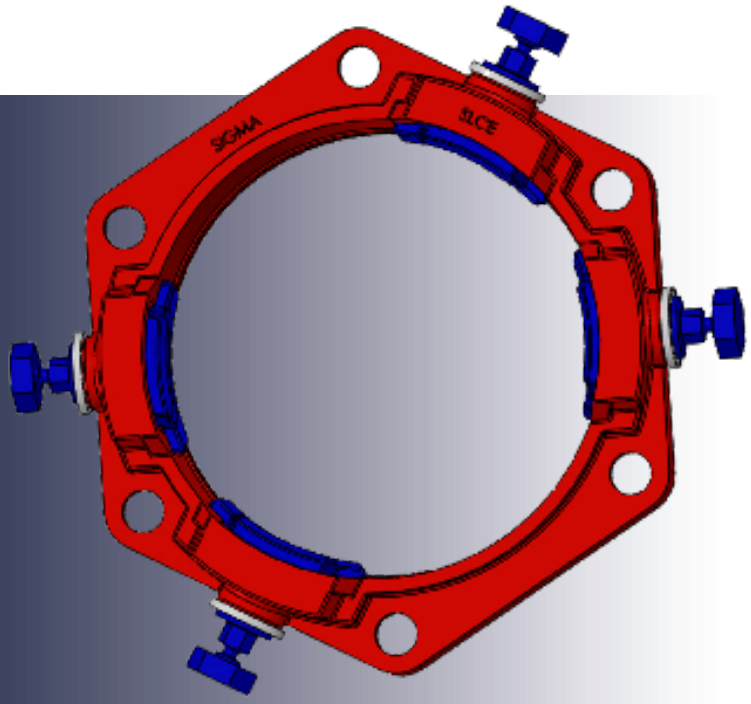
ONE-LOK™ Model SLCE for PVC Pipe



Description

The SIGMA ONE-LOK™ Model SLCE is a mechanical joint restraining gland. It consists of individually activated wedges and bolts on a mechanical joint gland.

How it works

When the wedge segments are engaged by the appropriate bolt, the wedge locks firmly onto the pipe wall. When all segments are activated correctly then this gland effectively restrains all thickness and pressure classifications of PVC pipe.

Product Sizes Available

3-60 inches

Features

- ONE-LOK™ SLCE's precision contoured wedges provide proper contact and support of the PVC pipe. This contour eliminates potential damage to the pipe wall that might be incurred during installation, even on thinner pressure classes of PVC pipe.
- The wedge bolt provides the installer with a visual torque indicator eliminating the need for special tools.
- The breakaway top to these bolts ensures proper engagement of the wedge segment during installation. Unlike other bolts, the ONE-LOK™ SLCE is manufactured to a proprietary quality control system that ensures the breakaway bolts activate at the correct torque.
- The SLCE's unique wedge segment and bolt design uses a cam action principle, allowing wedge segments to rock and increase their grip on the pipe wall as thrust on the assembled joint increases. This design feature improves the product's resistance to subsidence, seismic forces, and other movement within the maximum deflection limitations of AWWA applicable standards.
- No special installation tools are required.
- Post-installation disassembly of the restrained joint, if required, is straightforward.
- ONE-LOK™ SLCE also features a non-corrosive, two-piece ABS plastic spacer that is removed when using the product to restrain IPS sized pipes meeting ASTM D2241. The two-piece design of this spacer allows it to be removed without requiring disassembly of the product. When the ONE-LOK™ SLCE is used to restrain pipes meeting AWWA C900, the spacer is left intact on the actuating bolt.
- SIGMA ONE-LOK™ SLCE can be used on all pressure classes and thicknesses of PVC pipe.

Materials

- Gland body, wedge segments & actuating bolts ASTM A536 65-45-12 ductile iron.
- T-Bolts/Nuts: High strength, low alloy steel meeting AWWA/ANSI C111/A21.11 with minimum 65,000 psi tensile strength and 45,000 psi yield strength.

