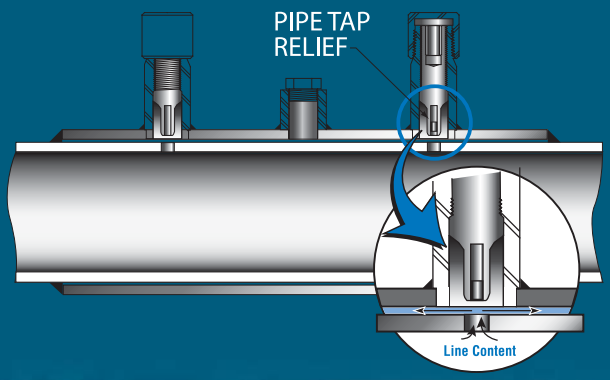
DRESSER®

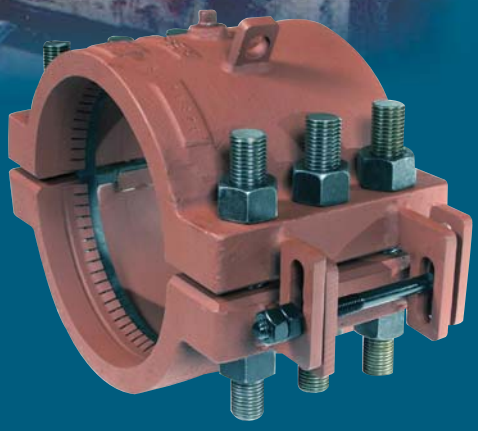
Piping Specialties



REPAIR PRODUCTS

for Natural Gas Piping Systems

- Collar Clamps & Bell Joint Clamps
- Band Clamps & 360-Degree Clamps
- High Pressure Clamps
- Split Repair Sleeves
- High Pressure Repair Sleeves
- Reinforcing Sleeves
- Encasement Sleeves



Piping Specialties

Gas Repair Products

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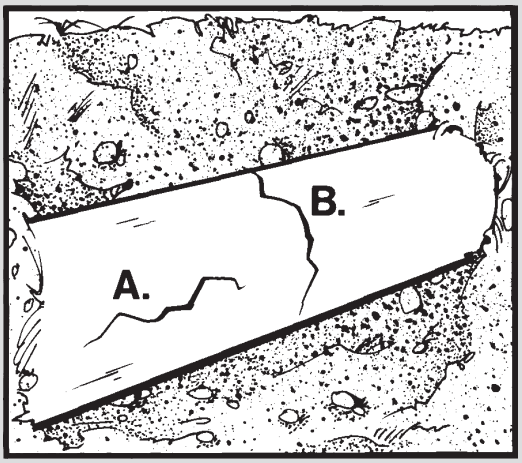
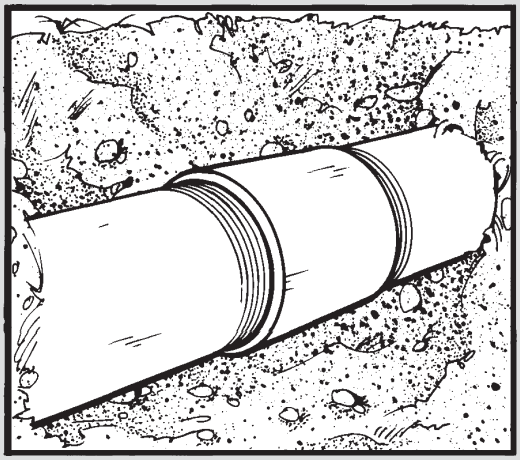
NEVER INSTALL ANY DRESSER PRODUCTS BEFORE READING THE INSTALLATION INSTRUCTIONS AND WARNINGS!

DRESSER Repair Products for Steel Pipe Sizes



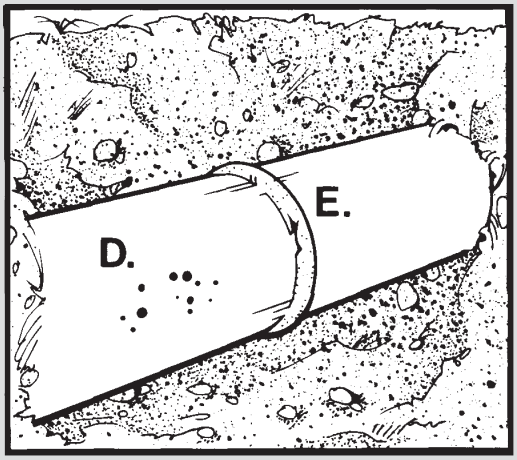
A. Circumferential Breaks or
B. Longitudinal Breaks up to 8”

PRODUCT	SIZE	MAX. PRESS.
54 Split Sleeve	2”- 4”	500 psi
73 Split Sleeve	2” & 3”	500 psi
93 Split Sleeve	6” - 24”	500 psi
96 Split Sleeve	6” - 24”	500 psi
97 Split Sleeve	3” - 24”	1000 psi
360 Clamp	2”- 12” 14”- 24”	See Chart Page 9



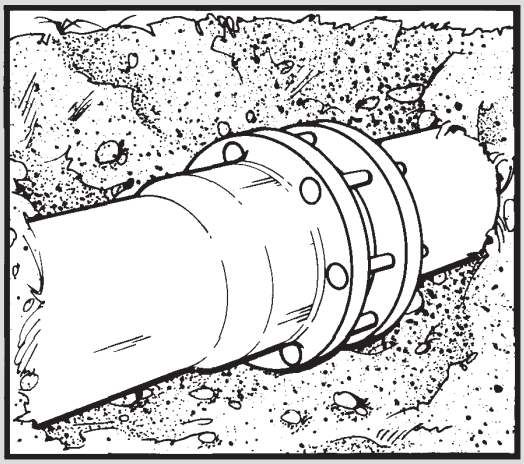
Leaking Collars

PRODUCT	SIZE	MAX. PRESS.
4 Collar Clamp	3/4”- 4”	1000 psi
41 Collar Clamp	4-1/2”- 12”	1000 psi
54 Split Sleeve	2”- 4”	500 psi
73 Split Sleeve	2” & 3”	500 psi
93 Split Sleeve	6” - 24”	500 psi
96 Split Sleeve	6” - 24”	500 psi



D. Small Pinhole Leaks, Splits, or
Corrosion Cracks or; E. Broken Weld

PRODUCT	SIZE	MAX. PRESS.
54 Split Sleeve	2”- 4”	500 psi
73 Split Sleeve	2” & 3”	500 psi
75 Clamp	4”- 36”	1200 psi
77 Band Clamp	1”- 24”	150 psi
93 Split Sleeve	6” - 24”	500 psi
118 Handiband Clamp (D only)	1/2”- 4” 6”- 8”	150 psi 100 psi
360 Clamp (D only)	2”- 12” 14”- 24”	See Chart Page 9

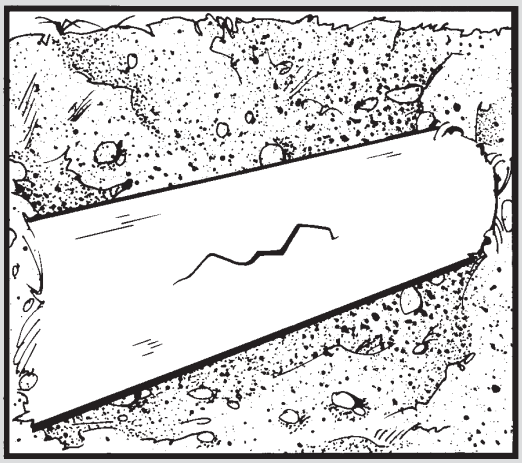


Leaking Coupled Joints

PRODUCT	SIZE	MAX. PRESS.
54 Split Sleeve	2”- 4”	500 psi
96 Split Sleeve	6” - 24”	500 psi
220 Sleeve	2” - 26”	400 -1600 psi See Chart Pg. 18

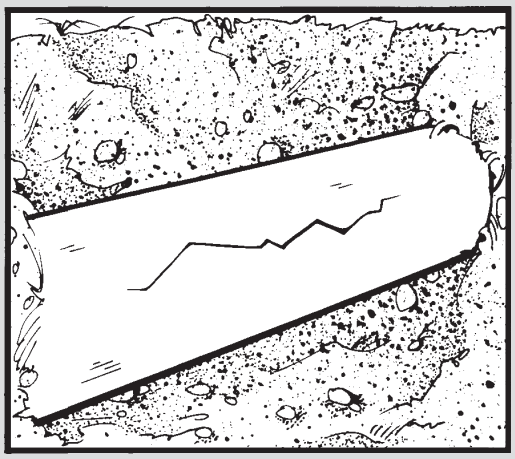
Questions? Call Dresser Customer Service: 1-814-362-9200

DRESSER Repair Products for Cast Iron Pipe Sizes



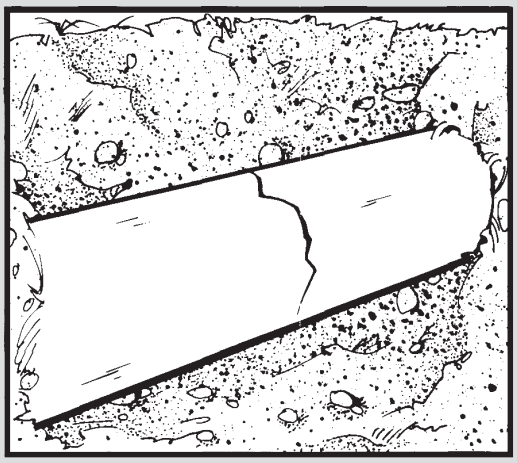
Longitudinal Breaks up to 8”

PRODUCT	SIZE	MAX. PRESS.
50 Split Sleeve	4” and above	100 psi
57 Split Sleeve	2” & 3”	250 psi
80 Split Sleeve	4” - 8”	150 psi
360 Clamp	3”- 8” 10”- 24”	See Chart Page 9



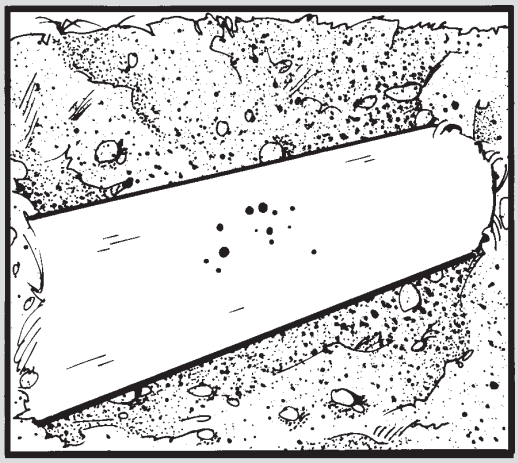
Longitudinal Breaks from 8-16”

PRODUCT	SIZE	MAX. PRESS.
50 Special	4” and above	100 psi
57 Split Sleeve w/Joint Assembly	2” & 3”	250 psi
360 Clamp	3”- 8” 10”- 24”	See Chart Page 9



Circumferential Breaks

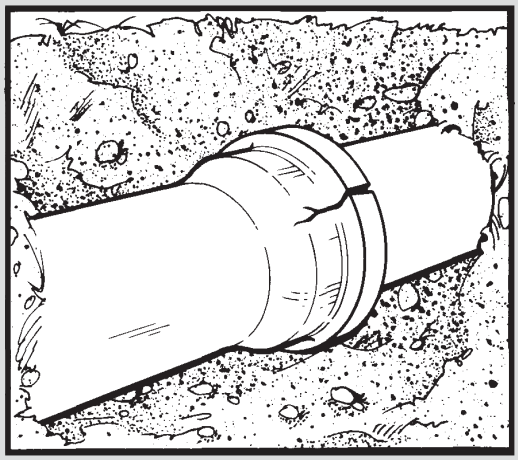
PRODUCT	SIZE	MAX. PRESS.
50 Split Sleeve	4” and above	100 psi
57 Split Sleeve	2” & 3”	250 psi
80 Split Sleeve	2” - 6”	150 psi
360 Clamp	3”- 8” 10”- 24”	See Chart Page 9



Small Pinhole or Corrosion Leaks

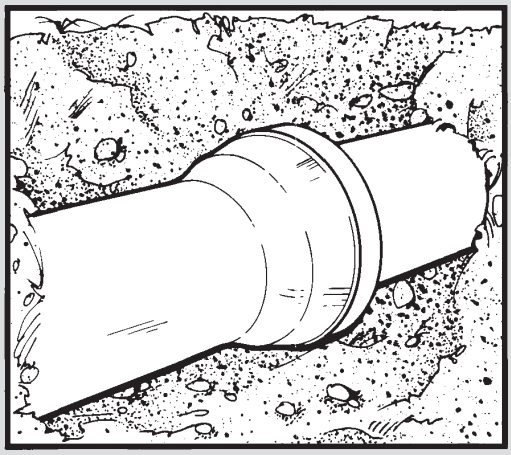
PRODUCT	SIZE	MAX. PRESS.
50 Split Sleeve	4” and above	100 psi
57 Split Sleeve	2” & 3”	250 psi
80 Split Sleeve	2” - 6”	150 psi
360 Clamp	3”- 8” 10”- 24”	See Chart Page 9

DRESSER Repair Products for Cast Iron Pipe Sizes



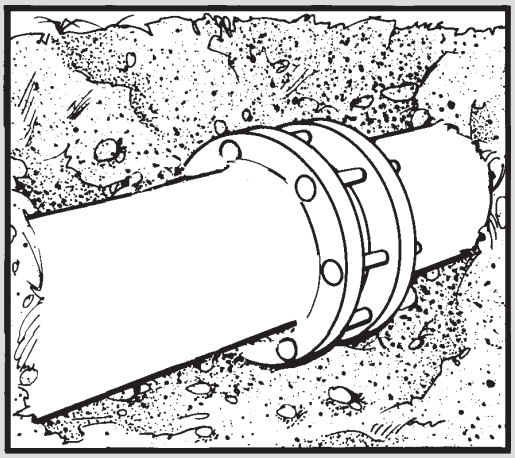
Cracked or Leaking Bell

PRODUCT	SIZE	MAX. PRESS.
60 Bell Clamp	3" - 24"	100 psi
60-S Bell Clamp	4" - 24"	100 psi
160 Bell Clamp	4" - 8" 12" & 16"	100 psi
126 Split Sleeve	3" - 24"	100 psi



