





GATE, GLOBE & CHECK CATALOG

BRONZE





A history of **Quality, Service** and **Innovation**

Now in its ninth decade, Conbraco Industries, Inc. is a leading manufacturer of flow control products for U.S. and international markets. The company's headquarters is based in Matthews, North Carolina with manufacturing plants and foundries located in Pageland and Conway, South Carolina.

Conbraco has a history of new product development and innovation that dates back to the company's inception in 1928. Today, the Conbraco line of products is marketed under the "Apollo Valves" brand and includes: ball valves, butterfly valves, backflow prevention devices, water pressure reducing valves, mixing valves, safety relief valves, water gauges, strainers, vacuum breakers, valve actuators and more.

In 2011 Conbraco introduced a new line of Made in USA bronze gate, globe and swing check valves in sizes 1/4" through 3". This new line of multi-turn valves is suitable for a wide range of applications including HVAC systems, potable water, irrigation and OEM. These valves are an ideal complement to our existing family of commercial products.

The Apollo International[™] import cast iron flanged products in this catalog are offered to extend the scope of our multi-turn offering to 24″. These cast iron multi-turn valves have been manufactured to our exacting specifications, are 100% factory tested and are furnished with a two year warranty.

The Conbraco line continues to expand - with new products, designs and advanced materials - to better serve the needs of our customers in a variety of residential, commercial and industrial markets.



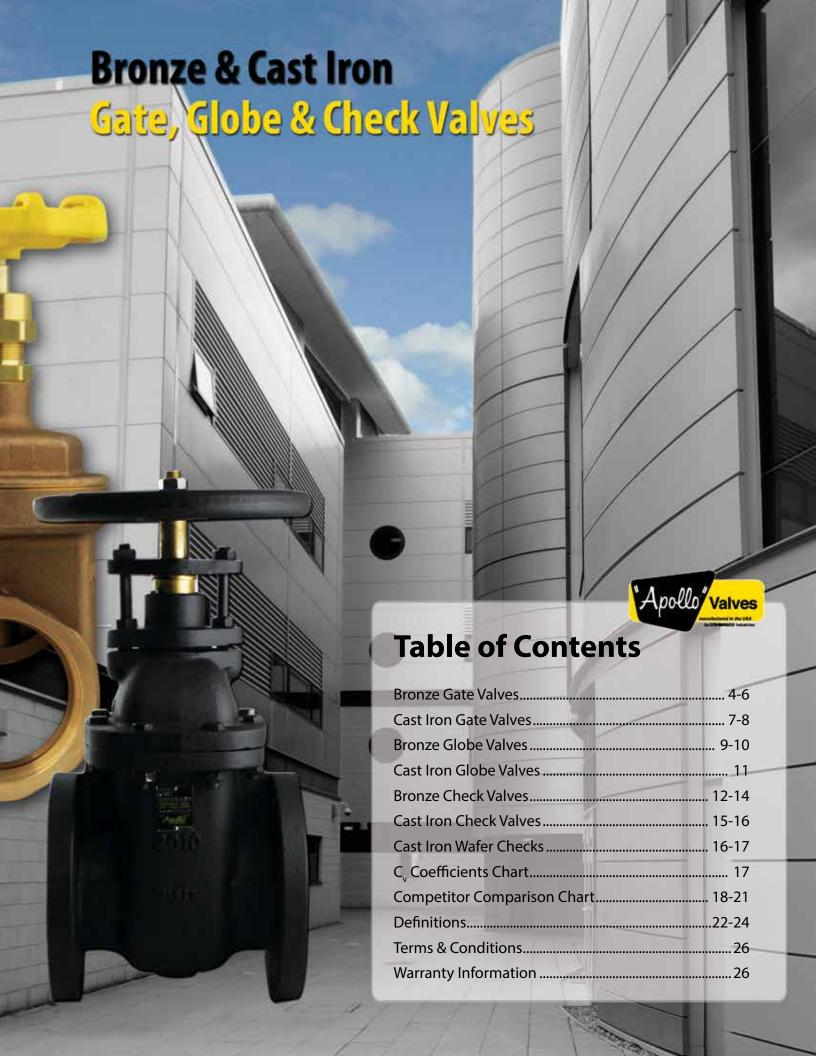




Throughout this catalog, products that have a Lead Free* option will be identified with this logo.

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with CA AB1953, VT Act 193, MD HB372, LA HB471 and Federal Public Law 111-380. ANSI 3rd party approved.

**Any imported products are clearly identified as "Apollo International™".



BRONZE GATE VALVES

101S/101S-LF SERIES



All dimensions are in inches and pounds.

200 CWP GATE VALVE



Features: Threaded Bonnet Solid Disc Rising Stem Solder Ends



Body, Bonnet & Wedge:ASTM B62 Bronze **LF** = ASTM B584-C89836

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

200 CWP GATI	E VALVE				
Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight
30-083-01	30LF-083-01	1/2	1.88	4.85	1.00
30-084-01	30LF-084-01	3/4	2.43	5.71	1.30
30-085-01	30LF-085-01	1	2.96	6.71	2.20
30-086-01	30LF-086-01	1 1/4	3.14	8.10	3.20
30-087-01	30LF-087-01	1 1/2	3.44	9.08	4.40
30-088-01	30LF-088-01	2	4.11	11.28	7.00
30-089-01	30LF-089-01	2 1/2	4.79	14.58	13.80
30-080-01	30LF-080-01	3	5.43	19.07	17.70

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_w) see page 17.

All dimensions are in inches and pounds.

101T/101T-LF SERIES



Features:

Threaded Bonnet Solid Disc Rising Stem NPT



Body, Bonnet & Wedge:

ASTM B62 Bronze

LF = ASTM B584-C89836

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

Class 125 (200 CWP, 125 SWP) GATE VALVE

Cluss 125 (200 CWI, 125 SWI) GRIE VALVE						
Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight	
30-001-01	30LF-001-01	1/4	1.76	4.57	0.80	
30-002-01	30LF-002-01	3/8	1.76	4.51	0.77	
30-003-01	30LF-003-01	1/2	2.03	4.85	1.00	
30-004-01	30LF-004-01	3/4	2.07	5.71	1.30	
30-005-01	30LF-005-01	1	2.45	6.71	2.16	
30-006-01	30LF-006-01	1 1/4	2.63	8.10	3.20	
30-007-01	30LF-007-01	1 1/2	2.88	9.08	4.36	
30-008-01	30LF-008-01	2	3.06	11.28	7.01	
30-009-01	30LF-009-01	2 1/2	4.13	14.58	13.79	
30-000-01	30LF-000-01	3	4.48	19.07	17.70	
30-008-01 30-009-01	30LF-008-01 30LF-009-01	2 1/2	3.06 4.13	11.28 14.58	7.01 13.79	

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_{ν}) see page 17.

All dimensions are in inches and pounds.

102S/102S-LF SERIES



Features:

Threaded Bonnet Solid Disc Non-Rising Stem Solder Ends



Body, Bonnet & Wedge:

ASTM B62 Bronze

LF = ASTM B584-C89836

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

200 CWP GATI	EVALVE				
Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight
30-043-01	30LF-043-01	1/2	1.88	3.56	0.85
30-044-01	30LF-044-01	3/4	2.43	4.05	1.19
30-045-01	30LF-045-01	1	2.96	4.55	1.98
30-046-01	30LF-046-01	1 1/4	3.14	5.14	2.80
30-047-01	30LF-047-01	1 1/2	3.44	6.02	3.95
30-048-01	30LF-048-01	2	4.11	7.09	5.88
30-049-01	30LF-049-01	2 1/2	4.79	9.11	12.19
30-040-01	30LF-040-01	3	5.43	12.61	16.84

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position.

For Flow Coefficients (C,) see page 17.



BRONZE GATE VALVES

All dimensions are in inches and pounds.

102T/102T-LF SERIES



Features: Threaded Bonnet Solid Disc Non-Rising Stem

Body, Bonnet & Wedge: ASTM B62 Bronze LF = ASTM B584-C89836

Stem: ASTM B371 Sil-Brz **Packing:** Graphoil

Hand Wheel: Malleable Iron

Class 125 (200) CWP, 125 SWP)	GATE VAL	.VE		
Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight
30-031-01	30LF-031-01	1/4	1.76	3.29	0.74
30-032-01	30LF-032-01	3/8	1.76	3.29	0.71
30-033-01	30LF-033-01	1/2	2.03	3.56	0.85
30-034-01	30LF-034-01	3/4	2.07	4.05	1.19
30-035-01	30LF-035-01	1	2.45	4.55	1.98
30-036-01	30LF-036-01	1 1/4	2.63	5.14	2.80
30-037-01	30LF-037-01	1 1/2	2.88	6.02	3.95
30-038-01	30LF-038-01	2	3.06	7.09	5.88
30-039-01	30LF-039-01	2 1/2	4.13	9.11	12.19
30-030-01	30LF-030-01	3	4.48	12.61	16.84

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

102T-K SERIES (Irrigation)



Features:

Threaded Bonnet Solid Disc Non-Rising Stem Cross-Handle (irrigation)

Body, Bonnet & Wedge: ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Cross-Handle: Bronze

Class 125 (200 CWP.125 SWP) GATE VALVE

_	Cluss 125 (200 CWI, 125 SWI / GAIL VALVE								
	Part Number	NPS	Length	Height	Weight				
	30-033-01K	1/2	2.03	3.56	0.85				
	30-034-01K	3/4	2.07	4.05	1.19				
	30-035-01K	1	2.45	4.55	1.98				
	30-036-01K	1 1/4	2.63	5.14	2.80				
	30-037-01K	1 1/2	2.88	6.02	3.95				
	30-038-01K	2	3.06	7.09	5.88				
	30-039-01K	2 1/2	4.13	9.11	12.19				
	30-030-01K	3	4.48	12.61	16.84				

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

103T SERIES



Features:

Union Bonnet Solid Disc Rising Stem

Body, Bonnet & Wedge:

ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

All dimensions are in inches and pounds.

