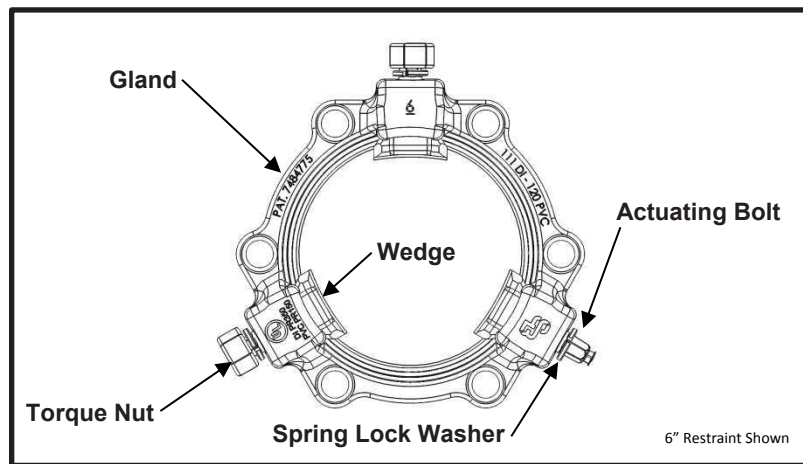


SPECIFICATION

CAM-LOCK™ JOINT RESTRAINT

MODEL 111



APPLICATIONS

- **Typical Uses**
 - Restraining and sealing Ductile Iron or Carbon Steel pipe ends to mechanical joint valves or fittings
- **Standard Pipe Size**
 - Ductile Iron 3" - 48" nominal
 - Carbon Steel 3" - 12" nominal
- **Type of Pipe**
 - Ductile Iron, Carbon Steel
- **Working Pressure**
 - Ductile Iron pipe sizes 3" - 16" = 350 psi, 18" - 48" = 250 psi
 - Carbon Steel pipe sizes 3" - 12" = 250 psi

MATERIALS

- **Gland**
 - Cast using Ductile Iron 65-45-12 per ASTM A536
 - Flexi-Coat® fusion bonded epoxy finish meets requirements of AWWA C213
 - Wedge pocket designed for unique cam action for maximum wedge engagement
 - Maximum Pipe Deflection: 3" = 3°, 4" - 12" = 5°, 14" - 16" = 2°, 18" - 24" = 1.5°, 30" - 48" = 1°
- **Wedge**
 - Cast using Ductile Iron 65-45-12 per ASTM A536
 - E-Coated Epoxy finish, color coded black
 - Contoured single tooth design for maximum pipe engagement
 - Heat treated to RC 45
- **Torque Nut**
 - 1008/1010 Carbon Steel
 - E-Coated Epoxy finish, color coded black
 - Fits standard socket sizes 3" = 1-1/16", 4"-24" = 1-1/4", 30"-36" = 1-5/8", 42"-48" = 2"
 - Low breakaway torque 45 - 60 ft. lbs.
- **Actuating Bolt**
 - Cast using Ductile Iron 60-40-18 per ASTM A536
 - E-Coated Epoxy finish, color coded black
 - 3/4" - 10 UNC - 2A - LH
 - Secondary 5/8" hex shank used for fitting removal and reuse



SPECIFICATION

CAM-LOCK™ JOINT RESTRAINT

MODEL 111

- **Spring Lock Washer**
 - Carbon Steel per ANSI B18.21.1
 - 5/8" diameter
 - Designed to retain actuating bolt to prevent lost hardware if fitting is removed

LISTINGS

- UL Listed for restraining UL Listed Ductile Iron fittings to UL Listed Ductile Iron pipe. Maximum rated pressure: 3" - 16" = 350 psi, 18" = 250 psi, 20"=200 psi, 24"=250 psi

