necessary.
Galvanized Steel Pipe		Yes		If the surface of the galvanized pipe is uneven, then the pipe surface must be smoothed.
Pipe With Black Shellac Or Lacquer		Yes		If the pipe is coated with black shellac or lacquer the coating has to be smoothed. It is not necessary to completely remove the coating.
Pipe With Rust		Yes		If the pipe has no lacquer and there is a rust film on the surface, the surface has to be prepped until the rust film is removed and the pipe surface is smooth.
Epoxy Coating		No		The epoxy coating must be reduced to allow the pipe to be inserted into the fitting. If the pipe has been coated, the maximum external diameter must not exceed the limit in the Insertion Depth table.
Cataphoretic Paint (KTL)		No		If the pipe is cataphoretic painted (KTL) and the surface is smooth, it is not necessary to prep the pipe. If there are scratches on the KTL, the surface has to be smoothed.

Table 3: Pipe Preparation

Pipe surfaces must be smooth, without indentations, pits, deformations, or damage, and free of dirt, debris, rust, scale, oil, and grease.

Protective coatings do not need to be completely removed, nor does bare steel material need to be exposed.

Engraved or stamped pipes are not suitable for use with the MECHPRESS fitting system to avoid potential leak paths.

Engraving or stamping on pipes should not be removed using a grinder or other tools.

In applications requiring complete corrosion protection (e.g., cooling systems), apply suitable corrosion protection to exposed pipe surfaces after pressing.

Lubrication of the pipe or fitting is not required for the MECHPRESS system.

Installation Instructions

Check System Components.

Installing and Mounting the Pipe

When hanging and mounting pipes:

- Fixed piping should not support other components.
- Avoid using pipe hooks.
- Maintain proper distance between fittings and mounting points.
- Plan fixed and sliding mounts according to the expansion direction.

Pipe Hangers and Supports

Piping supports serve two functions: to provide support and guide pipe during thermal expansion.

Fittings should not be used as support to avoid stress on the system.

Follow industry standard practices and guidelines for layout and support.

Supports, hangers, and anchors should not hinder the free expansion and contraction of piping.

Sliding hangers must be positioned to prevent unintended rigidification.

Please see Table below.

Pipe Size (Inches)	Maximum Span (Feet)	Minimum Rod Diameter (Inches)
1/2	7	3/8
3/4		
1		
1-1/4		
1-1/2	9	3/8
2	10	3/8

Table 4: Pipe Hangers and Supports

Transition Fittings

Threaded Connections: Make threaded connection before press connection to avoid torsion on the press fitting.

Flange Connections: Bolt flange end in place before pressing the fitting to the pipe.

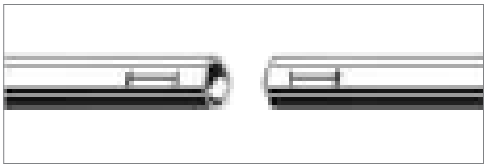
No-Stop Couplings

No-stop couplings allow repairs and can slide onto pipes for tight spaces.

Ensure minimum and maximum insertion depths are marked and adhered to.

Use proper insertion depths to distinguish between good and bad connections.

Please see Tables below.



Pipe Diameter (Inches)	Minimum Insertion Depth (Inches)	Minimum Insertion Depth (mm)	Maximum Insertion Depth (Inches)	Maximum Insertion Depth (mm)
1/2	1-1/16	27	1-5/8	41
3/4	1-3/16	29	1-13/16	46
1	1-3/8	34	1-15/16	49
1-1/4	1-13/16	46	2-1/2	63
1-1/2	1-7/8	48	2-3/4	70
2	2	50	2-3/4	70

Table 5: Insertion depths for MECHPRESS no-stop couplings

Pipe Diameter (Inches)	Minimum Insertion Depth (Inches)	Minimum Insertion Depth (mm)	Maximum Insertion Depth (Inches)	Maximum Insertion Depth (mm)
1/2	1-1/16	27	2-3/4	70
3/4	1-3/16	29	2-13/16	72
1	1-3/8	34	3	77
1-1/4	1-13/16	46	3-1/2	89
1-1/2	1-7/8	48	3-9/16	91
2	2	50	3-11/16	93

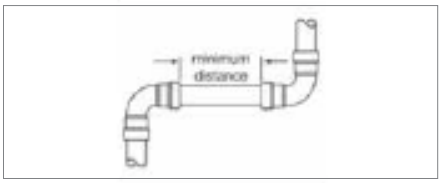
Table 6: Insertion depths for MECHPRESS extended no-stop couplings

Space Requirements and Intervals

Ensure adequate space for pressing tools, especially near penetrations in walls or ceilings.

