

COMMERCIAL RISER ASSEMBLY PACK WITH PRESSURE RELIEF TRIM



Argco's Model CR Commercial Riser comes factory assembled with the necessary accessories for a cost effective, yet complete riser assembly. Powder Coated Steel with label on the manifold identifies manifold pipe size, flow direction, gauge and drain outlets.

2", 2-1/2", 3", 4" & 6" Grooved (8" M.T.O.)
300 psi Working Pressure



Features:

1. Powder Coated steel body construction for grooved manifolds.
2. Brass and galvanized Trim.
3. Factory assembled and pressure tested.
4. Available with Test and Drain Valves in various orifice sizes.
5. Same end-to-end dimensions for the 2" through 8" grooved sizes.
6. Approved for installation in horizontal or vertical positions.
7. 1/4" three-way valve allows for easy testing and replacing of pressure gauge.
8. Dedicated cULus Listed, ULC Listed and FM Approved Waterflow Detector assures optimum sensitivity.

ARGCO'S Commercial Riser Manifold Assembly includes a cULus Listed pressure gauge, a 1/4" three-way valve, and a dedicated System Sensor waterflow detector containing two sets of SPDT contacts, having an electrical rating of 10A @ 125/250 VAC/2.5 A @ 24 VDC.

- a. Test & Drain Trim with 5.6K Factor
- b. Pressure Relief Trim with Test & Drain Valve with 175 psi pressure rating
- c. Grooved Butterfly Valve (UL/FM)
- d. Grooved Check Valve (UL/FM)
- e. Four Grooved Standard Rigid Couplings (UL/FM)

