Dresser\* Pipeline Solutions
Repair products for natural gas
piping systems





GE Oil & Gas offers natural gas pipeline industry customers an array of high-pressure repair products and solutions, including clamps, sleeves, and gaskets, to effectively tackle the most challenging pipeline application problems. These ruggedly built products, made of high-quality materials, are indispensable parts of a Dresser pipeline solutions portfolio that has been distinguished by industry-leading innovation and performance excellence for more than 120 years.

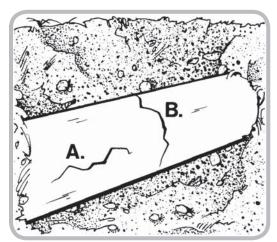
Our gas pipeline repair fittings are used to join and repair pipe, fix pinhole leaks and cracks, and reinforce connections for pipeline integrity.

To make sure you get the right solution to fit your pipeline repair needs, GE fields a peerless network of field sales representatives who consult directly with you about your requirements. They are complemented by inside customer service specialists who understand the features, capabilities, design and installation of each product.

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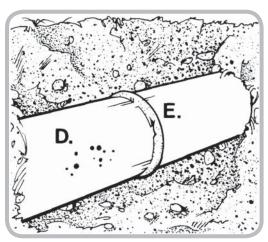
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## Dresser Repair Products for Steel Pipe



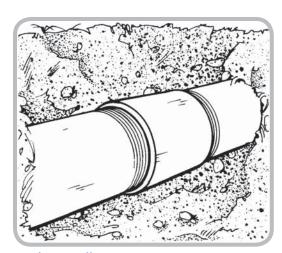
A. Longitudinal Breaks up to 8" or B. Circumferential Breaks

Product	Size	Maximum Pressure
Style 54 Split Sleeve	2" - 4"	500 psi
Style 73 Split Sleeve	2	500 psi
Style 96 Split Sleeve	6" - 24"	500 psi
Style 97 Split Sleeve	3" - 16"	1400 psi
Style 360 Clamp	2" - 12" 14"- 24"	See Chart Page 11



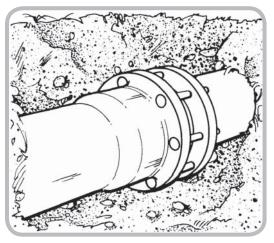
D. Small Pinhole Leaks, Splits and Corrosion Cracks or E. Broken Weld

Product	Size	Maximum Pressure
Style 54 Split Sleeve	2" - 4"	500 psi
Style 73 Split Sleeve	2"	500 psi
Style 77 Band Clamp	1" - 24"	150 psi
Style 118 Handiband Clamp (D only)	1/2" - 4" 6" - 8"	150 psi 100 psi
Style 360 Clamp (D only)	2" - 12" 14"- 24"	See Chart Page 11



### **Leaking Collars**

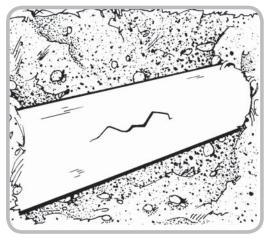
Product	Size	Maximum Pressure
Style 4 Collar Clamp	2" - 4"	1000 psi
Style 41 Collar Clamp	4-1/2" - 12"	1000 psi
Style 54 Split Sleeve	2" - 4"	500 psi
Style 73 Split Sleeve	2"	500 psi
Style 96 Split Sleeve	6" - 24"	500 psi



### **Leaking Coupled Joints**

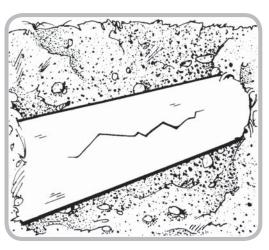
Product	Size	Maximum Pressure
Style 54 Split Sleeve	2" - 4"	500 psi
Style 96 Split Sleeve	6" - 24"	500 psi
Style 220 Sleeve	2" - 26"	400 - 1600 psi See chart page 21

# Dresser Repair Products for Cast Iron Pipe



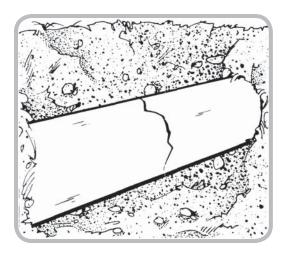
### Longitudinal Breaks up to 8"

Product	Size	Maximum Pressure
Style 50 Split Sleeve	4" and above	100 psi
Style 80 Split Sleeve	4' - 8"	150 psi
Style 360 Clamp	3" - 8" 10"- 24"	See Chart Page 11



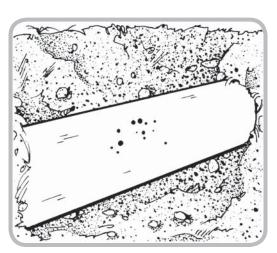
### Longitudinal Breaks from 8" - 16"

