



**SIP Industries**

Quality Manufacturers Since 1960

**EZ GRIP®**

## EZ GRIP® ULTRA PVC Joint Restraint

- Less wedges result in less labor time & easier installation
- The highest certified pressure rating in the Industry for PVC pipe joint restraint
- Installs on either CI OD or IPS PVC pipe without the need to remove washers, thus eliminating human error
- Wedges are threaded into the torque bolt assemblies, not glued, eliminating the possibility of the wedges falling out during shipping, or when handling in the field.
- Wedges match the curve of the pipe diameter, eliminating point loading
- Grips 2/3 of the pipe circumferential area
- Wedge torque increases with pressure, eliminating pipe stress
- 14" and up provides evenly distributed 360° pipe grip engagement



### ADVANTAGES, BENEFITS, FEATURES

- The EZ GRIP® Joint Restraint performs optimally with all mechanical joint sockets of the ANSI/AWWA C111/A21.11, C110/A21.10, and C153/A21.53 Standards and may be used with 4" - 24" AWWA C900 (PVC), C906 (HDPE)\*, C909 (PVC) or 3"-12" ASTM D2241 IPS PVC Pipe
- The EZ GRIP® Joint Restraint will allow full 5° joint deflection
- The EZ GRIP® Joint Restraint shall have a pressure rating equal to that of the PVC pipe and shall have a minimum safety factor of at least 2 to 1
- The hex head of the torque control actuating screw is the same size as a standard T-bolt nut (1¼"), it's designed to shear at a preset limit, assuring proper installation and preventing damage to the PVC pipe.
- 5/8" hex head remains for disassembly and re-installation, if necessary
- The gland, wedges, and screws are manufactured from high strength Ductile Iron in compliance with the ASTM A536 Standard, Grade 65-45-12
- The EZ GRIP® Joint Restraint for PVC Pipe is provided with a standard red coating compatible with most field applied coatings. It is also available with EZ Shield®, a polyester based powder coating
- Approved by Factory Mutual (FM) for sizes 4"-12" at 250psi for AWWA C900 Class 305 DR-14 pipe and at 200psi on AWWA C900 Class 235 DR-18 pipe. Listed with Underwriters Laboratories (UL) for sizes 4"-12" at 235psi on AWWA C900 Class 235 DR-18 pipe



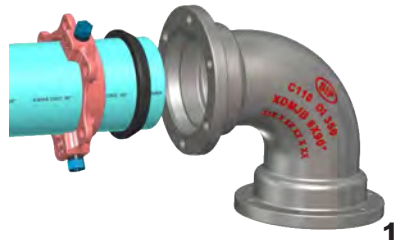
\* AWWA C906 HDPE Pressure Pipes up to 12" by using internal pipe stiffeners. Contact SIP for further assistance.

V 0524-01

**Toll Free 877-921-6111**  
**www.sipindustries.com**

**Installation Procedure**

Installation Procedure for restraining mechanical joint appurtenances on PVC pipe



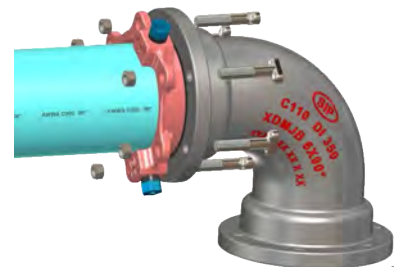
1



2



3



4



5



6

**1** Establish the type and diameter of the PVC pipe. If the PVC pipe is AWWA C900, or C909 then a Standard gasket is used. If the PVC pipe is IPS (Steel OD) then a Transition Gasket is required for proper sealing.

**2** Clean the socket and the plain end. Lubrication and additional cleaning should be provided by brushing both the gasket and the plain end with soapy water or an approved pipe lubrication meeting the requirement of ANSI/AWWA C111/A21.11, just prior to slipping the gasket onto the plain end for joint assembly. Place the gland on the plain end with lip extension toward the plain end, followed by the gasket.

NOTE: In cold weather it is preferable to warm the gasket to facilitate assembly of the joint.

**3** Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Keep the joint straight during assembly.

**4** Push the gland toward the socket and center it around the pipe with the gland lip against the gasket. Insert bolts and hand tighten nuts. Make deflection after joint assembly but before tightening bolts.