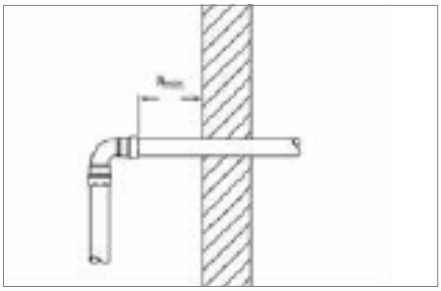
Adhere to minimum distances between fittings to prevent improper seals.

Please see Tables below.



Minimum distance between press fittings						
Pipe Diameter (inch)	1/2	3/4	1	1-1/4	1-1/2	2
Range (inch)	1/4	1/4	1/4	1/2	1/2	1/2

Table 7: Minimum distance between press fittings



Pipe Size (inches)	Minimum space requirement, a min for press tools (Inches)
	RIDGID RP241, RP320, RP33O, RP34O, and CT400 Press Tools Milwaukee M18 Press Tools
1/2 to 1	1½
1¼ to 2	3/8

Table 8: MECHPRESS distance requirements for press jaws between pipes and walls

MECHPRESS Jaws Clearance Requirements

Consider the minimum distance between the pipe or the pipe and the wall/ceiling during the planning phase to ensure a smooth work process.

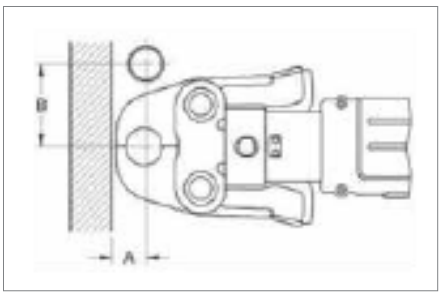
Adequate clearance is crucial for successful pressing in tight spaces.

Close proximity of pipes may result in leaks.

Adhere to minimum intervals between fittings to prevent leaks.

Ensure the pipe is inserted to its full depth before pressing to maintain proper connection integrity.

Please see Tables that follow.

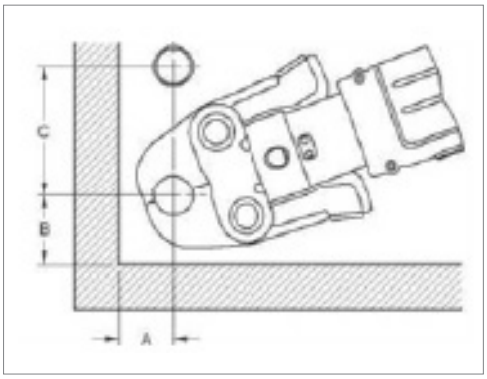


Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)
1/2	1	26	2-5/8	67
3/4	1-1/4	32	3-1/8	79
1	1-3/4	45	3-5/8	92

Table 9: MECHPRESS Jaws Clearance Requirements

Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)
1/2	1-1/4	32	2-7/8	73
3/4	1-1/8	39	3	76

Table 10: MECHPRESS compact jaws clearance requirements



Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)	C Minimum (Inches)	C Minimum (mm)
1/2	1-1/4	32	1-7/8	48	3	76
3/4	1-1/2	38	2-1/8	54	3-1/2	89
1	2	51	2-1/2	64	4	101

Table 11: MECHPRESS standard jaws clearance requirements between pipe, wall, and floor

Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)	C Minimum (Inches)	C Minimum (mm)
1/2	1-1/2	38	2-1/8	54	3-1/8	79
3/4	1-3/8	35	2-1/8	54	3-3/8	86

Table 12: MECHPRESS compact jaws clearance requirements between pipe, wall, and floor

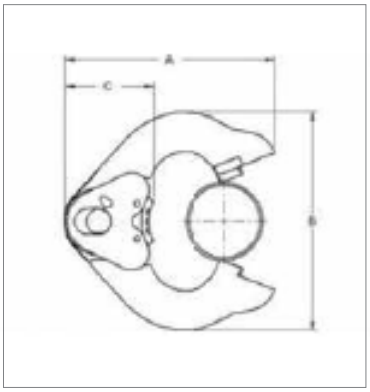
MECHPRESS Rings Clearance Requirements

Verify the availability of space needed for system pressing tools if MECHPRESS fittings are to be installed near ceiling penetrations.

