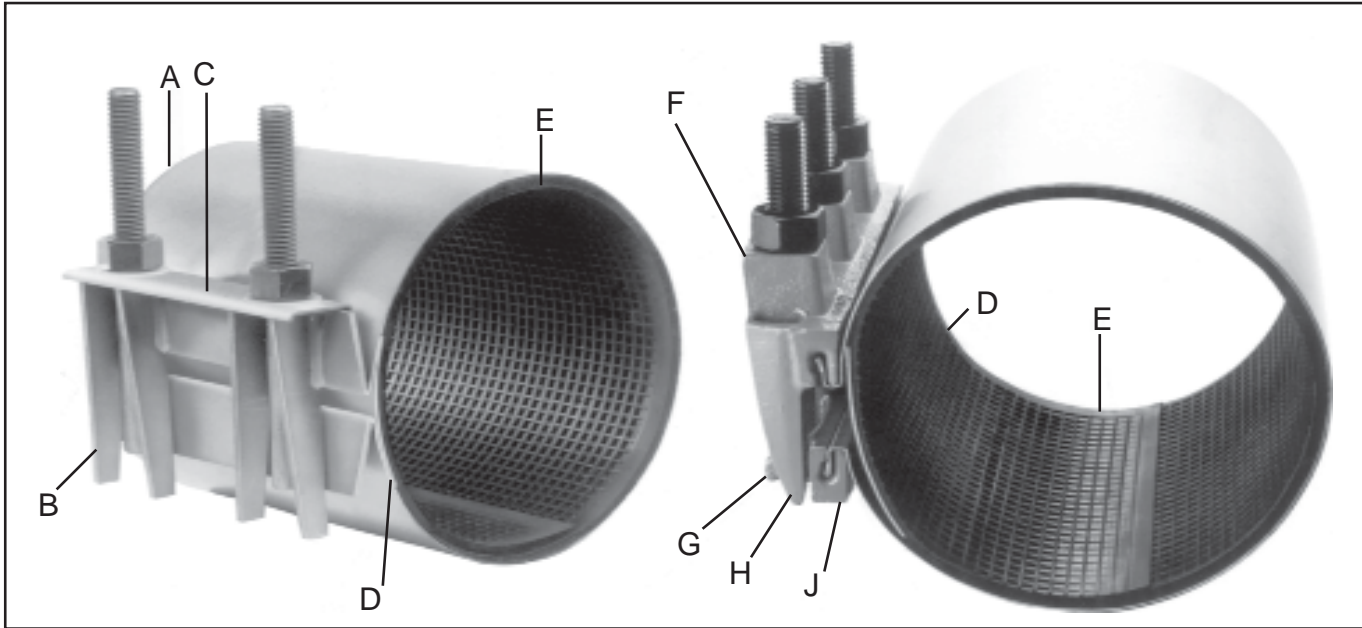


General Information



A Full circumference single or multiple section stainless steel bands are available in 7 1/2", 10", 15", 20" and 30" widths to fit virtually all types and sizes of pipe up to 12" in diameter.

B All weldments including studs, sidebars and fingers are constructed of premium grade stainless steel to minimize the possibility of corrosion.

C Smith-Blair's exclusive "C" shaped keeper bar permits fast run-down of nuts against the clamps weldments while equalizing tension along the full length of the clamp.

D Bridge plate flush mounted and bonded to the gasket assures even distribution of gasket pressure and prevents crimping.

E Gridded, tapered, overlapping gasket design offers

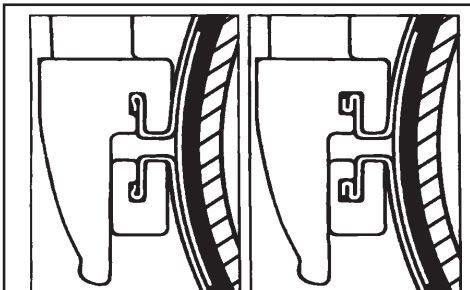
excellent full circumference sealing and full adjustment to rough pipe surfaces.

F A special high-strength ductile iron alloy lug utilizes a strength efficient computer-aided design that's not only stronger, but also lighter and easier to install. Lugs are Flexi-Coat epoxy coated.

G Drop-in, self-securing bolts eliminate loose parts, save time and make installation possible with only one wrench.

H Lugs with mutually supporting sliding fingers to assure proper bolt alignment while tightening. Permits maximum torque without bending of bolts.

