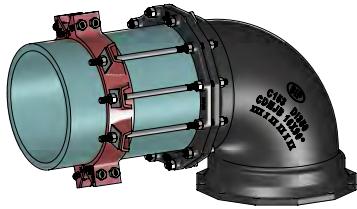


## 4" - 48" PVC PIPE TO DI FITTING JOINT RESTRAINT

### Submittal Information

Project Name / Location:	
Engineer:	
Referenced Specs:	
Distributor / Contractor:	



### Optional Specifications

Coating:	EnviroShield, Direct To Metal (DTM) Alkyd Enamel (Red)
	EZ-Shield® Polyester Based Powder Coating (Red)
	Other - Specify:
Rods, Bolts: & Nuts	Standard High Strength Low Alloy Steel (HSLA) In Accordance With ANSI/AWWA C111/A21.11
	Fluoropolymer Corrosion Resistant Coating
	Stainless Steel: Type 304 Type 316
	Other - Specify:

### General Specifications



**Material** : Harness bodies are Ductile Iron per ASTM A536, Grade 65-45-12

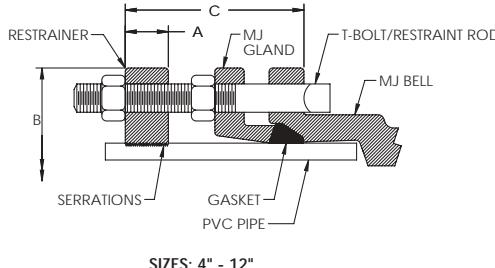
**Pressure** : Pressure rating equal to that of the PVC pipe rating, with a minimum 2:1 safety factor. The grip of the 360° circumferential serrations increases as the hydrostatic pressure increases. (Note: Harness pressure rating is reduced if not all connecting bolts/rods are used)

**Dimensions** : Compatable with AWWA C900 (PVC), C906 (HDPE)\*, C909 (PVCO) or ASTM D2241 IPS PVC Pipe  
\* AWWA C906 HDPE Pressure Pipes up to 12" by using internal pipe stiffeners.  
\* IPS PVC Pipe applications require use of a Transition Gasket.

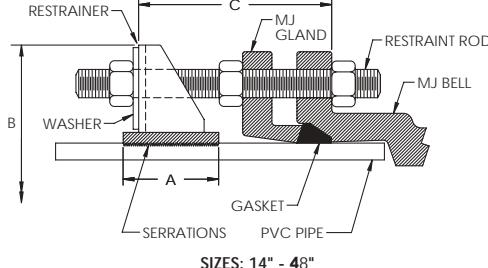
**Installations** : Install in accordance with SIP installation procedures and intent of AWWA C600 / M41  
Pipe ends must be free from defects to allow proper gland engagement to the pipe ends  
Note: There are no additional tools required for installation other than the tools required to install standard sizes of hex nuts from 5/8"-1 1/4".  
The hex heads, bolts and rods shall be designed to tighten clockwise. The hex heads, bolts and rods are manufactured to allow for disassembly and re-installation of the restraint.

**Deflection** : Restraint allows the full joint deflection dictated by pipe manufacturer's recommendation, and maintains the seal while under pressure, and while subjected to ground movements

**Approvals** : FM Approved for sizes 4"-12" at 185 psi on AWWA C900 Class 235 DR-18 PVC pipe



SIZES: 4" - 12"



SIZES: 14" - 48"

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 Specifications

Size	C900 PVC Pipe PTPDF Series			IPS PVC Pipe PTPSDF Series			A	B (Approx.)	C (Max.)	Restraint Bolts/Rods		Clamping Bolts		Approx. Weight (Lbs)
	Select	O.D.	Item Code	Select	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 1/4 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 1/4 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

Supporting documentation for the above 'General Specifications' and 'Optional Specifications' are available upon request to review, in addition to Installation Instructions and any requested material samples

Please contact SIP for technical assistance of nonstandard applications

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

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