**5** Tighten the bolts to the normal range of torque as per AWWA C600 (see table below), while at all times maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This can be accomplished by partially tightening the bottom bolt first, then top bolt, next the bolts at either side, finally the remaining bolts. Repeat the process until all bolts are within the appropriate range of torque. The use of a torque-indicating wrench will facilitate this procedure. Over-tightening T-Head Bolts can damage the PVC pipe. Do not over-tighten the T-Head Bolts

**6** Tighten the torque control hex heads clockwise until all the wedges are in firm contact with the pipe wall.

Tighten a torque control hex head 1/2 turn, and then continue tightening each torque control hex head 180° opposite the previously tightened hex head until all torque control hex heads have been twisted off.

If it is necessary to disassemble, a 5/8" hex head is provided on the wedge screws.

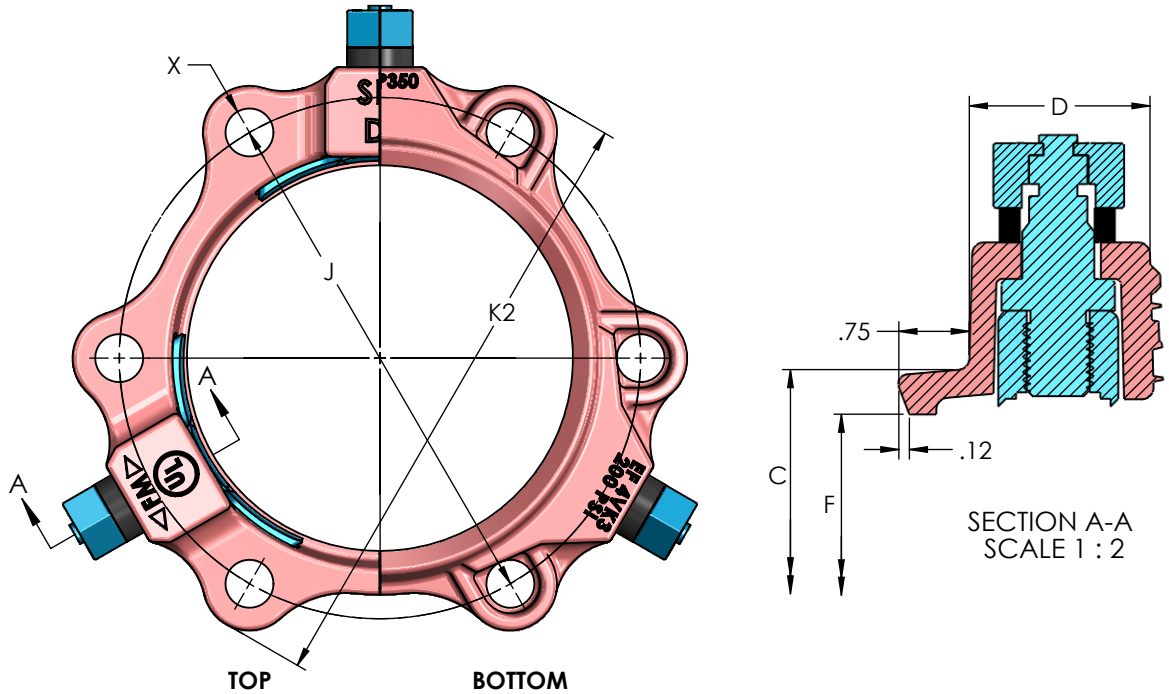
For re-installation, first confirm that all wedges are in their sockets, and then follow the installation instructions, using a torque indicating wrench to tighten the 5/8" hex head to 45 ft-lbs for 3", 65 ft-lbs for 4"-12", and 85 ft-lbs for sizes 14"-24".

BREAK-AWAY HEX NUT TORQUE RANGES	
SIZE (IN)	RANGE OF TORQUE (FT-LBS)
3	40 - 50
4 - 12	65 - 75
14 - 24	75 - 85

RECOMMENDED TORQUE (T-HEAD BOLTS & NUTS)*		
PIPE SIZE (IN)	BOLT SIZE (IN)	RANGE OF TORQUE (FT-LBS)
3	5/8	45 - 60
4 - 24	3/4	75 - 90

