



# JCM Industries, Inc.

**Fittings & Fabrications  
for Repair - Connection - Branching  
All Types and Sizes of Pipe**

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## **JCM 101 UNIVERSAL CLAMP COUPLINGS JCM 171 UNIVERSAL CLAMP COUPLINGS REMOVEABLE LUGS Single Band, Ductile Iron Lugs**

Corrosion resistant, high strength low alloy bolts and nuts (AWWA C-111, ANSI A21.11.) are standard. Optional 18-8 Type 304 Stainless Steel available. Drop-in bolts means no loose parts.

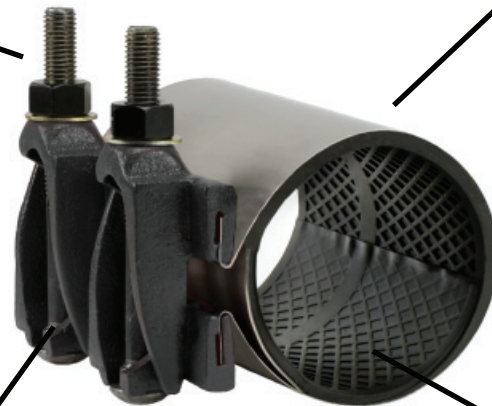
Meets ANSI/AWWA C230 Stainless-Steel Full- Encirclement Repair and Service Connection Clamps.

Low profile Ductile Iron lugs (ASTM A536) with mutually supporting sliding fingers provide distortion free tightening over wide range.

Model 101 Positive attachment of band to lugs eliminates mechanical weaknesses and band pull-out.

Model 171 Removeable lugs eases installation in tight spaces.

Type 304 Stainless Steel band conforms to pipe irregularities maintaining sealing pressure for entire gasket.



Gridded gasket with long tapered ends and recessed bridge plate assures even gasket pressure throughout range - without wrinkling or crimping. Compounded for use with water, salt solutions, mild acids and bases.

Image Reflects 6" Clamp Width

## **JCM 101 Universal Clamp Couplings meet all Three R's**

### **Robust, Reliable and Ready!**

## JCM Universal Clamp Couplings Selection

Industry standard repair clamps require bolt torque ranges between 60 - 85 ft. lbs. of torque. Some manufacturers advise not to exceed 75 ft. lbs. of torque due to excessive lug deformation. Difficult installations involving pipe offset or deflection often require more torque to assure proper clamp conformation to the pipe and high gasket compression. Larger pipe sizes and pipelines with higher working pressures also require greater torque capability. JCM Universal Clamp Couplings have bolt torque capability in excess of 100 ft. lbs. on 5/8" bolts and 150 ft. lbs. on 3/4" bolts. These elevated torque value capabilities allow JCM Universal Clamp Couplings to go beyond the "standard installation".

As an added PLUS, JCM Universal Clamp Couplings come standard with a thicker gasket in all but the smallest sizes. This heavy 1/4" thick gasket was introduced to the industry to provide for better performance on heavily damaged and pitted pipe. However, it had been available in only 10" and 12" clamp sizes. In JCM clamps this heavier gasket is standard in all sizes 3" and larger. Combined with the **greater bolt torque capability**, the heavy gasket feature means more clamp capability under extreme conditions.

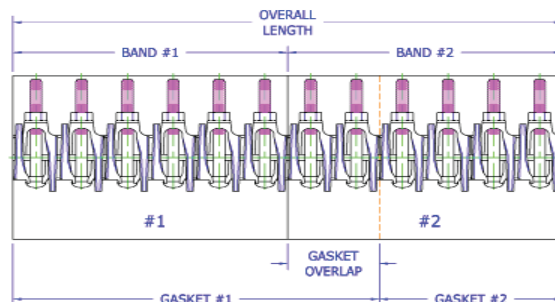
### Width Selection - 101, 102, 171, 172 Universal Clamp Couplings

JCM Universal Clamp Couplings are available in a great many widths. Because these clamps utilize a heavier gasket and bolting arrangement than most comparable clamps, when you use JCM Universal Clamp Couplings significant savings are possible. The following general recommendations are offered to assist you in taking advantage of the design benefits of these clamps. Specific circumstance may require widths other than these general recommendations.

