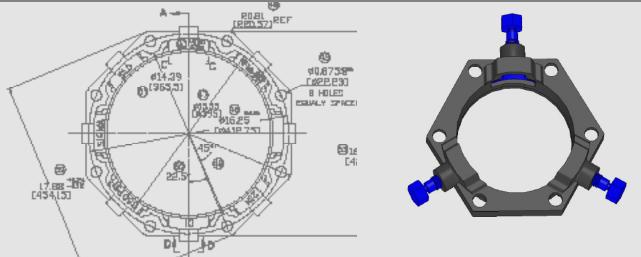


ONE-LOK[™] Series SLDM for Oversized Pipe





ONE-LOK's unique cam action allows the restraining wedges to "rock," gripping the pipe wall more securely as thrust force increases.



ONE-LOK's cam action also accommodates deflection of the joint during print and also allows for subsidence, seismic or other forces after and installation, up to the maximum allowed deflection.

Deflection Chart

Nominal Size	Item #	Deflection				
4-12"	SLDM4-SLDM12	5 deg				
14-16"	SLDM14-SLDM16	2 deg				
20"	SLDM20	1.5 deg				

Features & Advantages:

1) The SIGMA ONE-LOK[™] Series SLDM modified wedge-action mechanical joint restraining gland is suitable for use on pit cast grey iron pipes with "oversized" C and D barrel dimensions. For pit cast pipes with A and B size outside diameters per AWWA C150/151, the standard ONE-LOK Series SLD or SLDE restrainer may be used without any modifications.

2) The SIGMA ONE-LOK Series SLDM is a mechanical joint restraining gland that implements a series of individually activated wedges into the mechanical joint follower gland. When the wedge segment is engaged by the actuating bolt, the primary contact edges of each wedge segment lock onto the pipe wall. This action causes the primary contact edges to grip the pipe and effectively restrain all classifications of ductile iron pipe.

3) ONE-LOK SLDM precision contoured wedges provide proper contact and support of the ductile iron pipe wall. Each wedge is manufactured with an elongated contour that evenly matches the outside circumference of each nominal diameter of ductile iron pipe. This elongated contour also eliminates the concern of damage to both the pipe wall and the interior cement mortar lining caused by point loading, even on the thinner pressure classes of ductile iron pipe.

4) ONE-LOK SLDM wedge actuating bolt provides the installer with a visual torque indicator. The breakaway top ensures proper engagement of the wedge segment at the time of installation. Unlike other actuating bolts, the ONE-LOK SLDM is manufactured with a proprietary quality control system that ensures the breakaway tops will activate at the correct torque. The breakaway top is sized to match the same dimensions of the bolts and nuts used to assemble the mechanical joint fitting and follower gland, eliminating the need for special installation tools. Once engaged, the actuating bolt leaves a residual hex-head shank, allowing post-installation disassembly of the restrained joint, if necessary.

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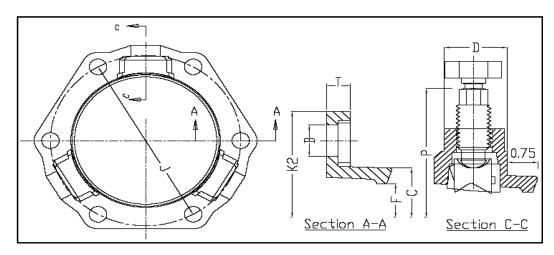
ONE-LOK[™] Series SLDM for Oversized Pipe

Sample Specification

Restraint for standard mechanical joint fittings on oversized cast iron pipe shall be incorporated in the design of the follower gland and shall utilize multiple wedge segments that act against the pipe, increasing their resistance as the line pressure increases. The assembled joint shall maintain the maximum flexibility and deflection of all nominal pipe sizes after burial. Restraining gland, wedge segments, and actuating bolts shall be manufactured of high strength ductile iron conforming to the requirements of ASTM A536, Grade 65-45-12. Wedge segments shall be heat treated to a hardness of 370 BHN minimum. Dimensions shall be compatible with standardized mechanical joints conforming to the requirements AWWA C111/ANSI A21.11 and AWWA C153/ANSI 21.53 through 20". Breakaway tops shall be incorporated in the design of the actuating bolts to visually ensure proper torque. The manufacturing of the actuating bolt must incorporate a quality control procedure that is deemed acceptable by the specifier and positively assures precise and consistent operating torque of the breakaway top. The mechanical joint restraining devices shall have a working pressure rating of 250 psi (150 psi for 20") minimum and provide no less than a safety factor of 2:1. Restraining device shall be SIGMA ONE-LOK™ or approved equal.

