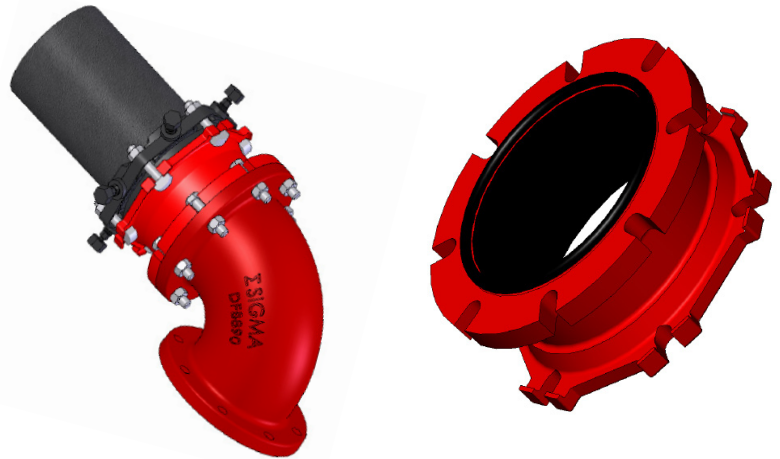
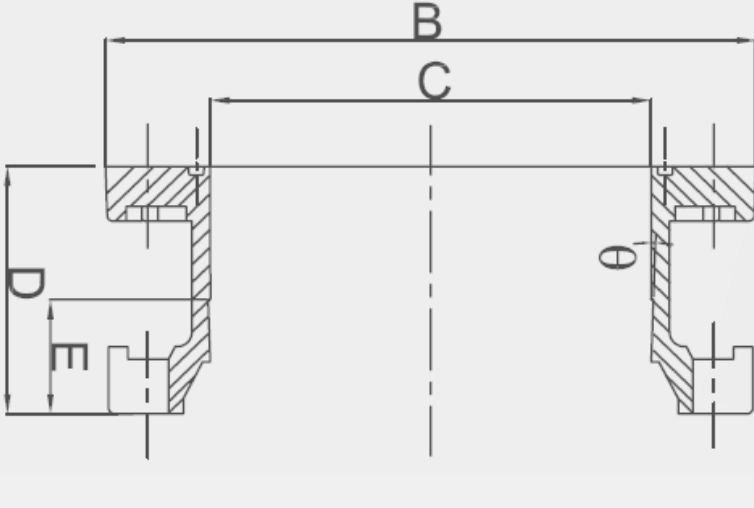


SIGMAFLANGE™ Adapter



Deflection Chart

Nominal Size	Item #	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

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.

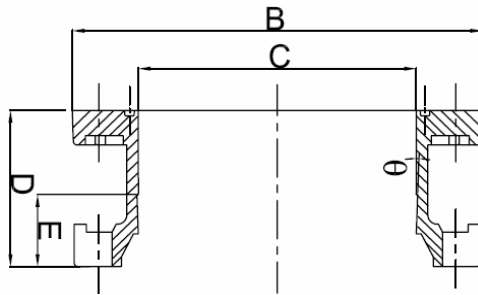
Features:

- 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*

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.

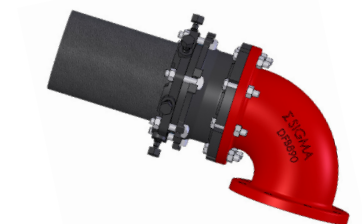
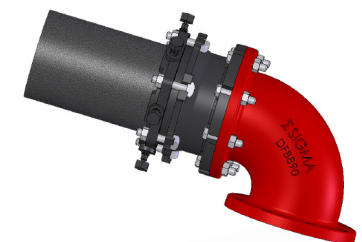
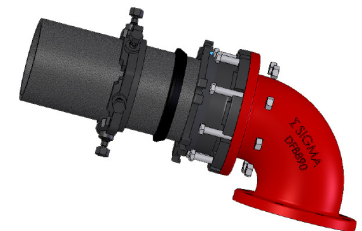
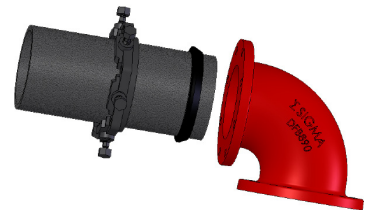
Installation Instructions

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.