J The band locking system uses a unique lug core design and a band hemming process that resists pull-out and provides maximum band retention.



Smith-Blair's design (right) securely attaches the lug to the band.



EXAMPLES:

Electrical Conductivity Buttons

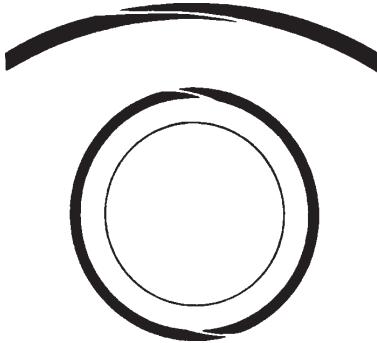
Copper electrical conductor buttons are available for most 200 series Full Circle® Repair Clamps for Gas Service. Factory installed conductor buttons are glued between the gasket and the stainless steel band with contact buttons protruding through specially prepared gaskets to accommodate cathodic protection.

When ordering clamps with factory installed conductor buttons, change the first digit of the last three digits in the catalog number to a 7.

- XXX-XXXXXX-700 Conductor buttons and low alloy bolts.
- XXX-XXXXXX-701-Conductor buttons and stainless steel bolts.
- XXX-XXXXXX-099 Extra nut for anode attachment.
- XXX-XXXXXX-799 Conductor strips and extra nut.

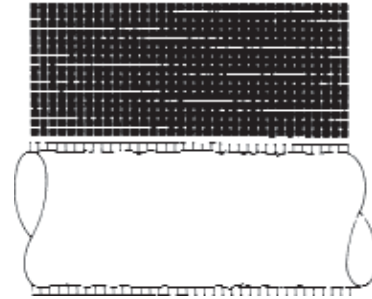
Smith-Blair Repair Clamps seal positively and effectively

Tapered and Lapped Gaskets



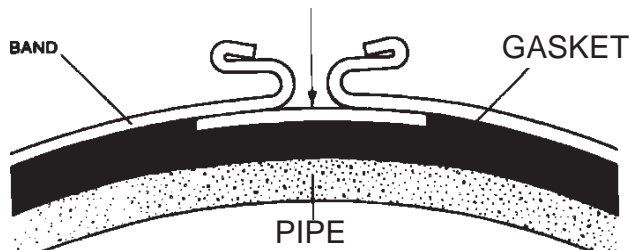
Smith-Blair tapered, lapped gaskets provide a continuous and uniform seal over the full O.D. range of the clamp.

Finely Grided Gasket



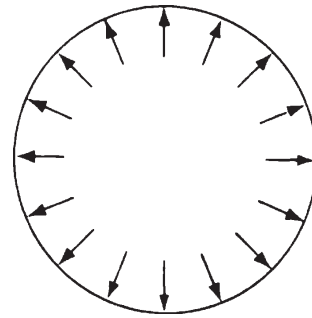
Smith-Blair finely grided gaskets have 16 grids to the square inch; form a series of dams to conform to irregularities on the pipe surface; and seal effectively against rough or pitted surfaces to prevent development of a leak path.

Smith-Blair Recessed Bridge Plate Bonded-In Recessed Bridge Plate



Smith-Blair® bridge plates are precision set, flush mounted and securely bonded into the gasket during the molding operation. This provides a smooth gasket surface, which insures a 100% encirclement of uniform gasket pressure. A dependable method of sealing.

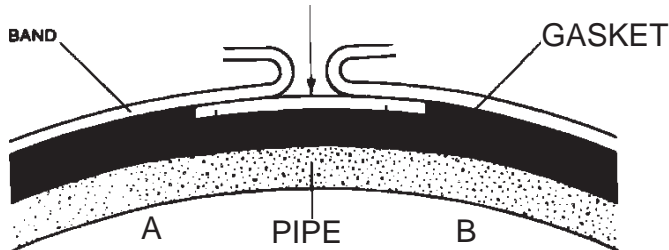
Uniform Distribution of Gasket Pressure



There is a uniform distribution of gasket pressure over the entire circumference of the pipe.

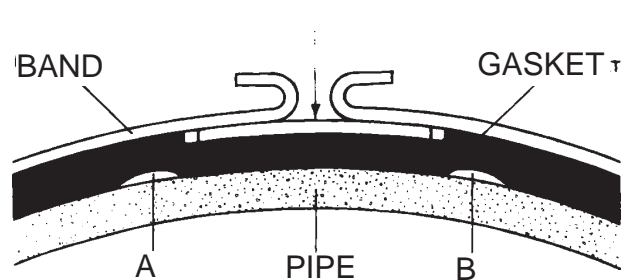
Other Methods of Bridge Plate

Bridge Plate Glued on Top of Gasket



Bridge plates attached to the clamp band or glued to the outside of the gasket have exposed metal edges that hold the band away from the gasket, setting up low pressure points as in "A" and "B" above, which are potential leak paths. The exposed metal edge can also hang up on the clamp band and impede tightening of the clamp.

Bridge Plate Glued in Molded Recess



Bridge plates that are glued into recesses formed in the gasket during molding, may not fit the recess properly. There may be void spaces that create low pressure points, as at "A" and "B" above which are potential leak points.



225 Full Circle® Repair Clamp Single Band



Standard				Catalog Number		Metric			
Nom. Size Inches	O.D. Range Inches	Width Inches	Wt. Each Lbs.	With Low Alloy Bolts & Nuts	With Stainless Steel Bolts & Nuts	Nom. Size MM	O.D. Range MM	Width MM	Wt. Each Kg.
10	11.04-11.44	7 1/2	14.0	225-10111007-000	225-10111007-001	250	281-290	190	6.4
		10	18.7	225-10111010-000	225-10111010-001			254	8.5
		12 1/2	22.9	225-10111012-000	225-10111012-001			317	10.4
		15	27.6	225-10111015-000	225-10111015-001			381	12.5
		20	36.6	225-10111020-000	225-10111020-001			508	16.6
		30	54.9	225-10111030-000	225-10111030-001			762	24.9
12	12.60-13.00	7 1/2	15.6	225-10126007-000	225-10126007-001	300	321-330	190	7.7
		10	20.2	225-10126010-000	225-10126010-001			254	9.2
		12 1/2	24.9	225-10126012-000	225-10126012-001			317	11.3
		15	28.9	225-10126015-000	225-10126015-001			381	13.1
		20	39.8	225-10126020-000	225-10126020-001			508	18.1
		30	59.7	225-10126030-000	225-10126030-001			762	27.1
12	13.10-13.50	7 1/2	16.6	225-10132007-000	225-10132007-001	300	333-342	190	7.5
		10	20.7	225-10132010-000	225-10132010-001			254	9.4
		12 1/2	25.3	225-10132012-000	225-10132012-001			317	11.5
		15	29.1	225-10132015-000	225-10132015-001			381	13.2
		20	40.4	225-10132020-000	225-10132020-001			508	18.3
		30	60.6	225-10132030-000	225-10132030-001			762	27.5
14	14.00-14.40	7 1/2	18.8	225-10140007-000	225-10140007-001	300	356-365	190	8.5
		10	23.1	225-10140010-000	225-10140010-001			254	10.5
		12 1/2	28.9	225-10140012-000	225-10140012-001			317	13.1
		15	34.7	225-10140015-000	225-10140015-001			381	15.7
		20	46.2	225-10140020-000	225-10140020-001			508	21.0
		30	69.3	225-10140030-000	225-10140030-001			762	31.4

225 Full Circle® Repair Clamp Double Band



Smith-Blair 225 Super Range Double Band Full Circle® Repair Clamps provide a fast, economical means of repairing holes, cracks or other types of damage to cast iron, steel and other types of pipe.

Full Circle® Repair Clamps feature a lap type gasket with molded tapered ends to provide efficient equalized sealing at the lap joint on any pipe within the clamp's range. The gasket has a finely grided surface with the resilience to easily conform to irregularities on rough pipe surfaces or in pitted areas, providing an effective seal all around the pipe.

A stainless steel bridge plate spans the opening of the lugs and is bonded flush into the gasket to prevent wrinkling in the lug area, providing even gasket pressure at all points around the full circumference of the pipe.

The band is made of stainless steel, selected to meet the necessary corrosion resistance, flexibility and strength requirements. Lugs are securely attached to the stainless steel band, and have mutually supporting stabilizing fingers to permit maximum torquing of the bolts. The lug design includes a drop-in bolt feature that eliminates loose parts, saves time and aids installation under adverse conditions.

The bolts and nuts are low alloy steel with rolled threads, double radius heads and a generous shoulder to prevent bolt rotation under maximum torque loading.