Materials:

- Gland body, wedge segments, & actuating bolts: ASTM A536 65-45-12 ductile iron.
- Wedge segments are heat treated to a minimum hardness of 370BHN
- T-head bolts & nuts: High strength, low alloy steel meeting AWWA/ANSI C111/ A21.11 with minimum 65,000psi tensile strength and 45,000psi yield strength.



Dimensions in Inches, Weights in Pounds

Nom Pipe	Item #	Wgt	PIT CAST PIPE OD	Dimensions						Break off Bolts and Inserts			Pressure Rating	T-Bolts			Gasket			
Size		(lbs)	CLASS C & D	С	F	D	Т	P*	В	J	K2	No	Size	Torque ft-lbs	(PSI)	No	Size	Torque ft-lbs	No	ltem
4	SLDM4	10.00	5.00	5.92	5.10	1.50	0.75	10.24	0.875	7.50	9.12	4	7/8	75 - 90	250	4	³∕₄ x 3.5	75 - 90	1	MG-4
6	SLDM6	12.00	7.10	8.02	7.20	1.50	0.88	12.34	0.875	9.50	11.12	3	7/8	75 - 90	250	6	³∕₄ x 3.5	75 - 90	1	MG-6
8	SLDM8	20.00	9.30	10.17	9.40	1.63	1.00	14.32	0.875	11.75	13.37	6	7/8	75 - 90	250	6	³∕₄ x 4.0	75 - 90	1	MG-8
10	SLDM10	26.00	11.40	12.22	11.50	1.57	1.00	16.54	0.875	14.00	15.62	8	7/8	75 - 90	250	8	³∕₄ x 4.0	75 - 90	1	MG-10
12	SLDM12	34.00	13.50	14.32	13.60	1.63	1.00	18.80	0.875	16.25	17.88	8	7/8	75 - 90	250	8	³∕₄ x 4.0	75 - 90	1	MG-12
14	SLDM14	45.00	15.65	16.40	15.80	1.77	1.25	21.20	0.875	18.75	20.25	10	7/8	75 - 90	250	10	³∕₄ x 4.5	75 - 90	1	MG-14
16	SLDM16	56.00	17.80	18.65	17.95	2.42	1.31	23.74	0.875	21.00	22.91	12	7/8	75 - 90	200	12	³∕₄ x 4.5	75 - 90	1	MG-16
20	SLDM20	75.00	22.06	23.15	22.20	1.85	1.38	27.94	0.875	25.50	27.47	14	7/8	75 - 90	150	14	³∕₄ x 5.0	75 - 90	1	MG-20

Note: P* With break off bolts broken head



Installation Instructions for Wedge Action Restraint with PVC Pipe & Mechanical Joint Fitting

1. Clean the fitting socket & pipe end. Lubricate mechanical joint gasket & pipe end with soapy water or approved lubricant meeting AWWA C111/A21.11. (A transition gasket is required if using on steel OD pipe)	EASE-ON PIPE JOINT (UBERLEY CONT WARRANT WITH THE SECOND CONTENTS - EIGHT FULLY CONTENTS - EIGHT FULLY
2. Insert the One Lok SLDM Wedge Restraint on the pipe with the lip extension facing the pipe end followed by the gasket, tapered side toward end of the pipe.	
3. Insert the gasket along with the pipe into the fitting socket and seat the gasket firmly and evenly into the gasket cavity, keeping the joint straight.	
4. Push the One-Lok gland toward the fitting and center it around the pipe with the lip evenly against the gasket.	

ONE-LOK[™] Series SLDM for Oversized Pipe

Installation Instructions for Wedge Action Restraint with PVC Pipe & Mechanical Joint Fitting (Continued)

5. Insert the T-bolts with the T-head on the fitting side and nut on the restraint side, and hand tighten the nuts. Make the joint deflection as required keeping the wedge restraint centered on the pipe before torquing the T-Bolts.		
6. Tighten the nuts in an alternate method (STAR PATTERN) to the recommended torque of 45-60 ft-lbs for 3", 75-90 ft-lbs for 4" – 24",100-120 ft-lbs for 30",36", 120 – 150 ft-lbs for 42",48", 54", 60" & 64" sizes, use of a torque indicating wrench is recommended to confirm the applied torque.	a de la de l	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
7. Hand tighten each actuating bolt in a clockwise direction until contact is made between each wedge insert and the pipe OD. Continue tightening the actuating bolts in an alternate method (STAR PATTERN) until all the break-off tops have been removed. Never tighten actuating bolt more than 180 degrees before moving to the next bolt. Recommended Torque for actuating bolt – 75-90 ft-lbs for 3" – 24", 115 – 125 ft-lbs for 30",36",42",48", 400 +/- 5 ft-lbs for 54",60",64"		