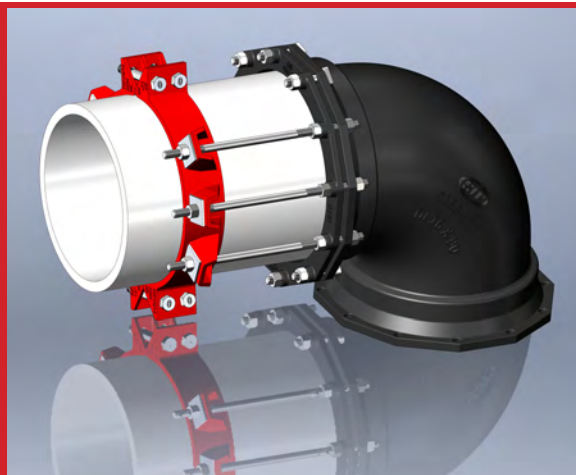


PTPDF JOINT RESTRAINT FOR PVC PIPE TO DI FITTINGS

## The EZ GRIP®

Pipe-To-Fitting Joint Restraint is a proven design, offering an efficient, reliable, and inexpensive method of restraining mechanical joint and push-on pipe fittings (4"-12")\*\* by utilizing a series of rigid machined gripping serrations that grabs, holds, and secures the PVC pipe to the fitting



## ADVANTAGES, BENEFITS, FEATURES

- The PTPDF Joint Restraint eliminates the need of timely thrust blocks.
- The PTPDF Joint Restraint performs optimally with AWWA C900 (PVC), C906 (HDPE), C909 (PVCO), or ASTM D2241 IPS PVC Pipe.
- Composed of high strength Ductile Iron in compliance with the ASTM A536 Standard, Grade 65-45-12
- T-Bolts, Rods, and Hex nuts are manufactured from high-strength low-alloy (HSLA) steel as per ANSI/AWWA C111/A21.11.
- Machined to exact tolerances with a minimum safety factor of 2:1 \*\*
- Easily maintains a working water pressure equal to that of the PVC pipe on which it is installed
- The PTPDF Joint Restraint is designed and manufactured to be disassembled, reinstalled, and reusable.
- The PTPDF Joint Restraint can be installed on new or existing water systems.
- The PTPDF Joint Restraint allows full joint deflection and maintains the seal while under pressure, and while subjected to ground movements.
- The internal serrations offer 360° circumferential contact with the pipe wall and increase the grip as the hydrostatic pressure increases while concurrently offering support of the pipe wall.
- With the split castings, the PTPDF Joint Restraint can conveniently be installed in or outside the trench.
- The PTPDF Joint Restraint for Ductile Iron Fittings is provided with a coating that is compatible with most field applied coatings. The standard color of the PTPDF Joint Restraint is red.
- Offered in sizes from 4" up to 48"

Available:  Import

\*\*Harness pressure rating is reduced if not all connecting bolts/rods are used.

### Installation Procedure: 4"-12"



Some ductile iron fittings will not allow the longer T-Head Bolts to be installed in the "crotch" of the fitting. Under these conditions simply orient the restrainer so that the longer bolts can be used.

**1** Insert the spigot end of the pipe into the mechanical joint (MJ) bell. Next, insert one of the T-bolts through one of the bolt holes and mark a line approximately 1 inch from the far end of the bolt. For Push-On fittings, insert one of the long threaded rod through the top tab of the fitting and mark a line approximately 1 inch from the far end of the rod.

**2** Assemble the MJ joint using the gasket, gland, and T-bolts to AWWA standards omitting the T-bolts corresponding to the ears on the restrainer. Assemble the restrainer on the pipe (as shown) so that the marked line on the pipe is even with the far side of the restrainer. Next, align the restraint holes by using one of the provided long T-bolts. Then, tighten restrainer clamping bolts to the recommended torque (see table below). For Push-on joint fittings, assemble the joint as per the manufacturers instructions. Assemble the restrainer on the pipe as described above. Align the restrainer so that the restraint holes line up with the tabs on the push-on joint fitting.

