



4" Light Pattern Style 38

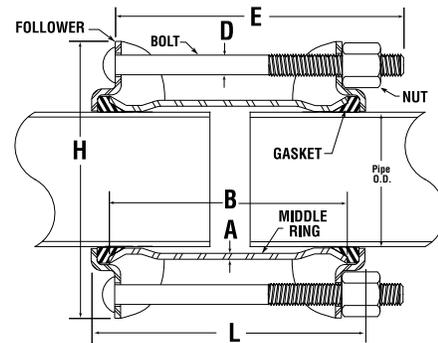


2" Light Pattern Style 38

Style 38 Bolted Couplings for Steel Pipe

Proven by years of service on all kinds of pipe, **Dresser Style 38 couplings** provide flexible, leakproof connections that last the life of the pipe. No costly threading, beveling, exact pipe fitting or alignment is required. The resilient Dresser gaskets absorb vibration and pipe movement and permit curves to be laid with straight pipe lengths. Installation is safe and sure. There's no hazard to workmen or delays due to weather. Dresser Style 38 couplings are available from 1/2" ID to over 400" OD.

NOTE: Commonly used sizes are listed in the tables, but couplings can be furnished for practically any size or special condition. **Penstock coupling** brochure available on-line: www.dresser.com.



Typical single-piece follower construction

Materials of Construction

Followers: AISI C1012 or ASME SA36 (Ductile Iron or Malleable Iron for 1/2" thru 1-1/2")

Middle Ring: ASTM A513, ASTM A635 or ASME SA675 GR60

Bolts: AWWA C 111/ANSI A21.11

Coating: Fusion-Bonded Epoxy

Style 38 Couplings

Sizes and Specifications for Steel Pipe

Pipe Nominal Size (In)	Outside Pipe Diameter (OD)	Middle Ring Thickness & Length (A&B) ¹	Bolts ² No./Diam. x Length (D&E)	Overall Dimensions		Working Pressure ⁵ Lbs. per Sq. In.	Max. Test Pressure Lbs. per Sq. In.	Approx. Weight Each (Lbs.)
				Diam. (H)	Length ⁴ (L)			
1/2	.840	.156 x 3-1/2	2-1/2 x 6	3-1/2	8	1500	2250	2
3/4	1.050	.156 x 5	2-1/2 x 7-1/4	3-13/16	8-1/2	1500	2250	3
1	1.315	.148 x 5	2-1/2 x 7-1/4	4-1/16	8-1/2	1500	2250	4
1-1/4	1.660	.154 x 5	2-1/2 x 7-1/4	4-7/16	8-1/2	1500	2250	4
1-1/2	1.900	.165 x 5	2-1/2 x 7-1/4	4-3/4	8-1/2	1500	2250	5
2	*2.375	.156 x 4	2-1/2 x 7-1/4	5-3/8	8-1/2	-	-	4.5
2	2.375	.156 x 5	2-5/8 x 8-1/4	6	9-1/2	1500	2250	7
2	2.375	.156 x 5	3-5/8 x 8-1/4	6-1/4	9-1/2	1500	2250	10
2	2.375	.156 x 7	3-5/8 x 10-3/4	6-1/4	11-1/2	1326	1989	13
2-1/2	2.875	.180 x 5	3-5/8 x 8-1/4	7	9-1/2	1326	1989	13
3	*3.000	.180 x 4	2-1/2 x 7-1/4	6	8-1/2	-	-	6.5
3	*3.500	.156 x 4	3-1/2 x 6	6-1/2	8	-	-	7
3	3.500	.156 x 5	4-5/8 x 6	8	8	982	1473	13.5
3	3.500	.156 x 7	4-5/8 x 8-1/4	8	9-1/2	982	1473	17.5
3-1/2	*4.000	.134 x 4	3-1/2 x 6	7	8	-	-	7.5
3-1/2	4.000	.188 x 5	4-5/8 x 6	8-5/8	8	1034	1561	17
4	*4.500	.188 x 4	3-1/2 x 6	7-1/2	8	-	-	8
4	4.500	.188 x 5	4-5/8 x 6	9	8	931	1396	16.5
4	4.500	.188 x 7	4-5/8 x 8-1/4	9	9-1/2	931	1396	23.5
5	*5.500	.188 x 4	4-1/2 x 6	8-1/2	8	-	-	10
5	5.500	1/4 x 5	4-5/8 x 8-1/4	9-5/8	9-1/2	1205	1808	23.5
5	*5.563	3/16 x 4	4-1/2 x 6	8-1/2	8	-	-	20
5	5.563	1/4 x 5	4-5/8 x 6	10-3/8	8	1205	1808	23.5
5	5.563	1/4 x 7	4-5/8 x 8-1/4	10-3/8	9-1/2	1205	1808	25
6	*6.000	.188 x 4	4-1/2 x 6	10-5/8	8	-	-	11
6	6.000	1/4 x 5	6-5/8 x 6	10-5/8	8	1126	1689	26.5
6	*6.625	.188 x 4	4-1/2 x 6	9-5/8	8	-	-	22.5
6	6.625	1/4 x 5	6-5/8 x 6	11-1/4	8	1029	1544	25.5
6	6.625	1/4 x 7	6-5/8 x 8-1/4	11-1/4	9-1/2	1029	1544	31

