



JCM Industries, Inc.

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

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JCM 102 EXTENDED RANGE UNIVERSAL CLAMP COUPLINGS JCM 172 EXTENDED RANGE UCC with REMOVEABLE LUGS Multi 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 102 Positive attachment of band to lugs eliminates mechanical weaknesses and band pull-out.

Model 172 Removeable Lug 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 12" Clamp Width

JCM 102 & 172 EXTENDED RANGE 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". 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.

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.

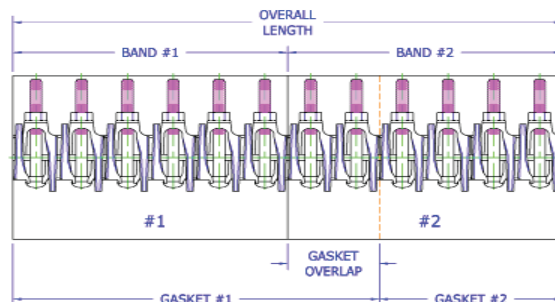
Width Selection - 101, 102, 171, 172 Universal Clamp Couplings

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 102 Extended Range Universal Clamp Couplings

JCM 172 Extended Range UCC with Removeable Lug



DOUBLE BAND CLAMPS

NOM PIPE SIZE (IN)	CLAMP O.D. RANGE (IN)	102 ATTACHED LUG	172 REMOVEABLE LUG	Clamp Width - Approximate Weight						
				6"	7"	12"	15"	18"	24"	30"
		CLAMP NUMBER		Lbs.#	Lbs.#	Lbs.#	Lbs.#	Lbs.#	Lbs.#	Lbs.#
4	4.44 - 5.24 4.74 - 5.57	0450 0480		•	•	•	•	•	•	•
				16#	20#	32#	40#	48#	64#	80#
6	6.62 - 7.42 6.84 - 7.64	0663 0690		•	•	•	•	•	•	•
				16#	20#	32#	40#	48#	64#	80#
8	8.62 - 9.42 8.99 - 9.79	0863 0905		•	•	•	•	•	•	•
				17#	21#	34#	43#	51#	68#	85#
10	10.72 - 11.72 11.04 - 12.24	1075 1110				•		•	•	•
						53#		80#	106#	132#
12	12.72 - 13.92 13.14 - 14.34 13.65 - 14.65	1275 1320 1365				•		•	•	•
						55#		80#	106#	132#
14	15.20 - 16.20	1530				•		•	•	•
						58#		87#	106#	145#
14 - 16	16.00 - 17.00 17.20 - 18.20	1600 1740				•		•	•	•
						59#		89#	108#	148#
16 - 18	18.40 - 19.40	1846				•		•	•	•
						62#		95#	124#	158#
18 - 20	19.40 - 20.40 20.40 - 21.40	1950 2050				•		•	•	•
						63#		95#	126#	158#
20 - 22	21.40 - 22.40 22.50 - 23.60	2160 2260				•		•	•	•
						67#		100#	134#	168#
Number of Bolts				4	4	8	8	12	16	20

MULTI-BAND CLAMPS

24	23.80 - 25.00 25.50 - 26.70 27.90 - 29.10	2400 2580 2800				•		•	•	•
						93#		140#	186#	233#
24 - 30	29.80 - 31.00 31.70 - 32.90	3000 3200				•				
						98#		147#	196#	245#
36	37.85 - 39.20	3830				•		•	•	•
						117#		175#	234#	292#

Larger sizes and ranges available upon request, contact JCM Sales Team.

HOW TO ORDER

1. Determine O.D. of pipe.
2. Select proper clamp O.D. range and width.
3. Determine Model Number. Model 102 for standard clamp, 172 for Removeable lug system.
4. Specify clamp number.

Example: To fit Cast Iron pipe, 6.90 O.D. with 12" width, order: 102-0690-12or 172-0690-12

For tapped/threaded outlet clamps, see JCM Tapped Clamps

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.

JCM 102 Extended Range Universal Clamp Couplings

JCM 172 Extended Range UCC with Removeable Lug

JCM Extended Range Universal Clamp Coupling - Double/Multi-Band

JCM 102 and 172 Extended Range Universal Clamp Couplings are designed especially for systems with both asbestos-cement and cast iron pipe, or with oversized pipe. This extended range, multi-band clamp provides a full circumferential seal and extra wide range. Only 6 clamps are needed to fit all cast-iron and asbestos-cement pressure pipe in sizes 4" through 12". Extra range and safety factor make this clamp particularly suited for pipe sizes 10" and larger.

JCM 102 and 172 Extended Range/Multi-Band clamps are designed to accommodate the working characteristics of large diameter pipe. In repair applications to large diameter pipe, there are several factors to consider to maintain pipe integrity and return to 100% service capacity. Factors critical to the application include: size and type of pipe, severity of damage, working pressure or service requirements, location or repair and time factor. JCM 102 UCC design criteria accommodate these factors by providing the following strength features...

Heavy Duty Lug - provides the safety factor and solid platform to support the increased bolt torque levels required to compress the gasket and seal the damaged area.

Large Bolts - supply bolting power and greater torque ability to fully compress the full circumferential gasket.

Thick Stainless Steel Band - increases pressure holding capability and provides even, consistent compression over the gasket area.

JCM 172 provides an easy to remove lug that accommodates cramped underground utility applications, rockbound soil conditions, restricted, narrow space piping galleries and limited excavation applications.

**JCM Extended Range
Universal Clamp Couplings
with
Heavy Duty Lug System
3/4" Bolt Assembly - 10" and larger
Thicker Gauge Stainless Steel Band**



Image Reflects 12" Clamp Width

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.