Class 125 (200 CWP,125 SWP) GATE VALVE

		,		
Part Number	NPS	Length	Height	Weight
30-051-01	1/4	1.76	4.57	0.90
30-052-01	3/8	1.76	4.51	0.86
30-053-01	1/2	2.03	4.85	1.07
30-054-01	3/4	2.07	5.71	1.43
30-055-01	1	2.45	6.71	2.44
30-056-01	1 1/4	2.63	8.10	3.71
30-057-01	1 1/2	2.88	9.08	4.89
30-058-01	2	3.06	11.28	7.53
30-059-01	2 1/2	4.96	14.58	15.33
30-050-01	3	4.48	19.07	19.56

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17

BRONZE GATE VALVES

106T SERIES



Features: Threaded Bonnet Solid Disc

Non-Rising Stem

Body, Bonnet & Wedge: ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

All dimensions are in inches and pounds.

(30)	, CIII, 150	, 5111 , GA		
Part Number	NPS	Length	Height	Weight
30-281-01	1/4	1.76	3.29	0.74
30-282-01	3/8	1.76	3.29	0.71
30-283-01	1/2	2.03	3.56	0.98
30-284-01	3/4	2.07	4.05	1.21
30-285-01	1	2.45	4.55	1.98
30-286-01	1 1/4	2.63	5.14	2.80
30-287-01	1 1/2	2.88	6.02	4.06
30-288-01	2	3.06	7.09	5.88
30-289-01	2 1/2	4.13	9.11	12.19

4.48

Class 150 (300 CWP, 150 SWP) GATE VALVE

12.61 Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

16.90

107T SERIES



Features:

Union Bonnet Solid Disc **Rising Stem** NPT

Body, Bonnet & Wedge:

ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

Class 150 (300 CWP, 150 SWP) GATE VALVE

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Part Number	NPS	Length	Height	Weight
30-201-01	1/4	1.76	4.57	0.90
30-202-01	3/8	1.76	4.51	0.86
30-203-01	1/2	2.03	4.85	1.07
30-204-01	3/4	2.07	5.71	1.43
30-205-01	1	2.45	6.71	2.50
30-206-01	1 1/4	2.63	8.10	3.69
30-207-01	1 1/2	2.88	9.13	5.01
30-208-01	2	3.06	11.28	7.53
30-209-01	2 1/2	4.13	14.58	15.33
30-200-01	3	4.48	16.90	19.56

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

111T SERIES and 116T SERIES



Features: Union Bonnet Solid Disc Rising Stem

Body, Bonnet & Wedge: ASTM B61 Bronze

SS Seat Option: Type 316 SS

Stem: ASTM B371 Sil-Brz

Packing: Graphoil

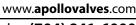
Hand Wheel: Malleable Iron

Class 300 (1000 CWP, 300 SWP) GATE VALVE

30-280-01

Part Number SS Seat Part Number		NPS	Length	Height	Weight	
30-443-01	30-453-01	1/2	2.31	4.97	1.40	
30-444-01	30-454-01	3/4	2.56	6.22	2.30	
30-445-01	30-455-01	1	2.89	6.94	3.50	
30-446-01	30-456-01	1 1/4	3.01	8.29	5.10	
30-447-01	30-457-01	1 1/2	3.05	9.28	6.80	
30-448-01	30-458-01	2	3.08	11.37	9.60	

 $Length\ is\ measured\ from\ end\ to\ end.\ Height\ is\ measured\ from\ centerline\ to\ top\ of\ wheel\ in\ full\ open\ position.$ For Flow Coefficients (C,) see page 17.





IRON GATE VALVES

610F SERIES Apollo International





FEATURES: Compatible with ANSI 125# & 150# Flanges **Full Port Bronze Mounted Seat Rings** Solid Wedge Adjustable Graphite Stem Packing Non-Rising Stem **Bolted Bonnet Back Seat Protection**

STANDARDS:

MSS SP-70

"Gray Iron Gate Valves Flanged and Threaded" **ASME B16.10**

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam:

125 psi (8.6 Bar) to 353°F (178°C)(2"-12") 100 psi (6.9 Bar) to 338°F (170°C) (14"-24")

Cold Working Pressure:

200 psi (13.8 Bar) at 100°F (2"-12") 150 psi (10.3 Bar) at 100°F (14"-24")

Temperature Range:

-20°F to 406°F

MATERIALS:

Body, Bonnet & Wedge: ASTM A126 CL-B, Cl

Stem: ASTM B16

Packing & Gasket: Graphoil

Class 125 FLA	NGED GAI	EVALVE		
Part Number	NPS	Length	Height	Weight
6GA-108-B1	2	7.00	14.57	36.0
6GA-109-B1	2 1/2	7.50	16.34	48.0
6GA-100-B1	3	8.00	18.90	59.0
6GA-10A-B1	4	9.00	20.67	104.0
6GA-10B-B1	5	10.00	24.61	150.0
6GA-10C-B1	6	10.50	28.74	192.0
6GA-10E-B1	8	11.50	32.48	260.0
6GA-10G-B1	10	13.00	37.40	434.0
6GA-10H-B1	12	14.00	43.31	606.0
6GA-10J-B1	14	15.00	37.01	926.0
6GA-10K-B1	16	16.00	42.52	1098.0
6GA-10M-B1	18	17.00	46.46	1543.0
6GA-10N-B1	20	18.00	54.33	1638.0
6GA-10P-B1	24	20.00	57.48	2756.0

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C,) see page 17.

NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

Class 250 FLANGED GATE VALVE

All dimensions are in inches and pounds.

All dimensions are in inches and nounds

620F SERIES Apollo International



FEATURES:

Compatible with ANSI 250# & 300# Flanges Full Port

Bronze Mounted Seat Rings Solid Wedge

Adjustable Graphite Stem Packing

Non-Rising Stem

Flanged Connection

Bolted Bonnet

Rugged Iron Hand Wheel

Back Seat Protection

STANDARDS:

MSS SP-70

"Gray Iron Gate Valves Flanged and Threaded" **ASME B16.10**

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam: 250 psi (17.2 Bar) to 406°F(207°C) Cold Working Pressure: 500 psi (34.5 Bar) at 100°F Temperature Range: -20°F to 406°F

MATERIALS:

Body, Bonnet & Wedge: ASTM A126 CL-B, CI

Stem: ASTM B16

Packing & Gasket: Graphoil

Part Number	NPS	Length	Height	Weight
6GA-208-B1	2	8.50	11.28	42.0
6GA-209-B1	2 1/2	9.50	12.72	55.0
6GA-200-B1	3	11.00	13.31	66.0
6GA-20A-B1	4	12.00	16.18	115.0
6GA-20B-B1	5	15.00	19.80	161.0
6GA-20C-B1	6	16.00	22.00	205.0
6GA-20E-B1	8	16.50	25.59	278.0
6GA-20G-B1	10	18.00	30.31	456.0
6GA-20H-B1	12	19.75	33.90	633.0

Length is measured from end to end.

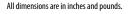
Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C,) see page 17.

NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

For additional information, submittal sheets and manuals, visit www.apollovalves.com

IRON GATE VALVES

611F SERIES Apollo International





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Compatible with ANSI 125# & 150# Flanges Full Port **Bronze Mounted Seat Rings** Solid Wedge Adjustable Graphite Stem Packing **Outside Screw and Yoke Bolted Bonnet Back Seat Protection**

STANDARDS:

MSS SP-70

"Gray Iron Gate Valves Flanged and Threaded" **ASME B16.10**

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam:

125 psi (8.6 Bar) to 353°F (178°C) (2"-12") 100 psi (6.9 Bar) to 338°F (170°C) (14"-24")

Cold Working Pressure:

200 psi (13.8 Bar) at 100°F (2"-12") 150 psi (10.3 Bar) at 100°F (14"-24")

Temperature Range:

-20°F to 406°F

MATERIALS:

Body, Bonnet & Wedge: ASTM A126 CL-B, Cl

Stem: ASTM B16

Packing & Gasket: Graphoil

CIGSS 125 I LANGED GAIL VALVE						
Part Number	NPS	Length	Height	Weight		
6GA-118-B1	2	7.00	14.96	38.0		
6GA-119-B1	2 1/2	7.50	16.93	51.0		
6GA-110-B1	3	8.00	19.09	62.0		
6GA-11A-B1	4	9.00	24.21	110.0		
6GA-11B-B1	5	10.00	27.56	154.0		
6GA-11C-B1	6	10.50	32.87	203.0		
6GA-11E-B1	8	11.50	37.76	284.0		
6GA-11G-B1	10	13.00	48.03	459.0		
6GA-11H-B1	12	14.00	56.50	637.0		
6GA-11J-B1	14	15.00	65.16	966.0		
6GA-11K-B1	16	16.00	71.85	1135.0		
6GA-11M-B1	18	17.00	79.53	1753.0		
6GA-11N-B1	20	18.00	90.16	2238.0		
6GA-11P-B1	24	20.00	132.28	3197.0		

Class 125 FLANGED GATE VALVE

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

621F SERIES Apollo International



FEATURES:

Compatible with ANSI 250# & 300# Flanges

Full Port

Bronze Mounted Seat Rings

Solid Wedge

Adjustable Graphite Stem Packing

Outside Screw and Yoke

Flanged Connection

Bolted Bonnet

Back Seat Protection

STANDARDS:

"Gray Iron Gate Valves Flanged and Threaded" **ASME B16.10**

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam: 250 psi (17.2 Bar) to 406°F(207°C) Cold Working Pressure: 500 psi (34.5 Bar) at 100°F

Temperature Range: -20°F to 406°F

MATERIALS:

Body, Bonnet & Wedge: ASTM A126 CL-B, CI

Stem: ASTM B16

Packing & Gasket: Graphoil

All dimensions are in inches and pounds.

Class 250 FLA	NGED GAT	E VALVE		
Part Number	NPS	Length	Height	Weight
6GA-218-B1	2	7.00	14.96	44.0
6GA-219-B1	2 1/2	7.50	16.93	57.0
6GA-210-B1	3	8.00	19.09	71.0
6GA-21A-B1	4	9.00	24.21	121.0
6GA-21B-B1	5	10.00	27.56	165.0
6GA-21C-B1	6	10.50	32.87	216.0
6GA-21E-B1	8	11.50	39.76	302.0
6GA-21G-B1	10	13.00	48.03	481.0
6GA-21H-B1	12	14.00	56.50	642.0

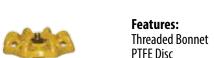
Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

www.apollovalves.com

BRONZE GLOBE VALVES

120S/120S-LF SERIES





Body & Bonnet: ASTM B62 Bronze

Solder Ends

Stem: ASTM B371 Sil-Brz

Disc: PTFE

Packing: Graphoil

Hand Wheel: Malleable Iron

Length	Height	Weight	

All dimensions are in inches and pounds.