* Light Pattern Couplings - Standard pressure rating of 150 psi.

Style 38 Coupling Sizes and Specifications for Steel Pipe (cont'd)

Pipe Nominal Size (In)	Outside Pipe Diameter (OD)	Middle Ring Thickness & Length (A&B) ¹	Bolts ² No./Diam. x Length (D&E)	Overall Dimensions		Working Pressure ⁵ Lbs. per Sq.In.	Max. Test Pressure Lbs. per Sq.In.	Approx. Weight Each (Lbs.)
				Diam. (H)	Length ⁴ (L)			
8	*8.000	.188 x 4	5-1/2 x 6	11	8	-	-	15
8	8.000	1/4 x 5	6-5/8 x 8-1/4	11-7/8	9-1/2	866	1299	31
8	*8.625	.188 x 4	6-1/2 x 6	11-5/8	8	-	-	16
8	8.625	1/4 x 5	6-5/8 x 6	13-1/4	8	807	1211	32
8	8.625	1/4 x 7	6-5/8 x 8-1/4	13-1/4	9-1/2	807	1211	38
10	10.000	1/4 x 5	8-5/8 x 8-1/4	13-7/8	9-1/2	703	1055	39
10	10.750	1/4 x 5	8-5/8 x 6	14-5/8	8	657	986	40
10	10.750	1/4 x 7	8-5/8 x 8-1/4	14-5/8	9-1/2	657	986	49
10	10.750	3/8 x 7	8-5/8 x 8-1/4	14-5/8	9-1/2	813	1200	53
12	12.000	1/4 x 7	8-5/8 x 10-3/4	16	11-7/8	591	887	53
12	12.750	1/4 x 5	8-5/8 x 6	16-3/4	6-7/8	558	837	45
12	12.750	1/4 x 7	8-5/8 x 8-1/4	16-3/4	9-1/2	558	837	56
12	12.750	3/8 x 7	8-5/8 x 8-1/4	16-3/4	9-1/2	823	1236	65
14	14.000	1/4 x 7	8-5/8 x 10-3/4	18	11-7/8	510	765	60
14	14.000	3/8 x 7	8-5/8 x 10-3/4	18	11-7/8	754	1131	72
16	16.000	1/4 x 7	10-5/8 x 10-3/4	20	11-7/8	449	673	70
16	16.000	3/8 x 7	10-5/8 x 10-3/4	20	11-7/8	667	997	82
18	18.000	1/4 x 7	10-5/8 x 10-3/4	22	11-7/8	401	602	75
18	18.000	3/8 x 7	10-5/8 x 10-3/4	22	11-7/8	595	892	88
20	20.000	1/4 x 7	12-5/8 x 10-3/4	24-1/16	11-7/8	362	543	86
20	20.000	3/8 x 7	12-5/8 x 10-3/4	24-1/16	11-7/8	538	807	90
22	22.000	1/4 x 7	14-5/8 x 10-3/4	26	11-7/8	330	495	98
22	22.000	3/8 x 7	14-5/8 x 10-3/4	26	11-7/8	491	736	108
24	24.000	1/4 x 7	14-5/8 x 10-3/4	28	11-7/8	304	456	105
24	24.000	3/8 x 7	14-5/8 x 10-3/4	28	11-7/8	451	676	120
30	30.000	1/4 x 7	16-5/8 x 10-3/4	34	11-7/8	243	364	120
30	30.000	3/8 x 7	16-5/8 x 10-3/4	34	11-7/8	303	454	153
30	30.500	1/4 x 7	16-5/8 x 10-3/4	34-1/2	11-7/8	240	360	125
30	30.750	3/8 x 7	16-5/8 x 10-3/4	34-3/4	11-7/8	295	442	158
36	36.000	3/8 x 7	18-5/8 x 10-3/4	40	11-7/8	253	379	181
36	36.750	3/8 x 7	18-5/8 x 10-3/4	41-3/4	11-7/8	298	447	227
42	42.000	1/2 x 10	20-5/8 x 15	47	16-1/2	346	519	351
48	48.750	1/2 x 10	22-5/8 x 15	53	16-1/2	304	456	399