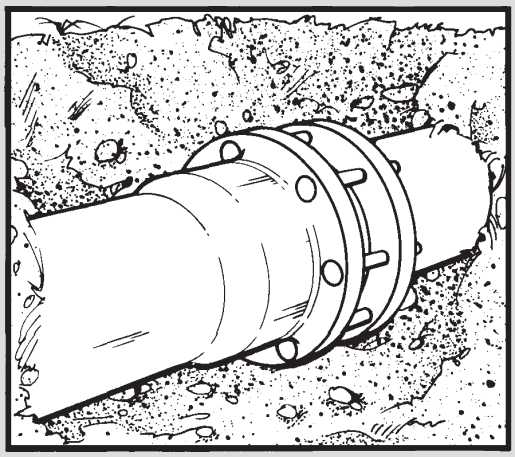
Leaking Inner-Tite Joint

PRODUCT	SIZE	MAX. PRESS.
60-S Bell Clamp	4" - 24"	100 psi
126 Split Sleeve	8", 20", 24"	100 psi
126 Special	4", 6", 10" 16", 30", 36"	100 psi



Leaking Coupled Joints

PRODUCT	SIZE	MAX. PRESS.
126 Split Sleeve	3" - 24"	100 psi

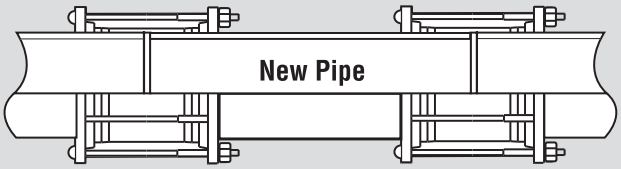


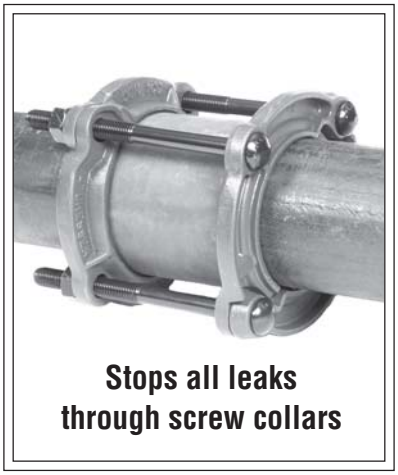
Leaking Mechanical Joints

PRODUCT	SIZE	MAX. PRESS.
126 Split Sleeve	3" - 24"	100 psi

OPTIONAL REPAIR

Remove defective length of pipe, insert new pipe and join with two Dresser Style 38, 40 or 700 couplings.



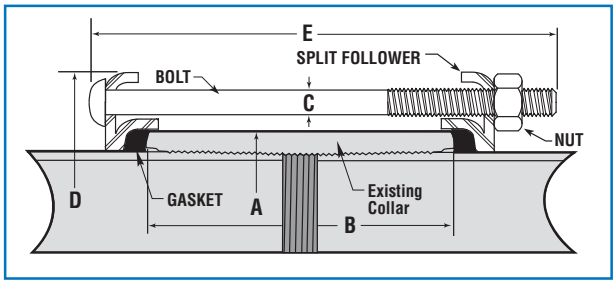


Stops all leaks through screw collars

Style 4 & 41 Collar Clamps

Dresser® Style 4 and Style 41 clamps quickly and inexpensively stop leaks through the threads of screw collars (threaded couplings), solvent weld couplings (collars) and stab-type PVC joints. Repairs are permanent and normally made without interrupting service or dismantling the line. **Style 4** clamps consists of two malleable split follower rings with interlocking ends on each section, two resilient split Dresser gaskets, and bolts as required for pipe sizes up to 4".

Style 41 consists of the same parts except the split follower rings are steel and are connected by steel lock links.



Materials of Construction

Followers: AISI C1012 or ASME SA36
Bolts & Nuts: Alloy to AWWA C 111/ANSI A21.11
Gasket: Grade 27 BUNA S

Style 4 (Malleable)

Sizes Specifications for 3/4" through 4"

Nominal Size Steel (ID)	Outside Diameter (OD)	COLLAR DIMENSIONS Overall Diameter (A)	COLLAR DIMENSIONS Overall Length (B)	BOLTS Number Diam. & Length (C & D)	CLAMP DIMENSIONS Overall Diameter (G)	CLAMP DIMENSIONS Overall Length (H)	GASKET Section Dimensions (E & F)	Approx. Shipping Weight Ea. (Lbs)
3/4	1.050	1.316	2.125	4– 3/8 x 5-1/4	3-13/16	5-3/4	3/16 X 5/16	3
1	1.315	1.575	2.375	4– 3/8 x 5-1/4	4	5-3/4	3/16 X 5/16	3
1-1/4	1.660	2.054	2.875	4– 3/8 x 5-1/4	4-1/4	5-3/4	3/16 X 5/16	3
1-1/2	1.900	2.294	2.875	4– 3/8 x 5-1/4	4-7/16	5-3/4	7/32 X 5/16	3
2	2.375	2.841	3.625	4– 5/8 x 6-1/2	6-5/16	7	9/32 X 5/8	8
2-1/2	2.875	3.389	4.125	4– 5/8 x 7-1/2	7-5/16	7	11/32 X 5/8	8-1/2
3	3.500	4.014	4.125	4– 5/8 x 7-1/2	7-1/2	8	11/32 X 3/4	9
4-1/4 CAS	4.500	5.021	3.625	4– 5/8 x 6-1/2	8-1/2	7	23/64 X 3/4	11
4	4.500	5.233	4.625	4– 5/8 x 7-1/2	8-1/2	8	23/64 X 3/4	11

Style 41 (Steel)

Sizes Specifications for 5" O.D. through 12" I.D.

Nominal Size Steel (ID)	Outside Diameter (OD)	COLLAR DIMENSIONS Overall Diameter (A)	COLLAR DIMENSIONS Overall Length (B)	BOLTS Number Diam. & Length (C & D)	CLAMP DIMENSIONS Overall Diameter (G)	CLAMP DIMENSIONS Overall Length (H)	GASKET Section Dimensions (E & F)	Approx. Shipping Weight (Lbs)
4-3/4 CAS	5.000	5.521	3.625	4 – 5/8 x 7.0	9-13/16	8	3/8 X 3/4	18
4-1/2	5.000	5.733	4.625	4 – 5/8 x 8.0	9-13/16	9	3/8 X 3/4	18
5 CAS	5.250	5.828	4.125	4 – 5/8 x 7-1/2	9-13/16	8-1/2	5/16 X 3/4	19
5-3/16	5.500	6.078	4.125	4 – 5/8 x 7-1/2	9-13/16	8-1/2	5/16 X 3/4	19
5	5.563	6.420	5.125	4 – 5/8 x 8-1/2	9-13/16	9-1/2	7/16 X 21/32	20
5-5/8 CAS	6.000	6.664	4.125	6 – 5/8 x 7-1/2	10-1/8	8-1/2	11/32 X 3/4	22
6-1/4 CAS	6.625	7.308	4.625	6 – 5/8 x 8.0	10-3/4	9	11/32 X 3/4	23
6	6.625	7.482	5.125	6 – 5/8 x 8-1/2	10-3/4	9-1/2	7/16 X 3/4	23
6-5/8 CAS	7.000	7.692	4.625	6 – 5/8 x 8.0	11-1/8	9	23/64 X 3/4	23
7-5/8 CAS	8.000	8.788	5.125	6 – 5/8 x 8-1/2	12-1/8	9-1/2	1/2 X 11/16	26
8-1/4 CAS	8.625	9.413	5.125	6 – 5/8 x 8-1/2	12-7/8	9-1/2	1/2 X 3/4	28
8	8.625	9.596	6.125	6 – 5/8 x 9-1/2	12-7/8	10-1/2	1/2 X 3/4	28
9-5/8 CAS	10.000	10.911	6.625	8 – 5/8 x 9-1/2	14-1/8	10-1/2	7/16 X 3/4	33
10	10.750	11.958	6.625	8 – 5/8 x 10.0	15-3/8	11	5/8 X 23/32	44
11-5/8 CAS	12.000	12.911	6.125	8 – 5/8 x 9-1/2	16-5/16	10-1/2	7/16 X 3/4	42
12	12.750	13.958	6.625	8 – 5/8 x 10.0	17-3/8	11	5/8 X 23/32	50

For repair of cast iron bell & spigot joints

Style 60 & 160 Bell Joint Clamps

Dresser® Bell Joint Clamps permanently stop or prevent leaks through the jointing materials of cast iron bell-and-spigot joints. Completely adjustable to provide a close fit on both the pipe bell and spigot, one standard clamp fits virtually all the various makes of pipe within a nominal size.

Style 60 and 160 clamps can be quickly installed with no interruption of service. A large, special rubber compound gasket shuts off the leak when compressed as the spigot ring is drawn up and, in turn, by bolts connected to the bell ring (anchored on the bell).

Materials of Construction

Rings: Cast Ductile Iron to ASTM A536

Bolts & Nuts: Dresserloy Carbon Steel; Spigot Ring: ASTM A-307

Clips: Ductile or Malleable Iron

Gasket: Grade 27

Style 60

The spigot ring of the Style 60 offers a wide range of adjustment made possible by the use of clips having fillers with the same cross section of the spigot ring. Serrated ends on the bell ring sections offer a simple and effective means of adjustment, providing a positive fit for varying outside bell diameters.

Style 160

The Style 160 clamp features a wrap around design of the spigot ring that hinge together. There are no clips and the spigot sections have serrated ends that bolt together.

Style 60/160

Sizes Specifications for 3" through 16"				Sizes Specifications for 18" through 48"			
PIPE (CIP) Nominal Size	GASKETS Thickness x Length	BOLTS Number Diam. x Length	WEIGHT App. Ship. Ea. (Lbs.)	PIPE (CIP) Nominal Size	GASKETS Thickness x Length	BOLTS Number Diam. x Length	WEIGHT App. Ship. Ea. (Lbs.)
3	1-1/8 x 1	4 – 5/8 x 5	13	18	1-1/8 x 1	12 – 5/8 x 6-1/2	73
4*	1-1/8 x 1	4 – 5/8 x 5	15	20	1-1/8 x 1	12 – 5/8 x 6-1/2	74
6*	1-1/8 x 1	6 – 5/8 x 5-1/2	21	24	1-1/8 x 1	12 – 5/8 x 7	86
8*	1-1/8 x 1	6 – 5/8 x 5-1/2	24	30	1-1/8 x 1	16 – 5/8 x 7	113
10	1-1/8 x 1	8 – 5/8 x 5-1/2	35	36	1-1/8 x 1	20 – 5/8 x 7	148
12*	1-1/8 x 1	9 – 5/8 x 5-1/2	38	42	1-1/8 x 1	24 – 5/8 x 7-1/2	199
14	1-1/8 x 1	9 – 5/8 x 6	46	48	1-1/8 x 1	24 – 5/8 x 7-1/2	227
16*	1-1/8 x 1	9 – 5/8 x 6	50	-	-	-	-

*NOTE: Style 160 Clamps may be furnished in these sizes

For repair of pinhole leaks

Style 75 PERMACLAMP

The Dresser® Style 75 Permaclamp provides for fast, simple, permanent repair of pinhole leaks in steel pipelines. Clamps are shipped in ready-to-use cartons and there is nothing to do but position clamp and tighten the side bolts. Clamp body is marked for quick positioning over the leak or split, and slotted for girth weld beads.

The Style 75 features:

- A permanent repair, yet the clamp can be removed and used elsewhere.
- Cost less than heavier sleeves, yet just as permanent. Also cost less to install.
- No costly tools, labor or time charges, and no bypassing or service interruptions.

Materials of Construction

Body & Followers: Carbon Steel Castings to ASTM A-27; Bar/Plate AISI C1015/ASTM A36

Set Screws: Heat-treated Alloy Steel, Cadium-plated

Straps & Fasteners: Carbon Steel to ANSI A21.11/ AWWA C111

Gaskets: Grade 29

Sealing action is effected by simply tightening the side bolts and follower setscrews creating a leakproof seal for the life of the line.

Style 75 PERMACLAMP

Specifications for Sizes 4" thru 42"

Nominal Size (IN)	Outside Diameter (OD)	Set Screw Size	Side Bolt Size	Gasket Coverage (Sq. In.)	Approx. Weight Per Clamp (Lbs.)
4	4.500	3/8	5/8	9-1/2	11
6	6.625	3/8	5/8	11-1/2	15
8	8.625	7/16	3/4	11-1/2	19
10*	10.750	7/16	3/4	13	24
12*	12.750	7/16	3/4	13	28
14	14.000	7/16	3/4	13	44
16	16.000	7/16	1	17	49
18	18.000	7/16	1	17	87
20	20.000	7/16	1	17	97
22	22.000	7/16	1	17	102
24	24.000	7/16	1	17	112
26	26.000	7/16	1	17	115
28	28.000	7/16	1	17	118
30	30.000	7/16	1	17	120
36	36.000	7/16	1	17	186
42	42.000	7/16	1	17	244

Style 75 Pressure Ratings*

***760 PSI for sizes 10" and 12"**
1200 PSI for all other sizes

Temperature Ratings
-20° to +150°F

Larger diameters and metric sizes available on request. Please consult factory with your particular application requirements.

Style 77B Band Clamp

Dresser® Style 77B Band Clamps are specifically designed to provide a low cost repair for small pinholes, leaks, corroded areas and pits in straight runs of steel piping. They are suitable for practically all working pressures and line contents.

Each clamp consists of a flexible, one-piece carbon steel circular band that is sprung apart to fit over the pipe, and a high-strength carbon steel bolt and nut of sufficient diameter to provide both a safety factor and protection against corrosion. The 77B is available in standard steel pipe sizes from 2" thru 24" with 2" or 3" bands. Cone gaskets must be specified when ordering the Style 77B repair clamp with three different size cone gaskets available (see chart).