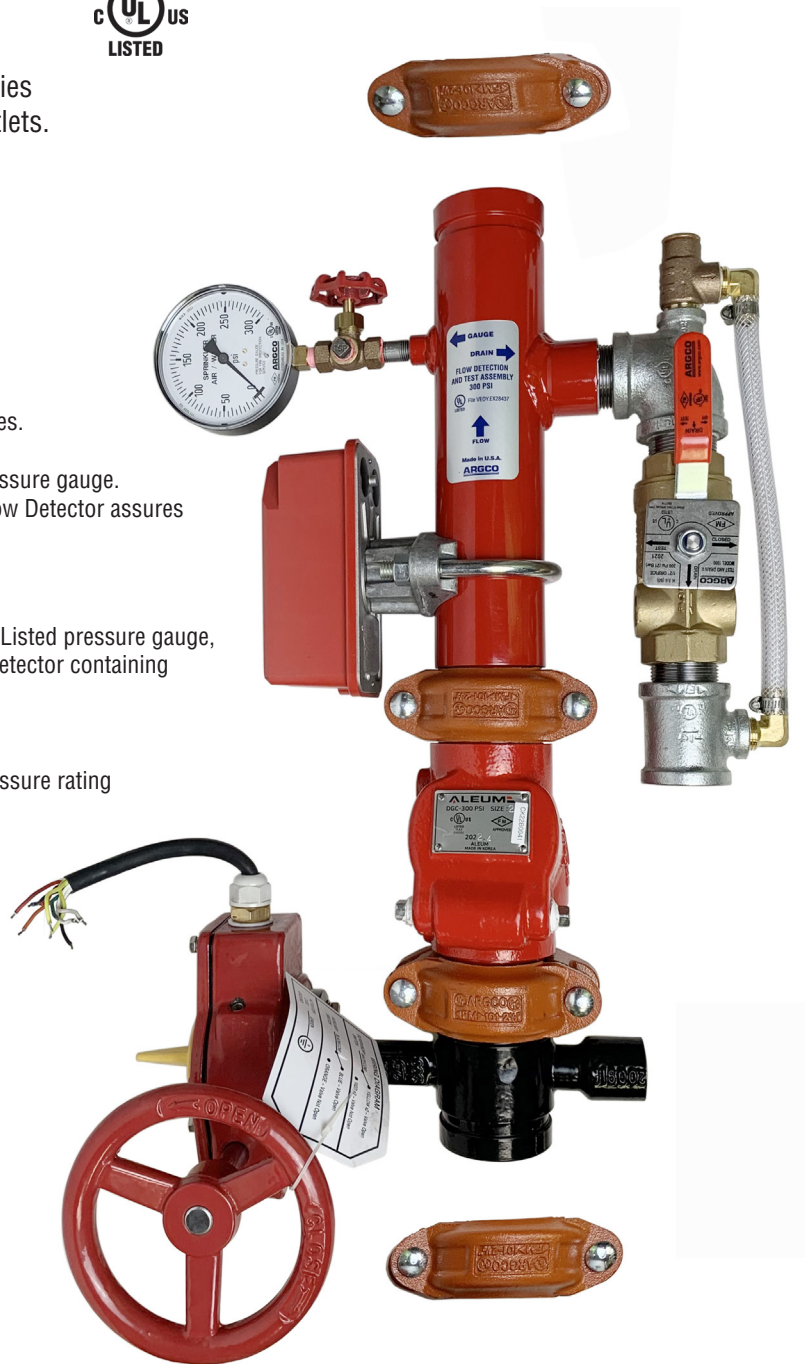


Photo shows Riser Assembly with Butterfly Valve, Check Valve and Couplings Installed. Product is shipped uninstalled Valves & Couplings.

SIZE	ITEM #
2"	6520357-0200C
2-1/2"	6520357-0250C
3"	6520357-0300C
4"	6520357-0400C
6"	6520357-0600C
8"	6520357-0800C

System Sensor® is a registered trademark of Honeywell International, Inc.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

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Installation

Model CR Commercial Riser Manifolds with Pressure Relief Trim



May be installed either horizontally (flow switch on top) or vertically (flow going up). The inlet of the Riser Manifold may be connected directly to a control valve.

Notes:

Where applicable, pipe thread sealant is to be applied sparingly. Use of a non-hardening pipe thread sealant is recommended.

Never remove any piping component nor correct or modify any piping deficiencies, without first depressurizing and draining the system. The alarm test flow is to be through an orifice having a flow capacity equal to, or smaller than, the smallest orifice sprinkler in the system. One of two options can be considered. The first option is to temporarily install a test orifice in the outlet of the drain line prior to performing the alarm test. The second option is to install an Inspector's Test Connection downstream of the Waterflow Alarm Switch.

Step 1. Remove 1/2" pipe plug from manifold tee. Inspect exposed female tee threads, remove thread sealant remnants or debris as necessary.

Step 2. Install Pressure Relief Valve in manifold tee, orienting valve outlet port perpendicular to, and facing away from, manifold body.

Step 3. Install 1/2" Brass 90 x Barb in pressure relief valve outlet port.

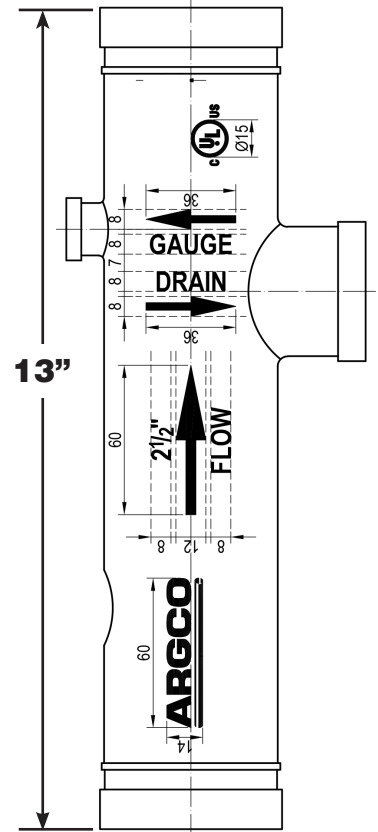
Step 4. Disconnect drain piping from of manifold Test and Drain Valve, as applicable and install Reducing Tee on valve outlet, aligning tee threaded branch outlet parallel with pressure relief valve outlet port.

