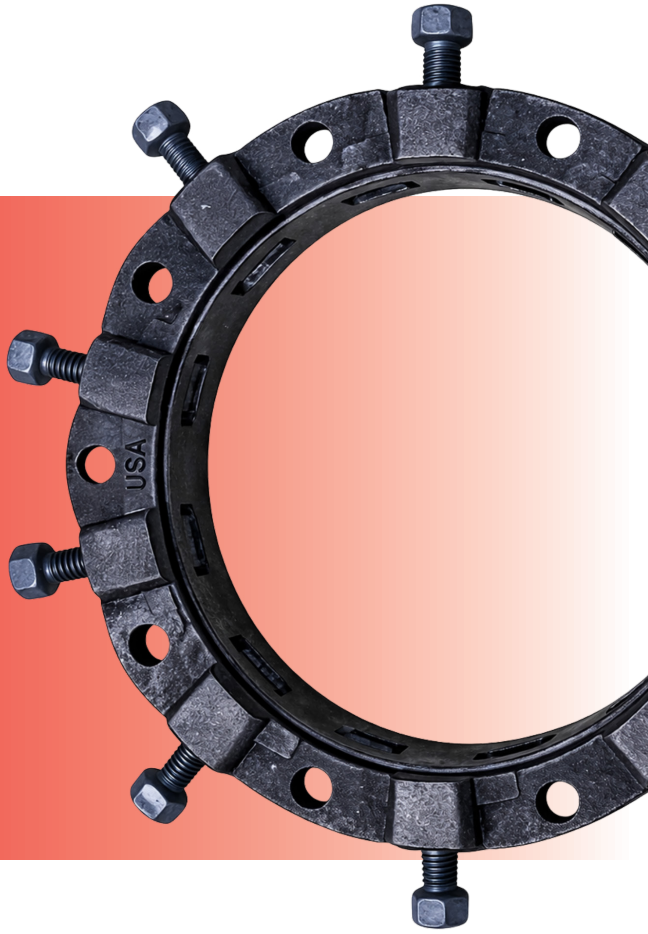
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DOMESTIC WEDGE ACTION RESTRAINT FOR DUCTILE IRON PIPE



Description

Sigma's Domestic Wedge Action Restraint for Ductile Iron pipe series D-SLDE is a mechanical joint gland with individually activated wedges and auto torque head bolts designed to break off at pre-determined torque.

Once the auto torque bolt breaks off at the pre-determined torque which drives the wedge to bite & grip the pipe and as the pressure increases the wedges actuate more to increase the grip on the pipe thereby restraining the joint.

Product Sizes Available

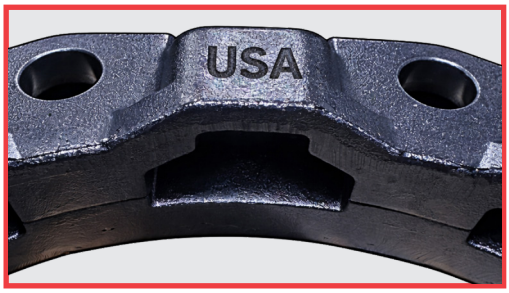
3" through 48"

Features

- D-SLDE wedges contour are designed to match the respective pipe OD's there by providing proper contact and support of the ductile iron pipe. Precise contour along with the pre-determined torque eliminates potential damage to the pipe wall and its internal cement lining during installation on thinner walls of the ductile iron pipe.
- Auto torque bolt provides a visual indicator for the installer ensuring the pre-determined torque is achieved during installation. Each bolt is manufactured with a proprietary quality control system which ensures the bolt breaks away at the pre-determined torque for each bolt.
- Utilizes standard tools eliminating the need for any special tool requirement.
- Allows deflection of the joint post assembly.
- Sizes 30",36",42",48" features an innovative pipe re-rounding feature that aides out of round pipes to be able to be made round which will enable the installation of the joint easier.

