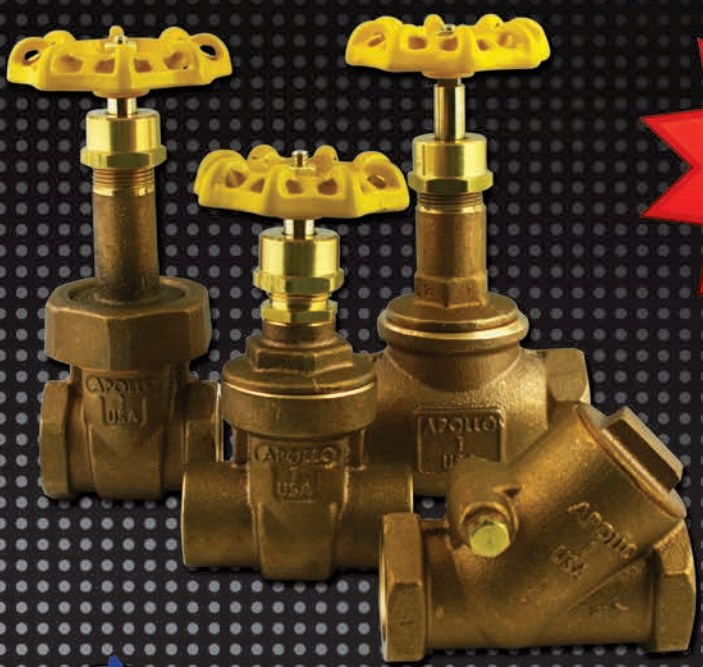




**NEW
CLASS
300**

GATE, GLOBE & CHECK CATALOG



Now More
LEAD FREE
Valves

BRONZE



IRON



A history of Quality, Service and Innovation

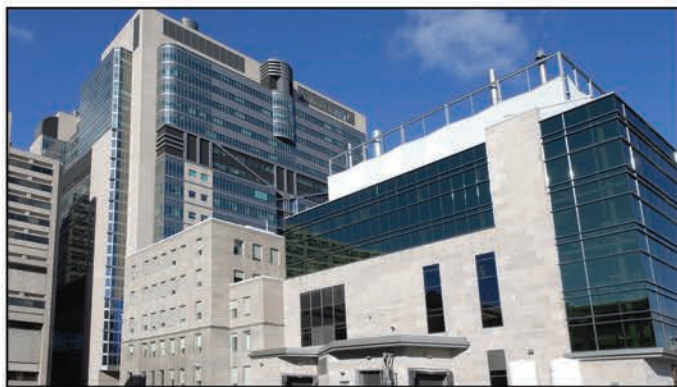
Now in its ninth decade, Conbraco Industries, Inc. is a leading manufacturer of flow control products for U.S. and international markets. The company's headquarters is based in Matthews, North Carolina with manufacturing plants and foundries located in Pageland and Conway, South Carolina.

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". In 2013 we extended the product family to include class 300 valves. This new line of multi-turn valves is suitable for a wide range of applications including boiler and 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 Federal Public Law 111-380. ANSI 3rd party approved and listed.

New Lead Free Models. Commencing Summer 2015, all new production of iron gate, globe and check valves will include NSF 372 Lead Free certification and labeling. Lead Free models are identified by a "LF" suffix in the part number, example: 6SC108B1 2" swing check will be replaced with 6SC108B1LF. Lead Free models will become available as existing inventory is depleted. Please consult your Apollo factory representative for availability.

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

Bronze & Cast Iron Gate, Globe & Check Valves



Table of Contents

Bronze Gate Valves.....	4-6
Cast Iron Gate Valves.....	7-8
Bronze Globe Valves.....	9-10
Cast Iron Globe Valves.....	11
Bronze Check Valves.....	12-14
Cast Iron Check Valves.....	15-16
Cast Iron Wafer Checks.....	16-17
C _v Coefficients Chart.....	17
Competitor Comparison Chart.....	18-21
Definitions.....	22-24
Terms & Conditions.....	26
Warranty Information.....	26

BRONZE GATE VALVES

101S/101S-LF SERIES



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

All dimensions are in inches and pounds.

200 CWP GATE 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_v) see page 17.

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

All dimensions are in inches and pounds.

Class 125 (200 CWP, 125 SWP) GATE 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

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.

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

All dimensions are in inches and pounds.

200 CWP GATE VALVE

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_v) 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
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

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
NPT
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

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.

