JCM 131 All Stainless Steel Universal Clamp Couplings

JCM 131 All Stainless Steel Universal Clamp Coupling - Single Band

JCM All Stainless Universal Clamp Couplings work on the mechanical sealing principle providing a stronger, more structurally positive fastener system that is capable of obtaining maximum gasket compression. JCM All Stainless Steel Universal Clamp Couplings with “Turbo Torque” provide the means of making the clamp conform to the pipe and performing as never before. Advanced design features include:

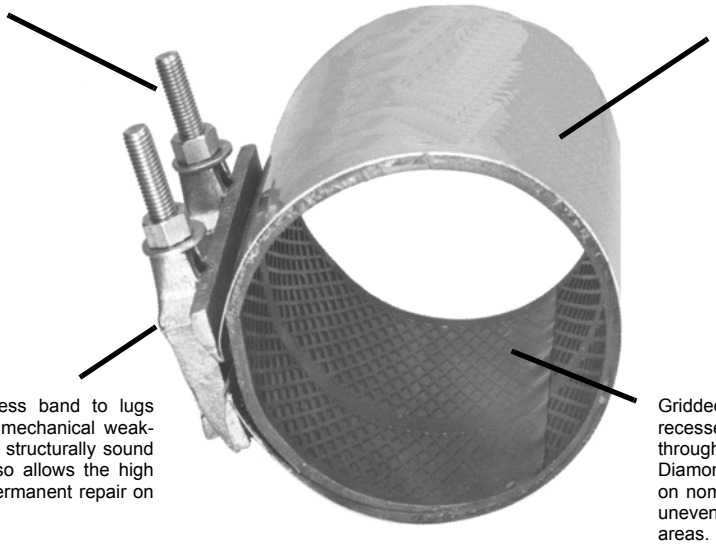
Low Profile Cast Stainless Steel Lugs - with mutually supporting sliding fingers provide distortion free tightening over a wide range. Cast Stainless Steel Lugs offer corrosion resistance for hot and acidic environments.

Positive Attachment - of the stainless band to lugs eliminates band pull out and mechanical weakness at this critical point. Allow “Turbo Torque” capabilities to ensure permanent repairs on high pressure applications

Larger Bolts - for greater toque rating are provided on 10” clamps and larger the 3/4” bolts have bolt torque capability in excess of 100 ft. lbs allowing the JCM 131 to go beyond the “standard installation.”

Balanced, low profile CF-8 Cast Stainless Steel Lugs with mutually supporting sliding fingers provide distortion free tightening over a wide range. Stainless Steel lugs offer corrosion resistance and the most efficient method of transfer of energy from the fastener attachment directly to compression of the gasket.

Corrosion resistant stainless steel band conforms to pipe irregularities, maintaining 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 eliminates band pull out and mechanical weakness at this critical point. This structurally sound fabrication design element also allows the high toque capabilities to ensure permanent repair on high pressure applications.

Gridded gasket with long tapered ends and recessed bridge plate assures even gasket pressure throughout the range - without wrinkling or crimping. Diamond Gridded Gasket 1/4” Thick (JCM standard on nominal sizes 3” and larger) adapts to pitted or uneven pipe surfaces to completely seal damaged areas.

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NOM. PIPE SIZE (IN.)	CLAMP O.D. RANGE (IN.)	WIDTH	CLAMP NUMBER	APPR. WT. EA. (LBS.)
1-1/2	1.88 - 2.15	6 12	131-0190- 6 131-0190-12	5 10
2	2.35 - 2.63	6 7-1/2 12 15	131-0238- 6 131-0238- 7 131-0238-12 131-0238-15	5 6 10 12
2-1/4 - 2-1/2	2.70 -3.13	6 7-1/2 12 15	131-0275- 6 131-0275- 7 131-0275-12 131-0275-15	5 6 10 12
3	3.46 -3.70	6 7-1/2 12 15	131-0350- 6 131-0350- 7 131-0350-12 131-0350-15	6 7 11 13
3 - 4	3.73 - 4.13	6 7-1/2 12 15	131-0400- 6 131-0400- 7 131-0400-12 131-0400-15	6 7 11 13
4	4.45 - 4.75	6 7-1/2 12 15	131-0450- 6 131-0450- 7 131-0450-12 131-0450-15	6 7 11 13
4	4.74 - 5.14	6 7-1/2 12 15 18 30	131-0480- 6 131-0480- 7 131-0480-12 131-0480-15 131-0480-18 131-0480-30	6 7 11 14 18 28
4	4.95 - 5.35	6 7-1/2 12 15 18 30	131-0500- 6 131-0500- 7 131-0500-12 131-0500-15 131-0500-18 131-0500-30	6 7 12 14 18 28
4 - 5	5.22 - 5.62	6 7-1/2 12 15 18 30	131-0525- 6 131-0525- 7 131-0525-12 131-0525-15 131-0525-18 131-0525-30	6 7 12 14 19 29
6	5.95 - 6.35	6 7-1/2 12 15 18 30	131-0600- 6 131-0600- 7 131-0600-12 131-0600-15 131-0600-18 131-0600-30	6 7 12 14 19 29
6	6.56 - 6.96	6 7-1/2 12 15 18 30	131-0663- 6 131-0663- 7 131-0663-12 131-0663-15 131-0663-18 131-0663-30	7 8 13 16 20 30

NOM. PIPE SIZE (IN.)	CLAMP O.D. RANGE (IN.)	WIDTH	CLAMP NUMBER	APPR. WT. EA. (LBS.)
6	6.85 - 7.25	6 7-1/2 12 15 18 30	131-0690- 6 131-0690- 7 131-0690-12 131-0690-15 131-0690-18 131-0690-30	7 8 13 16 21 31
6	7.05 - 7.45	6 7-1/2 12 15 18 30	131-0710- 6 131-0710- 7 131-0710-12 131-0710-15 131-0710-18 131-0710-30	7 8 13 16 21 31
6	7.45 - 7.85	6 7-1/2 12 15 18 30	131-0745- 6 131-0745- 7 131-0745-12 131-0745-15 131-0745-18 131-0745-30	7 9 14 17 22 33
8	7.95 - 8.35	6 7-1/2 12 15 18 30	131-0800- 6 131-0800- 7 131-0800-12 131-0800-15 131-0800-18 131-0800-30	7 9 15 18 23 35
8	8.54 - 8.94	6 7-1/2 12 15 18 30	131-0863- 6 131-0863- 7 131-0863-12 131-0863-15 131-0863-18 131-0863-30	8 9 15 18 24 36
8	8.99 - 9.39	6 7-1/2 12 15 18 30	131-0905- 6 131-0905- 7 131-0905-12 131-0905-15 131-0905-18 131-0905-30	8 9 15 19 24 38
8	9.27 - 9.67	7-1/2 12 15 18 30	131-0940- 7 131-0940-12 131-0940-15 131-0940-18 131-0940-30	10 15 20 24 39
8 - 10	9.90 - 10.30	7-1/2 12 15 18 30	131-1000- 7 131-1000-12 131-1000-15 131-1000-18 131-1000-30	13 22 27 33 54
10	10.60 - 11.00	7-1/2 12 15 18 30	131-1075- 7 131-1075-12 131-1075-15 131-1075-18 131-1075-30	14 24 28 36 56

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NOM. PIPE SIZE (IN.)	CLAMP O.D. RANGE (IN.)	WIDTH	CLAMP NUMBER	APPR. WT. EA. (LBS.)
10	11.04 - 11.44	7-1/2 12 15 18 30	131-1110- 7 131-1110-12 131-1110-15 131-1110-18 131-1110-30	14 24 28 36 56
10	11.34 - 11.74	7-1/2 12 15 18 30	131-1140- 7 131-1140-12 131-1140-15 131-1140-18 131-1140-30	15 24 29 36 58
10	11.75 - 12.15	7-1/2 12 15 18 30	131-1175- 7 131-1175-12 131-1175-15 131-1175-18 131-1175-30	15 26 31 39 60
10 - 12	12.00 - 12.40	7-1/2 12 15 18 30	131-1200- 7 131-1200-12 131-1200-15 131-1200-18 131-1200-30	15 26 32 40 64

JCM Universal Clamp Coupling published ranges accommodate standard industry pipe dimensions. Should your application require a special range, contact the JCM Inside Sales Team.

NOM. PIPE SIZE (IN.)	CLAMP O.D. RANGE (IN.)	WIDTH	CLAMP NUMBER	APPR. WT. EA. (LBS.)
12	12.62 - 13.02	7-1/2 12 15 18 30	131-1275- 7 131-1275-12 131-1275-15 131-1275-18 131-1275-30	16 27 33 41 66
12	13.10 - 13.50	7-1/2 12 15 18 30	131-1320- 7 131-1320-12 131-1320-15 131-1320-18 131-1320-30	16 27 33 41 66
12	13.40 - 13.80	7-1/2 12 15 18 30	131-1340- 7 131-1340-12 131-1340-15 131-1340-18 131-1340-30	17 27 34 41 67
12	13.70 - 14.10	7-1/2 12 15 18 30	131-1370- 7 131-1370-12 131-1370-15 131-1370-18 131-1370-30	17 28 34 42 68
12	14.00 - 14.40	7-1/2 12 15 18 30	131-1400- 7 131-1400-12 131-1400-15 131-1400-18 131-1400-30	17 28 34 42 68

JCM Universal Clamp Couplings
Repairs or reconnection means...

- Less pipeline downtime
- Less labor, material and equipment cost
- Less complications in scheduling crew and equipment
- Small excavations
- No need of special equipment or materials
- No need of extra pipe
- No need of complete shutdown

JCM 131 and 132 All Stainless Steel Universal Clamp Couplings Typical Specifications

JCM 131 All Stainless Universal Clamp Couplings - JCM 132 All Stainless Multi-Band Clamps (sizes 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 and bolts; low profile CF-8 Cast Stainless Steel lugs - equivalent to 18-8 type 304 stainless steel, with mutually supporting sliding fingers and minimum 9/16"(11/16" clamps 10" and larger) replaceable 304 stainless steel bolts. The gasket shall be gridded 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.Clamps shall be similar to JCM 131 All Stainless Universal Clamp Coupling, JCM 132 All Stainless Clamp or approved equal.

JCM 132 All Stainless Multi-Band Clamps (sizes 10" and larger)

All full circumferential single and multi-band repair clamps 10" and larger shall have a minimum of 17 gauge certifiable prime 304 stainless steel band and bolts; CF-8 Cast Stainless Steel lugs with mutually supporting sliding fingers, replaceable 304 stainless steel bolts with an oval neck, a 1/4" thick gridded gasket with tapered ends and a 304 stainless steel quarter hardened bridge plate molded flush into the gasket. Length of clamps shall be 12" minimum. Lugs shall be heavy duty design providing a minimum range of 1/2" and shall have a minimum of 9/16" diameter bolts (sizes 4" through 8") and 11/16" (sizes 10" and larger) diameter bolts. Clamps shall be JCM 132 All Stainless Universal Clamp Coupling or approved equal.

JCM Series 130 All Stainless Steel Universal Clamp Couplings are ANSI/NSF Standard 61 Certified.

JCM All Stainless Steel Universal Clamp Couplings Material Specifications

JCM All Stainless Steel Universal Clamp Couplings - 131, 132, 133, 134

BAND: 18-8 Type 304 Stainless Steel

LUGS: CF-8 Cast Stainless Steel (equivalent to 18-8 Type 304 Stainless Steel)

BOLTS: 18-8 Type 304 Stainless Steel

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

TAPPED OUTLET (Models 133, 134):18-8 Type 304 Stainless Steel

JCM All Stainless Steel Universal Clamp Couplings

JCM All Stainless Steel Universal Clamp Couplings

All stainless steel universal clamp couplings are utilized in various industries to repair or join pipe in hot, acidic and corrosive environments. Common factors involved in these pipe repair/joint installations are working pressure, pipe diameter and severity of damage. All of these critical factors must be taken into consideration when using all stainless or any other type of repair clamp. Therefore, an all stainless steel repair clamp should meet or exceed the same pressure holding capabilities, bolt torque values and ease of installation of similar products.

The sum total of a clamp's success rests with its capabilities of applying sealing pressure (PSI) over the entire length of the gasket. This capability is determined by the fastener attachment and its ability to transfer bolt torque energy to the full encirclement band.

Within the piping industry there are two basic designs of all stainless steel repair clamps. First, the fabricated lifter bar lug design. This type consists of stainless steel bar stock cut, formed and welded into a finger design. The solid bar runs the full length of the clamp and creates a rigid non-conforming unit. The closure piece of this lug assembly is a thin flat plate with a lip to lock over the fabricated finger lug. The hardware consists of stainless studs permanently welded to the lug bar with coated threads to prevent seizing of the nut. Nuts are tightened down on top of the lifter bar to lock fingers into place. The fabricated lug is susceptible to warpage and twisting when nuts are tightened. Depending on clamp size, torque values are limited to 50 ft. lbs. (4" and below) and 70 ft. lbs. (5" and above). Longer clamps have a higher percentage of warpage problems.

Second, is the Cast Finger Lug. This design utilizes a solid cast stainless steel part which has a thicker cross section at high stress points. The finger lug is cast with mutually supporting finger that automatically align during installation and provides even compression of the gasket for the full length of the clamp. These lug assemblies are welded (TIG) to the stainless band in increments of 6" or 7" depending on clamp width required. The separate lug sections allow the clamp to articulate and conform to irregular pipe diameters. Finger lugs are secured with replaceable stainless bolts with permanently coated nuts which eliminate seizing. Cast stainless lugs are exceptionally strong and accommodate bolt torque values in excess of 100 ft. lbs. (on rigid pipe).

The JCM Cast Finger Lug Clamps, the 131 and 132, provide a more structurally positive fastener system that is capable of obtaining maximum gasket compression. JCM All Stainless Steel Universal Clamp Coupling with "Turbo Torque" provide the means of making the clamp conform to the pipe and perform as never before.

MATERIAL SPECIFICATIONS - JCM 131 All Stainless Universal Clamp Couplings

BAND: 18-8 Type 304 Stainless Steel

LUGS: CF-8 Cast Stainless Steel (equivalent to 18-8 Type 304 Stainless Steel)

BOLTS: 18-8 Type 304 Stainless Steel

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

JCM Stainless Steel Universal Clamp Couplings Installation Instructions Models 131, 132, 133, 134

131 STANDARD RANGE UNIVERSAL CLAMP COUPLING

- Clean pipe and place reference mark on pipe, back from break, to help in centering clamp over joint or damaged area.
- Place clamp on pipe and center over damaged area.
- 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. Tighten bolts evenly to the following torque values:

NOMINAL PIPE SIZE	RECOMMENDED TORQUE
8” & Smaller	70 Ft/Lbs
10” & Larger	90 Ft/Lbs

132 EXTENDED RANGE UNIVERSAL CLAMP COUPLING

- Clean pipe and place reference mark on pipe, back from break, to help in centering clamp over joint or damaged area.
- Place clamp half without bolts on pipe so that gasket flap is on top facing you.
- 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 top bolts.
- Rotate clamp in direction of arrow to smooth gasket flaps. Engage remaining bolts and tighten all bolts evenly to the recommended torque values.

  Note: Gaps between lugs should be approximately even on both sides.

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 *“tricks of the trade”*.

- Always clean and lubricate pipe with water or soap and water. It helps to overcome friction. Do not use pipe lubricant.
- Place a reference mark on pipe back from break to help in centering clamp over break.
- Where break involves deflected pipe, use “long” width clamp. Lugs will articulate, permitting clamp to better conform to pipe.
- Place stainless or galvanized metal over large holes (under repair clamp) to provide gasket something to seal against.
- Drill ends of split to relieve forces which could cause split to grow.
- Clamp performance drops when gap between pipe ends is larger that 1/2”. Use spacer to fill gap or metal to place over gap.
- Leaving enough pressure on broken line to prevent intrusion of foreign matter will help prevent 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.

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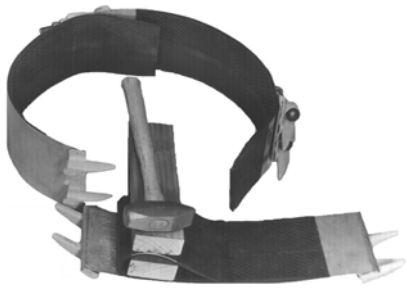
JCM Stainless Steel Universal Clamp Couplings Installation Instructions Models 131, 132, 133, 134

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 provides you with “on hand” capability to make repairs on larger pipe sizes throughout your system.



- 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 is 14” clamp to fit 16.44 O.D. Combining a 131-0905-12 (Range 8.99 to 9.39) and a 131-0690-12 (Range 6.84 to 7.25) you make a clamp with a range of 15.84 - 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 small sledge hammer.

- Install as multi-band clamp making sure to tighten bolts evenly keeping gaps between lugs approximately even.

WIDTH SELECTION - 131 & 132 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 1/2”. 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.

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