Adequate clearance is necessary to accommodate the pressing tools during installation.

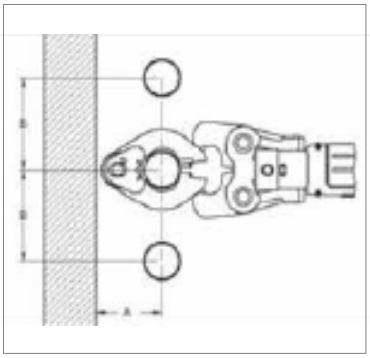
Ensure that there is sufficient room for the tools to operate effectively without obstruction from the ceiling penetrations.

Please see Tables below.



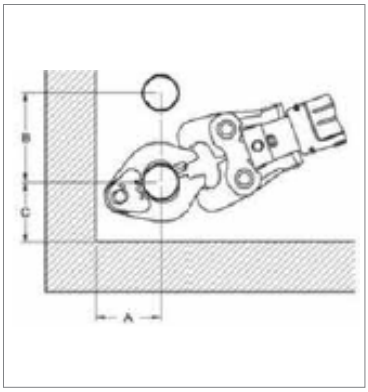
Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)	C Minimum (Inches)	C Minimum (mm)
1-1/4	6	152	6-1/4	159	2-1/2	64
1-1/2	6	152	6-3/4	171	2-5/8	67
2	6	152	6-7/8	175	2-1/2	64
2-1/2	5-5/8	168	7-5/8	194	2-1/2	64
3	7-1/2	190	8-7/8	225	2-1/2	64
4	8-1/2	214	10-3/8	270	2-5/8	67

Table 13: MECHPRESS rings dimensions



Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)
1-1/4	3-3/4	95	4-7/8	124
1-1/2	4	102	5-1/8	130
2	4	102	5-3/8	137
2-1/2	4-1/2	115	5-7/8	150
3	4-3/4	120	6-3/4	170
4	5-3/8	135	8-1/4	210

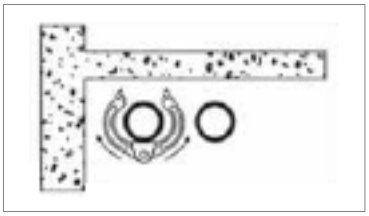
Table 14: MECHPRESS rings with V2/V3 actuator clearance requirements



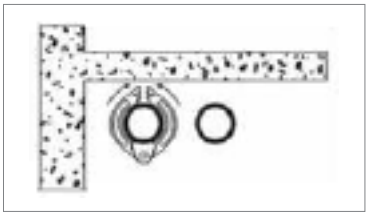
Pipe Diameter (Inches)	A Minimum (Inches)	A Minimum (mm)	B Minimum (Inches)	B Minimum (mm)	C Minimum (Inches)	C Minimum (mm)
1-1/4	3-3/4	95	3-3/4	95	4-7/8	124
1-1/2	4	102	4	102	5-1/8	130
2	4	102	4	102	5-3/8	137
2-1/2	4-1/2	115	5-7/8	150	4	100
3	4-3/4	120	6-3/4	170	4-3/4	120
4	5-3/8	135	8-1/4	210	5-1/2	140

Table 15: MECHPRESS rings with V2/V3 actuator clearance requirements between pipe, wall, and floor

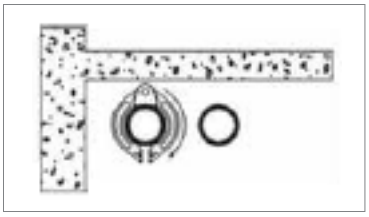
Pressing with Ring and Actuator in Tight Quarters



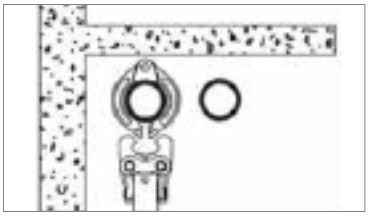
Wrap the actuator ring around the press fitting with the opening facing away from you.



Close the actuator ring tight around the fitting.



Rotate the actuator ring until the press jaw receptacle is facing toward you.



Properly insert the press jaw and begin the press fitting procedure.

Welding

Maintain proper distances from fittings to prevent damage to sealing elements during welding.

If welding in line with the connection, maintain a minimum distance of three feet from the connection to safeguard the sealing element.

When welding adjacent to the connection, ensure a minimum distance of four inches between the weld and the connection to prevent damage to the sealing element.

