



# PVC Stargrip® series 4000G2

Mechanical Joint Wedge Action Restraint  
for Plastic Pressure Pipe  
U.S. Patent #9,822,910



6" PVC Stargrip® Series 4000G2 for PVC Pipe

### SUBMITTAL INFORMATION

PROJECT NAME:

ENGINEER:

CONTRACTOR:

SPEC. SECTION:



### FEATURES & ADVANTAGES

- Can be used on 4" through 12" AWWA C900 and AWWA C909 PVCO pipe, HDPE pipe or 3"-12" IPS Plastic pipe\* (**\*transition gasket required on IPS PVC Pipe**).
- Tested to and meets the requirements of ASTM F1674.
- Listed with Underwriters Laboratories in sizes 4" to 12".
- Approved by Factory Mutual Research in sizes 4" to 12".
- The safety factor is twice (2:1) the standardized pressure rating listed on next page.
- Improved design (Gen 2) provides same performance with fewer wedges and lower wedge-bolt torque (45 to 60 ft-lbs).
- Fewer wedges and lower torque results in a quicker and easier installation.
- Gen 2 design uses a spacer that is easily removed when restraint is used on IPS Plastic pipe. Wedge bolts no longer need to be removed and reinstalled to remove spacer.
- Curved wedges reduce the amount of localized pipe deformation.
- Gen 2 offers five degrees of deflection on all sizes of AWWA C900 pipe.
- The gland's larger inside diameter allows Gen 2 to be installed on pipe with more ovality.
- Improved design of the wedge bolts prevents over torquing which can damage PVC pipe.
- Wedges are mechanically attached to wedge bolts, which eliminates the possibility of falling out during shipping and handling.
- Gland is made from high strength Ductile Iron per ASTM A536 Grade 65-45-12 and is compatible with all Mechanical Joints that conform to ANSI/AWWA C111/A21.11.
- Eliminates the need for tie rods and thrust blocks.
- Patent Pending

### MATERIAL SPECIFICATIONS:

- Wedges: Ductile Iron per ASTM A536, Grade 65-45-12. Wedge coating is a thermally cured fluoropolymer epoxy.

#### GLAND FINISH:

- Standard: alkyd enamel coating
- Optional: Starbond™ TGIC polyester powder coating applied by an electrostatic spray process
- Optional: Other (specify) \_\_\_\_\_

#### COUNTRY OF ORIGIN:

Import only

#### HARDWARE OPTIONS (Please check):

- Standard: T-bolts and nuts are high strength low alloy steel manufactured in accordance with ANSI/AWWA C111/A21.11
- Optional: T-bolts alloy SS 304 per ASTM F593; Nuts alloy SS 304 per ASTM F594 CW
- Optional: T-bolts alloy SS 316 per ASTM F593; Nuts alloy SS 316 per ASTM A194 Grade 8M
- Optional: T-bolts and nuts Fluoropolymer Star-Blue coated high strength low alloy steel manufactured in accordance with ANSI/AWWA C111/A21.11



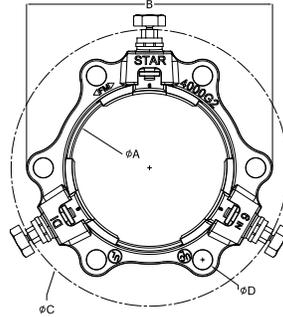
STAR® PIPE PRODUCTS



PVC Stargrip® series 4000G2

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TECHNICAL INFORMATION



6" PVC Stargrip® Series 4000G2 for PVC Pipe

PVC STARGRIP® 4000G2 SPECIFICATIONS*									
NOM. SIZE	C900/C909 PIPE CI OD	IPS PIPE OD (TRANSITION GASKET REQUIRED)	ØA	B	ØC <sup>1</sup>	ØD	T-BOLT SIZE (QTY)	WEDGE (QTY)	APPROX WT. (LBS)
3	N/A	3.50	4.09	7.57	9.01	3/4	5/8 x 3 (4)	2	6
4	4.80	4.50	4.93	9.00	10.29	7/8	3/4 x 3 1/2 (4)	2	7
6	6.90	6.63	7.03	11.00	12.39	7/8	3/4 x 3 1/2 (6)	3	10
8	9.05	8.63	9.18	13.25	14.44	7/8	3/4 x 4 (6)	4	15
10	11.10	10.75	11.23	15.62	16.59	7/8	3/4 x 4 (8)	6	21
12	13.20	12.75	13.33	17.87	18.54	7/8	3/4 x 4 (8)	6	25

Please check sizes:

\*All dimensions in inches except where indicated.  
1 - dimension after assembly on pipe

Table A. Maximum Working Pressure Rating with Occasional or Recurring Surges in PSI for Plastic Pipes Made to a CIOD Diameter Regimen

NOM. SIZE (IN)	Actual Plastic Pipe OD	AWWA C900 PVC						AWWA C909 PVCO		AWWA C906 HDPE*					
		DR14	DR17	DR18	DR21	DR25	DR27.5	IPEX PVCO	JM EAGLE PVCO	DR 7.3	DR 9	DR 9.3	DR11	DR13.5	DR17
								PC235	PC235						
4	4.80	305	250	235	200	165	-	235	-	254	200	193	160	130	100
6	6.90	305	250	235	200	165	-	235	235	254	200	193	160	130	100
8	9.05	305	250	235	200	165	-	235	235	254	200	193	160	130	100
10	11.10	305	250	235	200	165	-	235	235	254	200	193	160	130	100
12	13.20	305	250	235	200	165	-	235	235	254	200	193	160	130	100

\* A stainless steel pipe stiffener (provided by others) is required for the Series 4000G2 to be installed on HDPE pressure pipe. The stiffener must be installed in the HDPE pipe before installing the Series 4000G2. The stainless steel pipe stiffener must be of sufficient length to support the full bearing length of the restrainer.

Table B. Maximum Working Pressure Rating with Occasional or Recurring Surges in PSI for Plastic Pipes Made to an IPS Diameter Regimen

NOM. SIZE (IN)	Actual Plastic Pipe OD	ASTM D2241 PVC			AWWA C901 and AWWA C906 HDPE**					
		SDR17	SDR21	SDR26	DR 7.3	DR 9	DR 9.3	DR11	DR13.5	DR17
3	3.50	250	200	160	254	200	-	160	130	100
4	4.50	250	200	160	254	200	193	160	130	100
6	6.63	250	200	160	254	200	193	160	130	100
8	8.63	250	200	160	254	200	193	160	130	100
10	10.75	250	200	160	254	200	193	160	130	100
12	12.75	250	200	160	254	200	193	160	130	100

NOTE: A transition gasket is required for use with pipes made to an IPS diameter regimen.

\*\* A stainless steel pipe stiffener (provided by others) is required for the Series 4000G2 to be installed on HDPE pressure pipe. The stiffener must be installed in the HDPE pipe before installing the Series 4000G2. The stainless steel pipe stiffener must be of sufficient length to support the full bearing length of the restrainer.

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