Product	Size	Maximum Pressure
Style 50 Special	4" and above	100 psi
Style 360 Clamp	3" - 8" 10"- 24"	See Chart Page 11



### **Circumferential Breaks**

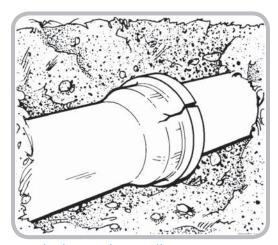
Product	Size	Maximum Pressure
Style 50 Split Sleeve	4" and above	100 psi
Style 80 Split Sleeve	4' - 8"	150 psi
Style 360 Clamp	3" - 8" 10"- 24"	See Chart Page 11



### **Small Pinhole or Corrosion Leaks**

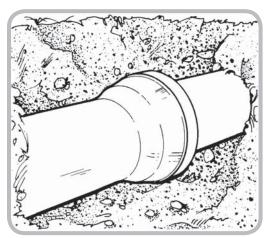
Product	Size	Maximum Pressure
Style 50 Split Sleeve	4" and above	100 psi
Style 80 Split Sleeve	4' - 8"	150 psi
Style 360 Clamp	3" - 8" 10"- 24"	See Chart Page 11

## Dresser Repair Products for Cast Iron Pipe



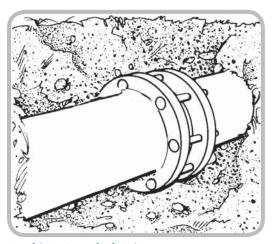
### **Cracked or Leaking Bell**

or defice or leading lead		
Product	Size	Maximum Pressure
<b>Leaking Bell:</b> Style 60 Bell Clamp	3" - 24"	100 psi
Style 160 Bell Clamp	4" - 8 " 12" & 16"	100 psi
Cracked Bell: Style 126 Split Sleeve	3" - 24"	100 psi



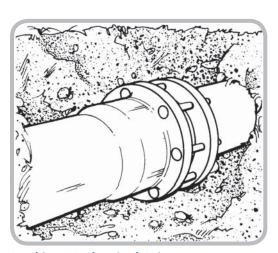
### **Leaking Inner-Tite Joint**

Product	Size	Maximum Pressure
Style 126 Split Sleeve	8", 20", 24"	100 psi
Style 126 Special	3'- 24"	100 psi



### **Leaking Coupled Joints**

Product	Size	Maximum Pressure
Style 126 Split Sleeve	3" - 24"	100 nsi

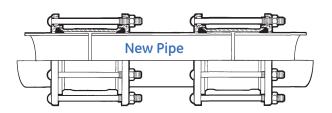


### **Leaking Mechanical Joints**

Product	Size	Maximum Pressure
Style 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.



## Style 4 and 41 Collar Clamps

#### Stops all leaks through screw collars

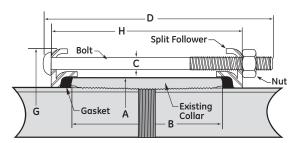
Dresser Style 4 and 41 clamps quickly and inexpensively stop leaks through the threads of screw collars (threaded couplings), solvent weld couplings (collars) and stab-type PVC joints. Repairs are permanent and normally made without interrupting service or dismantling the line.

**Style 4** clamps consist 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** clamps consist of the same parts except the split follower rings are steel and are connected by steel lock links.

Material of Construction			
Followers	Style 4 Malleable, Style 41 Steel		
Bolts & Nuts	Alloy to AWWA C111/ANSI A21.11		
Gasket	Grade 27 BUNA S		





Style 4 (Malleable) - Size specifications for 2" - 4"

		Collar Din	nensions	Bolts Num-	Clamp Dir	mensions	Gasket	Approximate
Nominal Size Steel (D)	Outside Diameter (OD)	Overall Dimensions (A)	Overall Length (B)	ber Diameter & Length (C and D)	Overall Diameter (G)	Overall Length (H)	Section Dimensions (E&F)	Shipping Weight Ea. (lbs)
2	2.375	2.841	3.625	4-5/8 x 6-1/2	6-5/16	7	9/32 x 5/8	8
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	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) - Size specifications for 6" I.D. - 12" I.D.

Nominal	Outside	Collar Dim	ensions	Bolts Number	Clamp Dir	nensions	Gasket	Approximate
Size Steel (D)	Diameter (OD)	Overall Dimensions (A)	Overall Length (B)	Diameter & Length (C & D)	Overall Diameter (G)	Overall Length (H)	Section Dimensions (E&F)	Shipping Weight Ea. (lbs)
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
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
10	10.750	11.958	6.625	8 - 5/8 x 10.0	15-3/8	11	5/8 x 23/32	44
12	12.750	13.958	6.625	8 - 5/8 x 10.0	17-3/8	11	5/8 x 23/32	50

## Style 60 and 160 Bell Joint Clamps

#### For repair of cast iron bell and spigot joints



Material 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 BUNA S		

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).