Use precautions to keep press connections cool during welding.

Wrap the connection with a cold wet rag.

Protect the connection with a weld blanket.

Prefabricate solder connections or welded fittings before installing the press fitting. Ensure the pipe has cooled before installing the press fitting.

Apply heat sink gel, spray, or spot freezing as needed.

Operating Instructions

Personal Protective Equipment (PPE)
Safeguard against potential hazards by wearing Personal Protective Equipment (PPE). Ensure proper selection, use, and maintenance of PPE to promote a secure and healthy environment.

NOTE: Installation guidelines are the same for MECHPRESS and MECHPRESS-G

1. Cut pipe square using a fine-toothed saw or displacement-type metal tubing cutter.

   Do not use flame cutters, grease or oils.

   Damage to pipe and/or sealing element may result.

2. Maintain a minimum of **four inches** from the vise area when cutting pipe.

   For optimal sealing, cut an area where the wall thickness is uniform.

   Avoid cutting through any manufacturer's markings, grooves, or other engravings present on the surface of the pipe.

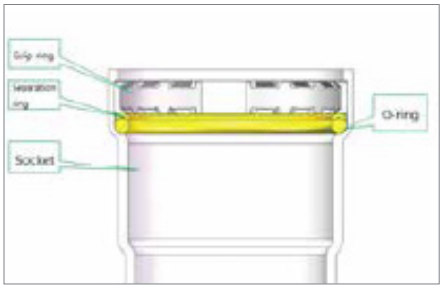
3. Remove all burrs from the inside and outside of pipe and prepare pipe surface to insertion depth using deburring tool or fine grit sandpaper.

   Pipe ends must be clear of all burrs.

   Improper deburring will reduce service life and encourage leak path formation.

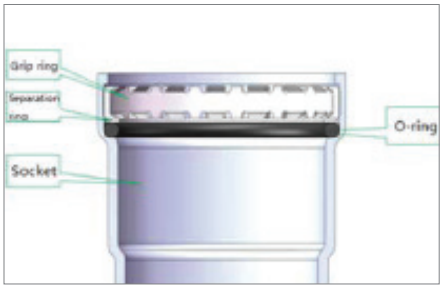
4. Inspect sealing element to ensure correct material for application: EPDM (black) for Mechanical and Fire Sprinkler Systems, or HNBR (yellow) for Gas and Fuel Oils.

MECHPRESS-G (HNBR)



5. Ensure that press fitting components are intact and seated properly. Refer to illustration for proper fit of grip ring, separation ring, and sealing element.

MECHPRESS (EPDM)



6. Determine insertion depth from nominal pipe diameter (see table below), and mark insertion depth on the surface of the pipe.

   Insertion depth must be marked before pressing the connection and visible after the connection is made.

   Improper insertion depth will reduce service life and potentially create a leakage path.

Proper Insertion Depth by Nominal Pipe Size

Nominal Pipe Diameter (inches)	Minimum Insertion Depth (inches)	Maximum Insertion Depth (inches)
1/2	1-1/16	1-5/8
3/4	1-3/16	1-13/16
1	1-3/8	1-15/16
1-1/4	1-13/16	2-1/2
1-1/2	1-7/8	2-3/4
2	2	2-3/4

7. Insert press fitting over prepared pipe end, twisting slightly, until proper insertion depth is reached.
   a. **Where fitting contains a stop:** Ensure end of pipe contacts stop before proceeding.
   b. **Where fitting does not contain a stop:** Ensure Maximum Insertion Depth (see Insertion Depth chart below) is maintained before proceeding.

Ensure minimum distance between press fittings is maintained. Failure to leave adequate distance will reduce service life and encourage leak path formation.

Minimum Distance Between Press Fittings

Nominal Pipe Diameter (inches)	Minimum Distance (inches)
1/2	1/4
3/4	
1	
1-1/4	1/2
1-1/2	
2	

Pipe Hanger Spacing

Pipe Size (inches)	Maximum Span (ft)	Minimum Rod Diameter (inches)
1/2	7	3/8
3/4		
1		
1-1/4		
1-1/2	9	3/8
2	10	3/8

Insertion Depth for Couplings Without Stops

Adjustable Insertion Depth		
Pipe Diameter (inches)	Min. Insertion Depth (inches)	Max. Insertion Depth (inches)
1/2	1-1/16	1-5/8
3/4	1-3/16	1-13/16
1	1-3/8	1-15/16
1-1/4	1-13/16	2-1/2
1-1/2	1-7/8	2-3/4
2	2	2-3/4

Insertion Depth for Extended Couplings Without Stops

Extended Adjustable Insertion Depth		
Pipe Diameter (inches)	Min. Insertion Depth (inches)	Max. Insertion Depth (inches)
1/2	1-1/16	2-3/4
3/4	1-3/16	2-13/16
1	1-3/8	3
1-1/4	1-13/16	3-1/2
1-1/2	1-7/8	3-9/16
2	2	3-11/16

NOTICE: In the next step, refer to nominal diameter of pipe and fittings for appropriate process for press connection.