All dimensions are in inches and pounds.

103T 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 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.



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

Customer Service (704) 841-6000

BRONZE GATE VALVES

All dimensions are in inches and pounds.

106T SERIES



Features:
Threaded Bonnet
Solid Disc
Non-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

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
30-280-01	3	4.48	12.61	16.90

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.

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

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
NPT

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

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_v) 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, CI
Stem: ASTM B16
Packing & Gasket: Graphoil

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

All dimensions are in inches and pounds.

Class 125 FLANGED GATE VALVE

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_v) see page 17.

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

All dimensions are in inches and pounds.

Class 250 FLANGED GATE VALVE

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-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_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 GATE VALVES

All dimensions are in inches and pounds.

611F SERIES *Apollo International*



FEATURES:

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, CI
Stem: ASTM B16
Packing & Gasket: Graphoil

Class 125 FLANGED GATE 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

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:

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

All dimensions are in inches and pounds.

Class 250 FLANGED GATE VALVE

Part Number	NPS	Length	Height	Weight
6GA-218-B1	2	8.50	14.96	44.0
6GA-219-B1	2 1/2	9.50	16.93	57.0
6GA-210-B1	3	11.12	19.09	71.0
6GA-21A-B1	4	12.00	24.21	121.0
6GA-21B-B1	5	15.00	27.56	165.0
6GA-21C-B1	6	15.88	32.87	216.0
6GA-21E-B1	8	16.50	39.76	302.0
6GA-21G-B1	10	18.00	48.03	481.0
6GA-21H-B1	12	19.75	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.

BRONZE GLOBE VALVES

All dimensions are in inches and pounds.

120S/120S-LF SERIES



Features:

Threaded Bonnet
PTFE Disc
Solder Ends



Body & Bonnet:

ASTM B62 Bronze

Stem: ASTM B371 Sil-Brz

Disc: PTFE

Packing: Graphoil

Hand Wheel: Malleable Iron

200 CWP GLOBE VALVE

Part Number	LEAD FREE 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.

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

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

Class 125 (200 CWP, 125 SWP) GLOBE VALVE

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

Customer Service (704) 841-6000

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 pounds.

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.

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

All dimensions are in inches and pounds.

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

Hand Wheel: Malleable Iron

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
 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: 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, CI
Stem: ASTM B16
Packing & Gasket: Graphite

All dimensions are in inches and pounds.

Class 125 FLANGED GLOBE 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	NPS	Length	Height	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-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_v) 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

All dimensions are in inches and pounds.

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)

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_v) see page 17.

161T/161T-LF SERIES



Features:

Y-Pattern
Bronze 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 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.

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

All dimensions are in inches and pounds.

163S/163S-LF SERIES



Features:
Y-Pattern
PTFE Disc
Soldier



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.

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_v) see page 17.

164T SERIES



Features:
Y-Pattern
Bronze Disc
NPT

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.



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

Customer Service (704) 841-6000

BRONZE SWING CHECK VALVES

168T SERIES



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)

All dimensions are in inches and pounds.

Class 300 (600 CWP, 300 SWP) SWING CHECK

Part Number	NPS	Length	Height	Weight
61Y-753-01	1/2	2.50	1.65	.75
61Y-754-01	3/4	2.95	1.90	1.20
61Y-755-01	1	3.57	2.27	1.80
61Y-756-01	1 1/4	4.50	3.00	3.50
61Y-757-01	1 1/2	4.50	3.00	3.20
61Y-758-01	2	5.25	3.75	5.60

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

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.

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

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

All dimensions are in inches and pounds.

Class 125 FLANGED SWING CHECK

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
6SC-10H-01	12	27.50	12.56	644.0
6SC-10J-01	14	31.00	17.50	950.0
6SC-10K-01	16	36.00	23.45	1160.0
6SC-10M-01	18	36.00	27.50	1720.0
6SC-10N-01	20	40.00	29.25	2094.0

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.

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, CI
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-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

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, CI
Disc: Aluminum Bronze
Seat: Nitrile (Buna-N)

All dimensions are in inches and pounds.