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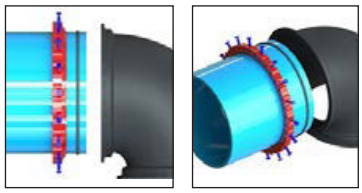
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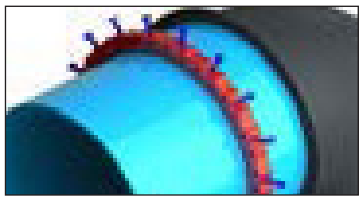
Installation Instructions
ONE-LOK™ Model SLCE for PVC Pipe



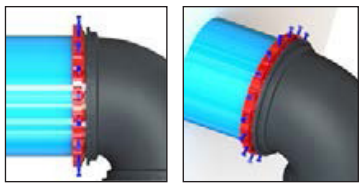
1. Clean the fitting socket & pipe end. Lubricate mechanical joint gasket & pipe end with soapy water or approved lubricant meeting AWWA C111/A21.11. (A transition gasket is required if using on "IPS" PVC pipe)



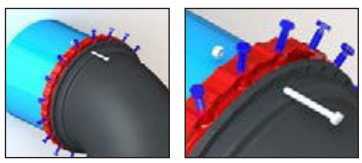
2. Install the ONE-LOK™ SLCE Wedge Restraint on the pipe with the lip extension facing the pipe end followed by the gasket, tapered side toward end of the pipe.



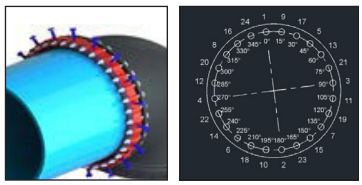
3. Insert the gasket along with the pipe into the fitting socket and seat the gasket firmly and evenly into the gasket cavity, keeping the joint straight.



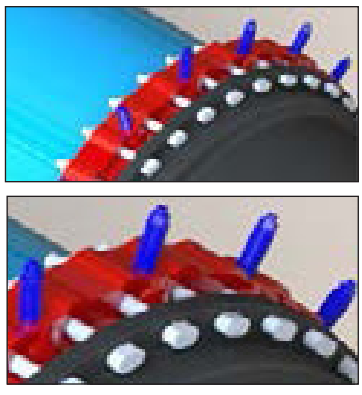
4. Push the ONE-LOK™ gland toward the fitting and center it around the pipe with the lip evenly against the gasket.



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 required joint deflection as required, keeping the wedge restraint centered on the pipe prior to tightening the T-bolts.



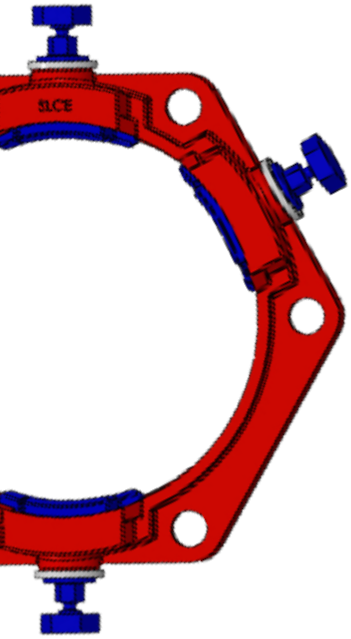
6. Tighten the nuts in an alternate method (STAR PATTERN) to the **recommended torque of 45-60 ft-lbs for 3", 75-90 ft-lbs for 4"– 24", 100-120 ft-lbs for 30" and 36", 120–150 ft-lbs for 42", 48", 54" and 60" sizes.** Use of a torque indicating wrench is recommended to confirm the applied torque.



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 of 45-55 ft-lbs for 3", 50-60 ft-lbs for 4"-12", 55-65 ft-lbs for 14"-24", 65-75 ft-lbs for 30"-48", 105-115 ft-lbs for 54" and 60".**

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Technical Details
ONE-LOK™ Model SLCE for PVC Pipe

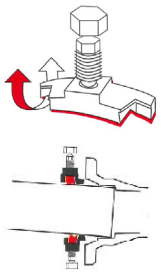


Sample Specification

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. Dimensions shall be compatible with standardized mechanical joints conforming to the requirements AWWA C111/ANSI A21.11 and AWWA C153/ANSI 21.53 through 24" (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 235 psi and provide no less than a safety factor of 2:1. Restraint shall be FM approved in applicable sizes. Restraining device shall be SIGMA ONE-LOK™ or approved equal.

Materials

- Gland body, brackets, wedge segments and actuating bolts ASTM A536 65-45-12 ductile iron.
- T-Bolts/Nuts: High strength, low alloy steel meeting AWWA/ANSI C111/A21.11 with minimum 65,000 psi tensile strength and 45,000 psi yield strength.