Installation requires a constant-force press tool with press jaws and press rings and corresponding actuator suitable for nominal pipe diameter.

Refer to the Compatible Tools section for further information.

8. **FOR NOMINAL SIZES 1/2" TO 1"**

   Press connections made with MECHPRESS 1/2" to 1" fittings must be performed with **press jaws**.

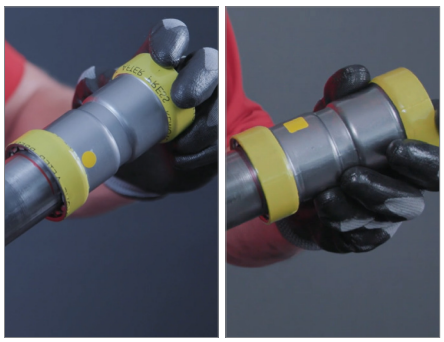
FOR NOMINAL SIZES 1-1/4" TO 2"

Press connections made with MECHPRESS 1-1/4" to 2" fittings press connections must be performed with **both ring jaw and press ring**.

9. **FOR NOMINAL SIZES 1/2" TO 1"**

   Start pressing process by holding the tool trigger until jaw has engaged over the hub of the fitting. **Ensure insertion depth mark is visible**.

   KEEP EXTREMITIES AND FOREIGN OBJECTS CLEAR OF TOOL DURING OPERATION TO PREVENT INJURY OR INCOMPETE PRESS

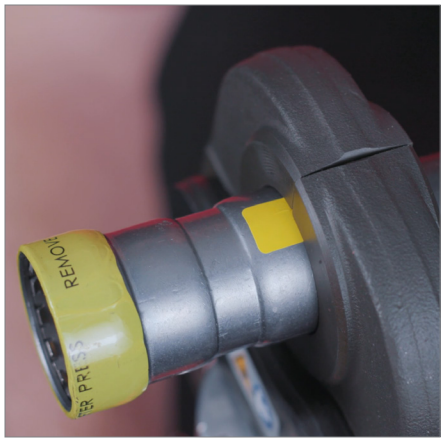


FOR NOMINAL SIZES 1-1/4" TO 2"

Open press ring and place over hub of press fitting. **Ensure insertion depth mark is visible**.

Place ring jaw onto press ring and energize tool until ring jaw has engaged press ring.

KEEP EXTREMITIES AND FOREIGN OBJECTS CLEAR OF TOOL DURING OPERATION TO PREVENT INJURY OR INCOMPETE PRESS



10. **FOR NOMINAL SIZES 1/2" TO 1"**

    Engage trigger until press joint is complete, then remove press jaws.

FOR NOMINAL SIZES 1-1/4" TO 2"

Engage trigger until press joint is complete, then remove ring jaw and press ring.

11. Coloured shrink wrap hubs will fall off after pressing, providing visual confirmation that the fittings have been pressed before going into service.

    Never press a connection more than once.

Installation Guidelines for Underground Carbon Steel Press Fittings

A. Construction Preparation

(1) Material Preparation
- Select press fittings and pipes compliant with product standards. Pipe specifications should be determined according to actual needs.
- Prepare auxiliary materials such as sealing rings and lubricants.

(2) Tool Preparation
- Equip with dedicated press tools, ensuring their precision and performance.
- Prepare other tools including cutting, chamfering, measuring tools, spirit level, and marking pens.

(3) Site Preparation
- Clear the construction site to ensure it is level and free of obstacles.
- Measure and mark the pipe layout and position based on test requirements.

(4) Corrosion Protection Requirements
- **Surface Treatment**: Derust the carbon steel press fittings before installation to reach the Sa2.5 standard.
- **Anti-corrosion Coating**: Apply three-layer PE anti-corrosion coating or coal tar enamel, with thickness meeting relevant standards.
- **Cathodic Protection**: For long-distance buried pipes, consider using sacrificial anode or impressed current cathodic protection.

