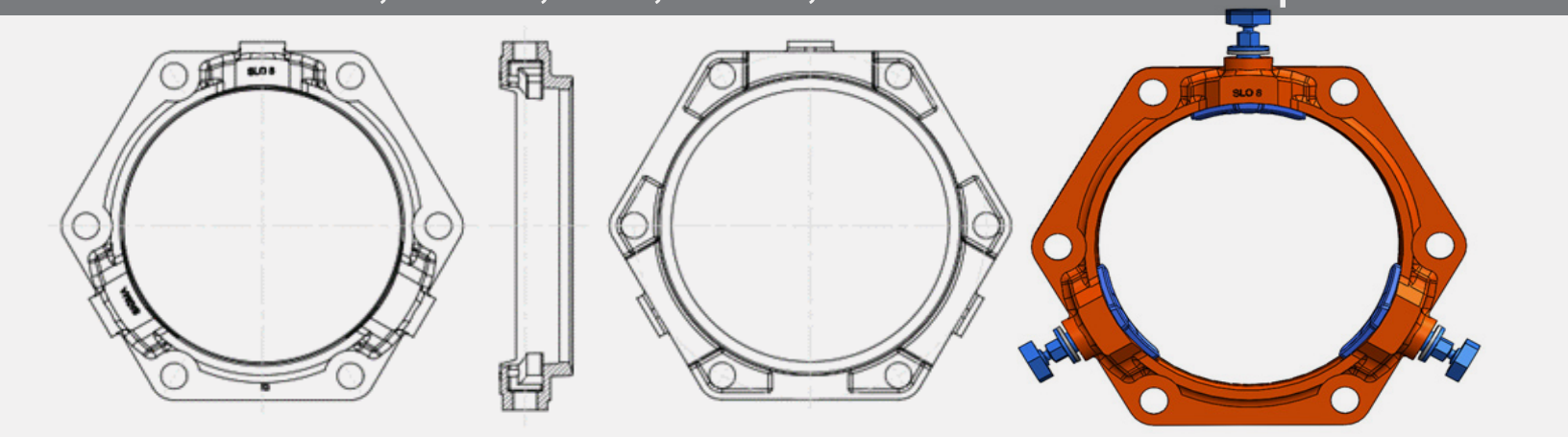
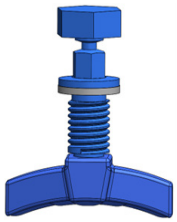
SIGMA™

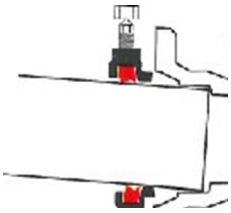
Quality – Service – Commitment – Delivered.

ONE-LOK™ Series SLO FOR DUCTILE IRON,C900,IPS,Steel,HDPE & C909 Pipe





ONE-LOK's unique interlocking arrangement of the wedge & break off bolt allows the restraining wedges to provide the gripping action of the pipe wall more securely as thrust force increases.



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

Deflection Chart

Nominal Size	Item #	Deflection
3" - 12"	SLO3 - SLO12	5 deg

Features & Advantages:

1) SIGMA ONE-LOK Series SLO is a mechanical joint restraint 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 various types of pipes - ductile iron,pvc,steel,HDPE.

2) ONE-LOK SLO's precision contoured wide wedges provide proper contact and support of the pipe wall. Each wedge is manufactured with a contour that evenly matches the outside circumference of each nominal diameter of the pipe. This 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 the pipe.

3) ONE-LOK SLO's 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 SLO 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.

4) ONE-LOK SLO's unique wedge segment and actuating bolt design allows the two components to interface using a cam action principle, allowing the wedge segments to rock and increase their grip on the pipe wall as thrust on the assembled joint increases. This also allows improved resistance to subsidence, seismic forces, and other movement within the maximum deflection limitations of the mechanical joint under applicable AWWA standards.

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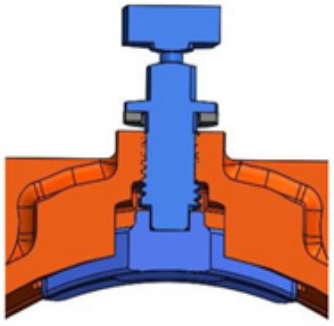
ONE-LOK™ Series SLO FOR DUCTILE IRON,C900,IPS,Steel,HDPE & C909 Pipe

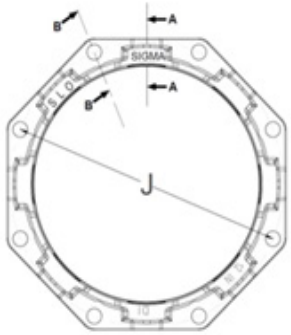
Sample Specification:

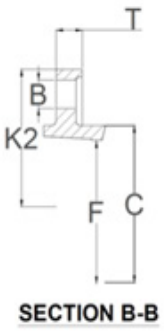
Restraint for standard mechanical joint fittings shall be incorporated in the design of the follower gland and shall utilize multiple wedge segments that act against the pipe, increasing their resistance as the line pressure increases. The assembled joint shall maintain the maximum flexibility and deflection 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 ANSI/AWWA C111/A21.11, ANSI/AWWA C153/A21.53 and ANSI/AWWA C110/A21.10 (latest revision). 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 350psi (for sizes 3-12") minimum and provide no less than a safety factor of 2:1. Restraint shall be UL Listed and FM approved in applicable sizes. Restraining device shall be SIGMA ONE-LOK™ or approved equal.