ONE-LOK™ SLCE also features a non-corrosive, two-piece ABS plastic spacer that is removed when using the product to restrain IPS sized pipes meeting ASTM D2241. The two-piece design of this spacer allows it to be removed without requiring disassembly of the product. When the ONE-LOK™ SLCE is used to restrain pipes meeting AWWA C900, the spacer is left intact on the actuating bolt.

Dimensions in Inches, Weights in Pounds

Nom Pipe Size	Item #	Pressure Rating													
		C900									ASTM D2241				
		DR14	DR17	DR18	DR21	DR25	DR27.5		DR41	DR51	SDR17	SDR21			SDR41
3	SLCE3	-	-	-	-	-	-	-	-	-	250	200	160	125	100
4	SLCE4	305	250	235	200	165	150	-	-	-	250	200	160	125	100
6	SLCE6	305	250	235	200	165	150	-	-	-	250	200	160	125	100
8	SLCE8	305	250	235	200	165	150	-	-	-	250	200	160	125	100
10	SLCE10	305	250	235	200	165	150	-	-	-	250	200	160	125	100
12	SLCE12	305	250	235	200	165	150	-	-	-	250	200	160	125	100
14	SLCE14	305	250	235	200	165	150	125	100	-	-	-	-	-	-
16	SLCE16	305	250	235	200	165	150	125	100	-	-	-	-	-	-
18	SLCE18	305	250	235	200	165	150	125	100	80	-	-	-	-	-
20	SLCE20	305	250	235	200	165	150	125	100	80	-	-	-	-	-
24	SLCE24	305	250	235	200	165	150	125	100	80	-	-	-	-	-
30	SLCE30	-	250	235	200	165	150	125	100	80	-	-	-	-	-
36	SLCE36	-	-	235	200	165	150	125	100	80	-	-	-	-	-
42	SLCE42	-	-	-	200	165	150	125	100	80	-	-	-	-	-
48	SLCE48	-	-	-	-	165	150	125	100	80	-	-	-	-	-
54	SLCE54	-	-	-	-	165	150	125	100	80	-	-	-	-	-
60	SLCE60	-	-	-	-	165	150	125	100	80	-	-	-	-	-

NOTE: All packs come with ONE-LOK™ SLCE Gland, MJ or SIGMA Seal Gaskets & required number of T-Bolts

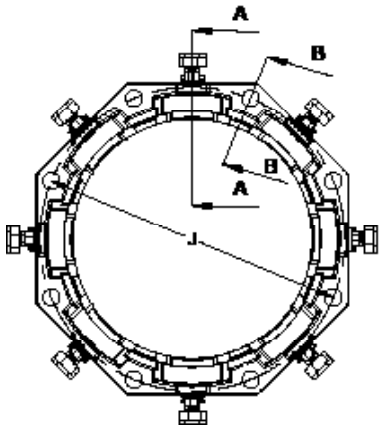
SIGMA Waterworks ONE-LOK™ Models SLCE and SLCEH, sizes 42",48", 54" & 60" have been successfully tested on a variety of dimension ratio (DR) pipes as manufactured by Diamond Plastics and Ipex Canada. For any questions or additional information, please contact Satheesh Chandrasekaran (Pipe Restraint Engineer) at **mcs@sigmawaterworks.com**

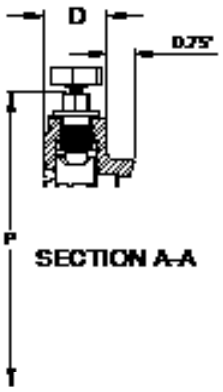
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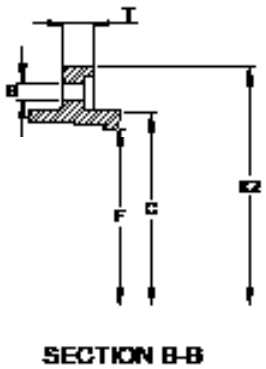
Technical Details ONE-LOK™ Model SLCE for PVC Pipe