Material Specifications

Band:	Stainless Steel Type 304
Lugs:	Ductile Iron ASTM A536, 65-45-12.
Gasket:	Nitrile (Buna N). Specially compounded NBR rubber to resist oil, acids alkalis, most (aliphatic) hydro-carbon fluids, water and many chemicals. Nominal temperature range from -20°F to 180°F. Consult manufacturer for specific applications or other service temperatures.
Bridge Plate:	Stainless steel recessed flush and bonded into gasket.
Bolts:	High strength low-alloy steel with heavy semi-finished hexagon nuts Per ASTM A563. Optional 304 stainless steel bolts with fluoropolymer coated nuts to prevent galling.

Material specifications are subject to change.

Band Width Inches	Number of Bolts	Bolt Sizes
7 1/2	6	
10	8	Drop-in lug
12 1/2	10	5/8" x 6"
15	12	Closed lug
20	16	5/8" x 6 7/8"
30	24	



225 Full Circle® Repair Clamp

Super Range Double Band



Standard				Catalog Number		Metric			
Nom. Size Inches	O.D. Range Inches	Width Inches	Wt. Each Lbs.	With Low Alloy Bolts & Nuts	With Stainless Steel Bolts & Nuts	Nom. Size MM	O.D. Range MM	Width MM	Wt. Each Kg.
3	3.49-4.29	7 1/2	17.9	225-20035007-000	225-20035007-001	80	89-108	190	8.1
		10	24.0	225-20035010-000	225-20035010-001			254	10.9
		12 1/2	29.9	225-20035012-000	225-20035012-001			317	13.6
		15	35.9	225-20035015-000	225-20035015-001			381	16.3
		20	47.8	225-20035020-000	225-20035020-001			508	21.7
		30	71.7	225-20035030-000	225-20035030-001			762	32.5
4	4.44-5.24	7 1/2	18.7	225-20045007-000	225-20045007-001	100	113-133	190	8.5
		10	25.3	225-20045010-000	225-20045010-001			254	11.5
		12 1/2	31.2	225-20045012-000	225-20045012-001			317	14.2
		15	36.6	225-20045015-000	225-20045015-001			381	16.6
		20	49.2	225-20045020-000	225-20045020-001			508	22.3
		30	73.8	225-20045030-000	225-20045030-001			762	33.5
4	4.74-5.57	7 1/2	18.8	225-20048007-000	225-20048007-001	100	121-141	190	8.5
		10	25.1	225-20048010-000	225-20048010-001			254	11.5
		12 1/2	31.0	225-20048012-000	225-20048012-001			317	14.2
		15	36.9	225-20048015-000	225-20048015-001			381	16.6
		20	49.8	225-20048020-000	225-20048020-001			508	22.4
		30	74.7	225-20048030-000	225-20048030-001			762	33.8
6	6.62-7.42	7 1/2	19.9	225-20066307-000	225-20066307-001	150	169-188	190	9.0
		10	27.0	225-20066310-000	225-20066310-001			254	12.2
		12 1/2	33.2	225-20066312-000	225-20066312-001			317	15.1
		15	39.2	225-20066315-000	225-20066315-001			381	17.8
		20	52.8	225-20066320-000	225-20066320-001			508	23.9
		30	78.0	225-20066330-000	225-20066330-001			762	35.4
6	6.84-7.64	7 1/2	19.9	225-20069007-000	225-20069007-001	150	174-194	190	9.0
		10	27.0	225-20069010-000	225-20069010-001			254	12.2
		12 1/2	33.3	225-20069012-000	225-20069012-001			317	15.1
		15	39.2	225-20069015-000	225-20069015-001			381	17.8
		20	53.0	225-20069020-000	225-20069020-001			508	23.9
		30	78.5	225-20069030-000	225-20069030-001			762	35.4
8	8.62-9.42	7 1/2	21.7	225-20086307-000	225-20086307-001	200	219-239	190	9.8
		10	29.3	225-20086310-000	225-20086310-001			254	13.3
		12 1/2	35.7	225-20086312-000	225-20086312-001			317	16.2
		15	42.4	225-20086315-000	225-20086315-001			381	19.2
		20	56.4	225-20086320-000	225-20086320-001			508	25.6
		30	84.6	225-20086330-000	225-20086330-001			762	38.4
8	8.99-9.79	7 1/2	21.9	225-20090507-000	225-20090507-001	200	229-248	190	9.9
		10	29.7	225-20090510-000	225-20090510-001			254	13.5
		12 1/2	36.6	225-20090512-000	225-20090512-001			317	16.6
		15	42.6	225-20090515-000	225-20090515-001			381	19.3
		20	59.0	225-20090520-000	225-20090520-001			508	26.8
		30	86.0	225-20090530-000	225-20090530-001			762	39.0
10	10.75-11.55	10	31.2	225-20107510-000	225-20107510-001	250	273-293	254	14.2
		15	47.4	225-20107515-000	225-20107515-001			381	21.5
		20	63.2	225-20107520-000	225-20107520-001			508	28.7
		30	94.8	225-20107530-000	225-20107530-001			762	43.0
10	11.10-11.90	10	33.5	225-20111010-000	225-20111010-001	250	282-302	254	15.2
		15	47.5	225-20111015-000	225-20111015-001			381	21.5
		20	65.0	225-20111020-000	225-20111020-001			508	29.5
		30	97.5	225-20111030-000	225-20111030-001			762	44.2
10	11.60-12.40	10	33.0	225-20116010-000	225-20116010-001	250	295-315	254	15.0
		15	49.6	225-20116015-000	225-20116015-001			381	22.5
		20	65.0	225-20116020-000	225-20116020-001			508	29.5
		30	99.0	225-20116030-000	225-20116030-001			762	44.9
12	12.75-13.55	10	34.5	225-20127510-000	225-20127510-001	300	324-344	254	15.6
		15	49.9	225-20127515-000	225-20127515-001			381	22.6
		20	65.8	225-20127520-000	225-20127520-001			508	29.8
		30	99.9	225-20127530-000	225-20127530-001			762	45.3