Reconnect drain piping to tee drain outlet as necessary.

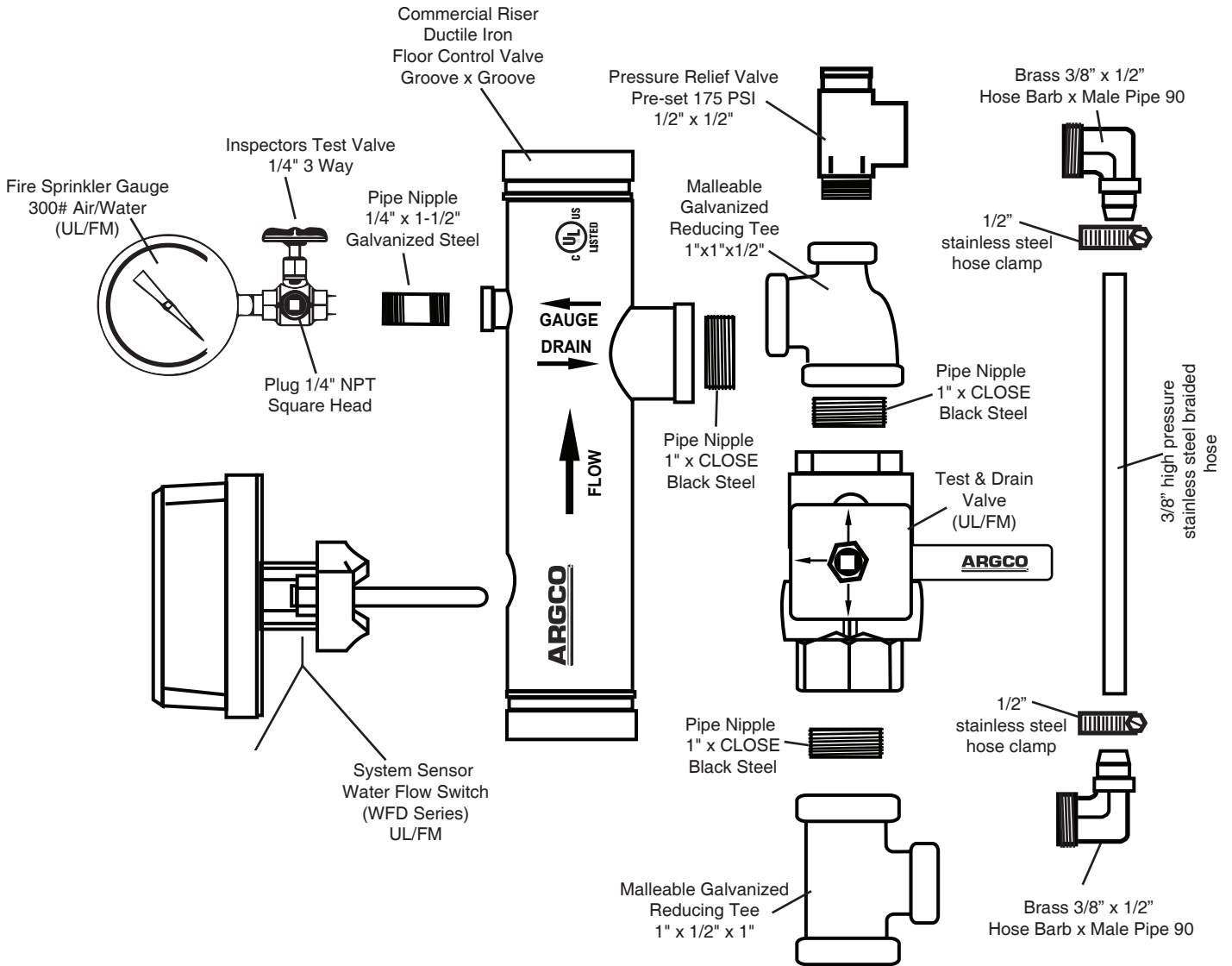
Step 5. Install Flexible Hose by threading female ends onto 1/2" Brass 90 x Barb installed on relief valve outlet port and onto reducing tee branch outlet.