Part Number	Part Number	NPS	Length	Height	Weight
33-143-01	33LF-143-01	1/2	2.97	3.47	1.00
33-144-01	33LF-144-01	3/4	3.83	4.75	1.90
33-145-01	33LF-145-01	1	4.57	5.40	2.80
33-146-01	33LF-146-01	1 1/4	5.95	7.80	7.30
33-147-01	33LF-147-01	1 1/2	5.95	7.80	6.80
33-148-01	33LF-148-01	2	7.18	8.43	10.60

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

120T/120T-LF SERIES



Features: Threaded Bonnet PTFE Disc NPT



Body & Bonnet: ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Disc: PTFE

Packing: Graphoil

Hand Wheel: Malleable Iron

Class 125 (200 CWP, 125 SWP) GLOBE VALVE

200 CWP GLOBE VALVE

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Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight			
33-132-01	33LF-132-01	3/8	2.39	3.37	1.00			
33-133-01	33LF-133-01	1/2	2.70	3.47	1.10			
33-134-01	33LF-134-01	3/4	3.20	4.75	1.90			
33-135-01	33LF-135-01	1	3.75	5.40	3.00			
33-136-01	33LF-136-01	1 1/4	4.74	7.78	7.30			
33-137-01	33LF-137-01	1 1/2	4.74	7.78	7.00			
33-138-01	33LF-138-01	2	5.72	8.43	10.70			

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

121T/121T-LF SERIES



Features: Threaded Bonnet Bronze Disc NPT



Body & Bonnet: ASTM B62 Bronze **LF** = ASTM B584-C89836

Stem: ASTM B371 Sil-Brz

Disc: ASTM B505 Brz LF = C27451 Brz

Packing: Graphoil

Hand Wheel: Malleable Iron

All dimensions are in inches and pounds.

Class 125 (200 CWP, 125 SWP) GLOBE VALVE

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Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight
33-161-01	33LF-161-01	1/4	2.39	3.46	1.00
33-162-01	33LF-162-01	3/8	2.39	3.46	1.00
33-163-01	33LF-163-01	1/2	2.70	3.56	1.10
33-164-01	33LF-164-01	3/4	3.20	4.75	1.90
33-165-01	33LF-165-01	1	3.75	5.40	3.00
33-166-01	33LF-166-01	1 1/4	4.74	7.78	7.30
33-167-01	33LF-167-01	1 1/2	4.74	7.78	7.00
33-168-01	33LF-168-01	2	5.72	8.43	11.00

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.



For additional information, submittal sheets and manuals, visit www.apollovalves.com

BRONZE GLOBE VALVES

122T SERIES



Features: Union Bonnet PTFE Disc NPT

Body & Bonnet: ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Disc: PTFE

Packing: Graphoil

Hand Wheel: Malleable Iron

All dimensions are in inches and nounds

Class 150 (300 CWP, 150 SWP) GLOBE VALVE								
Part Number	NPS	Length	Height	Weight				
33-221-01	1/4	2.39	4.23	1.40				
33-222-01	3/8	2.39	4.23	1.40				
33-223-01	1/2	2.70	4.31	1.40				
33-224-01	3/4	3.20	4.89	2.20				
33-225-01	1	3.75	5.40	3.50				
33-226-01	1 1/4	4.74	7.79	7.70				
33-227-01	1 1/2	4.74	7.79	7.40				
33-228-01	2	5.20	8.76	12.40				
33-229-01	2 1/2	6.60	10.07	18.80				
33-220-01	3	7.74	11.39	25.50				

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

127T SERIES





Features:

Union Bonnet Bronze Disc and Seat NPT

Body & Bonnet:

ASTM B61 Bronze

Stem: ASTM B371 Sil-Brz

Disc: ASTM B61 Bronze

Packing: Graphoil

Hand Wheel: Malleable Iron

Class 300 (1000 CWP, 300 SWP) GLOBE VALVE

Part Number	NPS	Length	Height	Weight
33-663-01	1/2	2.70	5.40	1.78
33-664-01	3/4	3.20	5.86	2.28
33-665-01	1	4.00	6.71	4.22
33-666-01	1 1/4	5.25	8.50	8.30
33-667-01	1 1/2	5.25	8.50	8.10
33-668-01	2	6.25	9.75	13.00

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position.

For Flow Coefficients (C_v) see page 17.

128T SERIES





Features:

Union Bonnet Stainless Steel Disc and Seat NPT

Body & Bonnet: ASTM B61 Bronze

Stem: ASTM B371 Sil-Brz

Disc and Seat: ASTM A276-420 SS

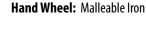
Packing: Graphoil

All dimensions are in inches and pounds.

Class 300 (1000 CWP, 300 SWP) GLOBE VALVE

Part Number	NPS	Length	Height	Weight
33-743-01	1/2	2.70	5.40	1.78
33-744-01	3/4	3.20	5.86	2.28
33-745-01	1	4.00	6.71	4.22
33-746-01	1 1/4	5.25	8.50	8.30
33-747-01	1 1/2	5.25	8.50	8.10
33-748-01	2	6.25	9.75	13.00

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.





IRON GLOBE VALVES

711F SERIES Apollo International



FEATURES:

Compatible with ANSI 125# & 150# Flanges Full Port Bronze Mounted Seat Rings Positive Shut-Off Throttling Capabilities Adjustable Graphite Stem Packing Outside Screw and Yoke Bolted Bonnet

STANDARDS:

MSS SP-85

"Gray Iron Globe & Angle Valves Flanged & Threaded Ends"
ASME R16 10

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam: 125 psi (8.6 Bar) to 353°F (178°C) Cold Working Pressure: 200 psi (13.8 Bar) at 100° F Temperature Range: -20°F to 406°F

MATERIALS:

Body, Bonnet & Disc: ASTM A126 CL-B, Cl

Stem: ASTM B16

Packing & Gasket: Graphite

All dimensions are in inches and pounds.

Class 125 FLA	NGED GLO	BE VALVE		
Part Number	NPS	Length	Height	Weight
6GB-118-B1	2	8.00	11.61	36.0
6GB-119-B1	2 1/2	8.50	12.99	49.0
6GB-110-B1	3	9.50	14.37	64.0
6GB-11A-B1	4	11.50	15.75	94.0
6GB-11B-B1	5	13.00	17.72	137.0
6GB-11C-B1	6	14.00	20.67	195.0
6GB-11E-B1	8	19.50	23.43	315.0
6GB-11G-B1	10	24.50	26.97	485.0

Length is measured from end to end.

Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_v) see page 17.

NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

721F SERIES Apollo International



FEATURES:

Compatible with ANSI 250# & 300# Flanges
Full Port
Bronze Mounted Seat Rings
Positive Shut-Off
Throttling Capabilities
Adjustable Graphite Stem Packing
Outside Screw and Yoke
Flanged Connection
Bolted Bonnet
Rugged Iron Hand Wheel
Back Seat Protection

STANDARDS:

MSS SP-85

"Gray Iron Globe & Angle Valves Flanged & Threaded Ends"
ASME B16.10

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam: 250 psi (17.2 Bar) to 406°F (207°C)
Cold Working Pressure: 500 psi (34.5 Bar) at 100° F
Temperature Range: -20°F to 406°F

MATERIALS:

Body, Bonnet & Disc: ASTM A126 CL-B, CI

Stem: ASTM B16

Packing & Gasket: Graphite

All dimensions are in inches and pounds.

Class 250 FLANGED GLOBE VALVE							
Part Number	ber NPS Length I			Weight			
6GB-218-B1	2	10.50	14.17	40.8			
6GB-219-B1	2 1/2	11.50	15.75	52.9			
6GB-210-B1	3	12.50	16.93	70.5			
6GB-21A-B1	4	14.00	18.90	99.2			
6GB-21B-B1	5	15.75	20.87	136.7			
6GB-21C-B1	6	17.50	23.62	202.8			
6GB-21E-B1	8	21.00	27.56	332.9			

Length is measured from end to end. Height is measured from centerline to top of wheel in full open position. For Flow Coefficients (C_o) see page 17.

NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

BRONZE SWING CHECK VALVES

161S/161S-LF SERIES



Features: Y-Pattern Bronze Disc Solder Ends



Body & Cap: ASTM B62 Bronze

LF = ASTM B584-C89836

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 3" **LF** - Stainless

Pin: Stainless Steel

Seat: ASTM B62 Bronze **LF** -ASTM B584-C89836

Plug: Brass (ASTM B16)

All dimensions are in inches and pounds.

200 CWP SWING CHECK								
Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight			
61Y-093-01	61YLF-093-01	1/2	2.53	1.65	0.62			
61Y-094-01	61YLF-094-01	3/4	3.36	1.90	0.91			
61Y-095-01	61YLF-095-01	1	4.07	2.26	1.70			
61Y-096-01	61YLF-096-01	1 1/4	4.68	2.65	2.00			
61Y-097-01	61YLF-097-01	1 1/2	5.28	2.99	2.70			
61Y-098-01	61YLF-098-01	2	6.50	3.74	4.90			
61Y-099-01	not available	2 1/2	8.30	5.11	9.70			
61Y-090-01	not available	3	9.58	6.05	15.00			

Height is measured from centerline to top of unit. For Flow Coefficients (C,,) see page 17.

All dimensions are in inches and pounds.