NOTE: NOT recommended for PE pipe applications.
For polywrap kit see page 11.



225 Full Circle® Repair Clamp Super Range Double Band



Standard				Catalog Number		Metric			
Nom. Size Inches	O.D. Range Inches	Width Inches	Wt. Each Lbs.	With Low Alloy Bolts & Nuts	With Stainless Steel Bolts & Nuts	Nom. Size MM	O.D. Range MM	Width MM	Wt. Each Kg.
12	13.20-14.00	10	34.5	225-20132010-000	225-20132010-001	300	334-364	254	15.6
		15	49.9	225-20132015-000	225-20132015-001			381	22.6
		20	65.8	225-20132020-000	225-20132020-001			508	29.8
		30	99.9	225-20132030-000	225-20132030-001			762	45.3
12	13.65-14.45	10	34.6	225-20136510-000	225-20136510-001	300	347-372	254	15.7
		15	50.0	225-20136515-000	225-20136515-001			381	22.7
		20	68.0	225-20136520-000	225-20136520-001			508	30.8
		30	102.0	225-20136530-000	225-20136530-001			762	46.3

Polywrap Kit

For protection against aggressive soil conditions found in many areas of the country, a polywrap kit is available for Full Circle® Clamps.

The kit consists of 6 mil (min.) thick polyethylene sheeting and an extra nut. The nut is for the attachment of an anode or bonding wire, since the gasket electrically insulates the clamp from the pipe.

The sheeting, when loosely wrapped around the clamp, protects it from the surrounding soil, biological activity and stray currents.

Polyethylene encasement has been subject to a lot of research and is recognized as an effective method of mitigating corrosion in underground piping systems.

Fits Pipe Diameter (Inches)	For Clamp Widths (Inches)	Part Number	
		with Alloy Bolts	with Stainless Steel Bolts
2.38" thru 4.50"	thru 12-1/2"	000-00520021-005	000-00520027-002
2.38" thru 4.50"	15" thru 30"	000-00520022-005	000-00520028-002
4.80" thru 9.05"	thru 12-1/2"	000-00520023-005	000-00520029-002
4.80 thru 14.00"	15" thru 30"	000-00520024-005	000-00520030-002

Multiple Band Clamps

Fits Pipe Diameter (Inches)	For Clamp Widths (Inches)	Part Number	
		with Alloy Bolts	with Stainless Steel Bolts
3.50" thru 9.05"	thru 12-1/2"	000-00520023-005	000-00520029-002
3.50" thru 9.05"	15" thru 30"	000-00520024-005	000-00520030-002
10.75" thru 14.00"	thru 30"	000-00520025-005	000-00520031-002
14.38" thru 27.65"	thru 30"	000-00520026-005	000-00520032-002