CONE GASKETS - Style 77B

Gasket Number	Gasket Size
216	1-5/8"
217	2"
218	2-1/2"

Materials of Construction

Band/Lugs: AISI C1008/1010 Carbon Steel

Bolt & Nut: SAE Grade 5 Carbon Steel

Gasket (77G): 100% Pure Gum Rubber;1/4" Min. Thickness, 40 Durometer

Style 77B Band Clamp Specifications for sizes 2"- 24"

Pipe (Steel) Nominal Size (ID)	Outside Diameter (OD)	Band Thickness & Width	Bolt Diameter & Length	Weight Approx. Ship. Ea. (Lbs.)
2	2.375	1/16 x 2"	1/2 x 4	0.84
3	3.500	1/16 x 2"	1/2 x 4	0.96
4	4.500	1/16 x 2"	1/2 x 5-1/2	1.3
5	5.563	1/16 x 2"	1/2 x 5-1/2	1.4
6	6.625	3/32 x 3"	5/8 x 6	2.8
6-5/8 CAS	7.000	3/32 x 3"	5/8 x 6	2.9
8	8.625	3/32 x 3"	5/8 x 6	3.4
10	10.750	3/32 x 3"	5/8 x 7	4.0
11-5/8 CAS	12.000	3/32 x 3"	5/8 x 7	4.3
12	12.750	3/32 x 3"	5/8 x 7	4.5
	14.000	1/8 x 3"	5/8 x 8-1/4	6.2
	16.000			6.9
	18.000			7.5
	20.000			8.2
	24.000			9.6

Dresser® Style 77G Band Clamps provide the same low cost repair as the Style 77B, but are supplied with a heavy lug-to-lug full-length sheet gasket of low durometer providing ease of sealing on badly corroded steel pipe surfaces.

The **77G** repair clamp consists of the same flexible, one-piece circular carbon steel band and high strength carbon steel bolt and nut, and comprised of material chemically equivalent to the pipe material eliminating any corrosion concerns when dissimilar materials are used. With rugged construction and generous gasket thickness, the Style 77G provides the ideal economical repair. Available from 2" thru 8" sizes with 3" and 6" band widths.

Style 77G Band Clamp

Specifications for Sizes 2" through 8"

Pipe (Steel) Nominal Size (ID)	Outside Diameter (OD)	Band Thickness & Width	Bolt Diameter & Length	Weight Approx. Ship. Ea. (Lbs.)
2	2.375	3/64 x 3"	1/2 x 4	0.5
2	2.375	3/64 x 6"	1/2 x 4	1.0
3	3.500	1/16 x 3"	1/2 x 4	.75
3	3.500	1/16 x 6"	1/2 x 4	1.50
4	4.500	1/16 x 3"	1/2 x 5-1/2	1.0
4	4.500	1/16 x 6"	1/2 x 5-1/2	2.0
6	6.625	5/64 x 3"	5/8 x 6	1.5
6	6.625	3/32 x 6"	5/8 x 6	3.0
8	8.625	3/32 x 3"	5/8 x 6	3.5
8	8.625	3/32 x 6"	5/8 x 6	7.0

For quick, permanent repair of small holes in steel pipe

Style 118 HandiBand Clamp

The Dresser® Style 118 Handiand Clamp is a field-proven, low cost band-type repair clamp for quick repair of small leaks and holes in steel gas piping. Installation is fast, easy and foolproof. Simply wrap the clamp around the pipe, drop the boltheads through the slotted lugs and tighten the nuts. Compression of the large size gasket seals the leak completely and permanently.

Individual components of the Style 118 clamp are carefully engineered and constructed with lugs of ductile iron and bolts plated for long-life and durability. The Handiband clamp is made of stainless steel for corrosion resistance. The Dresser Grade 304 rubber compound gasket offers resistance to oil, aromatic and aliphatic hydrocarbons, condensates, gasoline and natural gas. These gaskets retain their resilience for the life of the line.

Materials of Construction

Band: Stainless Steel 18-8, Type 304
Lugs: Ductile Iron ASTM 536
Bolts & Nuts: Alloy to ANSI A21.11
Gasket: Gridded to Dresser Specs

Style 118 Handiband

Specifications for sizes 1/2" through 8"

Nominal Size (ID)	Outside Diameter (OD)	Overall Length (In.)	Quantity Per Package	Weight Approx. Ea. (lbs.)
1/2	.840	3	20	.50
1/2	.840	6	10	1.00
3/4	1.050	3	16	.60
3/4	1.050	6	8	1.10
1	1.315	3	16	.60
1	1.315	6	8	1.20
1-1/4	1.660	3	12	.90
1-1/4	1.660	6	6	1.70
1-1/2	1.900	3	12	.90
1-1/2	1.900	6	6	1.80
2	2.375	3	8	1.11
2	2.375	6	4	2.30
2	2.375	12	2	4.50
2-1/2	2.875	3	8	1.20
2-1/2	2.875	6	2	2.30

Nominal Size (ID)	Outside Diameter (OD)	Overall Length (In.)	Quantity Per Package	Weight Approx. Ea. (Lbs.)
3	3.500	3	6	1.20
3	3.500	6	4	2.40
3	3.500	12	2	4.80
3-1/2	4.000	3	6	1.50
3-1/2	4.000	6	4	3.00
4	4.500	3	6	1.50
4	4.500	6	4	3.10
4	4.500	12	2	6.30
5	5.563	3	6	1.60
5	5.563	6	4	3.21
6	6.625	3	6	1.80
6	6.625	6	4	3.60
6	6.625	12	1	7.20
8	8.625	3	6	2.00
8	8.625	6	4	2.00
8	8.625	12	1	2.00

*NOTE: All orders for unpackaged sizes and for broken carton quantities will be random packaged

For fast repair of leaks in cast/ductile and steel mains

Style 360 Repair Clamps

The **Dresser® Style 360®** repair clamp offers simplicity and ease of installation. Just wrap the clamp around the pipe, drop the bolts in place and tighten. It's that simple! Moreover, special one-inch long nuts allow the use of a standard deep socket wrench for complete tightening. In the popular 7.5 inch clamp width, there is also a third bolt so the middle bolt & nut can be used to pre-tighten the clamp. Additionally, the smaller sized clamps feature a flexible band which means less holding force is required while tightening.

With the "360" clamp you can repair holes, breaks and splits in the pipeline. You can use it where pipe ends are separated, or where ends are deflected up to 4 degrees or 1/8 inch. Or you can join two pipes with a variation of 1/4 inch outside diameter. Clamp features include a tapered gasket with a gridded design and the spanner is molded flush with the gasket to prevent "hang up." The "360" has a stainless band, lugs of rugged ductile iron and bolts of corrosion-resistant Dresserloy.

Materials of Construction

Band:	AISI Type 304 Stainless Steel
Lugs:	Ductile Iron
Nuts:	Dresserloy
Bolts:	Dresserloy
Spanner:	AISI Type 304 Stainless Steel
Gasket:	Gridded Surface to Dresser Spec

Style 360 Clamp Features:

- **One-Inch Long Nuts** allow tightening with standard deep socket wrench.
- **Drop-In Bolts** - No need to remove bolts in the ditch. No loose parts to misplace.
- **Multi-Band Clamp** - Features a multi-band design in the 14" through 24" sizes. Clamp is packaged and shipped "in the flat" meaning the bands are not formed to the radius of the pipe. Reduces storage space and installation time, and has twice the adjustment range of the single-band clamp.

Available with Service Outlet - The service outlet addition permits fast, easy repair of pulled or broken service connections. Service outlet clamp can used on complete circumferential breaks even when the pipe ends are separated or deflected up to 4 degrees–without changing the service location or tapping the main. Service outlet clamp is available in sizes 3"- 14" with widths up to 20".

Style 360 Size Specifications

Range of Fit (OD)	Clamp Widths (INCHES)	Maximum PSI	Range of Fit (OD)	Clamp Widths (INCHES)	Maximum PSI
2.35 - 2.63 2.70 - 3.00 2.97 - 3.25	**7-1/2, 10, 12-1/2, 15** **0.024" Thick Band**	**125 PSI**	11.04 - 11.44 11.34 - 11.74 11.75 - 12.15 12.00 - 12.40 12.62 - 13.02 13.10 - 13.50 13.40 - 13.80 13.70 - 14.10 14.00 - 14.40	**7-1/2, 10, 12-1/2, 15, 20, 25, 30** **0.036" Thick Band** **0.036" Thick Band w/Oulet Available from 3.36 - 14.40**	95 85 85 85 75 75 65 65 65
3.46 - 3.70 3.73 - 4.00 3.96 - 4.25 4.45 - 4.86 4.74 - 5.14 4.95 - 5.35	**7-1/2, 10, 12-1/2, 15, 20, 25** **0.024" Thick Band**	**125 PSI**			
5.22 - 5.62 5.95 - 6.35 6.56 - 6.96 6.84 - 7.24 7.05 - 7.45 7.45 - 7.85 7.95 - 8.35 8.54 - 8.94 8.99 - 9.39 9.27 - 9.67 9.68 - 10.08 9.70 - 10.10 10.64 - 11.04	**7-1/2, 10, 12-1/2, 15, 20, 25, 30** **0.036" Thick Band**	125 125 125 125 125 125 125 125 125 115 115 115 95	**2 Band Sizes** 14.38 - 15.13 15.07 - 15.82 15.92 - 16.67 16.56 - 17.31 17.15 - 17.90 17.82 - 18.57 18.46 - 19.21 19.23 - 19.98 19.90 - 20.65 20.70 - 21.45 21.52 - 22.27 22.12 - 22.87 22.90 - 23.65	**10, 12-1/2, 15, 20, 25, 30** **0.048" Thick Multi-Band w/No Outlet**	105 100 90 85 80 75 70 65 60 55 50 50 45

NOTE: On any given installation, the pressure capability of the clamps is influenced by the type and extent of the damage, service conditions, environmental conditions and installation workmanship.

Style 50 Split Repair Sleeve

Dual purpose sleeve for emergency repair or hot tapping CIP

Materials of Construction

Consult Factory Per Application

The **Dresser® Style 50 Split Sleeve** is one of the more versatile products in the Dresser line. It can provide a safe, efficient method of hot tapping cast iron pipe under pressure. Or, it can be ordered without the pipe branch and serve as an emergency repair sleeve, eliminating the necessity of stocking separate tapping and repair sleeves.

Style 50 sleeves can be furnished with any size threaded, flanged or plain-end tapping branch custom-fabricated at the plant to meet any requirement. And, each sleeve can accommodate several branch sizes permitting even further inventory reductions. Branches can be supplied with special taps for insertion of bagging equipment when low pressure tapping is performed.

Style 50 Sleeve Features:

- **Fabricated** from steel and insulated from main to meet D.O.T. standards.
- **Factory-assembled** to facilitate handling, storage and ease of installation. Sleeve halves are match-marked to assure a proper fit.
- **No service interruptions** during the installation procedure.
- **Deflection and line stresses absorbed** when used as a repair device for complete breaks.
- **Time-proven sealing principle** and furnished with Dresser gray epoxy coating as standard.
- **Sleeve** can be pressure tested to ensure sealing performance prior to tapping.

Style 50 With Branch Outlet Size Specifications for 6”- 24”

Pipe Nominal Size* CIP (In)	Outside Diameter (OD)	Length Between End Gaskets (In.)	Maximum Branch Size (In)	Maximum Operating Pressure**
6	6.90	10-1/2	6 IPS	100 PSI
8	9.05	12	8 IPS	
10	11.10	17-1/4	10 IPS	
12	13.20	17-1/4	12 IPS	
16	17.40	21-3/4	16 IPS	
20	21.60	24	20 IPS	
24	25.80	29	24 IPS	

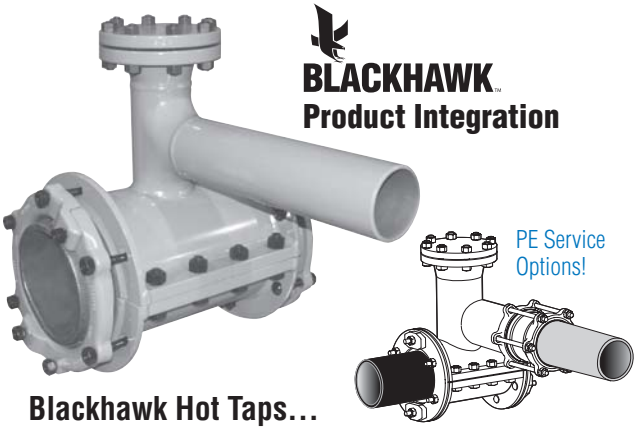
*Dresser Style 50 sleeves may be furnished in sizes up to 48”or larger.
**Other pressures available on request

Style 50 with Plain-end Branch

Style 50 Fabricated Size Specifications 6” - 24”

Pipe Nominal Size* CIP (In)	Outside Diameter (OD)	Length Between End Gaskets (In.)	Maximum Operating Pressure**
6	6.90	10-1/2	100 PSI
8	9.05	12	
10	11.10	17-1/4	
12	13.20	17-1/4	
16	17.40	21-3/4	
20	21.60	24	
24	25.80	29	

NOTE: Details and pricing for sleeves with plain, flanged, threaded or Dresser-end branches can be furninshed upon request.



BLACKHAWK™ Product Integration

PE Service Options!

Blackhawk Hot Taps…

The Dresser Style 50 Sleeve is easily integrated with **Blackhawk** LS2 flange fittings to provide an efficient hot tap of cast iron pipe under pressure. Custom-fabrication with branch service outlets can be coupled with Dresser bolted couplings for all your PE connection requirements.

Style 54, 57 & 73 Split Sleeves

Style 57
For repair of 2", 3" and 4"cast iron and steel pipe

Materials of Construction

Consult Factory Per Application

Dresser® Style 54 Cast Split Sleeves are designed to completely enclose and repair defective screw collars, plain or butt bell & spigot joints and double-bell circumferential welded joints. Style 54 sleeves can also be used to repair holes and splits up to 8" in length on 2", 3" and 4" steel pipe.