161T/161T-LF SERIES



Features: Y-Pattern Bronze Disc

OR FREE WAYNER

Body & Cap: ASTM B62 Bronze

LF = ASTM B584-C89836

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 3" **LF** - Stainless

Pin: Stainless Steel

Seat:

ASTM B62 Bronze LF -ASTM B584-C89836

Plug: Brass (ASTM B16)

Class 125 (200 CWP, 125 SWP) SWING CHECK

Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight
61Y-191-01	61YLF-191-01	1/4	2.14	1.51	0.64
61Y-192-01	61YLF-192-01	3/8	2.14	1.51	0.62
61Y-193-01	61YLF-193-01	1/2	2.48	1.65	0.73
61Y-194-01	61YLF-194-01	3/4	2.94	1.90	1.06
61Y-195-01	61YLF-195-01	1	3.57	2.26	1.70
61Y-196-01	61YLF-196-01	1 1/4	4.50	2.99	3.30
61Y-197-01	61YLF-197-01	1 1/2	4.50	2.99	3.10
61Y-198-01	61YLF-198-01	2	5.25	3.74	5.50
61Y-199-01	not available	2 1/2	8.00	5.11	11.70
61Y-190-01	not available	3	9.24	6.05	17.80

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

162T SERIES



Features:

Y-Pattern Viton® Disc NPT

Body & Cap:

ASTM B62 Bronze

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 2"

Pin: Stainless Steel

Seat: Viton®

Plug: Brass (ASTM B16)

Class 125 (200 CWP, 125 SWP) SWING CHECK

_	•	•	•		
	Part Number	NPS	Length	Height	Weight
	61Y-201-V1	1/4	2.14	1.51	0.64
	61Y-202-V1	3/8	2.14	1.51	0.62
	61Y-203-V1	1/2	2.48	1.65	0.73
	61Y-204-V1	3/4	2.94	1.90	1.06
	61Y-205-V1	1	3.57	2.26	1.70
	61Y-206-V1	1 1/4	4.50	2.99	3.30
	61Y-207-V1	1 1/2	4.50	2.99	3.10
	61Y-208-V1	2	5.25	3.74	5.40

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.



BRONZE SWING CHECK VALVES

163S/163S-LF SERIES



All dimensions are in inches and pounds.



Features: Y-Pattern PTFE Disc Solder



Body & Cap: ASTM B62 Bronze LF = ASTM B584-C89836

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 2"

LF - Stainless

Pin: Stainless Steel

Seat: PTFE

Plug: Brass (ASTM B16)

200 CWP SWING CHECK						
Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight	
61Y-103-T1	61YLF-103-T1	1/2	2.53	1.65	0.62	
61Y-104-T1	61YLF-104-T1	3/4	3.36	1.90	0.91	
61Y-105-T1	61YLF-105-T1	1	4.07	2.26	1.70	
61Y-106-T1	61YLF-106-T1	1 1/4	5.28	2.99	3.20	
61Y-107-T1	61YLF-107-T1	1 1/2	5.28	2.99	2.70	
61Y-108-T1	61YLF-108-T1	2	6.50	3.74	4.90	

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.

All dimensions are in inches and pounds.

163T/163T-LF SERIES



Features:

Y-Pattern PTFE Disc NPT



Body & Cap: ASTM B62 Bronze

LF = ASTM B584-C89836

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 2" **LF** - Stainless

Pin: Stainless Steel

Seat: PTFE

Plug: Brass (ASTM B16)

Class 125 (200 CWP, 125 SWP) SWING CHECK

Part Number	LEAD FREE Part Number	NPS	Length	Height	Weight
61Y-201-T1	not available	1/4	2.14	1.51	0.64
61Y-202-T1	not available	3/8	2.15	1.51	0.62
61Y-203-T1	61YLF-203-T1	1/2	2.48	1.65	0.73
61Y-204-T1	61YLF-204-T1	3/4	2.94	1.90	1.06
61Y-205-T1	61YLF-205-T1	1	3.57	2.26	1.70
61Y-206-T1	61YLF-206-T1	1 1/4	4.50	2.99	3.30
61Y-207-T1	61YLF-207-T1	1 1/2	4.50	2.99	3.10
61Y-208-T1	61YLF-208-T1	2	5.25	3.74	5.40

Height is measured from centerline to top of unit. For Flow Coefficients (C_{ν}) see page 17.

All dimensions are in inches and pounds.

164T SERIES



Features:

Y-Pattern Bronze Disc

Body & Cap:

ASTM B62 Bronze

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 3"

Pin: Stainless Steel

Seat: ASTM B62 BRONZE

Plug: Brass (ASTM B16)

Class 150 (300 CWP, 150 SWP) SWING CHECK

_	•				
	Part Number	NPS	Length	Height	Weight
	61Y-211-01	1/4	2.14	1.51	0.64
	61Y-212-01	3/8	2.14	1.51	0.62
	61Y-213-01	1/2	2.48	1.65	0.73
	61Y-214-01	3/4	2.94	1.90	1.06
	61Y-215-01	1	3.57	2.26	1.70
	61Y-216-01	1 1/4	4.50	2.99	3.30
	61Y-217-01	1 1/2	4.50	2.99	3.10
	61Y-218-01	2	5.25	3.74	5.50
	61Y-219-01	2 1/2	8.00	5.11	11.70
	61Y-210-01	3	9.24	6.05	17.80

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.



BRONZE SWING CHECK VALVES

168T SERIES



All dimensions are in inches and pounds.

Height

1.65

1.90

2.27

3.00

For Flow Coefficients (C_v) see page 17.

Weight

.75

1.20

1.80

3.50

Features: Y-Pattern
Bronze Disc
NPT

Body & Cap: ASTM B61 Bronze

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 2"

Pin: Stainless Steel

Seat: ASTM B61 BRONZE **Plug:** Brass (ASTM B16)

	Height is measured from centerline to ton of unit					
61Y-758-01	2	5.25	3.75	5.60		
61Y-/5/-01	1 1/2	4.50	3.00	3.20		

Length

2.50

2.95

3.57

4.50

Class 300 (600 CWP, 300 SWP) SWING CHECK

NPS

1/2

3/4

1

1 1/4

Part Number

61Y-753-01

61Y-754-01

61Y-755-01

61Y-756-01



169T SERIES

Features:

Y-Pattern PTFE Disc NPT

Body & Cap: ASTM B61 Bronze

Hanger: SS for 1/2", 3/4" & 1", or B62 on 1 1/4" to 3"

Pin: Stainless Steel

Seat: PTFE

Plug: Brass (ASTM B16)

	All dimensions are in inches and pounds.
300 (600 CWP) SWING CH	HECK

Class 300 (600 CWP) SWING CHECK						
Part Number	NPS	Length	Height	Weight		
61Y-753-T1	1/2	2.5	1.65	.75		
61Y-754-T1	3/4	2.95	1.90	1.20		
61Y-755-T1	1	3.57	2.27	1.80		
61Y-756-T1	1 1/4	4.50	3.00	3.50		
61Y-757-T1	1 1/2	4.50	3.00	3.20		
61Y-758-T1	2	5.25	3.75	5.60		

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.



IRON SWING CHECK VALVES

All dimensions are in inches and pounds.

910F SERIES Apollo International



FEATURES:

Compatible with ANSI 125# & 150# Flanges Full Port Minimal Pressure Drop Bolted Bonnet Integral Bronze Seat

STANDARDS:

MSS SP-71

"Gray Iron Swing Check Valves Flanged and Threaded"
ASME B16.10

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam:

125 psi (8.6 Bar) to 353°F (178°C) (2"-12") 100 psi (6.9 Bar) to 338°F(170°C) (14"-20")

Cold Working Pressure:

200 psi (13.8 Bar) at 100°F (2"-12") 150 psi (10.3 Bar) at 100°F (14"-20")

Temperature Range:

-20°F to 406°F

MATERIALS:

Body, Cover & Disc: ASTM A126 CL-B, CI

Seat & Disc Ring: ASTM B62 Bronze (2"-6") ASTM A126 CL-B, (8"-20")

Gasket: Graphoil

Part Number	NPS	Length	Height	Weight
6SC-108-B1	2	8.00	4.41	26.0
6SC-109-B1	2 1/2	8.50	5.24	39.0
6SC-100-B1	3	9.50	5.67	47.0
6SC-10A-B1	4	11.50	6.61	82.0
6SC-10B-B1	5	13.00	7.80	124.0
6SC-10C-B1	6	14.00	8.54	160.0
6SC-10E-01	8	19.50	10.28	271.0
6SC-10G-01	10	24.50	11.30	437.0

27.50

31.00

36.00

36.00

40.00

Class 125 FLANGED SWING CHECK

12

14

16

18

20

6SC-10H-01

6SC-10J-01

6SC-10K-01

6SC-10M-01

6SC-10N-01

Height is measured from centerline to top of unit. For Flow Coefficients (C_{ν}) see page 17.

12.56

17.50

23.45

27.50

29.25

644.0

950.0

1160.0

1720.0

2094.0

NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

910FLW SERIES Apollo International



FEATURES:

Compatible with ANSI 125# & 150# Flanges Full Port Minimal Pressure Drop Bolted Bonnet Integral Seat Lever and Weight Design

STANDARDS:

MSS SP-71

"Gray Iron Swing Check Valves Flanged & Threaded" ASME B16.10

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam: 125 psi (8.6 Bar) to 353°F Cold Working Pressure: 200 psi (13.8 Bar) at 100°F

Temperature Range: -20°F to 406°F

MATERIALS:

Body, Cover & Disc: ASTM A126 CL-B, Cl

Seat & Disc Ring: ASTM B62 Bronze (2"-6") ASTM A126 CL-B, (8"-12")

Packing & Gasket: Graphoil

All dimensions are in inches and pounds.

Class 125 FLANGED SWING CHECK						
Part Number	NPS	Length	Height	Weight		
6SC-108-B1L	2	8.00	4.41	38.8		
6SC-109-B1L	2 1/2	8.50	5.24	45.2		
6SC-100-B1L	3	9.50	5.67	61.7		
6SC-10A-B1L	4	11.50	6.61	99.2		
6SC-10B-B1L	5	13.00	7.80	132.3		
6SC-10C-B1L	6	14.00	8.54	169.8		
6SC-10E-01L	8	19.50	10.28	282.2		
6SC-10G-01L	10	24.50	11.30	438.7		
6SC-10H-01L	12	27.50	12.56	672.4		

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.

NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

IRON SWING CHECK VALVES

920F SERIES Apollo International



FEATURES:

Compatible with ANSI 250# & 300# Flanges Full Port Minimal Pressure Drop Bolted Bonnet Integral Seat

STANDARDS:

MSS SP-71

"Gray Iron Swing Check Valves Flanged and Threaded" ASME B16.10

"Face-to-Face and End-to-End Dimensions of Valves"

PERFORMANCE RATING:

Saturated Steam: 250 psi (17.2 Bar) to 406°F Cold Working Pressure: 500 psi (34.5 Bar) at 100°F Temperature Range: -20°F to 406°F

MATERIALS:

Body, Cover & Disc: ASTM A126 CL-B, CI

Seat & Disc Ring: ASTM B62 (2"-6") & ASTM A126 CL-B, CI (8")

Gasket: Graphoil

All dimensions are in inches and pounds.