B. Pipe Laying

(1) Channel Excavation
- Excavate trenches according to the design, ensuring the depth and width meet the installation and backfill requirements.
- Level the trench bottom, remove sharp objects, and lay a 10–15cm sand cushion layer.
- Place concrete or metal supports every 2–3m based on fitting specifications and pipe length to prevent sinking.

(2) Burial Depth Requirements
- Minimum burial depth (from pipe top to ground) is 0.7m under sidewalks and 1.0m under roadways.
- Increase the depth for special areas like rivers or railways in accordance with codes.

(3) Compaction Requirements
- **Compaction Material**: Prefer fine soil or sandy soil; avoid rocks or frozen soil blocks.
- **Compaction Steps**: Manually backfill and compact soil in 20cm layers up to 50cm above the pipe, achieving 90% compaction. Backfill soil must be uniform and free of debris. Use mechanical compaction over 50cm above the pipe, avoiding impact on the pipe.

C. Pipe Assembly

(1) Pipe Presetting
- Cut pipes to suitable lengths using cutting tools based on the actual installation length. The cut face should be perpendicular to the pipe axis.
- Before inserting the pipe into the fitting, chamfer the pipe end, remove burrs, apply lubricant to the connection, and insert to the marked position to ensure correct depth.

(2) Press Connection
- Use a properly maintained, calibrated and compatible press tool on the connection, keeping it perpendicular to the fitting and applying even pressure until the tool reaches the set pressure.
- After pressing, check for cracks or deformities.

(3) Corrosion Protection After Assembly
- Apply corrosion protection measures such as PE anti-corrosion tape and cathodic protection to the connection.

(4) Insulation for Underground Installation
- Insulate the pipe with materials and protective layers that meet local standards.

(5) Protection of Connection Fittings
- Protect connection fittings, adding sleeves if necessary to prevent leaks caused by pressure or soil settlement.

D. Pressure Test

(1) Test Preparation
- After installation, check the system for secure connections.
- Seal all openings, fill the system with water, and expel air.

(2) Test Process
- Slowly increase pressure to 1.5 times the working pressure (1.8MPa for water, 1.3MPa for gas, with a minimum of 0.6MPa).
- Hold the pressure for 10- 30 minutes to check for leaks or deformation.
- Reduce the pressure to the working pressure, hold for 30 minutes, and check for pressure drops.

(3) Test Record
- Record the test time, pressure, holding time, and inspection results during the pressure test.

E. Precautions

(1) Pre-installation Inspection
- Check fittings for appearance and perform a pressure test to ensure there is no damage or leakage.
- Avoid impacts or scratches during handling, storage, and installation.

(2) Connection Operation
- Strictly follow press connection procedures to ensure secure connections.

(3) Construction Monitoring
- Wrap products with approved anti-corrosion materials before burial.
- Monitor the pipe position, elevation, and deformation during burial, addressing any issues promptly.

(4) Crossing Other Underground Pipelines
- When crossing other underground pipelines, follow codes to prevent interference.
- Use protective measures such as sleeves when pipes cross roads or buildings.

(5) Compliance with Regulations
- Installation personnel must comply with local construction and piping codes. Some areas have special requirements for direct burial.

(6) Soil Conditions
- In highly corrosive soils, additional protection such as cathodic protection may be necessary.

(7) Gas Pipelines
- If the fittings are used for underground gas pipelines, they must meet NFPA 54 (National Fuel Gas Code) and have corresponding protection.

(8) Post-burial Seal Test
- After burial, conduct a seal test at 1.8MPa water pressure or 1.3MPa gas pressure.
- Then perform a roller compaction test and maintain pressure for 24 hours.

Compatible Tools

MECHPRESS and MECHPRESS-G can be installed with properly maintained and calibrated RIDGID and Milwaukee press tools and their compatible jaws, rings, and accessories designed for carbon steel.

RIDGID® is a registered trademark of RIDGID, Inc.

Milwaukee® is a registered trademark of Milwaukee Electric Tool Corporation.

Notes Regarding Press Tools

- See Operator's Manual for proper tool instructions.
- Ensure press jaws and rings are compatible with carbon steel.
- **Do not use press tools or components intended for copper press-fit system and stainless steel.**
- Do not mix and match components from different manufacturers.
- Safeguard against potential hazards by wearing Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE)

Safeguard against potential hazards by wearing Personal Protective Equipment (PPE). Ensure proper selection, use, and maintenance of PPE to promote a secure and healthy environment.