Style 54 sleeves are of rugged construction to permit safe repairs on high pressure gas and oil transmission pipelines. Each sleeve is air-tested with 60 psi air pressure and 1000 psi hydrostatic pressure before shipment. The sleeves are shipped factory assembled with the end parts packed inside the sleeve body with the installation instructions.

Style 57 Cast Split Sleeves enclose and repair holes, breaks, splits up to 8" in length on straight runs of 2" and 3" cast iron pipe. This sleeve can be quickly installed without service line shutdowns. Installation instruction and wrenches are shipped with each sleeve.

Style 73 Cast Repair Sleeves are similar in construction to the Style 57 and provide a fast, permanent repair on steel lines where moderate pressures are involved.

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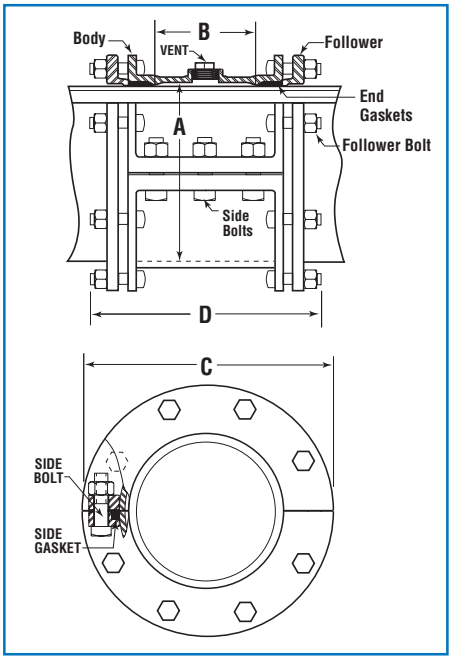


Style 54 Sizes Specifications for Steel Pipe (500 PSI)

Nominal Size (ID)	Outside Diameter (OD)	End Bolts No./Diam. x Length	Side Bolts No./Diam. x Length	Inside Dimen. Diam. (A)	Inside Dimen. Length (B)	Overall Dimen. Diam. (C)	Overall Dimen. Length (D)	Vent Size (IPS)	Weight Approx. Ea. (lbs.)
2	2.375	8 - 1/2 x 4	10 - 3/4 x 2-1/2	6-7/8	11	11-3/4	20-1/8	1	75
3	3.500	8 - 5/8 x 4	10 - 3/4 x 2-1/2	8	11	13	20-1/8	1-1/4	85
4	4.500	8 - 5/8 x 4	12 - 3/4 x 3	10-1/2	14-1/4	16-1/8	25-1/2	2	154

Style 73 Sizes Specifications for Steel Pipe (500 PSI)

Nominal Size (ID)	Outside Diameter (OD)	End Bolts No./Diam. x Length	Side Bolts No./Diam. x Length	Inside Dimen. Diam. (A)	Inside Dimen. Length (B)	Overall Dimen. Diam. (C)	Overall Dimen. Length (D)	Vent Size (IPS)	Weight Approx. Ea. (lbs.)
2	2.375	8 – 9/16 x 3-1/2	6 – 5/8 x 2-1/2	3-15/16	7	8-1/2	16-1/2	1	47
3	3.560	8 – 5/8 x 3-1/2	6 – 5/8 x 2-1/2	5 - 5/16	7	10-1/8	16-1/4	1-1/4	70

Style 57 Sizes Specifications for Cast Iron Pipe (250 PSI)

Nominal Size (ID)	Outside Diameter (OD)	End Bolts No./Diam. x Length	Side Bolts No./Diam. x Length	Inside Dimen. Diam. (A)	Inside Dimen. Length (B)	Overall Dimen. Diam. (C)	Overall Dimen. Length (D)	Vent Size (IPS)	Weight Approx. Ea. (lbs.)
2	2.375	8 – 9/16 x 3-1/2	6 – 5/8 x 2-1/2	3-15/16	7	8-1/2	16-1/4	1	47
2	2.625	8 – 5/8 x 3-1/2	6 – 5/8 x 2-1/2	3-15/16	7	8-1/2	16-1/4	1	47
3	3.660	8 – 5/8 x 3-1/2	6 – 5/8 x 2-1/2	5 - 5/16	7	10-1/2	16-1/4	1-1/4	68
3	3.800	8 – 5/8 x 3-1/2	6 – 5/8 x 2-1/2	5 - 5/16	7	10-1/2	16-1/4	1-1/4	68
3	3.960	8 – 5/8 x 3-1/2	6 – 5/8 x 2-1/2	5 - 5/16	7	10-1/2	16-1/4	1-1/4	68

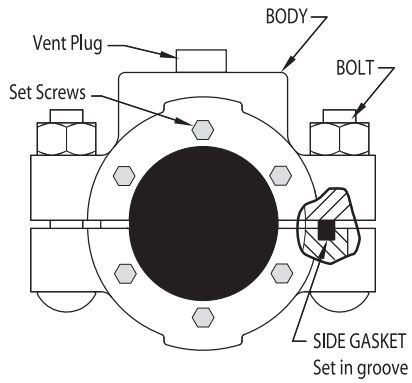
Style 80 "Ready-Pack" Sleeve

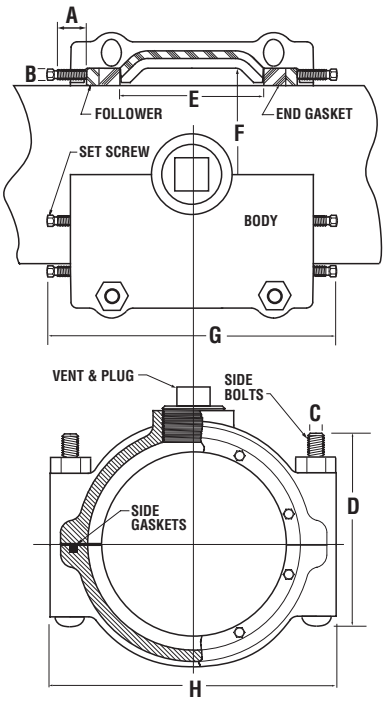
For repairs on Cast Iron pipe

Dresser® Style 80 Split "Ready-Pack" Sleeves are used to enclose and permanently repair breaks, splits and holes in cast iron pipe. Style 80 sleeves can also be used as an efficient, low-cost tapping sleeve for branch service connections.

Style 80 sleeve bodies are cast from close-grained gray iron (malleable iron in 2" size). Steel follower rings on each end are completely enclosed in the sleeve body. Carbon steel set screws are drawn up against the follower ring to compress the gasket creating total circumferential sealing on the pipe. Side bolts, which are fully enclosed within the sleeve body to prevent corrosion, are tighten to compress side gaskets providing a complete leakproof seal.

Dresser Style 80 sleeves are recommended for all customary pressures where pipe wall thickness is in conformity with specifications for standard cast iron pipe.





Materials of Construction

Body: Cast or malleable iron

Vent Plug: Forged steel to ASTM A105 or Cast to ASTM A126-42 Class A

Follower Rings: Cold-formed carbon steel

Bolts & Nuts: Alloy to AWWA C111/ANSI A21.11

Gaskets: Grade 29

Set Screws: Heat treated carbon steel, cadium plated

Coating: Provided Dresser shopcoat as standard; Fusion-bonded epoxy optional

Style 80 Size Specifications (150 PSI)

PIPE Nominal Size (CIP)	Range of Fit Outside Diamater (OD)	End Screws Number Diam. x Length A & B	Side Bolts Number Diam. x Length C & D	End Gaskets Section Dimensions	Side Gaskets Section Dimensions	Inside Dimensions[1]		Overall Dimensions		Vent* Diam.	Weight Shipping Each (Lbs.)
						Diam. (E)	Length (F)	Diam. (G)	Length (H)		
2	2.290 - 2.540	12 - 3/8 x 1	4 - 1/2 x 3-1/2	5/8 x 5/8	5/16 x 1/2	3-15/16	2-1/2	6-5/8	7-3/4	3/4-1/1/4	20
2	2.540 - 2.790	12 - 3/8 x 1	4 - 1/2 x 3-1/2	5/8 x 5/8	5/16 x 1/2	3-13/16	2-1/2	6-5/8	7-3/4	3/4-1/1/4	20
3	3.750 - 4.000	12 - 3/8 x 1	4 - 5/8 x 5-1/2	5/8 x 3/4	5/16 x 1/2	5-5/32	4	7-15/16	9-3/8	3/4-2/1/2	40
4*	4.740 - 4.990	12 - 3/8 x 1	4 - 5/8 x 5-1/2	5/8 x 3/4	5/16 x 1/2	6-5/32	4	8-15/16	9-3/8	3/4-3	45
6*	6.840 - 7.090	16 - 3/8 x 1	4 - 5/8 x 6-1/2	5/8 x 3/4	5/16 x 1/2	8-1/4	4	11-1/16	9-5/16	3/4-3	60
8	8.990 - 9.240	20 - 3/8 x 1	4 - 5/8 x 7-1/2 2 - 5/8 x 5-1/2	5/8 x 13/16	5/16 x 1/2	10-13/32	7	14-3/8	12-1/2	3/4-4	100

1- Inside Dimension "E" as indicated in cross section drawing, is distance between inside of end gaskets. This length is equal to or greater than found between calking spaces in foundry "splits" as shown in AGA Standards Specifications for Service Sleeves.

* Also available in long pattern design with vent size up to 4". Consult factory for specification details. Style 80 long body sleeves have six side bolts.

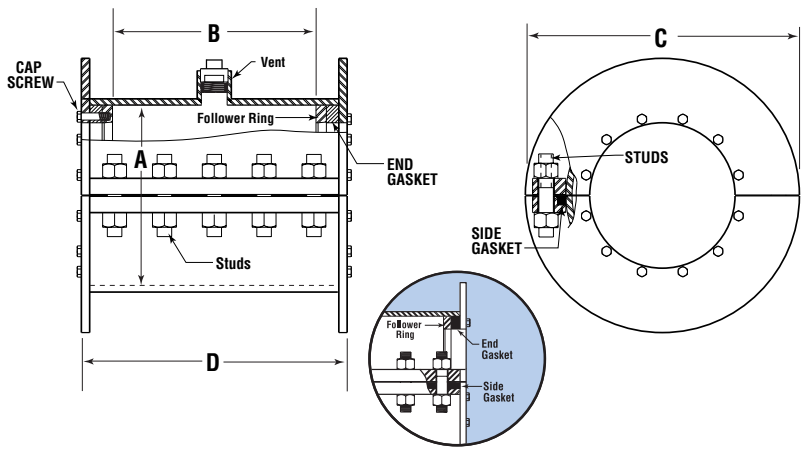
NOTE: For other cast iron pipe not listed above see the Dresser Style 57 Repair Sleeves on page 11.

For high pressure repairs on steel pipe

Style 93 Split Repair Sleeve

Dresser® Style 93 Split Repair Sleeves are especially designed for high pressure steel transmission piping and make quick, permanent repairs without service interuptions. Style 93 sleeves are fabricated from high quality carbon steel or manufactured from cast steel and come completely factory-assembled for quick installation. Sleeves are also vented for installation under pressure.

- Designed to completely enclose and permanently repair pit holes or splits in steel pipe up to 8" in length; or encase defective screw collars and butt-welded joints. Sleeves will assemble over deflected pipe as much as 5 degrees.
- Cap screw design provides added circumferential sealing capability around the pipe.



Pressure Ratings

ANSI 150 to 500 psi
ANSI 300 to 1000 psi
ANSI 600 to 1500 psi

Temperature Ratings

-20° to +150°F for all sizes

Style 93 Dimension Specifications for Sizes 6" thru 48"

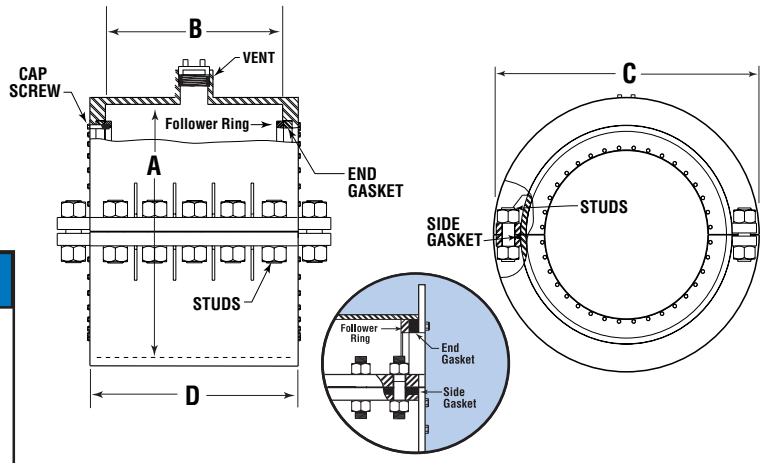
PIPE (Steel)		ANSI 150 to 500 PSI				ANSI 300 to 1000 PSI				ANSI 600 to 1500 PSI				
Nom. Size (IN)	Outside Diam. (OD)	Inside Dim. Diam. (A)	Inside Dim. Length (B)	Overall Dim. Diam. (C)	Overall Dim. Length (D)	Inside Dim. Diam. (A)	Inside Dim. Length (B)	Overall Dim. Diam. (C)	Overall Dim. Length (D)	Inside Dim. Diam. (A)	Inside Dim. Length (B)	Overall Dim. Diam. (C)	Overall Dim. Length (D)	VENT Diameter (IN)
6	6.625	8-7/8	8	14-1/2	12-3/8	8-7/8	7-1/2	17-7/8	12	8-7/8	8-1/4	19-1/8	13	1-1/4
8	8.625	10-7/8	8	16-1/2	12-3/8	10-7/8	7-1/2	19-7/8	12	10-7/8	8-1/2	20-3/8	19-1/2	1-1/4
10	10.750	13	8	18-3/4	12-3/8	13	7-1/2	22-1/2	12-1/2	13	7-1/4	22	17-3/4	2
12	12.750	15	8-1/4	21-3/8	13-3/4	15	12	25-1/2	17	15	8-3/4	26	21-1/4	2
14	14	16-1/4	8-1/4	22-3/4	13-3/4	16-1/4	8 -1/2	25-3/4	13-1/2	16-1/4	8-3/4	27-1/4	21-1/4	3
16	16	18-1/4	8-1/4	25-1/8	13-3/4	18-1/4	8-3/4	27-3/4	19-3/4	18-1/4	8-3/4	29-1/4	21-1/4	3
18	18	20-1/4	8-1/4	27-1/8	13-3/4	20-1/4	8-3/4	30-1/4	20-1/4	20-1/4	8-3/4	30-3/4	20-3/4	3
20	20	24-1/4	8-1/4	28-5/8	14	22-1/4	11-1/2	35-1/4	17	22-1/4	8-3/4	32-3/4	20-3/4	3
22	22	24-1/4	8-1/4	30-5/8	14	24-1/4	11-1/2	37-1/4	17	24-1/4	11-1/2	37-1/4	26	3
24	24	26-1/4	8-1/4	33-1/8	14	26-1/4	11-1/2	39-1/4	17	26-1/4	11-1/2	39-1/4	26	3
26	26	26-1/4	8-1/4	33-1/8	14	28-1/4	7-1/2	39-1/4	20	28-1/4	11-1/2	41-1/4	26	3
28	28	26-1/4	8-1/4	33-1/8	14	30-1/4	9	40-3/4	21	30-1/4	11-1/2	43-1/4	26	3
30	30	26-1/4	8-1/4	33-1/8	14	32-1/4	12-3/4	44-3/4	26-3/4	32-1/4	11-3/4	45-1/4	26-1/4	3
36	36	36-1/4	10-7/8	47-1/4	16-3/4	36-1/4	9	47-1/4	21-1/2	–	–	–	–	3
42	42	42-1/4	11-1/2	55-1/4	16-1/4	42-1/4	13-1/2	55-1/4	26-1/2	–	–	–	–	3
48	48	48-1/4	11-1/2	61-1/4	16-1/4	48-1/4	12	61-1/4	26-1/2	–	–	–	–	3

NOTE: Dresser will custom fabricate larger diameters upon request. Higher pressure ratings, longer sleeve lengths and/or metric sizes can be furnished per order. Please consult customer service with your particular individual application requirements.