Class 250 FLANGED SWING CHECK						
Part Number	NPS	Length	Height	Weight		
6SC-208-B1	2	10.51	4.41	30.0		
6SC-209-B1	2 1/2	11.50	5.24	44.0		
6SC-200-B1	3	12.50	5.67	55.0		
6SC-20A-B1	4	14.00	6.61	90.0		
6SC-20B-B1	5	15.75	7.80	135.0		
6SC-20C-B1	6	17.50	8.54	172.0		
6SC-20E-01	8	21.00	10.28	289.0		

Height is measured from centerline to top of unit. For Flow Coefficients (C_v) see page 17.

NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

IRON WAFER CHECKS

All dimensions are in inches and pounds

910WB SERIES Apollo International



FEATURES:

Compatible with ANSI 125# & 150# Flanges Full Port Minimal Pressure Drop Light Weight Spring Assisted Closing for Quicker Response

PERFORMANCE RATING:

Cold Working Pressure: 200 psi (13.8 Bar) at 100°F (2"-12") 150 psi (10.3 Bar) at 100°F (14"-24") Temperature Range:

10°F to 180°F

MATERIALS:

Body: ASTM A126 CL-B, Cl Disc: Aluminum Bronze Seat: Nitrile (Buna-N)

Class 125 WAR	Class 125 WAFER CHECK - Nitrile (Buna-N)									
Part Number	NPS	Length	Height	Weight						
6WC-108-N1	2	2.21	4.00	5.0						
6WC-109-N1	2 1/2	2.38	4.75	7.0						
6WC-100-N1	3	2.62	5.25	10.0						
6WC-10A-N1	4	2.62	6.75	12.0						
6WC-10B-N1	5	3.25	7.50	15.0						
6WC-10C-N1	6	3.75	8.50	22.0						
6WC-10E-N1	8	5.00	11.00	35.0						
6WC-10G-N1	10	5.50	13.25	66.0						
6WC-10H-N1	12	7.12	16.00	108.0						
6WC-10J-N1	14	7.25	17.75	172.0						
6WC-10K-N1	16	7.50	20.00	132.0						
6WC-10M-N1	18	8.00	21.50	223.0						
6WC-10N-N1	20	8.38	23.75	333.0						
6WC-10P-N1	24	8.75	28.00	474.0						

For Flow Coefficients (C,) see page 17.

IRON WAFER CHECKS

All dimensions are in inches and pounds.

910WE SERIES Apollo International



FEATURES:

Compatible with ANSI 125# & 150# Flanges Full Port Minimal Pressure Drop Light Weight Spring Assisted Closing for Quicker Response

PERFORMANCE RATING:

Saturated Steam: 125 psi (8.6 Bar) to 353°F (178°C) Cold Working Pressure: 200 psi (13.8 Bar) at 100°F

Temperature Range: -30°F to 275°F

NOTE: The maximum saturated steam working pressure (SWP) for soft seated valves is determined by the limits of the non-metallic materials.

MATERIALS:

Body: ASTM A126 CL-B, CI **Disc:** Aluminum Bronze

Seat: EPDM

Class 125 WAI	ER CHECK	Class 125 WAFER CHECK - EPDM									
Part Number	NPS	Length	Height	Weight							
6WC-108-E1	2	2.12	4.00	5.0							
6WC-109-E1	2 1/2	2.38	4.75	7.0							
6WC-100-E1	3	2.62	5.25	10.0							
6WC-10A-E1	4	2.62	6.75	12.0							
6WC-10B-E1	5	3.25	7.50	15.0							
6WC-10C-E1	6	3.75	8.50	22.0							
6WC-10E-E1	8	5.00	11.00	35.0							
6WC-10G-E1	10	5.50	13.25	66.0							
6WC-10H-E1	12	7.12	16.00	108.0							

For Flow Coefficients (C_v) see chart below.

C_v COEFFICIENTS – For Flow Estimation Only

Size	Bronze Gate	Bronze Globe	Bronze Swing Check	CI Gate	CI Globe	CI Swing Check	CI Wafer Check
1/4	3.0	1.4	2.6				
3/8	6.0	2.6	4.5				
1/2	12.5	4.4	7.0				
3/4	24.0	7.4	12.0				
1	72.3	12.1	28.6				
1-1/4	80	29	39				
1-1/2	119	30	56				
2	338	49	152	328	52	132	75
2-1/2	395	74	198	482	76	192	95
3	435	112	242	744	116	298	191
4				1316	204	526	377
5				2130	328	852	483
6				3176	488	1272	821
8				5692	874	2278	1590
10				8972	1376	3588	2920
12				13352		5342	4470
14				16278		6512	5870
16				21564		8626	8690
18				28716		11488	10940
20				35762		14304	14290
24				52166			23000

BRONZE CROSS REFERENCE CHART

	Apollo Model	1015	101S- LF	101T	101T- LF	1025	102S-LF
	Apollo P/N	30-08X-01	30LF-08X-01	30-00X-01	30LF-00X-01	30-04X-01	30LF-04X-01
	Size Range	1/2" to 3"	1/2" to 3"	1/4" to 3"	1/4" to 3"	1/2" to 3"	1/2" to 3"
S	Description	200 CWP Gate Valve Bronze Threaded Bonnet Solid Disc Rising Stem Solder Ends	200 CWP Gate Valve LF-Bronze Threaded Bonnet Solid Disc Rising Stem Solder Ends	Class 125 (200 CWP, 125 SWP) Gate Valve Bronze Threaded Bonnet Solid Disc Rising Stem NPT	Class 125 (200 CWP, 125 SWP) Gate Valve LF-Bronze Threaded Bonnet Solid Disc Rising Stem NPT	200 CWP Gate Valve Bronze Threaded Bonnet Solid Disc NRS Solder Ends	200 CWP Gate Valve LF-Bronze Threaded Bonnet Solid Disc NRS Solder Ends
	Design Standard	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139
VALVES	Crane Model	1334		428		1320	
	Hammond Model	IB635		IB640		IB647	
W	Kitz Model	444		24		41	
E	Milwaukee Model	149	UP149	148	UP148	115	UP115
BRONZE GATE	Nibco Model	S111		T111		S113	S113-LF
80	Stockham Model	B108K		B100K		B104K	
8	Walworth Model	55SJ		55		4SJ	

	Apollo Model	1615	161S-LF	161 T	161T- LF	162T
	Apollo P/N	61Y-09X-01	61YLF-09X-01	61Y-19X-01	61YLF-19X-01	61Y-20X-VI
	Size Range	1/2" to 3"	1/2" to 2"	1/4" to 3"	1/4" to 2"	1/4" to 2"
BRONZE CHECK VALVES	Description	200 CWP Swing Check Bronze Y-Pattern Bronze Disc Solder Ends	200 CWP Swing Check LF-Bronze Y-Pattern Bronze Disc Solder Ends	Class 125 (200 CWP, 125 SWP) Swing Check Bronze Y-Pattern Bronze Disc NPT	Class 125 (200 CWP, 125 SWP) Swing Check LF-Bronze Y-Pattern Bronze Disc NPT	Class 125 (200 CWP, 125 SWP) Swing Check Bronze Y-Pattern Viton® Disc NPT
11	Design Standard	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139	MSS SP-80
	Crane Model	1340		37		
	Hammond Model	IB912		IB904		
	Kitz Model			22		
E	Milwaukee Model	1509	UP1509	509	UP509	
NZ	Nibco Model	S413B		T413B		T413V
R 0	Stockham Model	B309YK		B319YK		B320BYK
<u>~</u>	Walworth Model	3406SJ		3406		

BRONZE CROSS REFERENCE CHART

	102T	102T- LF	102T-K	103T	106T	107T	111T	116T
	30-03X-01	30LF-03X-01	30-03X-01K	30-05X-01	30-28X-01	30-20X-01	30-44X-01	30-45X-01
	1/4" to 3"	1/4" to 3"	1/4" to 3"	1/4" to 3"	1/4" to 3"	1/4" to 3"	1/2" to 2"	1/2" to 2"
(Z 1 G B TI S	lass 125 200 CWP, 25 SWP) ate Valve ronze hreaded Bonnet olid Disc RS PT	Class 125 (200 CWP, 125 SWP) Gate Valve LF-Bronze Threaded Bonnet Solid Disc NRS NPT	Class 125 (200 CWP, 125 SWP) Gate Valve Bronze Threaded Bonnet Solid Disc NRS NPT	Class 125 (200 CWP, 125 SWP) Gate Valve Bronze Union Bonnet Solid Disc Rising Stem NPT	Class 150 (300 CWP, 150 SWP) Gate Valve Bronze Threaded Bonnet Solid Disc NRS NPT	Class 150 (300 CWP, 150 SWP) Gate Valve Bronze Union Bonnet Solid Disc Rising Stem NPT	Class 300 (1000 CWP, 300 SWP) Gate Valve Bronze Union Bonnet Solid Disc Rising Stem NPT	Class 300 (1000 CWP, 300 SWP) Gate Valve Bronze Union Bonnet Solid Disc, SS Seats Rising Stem NPT
	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-80	MSS SP-80	MSS SP-80	MSS SP-80	MSS SP-80
	438			428UB	437	431UB	622E	634E
	IB645			IB617	IB646	IB629	IB652	IB654
	40				46	42	37	
	105	UP105		1152	1140	1151	1182	1184
	T113	T113-LF	T113-K	T124	T133	T134	T174A	T174SS
	B103K			B105K	B128K	B120K	B144K	B145K
	4			2	14	11	3048	