Note: Assure Flexible Hose is not susceptible to being caught or snagged by other moving parts.

Commercial Riser with Test & Drain and Pressure Relief Trim



**Model CR-PR
Commercial Riser Manifold
with Test & Drain
and Pressure Relief Kit**



GROOVED BUTTERFLY VALVE WITH TAMPER SWITCH

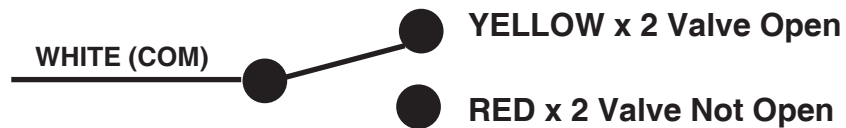


- Design Standard: API609
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211
Stem drive by keys, parallel or diagonal square of flat head
- Working Pressure: 300PSI
- Temperature Range: 32° to 176° F
- Coating:
Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA



WIRING DIAGRAM:

SUPERVISORY SWITCH



AUXILIARY SWITCH

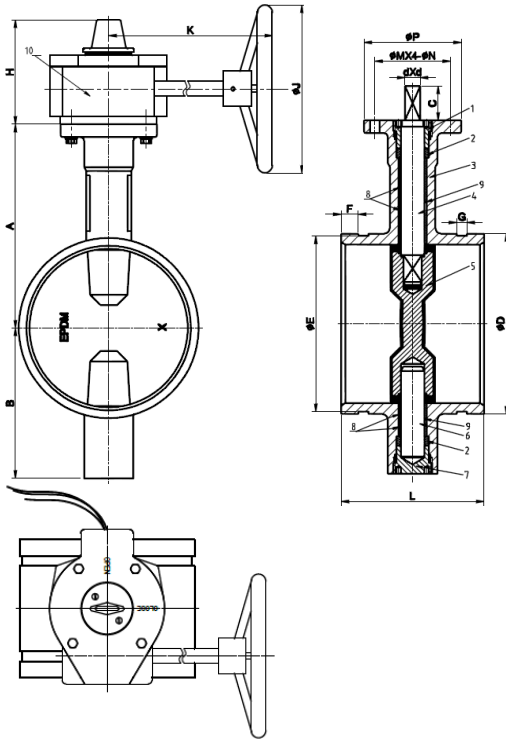


ACTUATOR CASE GROUND



System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED BUTTERFLY VALVE WITH TAMPER SWITCH



SPECIFICATIONS: MATERIAL

1. **Upper Shaft Sealing Nut**
2. **Shaft (Stem) Seal:** EPDM
3. **Body:** Ductile Iron conforming to ASTM A-536, Grade 65-45-12
4. **Upper Shaft (Stem):** 416 stainless steel conforming to ASTM A-582
5. **Disc:** Ductile Iron conforming to ASTM A-536, Grade 65-45-12, with EPDM Coating
6. **Lower Shaft (Stem):** 416 stainless steel conforming to ASTM A-582
7. **Lower Shaft (Stem) Sealing Nut:** WCB conforming to ASTM A-216
8. **Stem Bushing:** PTFE conforming to ASTM A-4894
9. **O-Ring (Seat):** Grade "E" EPDM conforming to ASTM D-2000
10. **Gear Box:**



Item #	Size	A	B	C	D	E	F	G	H	K	P	M	N	D	L
6520250	2-1/2"	4.92	3.74	1.26	2.87	2.72	0.63	0.31	4.37	6.02	3.54	2.76	0.35	0.39	3.8
					3	2.85									
6520251	3"	5.51	3.94	1.26	3.5	3.34	0.63	0.31	4.37	6.02	3.54	2.76	0.35	0.39	3.82
6520252	4"	6.3	3.94	1.26	4.5	4.33	0.63	0.31	4.37	6.02	3.54	2.76	0.35	0.43	4.53
6520253	6"	7.48	5.51	1.26	6.5	6.33	0.63	0.37	4.37	6.02	3.54	2.76	0.35	0.63	5.21
					6.63	6.46									
6520254	8"	9.06	6.89	1.26	8.52	8.33	0.75	0.44	4.96	8.27	4.92	4.02	0.47	0.75	5.8
					8.63	8.46									
6520255	10"	10.2	7.87	1.77	10.53	10.56	0.75	0.5	4.96	8.27	4.92	4.02	0.47	0.87	6.26
					10.75	12.32									

