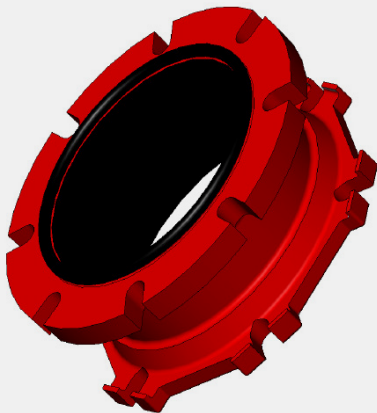


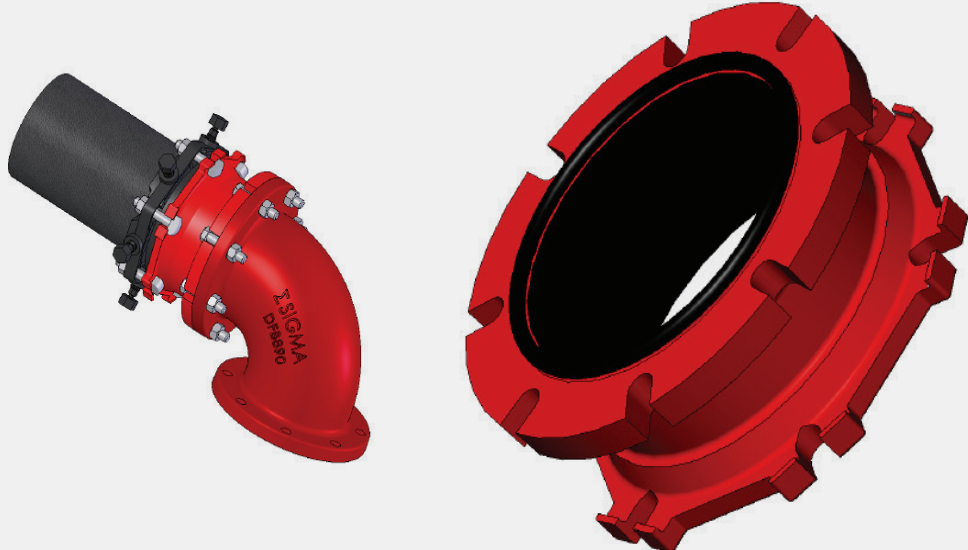
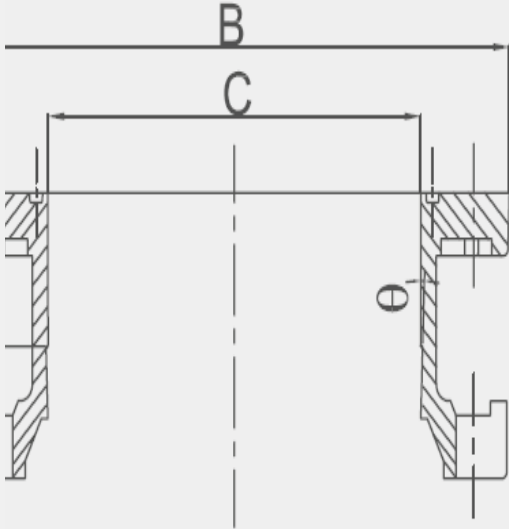
SIGMAFLANGE™ MODEL SFA-FLANGE ADAPTER SLEEVE FOR DUCTILE IRON PIPE, PVC PIPE OR STEEL PIPE TO FLANGE FITTING, VALVE AND OTHER APPURTENANCES