* Light Pattern Couplings - Standard pressure rating of 150 psi.

NOTE: Only couplings for most commonly used steel pipe sizes are shown. Couplings are supplied for ALL SIZES of steel pipe and are regularly available in any special size. Details and prices will be furnished on request for any size of pipe or for any special conditions. Please consult factory.

1- Middle Rings - Thicker or longer than those listed can be furnished. Please specify if pipe stop is required.

2- Bolts - Furnished E-Coated steel as standard.

3- Gasket - Information appears on Page 20.

4- Dimension "L" - Overall length taken with fasteners drawn up finger tight.

5- Working Pressure - Pressure ratings are determined on the basis of Barlow's formula using a working stress equal to one half the minimum yield of the middle ring material.



**For Style 38
Stainless Coupling
sizes and specifications,
please refer to standard
Style 38 coupling charts
on pages 5-6**

Style 38 Stainless Couplings

**For severe service
conditions!**

When you need a coupling for highly corrosive conditions - too corrosive for ordinary carbon steel couplings - Dresser offers its proven Style 38 coupling in an all-stainless steel design. The coupling is available in either Type 304 or Type 316 stainless steel. Followers are available in Type 316 only. You can also specify the middle ring only in stainless or the nuts and bolts only in stainless.

Dresser Style 38 stainless steel couplings are furnished with gaskets to match the particular service. Available compounds include Buna S (Grade 27) and Buna N (Grade 42), fluorocarbon (Viton®)*, butyl and EPDM. There's also a high temperature gasket for applications up to 1200° F. See gasket recommendation chart on inside back cover.

Dresser stainless steel couplings provide flexible, bottle-tight connections with no need for costly threading, beveling, exact pipe fittings or alignment. Installation is so easy, ordinary workmen can make tight joints every time, only tool needed is a wrench.

*Viton is a Registered trademark of Dupont Corporation

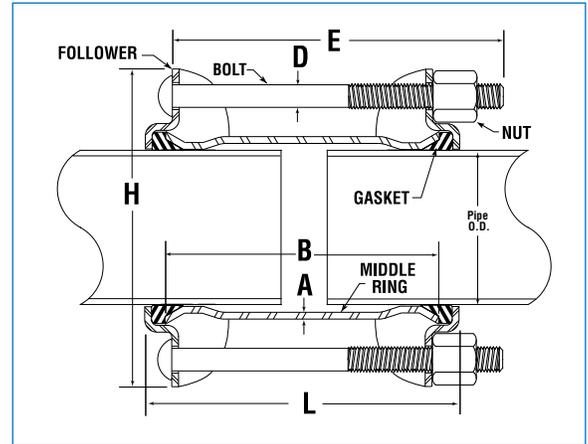


Style 38 and 138 Couplings for CIP/DIP

Dresser Style 38 Couplings are also available for cast and ductile iron pipe sizes 2" through 24". These couplings have long been used for joining plain end cast-iron pipe, combining the advantages of absolutely tight joints and easier, faster pipe joining. Style 38 couplings also permit the salvage and use of random lengths of cast-iron pipe from which bell-ends or cracked sections have been removed.