Deflection Chart:

- 3"-12": 5°
- 14"-24": 3°
- 30"-48": 1°



BABA COMPLIANT
AIS Compliant

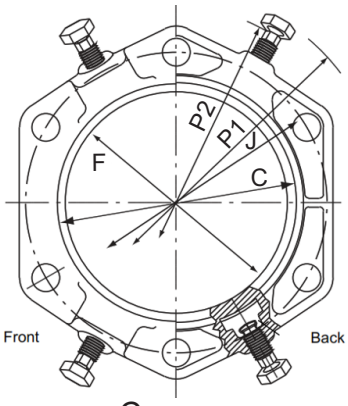
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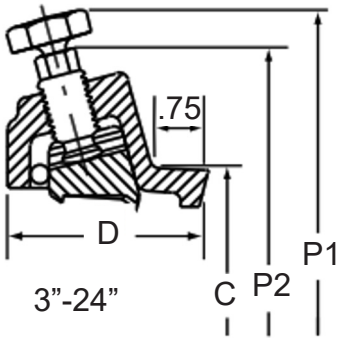
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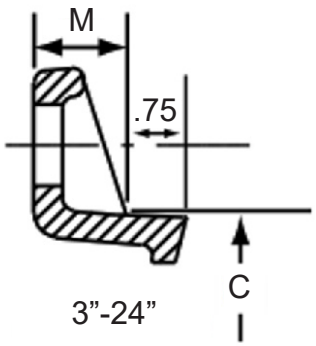
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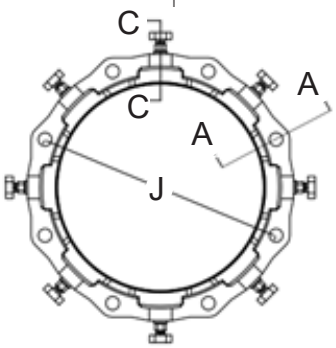
Technical Details
Domestic Wedge Action Restraint for Ductile Iron Pipe

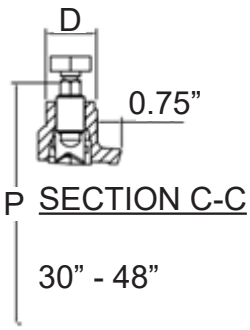
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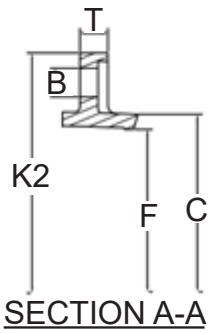












Dimensions in Inches, Weights in Pounds

Nominal Pipe Size	Ductile Iron Pipe OD	Item #	Weight	Pressure Rating (PSI)	Dimensions						No. of Wedges	T-Bolt	
					F	J	C	D	P*	T/M		Size	Qty
3	3.96	D-SLDE-X3	8.6	350	4.06	6.19	4.84	2.65	9.06	0.68	2	⅝ x3	4
4	4.80	D-SLDE-X4	11.7	350	4.90	7.50	5.92	2.65	10.0	0.88	2	¾ x 3 ½	4
6	6.90	D-SLDE-X6	17.6	350	7.00	9.50	8.02	2.65	12.1	0.88	3	¾ x 3 ½	6
8	9.05	D-SLDE-X8	21.7	350	9.15	11.75	10.17	2.65	14.3	1.10	4	¾ x 4	6
10	11.10	D-SLDE-X10	31.9	350	11.20	14.00	12.22	2.75	16.3	1.10	6	¾ x 4	8
12	13.20	D-SLDE-X12	41.5	350	13.30	16.25	14.32	2.75	18.4	1.10	8	¾ x 4	8
14	15.30	D-SLDE-X14	57.0	350	15.50	18.75	16.40	3.00	20.9	1.50	10	¾ X 4 ½	10
16	17.40	D-SLDE-X16	64.0	350	17.60	21.00	18.50	3.00	23.0	1.56	12	¾ X 4 ½	12
18	19.50	D-SLDE-X18	81.0	250	19.70	23.25	20.60	3.05	25.8	1.65	12	¾ X 4 ½	12
20	21.60	D-SLDE-X20	90.0	250	21.67	25.50	22.70	3.10	27.9	1.70	14	¾ X 4 ½	14
24	25.80	D-SLDE24	107.0	250	26.04	30.00	26.90	3.20	32.3	1.85	16	¾ X 5	16
30	32.00	D-SLDE30	158.7	250	32.17	36.88	33.29	2.13	39.3	1.65	20	1 X 6 ½	20
36	38.30	D-SLDE36	315.8	250	38.47	43.75	39.59	3.15	46.1	1.75	24	1 X 6 ½	24
42	44.50	D-SLDE42	432.2	250	44.67	50.62	45.79	3.56	53.3	2.25	28	1 ¼ X 8	28
48	50.80	D-SLDE48	568.7	250	50.97	57.50	52.09	3.81	59.5	2.25	32	1 ½ X 8	32