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SWING CHECK VALVE GROOVED

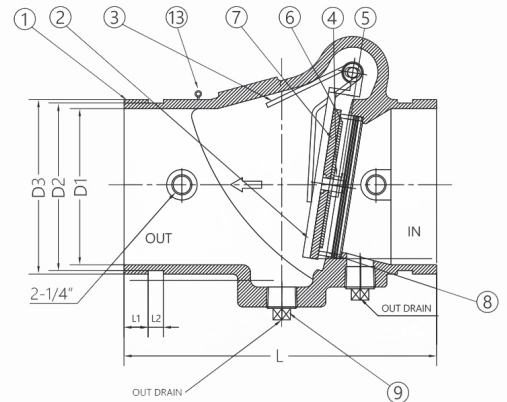


Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, and FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250°F (120°C)
- Application: Indoor and Outdoor Use
- Low pressure-drop, Non-slam performance

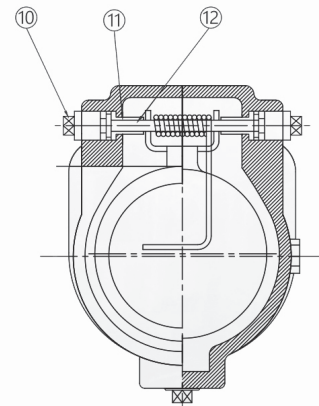


PART	COMPONENT	MATERIAL	SPECIFICATION
1	BODY	Ductile Iron, Epoxy Coated	ASTM A536 65-45-12
2	CLAPPER	Stainless Steel	ANSI 304
3	COIL SPRING	Stainless Steel	ANSI 302
4	NUT	Stainless Steel	ANSI 304
5	BOLT	Stainless Steel	ANSI 304
6	WASHER	Rubber	ANSI 304
7	FACING SEAL	Stainless Steel	ANSI 304
8	SEAT RING	Ductile Iron	EPDM
9	DRAIN PLUG	Ductile Iron	ANSI 304
10	PIN PLUG	Aluminum Bronze	Drain Plug
11	BUSHING	Stainless Steel	Bushing
12	HINGE PIN	Steel	Hinge Pin
13	HOOK		Hook
14	OIL RING		EPDM
15	WASHER		ASTM A-307



DIMENSIONS

ITEM #	SIZE	D1	D2	D3	L	L1	L2
6520200	2"	1.9"	2.2"	2.4"	6.7"	0.6"	0.3"
6520201	2-1/2"	2.4"	2.7"	2.9"	7.2"	0.6"	0.3"
6520202	3"	2.9"	3.3"	3.5"	7.6"	0.6"	0.3"
6520203	4"	3.9"	4.3"	4.5"	8.1"	0.6"	0.3"
6520204	6"	6.1"	6.4"	6.6"	12.6"	0.6"	0.3"
6520205	8"	7.9"	8.5"	8.6"	14.6"	0.8"	0.4"
6520206	10"		10.6"	10.7"	18.0"	0.8"	0.5"
6520207	12"		12.5"	12.8"	21.1"	0.8"	0.5"



System No.		Location		Spec Section		Paragraph	
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GROOVED COUPLINGS - STANDARD RIGID

Model 101



The ARGCO Model 101 is an angle-pad design standard rigid coupling for moderate pressure piping services including fire mains, long straight runs and valve connections.

The angle-pad design allows the coupling housings to slide along the bolt pads when tightened. The result is an offset clamping action which provides a rigid joint which resists so-called 'snaking' of a long straight run. Support and hanging requirements correspond to ANSI B31.1, B31.9 and NFPA 13. With the removal of only one bolt you can make a fast and easy 'swing-over' installation.