- 6" Width:** Best and most economical width to repair most beam breaks and to connect pipe in sizes 4" and smaller. Short length with thicker gasket give outstanding deflection capability. Recommend 2" of gasket on both sides of the break.
- 7-1/2" Width:** Best for Asbestos Cement coupling replacements, beam breaks and connection of pipe in sizes 6" and larger.
- 12" Width:** Best for longer breaks, repairs on working pressure above 150 PSI and for larger sizes of pipe.
- 15, 18, 24, 30" and longer widths:** Best for long splits and heavily damaged pipe. For best performance the separation between pipe ends should be no more than 1/4". If the space is larger, or a large hole is being repaired, use a sheet of stainless steel over the hole under the gasket or a spacer to fill gap between pipe ends.

### JCM Multi-Segment Clamps for Extended Width Clamps

JCM clamps with widths greater than 48" are often provided as multi-segmented clamps which install in an overlapping band/gasket design. The gasket in the first section extends out from the band. The next section clamp has the gasket offset in the clamp, the second band butts up to the first band and covers the extended gasket and the additional sections continue with the offset assembly. The last band segment has a gasket flush with the stainless band, providing the last segment of the clamp. This overlapping band design allows for nearly unlimited clamp widths, ensures safe, damage free transport on common carriers and hot shot service, eases installation for a small number of crew members, provides for direct tightening of bolt sections over the gasket.



# JCM 101 Universal Clamp Couplings JCM 171 Universal Clamp Couplings



## Single Band Clamps

Nom. Pipe Size (IN.)	Clamp O.D. Range (IN.)	101 Attached	171 Removeable Lug	Clamp Width - Approximate Weight						
				6"	7"	12"	15"	18"	24"	30"
				Lbs.#	Lbs.#	Lbs.#	Lbs.#	Lbs.#	Lbs.#	Lbs.#
1-1/2	1.88 - 2.15	0190		•		•				
				7#		14#				
2 - 2-1/2	2.35 - 2.63 2.70 - 3.13	0238 0275		•	•	•	•			
				8#	9#	15#	19#			
3	3.46 - 3.70 3.73 - 4.13	0350 0400		•	•	•	•			
				8#	10#	16#	20#			
4	4.45 - 4.75 4.74 - 5.14 4.95 - 5.35 5.22 - 5.62	0450 0480 0500 0525		•	•	•	•	•	•	•
				9#	11#	18#	22#	27#	36#	44#
6	5.95 - 6.35 6.56 - 6.96 6.85 - 7.25 7.05 - 7.45 7.45 - 7.85	0600 0663 0690 0710 0745		•	•	•	•	•	•	•
				10#	12#	19#	24#	29#	38#	48#
8	7.95 - 8.35 8.54 - 8.94 8.99 - 9.39 9.27 - 9.67 9.90 - 10.30	0800 0863 0905 0940 1000		•	•	•	•	•	•	•
				11#	13#	21#	27#	32#	42#	53#
10*	10.60 - 11.00 11.04 - 11.44 11.34 - 11.74 11.75 - 12.15 12.00 - 12.40	1075 1110 1140 1175 1200			•	•	•	•	•	•
					19#	36#	39#	52#	70#	78#
12*	12.60 - 13.02 13.10 - 13.50 13.40 - 13.80 13.70 - 14.10 14.00 - 14.40	1275 1320 1340 1370 1400			•	•	•	•	•	•
					20#	37#	40#	52#	74#	82#
<b>Number of Bolts</b>				<b>2</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>

\*7" and 15" widths use 5/8" bolts

### HOW TO ORDER

1. Determine O.D. of pipe.
2. Select proper clamp O.D. range and width.
3. Determine Model Number. Model 101 for standard clamp, 171 for Removeable lug system.
4. Specify clamp number.

Example: To fit Cast Iron pipe, 6.90 O.D. with 6" width, order: 101-0690-6 or 171-0690-6

Note: Clamps do not prevent lateral movement of pipe. Applications in which the pipe may move out of the clamp, proper anchorage of the pipe must be provided.