PRODUCT SPECIFICATIONS

- MATERIAL:**
- Adapter flange sleeve is manufactured of high strength ductile iron in accordance with ASTM A536, Grade 65-45-12.
 - O-ring gasket is manufactured of styrene butadiene rubber (SBR) per ANSI/AWWA C111/A21.11.
- SIZE RANGE:**
- 3" through 36" on ductile iron pipe, 4" – 36" on PVC pipe and 4"-12" on steel pipe
- DIMENSION:**
- Conform to ANSI/AWWA A21.10/C110 and ANSI/AWWA A21.53/C153 and ANSI/ AWWA C115/A21.15 (Class 125/150 drilling pattern).
- PRESSURE RATINGS:**
- Sizes 3"-16" carry 350 psi WWP and sizes 18"-36" carry a 250 psi WWP while providing a minimum 2:1 factor of safety for use with AWWA C151 ductile iron pipe.
 - Equal to the water working pressure rating of the pipe upon which it is installed with a minimum 2:1 factor of safety for use with AWWA C900/905 PVC pipe and Steel pipe.
- COATING:**
- Sleeve body, both exterior and interior, is coated with electro-deposition "CORRSAFE™" for further information, please refer to our CORRSAFE Product Information sheet at <http://www.sigmaco.com/pipe-restraint-product-coatings-linings/>.
 - Exterior is top-coated with Red Alkyd paint and interior top-coated with NSF61 black asphaltic lining.
- APPROVALS:**
- Underwriter Laboratories' listed and Factory Mutual approved in sizes 3" – 12"
- DEFLECTION:**
- 5° for 3"-12", 2° for 14"-16", 1-1/2° for 18"-24" and 1° for 30"-36"
- TRACEABILITY:**
- Adapter flange sleeve is individually cast with exact heat code information
- INSTALLATION:**
- In accordance with manufacturer's recommendation and applicable AWWA standards
 - Must be installed only in conjunction with the Sigma One Lok Model SLDE or SLCE and please refer to our submittal & installation information for wedge restraints.

SIGMAFLANGE™ Adapter



SIGMA Corporation's SIGMAFLANGE Model SFA is designed to connect plain-end ductile iron or PVC pressure pipe to a flanged fitting, pipe, valve and other flanged appurtenances. An oversized ductile iron mechanical joint x flanged sleeve provides proper sealing of the adjacent flange outlet using an O-ring gasket while accommodating necessary pipe end restraint to the mechanical outlet using SIGMA ONE-LOK™ SLDE for ductile iron or SLCE for PVC pipe wedge-action restraining gland.

Deflection Chart

Nominal Size	Item No.	Deflection	Pressure Rating
3	SFA3	5 deg	350 psi
4	SFA4	5 deg	350 psi
6	SFA6	5 deg	350 psi
8	SFA8	5 deg	350 psi
10	SFA10	3 deg	350 psi
12	SFA12	3 deg	350 psi
14	SFA14	2 deg	350 psi
16	SFA16	2 deg	350 psi
18	SFA18	2 deg	250 psi
20	SFA20	2 deg	250 psi
24	SFA24	1 deg	250 psi
30	SFA30	1 deg	250 psi
36	SFA36	1 deg	250 psi

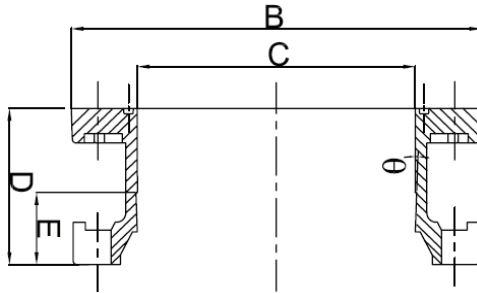
Features:

- Accommodates pipe misalignment.
- Acts as a dismantling joint for service and maintenance requirements.
- Provides a pressure rating equal to the pipe with a 2:1 factor of safety.
- No special tools required for installation or removal.
- Allows slight variations in field-cut pipe.
- Slotted bolt hold design for ease of installation.
- Accommodate DIA PVC pipe.
- O-ring on flange face for better compression and sealing.

SIGMAFLANGE™ Adapter

MATERIALS

- SIGMAFLANGE™ mechanical joint x flange sleeve is manufactured of high strength ductile iron in accordance with ASTM A536, Grade 65-45-12.
- Flanged adapter sleeve is manufactured in accordance with ANSI/AWWA C153/A21.53, ANSI/AWWA C111/A21.11, and ANSI/AWWA C115/A21.15 (Class 125/150 drilling pattern).
- Mechanical joint gasket and O-ring gasket are manufactured of styrene butadiene rubber (SBR) per ANSI/AWWA C111/A21.11.
- Coating: Red primer with electro-deposition undercoating.
- Lining: NSF61 black asphaltic lining with electro-deposition undercoating.
- T-head bolts and nuts are manufactured of high strength, low alloy steel in accordance with ANSI/AWWA C111/A21.11.