\* Requirement of AWWA C600

**Technical Data**



**EZ-GRIP® ULTRA PVC RESTRAINTS SPECIFICATIONS**

NOMINAL PIPE SIZE	SERIES NUMBER	C	D	F	X	J	K2	BOLT QTY	WEDGE QTY	APPROX. WEIGHT (LBS)
3	EZPVCU03	4.84	1.83	4.06	3/4	6.19	7.54	4	2	5.69
4	EZPVCU04	5.92	1.83	4.90	7/8	7.50	9.16	4	2	7.22
6	EZPVCU06	8.02	1.87	7.00	7/8	9.50	11.12	6	3	10.74
8	EZPVCU08	10.17	1.88	9.15	7/8	11.75	13.75	6	4	15.13
10	EZPVCU10	12.22	2.03	11.20	7/8	14.00	15.91	8	6	22.37
12	EZPVCU12	14.32	2.05	13.30	7/8	16.25	18.23	8	6	25.50
14	EZPVCU14	16.40	2.69	15.44	7/8	18.75	20.63	10	10	51.70
16	EZPVCU16	18.50	2.69	17.54	7/8	21.00	22.88	12	12	61.30
18	EZPVCU18	20.60	2.76	19.64	7/8	23.25	25.25	12	12	72.37
20	EZPVCU20	22.70	2.76	21.74	7/8	25.50	27.50	14	14	81.82
24	EZPVCU24	26.90	2.83	25.94	7/8	30.00	32.00	16	16	100.62

All dimensions are 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							
ANSI/AWWA C900 CI OD		ANSI/AWWA C906 HDPE*		C909 PVC O Pressure Pipe		ASTM D2241 IPS OD	
DR 14	305 PSI	DR 7.3	254 PSI	PC235	235	SDR 17	250 PSI
DR 18	235 PSI	DR 9	200 PSI			SDR 21	200 PSI
DR 25	165 PSI	DR 9.3	193 PSI			SDR 26	160 PSI
DR 32.5	125 PSI	DR 11	160 PSI				

\* AWWA C906 HDPE Pressure Pipes up to 12" by using internal pipe stiffeners of sufficient length to support full bearing length of restraint (provided by others).

**Toll Free 877-921-6111**

**www.sipindustries.com**



# SIP Industries

Quality Manufacturers Since 1960

# EZ GRIP®

JOINT RESTRAINT FOR PVC PIPE

## SAMPLE SPECIFICATIONS


The mechanical joint restraining mechanism and the follower gland shall be designed and manufactured as one integral device providing for a joint seal and performing as a joint restraint. The mechanical joint restraint shall be compatible with AWWA C900, C906, C909 and ASTM D2241 PVC Pipe and shall be achieved by a series of individually activated, contoured wedges gripping the outside wall of the PVC Pipe. The mechanical joint restraint shall have the same pressure rating as the pipe with a 2:1 safety factor. The grip of the wedges shall increase as the hydrostatic pressure increases.

There shall be no additional tool required for installation other than the tool required to install a standard Mechanical Joint T-Bolt and 1-1/4" Nut. The hex head of the actuating screw shall be designed to break off at a preset torque, and only by tightening clockwise. After the removal of the 1-1/4" torque control hex head, a 5/8" hex head on the actuating screw shall remain, to allow for the disassembly and re-installation of the gland and restraint.

The gland, screws, and wedges shall be manufactured of high strength ductile iron in accordance with the ASTM A536 Standard, Grade 65-45-12.

The restraining gland shall comply with all applicable dimensions of ANSI/AWWA C111/A21.11, C110/A21.10 and C153/121.53 and shall be compatible with all mechanical joint sockets of those standards, unless stated otherwise.

The EZGrip mechanical joint restraint mechanism for PVC pipe shall be approved by Factory Mutual for sizes 4"-12" and listed by Underwriters Laboratories for sizes 4"-12". The restraint device for PVC Pipe shall be SIP Industries series EZP 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 3" - 24"
- 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



**SIP INDUSTRIES**  
SERAMPORE  
SINCE 1960

**SIP CORPORATE** 8876 Gulf Freeway, Suite 500, Houston, TX 77017

**SIP CENTRAL** 2900 Patio Drive, Houston, TX 77017

**SIP EAST** 600 Rayloc Drive, Atlanta, GA 30336

**SIP WEST** 8333 Almeria Avenue, Fontana, CA 92335

Phone: 877-921-6111 or 713-923-6111 | Fax: 713-923-6114 | [www.sipindustries.com](http://www.sipindustries.com) | [sales@sipindustries.com](mailto:sales@sipindustries.com)