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_v) 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 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

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

Customer Service (704) 841-6000

BRONZE CROSS REFERENCE CHART

BRONZE GATE VALVES	Apollo Model	101S	101S-LF	101T	101T-LF	102S	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"
	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-80	MSS SP-139 MSS SP-80	MSS SP-80	MSS SP-139 MSS SP-80
	Crane Model	1334		428		1320	
	Hammond Model	IB635		IB640	UP640	IB647	
	Kitz Model	444		24		41	
	Milwaukee Model	149	UP149	148	UP148	115	UP115
	Nibco Model	S111		T111		S113	S113-LF
	Stockham Model	B108K		B100K		B104K	
Walworth Model	55SJ		55		4SJ		

BRONZE CHECK VALVES	Apollo Model	161S	161S-LF	161T	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"
	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
	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		
	Milwaukee Model	1509	UP1509	509	UP509	
	Nibco Model	S413B		T413B		T413V
	Stockham Model	B309YK		B319YK		B320BYK
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"
Class 125 (200 CWP, 125 SWP) Gate Valve Bronze Threaded Bonnet Solid Disc NRS NPT	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	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	

163S	163S-LF	163T	163T-LF	164T	168T	169T
61Y-10X-T1	61YLF-10X-T1	61Y-20X-T1	61YLF-20X-T1	61Y-21X-01	61Y-75X-01	61Y-75X-T1
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"
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
MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-80	MSS SP-80
		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	



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

Customer Service (704) 841-6000

BRONZE AND IRON CROSS REFERENCE CHART

BRONZE GLOBE VALVES

Apollo Model	120S	120S-LF	120T	120T-LF	121T	121T-LF
Apollo P/N	33-14X-01	33LF-14X-01	33-13X-01	33LF-13X-01	33-16X-01	33LF-16X-01
Size Range	1/2" to 2"	1/2" to 2"	3/8" to 2"	3/8" to 2"	1/4" to 2"	1/4" to 2"
Description	200 CWP Globe Valve Bronze Threaded Bonnet PTFE Disc Solder Ends	200 CWP Globe Valve LF-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 LF-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
Design Standard	MSS SP-80	MSS SP-80	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139 MSS SP-80
Crane Model			5TF		1	
Hammond Model					IB440	
Kitz Model					11	
Milwaukee Model		UP1502			502	UP502
Nibco Model	S211Y		T211Y		T211b	
Stockham Model	B14TK		B13TK		B16K	
Walworth Model	3095SJ				3058	

BRONZE GLOBE VALVES (cont'd)

Apollo Model	122T	127T	128T
Apollo P/N	33-22X-01	33-66X-01	33-74X-01
Size Range	1/4" to 3"	1/2" to 2"	1/2" to 2"
Description	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	Class 300 (1000 CWP, 300 SWP) Globe Valve Bronze Union Bonnet SS Disc NPT
Design Standard	MSS SP-80	MSS SP-80	MSS SP-80
Crane Model	7TF		382P
Hammond Model	IB413T	IB412	IB444
Kitz Model	9	17	17S
Milwaukee Model	590T	572	593A
Nibco Model	T235Y	T275B	T276-AP
Stockham Model	B22TK	B66K	B74K
Walworth Model	3095	3205	

IRON GLOBE VALVES

Apollo Model	711F
Apollo P/N	6GB-11X-B1
Size Range	2" to 10"
Description	Class 125 Flanged Globe Valve Cast Iron OS&Y IBBM
Design Standard	MSS SP-85
Crane Model	351
Hammond Model	IR116
Kitz Model	
Milwaukee Model	2981M
Nibco Model	F718B
Stockham Model	G512
Walworth Model	W906F



IRON CROSS REFERENCE CHART

IRON GATE VALVES	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	Class 250 Flanged Gate Valve Cast Iron OS&Y IBBM
	Design Standard	MSS SP-70	MSS SP-70	MSS SP-70	MSS SP-70
	Crane Model	461		465 1/2	7 1/2E
	Hammond Model	IR1138		IR1140	IR330
	Kitz Model				
	Milwaukee Model	2882M		2885M	2894M
	Nibco Model	F619	F669	F617-0	F667-0
	Stockham Model	G612	F661	G623	F667
	Walworth Model	W719F		W726F	W786F

721F
6GB-21X-B1
2" to 8"
Class 250 Flanged Globe Valve Cast Iron OS&Y IBBM
MSS SP-85
21E
IR313
2983M
F768B
F532
W955F

IRON CHECK VALVES	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
	Size Range	2" to 24"	2" to 12"	2" to 8"	2" to 24"	2" to 12"
	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
	Design Standard	MSS SP-71	MSS SP-71	MSS SP-71		
	Crane Model	373	383	39E		
	Hammond Model	IR1124		IR322	IR9253	
	Kitz Model					
	Milwaukee Model	2974M	C2974MLW	2970M	1400	
	Nibco Model	F918B	F918BLW	F968B	W910B	
	Stockham Model	G931	G931W	F947	WG970	WG961
	Walworth Model	W928F		W8970F		



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

Customer Service (704) 841-6000

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.