Available Sizes

- 1" through 12" (25 through 300 mm)

Pipe Material

- Carbon steel, Schedule 10, Schedule 40.

Maximum Working Pressure

- Up to 300 psi/2517 kPa.

Function

- Joins carbon steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

CERTIFICATIONS/LISTINGS

Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.



SPECIFICATIONS - MATERIAL

Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:

Standard: Orange Enamel

Available: Hot Dipped Galvanized

Gasket:

Standard: Pre-Lubricated Grade E EPDM (Type A)

ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts

Standard: Carbon Steel oval neck track bolts meeting ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.

Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.

Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.

Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

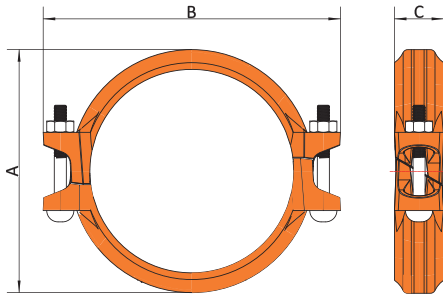
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GROOVED COUPLINGS - STANDARD RIGID

Model 101



ARGCO Grooved Couplings are suitable for fire protection systems, water supply systems, and other process systems of higher working pressure.



Item #	Nominal Size in/mm	Maximum Working Pressure psi/kPa	Maximum End Load lb/N	Axial Displacement in/mm	Dimensions			Bolt inches mm	Weight lb
					A inches mm	B inches mm	C inches mm		
7010001	1"	300	405	0-0.06	2.17	3.82	1.77	3/8" x1-1/2"	0.81
	25	20	1.80	0-1.6	55	97	45	M10x40	
7010002	1-1/4"	300	656	0-0.06	2.50	4.23	1.77	3/8" x1-3/4"	1.23
	32	20	2.92	0-1.6	63.5	107.5	45	M10x45	
7010003	1-1/2"	300	852	0-0.06	2.72	4.49	1.77	3/8" x1-3/4"	1.32
	40	20	3.79	0-1.6	69	114	45	M10x45	
7010004	2"	300	1327	0-0.06	3.29	4.88	1.81	3/8" x 2-1/8"	1.58
	50	20	5.91	0-1.6	83.6	124	46	M10x55	
7010005	2-1/2"	300	1945	0-0.06	3.86	5.39	1.81	3/8" x 2-1/8"	2.13
	65	20	8.66	0-1.6	98	137	46	M10x55	
7010006	3"	300	2885	0-0.06	4.49	6.14	1.81	3/8" x 2-1/8"	2.70
	80	20	12.84	0-1.6	114	156	46	M10x55	
7010007	4"	300	4258	0-0.16	5.43	7.32	1.97	1/2" x 2-5/8"	2.94
	100	20	18.94	0-4.1	138	186	50	M12x65	
7010008	5"	300	6457	0-0.16	6.46	8.39	1.97	1/2" x 2-5/8"	4.70
	125	20	28.73	0-4.1	164	213	50	M12x65	
7010009	6"	300	9229	0-0.06	7.56	9.61	1.97	1/2" x 2-5/5"	5.50
	150	20	41.06	0-4.1	192	244	50	M12x65	
7010010	8"	300	17079	0-0.16	10.00	13.39	2.44	3/4" x3-1/2 "	11.73
	200	20	75.99	0-4.1	254	340	62	M16x90	
7010011	10"	300	26101	0-0.16	12.32	15.75	2.52	3/4" x3-1/2"	18.08
	250	20	116.13	0-4.1	313	400	64	M20x90	
7010012	12"	300	37031	0-0.16	14.49	18.27	2.52	7/8" x4-1/3"	22.4
	300	20	164.76	0-4.1	368	464	64	M22x110	

- Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.
- The allowable pipe separation dimension shown is for system layout purposes only. ARGCO couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.
- When assembling ARGCO couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop.