



JCM Industries, Inc.

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

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JCM DUCTILE IRON COUPLINGS

JCM Ductile Iron Couplings employ the mechanical compression joint principle to join two pieces of plain end pipe. This stress receiving flexible joint eliminates precise cutting and fitting in the field while providing for deflection, limited expansion-contraction, pipe settlement and a quick easy means of disassembling the system for maintenance.



Bolted couplings offer several advantages in a piping system:

- No beveling, costly threading, exact pipe alignment or fitting is required
- Make assembly/disassembly of pipe sections fast.
- Quick, simple to install, using only a wrench.
- Gaskets absorb vibration and pipe movement
- Permits limited expansion/contraction
- Curves can be laid with straight pieces of pipe
- Simple, rugged and serviceable,
- Available for most sizes of steel, PVC or cast iron pipe sizes
- Meets AWWA Standard C219 Bolted Sleeve-Type Couplings for Plain-End Pipe

JCM DUCTILE IRON COUPLINGS- MATERIAL SPECIFICATIONS

Sleeve & Flanges: Ductile Iron ASTM A536

Gaskets: Styrene-Butadiene Rubber (SBR) has good physical properties. Compounded for use with water, salt solutions, mild acids and bases; has excellent abrasion resistance. Per ASTM D2000 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. Not recommended for use on oil, ozone or weather resistant applications.

Bolts: Corrosion resistant, high strength low alloy bolts per ASTM A242 (AWWA C111, ANSI 21.11) and nuts per A563 or equal. Optional Stainless Steel 18-8 Type 304.

Finish: Heavy coating of corrosion resistant metal primer. Optional fusion applied epoxy coating.

214 End Cap: A36 Steel or equal. Fabricated with ASTM A105 threaded outlet. Optional solid cap available.

Restraint Set Pins: AISI Type 1022 Carbon Steel

Pressure Rating: Up to 150PSI. Contact JCM Industries for higher pressure rating requirements.

JCM 200 Series Steel Couplings are ANSI/NSF Standard 61, Annex G and ANSI/NSF 372 Certified.

JCM 210 Ductile Iron Couplings

JCM 211 Ductile Iron Couplings

JCM Ductile Iron Couplings employ the mechanical compression joint principle to join two pieces of plain end pipe. This stress receiving flexible joint eliminates precise cutting and fitting in the field while providing for deflection, limited expansion-contraction, pipe settlement and a quick easy means of disassembling the system for maintenance.



210 DUCTILE IRON COUPLINGS - DUCTILE IRON, CAST IRON, C900 PVC, HDPE, A/C 150

NOM PIPE SIZE (IN)	PIPE O.D. RANGE (IN)	CATALOG NUMBER	FITS TYPE AND CLASS OF PIPE	NO. OF BOLTS	SLEEVE LENGTH (IN)	APPR WT EACH (LBS)
2	2.34 - 2.63	210-0250	STEEL, PVC, CI	2	5	8
2-1/4, 2-1/2	2.62 - 2.92	210-0288	CI, STEEL, PVC	2	5	9
3	3.80 - 4.17	210-0396	CI, DI, A/C 150	3	6	15
4	4.80 - 5.10	210-0480	CI, DI, A/C 150, C-900PVC, DI HDPE	4	6	20
6	6.90 - 7.20	210-0690	CI, DI, A/C 150, C-900 PVC, DI HDPE	5	6	24
8	9.05 - 9.40	210-0905	CI, DI, A/C 150, C-900 PVC, DI HDPE	6	6	36
10	11.10 - 11.40	210-1110	CI, DI, C-900 PVC, DI HDPE	7	6	46
12	13.20 - 13.50	210-1320	CI, DI, C-900 PVC, DI HDPE	8	6	62
14	15.30 - 15.70	210-1530	CI, DI, C-905 PVC, DI HDPE	9	7	100
16	17.40 - 17.80	210-1740	CI, DI, C-905 PVC, DI HDPE	10	7	132
18	19.10 - 19.70	210-1950	CI, DI, C-905 PVC, DI HDPE	12	7	140
20	21.35 - 21.75	210-2160	CI, DI, C-905 PVC, DI HDPE	12	7	150
24	25.70 - 26.00	210-2580	CI, DI, C-905 PVC, DI HDPE	14	10	285

Note: Applications in which pipe may move out of the coupling, proper anchorage of the pipe must be provided.

JCM Ductile Iron Bolted Couplings meet or exceed the ANSI/AWWA C219 Standard as applicable.

211 DUCTILE IRON COUPLINGS - IPS PVC, IPS HDPE, STEEL PIPE

NOM PIPE SIZE (IN)	PIPE O.D. RANGE (IN)	CATALOG NUMBER	FITS SIZES OF PIPE STEEL	NO. OF BOLTS	SLEEVE LENGTH (IN)	APPR WT EA (LBS)
2	2.38	210-0250	STANDARD IPS & SCHEDULE PIPE	2	5	8
2-1/2	2.88	210-0288	STANDARD IPS & SCHEDULE PIPE	2	5	9
3	3.50	211-0350	STANDARD IPS & SCHEDULE PIPE	3	6	15
4	4.50	211-0450	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	4	6	20
6	6.63	211-0663	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	5	6	25
8	8.63	211-0863	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	6	6	38
10	10.75	211-1075	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	7	6	46
12	12.75	211-1275	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	8	6	64
16	16.00	211-1600	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	10	7	132
18	18.00	211-1800	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	12	7	140
20	20.00	211-2000	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	12	7	150
24	24.00	211-2400	STD. IPS PVC, SCHEDULE PIPE, IPS HDPE	13	7	165

Note: Applications in which pipe may move out of the coupling, proper anchorage of the pipe must be provided.

JCM Ductile Iron Bolted Couplings meet or exceed the ANSI/AWWA C219 Standard as applicable.



JCM 212 Ductile Iron Transition Couplings

JCM Transition Ductile Iron Couplings employ the mechanical compression joint principle to join two pieces of plain end pipe. JCM 212 Transition Couplings provide connections between the same nominal pipe sizes to different outside diameter ranges. A simple change of gasket accommodates the variations in pipe outside diameters.



212 DUCTILE IRON TRANSITION COUPLINGS

NOM PIPE SIZE (IN)	FROM O.D. RANGE (IN)	TRANSITION TO O.D. RANGE (IN)	CATALOG NUMBER	NO. OF BOLTS	SLEEVE LENGTH (IN)	APPR WT EACH (LBS)
2, 2-1/2	2.62 - 2.92	2.38 - 2.50	212-0288-0238	2	5	9
3	3.80 - 4.17	3.50	212-0396-0350	3	6	15
4	4.50	4.00	212-0450-0400	4	6	20
4	4.50	4.22	212-0450-0422	4	6	20
4	4.80 - 5.10	4.00	212-0480-0400	4	6	20
4	4.80 - 5.10	4.22	212-0480-0422	4	6	20
4	4.80 - 5.10	4.50	212-0480-0450	4	6	20
6	6.63	6.00	212-0663-0600	5	6	26
6	6.63	6.30	212-0663-0630	5	6	26
6	6.90 - 7.20	6.00	212-0690-0600	5	6	26
6	6.90 - 7.20	6.30	212-0690-0630	5	6	26
6	6.90 - 7.20	6.63	212-0690-0663	5	6	26
8	8.63	8.00	212-0863-0800	6	6	38
8	8.63	8.40	212-0863-0840	6	6	38
8	9.05 - 9.40	8.00	212-0905-0800	6	6	38
8	9.05 - 9.40	8.40	212-0905-0840	6	6	38
8	9.05 - 9.40	8.63	212-0905-0863	6	6	38
10	10.75	10.50	212-1075-1050	7	6	46
10	11.10 - 11.40	10.50	212-1110-1050	7	6	46
10	11.10 - 11.40	10.75	212-1110-1075	7	6	46
12	12.75	12.50	212-1275-1250	8	6	64
12	13.20 - 13.50	12.50	212-1320-1250	8	6	64
12	13.20 - 13.50	12.75	212-1320-1275	8	6	64
24	26.10 - 26.32	25.70 - 26.00	212-2635-2580	14	10	285

Note: Applications in which pipe may move out of the coupling, proper anchorage of the pipe must be provided.

JCM Ductile Iron Bolted Couplings meet or exceed the ANSI/AWWA C219 Standard as applicable.



JCM 214 Pipe End Cap Couplings

The JCM 214 Pipe End Cap Coupling is a quick, simple means of capping plain end pipe in either permanent or temporary installations. Furnished standard with a threaded outlet, this fitting is often used as a test cap, air release or as a means of reduction for a smaller line extension. The optional restrained coupling end eliminates the need for required thrust blocks.



214 PIPE END CAP COUPLINGS (WITH 2" IPS OUTLET)

NOM PIPE SIZE (IN)	PIPE O.D. RANGE (IN)	CATALOG NUMBER	FITS TYPES & CLASSES OF PIPE	NO. OF BOLTS	SLEEVE LENGTH (IN)	APPR WT EACH (LBS)
3	3.50	214-0350	STEEL, PVC	3	6	19
3	3.80 - 4.17	214-0396	CI, DI, A/C 150	3	6	19
4	4.50	214-0450	STEEL, PVC	4	6	25
4	4.80 - 5.10	214-0480	CI, DI, A/C 150, C-900 PVC	4	6	25
6	6.63	214-0663	STEEL, PVC	5	6	32
6	6.90 - 7.20	214-0690	CI, DI, A/C 150, C-900 PVC	5	6	32
8	8.63	214-0863	STEEL, PVC	6	6	51
8	9.05 - 9.40	214-0905	CI, DI, A/C 150, C-900 PVC	6	6	49
10	10.75	214-1075	STEEL, PVC	7	6	64
10	11.10 - 11.40	214-1110	CI, DI, A/C 150, C-900 PVC	7	6	64
12	12.75	214-1275	STEEL, PVC	8	6	88
12	13.20 - 13.50	214-1320	CI, DI, A/C 150, C-900 PVC	8	6	86

*Pipe sizes 3.50 & 3.96 have 1-1/2" IPS outlet.

Larger Sizes Available Upon Request

Requires thrust blocks or restraint. Restrained ends available sizes 4" -12". Add (R) to end of catalog number to indicate restrained ends.

Restraining Set Pins Not for use A/C pipe, HDPE or PVC pipe. Contact JCM for optional fittings

Note: Applications in which pipe may move out of the coupling, correct anchorage of the pipe must be provided.

JCM 219 Restrained Ductile Iron Couplings

JCM 219 Restrained Ductile Iron Coupling simplifies piping installations requiring tie rods or other types of thrust restraint. The Ductile Iron Coupling eliminates the need for exact pipe fit, alignment and end preparation. The integral restraining set screws provide restraint equal to restrained M.J. glands and eliminate the need for cumbersome tie rods or harness assemblies.



219 RESTRAINED DUCTILE IRON COUPLINGS

NOM PIPE SIZE (IN)	PIPE O.D. RANGE (IN)	CATALOG NUMBER	NO. OF BOLTS	NO. OF SET SCREWS EA END	APPR WT EACH (LBS)
3	3.80 - 4.17	219-0396	4	4	19
4	4.80 - 5.10	219-0480	4	4	22
6	6.90 - 7.20	219-0690	8	8	38
8	9.05 - 9.40	219-0905	8	8	46
10	11.10 - 11.40	219-1110	12	12	67
12	13.20 - 13.50	219-1320	12	12	81

Larger Sizes Available Upon Request

Requires thrust blocks or restraint. Restrained ends available sizes 4" -12". Add (R) to end of catalog number to indicate restrained ends.

Restraining Set Pins Not for use A/C pipe, HDPE or PVC pipe. Contact JCM for optional fittings

Note: Applications in which pipe may move out of the coupling, correct anchorage of the pipe must be provided.

JCM 215 Long Ductile Iron Couplings



JCM Introduces the 215 Long Ductile Iron Coupling. This extra-long coupling provides a wide range, accommodates wide gaps between pipe ends, reduces inventory and fits both cast iron and A/C Class 150 pipe in the popular 4", 6" & 8" sizes. The JCM 215 utilizes the same JCM original transition gasket system. One coupling replaces two or more standard couplings. Unique transition gaskets change standard couplings into transition couplings, eliminating the need to stock transition couplings or color-coded end rings, gaskets and loose parts.

215 LONG DUCTILE IRON COUPLINGS

NOM PIPE SIZE (IN)	PIPE O.D. RANGE (IN)	CATALOG NUMBER	FITS TYPE AND CLASS OF PIPE	NO. OF BOLTS	COUPLING LENGTH (IN)	APPR WT EACH (LBS)
2	2.34 - 2.63	215-0250	STEEL, PVC, CI	2	10	16
2-1/2	2.62 - 2.92	215-0288	CI, STEEL, PVC	2	10	18
3	3.50	215-0350	STANDARD IPS & SCHEDULE PIPE	3	12	30
3	3.80 - 4.17	215-0396	CI, DI, A/C 150	3	12	30
4	4.50	215-0450	STANDARD IPS & SCHEDULE PIPE	4	12	35
4	4.80 - 5.10	215-0480	CI, DI, A/C 150, C-900PVC	4	12	35
6	6.63	215-0663	STANDARD IPS & SCHEDULE PIPE	5	12	42
6	6.90 - 7.20	215-0690	CI, DI, A/C 150, C-900 PVC	5	12	42
8	8.63	215-0863	STANDARD IPS & SCHEDULE PIPE	6	12	65
8	9.05 - 9.40	215-0905	CI, DI, A/C 150, C-900 PVC	6	12	65
10	10.75	215-1075	STANDARD IPS & SCHEDULE PIPE	7	12	79
10	11.10 - 11.40	215-1110	CI, DI, C-900 PVC	7	12	79
12	12.75	215-1275	STANDARD IPS & SCHEDULE PIPE	8	12	111
12	13.20 - 13.50	215-1320	CI, DI, C-900 PVC	8	12	111

Note: Applications in which pipe may move out of the coupling, correct anchorage of the pipe must be provided.

Standard bolted couplings to join plain end pipe do not prevent pipe movement or restrain from pipe pullout. In applications in which pipe may move/pull out of the coupling, correct anchorage/restraint of the pipe must be provided.

For JCM Restrainer options, see JCM Series 600 Restrainer Systems. JCM can also fabricate restraint mechanisms on fabrications to accommodate third party restrainer options. Contact JCM Industries Inside Sales for information.

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WARNING

WHEN PIPE PULLOUT
COULD OCCUR, PIPE JOINT
MUST
BE ANCHORED.
FAILURE TO ANCHOR PIPE
JOINT COULD RESULT IN
ESCAPING CONTENT
CAUSING
PROPERTY DAMAGE,
SERIOUS INJURY OR DEATH.

JCM Transition Gaskets

COUPLINGS 210, 211, 212, 214, 215, 216, 262, 4262, 6262 FLANGED ADAPTERS 301, 306, 307, 362, 4362, 6362

The uniquely simple JCM Wide Range Coupling and Flanged Coupling Adapter system utilizes self-centering, extra wide transition gaskets eliminating the need for stocking special transition couplings or color coded flanges and gaskets. Stock JCM Ductile Iron Coupling and JCM Flanged Coupling Adapters and change only gaskets to make a transition between A/C, Cast Iron, Ductile Iron, Steel and PVC pipe. Use the same size gasket on both ends to make a straight coupling.



GASKETS FOR STANDARD SIZE COUPLINGS

NOM PIPE SIZE (IN)	FITS COUPLING SLEEVE	GASKET O.D. RANGE (IN)	FITS TYPES & CLASSES OF PIPE	GASKET NUMBER
2-1/4, 2-1/2	0288	2.62 - 2.92 2.38 - 2.50	CI, 2-1/2" PVC, STEEL 2" PVC, STEEL, CI	G212-0288 G212-0288-0238*
3	0396	3.80 - 4.17 3.50	CI, DI, A/C 150, C-900 PVC IPS PVC, STEEL	G212-0396 G212-0396-0350*
4	0480	4.74 - 5.10 4.50 4.22 4.00	CI, DI, A/C 150, C-900 PVC IPS PVC, STEEL, HDPE SDR 35 STEEL TUBING	G212-0480 G212-0480-0450 G212-0480-0422 G212-0480-0400
6	0690	6.84 - 7.26 6.63 6.30 6.00	CI, DI, A/C 150, C-900 PVC IPS PVC, STEEL, HDPE SDR 35 STEEL TUBING	G212-0690 G212-0690-0663 G212-0690-0630 G212-0690-0600
8	0905	8.99 - 9.42 8.63 8.40 8.00	CI, DI, A/C 150, C-900 PVC IPS PVC, STEEL, HDPE SDR 35 STEEL TUBING	G212-0905 G212-0905-0863 G212-0905-0840 G212-0905-0800
10	1110	11.04 - 11.40 10.75 10.50	CI, DI, C-900 PVC IPS PVC, STEEL, HDPE SDR 35	G212-1110 G212-1110-1075 G212-1110-1050
12	1320	13.14 - 13.50 12.75 12.50	CI, DI, C-900 PVC IPS PVC, STEEL, HDPE SDR 35	G212-1320 G212-1320-1275 G212-1320-1250
14	1565	15.20 - 15.40 15.56 - 15.75	CI, DI, C-905 PVC CI	G212-1530 G212-1565
16	1780	17.32 - 17.50 17.72 - 17.94	CI, DI, C-905 PVC CI	G212-1740 G212-1780

*This size gasket does not have extended lip.