#### Style 60 Clamp

The spigot ring of the Style 60 clamp 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



#### Style 160 Clamp

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 and 160 - Size specifications for 3" - 16"

Nominal Size (CIP)	Gasket Thickness x Length	Bolts Number Diam. x Length	Weight App. Ship. Ea. (lbs)
3	1-1/8 × 1	4 – 5/8 x 5	13
$4^{1}$	1-1/8 x 1	4 – 5/8 x 5	15
6 <sup>1</sup>	1-1/8 x 1	6 - 5/8x 5-1/2	21
81	1-1/8 x 1	6 - 5/8 x 5-1/2	24
10	1-1/8 x 1	8 - 5/8 x 5-1/2	35
12 <sup>1</sup>	1-1/8 x 1	9 - 5/8 x 5-1/2	38
14	1-1/8 x 1	9 – 5/8 x 6	46
$16^{1}$	1-1/8 x 1	9 – 5/8 x 6	50

Dimensions are inches unless otherwise noted.

¹NOTE: Style 160 Clamps may be furnished in these sizes.

Style 60 and 160 - Size specifications for 18" - 48"

Nominal Size (CIP)	Gasket Thickness x Length	Bolts Number Diam. x Length	Weight App. Ship. Ea. (lbs)
18	1-1/8 x 1	12 - 5/8 x 6-1/2	73
20	1-1/8 x 1	12 - 5/8 x 6-1/2	74
24	1-1/8 x 1	12 - 5/8 x 7	86
30	1-1/8 x 1	16 - 5/8 x 7	113
36	1-1/8 x 1	20 - 5/8 x 7	148
42	1-1/8 x 1	24 - 5/8 x 7-1/2	199
48	1-1/8 x 1	24 - 5/8 x 7-1/2	227

## Style 77 Band Clamps

#### For repair of pinhole leaks





Dresser Style 77 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 77 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 77 repair clamp with three different size cone gaskets available (see chart).

Cone Gasket Style 77B			
Gasket Number	Gasket Size		
216	1-5/8"		
217	2"		
218	2-1/2"		

Style 77 - Size specifications 2" - 24"

Pipe (Steel) Nominal Size (ID)	Outside Diameter (OD)	Band Thickness & Width	Bolt Diameter & Length	Approximate Ship Weight 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	14.000	1/8 x 3	5/8 x 8-1/4	6.2
16	16.000	1/8 x 3	5/8 x 8-1/4	6.9
18	18.000	1/8 x 3	5/8 x 8-1/4	7.5
20	20.000	1/8 x 3	5/8 x 8-1/4	8.2
24	24.000	1/8 x 3	5/8 x 8-1/4	9.6

	Material of Construction
Band/Lugs	AISI C1008/1010 Carbon Steel
Bolt & Nut	SAE Grade 5 Carbon Steel
Gasket (77)	100% Pure Gum Rubber; 1/4" Min. Thickness, 40 Durometer

## Style 118 Handiband Clamps

### For quick, permanent repair of small holes in steel pipe

The Dresser Style 118 handiband 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 Style 118 clamp is made of stainless steel for corrosion resistance. The rubber compounded 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.

Material of Construction			
Band	Stainless Steel 18-8, Type 304		
Lugs	Ductile Iron ASTM 536		
Bolts & Nuts	Alloy to ANSI A21.11		
Gaskets	Gridded to GE Specs		





Ratings					
Pressure Ratings					
1/2" - 4"	150 psi				
5"- 8"	100 psi				

Style 118 Handiband - Size specifications for 1/2" - 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

Dimensions are inches unless otherwise noted.

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

### Style 360\* Repair Clamps

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



N	Material 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 Specs										

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 Style 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 Style 360 clamp has a stainless band, lugs of rugged ductile iron and bolts of corrosion-resistant Dresserloy.

- 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 singleband clamp

### Style 360 Clamps - Size specifications

Range to Fit (OD)	Clamp Widths	Max. psi	Range to Fit (OD)	Clamp Widths	Max. psi
2.35 - 2.63 2.70 - 3.00 2.97 - 3.25	7-1/2, 12-1/2 0.024" Thick Band	125	11.04 - 11.44 11.34 - 11.74 11.75 - 12.15	7-1/2, 12-1/2	95 85 85
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, 12-1/2, 20 0.024" Thick Band	125	12.00 -12.40 12.62 - 13.02 13.10 - 13.50 13.40 - 13.80 13.70 - 14.10 14.00 - 14.40	20, 30 0.036" Thick Band	85 75 75 65 65
5.22 - 5.62 5.95 - 6.35 6.56 - 6.96 6.84 - 7.24 7.05 - 7.45 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, 12-1/2, 20, 30 0.024" Thick Band	125 125 125 125 125 125 125 125 125 115 11	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	20, 30 0.048" Thick Multi-Band	105 100 90 85 80 75 70 65 60 55 50 45

Dimensions are inches unless otherwise noted.