1635	163S- LF	163T	163T- LF	164T	168T	169T	B
61Y-10X-T1	61YLF-10X-T1	61Y-20X-T1	61YLF-20X-T1	61Y-21X-01	61Y-75X-01	61Y-75X-T1	RO
1/2" to 2"	1/2" to 2"	1/4" to 2"	1/2" to 2"	1/4" to 3"	1/2" to 2"	1/2" to 2"	NZE
200 CWP Swing Check Bronze Y-Pattern PTFE Disc Solder Ends	200 CWP Swing Check LF-Bronze Y-Pattern PTFE Disc Solder Ends	Class 125 (200 CWP, 125 SWP) Swing Check Bronze Y-Pattern PTFE Disc NPT	Class 125 (200 CWP, 125 SWP) Swing Check LF-Bronze Y-Pattern PTFE Disc NPT	Class 150 (300 CWP, 150 SWP) Swing Check Bronze Y-Pattern Bronze Disc NPT	Class 300 (600 CWP, 300 SWP) Swing Check Bronze Y-Pattern Bronze Disc NPT	Class 300 (600 CWP, 300 SWP) Swing Check Bronze Y-Pattern PTFE Disc NPT	ZE CHECK VALVES
MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-80	MSS SP-80	ES
		41TF		137	76E		
IB423		IB940			IB949		
23T	823T	22T	822T	29	19		
1509T		509T		510	507		
S413Y	S4313Y-LF	T413Y	T413Y-LF	T433b	T473B	T473Y	
B310TY		B320TYK		B321K	B375K		
3095SJ					3428		



BRONZE AND IRON CROSS REFERENCE CHART

	Apollo Model	1205	120T	121T	121T- LF	122T	127T
	Apollo P/N	33-14X-01	33-13X-01	33-16X-01	33LF-16X-01	33-22X-01	33-66X-01
	Size Range	1/2" to 2"	3/8" to 2"	1/4" to 2"	1/4" to 2"	1/4" to 3"	1/2" to 2"
BRONZE GLOBE VALVES	Description	200 CWP Globe Valve Bronze Threaded Bonnet PTFE Disc Solder Ends	Class 125 (200 CWP, 125 SWP) Globe Valve Bronze Threaded Bonnet PTFE Disc NPT	Class 125 (200 CWP, 125 SWP) Globe Valve Bronze Threaded Bonnet Bronze Disc NPT	Class 125 (200 CWP, 125 SWP) Globe Valve LF-Bronze Threaded Bonnet Bronze Disc NPT	Class 150 (300 CWP, 150 SWP) Globe Valve Bronze Union Bonnet PTFE Disc NPT	Class 300 (1000 CWP, 300 SWP) Globe Valve Bronze Union Bonnet Bronze Disc NPT
411	Design Standard	MSS SP-80	MSS SP-80	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-80
	Crane Model		5TF	1		7TF	
8	Hammond Model			IB440		IB413T	IB412
10	Kitz Model			11		9	17
E	Milwaukee Model			502	UP502	590T	572
N _Z	Nibco Model	S211Y	T211Y	T211b		T235Y	T275B
8	Stockham Model	B14TK	B13TK	B16K		B22TK	B66K
8	Walworth Model	3095SJ		3058		3095	3205

	Apollo Model	711F	721F	
	Apollo P/N	6GB-11X-B1	6GB-21X-B1	<u>20</u>
	Size Range	2" to 10"	2" to 8"	N
	Description	Class 125 Flanged Globe Valve Cast Iron OS&Y IBBM	Class 250 Flanged Globe Valve Cast Iron OS&Y IBBM	RON GLOBE VALVES
ES	Design Standard	MSS SP-85	MSS SP-85	
ON GLOBE VALVES	Crane Model	351	21E	
	Hammond Model	IR116	IR313	
BE	Kitz Model			
9	Milwaukee Model	2981M	2983M	
	Nibco Model	F718B	F768B	
0	Stockham Model	G512	F532	
	Walworth Model	W906F	W955F	

IRON CROSS REFERENCE CHART

128T	
33-74X-01	3R
1/2" to 2"	NC
Class 300 (1000 CWP, 300 SWP) Globe Valve Bronze Union Bonnet SS Disc NPT	ZE GLOBE VAI
	VE
MSS SP-80	2
382P	
IB444	
175	
593A	
T276-AP	
B74K	
	1/2" to 2" Class 300 (1000 CWP, 300 SWP) Globe Valve Bronze Union Bonnet SS Disc NPT MSS SP-80 382P IB444 17S 593A T276-AP

	Apollo Model	610F	620F	611F	621F
	Apollo P/N	6GA-10X-B1	6GA-20X-B1	6GA-11X-B1	6GA-21X-B1
	Size Range	2" to 24"	2" to 12"	2" to 24"	2" to 12"
	Description	Class 125 Flanged Gate Valve Cast Iron NRS IBBM	Class 250 Flanged Gate Valve Cast Iron NRS IBBM	Class 125 Flanged Gate Valve Cast Iron OS&Y IBBM	2" to 12" Class 250 Flanged Gate Valve Cast Iron 0S&Y IBBM
S	Design Standard	MSS SP-70	MSS SP-70	MSS SP-70	MSS SP-70
VE	Crane Model	461		465 1/2	7 1/2E
	Hammond Model	IR1138		IR1140	IR330
ΕV	Kitz Model				
AT	Milwaukee Model	2882M		2885M	2894M
IRON GATE VALVES	Nibco Model	F619	F669	F617-0	F667-0
	Stockham Model	G612	F661	G623	F667
Ï	Walworth Model	W719F		W726F	W786F

	Apollo Model	910F	910FLW	920F	910WB	910WE	
	Apollo P/N	6SC-10X-B1	6SC-10X-B1L	6SC-20X-B1	6WC-10X-N1	6WC-10X-E1	RO
	Size Range	2" to 24"	2" to 12"	2" to 8"	2" to 24"	2" to 12"	N
	Description	Class 125 Flanged Swing Check Cast Iron IBBM	Class 125 Flanged Swing Check Cast Iron IBBM w/ lever & weight	Class 250 Flanged Swing Check Cast Iron IBBM	Class 125 Wafer Check Buna Cast Iron IBBM	Class 125 Wafer Check EPDMI Cast Iron IBBM	RON CHECK VALVES
ES	Design Standard	MSS SP-71	MSS SP-71	MSS SP-71			
	Crane Model	373	383	39E			
M	Hammond Model	IR1124		IR322	IR9253		
CK	Kitz Model						
IRON CHECK VALVES	Milwaukee Model	2974M	C2974MLW	2970M	1400		
U	Nibco Model	F918B	F918BLW	F968B	W910B		
Ó	Stockham Model	G931	G931W	F947	WG970	WG961	
H	Walworth Model	W928F		W8970F			



DEFINITIONS

BRONZE VALVE TYPES:

Apollo offers cast bronze alloy Gate, Globe and Swing Check valves in a variety of configurations and sizes:

Gate Valves: Apollo Gate valves are all fully guided solid wedge style available in Type 1A, "Non-Rising Stem and External Stuffing Box" and Type 2, "Rising Stem, Inside Screw, External Stuffing Box" designs.

Globe Valves: Apollo Globe valves are available in Type 1, "Metallic Disc, Integral Seat" and Type 2, "Non-Metallic Disc, Integral Seat", and Type 3, "Metallic Disc, Replaceable/Renewable Seat" designs.

Check Valves: Apollo Swing Check valves are available in Type 3, "Metal to Metal Seated", and Type 4, "Non-Metallic Disc, Metal Seat" designs.

CAST IRON VALVE TYPES:

Apollo Valves offers ANSI Class 125 and 250 flanged cast iron Gate, Globe and Swing Check valves; ASME B16.10 ANSI face to face and end to end dimensions of valves; ASME B16.1

Gate Valves: Flanged Cast Iron Gate Valves are Solid Wedge Design (Type I) with bronze mounted seat rings and are available in both non-rising stem and OS&Y configurations.

Globe Valves: Flanged Cast Iron Globe valves are offered in Type I (in line metal to metal seated) with bronze mounted seat rings. All feature OS&Y stem designs.

Swing Check Valves: Flanged Cast Iron Swing Check Valves are all Type I (full waterway, metal to metal seated) with bronze mounted seat rings.

Wafer Check Valves: Resilient seated, Dual Disc, spring-return design intended for installation between Class 125 or Class 150 flanges.

PRESSURE RATINGS:

SWP: "Steam Working Pressure" is defined as the maximum allowable working pressure for saturated steam service.

CWP: The acronym for "Cold Working Pressure" and is the allowable working pressure for the device in the temperature range of -20° F to 150° F (-29° C to 66° C)

Class 125: The CWP for Apollo's Class 125 valves is 200 psig.

Class 150: The CWP for Apollo's Class 150 valves is 300 psig

Class 250: The CWP for Apollo's Class 250 valves is 300 psig

Class 300: The CWP for Apollo's Class 300 valves is 1000 psig (600 psig for swing checks)

200 CWP: Commonly applied to bronze solder-end valves and equates to 200 psig.

125 SWP: The SWP for Apollo's Class 125 metal to metal seated valves is 125 psig.* (353° F)

150 SWP: The SWP for Apollo's Class 150 metal to metal seated valves is 150 psig.* (366° F)

300 SWP: The SWP for Apollo's Class 300 metal to metal seated valves is 300 psig.* (421° F)

*The maximum saturated steam working pressure (SWP) for soft seated valves is determined by the limits of the non-metallic materials.

TEMPERATURE RATINGS:

Maximum temperature ratings for valves with non-metallic seating (such as is offered in some globe and check valves) are dependant upon the composition of the sealing element. It is the responsibility of the user to specify the service conditions and verify that the valves selected are suitable for their intended use.

END CONNECTIONS:

Flanged Ends: All iron valves (with the exception of wafer checks) are supplied with flanged ends which comply with ASME B.16.1 and B16.10. End to end dimensions conform to ANSI B16.10.

Class 125, flat faced flanges & Class 250, 0.06 inch raised faced and MSS SP-6 finishes.

Threaded Ends: Bronze valves supplied with threaded ends comply with ASME B1.20.1.

Solder Ends: Bronze valves supplied with solder joint ends comply with ASME B16.18.



DEFINITIONS

STEM TYPES:

Rising Stem: Rising stem, inside screw is the most common stem design used in bronze gate and globe valves, while the larger cast iron valves use an OS&Y (outside screw and yoke) design. In the fully open, back seated position the stem threads are isolated from the media. The rising stem also give a clearly visible indication as to whether the valve is open or closed. Because the stem and handle rise above the valve during operation, adequate clearance must be provided.

Non-Rising Stem: Applicable only to gate valves. Valves with non-rising stems have a lower profile but the stem threads are exposed to the media leaving them subject to damage from erosion, corrosions or deposits. There is no visual open-closed indication.

BONNET OPTIONS:

Threaded Bonnet: This is the most cost effective method for assembling the bonnet of Gate and Globe valves.

Union Bonnet: Union bonnets are intended to simplify inspection of the interior of the valve. All Apollo cast iron gate, globe and swing check valves utilize bolted bonnet construction.

Bolted Bonnet: All Apollo cast iron gate, globe and swing check valves utilize bolted bonnet construction.

MATERIALS OF CONSTRUCTION - BRONZE VALVES:

For Standard Valves: All materials of construction comply with the requirements of MSS SP-80. Class 125, Class 150 and 200 CWP bodies and bonnets or covers are produced from ASTM B62 cast bronze containing a nominal 85% copper. Class 300 bodies and bonnets or covers are produced from ASTM B61 cast bronze containing a nominal 88% copper. Stems are produced from ASTM B371 silicon bronze.

"Lead-Free" Valves: Bodies and bonnets or covers are produced from ASTM B584-C89836 cast bronze containing a nominal 89% copper and no more than 0.1% lead. Stems are produced from ASTM B371 silicon bronze.

MATERIALS OF CONSTRUCTION - CAST IRON VALVES:

All materials of construction comply with the requirements of the governing MSS specification. Cast iron body and bonnet material is ASTM A126 Class B. All bolting is equal to or better than ASTM A307 B.

BRONZE & CAST IRON STEM PACKING:

All Apollo Gate and Globe valves are factory equipped with Die-Formed Graphite stem packing which ensures an effective seal under a wide range of service conditions.

BRONZE MARKING:

All Apollo Bronze Gate, Globe and Check valves are marked in compliance with MSS SP-80, MSS SP-139 and MSS SP-25. Swing check valves include a cast flow direction arrow. Lead Free valves feature a cast "LF" symbol where space permits.

CAST IRON MARKING:

All Apollo Gate, Globe and Check valves are marked in compliance with MSS SP-25 and the governing MSS product standard.

BRONZE TESTING:

All Apollo Bronze Gate, Globe and Check valves are tested in compliance with MSS SP-80 and MSS SP-139.

CAST IRON TESTING:

Each Apollo iron Gate, Globe and Check valve is tested in compliance with MSS SP-70, SP-71 or SP-85 as appropriate.



DEFINITIONS

BRONZE STANDARDS COMPLIANCE:

ASME B1.20.1, "Pipe Threads, General Purpose (Inch)"

ASME B16.18, "Cast Copper Solder Joint Pressure Fittings"

ASTM B61, "Standard Specification for Steam or Valve Bronze Castings"

ASTM B62, "Composition Bronze or Ounce Metal Castings"

ASTM B371, "Standard Specification for Copper-Zinc-Silicon Alloy Rod"

ASTM B584, "Standard Specification for Copper Alloy Sand Castings for General Applications"*

MSS SP-25, "Standard Marking System for Valves, Fittings and Flanges"

MSS SP-80, "Bronze Gate, Globe, Angle and Check Valves"

MSS SP-139, "Copper Alloy Globe, Angle, and Check Valves for Low Pressure/Low Temperature Plumbing Applications"*

* Lead-Free versions of Apollo's Gate, Globe and Check valves

CAST IRON STANDARDS COMPLIANCE:

ASME B16.1, "Cast Iron Pipe Flanges and Flanged Fittings" (Class 125 - flat faced flanged, Class 250 - 0.06 inch raised faced in accordance with MSS SP-6)

ASME B16.10, "Face to Face and End to End Dimensions of Valves"

ASME A126, "Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings"

ASTM A307, "Specification for Carbon Steel Bolts and Studs, 60000 psi Tensile Strength"

MSS SP-25, "Standard Marking System for Valves, Fittings and Flanges and Unions"

MSS SP-70, "Gray Iron Gate Valves Flanged and Threaded Ends"

MSS SP-71, "Gray Iron Swing Check Valves Flanged and Threaded Ends"

MSS SP-85, "Gray Iron Globe and Angle Valves Flanged and Threaded Ends"

CRN-0C .14467.xx (see www.ApolloValves.com for specific provinces) Canadian Registration Number in accordance with CSA B51 Boiler, Pressure Vessel and Pressure Piping Code.

CAUTIONS:

Bubble tight shut-off should not be expected on metal seated check valves. MSS Standards for Bronze (MSS SP-80) and for Cast Iron (MSS SP-70 and MSS SP-85) define acceptable leakage rates as 40 ml of water per hour per inch of Nominal Pipe Size (NPS) for valves 1" and larger or 0.4 Standard Cubic Foot (SCF) air per hour per inch of NPS. For valves smaller than 1" the allowable leak rate is 40 ml of water per hour or 0.4 SCF of air per hour.

Bubble tight shut-off should not be expected on metal to metal seated Gate or Globe valves. MSS Standards for Bronze (MSS SP-80) and for Cast Iron (MSS SP-70 and MSS SP-85) define acceptable leakage rates as 10 ml of water per hour per inch of Nominal Pipe Size (NPS) for valves 1" and larger or 0.1 SCF of air per hour per inch of NPS. For valves smaller than 1" the allowable leak rate is 10 ml of water per hour or 0.1 SCF of air per hour.

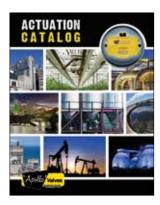
Gate valves are not recommended for throttling service and should only be used in the fully open or fully closed positions to minimize vibration and chatter which may damage the seat or wedge. For throttling applications refer to Apollo's Globe valve offering.

Safe working pressures and temperatures for solder end valve depends not only on the valve and tubing strength, but also on the composition of the solder used to produce the joints. It is the responsibility of the user to choose a solder that is compatible with the service conditions.

Properly sized swing check valves frequently are smaller than the pipe in which they are used. This practice keeps velocities up so the valve operates near full open, minimizing noise and vibration while maximizing valve life.



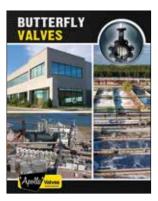
OTHER AVAILABLE PRODUCTS FROM APOLLO



Actuation & Controls Catalog



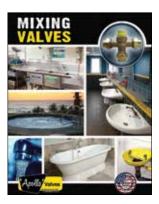
Backflow Prevention Catalog



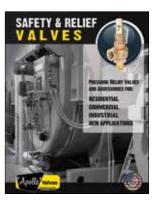
Butterfly Valves Catalog



Commercial Products Catalog



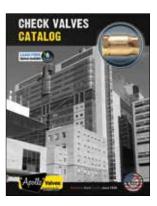
Mixing Valves Catalog



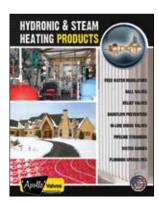
Safety & Relief Valves Catalog



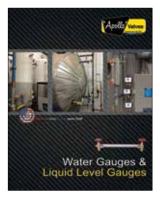
Flanged Iron Strainers Catalog



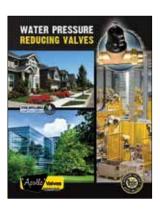
In-Line Check Valves Catalog



Hydronic & Steam Heating Products Catalog



Water Gauges & Liquid Level Catalog



Water Pressure Reducing Valves Catalog



Balancing Valves Brochure



TERMS, CONDITIONS & WARRANTY INFORMATION

TERMS & CONDITIONS OF SALE

- Payment: 2% 10th prox. Net 30 days.
- All prices F.O.B. shipping point with freight allowed on shipments of 750 pounds and/or \$5,000 net minimum to all shipping points within the United States excluding Alaska and Hawaii. No freight allowed on Air Freight or Parcel Post shipments. Claims for shortages must be made within 10 days of receipt of material. Our responsibility ends when a delivery receipt is furnished us by the carrier.
- No invoice rendered For Less than \$50.00.
- No freight will be allowed on Air Freight, Air Express, Parcel Post or U.P.S. shipments.
- All Conbraco products may be combined to make sufficient weight for full freight allowance.
- Phone order quoted prices are subject to correction. Prices and designs are subject to change without notice.
- Orders for material of special design or specification are made to customer's order and are not subject to cancellation or return.
- All goods returned to us will not be accepted unless a full explanation has been made and our written authorized permission obtained in advance. All goods returned if accepted will be credited at invoice price, less 30% for service and rehandling charges, plus shipping expenses.
- We reserve the right to adjust orders to box quantities.

WARRANTY AND LIMITATIONS OF LIABILITY

Conbraco Industries, Inc. warrants, to its initial purchaser only, that its products; including the cast bronze gates, globes & checks in this catalog; which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of FIVE years from the date of delivery to you, our initial purchaser. This warranty applies to Apollo brand product with "Made in the USA" markings only.

Should any failure to conform to this warranty appear within **FIVE** years after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco's recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco's own expense.

APOLLO INTERNATIONAL PRODUCTS: Conbraco Industries, Inc. warrants, to its initial purchaser only, its International products; including the cast iron gates, globes & checks in this catalog; which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of **TWO** years from the date of delivery to you, our initial purchaser.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESSED OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of Conbraco to our initial purchaser, with respect to the goods, whether based on contract, negligence, strict tort or otherwise. It is the intention of Conbraco Industries, Inc. that no warranty of any kind, whether expressed or implied shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: Conbraco Industries, inc. SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGES OR TO LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN, ARE EXCLUSIVE, AND THE LIABILITY OF CONBRACO WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE GOODS UPON WHICH SUCH LIABILITY IS BASED.

* It is the end user's responsibility to confirm that items intended for use satisfy local codes and standards.