**3** Insert one of the long T-bolts and assemble one nut each between the gland and the restrainer (as shown). Repeat the same procedure for the remaining long T-bolts. T-bolts should be tightened as per AWWA standards. For Push-on joint fittings, insert the threaded rod through the restrainer ring and into the tab on the fitting. Thread one nut onto the fitting side of the assembly. Thread a nut onto the threaded rod against the far side of the retainer. Repeat the same procedure for the remaining threaded rods.

**4** Snug tighten the remaining nuts behind the restrainer ears against the flat surface in a way that spigot end is secured into the MJ bell.

NOTE: Do not over-tighten the restrainer nuts, hand tight the nuts plus about one turn with a wrench.

### Installation Procedure: 14"-48"



**1** Insert the spigot end of the pipe into the mechanical joint (MJ) bell. Next, insert one of the long threaded rods through one of the open bolt holes and mark a line approximately 2 inches from the far end of the rod (towards the mechanical joint).

**2** Assemble the MJ joint using the gasket, gland, and T-bolts to AWWA standards omitting the long threaded rods corresponding to the ears on the restrainer. Assemble the restrainer on the pipe (as shown) so that the marked line on the pipe is even with the far side of the restrainer and the flat side of the ears is facing away from the fitting. Next, align the restraint holes by using one of the provided restraining rods. Then, tighten restrainer clamping bolts to the recommended torque (see table below).

**3** Assemble one nut behind the fitting bell, one nut against the gland. Repeat the same procedure for the remaining long threaded rods and tighten as per AWWA standards (this completes the MJ gasket assembly).

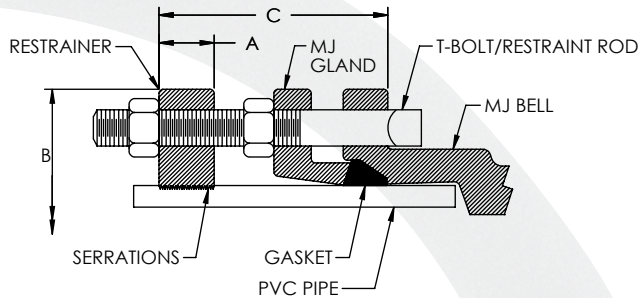
**4** Assemble one nut with washer on the flat side of each restrainer ear (as shown) and tighten until snug.

NOTE: Do not over-tighten the restrainer nuts, hand tight the nuts plus about one turn with a wrench.

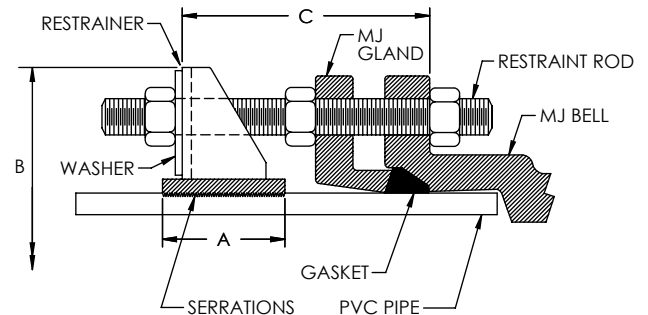
T-BOLT TORQUE (AS PER AWWA C600)		
PIPE SIZE (IN)	BOLT SIZE (IN)	RANGE OF TORQUE (FT/LBS)
4-24	3/4	75-90
30-36	1	100-120
42-48	1 1/4	120-150

RECOMMENDED TORQUE (CLAMPING BOLTS)	
PIPE SIZE (IN)	RANGE OF TORQUE (FT/LBS)
4-12	90-110
14-16	150-200
18	175-225
20	200-250
24-36	225-275
42-48	300-350

### Technical Data



SIZES: 4" - 12"



SIZES: 14" - 48"