Dresser Style 138 Couplings for CIP

Now you can stock one coupling in each nominal size, 2" through 16", and be sure of a fit, whether the cast-iron pipe was made in 1890 or from your latest shipment. The unique feature of this product is one middle ring can be used with up to six different gaskets and three followers to cover a wide range of pipes.



Materials of Construction

Followers: AISI C1012 or ASME SA36 (Ductile Iron or Malleable Iron for 1/2" thru 1-1/2")

Middle Ring: ASTM A513, ASTM A635 or ASME SA675 GR60

Bolts: AWWA C 111/ANSI A21.11

Gaskets: Grade 27 BUNA S

Coating: Fusion-Bonded Epoxy

Style 38 Coupling Sizes and Specifications for Plain-End Cast-Iron Pipe

Pipe Nominal Size (In)	Outside Pipe Diameter (OD)	Middle Ring Thickness & Length (A&B)	Bolts No./Diam. x Length (D&E)	Overall Dimensions		Working Pressure Lbs. per Sq.In.	Approx. Weight Each (Lbs.)
				Diam. (H)	Length (L)		
2	2.500	.180 x 5	3-5/8 x 8-1/4	6-1/2	9-1/2	1500	10
2-1/4	2.750	.203 x 5	3-5/8 x 8-1/4	7	9-1/2	1326	13
4	4.800	.188 x 5	4-5/8 x 8-1/4	9	9-1/2	1100	15
6	6.90 - 7.16	5/8 x 5	5-5/8 x 8-1/4	11	9-1/2	992	21
8	9.05 - 9.36	5/8 x 5	6-5/8 x 8-1/4	13-1/16	9-1/2	772	31
10	11.10 - 11.46	3/8 x 7	7-5/8 x 10-3/4	16	11-7/8	936	47
12	13.20 - 13.56	3/8 x 7	8-5/8 x 10-3/4	18-1/16	11-7/8	794	54
14	15.300	3/8 x 7	10-5/8 x 10-3/4	19-5/16	11-7/8	575	74
14	15.650	3/8 x 7	10-5/8 x 10-3/4	20-5/8	11-7/8	563	102
16	17.400	3/8 x 7	10-5/8 x 10-3/4	19-3/8	11-7/8	509	88
16	17.800	3/8 x 7	10-5/8 x 10-3/4	22-13/16	11-7/8	498	111
18	19.500	3/8 x 7	12-5/8 x 10-3/4	23-1/2	11-7/8	450	105
18	19.920	3/8 x 7	12-5/8 x 10-3/4	24-15/16	9-5/8	448	124
20	21.600	3/8 x 7	12-5/8 x 10-3/4	25-5/8	9-5/8	411	114
20	22.060	3/8 x 7	14-5/8 x 10-3/4	27-1/16	9-3/4	406	141
24	25.800	3/8 x 7	15-5/8 x 10-3/4	29-3/16	9-1/2	349	134
24	26.320	3/8 x 7	15-5/8 x 10-3/4	31-5/16	9-1/2	343	163

