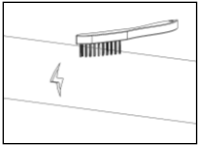


Installation Instructions

225, 234, 235, 258, & 259

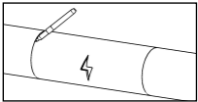
Full Circle® Repair Clamp (Cast Lugs)

DO NOT USE FOR FULL BREAKS OR JOINING PIPE



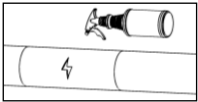
STEP 1

Thoroughly clean the pipe where the clamp will be installed. Be sure to remove any scale, dirt, or debris that could affect the gasket seal.



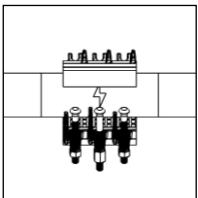
STEP 2

Mark the pipe in both directions a measured distance from the center of the break or damaged area.



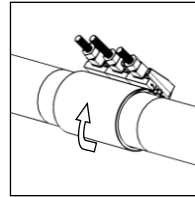
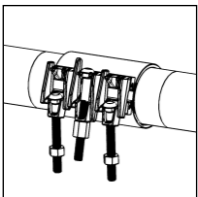
STEP 3

Place the clamp around the pipe, centered over the break or damaged area, with the gasket flap at the top. Note: For optimum product performance, the fitting should be lubricated with a suitable lubricant.



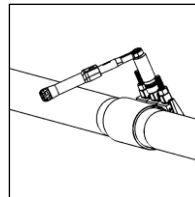
STEP 4

Tuck the gasket flap in place and mesh the lug fingers. Engage the centermost bolt(s) in the open-slot lugs and tighten hand-tight. Note: The clamp may be assembled beside the break or damaged area and slid into position if the pipe surface is wet or has been lubricated.



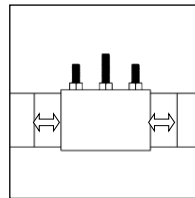
STEP 5

Rotate the clamp away from gasket taper to ensure proper seating of the gasket, and position the bolts and nuts for convenient tightening.



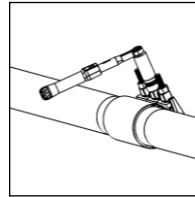
STEP 6

Tighten the nuts working from the center outward without exceeding torque values listed below. Note: Completely tightening the center nut(s) will usually stop or sufficiently slow the leakage to simplify completion of the installation.



STEP 7

When the nuts have been tightened sufficiently to stop the leakage, check reference marks to assure clamp is still properly centered over break or damaged area. Loosen nuts and reposition clamp if necessary. For multi-band clamps, maintain similar gaps between bands while tightening.



STEP 8

Recheck the tightness, and torque the nuts as evenly as possible to the recommended torque values listed below.
NOTE: Use of a calibrated torque wrench is recommended!

PRE-INSTALL NOTES

When a gap between the ends of the pipes is 1" or greater, a short section of pipe should be put in the opening or a thin strip of sheet metal should be wrapped around it to provide support to the gasket. Use discretion on larger O.D. pipes.

When a section of pipe wall equal to 40% or more of the pipe circumference is broken away, a section of sheet metal should be placed over the opening to provide a sealing surface for the gasket. Use of a clamp that extends 3" past the sheet metal on both sides axially is required.

Recommended Torque Values

Pipe Size	Torque
Through 4.73" O.D.	50 ft-lb
Above 4.73" O.D.	70 ft-lb
Do not exceed recommended torque	



Installation Instructions

225, 234, 235, 258, & 259

Full Circle® Repair Clamp (Cast Lugs)

234/235 INSTALL NOTES

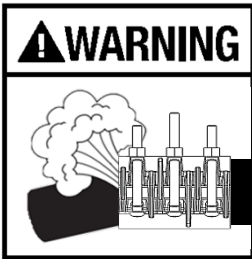
When tapping through clamps is required, the following guidelines must be followed:

- Tapping device should be properly supported.
- Drill bits and cutters should be sharp per the tapping device manufacturer requirements.
- Pressure relief devices should be used to prevent over-pressurization.
- Retorque fasteners using a calibrated torque wrench after tapping.

***Contact Smith-Blair for more information on these guidelines**

Type	Size	Working Pressure*
Single Band	2" – 10" Nominal	125 PSI
Single Band	12" – 14" Nominal	100 PSI
Double Band	3" – 12" Nominal	125 PSI

*The amount of pressure that a full circle clamp will contain is proportionate to the diameter of the clamp and the amount of torque applied to the bolts. Small diameter clamps will have a higher pressure rating than their larger counterparts (regardless of manufacturer). On any given installation, the pressure capability of a clamp is influenced by the type and extent of damage, type and condition of pipe, service conditions, environmental conditions, and installation workmanship.



THIS PRODUCT DOES NOT RESTRAIN PIPE MOVEMENT. Proper anchoring is required to prevent pipe pull out. Failure to anchor or improper anchoring can result in dangerous pipe content escape, property damage, serious injury, and/or death. Read the product installation instructions prior to installing this product.

WARRANTY

Smith-Blair, Inc. warrants its products to be free of defects in materials and workmanship for a period of one (1) year from the date of shipment by Smith-Blair, Inc. (the "Warranty Period"). Dated proof of purchase, such as a bill of sale, is required to establish warranty eligibility. If a product fails to perform due to a defect in materials or workmanship during the Warranty Period, Smith-Blair, Inc. will repair or, at Smith Blair, Inc.'s option, replace the product with the same or comparable item. In the event that the product cannot be repaired and a suitable replacement item is not available, Smith-Blair, Inc. will refund the original purchase price shown on the proof of purchase. In all cases, the customer is responsible for returning the allegedly defective product to the factory or warehouse designated by Smith-Blair, Inc.

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04/18

CORROSION & PRODUCT SELECTION NOTICE

Metal products are subject to corrosion, particularly when used outdoors and/or underground. A large number of factors and local conditions affect the rate of corrosion. Consult a local corrosion expert to determine the life expectancy of this product when used with your pipeline content, soil, and environment. Also, consult your system designer to determine the suitability of this product in your piping system. Failure to determine the suitability of this product in your application, soil, and/or environment can result in premature product failure. Smith-Blair will provide additional information about this product's material specifications at your request. You may also obtain product information at www.smith-blair.com.

04/18