### PTPDF PIPE RESTRAINTS SPECIFICATIONS

Size	C900/C909 PVC Pipe PTPDF Series		IPS PVC Pipe PTPSDF Series		A	B (Approx.)	C (Max.)	Restraint Bolts/Rods		Clamping Bolts		Approx. Weight (Lbs)
	O.D.	Item Code	O.D.	Item Code				Qty	Size	Qty	Size	
4	4.80	PTPDF04	4.50	PTPSDF04	1.12	9.15	6.00	2	3/8 X 7	2	3/8 X 3 1/2	8
6	6.90	PTPDF06	6.63	PTPSDF06	1.15	11.12	6.00	2	3/8 X 7	2	3/8 X 3 1/2	10
8	9.05	PTPDF08	8.63	PTPSDF08	1.47	14.75	6.00	2	3/8 X 9	2	3/8 X 4	20
10	11.10	PTPDF10	10.75	PTPSDF10	1.38	16.82	6.00	4	3/8 X 9	2	3/8 X 5	25
12	13.20	PTPDF12	12.75	PTPSDF12	1.42	19.45	6.00	4	3/8 X 9	2	3/8 X 5	28
14	15.30	PTPDF14	N/A	N/A	4.00	22.56	15.00	6	3/8 X 17	4	3/8 X 7	65
16	17.40	PTPDF16	N/A	N/A	4.00	24.64	15.00	6	3/8 X 17	4	3/8 X 7	72
18	19.50	PTPDF18	N/A	N/A	5.00	26.64	15.00	8	3/8 X 17	4	3/8 X 7	90
20	21.60	PTPDF20	N/A	N/A	5.00	28.75	22.00	8	3/8 X 24	4	1 1/8 X 9	110
24	25.80	PTPDF24	N/A	N/A	5.00	33.90	22.00	12	3/8 X 24	4	1 1/8 X 9	135
30	32.00	PTPDF30	N/A	N/A	5.50	40.75	22.00	10	1 X 24	4	1 1/8 X 8 1/2	260
36	38.30	PTPDF36	N/A	N/A	7.00	47.25	22.00	12	1 X 24	6	1 1/8 X 6	382
42	44.50	PTPDF42	N/A	N/A	6.30	56.25	32.00	16	1 1/4 X 36	4	1 1/2 X 9	565
48	50.80	PTPDF48	N/A	N/A	6.90	63.64	32.00	16	1 1/4 X 36	6	1 1/2 X 10	1170

All dimensions in inches, unless stated otherwise.

Please refer to our web page [www.sipindustries.com](http://www.sipindustries.com) for up to date product data and technical advisories

STANDARDIZED PRESSURE RATINGS														
Size	CI O.D.											IPS O.D.		
	ANSI/AWWA C900									ANSI/AWWA C909 PVC0		ASTM D2241		
	DR14	DR17	DR18	DR21	DR25	DR27.5	DR32.5	DR41	DR51	PC235	PC165	SDR11	SDR21	SDR26
4	200	-	150	-	100	-	-	-	-	-	-	250	200	160
6	200	-	150	-	100	-	-	-	-	-	-	250	200	160
8	200	-	150	-	100	-	-	-	-	-	-	250	200	160
10	200	-	150	-	100	-	-	-	-	-	-	250	200	160
12	200	-	150	-	100	-	-	-	-	-	-	250	200	160
14	305	250	235	200	165	-	-	-	-	235	-	-	-	-
16	-	250	235	200	165	-	-	-	-	235	165	-	-	-
18	-	250	235	200	165	-	-	-	-	200	-	-	-	-
20	-	-	235	200	165	-	-	-	-	-	-	-	-	-
24	-	-	235	200	165	-	-	-	-	-	-	-	-	-
30	-	-	235	200	165	150	125	100	80	-	-	-	-	-
36	-	-	235	200	165	150	125	100	80	-	-	-	-	-
42	-	-	-	200	165	150	125	100	80	-	-	-	-	-
48	-	-	-	-	165	150	125	100	80	-	-	-	-	-