NOTE: See Pages 8 for Sizes and Specifications Charts for Style 138 Couplings

Style 138 Couplings Specifications for Plain-End Cast-Iron Pipe

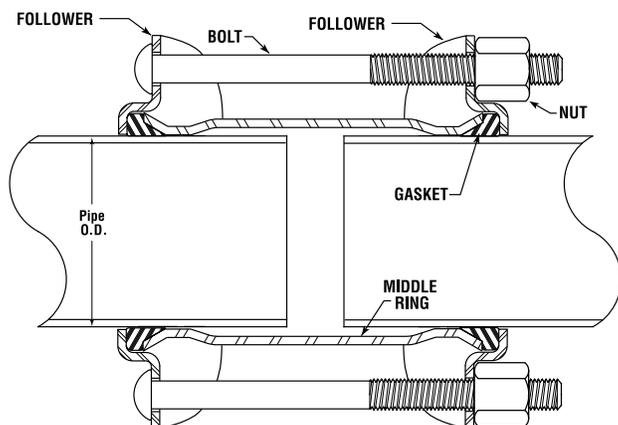
Nom. Size (CIP)	Pipe O. D. Range (In)		Middle Ring Thickness & Length (A&B)	Bolts Number/Diameter & Length (D&E)	Overall Dimensions		Max. Work. Pressure Lbs. per Sq. In.	Approx. Weight Each (Lbs.)
	END 1	END 2			Diam. (H)	Length (L)		
2 2-1/2	2.34 - 2.63	2.34 - 2.63	.188 x 5	2-5/8 x 8-1/4	6	9-1/2	250	7
	2.65 - 2.88	2.65 - 2.88	.180 x 5	2-5/8 x 8-1/4	6-1/2	9-1/2	250	8.5
3	3.50	3.50	3/8 x 5	4-5/8 x 8-1/4	7-3/4	9-1/2	250	12.5
	3.80 - 3.96	3.80 - 3.96						
	3.97 - 4.14	3.97 - 4.14						
4	4.46 - 4.86	4.46 - 4.86	3/8 x 5	4-5/8 x 8-1/4	8-13/16	9-1/2	250	15
	4.80 - 5.10	4.46 - 4.86						
	5.11 - 5.45	4.80 - 5.10						
6	6.56 - 6.96	6.56 - 6.96	3/8 x 5	4-5/8 x 8-1/4	11-3/16	9.5/11/5	250	23.5
	6.90 - 7.22	6.90 - 7.22						
8	8.00 - 8.16	8.00 - 8.16	3/8 x 5	6-5/8 x 8-1/4	13-5/16	9.5/11/5	250	32
	8.54 - 9.11	8.54 - 9.11						
	9.05 - 9.45	8.54 - 9.11						
	9.05 - 9.45	9.46 - 9.85						
10	10.50 - 10.75	10.50 - 10.75	3/8 x 7	6-5/8 x 10-3/4	15-3/4	11.5	250	52
	11.10 - 11.60	11.10 - 11.60						
	11.10 - 11.60	10.50 - 10.75						
12	13.20 - 13.50	13.20 - 13.50	3/8 x 7	8-5/8 x 10-3/4	17-15/16	11.5	250	55
	13.20 - 13.50	12.50 - 12.75						
	13.90 - 14.20	13.20 - 13.50						
16	17.40 - 17.80	17.40 - 17.80	3/8 x 7	10-5/8 x 10-3/4	22-13/16	11.5/15	250	80



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Why are DRESSER® couplings used more than any other coupling?

- Dresser offers the broadest line of couplings, including long body, insulating, reducing and transition types.
- Products feature Dresser AL-CLAD™ coating as standard in the most popular sizes. Our epoxy coating offers optimum protection against highly corrosive soil or aggressive water conditions and for handling brine, brackish water, most acids, alkalies, oil, chemical particulates and gases.
- Sizes range from 3/8" through 405" to cover every application including high temperature and abrasion.
- Dresser couplings are fast and easy to install with any size pipe or tubing.
- Wide temperature range from -20°F to +1200°F, with pressure ratings to 1500 psi.
- Available in rugged welded steel construction, stainless or carbon steel, titanium, monel or other alloys for special applications.
- Use a Dresser coupling and your pipeline joint is non-rigid, accepting expansion, contraction, vibration and line deflection.
- Special elastomer formulations are provided custom-matched to specific fluid process or application requirements.



Cutaway view shows components of a basic Dresser Style 38 Coupling

The Basic Working Principle of Dresser Couplings...

The Dresser coupling consists of one cylindrical middle ring, two follower rings, two resilient gaskets of special Dresser compound, and a set of steel trackhead bolts. The middle ring has a conical flare at each end to receive the wedge portion of the gaskets. The follower rings confine the outer ends of the gaskets. As the nuts are tightened, the bolts draw the follower rings toward each other, compressing the gaskets in the spaces formed by follower rings, middle ring flares and pipe surface thus producing a flexible, leak-proof seal on the pipe joint.