› Offered with or without re-rounding feature
› SIGMA seal gaskets are offered for these sizes
› Optional E-Coat for 24” and above

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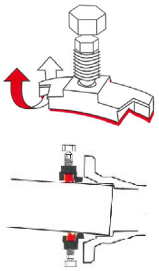


Sample Specification

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 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 350psi (for sizes 3-16") and 250 psi (for sizes 18-48") 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.

Materials

- Gland body, brackets, wedge segments and 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.

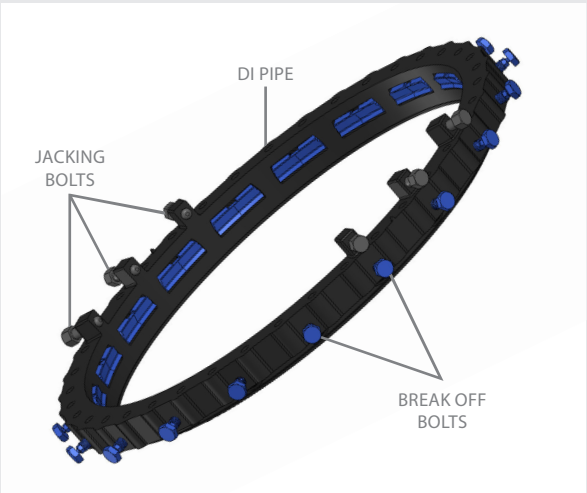


ONE-LOK's unique cam action allows the restraining wedges to "rock," gripping the pipe wall more securely as thrust force increases.

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

OPTIONAL ONE-LOK D-SLDE 30-48" Re-rounding Feature

SIGMA offers an additional re-rounding feature on its larger-sized pipe restraint products (30" and above). This feature has been developed to help the waterworks industry re-round ductile iron pipe without the use of any external equipment during restraint installation. By using this feature the installer or contractor is able to bring the out-of-round pipe to a near round shape, which enables the spigot end of the pipe to fit into the MJ Bell of a fitting or bell. This feature consists of six lugs for 42" – 48" restraint products, and four lugs for 30" and 36" products with threads to accommodate hex bolts. The bolts are located opposite each other. See diagram below for detailed installation instructions.



Directions for Installing SIGMA's Re-rounding Feature:

1. Measure the OD of the pipe and identify the minimum & maximum diameter.
2. Insert the D-SLDE onto the pipe with the lugs positioned on the maximum diameter side.
3. Using the bolts provided in the lugs tighten them in alternating method until the diameter averages out and the pipe can be inserted on to the bell.
4. Once the pipe is inserted on to the bell the bolts can be backed off.
5. Please exercise caution that these bolts are normal Hex bolts and are painted BLACK to distinguish between the break off bolts, which are painted BLUE.
6. These bolts can be either removed from the gland, or left, as these will be only used for re-rounding the pipe and will not be used during the installation of the D-SLDE.
7. Recommended installation instructions provided in the installation tag to be followed for installing the D-SLDE.

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