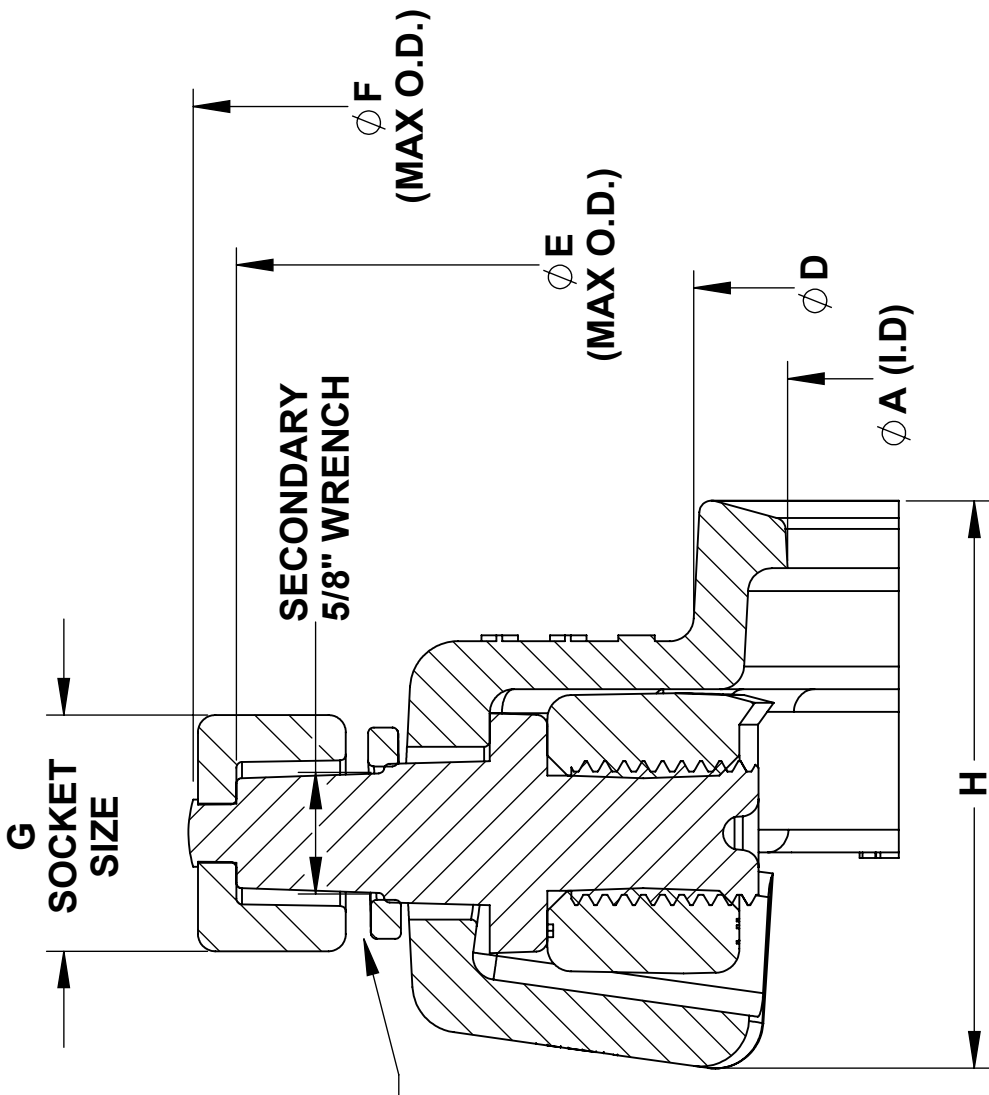