Dimensions in Inches, Weights in Pounds

Size	Item No.	Wt.	B	C	D	E
3	SFA3	8.0	7.50	4.06	3.63	2.50
4	SFA4	13.0	9.00	4.90	4.10	2.50
6	SFA6	19.5	11.00	7.00	5.07	2.50
8	SFA8	28.0	13.50	9.15	5.07	2.50
10	SFA10	46.5	16.00	11.20	5.37	2.50
12	SFA12	54.0	19.00	13.30	5.44	2.50
14	SFA14	68.0	21.00	15.44	6.42	3.50
16	SFA16	88.0	23.50	17.54	6.54	3.50
18	SFA18	101.0	25.00	19.64	7.15	3.50
20	SFA20	126.0	27.50	21.74	7.15	3.50
24	SFA24	166.0	32.00	25.94	7.65	3.50
30	SFA30	281	39.12	32.12	8.40	4.00
36	SFA36	411	46.00	38.42	9.40	4.00



SIGMAFLANGE™ adapter carries Underwriters' Laboratory listing and Factory Mutual Research approval.

*SIGMAFLANGE Adapters must be used only in conjunction with the SIGMA ONE-LOK Restraints SLDE or SLCE

SIGMA FLANGE ADAPTER WITH DI WEDGE RESTRAINT 3”

Item #	Description	# of SFA	SFA item #	SFA Wgt	# of One-Lok pack	One-Lok Pack Item #	One-Lok Pack Wgt	TOTAL Wgt
SFADP3	3 FLG ADPT SLV W/DI WDG RSTR	1	SFA3	9.1	1	SLDEP3	8.08	17.18
SFADP4	4 FLG ADPT SLV W/DI WDG RSTR	1	SFA4	13.53	1	SLDEP4	10.76	24.29
SFADP6	6 FLG ADPT SLV W/DI WDG RSTR	1	SFA6	20.59	1	SLDEP6	16.03	36.62
SFADP8	8 FLG ADPT SLV W/DI WDG RSTR	1	SFA8	28.78	1	SLDEP8	21.46	50.24
SFADP10	10 FLG ADPT SLV W/DI WDG RSTR	1	SFA10	40.93	1	SLDEP10	33.04	73.97
SFADP12	12 FLG ADPT SLV W/DI WDG RSTR	1	SFA12	53.52	1	SLDEP12	39.20	92.72
SFADP14	14 FLG ADPT SLV W/DI WDG RSTR	1	SFA14	75.07	1	SLDEP14	52.24	127.31
SFADP16	16 FLG ADPT SLV W/DI WDG RSTR	1	SFA16	90.75	1	SLDEP16	65.78	156.53
SFADP18	18 FLG ADPT SLV W/DI WDG RSTR	1	SFA18	103.12	1	SLDEP18	73.61	176.73
SFADP20	20 FLG ADPT SLV W/DI WDG RSTR	1	SFA20	126.74	1	SLDEP20	84.63	211.37
SFADP24	24 FLG ADPT SLV W/DI WDG RSTR	1	SFA24	166.94	1	SLDEP24	123.72	290.66
SFADP30	30" FLG ADPT SLV W/DI WDG RSTR	1	SFA30	396.38	1	SLDEP30	205.16	601.54
SFADP36	36" FLG ADPT SLV W/DI WDG RSTR	1	SFA36	437.22	1	SLDEP36	288.9	726.12