Style 38, 38 Stainless & 138 Couplings

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Style 39 Insulating Couplings

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Style 40 Long Couplings

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Style 62 Reducing & Transition Couplings

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Style 31 Line Caps

Page 14



Style 167 Lock Coupling

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Style 128-W Flange Adapter

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Style 63 Expansion Joints

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Style 131 Dismantling Joint

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Style 440 Joint Harness - Pg.19
Style 253 Cast Coupling - Pg.20

For those who may wish to draw up specifications of a general nature covering Dresser Style 38 couplings, this suggested form is offered:

1.) The pipe coupling shall be of a gasketed, sleeve-type design with diameter to properly fit the pipe. Each coupling shall consist of one (1) steel middle ring, of thickness and length specified, two (2) steel followers, two (2) rubber-compounded wedge section gaskets and sufficient track-head steel bolts to properly compress the gaskets.

The middle ring and followers of the coupling shall be true circular sections free from irregularities, flat spots or surface defects. They shall be formed from mill sections with the follower-ring section of such design as to provide confinement of the gasket. After welding, they shall be tested by cold expanding a minimum of 1% beyond the yield point. The middle ring, inside and out, and followers shall be coated with AL-CLAD™ thermosetting, fusion-bonded epoxy coating material that provides disbondment resistance in cathodically-protected systems and resistance to soil stresses and fungi. All constituents of the cured film are FDA and NSF-61 approved for exposure to fluids for human consumption and potable water.

The coupling bolts shall be of the elliptic-neck, track-head design with rolled threads. The manufacturer shall supply information as to the recommended torque to which the bolts shall be tightened. All bolt holes in the followers shall be oval for greater strength.

The coupling gaskets shall be composed of a crude or synthetic rubber base compounded with other products to produce a material that will not deteriorate from age, heat, or exposure to air under normal storage conditions. It shall also possess the quality of resilience and ability to resist cold flow of the material so that the joint will remain sealed and tight indefinitely when subjected to shock, vibration, pulsation and temperature or other adjustments of the pipeline.

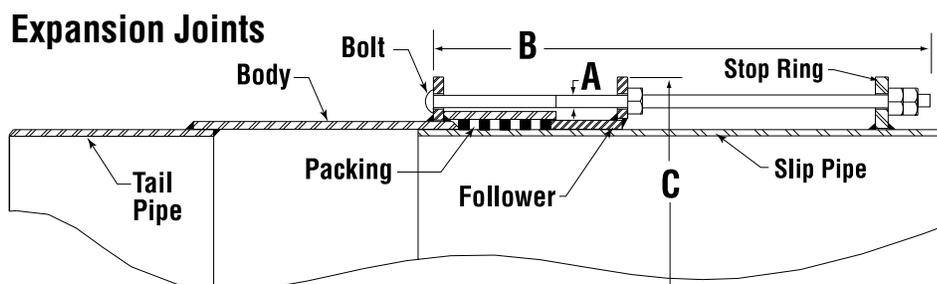
2.) The couplings shall be assembled on the job in a manner to ensure permanently tight joints under all reasonable conditions of expansion, contraction, shifting and settlement, unavoidable variations in trench gradient, etc. The coupling shall be Dresser Style 38, as manufactured by Dresser Piping Specialties, Bradford, PA, and the necessary quantity shall be furnished.

When Ordering Dresser Expansion Joints

Inquiries or orders for Dresser Style 63 Expansion Joints should contain the following information:

- (1) Quantity
- (2) Type of pipe: ductile iron, steel, etc.
- (3) Style number and type
- (4) Service: Water, Industrial, etc.
- (5) Maximum working pressure
- (6) Amount of movement to be taken care of by each joint
- (7) Temperature limitations and ranges
- (8) Frequency of cycling;
- (9) End preparation of slip or tail pipe—beveled for welding, flanged, other
- (10) Remarks, unusual installations, and list support methods of line and joint

The proper type of expansion joint to use and the method of anchoring and connecting it into a line depend upon the conditions of service and type of installation, as well as other joints in the line. The most effective use of Style 63 expansion joints usually requires an engineering recommendation. For that reason, a complete description of the installation should be submitted, with sketches or working drawings, if possible. Special joints may also be made for unusual conditions.