Style 96 Split Repair Sleeve

Expanded body split sleeve for repairs on steel pipe

Dresser® Style 96 Split Repair Sleeves are similar in design to the Style 93 repair sleeve but offer an expanded body for repairing coupled or mechanical joints on high pressure steel transmission piping systems. Style 96 sleeves are fabricated from high quality carbon steel or manufactured from cast steel and come completely factory-assembled for quick installation. Sleeves are also vented for installation under pressure.



Style 93 & 96 Materials of Construction

Body Halves: Weldable steel suitable for the particular application to ASTM A36 or equivalent.

Follower: Carbon Steel AISI C1015

Cap Screws: Heat-treated Carbon Steel C1038 cadium-plated.

Studs: Meet ASTM A193 Grade B7 and the strength requirements of the application.

Gaskets: To Dresser Specifications

Coatings: Provided Dresser shopcoat as standard; AL-CLAD™ fusion-bonded epoxy optional.

Pressure Ratings	Temperature Ratings
ANSI 150 to 500 psi ANSI 300 to 1000 psi ANSI 600 to 1500 psi	-20° to +150°F for all sizes

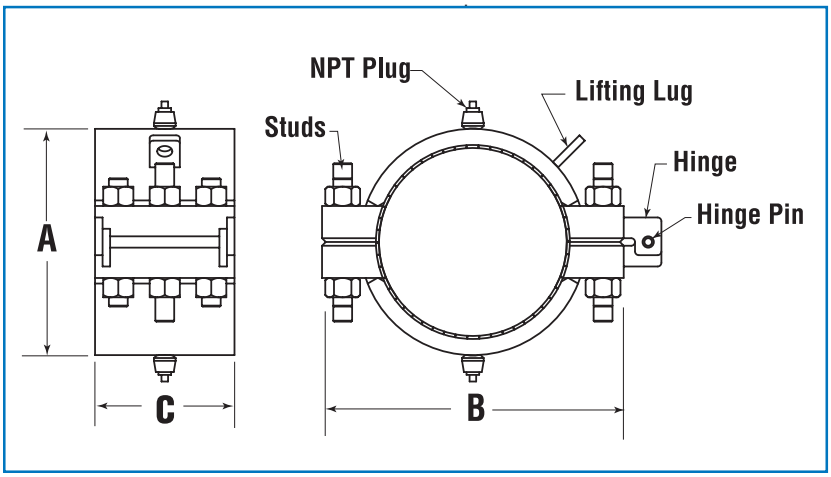
Style 96 Dimension Specifications for Sizes 6" thru 30"

PIPE (Steel)		ANSI 150 to 500 PSI				ANSI 300 to 1000 PSI				ANSI 600 to 1500 PSI				
Nom. Size (IN)	Outside Diam. (OD)	Inside Dim. Diam. (A)	Inside Dim. Length (B)	Overall Dim. Diam. (C)	Overall Dim. Length (D)	Inside Dim. Diam. (A)	Inside Dim. Length (B)	Overall Dim. Diam. (C)	Overall Dim. Length (D)	Inside Dim. Diam. (A)	Inside Dim. Length (B)	Overall Dim. Diam. (C)	Overall Dim. Length (D)	VENT Diameter (IN)
6	6.625	12-5/8	14	17-7/8	18-3/8	12-5/8	13-3/4	19-5/8	22-3/4	12-5/8	15-1/4	20-5/8	25	2
8	8.625	14-5/8	14	19-7/8	18-3/8	14-5/8	13-3/4	19-5/8	22-3/4	14-5/8	15-1/4	22-5/8	25	2
10	10.750	16-3/4	14-1/4	22	18-7/8	16-3/4	16-3/8	24-1/4	26-7/8	16-3/4	16-3/8	25-1/8	27	3
12	12.750	18-3/4	14-1/4	24-1/4	20-3/4	18-3/4	16-3/8	26-1/4	22-7/8	18-3/4	18	31	31-1/2	3
14	14	20	14-1/4	25-1/2	20-3/4	20	16	29-1/2	28	20	18	32	31-1/2	3
16	16	20	14-1/4	27-1/2	20-3/4	22	18	32	29-1/2	22	18	34	31-1/2	4
18	18	20	14-1/4	29-1/2	20-3/4	24	20-1/4	33-5/8	34	24	18	36	31-1/2	4
20	20	26	14-1/4	32-1/4	20-3/4	26	15-1/4	35	27	26	18	38	31-1/2	4
22	22	28	14-1/4	34-1/4	20-3/4	28	16-1/2	40-3/8	32	28	18	38	31-1/2	4
24	24	30	16	36-1/8	22-1/2	29-5/8	16-1/2	42	32	29-5/8	18	42	35	4
26	26	32	17-1/4	38-1/2	21-3/4	31-5/8	16-1/4	49	32-1/2	31-5/8	20	46	39	4
28	28	34	17-1/4	40-1/2	21-3/4	35-5/8	16	53	32-1/2	33-5/8	20	50	39	4
30	30	36	17-1/4	42-5/8	21-3/4	37-5/8	17	55	32-1/2	35-5/8	20	50	39	4

Style 97 Split Repair Sleeves

The **Dresser® Style 97 Split Repair Sleeve** is designed for fast, simple repair of pit holes, cracks or splits in high pressure steel pipelines up to 48" in diameter. Costing less than heavier sleeves now on the market, the Style 97 is also weldable offering your choice of a temporary or permanent repair. Stainless steel retainer rings and the lock-in gasket design ensures pressure-tight closure on the pipe with seal lengths of 5-inches (3-12") and 8-inches (14-48"). For ease of installation, a hinge and pin assembly and lifting lugs are standard on all clamps 6" and above. All clamps feature a 1/2" NPT relief plug.

Style 97 sleeves come completely factory-assembled for quick installation. Fabricated from high quality carbon steel or manufactured from cast steel, all Style 97 repair sleeves are factory-tested to 1.5 times rated pressure.



Materials of Construction

Body: Carbon Steel to ASTM A515/516; Cast to ASTM 216
Studs: Carbon Steel to ASTM A193
Hex Nuts: Carbon Steel to ASTM A194
Seal Retainer: Stainless Steel
Seals: To Dresser Specifications. Durometer Hardness: 70; Tensile Strength: 1000 psi minimum
Hinge Bracket: AISI 1010 Steel
Hinge Pin: AISI 1018 Steel
NPT Plugs: Carbon Steel

Style 97 Split Repair Sleeve Specifications for Sizes 3" thru 48"

Nominal Size (In.)	Overall Diameter (A) (In.)	Overall Width (B) (In.)	NPT Plugs (In.)	Overall Length (C) (In.)	Seal Length (In.)	Approx. Weight Per Sleeve (Lbs.)
3	5.5	8.3	1/2	8.5	5	42
4	6.3	10.5	1/2	8.5	5	65
6	8.6	12.6	1/2	9	5	85
8	10.5	15	1/2	9	5	132
10	12.7	17.5	1/2	9	5	156
12	15	19.2	1/2	9	5	174
16	18.3	24.6	1/2	12	8	360
20	23	29.5	1/2	12	8	525
24	27	36.4	1/2	13	8	680
30	33.4	41.3	1/2	13	8	865
36	40.1	48.7	1/2	13	8	1300
42	47.3	56.5	1/2	15.5	8	2150
48	53.2	64	1/2	18	8	2890

Larger diameters, metric sizes and longer seal lengths are available on request. Please consult factory with your particular application requirements.

Style 97 Pressure Ratings*

Size 3"- 48"
Up to ANSI 600 - 1440 psi

Temperature Ratings
-20° to +120°F

*NOTE: All Dresser Style 97 sleeves are factory-tested to 1.5 times the pressure rating.

Split reinforcing sleeve for repair of welded joints

Style 110 Reinforcing Sleeve

Pipeline engineers assure the safety of field joints by installing **Dresser® Style 110 Reinforcing Sleeves** on welded joints where special precautions are required. Style 110 sleeves can used on defective 'trouble spots' on piping systems at highway, river and railroad crossings, at overbends, at tie-ins, in marshy ground, near buildings and other places where special precautions are necessary.

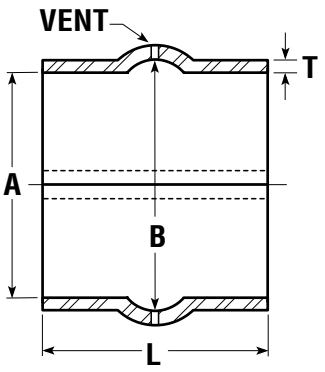
The Style 110 sleeve lends itself to field welding without preheating, using ordinary field welding procedures. All sleeves are factory prepared with standard welding bevel, machine flame cut for uniformity and ease of welding, and come with a drilled vent hole to preclude pressure build up between sleeve and pipe.

Built to rigid Dresser specifications, Style110 sleeves has a minimum yield strength of 50,000 psi and an ultimate strength of 70,000 psi. Style 110 sleeves are supplied in all sizes, lengths and thicknesses as shown in charts. Larger sizes and lengths available upon request.

Style 110 Reinforcing Sleeve Specifications

Nom. Pipe Size (in.)	Inside Diam. "A" & Pipe OD (in.)	Diam. "B" (in.)	Length "L" (in.)	Thick-ness "T" (in.)	Apprx. Ship Wt. (lbs.)
4	4-1/2	5-3/8	4	5/16	5-1/2
6	6-5/8	7-1/2	6	3/8	16-1/2
8	8-5/8	9-1/2	6	3/8	19
8	8-5/8	9-1/2	8	3/8	27
8	8-5/8	9-1/2	6	1/2	26
8	8-5/8	9-1/2	8	1/2	35
10	10-3/4	11-5/8	6	3/8	23
10	10-3/4	11-5/8	10	3/8	38
10	10-3/4	11-5/8	6	1/2	31
10	10-3/4	11-5/8	10	1/2	50
12	12-3/4	14-1/4	6	3/8	27
12	12-3/4	14-1/4	9	3/8	40-1/2
12	12-3/4	14-1/4	12	3/8	56
12	12-3/4	14-1/4	6	1/2	36
12	12-3/4	14-1/4	9	1/2	55
12	12-3/4	14-1/4	12	1/2	74
14	14	15-1/2	6	3/8	30
	14	15-1/2	9	3/8	45
	14	15-1/2	14	3/8	70
	14	15-1/2	6	1/2	40
	14	15 -1/2	9	1/2	60
	14	15-1/2	14	1/2	94
16	16	17-1/2	6	3/8	35
	16	17-1/2	19	3/8	52
	16	17-1/2	12	3/8	68
	16	17-1/2	16	3/8	90
	16	17-1/2	6	1/2	46
	16	17-1/2	9	1/2	70
	16	17-1/2	12	1/2	90
	16	17-1/2	16	1/2	120
18	18	19-1/2	6	3/8	39
	18	19-1/2	9	3/8	58
	18	19-1/2	12	3/8	77
	18	19-1/2	18	3/8	114
	18	19-1/2	6	1/2	51
	18	19-1/2	9	1/2	78
	18	19-1/2	12	1/2	101
	18	19-1/2	18	1/2	152
20	20	21-1/2	6	3/8	43
	20	21-1/2	9	3/8	64
	20	21-1/2	12	3/8	84
	20	21-1/2	20	3/8	139
	20	21-1/2	6	1/2	58
20	20	21-1/2	9	1/2	86
	20	21-1/2	12	1/2	112
	20	21-1/2	21	1/2	186
22	22	23-1/2	6	3/8	47
	22	23-1/3	9	3/8	70
	22	23-1/3	12	3/8	92
	22	23-1/3	22	3/8	166
	22	23-1/3	6	1/2	64
	22	23-1/3	9	1/2	94
	22	23-1/3	12	1/2	123
	22	23-1/3	22	1/2	230
24	24	25-1/2	6	3/8	51
	24	25-1/2	9	3/8	76
	24	25-1/2	12	3/8	100
	24	25-1/2	16	3/8	133
	24	25-1/2	24	3/8	198
	24	25-1/2	6	1/2	69
	24	25-1/2	9	1/2	101
	24	25-1/2	12	1/2	133
	24	25-1/2	16	1/2	177
	24	25-1/2	24	1/2	265
26	26	27-1/2	6	3/8	56
	26	27-1/2	9	3/8	82
	26	27-1/2	12	3/8	109
	26	27-1/2	16	3/8	143
	26	27-1/2	26	3/8	232
	26	27-1/2	6	1/2	75
	26	27-1/2	9	1/2	110
	26	27-1/2	12	1/2	144
	26	27-1/2	16	1/2	190
	26	27-1/2	26	1/2	310
30	30	31-1/2	6	3/8	64
	30	31-1/2	9	3/8	95
	30	31-1/2	12	3/8	125
	30	31-1/2	16	3/8	164
	30	31-1/2	30	3/8	310
	30	31-1/2	6	1/2	85
	30	31-1/2	9	1/2	127
	30	31-1/2	12	1/2	166
	30	31-1/2	16	1/2	220
	30	31-1/2	30	1/2	410

NOTE: Larger diameters, higher pressures and metric sizes may be furnished upon request. Please consult factory.



