JCM Tapped Outlet Repair Clamps - 103, 104

All Models of JCM Universal Clamp Couplings are available with tapped outlets for repair of direct tap pull outs and broken or split pipe requiring a service outlet.

How To Order

1. Select standard model, size and width clamp to fit pipe. 2. Change model number to corresponding Tapped Outlet Clamp Model Number.	3. Select size and type of tapped outlet from outlet guide below. Note minimum widths and sizes. 4. Add Outlet Tap Code to clamp number.	**Ordering Example:** For standard clamp to fit 6” Cast Iron Pipe with 12” width, with 2” IP outlet, order: 103-0690-12 x 14IP

Standard Clamp Model	Becomes	Tapped Outlet Clamp Model
101 Universal Clamp Coupling - Standard Range		103 Tapped Universal Clamp Coupling - Standard Range
102 Universal Clamp Coupling - Extended Range		104 Tapped Universal Clamp Coupling - Extended Range
131 All Stainless Steel UCC - Std Range		133 Tapped All Stainless Steel UCC - Std Range
132 All Stainless Steel UCC - Extd Range		134 Tapped All Stainless Steel UCC - Extd Range
121 Gas Repair Clamp		123 Tapped Gas Service Clamp
151 Gas Repair Clamp		153 Tapped All Stainless Steel Gas Service Clamp

CLAMP SIZES	MINIMUM CLAMP LENGTH	TYPE OF THREAD	TAP SIZE	ADD OUTLET TAP CODE	
				IP ORDER TAP CODE	CC ORDER TAP CODE
2.38 - 4.80	6”	IP or CC	3/4”	06	07
			1”	08	09
2.38 - 14.00	7-1/2”	IP or CC	3/4”	06	07
			1”	08	09
4.50 - 14.00	12”	IP or CC	1-1/4”	10	11
4.50 - 14.00	12”	IP or CC	1/12”	12	13
4.50 - 14.00	12”	IP	2”	14	-
4.50 - 14.00	12”	CC	2”	-	15

JCM 103 and 104
Tapped Universal Clamp Couplings
Typical Specifications

JCM 103 Tapped Universal Clamp Couplings - JCM 104 Tapped Multi-Band Clamps (sizes 4” through 8”)

All full circumferential single and multi-band repair clamps 1-1/2” and larger shall have a minimum material standard of certifiable prime 304 Stainless Steel band; heavy duty, low profile Ductile Iron Lugs (ASTM A536) with mutually supporting sliding fingers; 5/8” corrosion resistant alloy bolts, per AWWA Standard C-111, ANSI 21.11, (or Stainless Steel 18-8 Type 304 bolts) and a gridded gasket with tapered lap joint ends and a 304 stainless steel quarter hardened bridge plate molded flush into the gasket. Gaskets in sizes 3” and larger shall be 1/4” thick.To provide extra tightening capability, the band shall be permanently attached to the lugs by crimping the lug and locking it in place with a minimum of three stainless welds per lug. Clamp shall be similar to JCM 103 Universal Clamp Coupling, JCM 104 Universal Clamp Coupling or approved equal.

JCM 103 Tapped Universal Clamp Couplings - JCM 104 Tapped Multi-Band Clamps (sizes 10” and larger)

All full circumferential single and multi-band repair clamps 10” and larger shall have a minimum material of 17 gauge certifiable prime 304 Stainless Steel band; heavy duty Ductile Iron Lugs (ASTM A536) with mutually supporting sliding fingers; 3/4” corrosion resistant alloy bolts, per AWWA Standard C-111, ANSI 21.11, (or Stainless Steel 18-8 Type 304 bolts) and a 1/4” thick gridded gasket with tapered lap plate molded flush into the gasket. To provide extra tightening capability, the band shall be permanently attached to the lugs. The attachment shall withstand a minimum of 100 ft. lbs. of torque per bolt. Clamp shall be similar to JCM 103 Universal Clamp Coupling, JCM 104 Universal Clamp Coupling or approved equal.

JCM 100 Series Universal Clamp Couplings are ANSI/NSF Standard 61 Certified.

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JCM 103 and 104
Tapped Universal Clamp Couplings
Material Specifications

JCM UNIVERSAL CLAMP COUPLINGS

BAND: Type 304 Stainless Steel

LUGS: Ductile Iron ASTM A-536

BOLTS: Corrosion resistant low alloy per AWWA C-111, ANSI A21.11.
Optional Stainless Steel 18-8 Type 304.

GASKETS: Compounded for use with water, salt solutions, mild acids and bases. Other gaskets available upon request.