SIGMA FLANGE ADAPTER WITH PVC WEDGE RESTRAINT 3” -

Item #	Description	# of SFA	SFA item #	SFA Wgt	# of One-Lok pack	One-Lok Pack Item #	One-Lok Pack Wgt	TOTAL Wgt
SFACP3	3 FLG ADPT SLV W/PVC WDG RSTR	1	SFA3	9.1	1	SLCEP3	8.78	17.88
SFACP4	4 FLG ADPT SLV W/PVC WDG RSTR	1	SFA4	13.53	1	SLCEP4	10.80	24.33
SFACP6	6 FLG ADPT SLV W/PVC WDG RSTR	1	SFA6	20.59	1	SLCEP6	16.06	36.65
SFACP8	8 FLG ADPT SLV W/PVC WDG RSTR	1	SFA8	28.78	1	SLCEP8	21.32	50.10
SFACP10	10 FLG ADPT SLV W/PVC WDG RSTR	1	SFA10	40.93	1	SLCEP10	30.38	71.31
SFACP12	12 FLG ADPT SLV W/PVC WDG RSTR	1	SFA12	53.52	1	SLCEP12	36.48	90.00
SFACP14	14 FLG ADPT SLV W/PVC WDG RSTR	1	SFA14	75.07	1	SLCEP14	55.40	130.47
SFACP16	16 FLG ADPT SLV W/PVC WDG RSTR	1	SFA16	90.75	1	SLCEP16	68.32	159.07
SFACP18	18 FLG ADPT SLV W/PVC WDG RSTR	1	SFA18	103.12	1	SLCEP18	76.10	179.22
SFACP20	20 FLG ADPT SLV W/PVC WDG RSTR	1	SFA20	126.74	1	SLCEP20	84.48	211.22
SFACP24	24 FLG ADPT SLV W/PVC WDG RSTR	1	SFA24	166.94	1	SLCEP24	112.88	279.82
SFACP30	30" FLG ADPT SLV W/PVC WDG RSTR	1	SFA30	396.38	1	SLCEP30	248.97	645.35
SFACP36	36" FLG ADPT SLV W/PVC WDG RSTR	1	SFA36	437.22	1	SLCEP36	302.1	739.32



SIGMAFLANGE™ adapter carries Underwriters' Laboratory listing and Factory Mutual Research approval.

*SIGMAFLANGE Adapters must be used only in conjunction with the SIGMA ONE-LOK Restraints SLDE or SLCE

SIGMAFLANGE™ Adapter

Sample Specification

Restrained joint flange adapter in connecting plain-end pipe to a flanged fitting, valve or pipe shall incorporate a ductile iron mechanical joint x flange oversized sleeve and wedge-action restraining gland manufactured in accordance with ASTM A536, Grade 65-45-12. The flanged end must conform to Class 125/150 and ANSI/AWWA C115/A21.15 drill pattern. The mechanical joint end must be in accordance with ANSI/AWWA C111/A21.11, C110/A21.10 and C153/A21.53. Adapter must be installed using a SIGMA ONE-LOK for ductile iron or PVC pipe as appropriate for the carrier pipe material. The restrained joint flange adapter shall offer a maximum water working pressure rating of 350 psi (3" through 12") or 250 psi (14"-24") and provide a minimum 2:1 factor of safety. Restrained joint flange adapter shall be SIGMAFLANGE™ Adapter Model SFA or approved equal.

Installation Instructions

1. Examine the SIGMAFLANGE adapter sleeve to insure that all parts are free of damage and the SIGMA provided O-ring is properly secured in the cavity located on the face of the flanged end. Clean the pipe end thoroughly of any dirt or debris to facilitate the assembly of the mechanical joint gasket and provide a proper seal. Slide the SIGMA ONE-LOK™ restraining gland over the pipe end with the frontal lip facing the pipe end. Thoroughly apply soapy water or approved pipe lubricant per the ANSI/AWWA C111/A21.11 standard to the UL recognized mechanical joint gasket and the plain end of the pipe and slide the gasket over the plain end pipe making sure the tapered side of the gasket is facing the pipe end.

2. Install the SIGMAFLANGE adapter sleeve against the mating flanged outlet and insert the flange bolts in the corresponding bolt holes. Completely assemble the flanged joint (flange bolts are not included with the SIGMAFLANGE adapter). Insert the plain end pipe with the mechanical joint gasket and ONE-LOK restraining gland into the mechanical joint end of the adapter sleeve. The pipe must be inserted into the SIGMAFLANGE sleeve a minimum distance of 2.125" on 3"-4", 2.5" on 6"-12", and 3" on 14"-24" in order to accommodate the maximum deflection in the joint.

3. Ensure that the pipe is centered and the spacing of the pipes outside diameter and adapter sleeve's inside diameter are even throughout the entire circumference of the joint. Slide the mechanical joint gasket forward and seat evenly inside the mechanical joint cavity of the adapter sleeve, followed by the ONE-LOK restraining gland and hand tighten the necessary t-head bolts and nuts in the corresponding bolt holes. If joint deflection is required, make deflection following joint assembly but before tightening the bolts.

4. Install the SIGMA ONE-LOK restraining gland in accordance with the SIGMA installation instructions as appropriate for PVC or ductile iron pipe.