General Installation Notes

- Press tool operator's manual and fitting manufacturer's installation instructions must be read in full before installation.
  - **Failure to follow all instructions may have consequences, including but not limited to;** premature failure of system, property damage, personal injury, and/or death.
  - The installation, inspection, testing and purging of systems shall be in accordance with relevant codes and standards for all installations, as directed by the authority having jurisdiction.

MECHPRESS	MECHPRESS-G
Mechanical and Fire Protection Systems	**Gas and Fuel Oil Systems**
• See approved applications table for suitable types of service. • Fittings are not approved for fuel gas applications. • The mechanical system shall comply with the Electrical Bonding and Grounding Section of the relevant Plumbing & Electrical code. The metal-to-metal contact between fittings and pipe ensures continuity of the bonding through this contact.	• See approved applications table for suitable types of service. • The installation, inspection, testing and purging of systems shall be in accordance with local codes, or in the absence of local codes, with **NFPA 54/ANSI Z223.1**, ***National Fuel Gas Code*** as directed by the authority having jurisdiction. • Fuel gas system shall not be used as a grounding electrode for electrical systems.

Approved Applications for MECHPRESS and MECHPRESS-G Carbon Steel Press Systems

Type of Service	System Operating Conditions			Sealing Element	
	Comments	Pressure (psi)	Temperature (°C/°F)	EPDM	HNBR
				MECHPRESS	MECHPRESS-G
FLUIDS/WATER					
Chilled Water	Ethylene glycol/propylene glycol	200	See Note 1	√	
Hydronic Water	Ethylene glycol/propylene glycol			√	
Fire Sprinkler	NFPA 13, 13D, 13R	175	See Note 1	√	
Low Pressure Steam	Low Pressure Steam Supply Lines	5	Max 108°C/ 226.4°F	√[2]	
FUEL OIL AND LUBRICANTS					
Natural Gas	Major component methane	125	–40°C to 82°C/ –40°F to 180°F		√[4]
Propane					√[4]
Butane					√[4]
Heating Fuel Oil			Max 38°C/ 100.4°F		√
Diesel					√
Mineral Oil		200	Ambient 3		√
Lubricating Oil	Petroleum base	200	Max 65°C/ 149°F		√
GASES/VACUUM					
Compressed Air	Oil concentration≤25 mg/m^3	200	Max 60°C/ 140°F	√[2]	√[2]
	Oil concentration>25 mg/m^3				√[2]
Nitrogen				√	√
Carbon Dioxide	Dry			√	√
Argon Gas				√	√
Oxygen	Non-medical Keep oil and grease free	140	Max 60°C/ 140°F	√	
Hydrogen		125		√	√
Acetylene	Test pressure 350PSI	20	Ambient 3	√	√
Vacuum	Minimum absolute pressure Maximum differential pressure	750µm Hg 29.2" Hg	Max 71°C/ 159.8°F	√	√

1. System pressure and range depend on seals. Any ranges listed in the table above are limited by the following seals to include:
1a EPDM temperature range is typically –17°C to 120°C (0°F to 248°F) | FKM temperature ranges are typically –10°C to 140°C (14°F to 284°F), with temperature spikes (24hr) up to 356°F.
1b HNBR temperature range is typically –40°C to 82°C (–40°F to 180°F).
2. The system must contain sufficient condensate drain.
3. The ambient temperature should be regarded as a normal working condition and should not exceed the limit of the sealing ring.
4. Complies with CSA 6.32/ANSI LC-4.

Listings, Code, and Standards

	MECHPRESS	MECHPRESS-G
Referenced: Listing, Code or Standard	**Mechanical & Fire Protection**	**Gas & Fuel Oils**
Canadian Registration No. (CRN)	√	√
ANSI/CAN/UL 213, *Standard for Rubber Gasketed Fittings for Fire-Protection Service*	√	
ASME B31.1, *Power Piping*		√
ASME B31.3, *Process Piping*	√	√
ASME B31.5, *Refrigeration Piping & Heat Transfer Components*	√	√
ASME B31.9, *Building Services Piping*	√	√
CSA B149.1, *Natural Gas and Propane Installation Code*		√
CSA Class C330511, *GAS ACCESSORY DEVICES – Press Connect Type Metallic Fittings*		√
CSA Class C330591, *GAS ACCESSORY DEVICES – Press Connect Type Metallic Fittings Certified to US Standards*		√
CSA/ANSI LC 4/CSA 6.32, *Press-Connect Metallic Fittings For Use In Fuel Gas Distribution Systems*		√
FM 1920, *Pipe Couplings and Fittings for Aboveground Fire Protection Systems*	√	
IAPMO/ANSI/CAN Z1117, *Press Connections*	√	
International Fuel Gas Code (IFGC)	√	√
International Plumbing Code (IPC)	√	√
National Plumbing Code of Canada	√	√
NSF/ANSI 61, *Drinking Water System Components – Health Effects*	√	
NSF/ANSI/CAN 372, *Drinking Water System Components – Lead Content*	√	
UL 852, *Standard for Safety Metallic Sprinkler Pipe for Fire Protection Service*	√	
ULC/ORD-C199S, *Light Wall Steel Pipes for Sprinkler Systems*	√	
Uniform Plumbing Code (UPC)	√	√