Materials of Construction

Body: High strength, low carbon steel meeting ASTM A572 GR 50/ ASTM A588

Style 110 Pressure Ratings

See chart on page 17

Yield Strength
50,000 PSI Min.

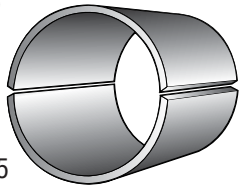
Temperature Ratings
-20° to +150°F

Style 110 Reinforcing Sleeve Pressure Ratings

PRODUCT STYLE	PRESSURE RATING (MAXIMUM OPERATING PRESSURE)				
Style 110	Pipe Size (OD) x Wall Thickness	Class 1	Class 2	Class 3	Class 4
NOTE: Style 110 design pressure for class location has been determined using the formula shown in D.O.T. Regulation 192, Section 192.105, assuming an 80% joint factor for the longitudinal field weld. For Oil applications refer to Class 1 Ratings as per D.O.T. Regulation 195.	4-1/2" O.D. x 5/16" Wall	3130 G	2605 G	2170 G	1735 G
	6-5/8" O.D. x 3/8" Wall	2615 G	2180 G	1815 G	1450 G
	8-5/8" O.D. x 3/8" Wall	2105 G	1755 G	1460 G	1170 G
	8-5/8" O.D. x 1/2" Wall	2740 G	2285 G	1900 G	1520 G
	10-3/4" O.D. x 3/8" Wall	1745 G	1450 G	1210 G	965 G
	10-3/4" O.D. x 1/2" Wall	2280 G	1900 G	1580 G	1265 G
	12-3/4" O.D. x 3/8" Wall	1440 G	1200 G	1000 G	800 G
	12-3/4" O.D. x 1/2" Wall	1885 G	1570 G	1310 G	1045 G
	14" O.D. x 3/8" Wall	1325 G	1105 G	920 G	735 G
	14" O.D. x 1/2" Wall	1745 G	1450 G	1210 G	965 G
	16" O.D. x 3/8" Wall	1180 G	985 G	820 G	655 G
	16" O.D. x 1/2" Wall	1555 G	1295 G	1080 G	860 G
	18" O.D. x 3/8" Wall	1065 G	885 G	740 G	590 G
	18" O.D. x 1/2" Wall	1400 G	1170 G	975 G	780 G
	20" O.D. x 3/8" Wall	970 G	805 G	670 G	535 G
	20" O.D. x 1/2" Wall	1275 G	1065 G	885 G	710 G
	22" O.D. x 3/8" Wall	890 G	740 G	615 G	490 G
	22" O.D. x 1/2" Wall	1175 G	975 G	815 G	650 G
	24" O.D. x 3/8" Wall	820 G	685 G	570 G	455 G
	24" O.D. x 1/2" Wall	1085 G	905 G	750 G	600 G
	26" O.D. x 3/8" Wall	760 G	635 G	530 G	420 G
	26" O.D. x 1/2" Wall	1010 G	840 G	700 G	560 G
	30" O.D. x 3/8" Wall	665 G	555 G	465 G	370 G

Dresser Style 115 Full-Wrap Split Sleeves are custom-fabricated to exact customer specifications. Please consult factory for details on your particular application requirements.

Style 115 Reinforcing Sleeves



Where special precautions are needed, you can be "double-sure" of field joints by installing **Dresser Style 115 reinforcing sleeves.** The Style 115 is a full-wrap split sleeve and can be manufactured to any length required. Style 115 sleeves are factory-prepared with standard welding bevel and are machine flame-cut for uniformity and ease of installation.

Style 220 Reinforcing Sleeve

For permanent repair of leaking coupled joints

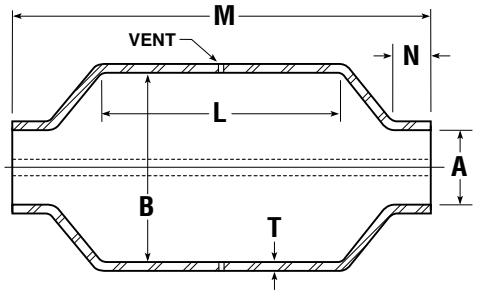
Materials of Construction

Body: High strength, low carbon steel meeting ASTM A572 GR 50/ ASTM A588

Similar in design to the Style 110, **Dresser® Style 220 Reinforcing Sleeves** encompass a "pumpkin" sleeve design and are commonly used to repair corrosion pits and stress cracks and offer a permanent repair over leaking couplings, flanges, valves or screw collars. The Style 220 also provides a means of being "double sure" of safety against pipe-end pullout when used to reinforce pipelines on high pressure piping systems.

The steel construction properties of the Style 220 sleeve lends itself to field welding without preheating, using ordinary field welding procedures. All sleeves are factory prepared with standard welding bevel, machine flame cut for uniformity and ease of welding, and come with a drilled vent hole to preclude pressure build up between sleeve and pipe.

Built to rigid Dresser specifications, Style 220 sleeves have a minimum yield strength of 50,000 psi and an ultimate strength of 70,000 psi. Style 220 sleeves are supplied in all sizes, lengths and thicknesses as shown in charts. Larger sizes and lengths available upon request.



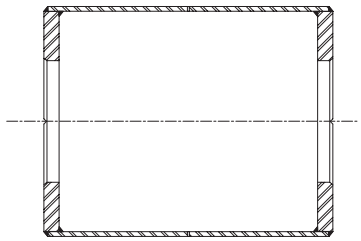
Standard Style 220 formed sleeve cutaway

Style 220 Reinforcing Sleeve
Sizes and Specifications for 2" thru 26"

Nom. Pipe Size	ID "A" & Pipe OD	Inside Diam. "B"	Inside Length "L"	Outlet Dimen. "N"	Overall Length "M"	Thickness "T"	Approx. Shipping Wt. (lbs.)
2*	2-3/8	8-3/8	10-1/2	1-1/4	23-1/4	5/16	45
3*	3-1/2	9-1/2	10-1/2	1-1/4	23-1/4	5/16	49
4	4-1/2	10-1/2	10	2	20-1/4	5/16	54
6	6-5/8	12-5/8	13-1/2	1-3/8	21-3/4	3/8	96
8	8-5/8	14-5/8	13-1/3	1-3/8	21-3/4	3/8	112
10	10-3/4	16-3/4	13-1/2	1-3/8	21-3/4	3/8	128
10	10-3/4	16-3/4	13-1/2	1-3/8	21-3/4	1/2	175
12	12-3/4	18-3/4	13-1/2	1-3/8	21-3/4	3/8	150
12	12-3/4	18-3/4	13-1/2	1-3/8	21-3/4	1/2	198
14	14	20	13-1/2	1-3/8	21-3/4	3/8	160
14	14	20	13-1/2	1-3/8	21-3/4	1/2	215
16	16	22	13-1/2	1-3/8	21-3/4	3/8	176
16	16	22	13-1/2	1-3/8	21-3/4	1/2	240
18	18	24	13-1/2	1-3/8	21-3/4	3/8	195
18	18	24	13-1/2	1-3/8	21-3/4	1/2	260
20	20	26	13-1/2	1-3/8	21-3/4	3/8	216
20	20	26	13-1/2	1-3/8	21-3/4	1/2	288
22	22	28	13-1/2	1-3/8	21-3/4	3/8	230
22	22	28	13-1/2	1-3/8	21-3/4	1/2	307
24	24	30	13-1/2	1-3/8	21-3/4	3/8	248
24	24	30	13-1/2	1-3/8	21-3/4	1/2	330
26	26	32	13-1/2	1-3/8	21-3/4	3/8	315
26	26	32	13-1/2	1-3/8	21-3/4	1/2	350

NOTE: Larger diameters available upon request. Please consult factory with your particular application requirements.

*** 2" and 3" sizes have minimum yield strength of 35,000 psi.**



Typical Style 220 custom-fabricated for non-standard applications

Style 220 Pressure Ratings
See chart on page 19

Yield Strength
50,000 PSI Min.

Temperature Ratings
-20° to +150°F

Style 220 Reinforcing Sleeve Pressure Ratings

PRODUCT	PRESSURE RATING (MAXIMUM OPERATING PRESSURE)				
Style 220	Pipe Size x Wall Thickness	Class 1	Class 2	Class 3	Class 4
NOTE: Style 220 design for Gas pressure for each class location has been determined using the formula shown in D.O.T. Regulation 192, Section 192.105, assuming an 80% joint factor for the longitudinal field weld. For Oil applications refer to Class 1 Ratings as per D.O.T. Regulation 195.	2-3/8" O.D. x 5/16" Wall	1200 G	1000 G	825 G	650 G
	3-1/2" O.D. x 5/16" Wall	1000 G	875 G	725 G	575 G
	4-1/2" O.D. x 5/16" Wall	1615 G	1345 G	1120 G	895 G
	6-5/8" O.D. x 3/8" Wall	1610 G	1345 G	1120 G	895 G
	8-5/8" O.D. x 3/8" Wall	1400 G	1170 G	975 G	780 G
	10-3/4" O.D. x 1/4" Wall	830 G	695 G	580 G	460 G
	10-3/4" O.D. x 3/8" Wall	1230 G	1025 G	855 G	685 G
	10-3/4" O.D. x 1/2" Wall	1620 G	1350 G	1125 G	900 G
	12-3/4" O.D. x 3/8" Wall	1105 G	920 G	765 G	615 G
	12-3/4" O.D. x 1/2" Wall	1455 G	1215 G	1010 G	810 G
	14" O.D. x 3/8" Wall	1040 G	865 G	720 G	575 G
	14" O.D. x 1/2" Wall	1370 G	1140 G	950 G	760 G
	16" O.D. x 3/8" Wall	945 G	790 G	655 G	525 G
	16" O.D. x 1/2" Wall	1250 G	1040 G	870 G	695 G
	18" O.D. x 3/8" Wall	870 G	725 G	605 G	480 G
	18" O.D. x 1/2" Wall	1150 G	960 G	800 G	640 G
	20" O.D. x 3/8" Wall	805 G	670 G	560 G	445 G
	20" O.D. x 1/2" Wall	1065 G	885 G	740 G	590 G
	22" O.D. x 3/8" Wall	750 G	625 G	520 G	415 G
	22" O.D. x 1/2" Wall	990 G	825 G	690 G	550 G
	24" O.D. x 3/8" Wall	700 G	585 G	485 G	390 G
	24" O.D. x 1/2" Wall	925 G	770 G	645 G	515 G
	26" O.D. x 3/8" Wall	655 G	545 G	455 G	365 G
	26" O.D. x 1/2" Wall	870 G	725 G	605 G	480 G

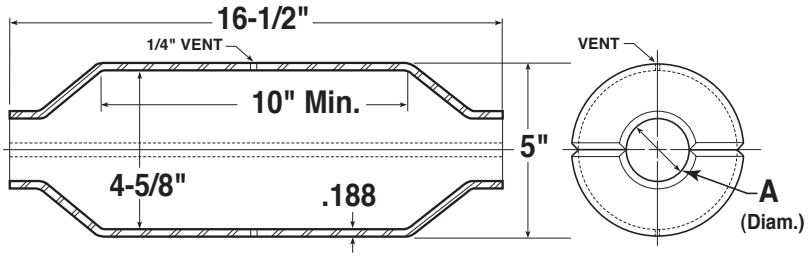
For small diameter repair from 3/4” - 2”I.D.

Style 220-S Reinforcing Sleeve

The Dresser® Style 220-S is a weld-over sleeve for reinforcing threaded collars, welded joints or compression couplings on small diameter pipe from 3/4” I.D. through 2” I.D. sizes. The sleeves are made to rigid Dresser specifications meeting ASTM-A513, GR1015 specs, and have a yield strength of 35,000 PSI, and an ultimate strength of 48,000 PSI.

Style 220-S sleeves are furnished in matched halves and all longitudinal edges are factory bevelled for welding. A drilled vent hole precludes pressure buildup between sleeve and pipe during welding. Style 220-S sleeves are rated at 350 psi working pressure and meet the requirements applicable to DOT #192 codes.