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 Sleeves

#### Dual purpose sleeve for emergency repair or hot tapping CIP

The Dresser Style 50 split repair sleeve is one of the more versatile products in the Dresser Pipeline Solutions 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.



- 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



#### **Material of Construction**

#### **Consult Factory per Application**

- 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

Nominal Size <sup>1</sup> (CIP)	Outside Diameter (OD)	Length between End Gaskets	Maximum Branch Size	Maximum Operating Pressure <sup>2</sup> (psi)
6	6.90	10-1/2	6 IPS	100
8	9.05	12	8 IPS	100
10	11.10	17-1/4	10 IPS	100
12	13.20	17-1/4	12 IPS	100
16	17.40	21-3/4	16 IPS	100
20	21.60	24	20 IPS	100
24	25.80	29	24 IPS	100

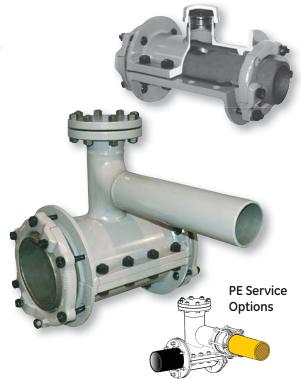
Dimensions are inches unless othewise noted.

#### Style 50 with Branch Outlet - Size specifications for 6" - 24

Nominal Size <sup>1</sup> (CIP)	Outside Diameter (OD)	Length between End Gaskets (in)	Maximum Operating Pressure² (psi)
6	6.90	10-1/2	100
8	9.05	12	100
10	11.10	17-1/4	100
12	13.20	17-1/4	100
16	17.40	21-3/4	100
20	21.60	24	100
24	25.80	29	100

Dimensions are inches unless othewise noted.

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



#### **Dresser Intervention Technologies Hot Taps**

The Dresser Style 50 Sleeve is easily integrated with Intervention Technologies 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.

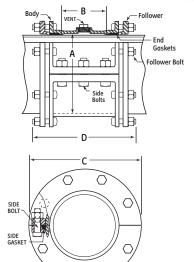
<sup>&</sup>lt;sup>1</sup>Dresser Style 50 sleeves may be furnished in sizes up to 48"or larger.

<sup>&</sup>lt;sup>2</sup>Other pressures available on request

### Style 54 and 73 Cast Split Sleeves

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





Dresser Style 54 cast split sleeves are designed to completely enclose and repair defective screw collars, plain or butt bell and 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 73 cast repair sleeves are similar in construction and provide a fast, permanent repair on steel lines where moderate pressures are involved.

**Material of Construction** 

**Consult Factory per Application** 

Style 54 Sleeves - Size specifications for Steel Pipe (500 psi)

Nominal Size Steel	Outside Diameter (OD)	End Bolts No./ Diameter x Length	Side Bolts No/ Diameter. x Length		imension er Length	Diamet	Dimension er Length H)	Vent Size (IPS)	Weight Approximate Ea. (lbs)	
(D)	(00)			(A)	(B)	(C)	(D)		Lu. (IDS)	
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 Sleeves - Size specifications for Steel Pipe (500 psi)

	Nominal Size Steel	Outside Diameter	End Bolts No./ Diameter x Length	Side Bolts No/ Diameter. x Length	Inside Dimension Diameter Length		Overall Dimension Diameter Length (H)		Vent Size (IPS)	Approximate	
(D)	(OD)	(00)		(A)	(B)	(C)	(D)		Ea. (lbs)		
	2	2,375	8 - 6/16 x 3-1/2	6 - 5/8 x 2-1/2	3-15/16	7	8 -1/2	16-1/2	1	47	

## Style 80 Split "Ready-Pack" Sleeves

#### For repairs on cast iron pipe

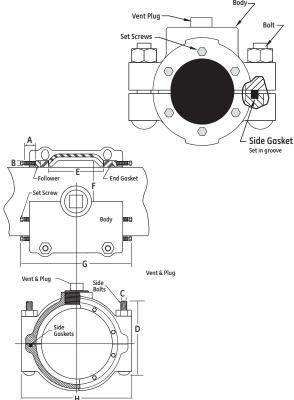
Dresser Style 80 split "ready-pack" sleeves are used to enclose and permanently repair breaks, splits and holes in cast iron pipe. Style 80 sleeves can also be used as an efficient, low-cost tapping sleeve for branch service connections.