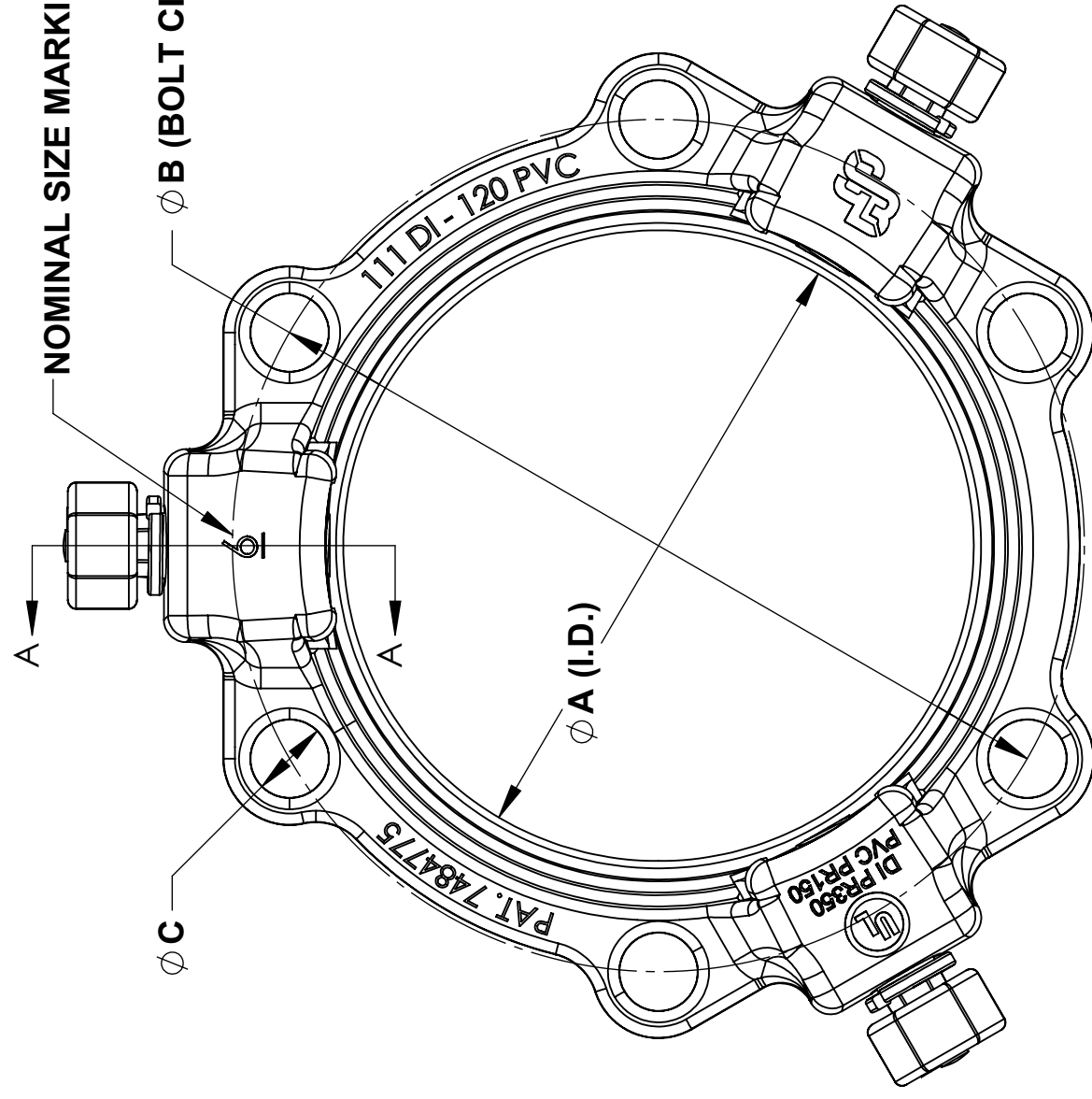
OPTIONS