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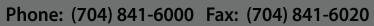
APOLLO VALVES SALES MANAGERS & INTERNATIONAL REPS

		AREAS COVERED	EMAIL	PHONE	FAX				
REGIONAL SALES DIRECTORS									
	Brian Blalock	Commercial	brian.blalock@conbraco.com	704-614-3744	704-841-6021				
	Mike Green	Industrial	mike.green@conbraco.com	704-841-6039	704-841-6021				
	REGIONAL SALES MANAGERS – COMMERCIAL								
COMMERCIAL	Kevin Ashworth	Mid-Atlantic	kevin.ashworth@conbraco.com	757-272-6200					
	Steve Brown	Western	steve.brown@conbraco.com	425-985-5095	253-862-3548				
	Andy Fretz	Canada	andy.fretz@conbraco.com	647-281-3161	905-761-6666				
	Ben Lauletta	Northeast	ben.lauletta@conbraco.com	518-795-4629					
	Sean Perry	Backflow Prevention Products	sean.perry@conbraco.com	704-641-9167					
	Nick Shelley	South Central & Florida	nick.shelley@conbraco.com	214-790-4157					
	Bill Stanton	North Central	bill.stanton@conbraco.com	262-227-0584					
	REGIONAL SALES MANAGERS – INDUSTRIAL								
INDUSTRIAL	JR Fortenberry	Mountain States	jr.fortenberry@conbraco.com	480-824-8288					
	Ken Griffin	Southeast	ken.griffin@conbraco.com	704-621-9296	704-841-6021				
	Sanford Pauly	Central	sanford.pauly@conbraco.com	513-716-7772	513-321-7717				
	James Saldivar	South Central	james.saldivar@conbraco.com	832-776-5547					
	Jim Todman	Canada	jim.todman@conbraco.com	905-407-8385	905-761-6666				
	Skip Wilson	West	skip.wilson@conbraco.com	760-330-3293	775-854-5722				
	LASCO FITTINGS REGIONAL SALES MANAGERS – IRRIGATION								
IRRIGATION	David Beyer	Northeast	dbeyer@lascofittings.com	561-718-9379					
	Ben Freeman	Southeast	bfreeman@lascofittings.com	205-919-4944					
	Ron Modugno	West	rmodugno@lascofittings.com	661-910-5058					
	Jimmy White	Central	jwhite@lascofittings.com	731-234-2372					
	Rick Williamson	Eastern Specifications Manager	rwilliamson@lascofittings.com	386-451-2307					
	INTERNATIONAL SALES REPS								
INTERNATIONAL	Jose Arias	Mexico	jose.arias@conbraco.com	1-956-631-4542	1-956-631-4681				
	JR Jefferson	Central & South America	jr.jefferson@conbraco.com	1-832-220-3783					
	Luke Liu	China	luke.liu@conbraco.com	86-411-869-02498					
	Brencliff Group	Australia	petermcl@brencliff.com	61-0477-223110					
	Pegler Yorkshire	United Kingdom	adrian.byrne@pegleryorkshire.co.uk	44-7740-449585					
	Pegler Yorkshire Mid East	Middle East/India	peter.pydubai@gmail.com	971-4-454-2353	971-4-454-2352				
		Europe/Africa/Israel	Contact Customer Service	1-704-841-6000	1-704-841-6021				

current as of 1/18/13



SALES & CUSTOMER SERVICE:





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APOLLO VALVES COMMERCIAL REPS

	AGENCY	AREAS COVERED	EMAIL	PHONE	FAX		
	SOUTHEAST REGION REPS	MAND AND AND A DOCUMENT		004 242 2004	004 242 2002		
SOUTHEAST	Mid South Marketing, Inc.	VA/MD/Washington DC/WV-East	michael.uecker@msmsales1.com	804-213-3801	804-213-3802		
	Pro Marketing, Inc. Spirit Group	NC/SC/TN-East FL (except Panhandle)	sales@promarketinginc.net info@spiritgroupinc.com	864-578-4334 407-291-6035	864-578-4889 407-299-0378		
no:	Tim Morales & Associates, Inc.	AL/FL Panhandle	sales@timmorales.com	251-602-8333	251-602-8339		
V1	White Wolf Group	GA	info@whitewolfgroupinc.com	800-401-4870	888-908-9372		
	NORTHEAST REGION REPS						
	Conroy & Griese Sales, Inc.	NY-East/NJ-North	iezzi52@aol.com	856-429-2660	856-429-2230		
NORTHEAST	Layden Company	NY-Upstate/PA-East/DE/NJ-South	joejr@laydencompany.com	610-363-6657	877-529-3361		
I EEE	Midwest Spec	Northern OH, Western PA, WV	glsales@mwspec.com	330-538-0406	330-538-0410		
OR.	Midwest Spec	Southern OH, KY	rvsales@mwspec.com	800-755-7732	513-353-1589		
2	Urell, Inc.	MA/New England States	apollo@urell.com	617-923-9500	617-926-9414		
	V.E. Sales Co., Inc.	MI (Except Upper Peninsula)	tomv@vesalesinc.com	586-774-7760	586-774-1490		
	NORTH CENTRAL REGION REPS						
T ≓	FourMation Sales	MN/ND/SD/WI-West	ryan@fourmationsales.com	763-420-6900	763-420-6993		
NORTH	Marathon Flow Control	KS except Northeast	sales@marathonflowcontrol.com	214-201-0100	214-201-0104		
	Marshall-Rodeno Heartland	NE/IA (Except River Counties)	dnaylor@marshallrodeno.com	303-575-6701	303-575-6706		
	New Tech Marketing	Northern-IL/WI-East/IN/MI-UP/IA-River Counties	sales@new-techmarketing.com	630-378-4300	630-378-0343		
	New Tech Marketing	MO/Southern IL/Northeast Kansas	ntm112@aol.com	618-394-0329	618-394-0427		
H. AL	SOUTH CENTRAL REGION REP			010 (27 52 10	010 ((4.1100		
SOUTH	NSC Marketing Group Inc. PEPCO Sales & Marketing	OK TX	nsc_tulsa@sbcglobal.net is@pepcosales.com	918-627-5340 972-823-8700	918-664-1408 972-823-8717		
S E	Southern Marketing Group	MS/TN-West/AR/Bowie CtyTX	SMG49@bellsouth.net	901-547-0042	901-547-0035		
	WESTERN REGION REPS	ms/ in west/in/bowie ety. IX	Sind 17@ben30utninet	901 917 001Z	901 917 0099		
	Elmco Duddy	CA - South	tduddy@elmcoduddy.com	626-333-9942	626-855-4811		
-	Gordon & Associates	WA, OR, AK, Northern counties ID	laura@gordonandassoc.com	360-566-1470	360-566-1478		
WESTERN	HC Fletcher	CA - North (AB 1953 Compliant Product & Fire Protection)	apollosales@hcfletcher.com	800-432-7047	949-660-9072		
EST	Marshall-Rodeno Associated	ID-SE/NV-NE	dnaylor@marshallrodeno.com	303-575-6701	303-575-6706		
	Southwest Valves	CA (Waterworks)	c.burell@southwestvalve.com	559-261-2703	559-261-2711		
	Southwestern Industrial Sales Co.	Nevada-SW	eduardop@sw-ind.com	480-458-5838	480-458-5843		
_	Spec Management Group	HI	msmarch4@cox.net	949-481-4225	949-487-0990		
	CANADA REPS						
•	Barclay Sales Ltd.	British Columbia	jblair@barclaysales.com	604-945-1010	604-945-3030		
	Conbraco Industries, Canada	178 Pennsylvania Ave., Unit 1, Concord, Ontario L4K 4B1	conbraco.canada@conbraco.com	905-761-6161	905-761-6666		
•	D & M Mechanical Sales	Ontario/East	don@dandmsales.ca	613-384-7084	613-384-3407		
PA	Dynamic Agencies, Ltd. J. Levandier Sales, Inc.	Saskatchewan	doug.dynamicage@sasktel.net vickie@jlevandiersales.com	306-343-1901 506-858-1615	306-343-1901 506-858-1084		
CANADA	Kern Industries, Ltd.	NS, NB, PE & NL Alberta-North	colin@kernind.com	780-451-2056	780-454-6687		
S -	Kern Industries Calgary, Ltd.	Alberta-South	laura.wood@kernindustries.ca	403-730-7791	403-239-8179		
•	Key to the North Sales Agency, Inc.	Ontario-North	office@keytothenorth.net	705-867-1401	705-867-1606		
	Task Controls, Inc.	Ontario	infotoronto@taskcontrols.com	416-291-3004	416-754-3481		
	Tom Beggs Agencies Ltd.	Manitoba/NW Ontario	tba@mts.net	204-953-1900	204-774-6915		
	Ventes Techniques Nimatec, Inc.	Quebec	nimatec@nimatec.com	450-691-9427	450-691-4949		
	IRRIGATION REPS						
	Active Sales Northwest, Inc.	OR, WA, Western ID	stevek@activesalesnw.com	541-726-0320	541-726-1148		
	Biz Sales Company	OH, KY, MI, IN, parts of PA, WV, WI	dzavelson@bizpvf.com	216-595-2888	216-595-2899		
	Fourmation Sales	MN/ND/SD/WI-West	dean@fourmationsales.com	763-262-4700	763-262-4740		
•	Hall Marketing	AL, LA	hallmarketing@bellsouth.net	228-547-4637	228-832-6666		
	J&J Midwest Sales	NE, IA, MO, KS	john@jandjmidwestsales.com	314-422-8419			
N N	John Hart Larry Perkins	FL TV Courthours	jhart@lascofittings.com	772-595-7773			
O Z	Marel Enterprises	TX - Southern New England, NY, DE, MD, VA, DC, parts of PA & WV	lperkins@lascofittings.com marelenterprise@gmail.com	936-443-1096 631-271-1718	631-427-8558		
I OI	Marsh & Moore	GA	iaustin@marshmoore.com	352-321-7499	904-827-8795		
IRRIGATION ONLY	Marshall-Rodeno Associated	CO/WY/MT/ID-SE/UT/NV-NE	dnaylor@marshallrodeno.com	303-575-6701	303-575-6706		
N N	NSC Marketing Group Inc.	OK	nsc_tulsa@sbcglobal.net	918-627-5340	918-664-1408		
	Pro Marketing, Inc.	NC/SC/TN-East	sales@promarketinginc.net	864-578-4334	864-578-4889		
	Sherman Dobbs	TX - Northern	sdobbs@lascofittings.com	469-442-8510	972-417-9733		
	Southern Marketing Group	MS/TN-West/AR/Bowie CtyTX	SMG49@bellsouth.net	901-547-0042	901-547-0035		
	Spec Management Group	CA	msmarch4@cox.net	949-481-4225	949-487-0990		
	Tim Morales & Associates, Inc.	AL	sales@timmorales.com	251-602-8333	251-602-8339		
	VPC Sales 000 - CG 7.500 3/13 (REV. 10/2	AZ	chudson@vpcsales.com	661-257-3923	661-257-3928		