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.

Material of Construction									
<b>Body</b> 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, cadmium plated								





Style 80 Sleeve - Size specifications for Steel Pipe (500 psi)

Pipe Nominal Size	Range of Fit Outside	End Screws Number Dia.	Side Bolts Number Dia. x	End Gasket Section	Side Gasket Section	Inside Dimension Diameter Length		Overall Dimension Diameter Length		Vent <sup>1</sup> Dia.	Weight Shipping
Steel (CIP)	Diameter (OD)	x Length A & B	Length C & D	Dimension	Dimensions	(E)	(F)	(G)	(H)	Dia.	Ea. (lbs)
3	3.750 - 4.000	12-3/8 x 1	4-5/8 x 5-1/2	5/8 - 3/4	5/16 x 1/2	4	5-5/32	9-3/8	7-15/16	3/4-2-1/2	40
42	4.740 - 4.990	12-3/8 x 1	4-5/8 x 5-1/2	5/8 - 3/4	5/16 x 1/2	4	6-5/32	9-3/8	8-15/16	3/4-3	45
6 <sup>2</sup>	6.840 - 7.090	16-3/8 x 1	4-5/8 x 6-1/2	5/8 - 3/4	5/16 x 1/2	4	8-1/4	9-5/16	11-1/16	3/4-3	60
8	8.990 - 9.240	20-3/8 x 1	2-5/8 x 5-1/2	5/8 - 3/16	5/16 x 1/2	7	10-13/32	12-1/2	14-3/8	3/4-3	100

<sup>&</sup>lt;sup>1</sup> 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.

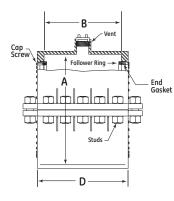
<sup>&</sup>lt;sup>2</sup> Also available in long pattern design with vent size up to 4". Consult factory for specification details. Style 80 long body sleeves have six side bolts.

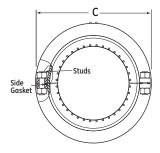
## Style 96 Split Repair Sleeves

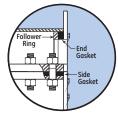
### Expanded body split sleeve for repairs on steel pipe

Dresser Style 96 split repair sleeves 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 and come completely factory-assembled for quick installation.









#### Ratings

**Pressure Ratings** ANSI 150 to 500 psi

ANSI 300 to 1000 psi ANSI 600 to 1500 psi

Temperature Ratings -20° F to +150° F for all sizes

Material 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 cadmium-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							

#### Style 96 Sleeves - Dimension specifications for sizes 6"- 30"

Pip	e (Seal)		ANSI 150	to 500 psi	i		ANSI 300 t	to 1000 ps	si		ANSI 600 to 1500 p			
Nom.	Outside	Inside	Dim.	Overa	Overall Dim.		e Dim.	Overd	III Dim.	Inside Dim.		Overa	III Dim.	Vent
Size (IN)	Diam. (OD)	(A)	(B)	(C)	(D)	(A)	(B)	(C)	(D)	(A)	(B)	(C)	(D)	Diameter
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	10-7/8	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	14-5/8	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	16-3/4	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	18-3/4	16	29-1/2	28	20	18	32	31-1/2	3
16	16	20	14-1/4	27-1/2	20-3/4	20	18	32	29-1/2	22	18	34	31-1/2	4
18	18	20	14-1/4	29-1/2	20-3/4	22	20-1/4	35-3/8	34	24	18	36	31-1/2	4
20	20	26	14-1/4	32-1/4	20-3/4	24	15-1/4	35	27	26	18	38	31-1/2	4
22	22	28	14-1/4	34-1/4	20-3/4	26	16-1/2	40-3/8	32	28	18	38	31-1/2	4
24	24	30	16	36-1/8	22-1/2	28	16-1/2	42	32	29-5/8	18	42	35	4
26	26	32	17-1/4	38-1/2	21-3/4	29-5/8	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

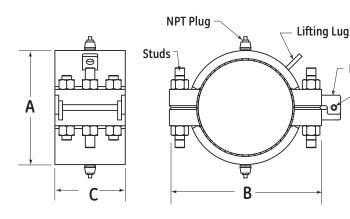


The Dresser Style 97 split repair sleeve is designed for fast, simple repair of pit holes, cracks or splits in high pressure steel pipelines up to 48" in diameter. Costing less than heavier sleeves now on the market, the Style 97 is also weldable offering your choice of a temporary or permanent repair. 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 sleeves are factory-tested to 1.5 times rated pressure.