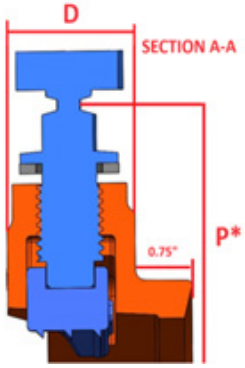
Material:

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









Dimensions in Inches, Weights in Pounds

Nominal Pipe Size	Item #	Weight (lbs)	DUCTILE IRON Pipe OD	STEEL PIPE OD	Allowable Deflection	Dimensions								Break off Bolts and Inserts			T-Bolts			Gasket	
						C	F	D	T	P*	B	J	K2	No	Size	Torque ft-lbs	No	Size	Torque ft-lbs	No	Item #
3	SLO3	5.0	3.96	3.50	5°	4.76	4.06	1.62	0.60	8.96	0.750	6.19	7.69	2	7/8	45 - 55	4	5/8 x 3.0	45 - 55	1	MG-3/TG-3
4	SLO4	6.5	4.80	4.50	5°	5.65	4.90	1.68	0.60	9.93	0.875	7.50	9.12	2	7/8	50 - 60	4	¾ x 3.5	75 - 90	1	MG-4/TG-4
6	SLO6	10.5	6.90	6.625	5°	8.02	7.10	1.75	0.60	12.65	0.875	9.50	11.12	3	7/8	50 - 60	6	¾ x 3.5	75 - 90	1	MG-6/TG-6
8	SLO8	14.5	9.05	8.625	5°	10.17	9.25	1.77	0.75	14.37	0.875	11.75	13.37	3	7/8	50 - 60	6	¾ x 4.0	75 - 90	1	MG-8/TG-8
10	SLO10	20.0	11.10	10.75	5°	12.22	11.30	1.77	0.85	16.27	0.875	14.00	15.62	6	7/8	50 - 60	8	¾ x 4.0	75 - 90	1	MG-10/TG-10
12	SLO12	25.0	13.20	12.75	5°	14.32	13.40	1.77	0.85	18.17	0.875	16.25	17.80	8	7/8	50 - 60	8	¾ x 4.0	75 - 90	1	MG-12/TG-12

Note: P* - Dimension after the break off heads torqued off

Pressure Rating Chart

Nominal Pipe Size	Item #	Ductile Iron Pipe	Steel Pipe	Pressure Rating PSI																	
				C900						ASTM D2241					C909	HDPE					
				DR14	DR17	DR18	DR21	DR25	DR27.5	SDR17	SDR21	SDR26	SDR32.5	SDR41		DR9	DR11	DR13.5	DR17	DR21	
3	SLO3	350	350	-	-	-	-	-	-	250	200	160	125	100	-	-	-	-	-	-	
4	SLO4	350	350	305	250	235	200	165	150	250	200	160	125	100	235	250	200	160	125	100	
6	SLO6	350	350	305	250	235	200	165	150	250	200	160	125	100	235	250	200	160	125	100	
8	SLO8	350	350	305	250	235	200	165	150	250	200	160	125	100	235	250	200	160	125	100	
10	SLO10	350	350	305	250	235	200	165	150	250	200	160	125	100	235	250	200	160	125	100	
12	SLO12	350	350	305	250	235	200	165	150	250	200	160	125	100	235	250	200	160	125	100	

SLO 3-12 is UL listed on Ductile Iron pipe for 350 psi, on C900 PVC pipe for 235 psi & on steel pipe for 300 psi,sizes 3”, 250 psi for 4” - 12”

SLO 3-12 is FM approved on Ductile Iron pipe for 175 Psi, on C900 PVC pipe for 150 Psi & on steel pipe with 175 psi for 3” - 10”

LOCATIONS

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Auburn, WA 98001
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ontcsr@sigmaco.com

AWWA Ductile Iron Fittings



- 2-64” C153 Ductile Iron Mechanical Joint Fittings
- 2-48” C110 Ductile Iron Mechanical Joint Fittings
- 2-64” C110 Ductile Iron Flanged Fittings
- 3-24” C153 Ductile Iron Push-On Fittings
- 4-24” C110 Ductile Iron Push-On Fittings
- 3-36” Ductile Iron Mechanical Joint Connector
- C116 Fusion Bonded Epoxy Lining Available
- PROTECTO 401® Ceramic Epoxy Lining Available