- Multi-Seal Gasket 4" – 12" sizes
- Anode Connector
- Installation Kit: High Strength Low Alloy (HSLA) 1/2" longer T-bolts, nuts and MJ Gasket accommodating AWWA C110 fittings
- Installation Kit: 304 Stainless Steel 1/2" longer T-bolts, fluoropolymer coated nuts, and MJ Gasket accommodating AWWA C110 fittings

NOTES

- Flexi-Coat® is a registered trademark of Smith-Blair Inc.
- Cam-Lock™ is a trademark of Smith-Blair Inc.
- These product specifications were correct at the time of publication and are subject to change without notice
- See the Smith-Blair website for part numbers and ordering information
- See the Smith-Blair website for warranty information
- See the Smith-Blair website for corrosion notice

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SECTION A-A

NOTES:

1. APPROXIMATE WEIGHTS BASED ON KIT (CAM-LOCK, GASKET, NUTS, AND BOLTS)

NOMINAL PIPE SIZE	DUCTILE OD	IPS OD	A	B	C	D	E	F	G	H	WEDGE QTY.	WEIGHT EA. LBS.	OPTIONAL T-BOLTS		
													SIZE	LENGTH	QUANTITY
3	3.96	3.50	4.08	6.19	0.75	4.88	10.04	10.64	1-1/16"	2.85	2	11	5/8"-11	3.00	4
4	4.80	4.50	4.93	7.50	0.875	5.92	10.90	11.50	1-1/4"	2.95	2	12	3/4"-10	4.00	4
6	6.90	6.63	7.03	9.50	0.875	8.02	12.77	13.37	1-1/4"	3.00	3	18	3/4"-10	4.00	6
8	9.05	8.63	9.18	11.75	0.875	10.17	14.92	15.52	1-1/4"	3.00	3	20	3/4"-10	4.50	6
10	11.10	10.75	11.23	14.00	0.875	12.22	16.97	17.57	1-1/4"	3.10	6	33	3/4"-10	4.50	8
12	13.20	12.75	13.33	16.25	0.875	14.32	19.07	19.67	1-1/4"	3.12	8	40	3/4"-10	4.50	8
14	15.30	N/A	15.50	18.75	0.875	16.40	21.24	21.84	1-1/4"	3.17	10	54	3/4"-10	5.00	10
16	17.40	N/A	17.60	21.00	0.875	18.50	23.34	23.94	1-1/4"	3.22	12	66	3/4"-10	5.00	12
18	19.50	N/A	19.70	23.25	0.875	20.60	25.44	26.04	1-1/4"	3.22	12	72	3/4"-10	5.00	12
20	21.60	N/A	21.80	25.50	0.875	22.70	27.54	28.14	1-1/4"	3.32	14	84	3/4"-10	5.00	14
24	25.80	N/A	26.00	30.00	0.875	26.90	31.74	32.34	1-1/4"	3.41	16	107	3/4"-10	5.00	16
30	32.00	N/A	32.18	36.88	1.125	33.30	39.48	40.06	1-5/8"	4.55	20	288	1"-8	7.50	20
36	38.30	N/A	38.48	43.75	1.125	39.60	45.78	46.36	1-5/8"	4.55	24	366	1"-8	7.50	24
42	44.50	N/A	44.69	50.62	1.375	45.80	-	53.62	2"	5.25	28	585	1-1/4"-7	8.50	28
48	50.80	N/A	50.96	57.50	1.375	52.10	-	60.50	2"	5.25	32	680	1-1/4"-7	8.50	32

UL LISTED FOR RESTRAINING UL LISTED DUCTILE IRON FITTINGS TO UL LISTED DUCTILE IRON PIPE. MAXIMUM RATED PRESSURE: 3" - 16" = 350 PSI, 18" = 250 PSI, 20"=200 PSI, 24"=250 PSI

TOLERANCES U.N.O. XX= ±.03 XXX= ±.015 FRACTIONS= ±.1* ANGLES= ±1* MACH. FIN.	REMOVE BURRS AND SHARP EDGES DO NOT SCALE DWG.	APP'D	DATE
	SCALE: N/A	CK'D	DATE
ALL DIMENSIONS ARE IN INCHES.	DRN	CHD	DATE
			2/19/16

TITLE

SPECIFICATION
CAM-LOCK™ JOINT RESTRAINT
MODEL 111

SMITH-BLAIR, Inc. TEXARKANA, ARKANSAS	P/N	N/A
	DWG. NO.	1 OF 1
	SPEC_111.DRW	7/28/16 REV.