Dimensions in Inches, Weights in Pounds

Size	Item #	Wgt	PVC Pipe DI OD	IPS Pipe OD	Dimensions										Bolts & Inserts			Pressure Rating (PSI)	T-bolts			Gasket	
					C	F	K2	T	P	P*	X	J	Bell Joint BCD	Bell Joint Hole Size	No	Size	Torque		No	Size	Torque	No	Item #
3	SLCE3	6.21	---	3.50	4.76	3.60	7.18	0.60	9.42	8.50	0.750	6.14	---	---	2	7/8	45-55	235	4	5/8 x 3.0	45-60	1	TG3
4	SLCE4	6.78	4.80	4.50	5.92	4.90	7.92	0.60	10.22	9.30	0.875	7.50	---	---	2	7/8	50-60	235	4	3/4 x 3.5	75-90	1	MG4
6	SLCE6	10.28	6.90	6.63	8.01	7.00	10.00	0.60	12.87	11.95	0.875	9.50	---	---	3	7/8	50-60	235	6	3/4 x 3.5	75-90	1	MG6
8	SLCE8	14.48	9.05	8.63	10.17	9.15	12.18	0.75	14.37	13.45	0.875	11.75	---	---	4	7/8	50-60	235	6	3/4 x 4.0	75-90	1	MG8
10	SLCE10	21.40	11.10	10.75	12.22	11.20	14.60	0.85	16.68	15.76	0.875	14.00	---	---	6	7/8	50-60	235	8	3/4 x 4.0	75-90	1	MG10
12	SLCE12	26.96	13.20	12.75	14.32	13.30	16.64	0.85	18.58	17.66	0.875	16.25	---	---	8	7/8	50-60	235	8	3/4 x 4.0	75-90	1	MG12
14	SLCE14	33.67	15.30	---	16.40	15.44	20.25	1.20	21.68	19.98	0.875	18.75	---	---	10	7/8	55-65	235	10	3/4 x 4.5	75-90	1	MG14
16	SLCE16	41.67	17.40	---	18.50	17.54	22.45	1.21	23.65	21.95	0.875	21.00	---	---	12	7/8	55-65	235	12	3/4 x 4.5	75-90	1	MG16
18	SLCE18	49.50	19.50	---	20.60	19.64	24.75	1.25	25.79	24.09	0.875	23.25	---	---	12	7/8	55-65	235	12	3/4 x 4.5	75-90	1	MG18
20	SLCE20	61.17	21.60	---	22.70	21.74	27.00	1.34	28.16	26.46	0.875	25.50	---	---	14	7/8	55-65	235	14	3/4 x 5.0	75-90	1	MG20
24	SLCE24	79.33	25.80	---	26.90	25.94	31.50	1.46	32.70	31.00	0.875	30.00	---	---	16	7/8	55-65	235	16	3/4 x 5.0	75-90	1	MG24
30	SLCE30	198.00	32.00	---	33.29	32.17	38.42	2.00	41.92	39.92	1.125	36.88	---	---	20	1.00	65-75	165	20	1 x 6.5	100-120	1	MGS30
36	SLCE36	248.00	38.30	---	39.59	38.47	46.00	2.00	48.78	46.78	1.125	43.75	---	---	24	1.00	65-75	165	24	1 x 6.5	100-120	1	MGS36
42	SLCE42	660.00	44.50	---	45.76	44.80	58.80	3.15	59.59	57.93	1.375	50.62	54.50	1.375	14	1.00	65-75	235	28	1 1/4 x 8.0	120-150	1	MGS42
48	SLCE48	751.00	50.80	---	52.09	50.97	65.74	3.15	66.63	63.5	1.375	57.50	61.44	1.375	16	1.00	65-75	200	32	1 1/4 x 8.0	120-150	1	MGS48
54	SLCE54	1022.00	57.56	---	58.85	57.73	67.50	4.50	72.1	70.5	1.375	63.2	---	---	18	1 1/4	105-115	250	36	1 1/4 x 11	120-150	1	MGS54
60	SLCE60	1115.00	61.61	---	62.90	61.78	72.00	4.50	77.4	75.75	1.375	67.72	---	---	18	1 1/4	105-115	250	36	1 1/4 x 11	120-150	1	MGS60







P With break off bolts broken head*

Weight does not include any accessories like T-bolt + Gasket. There could be +/- 5% variation in the weight.

- Sizes 4"-12" are UL listed and have been tested in accordance with ASTM F1674.
- Sizes 4"-12" are FM approved on AWWA C900 pipe.

UL LISTED

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