Pipe Size (O.D.)	Nom. Size	Diameter (A)
1.050	3/4”	1-1/8”
1.315	1”	1-3/8”
1.660	1-1/4”	1-3/4”
1.990	1-1/2”	2”
2.375	2”	2-7/16”



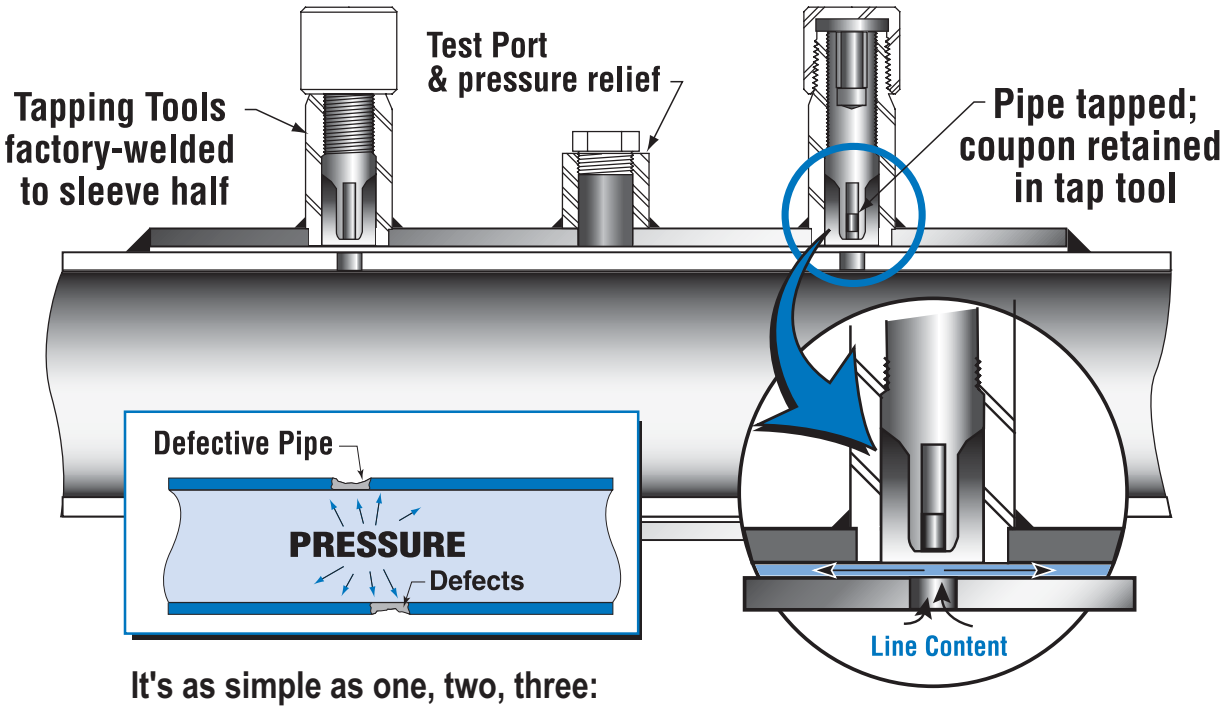
PBR Sleeve - Pressure Balanced Repair

Advanced pipe tap relief technology for pipeline stress reduction; plus a fast, economical repair solution for corroded or damaged pipelines

For use on gas and liquid transmission pipelines with general loss corrosion, coating failure anomalies or third party damage

The **Dresser® PBR Repair Sleeve** is a simple "weld & tap" repair process combining the Dresser split sleeve design with Dresser Tap-N-Valve™ pipe tapping methods. Tapping tool penetrates defective carrier pipe, thus equalizing pressure and transferring stress to welded repair sleeve resulting in immediate stress reduction across anomaly.

- Arrests defect propagation
- Non-abrasive process; Coupon slug is retained as the tapping tool is retracted and no debris is introduced to the pipeline system
- Low-profile sleeve design with the ID matching the nominal pipe size; factory-beveled for ease of field welding
- Nominal sizes 4" through 48" on 3/8" carrier pipe
- No chemical mixing, adhesives or fillers required



It's as simple as one, two, three:

1 - Sleeve is installed on the pipe and pressure tested. Sleeve is then sealed.

2 - 1/4" tapping tool is used to penetrate the carrier pipe

3 - Pressure now equalized on the interior and exterior of pipe wall as line content enters sleeve annulus, thus reducing stress level at point of defect

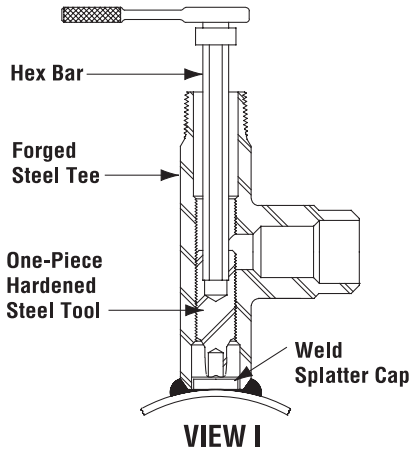
NOTE: Tap relief repair method can be applied to a variety of DRESSER weld and mechancial sleeves.

Materials of Construction

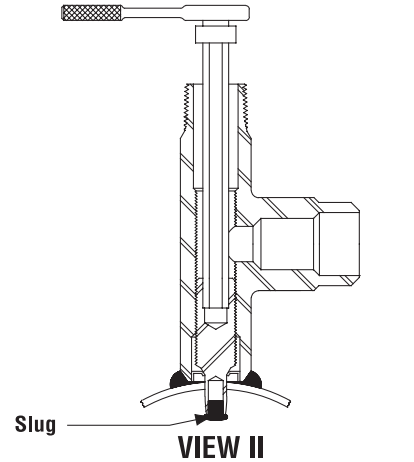
PBR Material Specification:
High strength, low carbon steel meeting ASTM A572 GR50/ ASTM A588

Nominal Thickness:
3/8" thru 1/2" per application

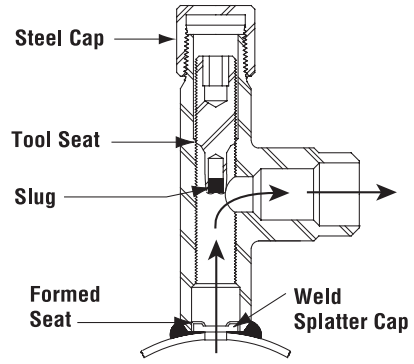
Style 90 Tap-N-Valve Tees for Pressure Relief



VIEW I



VIEW II



VIEW III

Use When Installing Dresser Reinforcing Sleeves

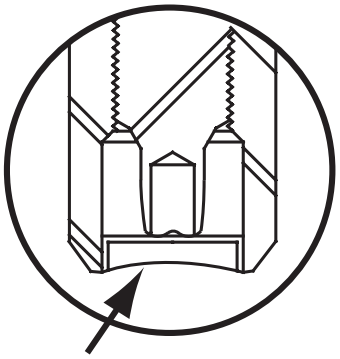
Dresser® time-proven Style 90 Tap-N-Valve Tees can be used for effective pressure relief when installing Dresser Styles 110, 115 and 220 reinforcing sleeves. As an option, the Style 90 tee is simply welded to the reinforcing sleeve, then tapped through the sleeve body to depressurize the sleeve while repair is being made.

As illustrated in View I, the tee is supplied with a splatter cap to prevent splatter from entering the internal threads of the tapping device. Field contouring of the tee weld inlet in also recommended to reduce the potential for field weld "burn through" and internal weld splatter. Leave weld splatter cap in place to prevent slag from entering threads.

To make the tap, the hollow cutting end of the tapping tool is inserted in the top of the tee and the threads engaged. A hex bar and 14" ratchet wrench are then used to rotate the tapping tool in a clockwise direction until the cutting edge touches the sleeve. As tip of tool penetrates through the sleeve wall, the required wrench pull or torque will decrease. Once the tap is complete, the tool is seated and the slug of the sleeve is retained in the tool (View II) . The wrench is then rotated in a counter-clockwise direction until the tool is flush with the top of the tee body.

NOTE: The tapping tool must be removed from inside the tee body while welding the sleeve. Place tool in plastic bag while welding - The tee must be cool before reinserting the tapping tool. The tee cap is then tightened onto the tee body and the tap is complete. Pressure relief is then realized through the tee branch during the welding procedure. (View III).

NOTE: Field contouring of the tee weld inlet to the pipe radius is suggested to improve weld prep and helps to reduce weld burn through and internal weld splatter.



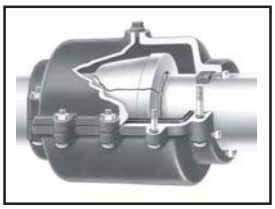
⚠ WARNING

On Weld Inlet Tees, remove tapping tool and all compression end components before welding. Failure to do so could damage the tapping tool and destroy the gasket, resulting in escaping gas that could ignite and cause property damage, serious injury or death.

Style 126 Bell-Pack® Sleeves

For repair of broken cast iron bell & spigot joints

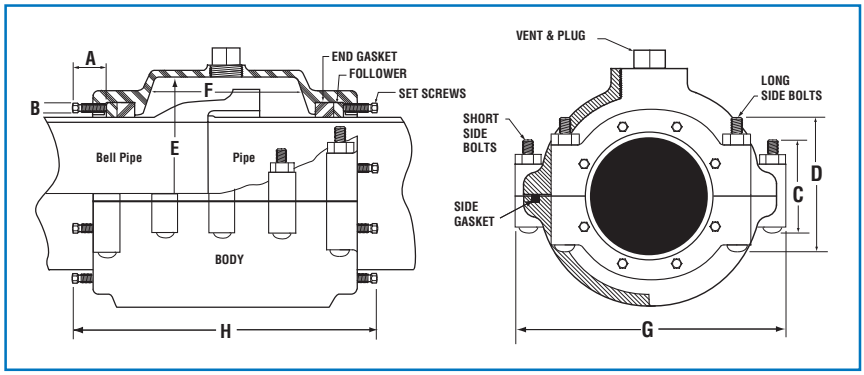
Pipeline maintenance personnel avoid pipeline shutdowns and expensive, temporary makeshift repairs by installing the **Dresser® Style 126 Repair Sleeve** for a fast, economical and permanent repair. A sleeve of lighter weight and compact design, the Style 126 provides maximum inside dimension clearance for repairing split cast iron bells and leaking mechanical joints.



Built to rigid Dresser specifications, Style 126 repair sleeves provide the time-proven features of the Dresser rubber-packed gasket sealing design. Side bolts, which are fully enclosed within the sleeve body to prevent corrosion, are tighten to compress side gaskets providing a complete, permanent leakproof seal.

Materials of Construction

Body: Cast or malleable iron
Vent Plug: Forged steel to ASTM A105 or Cast to ASTM A126-42 Class A
Followers: Cold-formed carbon steel
Bolts: Alloy to AWWA C111/ANSI A21.11
Gaskets: Grade 29
Set Screws: Carbon steel, cadium plated
Coating: Dresser shopcoat standard; Fusion-bonded epoxy optional



Style 126

Specifications for Sizes 3" thru 24" (100 PSI)

PIPE Nominal Size (CIP)	Outside Diamater (OD)	End Screws [1] Number Diam. x Length A & B	Short Side Bolts Number [2] Diam. x Length C	Long Side Bolts Number Diam. x Length D	Inside Dimensions Diam. (E)	Inside Dimensions Length (F)	Overall Dimensions Diam. (G)	Overall Dimensions Length (H)	Vent [3] Diam.	Max. Press. PSI	Weight Shipping Each (Lbs.)
3	3.800	12—3/8 x 1	6—5/8 x 4	4—5/8 x 5-1/2	8-1/2	12	13	19-1/16	1	100	123
3	3.960	12—3/8 x 1	6—5/8 x 4	4—5/8 x 5-1/2	8-1/2	12	13	19-1/16	1	100	123
4	4.800	12—3/8 x 1	6—5/8 x 4	4—5/8 x 6	10	12	14-1/2	19-1/16	1	100	136
4	5.000	12—3/8 x 1	6—5/8 x 4	4—5/8 x 6	10	12	14-1/2	19-1/16	1	100	136
6	6.900	16—3/8 x 1	6—5/8 x 5	4—5/8 x 7	12-1/2	12	17-1/8	19-1/16	1	100	185
6	7.100	16—3/8 x 1	6—5/8 x 7	4—5/8 x 7	12-1/2	12	17-1/8	19-1/16	1	100	185
8	9.050	20—3/8 x 1-1/4	6—5/8 x 5	4—5/8 x 7-1/2	15-1/2	12-3/8	20-1/4	19-13/16	1	100	265
8	9.300	20—3/8 x 1-1/4	6—5/8 x 5	4—5/8 x 7-1/2	15-1/2	12-3/8	20-1/4	19-13/16	1	100	265
10	11.100	24—7/16 x 2-1/4	12—3/4 x 4	-	16-5/8	13-1/2	22-3/8	18-5/8	1	100	300
10	11.400	24—7/16 x 2-1/4	12—3/4 x 4	-	16-5/8	13-1/2	22-3/8	18-5/8	1	100	300
12	13.200	28—7/16 x 2-1/4	12—7/8 x 4	-	18-3/4	13-1/2	24-1/2	18-5/8	1	100	335
12	13.500	28—7/16 x 2-1/4	12—7/8 x 4	-	18-3/4	13-1/2	24-1/2	18-5/8	1	100	335
16	17.400	32—7/16 x 2-1/4	14—7/8 x 4	-	24	16	30	21-1/8	2	100	554
16	17.800	32—7/16 x 2-1/4	14—7/8 x 4	-	24	16	30	21-1/8	2	100	554
20	21.600	40—7/16 x 2-1/4	14— 1 x 4	-	30	17	36	22-1/8	3	100	770
20	22.060	40—7/16 x 2-1/4	14— 1 x 4	-	30	17	36	22-1/8	3	100	770
24	25.800	48—7/16 x 2-1/4	14— 1 x 4	-	33-7/8	18	39-7/8	23-1/8	3	100	853
24	26.320	48—7/16 x 2-1/4	14— 1 x 4	-	33-7/8	18	39-7/8	23-1/8	3	100	853

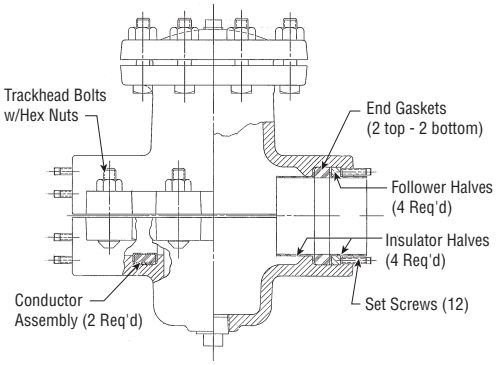
1- End Scews are cadium-plated high-grade steel, and have square heads, 3/8" across flats.
2- Side Bolts are cadium-plated high-grade steel with track heads and rolled threads through 8" size. Larger sizes are supplied with galvanized machine bolts.
3- Vent supplied with iron pipe threads or corporation threads, if specified.