GASKETS FOR OVERSIZED COUPLINGS

NOM PIPE SIZE (IN)	FITS COUPLING SLEEVE	GASKET O.D. RANGE (IN)	FITS TYPES & CLASSES OF PIPE	GASKET NUMBER
4	0535	5.06 - 5.40 4.80 - 5.10 4.50	A/C CI, DI, C-900 PVC IPS PVC, STEEL, HDPE	G212-0535 G212-0535-0480 G212-0535-0450
6	0740	7.17 - 7.55 6.90 - 7.10 6.63	A/C CI, DI, C-900 PVC IPS PVC, STEEL, HDPE	G212-0740 G212-0740-0690 G212-0740-0663
8	0960	9.32 - 9.75 9.05 - 9.30 8.63	A/C CI, DI, C-900 PVC IPS PVC, STEEL, HDPE	G212-0967 G212-0967-0905 G212-0967-0863
10	1200	11.60 - 12.05 11.10 - 11.30 10.75	A/C CI, DI, C-900 PVC IPS PVC, STEEL, HDPE	G212-1200 G212-1200-1110 G212-1200-1075
12	1420	13.92 - 14.40 13.20 - 13.50 12.75	A/C CI, DI, C-900 PVC IPS PVC, STEEL, HDPE	G212-1420 G212-1420-1320 G212-1420-1275

JCM 230 STAINLESS STEEL STIFFENERS FOR HDPE PIPE (6" width)
JCM 231 LONG STAINLESS STEEL STIFFENERS FOR HDPE PIPE (12" width)

JCM Industries recommends fusion as the primary method to join plain end HDPE. Often, however, logistics of the job site, weather, site conditions and accessibility can eliminate the fusion process as an option and mechanical, bolted fittings are selected. When mechanical fittings are selected as the means to join plain end pipe, JCM recommends that internal stiffeners be used. The expansion/contraction of HDPE pipe requires that the sealing system maintain a seal throughout all cycles which the system will experience in its life. Proper gasket capture, pipe support and reinforcement are critical factors for long term reliability.



JCM Stainless Stiffeners offer:

- Corrosion Resistance
- Rigid Reinforcement of Pipe Wall for Pipe Connections
- Accurate Pipe I.D. Sizing maintains proper Outside Diameter
- 1/8" Tapered Insert End provides easy installation
- Flared End or Tab Stop secures Stiffener to End of Pipe
- Positive Reinforcement without interference

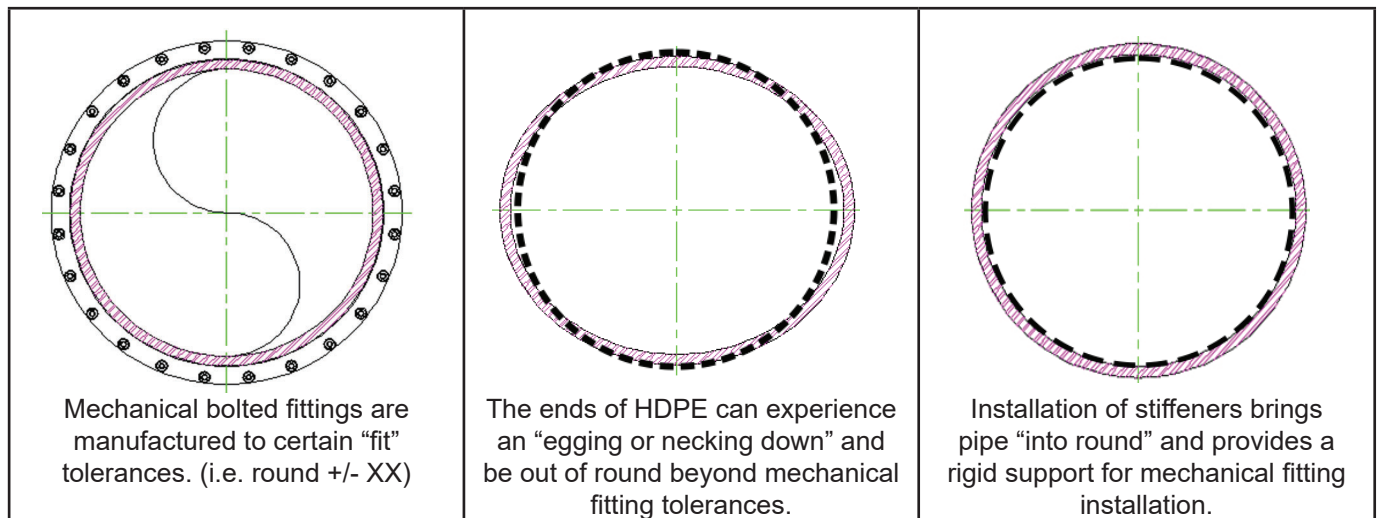
JCM Stainless Steel Stiffeners perform two functions when installed. First, the stiffener brings the pipe "into round" so that fabricated/cast mechanical bolt-on product will fit correctly as designed on the full circumference of the pipe.