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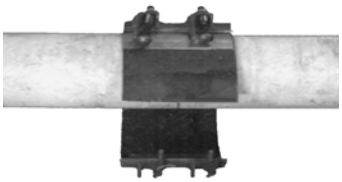
JCM UNIVERSAL CLAMP COUPLINGS
Installation Instructions
(101, 102, 103, 104)

1. Clean and scrape pipe. Remove any dirt or debris that would interfere with the complete sealing of the gasket around the pipe. Lubricate the pipe with soapy water. **Do not use oil base pipe lubricant.** *Trick of the Trade: Place a mark on the pipe to each side of the damaged area equal to the width of the clamp. This presents a visual mark to center the repair clamp over the damage area (1/2 of this distance is center).*

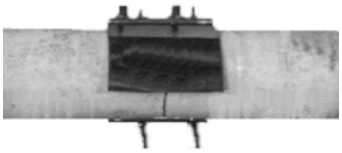
2. Inspect pipe for integrity, size and outside diameter. Confirm the proper size and range of repair clamp.

   For Models 101, 103 - Place clamp on pipe and center over damaged area.



101, 103

   For Models 102, 104 - Place clamp half without bolts on pipe so that gasket flap is on top facing you.

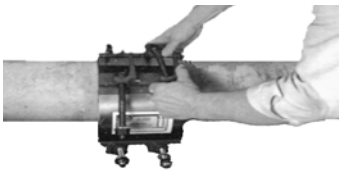


102, 104

3. **For Models 101, 103** - Tuck tapered gasket in place, mesh finger lugs and rotate clamp in direction of arrow to smooth tapered gasket flap. Engage bolts and tighten finger tight to hold in place.

101, 103

   For Models 102, 104 - Take half with bolts and turn gasket side up so that bolts slide back out of the way of fingers. Feed bottom tapered gasket end into place, mesh top lug fingers and engage bolts. Rotate clamp in direction of arrow to smooth gasket flaps Engage remaining bolts and tighten finger tight to hold in place. NOTE: Gaps between lugs should be approximately even on both sides.



102, 104

4. Tighten all bolts evenly to the following torque values:

   5/8" Bolts to 70 Foot Pounds
   3/4" Bolts to 90 Foot Pounds

5. Complete installation of fitting and confirm minimum bolt torque levels have been maintained. For JCM 103 and 104 Tapped Clamps, proceed with tapping process.

Universal Clamp Coupling Installation “Tricks of the Trade

Years of field experience, special applications and product testing have revealed many subtleties regarding application and installation of repair clamps. For maximum performance under adverse conditions take advantage of the JCM “Tricks of the Trade.”

- Always clean and lubricate pipe with water or soapy water. This will help overcome friction when rotating the clamp to smooth the gasket. Do not use oil base pipe lubricant.
- Place a reference mark on the pipe back from the damaged area to help in centering clamp over break. Clamp provide maximum performance when centered over damage area.
- Breaks involving deflected pipe require a wider clamp. JCM lugs will articulate, permitting clamp to better conform to pipe.
- Damage involving large holes or massive pitted areas - use stainless steel or galvanized metal plate over large holes (under repair clamp) to provide the gasket something to seal against.
- Drill holes in the ends of splits or cracks to relieve forces which could cause splits to continue.
- Clamp performance drops when gap between pipe ends is larger than 1/2”. Use a stainless steel spacer to fill or to place over gap.
- Leave sufficient pressure on a broken line to prevent intrusion of foreign matter to prevent excessive line contamination.
- With pressure reduced, spraying water will cease as soon as water level rises above break.
- Lubricating clamp bolts will ease clamp installation and assure proper torquing of bolts.

Making Larger Clamp From Smaller Clamps

Longer than normal gasket tapers permit joining of Universal Clamp Couplings of like width and type to make a larger clamp. For instance, a 6” and 8” clamp can be joined to make a 14” clamp. This provide you with “on hand” capability to make repairs on larger pipe sizes.

- Determine which clamps are available to make needed clamp, usually 2 or 3 clamps are sufficient. It is recommended that clamps to be joined be not more than one nominal size apart. Join clamps with ranges that when combined include O.D. of pipe to be repaired. For Example: Required clamp is 14” to fit 16.44 O.D. Combining a 101-0905-12 (range 8.99 to 9.39) and a 101-0690-12 (range 6.84 to 7.25) will make a clamp with a range of 15.84 to 16.64.
- Prior to joining clamps, reduce the curvature of the recessed bridge plate (as shown in photo) to slightly less than curvature of pipe to be repaired. This is done by laying bridge plate between two 2” x 4”’s and hitting with a small sledge hammer.
- Install as a multi-band clamp, making sure to tighten bolts evenly keeping gaps between lugs approximately even.