**SIP Industries**  
Quality Manufacturers Since 1960

**EZ GRIP®**  
**PTP SERIES**

## PTPDF JOINT RESTRAINT FOR PVC PIPE TO DI FITTINGS

### SAMPLE SPECIFICATIONS

The PVC pipe to ductile iron fittings restraining mechanism shall be designed and manufactured as two identical halves performing as a joint restraint. The PVC pipe to ductile iron fittings restraint shall be compatible with AWWA C900, C906, C909 and ASTM D2241 PVC Pipe and shall contain a series of rigid integrally machined serrations that grip the outside wall of the PVC Pipe. The PVC pipe to ductile iron fitting harness shall have the same pressure rating as the pipe with a 2:1 safety factor. The grip of the serrations shall increase as the hydrostatic pressure increases.

There shall be no additional tools required for installation other than the tools required to install standard sizes of hex nuts from 5/8" - 1 1/4". All hex heads, bolts and rods shall be designed to tighten clockwise. All hex heads, bolts and rods shall be manufactured to allow for disassembly and re-installation of the restraint.

The gland halves shall be manufactured of high strength ductile iron in accordance with the ASTM A536 Standard, Grade 65-45-12. Bolts, rods, and hex nuts shall be manufactured from high-strength low-alloy (HSLA) steel as per ANSI/AWWA C111/A21.11.

The restraining gland shall comply with all applicable dimensions of ANSI/AWWA C111/A21.11 and shall be compatible with all PVC pipe and mechanical joint fittings and push-on joint fittings (4"-12") sockets of the standard.

The restraint device for PVC Pipe to Ductile Iron Fitting shall be SIP Industries series PTPDF or equal.

Available: Import

### PRODUCT LINE

#### AWWA DI Fittings & Accessories

- C153 Compact MJ Fittings and Acc. 2" - 64"
- C110 Full Body MJ Fittings 2" - 64"
- C153 Trim Tyton® Push-On Fittings 4" - 24"
- C110 Flange Fittings 2" - 64"
- MJ x MJ Adapter for Connecting MJ Bells 3" - 24"
- Stainless Steel & Blue T-Bolts
- Made in India, China & Mexico
- Bare, Cement, Zinc, FBE & Other Linings

#### Joint Restraint System

- EZD Joint Restraint for DI Pipe 3" - 48"
- EZDTP Joint Restraint Tandem for DI Pipe 3" - 48"
- EZDPTP Joint Restraint for Push-On Joints DI Pipe 3" - 48"
- Ductile Iron Retainer Glands 3" - 30"
- FAR / FAH Flange Adapter for DI Pipe 3" - 48"
- EZFA Restrained Flange Adapter for DI and PVC Pipe 3" - 36"
- EZPVC Joint Restraint for PVC Pipe 3" - 36"
- ULTRA Joint Restraint for PVC Pipe 4" - 12"
- EZPVCPTP Joint Restraint for Push-On Joints PVC Pipe 14" - 36"
- PTPVC Pipe to Pipe Restraint 4" - 48"
- PTPDF Pipe to MJ Fittings Restraint 4" - 48"
- PTPFC Pipe to PVC Fittings Restraint 4" - 12"
- Made in China & USA
- EZ Shield or Shop Coating

#### Municipal Construction Castings

- Manhole Rings and Cover
- Frames and Grates
- Valve Boxes and Service Boxes
- Water Meter Covers and Boxes
- Cleanout and Monument Boxes
- Detectable Warning Plates
- Extension Rings
- Trench Grates and Tree Grates
- Made in India & USA

#### Fabrication Products for DI Pipe

- High Hub Flanges Class 150 and 250. 3" - 64"
- Threaded Bell Flanges 3" - 48"
- Anchor Flanges 3" - 60"
- Filler Flanges 4" - 30"

#### Other Products and Services

- All Thread Rod
- Pipe Lube and Hydraulic Cement
- Socket Clamps and Lugs
- Flange Packs
- OEM Castings



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