CB Supplies Limited Warranty

MECHPRESS AND MECHPRESS-G Carbon Steel Press Systems by CB Supplies

Subject to the conditions in this Limited Warranty, CB SUPPLIES LTD. warrants to end users and installers who purchase and properly install MECHPRESS and MECHPRESS-G carbon steel press fittings, under normal conditions of use, will be free from failure caused by manufacturing defects for a period of fifteen (15) years from date of installation.

Under this warranty, you only have a right to reimbursement if the failure or leak resulted from a manufacturing defect in the products covered by this warranty and occurred during the warranty period. You do not have a remedy or right of reimbursement under this warranty and this warranty does not apply if the failure or any resulting damage is caused by: (1) components in the plumbing systems other than those manufactured or sold by CB Supplies Ltd.; (2) not designing, installing, inspecting, testing, or maintaining the systems in accordance with CB Supplies Ltd. installation instructions effective as of the time of the installation and relevant specifications, codes and standards for the type of installation; (3) improper design of the system; (4) mishandling and inadequate protection of the product prior to, during, or after installation, inadequate freeze protection, exposure to conditions in excess of those covered by relevant codes and standards; and (5) natural disasters such as, but not limited to, fire, flood, wind, ground movement, or lightning.

In the event of a leak or other failure of a product covered by this warranty, it is the responsibility of the property owner to take measures to limit and repair any damage in a timely manner and pay for the same. Only if the warranty applies will CB Supplies Ltd. be responsible for reimbursement under this warranty. The part or parts that allegedly failed should be kept and CB Supplies Ltd. contacted in writing to the address below within thirty (30) days after the leak or failure and identifying yourself as having a warranty claim. You should be prepared to ship, at your expense, the product which you claim failed due to a manufacturing defect, document the date of installation, and the amount of any claimed bills which you wish to be reimbursed. Within a reasonable time after receipt of the product, CB Supplies Ltd. will investigate the reasons for the failure, which includes the right to inspect the product at a CB Supplies Ltd. location and reasonable access to the site of the damage in order to determine if the warranty applies. CB Supplies Ltd. will notify you in writing of the results of its review.

If CB Supplies Ltd. determines that a failure or leak and any resulting damages were the result of a manufacturing defect in the products covered by this warranty, the limited and exclusive remedy under this warranty shall be that CB Supplies Ltd. will reimburse the property owner for reasonable repair or replacement charges. CB Supplies Ltd. shall not be liable for consequential economic loss damages under any legal theory and whether asserted by direct action, for contribution or indemnity or otherwise.

The above limited warranty is in lieu of all other warranties express or implied, including but not limited to, the implied warranties of the merchantability and fitness for a particular purpose. Other than this limited warranty, CB Supplies Ltd. does not authorize any person or firm to create for it any other obligation or liability.

MECHPRESS
Carbon Steel Press Systems

CB Supplies established in 1962 is both a Canadian manufacturer and master distributor. Our core value is to provide exceptional customer service through each of our four regional offices with:

- High-quality products that meet changing market demands
- Competitive market pricing
- High-fill rates and prompt deliveries

We continually support our core value with long-term investment in our people, facilities, product, and our industry associations.

We provide a wide range of plumbing, hydronics, and HVACR solutions, including our branded products: VIPERT™ Potable and Radiant Tubing, LYNX-PEX™ Water Service Tubing, MECHPRESS Carbon Steel Press Fittings, Diamondback® (CSST) Flexible Gas Piping, and American Granby Products.

To find out how we can support you, visit us at **cbsupplies.ca**

CB SUPPLIES

CB Supplies Ltd. | cbsupplies.ca | salesinfo@cbsupplies.ca