Hinge

**Hinge Pin** 



	Ratings
Pressure Ratings Size 3" - 16"	Up to ANSI 600 to 1480 psi
Temperature Ratings	-20° F to +120° F

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

Style 97 Sleeves - Dimension specifications for sizes 3"- 16"

Nominal Size	Overall Diameter (A)	Overall Width (B)	NPT Plugs	Overall Length (C)	Seal Length	Approximate 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

Dimensions are inches unless otherwise noted.

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

Material of Construction					
Body	Carbon Steel to ASTM A515/516; Cast to ASTM A216				
Studs	Carbon Steel to ASTM A193				
Hex Nuts	Carbon Steel to ASTM A194				
Seal Retainer	Stainless Steel				
Seals	To GE specifications. Durometer Hardness: 70; Tensile Strength: 1000 psi minimum				
Hinge Bracket	AISI 1010 Steel				
Hinge Pin	AISI 1018 Steel				
NPT Plugs	Carbon Steel				

## Style 110 Reinforcing Sleeves

#### Split reinforcing sleeve for repair of welded joints

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 GE specifications, Style 110 sleeves have 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.



#### **Material of Construction**

Body

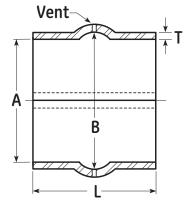
High strength, low carbon steel meeting ASTM A572 GR 50/ASTM A588

Style 110 Sleeves\* - Dimension specifications for nominal sizes 4"- 30" from 6" - 24"lengths (with vent)

-			1131011 3		,					cits (witch	
Nominal Size	Inside Diameter "A" & Pipe (OD) (in)	Diameter "B"	Length "L"	Thickness "T"	Approx. Ship Wt. (lbs)	Nominal Size	Inside Diameter "A" & Pipe (OD) (in)	Diameter "B"	Length "L"	Thickness "T"	Approx Ship Wt (Ibs)
4	4-1/2	5-3/8	4	5/16	5-1/2				9	1/2	86
6	6-5/8	7-1/2	6	3/8	16-1/2	20	20	21-1/2	12	1/2	112
8	8-5/8	9-1/2	6	3/8	19				21	1/2 3/8	186
8	5/8	9-1/2	8	3/8	27				6 9	3/8 3/8	47 70
8	8-5/8	9-1/2	6	1/2	26				12	3/8	92
8	8-5/8	9-1/2	8	1/2	35	22	22	23-1/3	22	3/8	166
10	10-3/4	11-5/8	6	3/8	23	22	22	25-1/5	6	1/2	64
10 10	10-3/4 10-3/4	11-5/8	10	3/8 1/2	38 31				9	1/2	94
10	10-3/4	11-5/8 11-5/8	6 10	1/2	50				12 22	1/2 1/2	123 230
12	12-3/4	14-1/4	6 9 12 6 9	3/8 3/8 3/8 1/2 1/2 1/2	27 40-1/2 456 36 55 74	24	24	25-1/2	6 9 12 16 24	3/8 3/8 3/8 3/8 3/8 1/2	51 76 100 133 198 69
14	14	15-1/2	6 9 14 6 9 14	3/8 3/8 3/8 1/2 1/2 1/2	30 45 70 40 60 94	26	26	27-1/2	9 12 16 24	1/2 1/2 1/2 1/2 1/2 3/8	101 133 177 265 56
16	16	17-1/2	6 19 12 16 6 9 12	3/8 3/8 3/8 3/8 1/2 1/2 1/2	35 52 68 90 46 70 90 120				9 12 16 26 6 9 12 16 26	3/8 3/8 3/8 3/8 1/2 1/2 1/2 1/2 1/2	82 109 143 232 75 110 144 190 310
18	18	19-1/2	6 9 12 18 6 9 12	3/8 3/8 3/8 3/8 1/2 1/2 1/2	39 58 77 114 51 78 101 152	30	30	31-1/2	6 9 12 16 30 6 9	3/8 3/8 3/8 3/8 3/8 1/2 1/2	64 95 125 164 310 85 127 166
20	20	21-1/2	6 9 12 20 6	3/8 3/8 3/8 3/8 1/2	43 64 84 139 58		s are inches Jer diameters		16 30 wise noted	1/2 1/2	220 410

## Style 110 Reinforcing Sleeves

Ratings				
Yield Strength	50,000 psi minimum			
Temperature Ratings	-20° F to +150°			



#### Style 110 Sleeves - (Maximum Operating Pressures)

Pipe Size (OD) x Wall Thickness	Class 1	Class 2	Class 3	Class 4
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	2704 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

Dimensions are inches unless otherwise noted.

NOTE: Style 110 sleeve 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.

## Style 115 Reinforcing Sleeves

Where special precautions are needed, you can be "doublesure" 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.