How to Specify Ends* on Steel Pipe

On orders and in specifications, the ends on steel pipe to be used with Dresser couplings may be specified briefly as follows:

- The pipe shall be furnished with plain ends for Dresser couplings in accordance with **A.W.W.A.** (American Water Works Association) Steel Water Pipe Specifications;
- OR:
- The pipe shall be furnished with plain ends for Dresser couplings in accordance with A.P.I. (American Petroleum Institute) Line Pipe Specifications.

If specifications are to be detailed, the following may be used:

For Pipe Above 5" OD to 10-3/4" OD inclusive:

- The pipe shall be sufficiently free from indentations, projections or roll marks for a distance of 8" from the end of the pipe to make a tight joint with the rubber-gasket type of coupling. The outside diameter of the pipe shall not be more than 1/64" smaller than the nominal outside diameter for a distance of 8" from the end of the pipe and shall permit the passing for a distance of 8" of a ring gauge which has a bore 1/16" larger than the nominal outside diameter of the pipe. The minimum outside pipe diameter shall be determined by the use of a steel tape circumferentially applied to prevent the shipment of undersize, out-of-round pipe which, if measured diametrically through the maximum diameter or checked with a No-Go ring gauge, might appear within the specified tolerance.

For Pipe Larger than 10-3/4" OD:

- The pipe shall be sufficiently free from indentations, projections or roll marks for a distance of 8" from the end of the pipe to make a tight joint with the rubber-gasket type of coupling. The outside diameter of the pipe shall not be more than 1/32" smaller than the nominal outside diameter for a distance of 8" from the end of the pipe and shall permit the passing for a distance of 8" of a ring gauge which has a bore 3/32" larger than the nominal outside diameter of the pipe. The minimum outside pipe diameter shall be determined by the use of a steel tape circumferentially applied to prevent the shipment of undersize, out-of-round pipe which, if measured diametrically through the maximum diameter or checked with a No-Go ring gauge, might appear within the specified tolerance.

*While Dresser couplings require only plain-end pipe, other kinds of pipe ends (such as threaded, beveled or grooved) can be used if such pipe is already on hand.

How to Specify Ends on Cast/Ductile Iron Pipe

On orders and in specifications, the ends on cast or ductile iron pipe to be used with Dresser couplings may be specified briefly as follows:

- The pipe shall be furnished with plain ends for Dresser couplings in accordance with **A.W.W.A.** (American Water Works Association) specifications on tolerances;
- OR:
- The pipe shall be furnished with plain ends for Dresser couplings in accordance with A.G.A. (American Gas Association) specifications on tolerances.

If further specifications are desired, the following may be added:

- The pipe shall be smooth and round for a distance of 8" from each end. The maximum plus or minus variation from nominal outside diameters for each size shall not exceed dimensions as shown in chart shown below.
- The maximum outside pipe diameter shall be such as to permit the passing of a ring gauge having an internal bore not greater than .01" larger than the maximum allowable outside diameter of the pipe. This ring gauge shall go over the end of the pipe for a distance of 8" for all sizes up to and including 24" and for a distance of 12" on sizes above 24".
- The minimum outside diameter shall be determined by use of a steel tape circumferentially applied to prevent the shipment of undersized, out-of-round pipe which, if measured diametrically through the maximum diameter or checked with a No-Go ring gauge, might appear within the specified tolerance.