For hot-tapping existing gas mains for cathodic protection

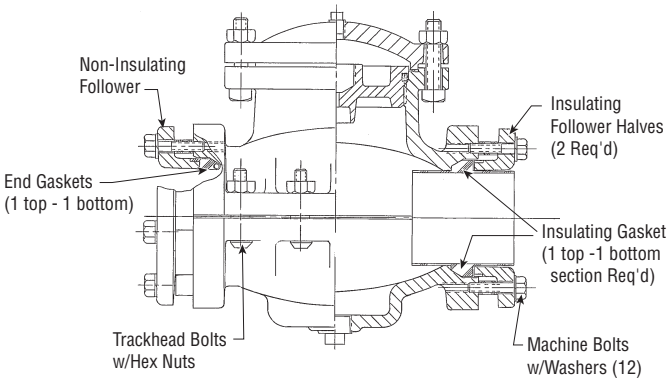
Style 850 Insulating Sleeve

The **Dresser® Style 850 Insulating Sleeve** is extensively used by gas utilities to simplify the application of cathodic protection to existing steel mains. The Style 850 is used with a conventional tapping machine equipped with a shell cutter or a hole saw to completely sever the main inside the sleeve. One end of the 850 is effectively insulated from the main by means of high dielectric insulators, while the other end is conductive, tying the sleeve into the existing section of the main under cathodic protection. A stabilizing rib in the sleeve body accurately centers the 850 on the main and prevents any excessive end-pitch of the pipe after the cutting operation.

- **Eliminates the need for expensive by-pass equipment**
- **No service interruptions (Hot-tapped)**
- **Sleeves come completely factory-assembled for quick installation**
- **A gas-tight, permanent joint!**



3" Style 850



4" Style 850

Style 850 Insulating Sleeve Specifications

Nominal Size* (In.)	Outside Diameter OD (In.)	Overall Length (In.)	Item Code	Approx. Shipping Weight (Lbs.)
2	2.375	11-1/2	0005	38
3	3.500	15-1/2	0002	125
4	4.500	17-1/2	0003	200
6	6.625	20-3/8	0004	325

* All sizes rated to 125 psi

Materials of Construction

Body: Ductile Iron to ANSI/SAE J434, Grade D4512; ASTM A536 Grade 65-45-12

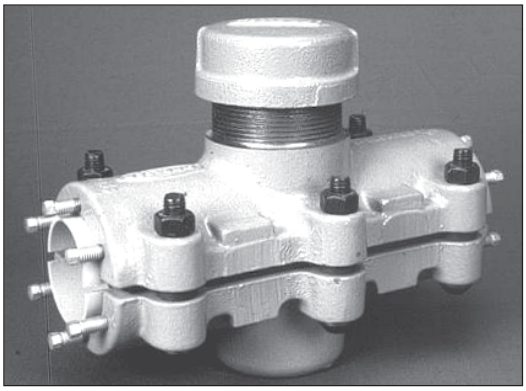
Followers (4") : Carbon Steel, Malleable or Ductile Iron per size specs.

Bolts, Nuts & Set Screws: Carbon Steel

Gasket Seals: To Dresser Specs per application

Insulator: Dielectric Plastic

Conductor: Copper



2" Style 850 Sleeve w/Cap

DRESSER® Life-time Gaskets

Dresser Compounded Rubber Gaskets

Pipe joints must be able to absorb pipe stress caused by natural forces and natural expansion, contraction, vibration and deflection while the line is in service. The sealing capabilities and the extreme flexibility of a Dresser coupled joint is made possible by the resilience of the rubber-compounded gaskets. Resiliency is the property that enables the gaskets to maintain pressure against the followers that confine it and, at the same time, allow for flexibility not found in rigid piping connections. Without it, a flexible joint is not possible!

Simply put, the absorption of pipeline stress permits each section of the pipeline to "float" in the joint ensuring a flexible piping system while avoiding leakage, line breaks, costly repairs and service interruptions.

Buna S (Grade 27) Max. Temp. 212°F*

The compound most generally used for plain gaskets is Buna S (Grade 27). This gasket has wide applications and is accepted as standard for most pipeline use. It is recommended for use on lines transporting both fresh water and salt water, natural and other gases, air, most acids, alkaline and sugar solutions and some refrigerants.

Buna N (Grade 42 - Nitrile) Max. Temp. 150°F*

Buna N (Grade 42) gaskets are resistant to oil, most aromatic and aliphatic hydrocarbons, natural gas fogging oil, condensates and gasolines.

Armored® Gaskets

Armored gaskets can be used to great advantage where low electrical-resistant joints are desired. The armor "bites" into the pipe providing metal to metal contact allowing easy passage of current where cathodic protection is a necessity.

The armor–an elastic, practically indestructible brass coil or helix–is molded into the gasket tip becoming an integral part of the gasket. When used with the proper grade/compound rubber, the armor shields the gasket material from the line content without interfering with the sealing efficiency of the gasket.

Fluorocarbon - Max. Temp. 350°F

Fluorocarbon gaskets are resistant to hydrocarbons, aromatic hydrocarbons, alcohols, organic acids, nitrogen-containing compounds, vegetable oils and greases.

Butyl -Max. Temp. 250°F

Butyl gaskets are resistant to hot air service, steam, hot water and miscellaneous aqueous solutions. They are also suitable for vegetable oils, organic chemicals, oxidizing acids and alkalies.

EPDM - Max. Temp. 300°F

EPDM gaskets provide excellent resistant to aging factors such as ozone, oxygen and elevated temperatures. This includes service in hot water, steam and dry heat. They are also suitable for handling popular chemicals such as ketones, alcohols, phosphate ester hydraulic fluids, glycols, dilute acids and alkalies.

High Temperature - Max. Temp. 1200°F

These braided flexible gaskets are designed specifically for the high temperature and abrasive atmospheres associated with services such as fly ash handling systems. As a replacement for asbestos, these gaskets are manufactured of a pure homogenous graphite bonded to a fiberglass carrier for strength and thermal durability. The braid over braid construction is die-formed and cut to length to fit proper coupling configurations resulting in a uniform tolerance which has proven itself as a reliable asbestos replacement.

Note: The non-resilient characteristic of this particular gasket material may result in a non leak-proof seal. This should be taken into consideration for this application.

WARNING NOTE: Temperature recommendations are for reference purposes only. Please consult Dresser Engineering for specific recommendations, product style, line content, working pressure and temperature ranges.

***For Dresser Styles 65 & 88 Fittings, the maximum temperature is 150°F**

Dresser® Gasket Recommendations for SEVERE Service Conditions

LINE CONTENT	DRESSER GASKET
Acetic Acid (10% concentration)	Plain Gr. 27
Ammonium Chloride	Plain Gr. 27
Ammonium Phosphate (diabasic)	Plain Gr. 27
Ammonium Phosphate (monobasic)	Plain Gr. 27
Barium Chloride	Plain Gr. 27
Barium Hydroxide	Plain Gr. 27
Benzene	Armored Gr. 42
Boric Acid	Plain Gr. 27
Butyl Acetate	Armored Gr. 42
Calcium Bisulfite	Plain Gr. 27
Calcium Chloride	Plain Gr. 27
Carbolic Acid, Phenol	Plain Gr. 27
Carbon Dioxide, Wet	Plain Gr. 27
Carbon Tetrachloride	Plain Gr. 42
Citric Acid	Plain Gr. 27
Copper Cyanide	Plain Gr. 27
Copper Sulfate	Plain Gr. 27
Ethylene Dichloride	Armored Gr. 27
Ethylene Glycol	Plain Gr. 27
Ferric Chloride	Plain Gr. 27
Ferric Sulfate	Plain Gr. 27
Formaldehyde	Plain Gr. 27
Formic Acid	Plain Gr. 27
Gelatin	Plain Gr. 27
Hydrogen Peroxide	Plain Gr. 42
Lacquers	Armored Gr. 42
Magnesium Chloride	Plain Gr. 27
Nickel Sulfate	Plain Gr. 27
Oxalic AcidPlain Gr. 42	
Phosphoric Acid	Plain Gr. 27
Picric Acid	Plain Gr. 42
Potassium Hydroxide	Plain Gr. 42
Potassium Sulfate	Plain Gr. 27
Puric Acid	Plain Gr. 42
Sodium Bicarbonate (baking soda)	Plain Gr. 27
Sodium Metaphosphate	Plain Gr. 27
Sodium Perborate	Plain Gr. 27
Sodium Phosphate (monobasic, dibasic, tribasic)	Plain Gr. 27
Sodium Sulfate	Plain Gr. 27
Sodium Thiosulfate (hypo)	Plain Gr. 27
Soybean Oil	Plain Gr. 42
Stearic Acid	Plain Gr. 42
Styrene	Viton®
Tannic AcidPlain Gr. 27	
Tartaric Acid	Plain Gr. 27
Trichloroethylene	Armored Gr. 42
Vinegar	Plain Gr. 27
Vinyl Chloride	Plain Gr. 27
Zinc Chloride	Plain Gr. 27

Other DRESSER® Products for Gas Piping Systems

Prefabricated Gate Stations

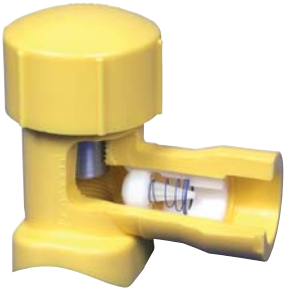
Dresser® utilizes its unique combination of engineering expertise and custom fabrication capabilities to produce truly "cost effective" prefabricated modular meter sets and gas transmission & regulation gate stations. Our prefabricated sets significantly reduce field installation costs by lowering material and labor costs required for field pipe cutting, beveling, welding, threading, coating and testing. Prefabricated gate stations are custom-built to customer specifications and configurations and offer a variety of valving options to suit your particular M&R system requirements.

Excess Flow Valves

The safe, economical choice for safety in the event of a catastrophic line rupture.

When a damaged service line allows natural gas leakage into residential or commercial buildings, both lives and property are at risk. Dresser developed its Excess Flow Device to reduce that risk by restricting gas flow automatically when a service line flow condition exceeds the normal operating flow such as would occur with third party damage.

Each Dresser Excess Flow Device is factory-tested to assure it performs within the designated trip flow and bypass flow range and complies with CFR Title 49 D.O.T. 192.381 and MSS-SP-115 governing standards. Fusion, weld and mechanical configurations are available factory-integrated in a variety of carrier fittings. Manufactured for 10 - 60 psi service applications. Consult factory for other pressure ratings.



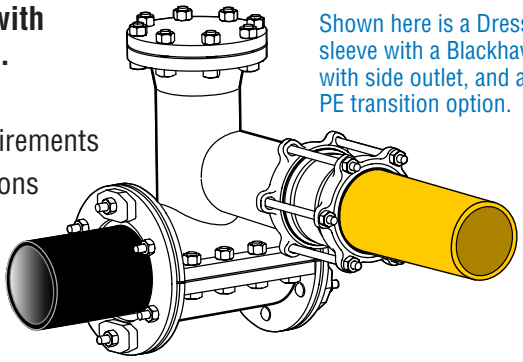
BLACKHAWK Hot Tap and LineStop Fittings

BLACKHAWK™ manufactures hot tapping and line stop fittings and accessories for the natural gas, oil and chemical industries. **LS-2 Pressure Control Fittings** are available for steel piping systems in threaded sizes from 1/4" through 3" and flange fittings from 4" through 12".

Full-encirclement LineStop fittings are available in ANSI 150, 300, 600 and 900 Series from 4" through 48" sizes. Split sleeve fittings are also manufactured with side outlet, spherical configurations and with a plain raised face weld neck flange for hot tapping. LineStop Flanges and Completion Plugs are also available. LS-2 Pressure Control Fittings and LineStop Fittings are compatible with specific tapping and plugging equipment and are designed to carry the extra loads imposed during hot tapping and line stopping operations. All fittings meet DOT 192 Federal Regulation for gas pipelines; and DOT 195 Federal Regulation for liquid pipelines and most international codes.

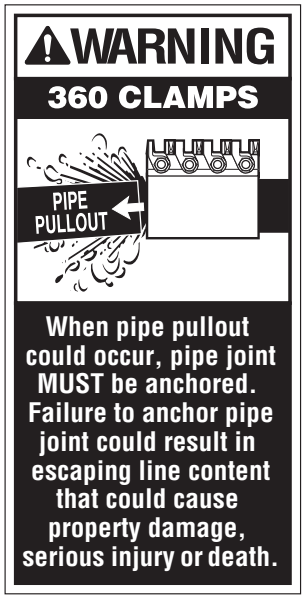
Blackhawk fittings are easily integrated with a variety of Dresser mechanical products.

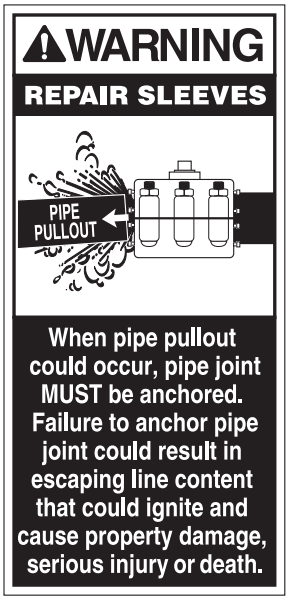
- Pre-engineered configurations
- Custom-fabricated to your specs and requirements
- Ideally suited for cast-iron piping applications
- Eliminates the need for field welding
- Factory-tested, factory-coated

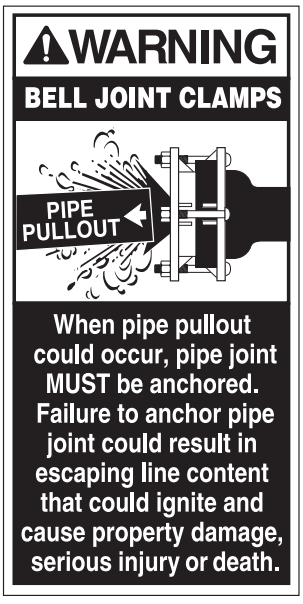


Shown here is a Dresser Style 50 mechanical split sleeve with a Blackhawk 150# LS-2 weld fitting with side outlet, and a Dresser Style 711 coupled PE transition option.

Applicable Warnings







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