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

## Style 220 Reinforcing Sleeves

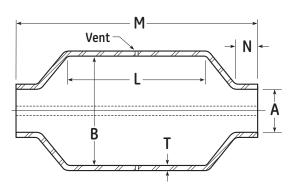
#### For permanent reinforcement of coupled joints

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 sleeve 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 GE specifications, Style 220 sleeves have a minimum yield strength of 50,000 psi and an ultimate strength of 70,000 psi. Style 120 sleeves are supplied in all sizes, lengths and thicknesses as shown in charts. Larger sizes and lengths available upon request.





Style 220 Sleeve - Dimension specifications for sizes 2"- 26"

Nominal Size	Inside Diameter "A" & Pipe (OD) (in)	Inside Diameter "B"	Inside Length "L"	Outlet Dim "N"	Overall Length "M"	Thick- ness "T"	Approx. Ship 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

Dimensions are inches unless otherwise noted.

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

#### **Material of Construction**

Body

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

<sup>\*\* 2&</sup>quot; and 3" sizes have minimum yield strength of 35,000 psi.

## Style 220 Reinforcing Sleeves

Style 220 Sleeves - (Maximum Operating Pressures)

Style 220 Sieeves - (Muxii	num Oper	dung Pre	essuresi	
Pipe Size (OD) x Wall Thickness	Class 1	Class 2	Class 3	Class 4
2-3/8 x 5/16 Wall	1200 G	1000 G	825 G	650 G
3-1/2 x 5/16 Wall	1000 G	875 G	725 G	575 G
4-1/2 x 5/16 Wall	1615 G	1345 G	1120 G	895 G
6-5/8 x 3/8 Wall	1610 G	1345 G	1120 G	895 G
8-5/8 x 3/8 Wall	1400 G	1170 G	975 G	780 G
10-3/4 x 1/4 Wall	830 G	695 G	580 G	460 G
10-3/4 x 3/8 Wall	1230 G	1025 G	855 G	685 G
10-3/4 x 1/2 Wall	1620 G	1350 G	1125 G	900 G
12-3/4x 3/8" Wall	1105 G	920 G	765 G	615 G
12-3/4 x 1/2 Wall	1455 G	1215 G	1010 G	810 G
14 x 3/8 Wall	1040 G	865 G	720 G	575 G
14 x 1/2 Wall	1370 G	1140 G	950 G	760 G
16 x 3/8 Wall	945 G	790 G	655 G	525 G
16 x 1/2" Wall	1250 G	1040 G	870 G	695 G
18" x 3/8 Wall	870 G	725 G	605 G	480 G
18 x 1/2 Wall	1150 G	960 G	800 G	640 G
20 x 3/8 Wall	805 G	670 G	560 G	445 G
20 x 1/2 Wall	1065 G	885 G	740 G	590 G
22 x 3/8 Wall	750 G	625 G	520 G	415 G
22 x 1/2 Wall	990 G	825 G	690 G	550 G
24 x 3/8 Wall	700 G	585 G	485 G	390 G
24 x 1/2 Wall	925 G	770 G	645 G	515 G
26 x 3/8 Wall	655 G	545 G	455 G	365 G
26 x 1/2 Wall	870 G	725 G	605 G	480 G

Ratings				
Yield Strength	50,000 psi minimum			
Temperature Ratings	-20° F to +150°			

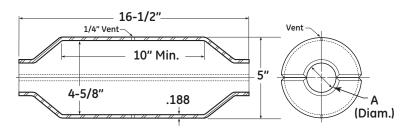
All dimensions are inches unless otherwise noted.

## Style 220-S Reinforcing Sleeves

#### For smaller diameter repair from 3/4" to 2" I.D.

The Dresser Style 220-S reinforcing sleeve 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 GE 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 (OD)	Nominal 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"

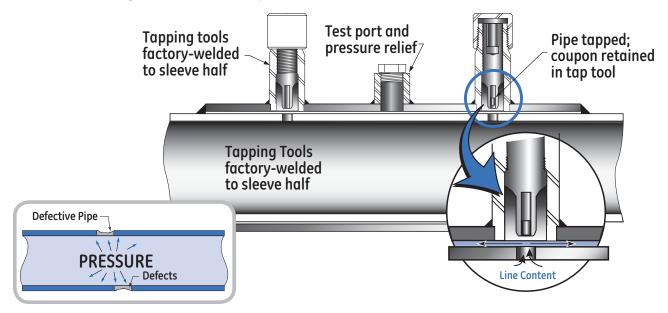
### Pressure Balanced Repair (PBR) Sleeves

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 GE 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.