Size	Maximum Variation
3" - 16"	.06"
18" - 24"	.08"
30" - 42"	.10"
48"	.12"
54" - 60"	.15"

Coupling Deflection, Movement, Expansion and Contraction

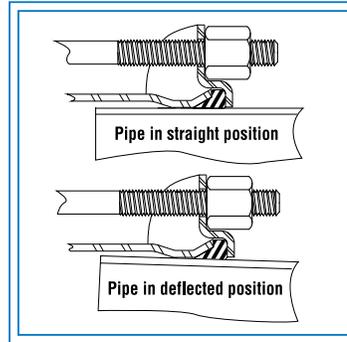
Laying out curves with standard Dresser couplings and straight sections of pipe

Presented in tabular form in the table at right entitled "Radius of Curve and Deflection of Pipe in Feet", this chart indicates (1) radius of circle for any given degrees of deflection and pipe length, (2) length of pipe for any given radius and deflection or (3) degrees deflection necessary for any given pipe length and radius. This information is worked out for the more commonly used pipe lengths and degrees deflection.

RADIUS OF CURVE AND DEFLECTION OF PIPE IN FEET												
Length of Pipe Sec. (feet)	Radius of Curve (Feet)						Deflection of Pipe (Feet/Inches)					
	Varying degrees deflection in each coupling						Varying degrees deflection in each coupling					
	1°	2°	3°	4°	5°	6°	1°	2°	3°	4°	5°	6°
6	344	172	115	84	66	57	1/4"	2-1/2"	3-3/4"	5"	6-1/4"	7-1/2"
12	687	344	229	172	138	114	2-1/2"	5"	7-1/2"	10"	1' 5/8"	1' 3"
16	916	458	306	229	183	153	3-3/8"	6-3/4"	10"	1' 1-1/2"	1' 4-3/4"	1' 8"
18	1031	516	344	258	206	172	3-3/8"	7-1/2"	1' 1-1/4"	1' 3-1/8"	1' 6-7/8"	1' 10-1/2"
20	1145	573	382	286	229	191	4-1/4"	8-3/8"	1' 5/8"	1' 4-3/4"	1' 8-7/8"	2' 1"
30	1718	860	573	430	344	286	6-1/4"	1' 5/8"	1' 6-7/8"	2' 1"	2' 7-7/8"	3' 1-5/8"
40	2291	1146	764	573	458	382	8-3/8"	1' 4-3/4"	2' 1"	2' 9-1/2"	3' 5-7/8"	4' 2-1/8"

Expansion & Contraction

Each coupling 10" ID and larger will safely accommodate up to 3/8" longitudinal pipe movement. This is equivalent to the amount of movement resulting from a 120° temperature variation in a 40-foot length of steel pipe. If pipe is not buried, anchorage should be provided to prevent excessive accumulation of movement. For repeated movements such as on a bridge or above ground, or if expansion exceeds 3/8" per joint, a Dresser Style 63 expansion joint should be used.



Maximum Recommended Laying Deflection Dresser Style 38 Couplings

From 3/8" ID to 2" ID Inclusive 6°
 From 2" ID to 14" OD Inclusive 4°

With Middle Ring Lengths:	5"	7"	10"
14" OD - 20" OD Inclusive	2-1/2"	4°	4°
20" OD - 30" OD Inclusive	2°	4°	4°
30" OD - 37" OD Inclusive	1-1/2"	3°	3-1/2°
37" OD - 42" OD Inclusive		2-1/2°	3-1/2°
42" OD - 49" OD Inclusive		2°	3°
49" OD - 54" OD Inclusive		2°	3°
54" OD - 66" OD Inclusive		2°	2-1/2°
66" OD - 78" OD Inclusive			2°
78" OD - 90" OD Inclusive			1-1/2°

Methods of Supporting Coupled Lines

Shown below are three options for supporting pipeline connections when using Dresser couplings. **Figure A** shows the offset method near the pipe joint for diameters 6" and smaller with pipe lengths up to 20 feet. Suitable for any pressure providing pipe is anchored to support for high pressure. **Figure B** indicates the center-type support for diameters from 6" to 16" and lengths not over 20 feet.

This method is suitable for pressures up to 25 lb. maximum with pipe fully anchored to supports.

Figure C shows the "Two & One" method for all sizes and any length of pipe up to 40 feet. Suitable for any pressure providing pipe is adequately anchored. When utilizing this method each length of pipe must be anchored to one (and ONLY one) support.