Secondly, it provides support to the pipe wall and prevents movement away from the pressure when gasketed bolted fittings are tightened. HDPE has a high coefficient of thermal expansion and contraction along with a low modulus of elasticity. This sensitivity to pressure and temperature causes HDPE to expand and contract more than traditional water and sewer piping materials.

The potential pipe expansion or contraction must be considered when assembling bolt-on fittings. HDPE will relax ("creep") at lower stress levels than other piping materials. The use of stiffeners in the interior of the pipe can prevent these types of issues. Along with the stiffeners, the use of restraint products suitable for HDPE should be factored into the application.



JCM 230 Stiffeners 6" in width
JCM 231 Stiffeners 12" in width
JCM 230/231 Stiffeners are available in
304 or 316 stainless steel



JCM 241 Standard Length Optimum Range Ductile Iron Couplings

JCM 242 Long Length Optimum Range Ductile Iron Couplings



Full Range capability - for pipe sizes 3" through 16"

242 Long length middle ring - allows for deeper pipe insertion and accommodates wide gaps between pipe ends

Rated for 250 PSI working pressure

Reduces inventory - one coupling fits SDR35, IPS PVC, C-900 PVC, Ductile Iron, Steel, Cast Iron and A/C Pipe classes 100, 150 and 200

Non-compromising design - with maximum number of bolts for uniform tightening provides the engineered test and field proven service and reliability of the JCM Ductile Iron Coupling family.

241 & 242 OPTIMUM RANGE COUPLING

NOM PIPE SIZE (IN)	PIPE O.D. RANGE (IN)	CATALOG NUMBER	SLEEVE LENGTH (IN)	NO. OF BOLTS	APPR WT EA (LBS)
3	3.45 - 4.20	241-0420	6	3	22
		242-0420	10	3	26
4	4.22 - 5.60	241-0550	6	4	30
		242-0550	10	4	35
6	6.28 - 7.60	241-0760	6	5	39
		242-0760	10	5	46
8	8.40 - 9.75	241-0960	6	6	47
		242-0960	10	6	55
10	10.50 - 12.12	241-1200	6	8	62
		242-1200	10	8	71
12	12.50 - 14.38	241-1430	6	8	71
		242-1430	10	8	84
14	15.05 - 16.93	242-1690	10	10	115
16	17.32 - 19.20	242-1920	10	11	118

Note: Applications in which pipe may move out of the coupling, correct anchorage of the pipe must be provided.

MATERIAL SPECIFICATIONS - JCM MODELS 241 & 242 OPTIMUM RANGE DUCTILE IRON COUPLINGS

Sleeve & Flanges: Ductile Iron ASTM A536

Gaskets: Styrene-Butadiene Rubber (SBR) has good physical properties. Compounded for use with water, salt solutions, mild acids and bases; has excellent abrasion resistance. Per ASTM D2000 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. Not recommended for use on oil, ozone or weather resistant applications.

Bolts: Corrosion resistant, high strength low alloy bolts and nuts per ASTM A242 (AWWA C111, ANSI 21.11) per A563 or equal. Optional Stainless Steel 18-8 Type 304.

Finish: Heavy coating of corrosion resistant metal primer. Optional fusion applied epoxy coating per ANSI/AWWA C213.

JCM 200 Series Steel Couplings are ANSI/NSF Standard 61, Annex G and ANSI/NSF 372 Certified.



Certified to:
NSF/ANSI/CAN 61
& NSF/ANSI 372

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