Material of Construction				
PBR Material Specification	High strength, low carbon steel meeting ASTM A572 GR 50/ASTM A588			
Nominal Thickness	3/8" to1/2" per application			

## Style 126 Bell-Pack\* Repair Sleeves

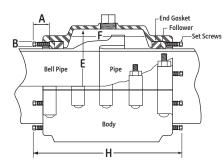
#### For repair of broken cast iron bell and spigot joints

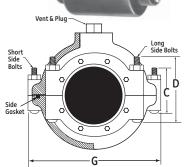
Pipeline maintenance personnel avoid pipeline shutdowns and expensive, temporary makeshift repairs by installing the Dresser Style 126 Bell-Pack repair sleeve for a fast, economical and permanent repair. A sleeve of lighter weight and compact design, the Style 126 provides maximum inside dimension clearance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

Built to rigid GE specifications, Style 126 repair sleeves provide the time-proven features of the GE rubber-packed gasket sealing design. Side bolts enclosed within the sleeve body, are then tightened to compress side gaskets providing









Material 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, cadmium plated				
Coating	Dresser shopcoat standard; Fusion bonded epoxy optional				

Style 126 Sleeve - Specifications for sizes 3"- 24" (100 psi)

Nom- inal	Outside Diam.	End Screws <sup>1</sup> Number	Short Side Bolts Number <sup>2</sup>	Long Side Bolts Number	Inside Dimension Diameter Length		Overall Dimension Diameter Length		Vent³ Dia.	Max. Pres-	Weight Approx.
Size (CIP)	(OD)	Dia. x Length (A) & (B)	Dia. x Length (C)	Dia. x Length (D)	(E)	(F)	(G)	(H)	(in)	sure (psi)	Ea. (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	19-3/16	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	19-3/16	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

<sup>&</sup>lt;sup>1</sup> End Screws are cadmium-plated high-grade steel, and have square heads, 3/8" across flats.

<sup>&</sup>lt;sup>2</sup> Side Bolts are cadmium-plated high-grade steel with track heads and rolled threads through 8" size. Larger sizes are supplied with galvanized machine bolts.

<sup>&</sup>lt;sup>3</sup> Vent supplied with iron pipe threads or corporation threads, if specified.

### Style 850 Insulating Sleeves

#### For hot tapping existing gas mains for cathodic protection

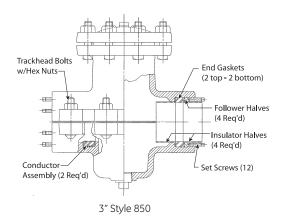
The Dresser Style 850 insulating sleeve is extensively used by gas utilities to simplify the application of cathodic protection to existing steel mains. The Style 850 sleeve is used with a conventional tapping machine equipped with a shell cutter or a hole saw to completely sever the main inside the sleeve. One end of the Style 850 sleeve 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 Style 850 sleeve on the main and prevents any excessive end-pitch of the pipe after the cutting operation.

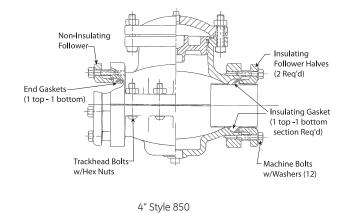
- Eliminates the need for expensive by-pass equipment
- No service interruptions (Hot-tapped)
- Sleeves come completely factory-assembled for quick installation
- A gas-tight, permanent joint





2" Style 850 Sleeve with Cap





Style 850 Sleeve - Specifications

Nominal Size <sup>1</sup> (in)	Outside Diameter (OD)	Overall Length	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	

Material 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, cadmium plated			
Coating	Dresser shopcoat standard; Fusion bonded epoxy optional			

 $<sup>^{\</sup>scriptscriptstyle 1}$  All sizes rated to 125 psi

### 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°F1

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. 212°F1

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

#### **Dresser 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.

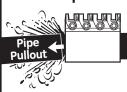
WARNING NOTE: Temperature recommendations are for reference purposes only. Please consult GE Engineering for specific recommendations, product style, line content, working pressure and temperature ranges.

 $^1\,$  For Dresser Styles 65 & 88 Fittings, the maximum temperature is 150°F

## **Applicable Warnings**

## WARNING

360 Clamps



When pipe pullout could occur, pipe joint MUST be anchored. Failure to anchor pipe joint could result in escaping line content that could ignite and cause property damage, serious injury or death.

### **WARNING**

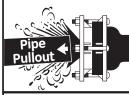
**Repair Sleeves** 



When pipe pullout could occur, pipe joint MUST be anchored. Failure to anchor pipe joint could result in escaping line content that could ignite and cause property damage, serious injury or death.

### **WARNING**

**Bell Joint Clamps** 



When pipe pullout could occur, pipe joint MUST be anchored. Failure to anchor pipe joint could result in escaping line content that could ignite and cause property damage, serious injury or death.



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