McWane Ductile

IRON STRONG

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FLEX GRIP 360™ RESTRAINT 4″-12″

RESTRAINED JOINT DUCTILE IRON PIPE AND FITTINGS

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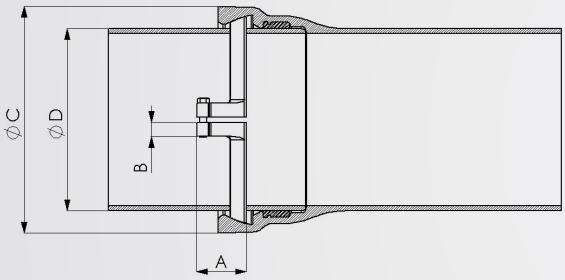
For Generations

FLEX GRIP 360™ FIELD RESTRAINT FOR TR FLEX® JOINT FROM MCWANE DUCTILE

The Flex Grip 360™ field restraint is designed for use in a restrained joint application when no TR Flex® weld bead is available. A standard Tyton® spigot or properly beveled field-cut end may be restrained in a TR Flex pipe or TR Flex fitting bell. The installation crew now has the potential for field adjustments within a restraint section of a line, preventing the need for pre-ordering or maintaining an inventory of special closure pieces.

The unique design of the Flex Grip 360 allows for greater surface contact with the pipe, providing a confident and secure restraint system. Currently, sizes range from 4" through 12" with joint pressure ratings of 350 psi.

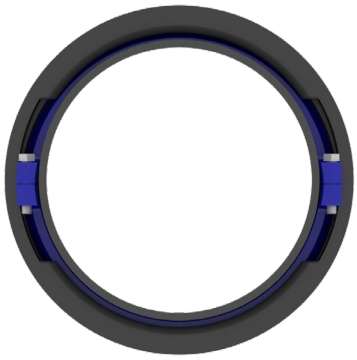


- Ductile iron restraining gland for TR Flex field cut applications
- Replaces standard locking segments
- For use where the standard TR Flex weld bead has been removed (e.g. in cut pipe)
- Features integrated, hardened teeth to provide a secure axial lock at the pipe or fitting joint
- Requires no special tools for assembly
- Eliminates field welding for TR Flex products on cut pipe

FLEX GRIP 360™ DETAILS & DIMENSIONS

SIZE	A	B	ØC	ØD	NO. OF GLAND	NO. OF BOLT
4	2.62	0.875	7.00	4.80	2	2
6	3.00	1.000	9.27	6.90	2	2
8	3.25	1.000	11.68	9.05	2	2
10	3.38	1.000	14.12	11.10	2	2
12	3.62	1.000	16.43	13.20	2	2

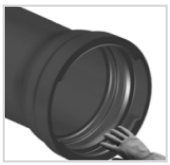
4"–12" Flex Grip 360 field restraint uses 2 bolts per ring set (2 half pieces) that are 1/2" – 13 x 2" Hex cap bolts.



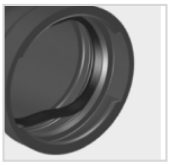
ASSEMBLY PROCEDURE

1. Inspect and remove the dirt and other material in the retaining groove and gasket seat area. Foreign matter in the gasket seat may cause a leak. (*fig. 1*)
2. The gasket must be wiped clean with a clean cloth, flexed, and then placed into the socket with the rounded bulb end entering first. Looping the gasket in the initial insertion will facilitate seating the gasket heel evenly around the retainer seat. (*fig. 2*)
3. Apply a thin film of Tyton Joint® lubricant to the exposed surface of the gasket that will come in to contact with the entering pipe spigot. (*fig. 3*)
4. When cut pipe, which have no assembly stripes, are to be assembled, the spigot insertion depth should be marked on the spigot to ensure that the joint is fully assembled.
5. To install the Flex Grip 360™ field restraint, remove the bolts from the field restraint ring and check the hardened teeth of the field restraint ring and the external thread of the bolts are clean. (*fig. 4*)
6. Position the field restraint ring into the TR Flex® segment cavity such that the lug locates beyond the bell face, apply a thin film of lubricant on bolts threads before proceeding for assembly. Insert the bolt into the field restraint ring lugs so that it forms a loose ring. To make assembly easier, insert spacers between the two rings so that the rings will be separated, and the plain end can be easily inserted. Field restraint lugs have drilled hole on the one side and tapped on the other side, make sure that the bolt inserted into the drilled hole side. (*fig. 5-7*)
7. Make sure that the joint is not deflected prior to tightening the field restraint ring. If the field gripper ring is not installed properly with the pipe, this may result in loosening of the ring and possible of separation. (*fig. 8-10*)

(*fig. 1*)



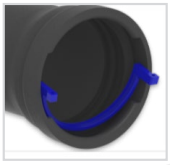
(*fig. 2*)

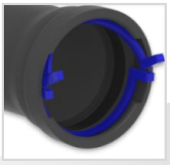


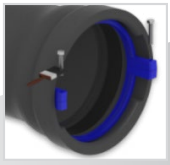
(*fig. 3*)

(*fig. 4*)

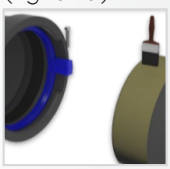
(*fig. 5-7*)

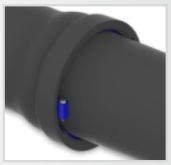






(*fig. 8-10*)





STANDARDS APPLICABLE TO DUCTILE IRON PIPE AND FITTINGS

THICKNESS DESIGN OF DUCTILE IRON PIPE	ANSI/AWWA C150/A21.50
DUCTILE IRON PIPE FOR WATER AND OTHER LIQUIDS	ANSI/AWWA C151/A21.51, FEDERAL WWP421D, GRADE C
DUCTILE IRON PIPE FOR GRAVITY FLOW SERVICE	ANSI/ASTM A746
DUCTILE IRON FITTINGS FOR WATER AND OTHER LIQUIDS (3 in. through 36 in.)	ANSI/AWWA C110/A21.10
DUCTILE IRON COMPACT FITTINGS (3 in. through 24 in.)	ANSI/AWWA C153/A21.53
FLANGED FITTINGS	ANSI/AWWA C110/A21.10, ANSI B16.1
DUCTILE IRON PIPE WITH THREADED FLANGES	ANSI/AWWA C115/21.15
COATINGS AND LININGS	
Asphaltic	ANSI/AWWA C151/A21.51, ANSI/AWWA C110/A21.10, ANSI/AWWA C153/A21.53
Cement Lining	ANSI/AWWA C104/A21.4
Various Epoxy Linings and Coatings	MANUFACTURER'S STANDARD
Exterior Polyethylene Encasement	ANSI/AWWA C105/A21.5
JOINTS – PIPE AND FITTINGS	
Push-On and Mechanical Rubber-Gasket Joints	ANSI/AWWA C111/A21.11, FEDERAL WWP421D
Flanged	ANSI/AWWA C115/A21.15, ANSI B16.1
Grooved and Shouldered	ANSI/AWWA C606
PIPE THREADS	ANSI B2.1
INSTALLATION	ANSI/AWWA C600

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