LOCATIONS

North Region

Cream Ridge, New Jersey (HQ)

Phone (800) 999-2550
Fax (609) 758-1158
crm-sales@sigmaco.com

Sauk Village, Illinois

Phone (888) 999-0420
Fax (708) 758-6790
chi-sales@sigmaco.com

South Region

Alexander City, Alabama

Phone (800) 824-4513
Fax (256) 234-4956
rps-sales@sigmaco.com

Houston, Texas

Phone (800) 999-0109
Fax (281) 987-0200
htn-sales@sigmaco.com

West Region & Canada

Ontario, California

Phone (800) 688-6230
Fax (909) 391-2033
ont-sales@sigmaco.com

Auburn, Washington

Phone (800) 688- 6230
Fax (909) 391-2033
ont-sales@sigmaco.com

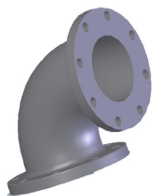
Victoriaville, Quebec, Canada

Phone (888) 744-6262
Fax (819) 758-1153
crm-sales@sigmaco.com

Innisfil, Ontario, Canada

Phone (877) 436-3800
Fax (705) 436-6338
crm-sales@sigmaco.com

AWWA Ductile Iron Fittings



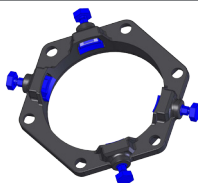
- 2-48" mechanical joint fittings (AWWA C153 & C110)
- 2-48" C110 / 54-64" C153 flanged fittings (cast iron also available)
- 3-48" MJ and 3-48" Flanged AWWA Fittings, Domestic Manufacture
- 4-24" TRIM TYTON® C153 / 14-24" TYTON® push on fittings
- 4-24" C110 push on fittings
- C116 fusion bonded epoxy lining available
- PROTECTO 401® ceramic epoxy lining available

Mechanical Joint Accessories



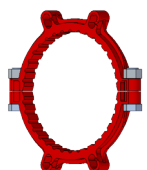
- Prepackaged and loose mechanical joint accessories
- SIGMASEAL™ improved mechanical joint gasket
- Snap-On multi-purpose gasket for ductile iron or PVC pressure pipes
- Ductile iron set screw retainer glands
- OMNI-SLEEVE™ improved wall penetration sleeve
- Specialty bolts and nuts for mechanical joint assemblies

ONE-LOK™ Wedge Action Restraints



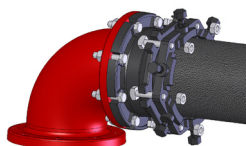
- 3-48" ONE-LOK SLDE restraint for ductile iron pipe (import or domestic)
- 3-36" ONE-LOK SLCE restraint for PVC pipe (import or domestic)
- 3-36" ONE-LOK SLDEH bell joint harness for ductile iron pipe
- 4-12" / 20" ONE-LOK SLDM restraint for oversized cast iron pipe
- 4-36" ONE-LOK SSLD split restraint for existing ductile iron pipe
- 4-36" ONE-LOK SSLDH split restraint harness for existing ductile iron pipe
- 4-12" ONE-LOK SLCEH bell joint harness for PVC pipe

PV-LOK™ Serration Lock Restraints



- 4-48" PV-LOK PWM Restraint for MJ Fitting to PVC pipe
- 4-48" PV-LOK PWP Restraint for PVC bell joint restraint
- 4-48" PV-LOK PWPF Restraint for PVC fitting to PVC pipe
- 4-12" PV-LOK PWH PVC bell joint harness
- 2-12" PV-LOK PVM Restraint for MJ Fitting to IPS PVC pipe
- 2-12" PV-LOK PVP Restraint for IPS PVC pipe bell joint
- 4-8" PV-LOK PVPF Restraints for IPS PVC pressure fitting

Flange Adapters



- 3-36" SIGMAFLANGE SFA flange adapter sleeve for PVC and DIP
- 2-48" ZIP FLANGE set screw style flange adapter

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 (2ft)
- 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

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