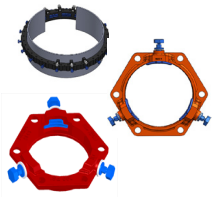
Visit our website for available special coatings. https://www.sigmaco.com/fittings

Mechanical Joint Accessories



- Prepackaged and Loose Mechanical Joint Accessories
- SIGMASEAL™ Improved Mechanical Joint Gasket
- Snap-On Multi-Purpose Gasket for Ductile Iron or PVC Pressure Pipes
- OMNI-SLEEVE™ Improved Wall Penetration Sleeve
- Specialty Bolts and Nuts for Mechanical Joint Assemblies

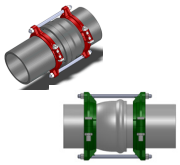
ONE-LOK™ Wedge Action Restraints



- 3-48” ONE-LOK D-SLDE Domestic Wedge Restraint for Ductile Iron Pipe
- 3-64” ONE-LOK SLDE Wedge Restraint for Ductile Iron Pipe (Import)
- 4-48” ONE-LOK T-SLDE Tandem Wedge Restraint for High Pressure Ductile Iron Pipe
- 3-36” ONE-LOK D-SLCE Domestic Wedge Restraint for PVC Pipe
- 3-12” ONE-LOK SLC Wedge Restraint for PVC Pipe (Import)
- 3-60” ONE-LOK SLCE Wedge Restraint for PVC Pipe (Import)
- 3-42” ONE-LOK SLDEH Wedge Harness Restraint for Ductile Iron Pipe
- 4-12” /16” /20” ONE-LOK SLDM Wedge Restraint for Oversized Cast Iron Pipe
- 4-48” ONE-LOK SSLD Split Wedge Restraint for Installed Ductile Iron Pipe & Fitting
- 4-36” ONE-LOK SSLDH Split Wedge Harness Restraint for Installed Ductile Iron Pipe
- 4-12” ONE-LOK SLCEH Wedge Harness Restraint for AWWA C900 PVC Pipe
- 3-12” ONE-LOK Series SLO

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PV-LOK™ Serration Lock Restraints



- 4-48” PV-LOK PWM Serrated Restraint for Ductile Iron Fitting & AWWA C900/905 PVC Pipe
- 4-48” PV-LOK PWP Serrated Bell Joint Restraint for AWWA C900/905 PVC Pipe
- 4-12” PV-LOK D-PWP Domestic Serrated Bell Joint Restraint for AWWA C900 PVC Pipe
- 4-12” PV-LOK PWPF Restraint for AWWA C900/905 PVC Pipe & PVC Fitting
- 4-12” PV-LOK PWH Serrated Harness Restraint for AWWA C900 PVC Pipe
- 2-12” PV-LOK PVM Serrated Restraint for Ductile Iron & IPS OD PVC pipe
- 2-12” PV-LOK PVP Serrated Bell Joint Restraint for IPS OD PVC Pipe
- 2-8” PV-LOK PVPF Serrated Restraint for IPS OD PVC Pipe & PVC Fitting
- 4-12” PV-LOK PWP Serrated Bell Joint Restraint for Ductile Iron Pipe

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- Extensive Nationwide Inventory
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Municipal Construction Castings



- Manhole Rings and Covers
- Curb and Meter Boxes
- Frames and Grates
- Storm Inlets
- Valve Boxes, Risers, and Extensions

Products for the Ductile Iron Fabricator



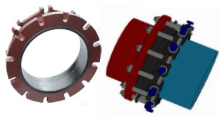
- 3-64” High Hub Threaded Flanges
- 3-48” Tapped High Hub Threaded Flanges
- 3-36” Extra Heavy 250lb Drilled Threaded Flanges
- 3-48” Threaded MJ Bell Adapters
- 3-48” MJ x PE Bell adapter
- 3-48” Anchor Flanges
- 3-16” Filler Flanges

Extended Range Products



- Flange-Pak™ Prepackaged Flange Accessory Sets
- Polyethylene Encasement for Ductile Iron Pipe
- Copper Tubing Products
- Tracer Wire & Detectable/Non-Detectable Marking Tape
- Pipe Joint Lubricant & Hydraulic Cement
- Socket Clamps and Tie Rod Accessories
- Boxlok Valve Box Alignment Device
- Cast Iron Companion Flanges

Flange Adapters



- 3-36” SIGMAFLANGE Flange Adapter Sleeve for PVC and Ductile Iron Pipe
- 2-12” ZIP FLANGE Set Screw Style Flange Adapter
- 3-36” SIGMAFLANGE Universal Joint for Flanged Fittings, Flanged Pipes & Valves

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