### Available Options Upon Request Models 101-171-102-172

- Pipe sizes and ranges not listed
- Stainless Steel Bolts
- Conductive Buttons
- Specialty Gaskets
- Tapped Outlets
- Other Sizes and Ranges

# JCM Universal Clamp Couplings - Single Band

JCM Universal Clamp Couplings provide a full circumferential seal and wide range for the permanent repair or reconnection of Asbestos-Cement, Cast Iron, Ductile Iron, PVC, Steel, HDPE and other types of pipe.

## JCM 101 Series Universal Clamp Couplings

- **Balanced, Low Profile Ductile Iron lugs (ASTM A536)** with mutually supporting sliding fingers provide distortion free tightening over a wide range. Ductile Iron lugs offer corrosion resistance and an efficient method of transfer of energy from the fastener attachment directly to compression of the gasket.
- **Corrosion Resistant Type 304 Stainless Steel Band** conforms to pipe irregularities, maintains sealing pressure over the entire gasket area. Design criteria requires gauge thickness increase with clamp size. This is just one of the design points which enables JCM Universal Clamp Couplings to withstand the internal forces involved with large pipe repair.
- **Positive Attachment** of stainless band to lugs is a structurally sound fabrication design element which accommodates the greater torque capabilities ensuring permanent repairs on high pressure applications.
- **Gridded Gasket** with long tapered ends and recessed bridge plate assures even gasket pressure through out the range - without wrinkling or crimping. **Diamond gridded, 1/4" thick gasket** (JCM standard on nominal sizes 4" and larger) adapt to pitted or uneven pipe surfaces to completely seal damaged areas. Standard gasket is compounded for use with water, salt solutions, mild acids, bases and sewage. Other gasket compounds for exotic line contents are available.
- **Larger Bolts** for greater torque ratings are provided on 10" clamps and larger. The 3/4" bolts have bolt torque capability in excess of 100 ft. lbs. These higher torque value capabilities allow JCM Universal Clamp Couplings to go beyond the "standard installation."

## JCM 170 Series Universal Clamp Coupling with Removeable Lug System

- **Features an Easy to Remove Lug** - simply slide the open ear lug section off the stainless band receiver pleat, install the clamp around the pipe and slide the lug back into place. A simple transfer of bolt torque energy from the bolt to the stainless steel band locks the lug into place and prevents band pull out.
- **Full Line of Diameters and Widths** - JCM 170 Series is available in the exact sizes and ranges as the JCM Models 101, 102, 103 and 104 have the same great availability. Single band, multi-band and tapped outlets are readily available.

## JCM 170 Series with Removeable Lug Overcomes common installation problems such as:

**Cramped Underground Utility Applications**  
**Rockbound Soil Conditions**  
**Restricted, Narrow Space Piping Galleries**  
**Limited Excavation Applications**

## MATERIAL SPECIFICATIONS - JCM Universal Clamp Couplings - Models 101, 102, 171, 172

- Band:** 18-8 Type 304 Certifiable Prime Stainless Steel
- Lugs:** Ductile Iron ASTM A-536, 60-40-18
- Bolts:** Corrosion resistant low alloy per ASTM A242, ANSI A21.11, AWWA C-111. National coarse rolled thread and heavy hex nut.  
Optional Stainless Steel 18-8 Type 304 or 316 available.  
Optional Electro Coated low alloy bolts/nuts available.
- Gasket:** Virgin Styrene-Butadiene Rubber (SBR) - Compounded for use with water, salt solutions, mild acids and bases. Per ASTM D-2000 M4AA 607. Standard temperature range from -40° to 150° F (-40° to 65° C) constant, maximum intermittent 180°F (82°C). For applications on high temperatures or chemical pipelines, contact JCM Industries Technical Services.
- Coating:** Corrosion resistant shop coat paint primer.
- Pressure Rating:** Pressure holding capabilities vary according to application.  
For specific pressure ratings, contact JCM Industries Technical Services.

Meets ANSI/AWWA C230 Stainless-Steel Full-Encirclement Repair and Service Connection Clamps as applicable.  
JCM 100 Series Universal Clamp Couplings are ANSI/NSF Standard 61, Annex G and ANSI/NSF 372 Certified.