STANDARDS

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"*

CRN-0C14467.5C (gates and globes) and CRN-0C11218.5C (swing checks) (see www.ApolloValves.com for specific provinces) Canadian Registration Number in accordance with CSA B51 Boiler, Pressure Vessel and Pressure Piping Code.

NSF/ANSI 372 Lead Free, 3rd party certified*

* 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.

NSF/ANSI 372 Lead Free, 3rd party certified*

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

New Lead Free Models. Commencing Summer 2015, all new production of iron gate, globe and check valves will include NSF 372 Lead Free certification and labeling. Lead Free models are identified by a "LF" suffix in the part number, example: 6SC108B1 2" swing check will be replaced with 6SC108B1LF. Lead Free models will become available as existing inventory is depleted. Please consult your Apollo factory representative for availability.

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-71) 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.

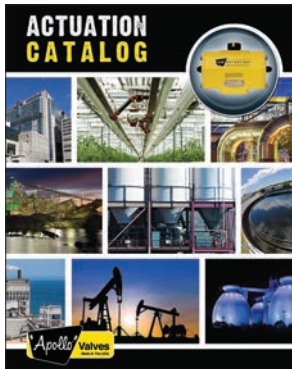
Gate valves are not recommended for throttling service and should only be used in the fully open or fully closed positions to minimize vibration and chatter which may damage the seat or wedge. For throttling applications refer to Apollo's Globe valve offering.

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.



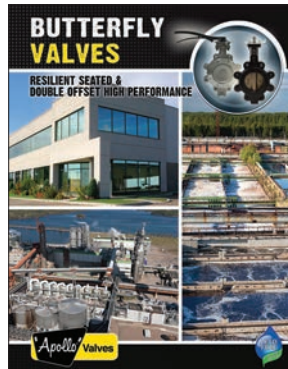
OTHER AVAILABLE PRODUCTS FROM APOLLO



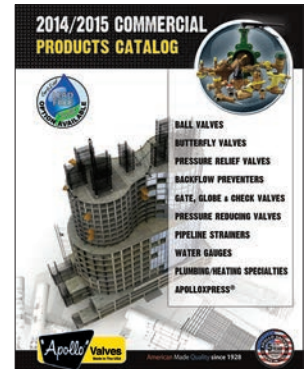
Actuation & Controls Catalog



Backflow Prevention Catalog



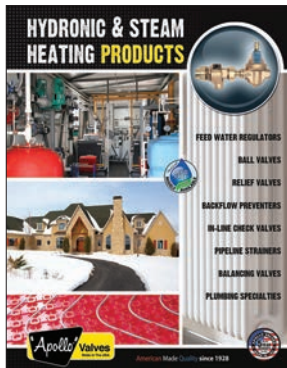
Butterfly Valves Catalog



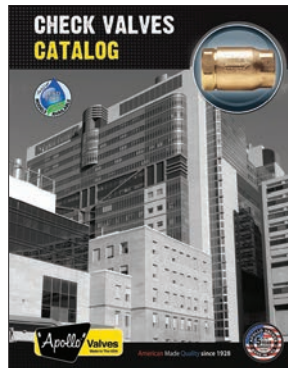
Commercial Products Catalog



Flanged Iron Strainers Catalog



Hydronic & Steam Heating Products Catalog



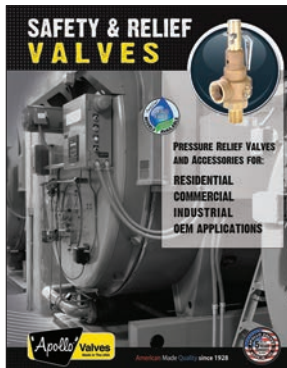
In-Line Check Valves Catalog



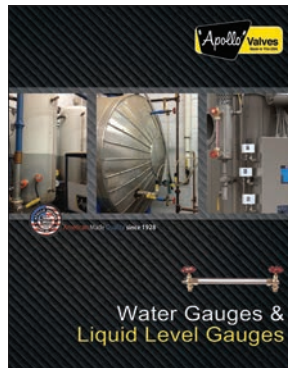
Lead Free Catalog



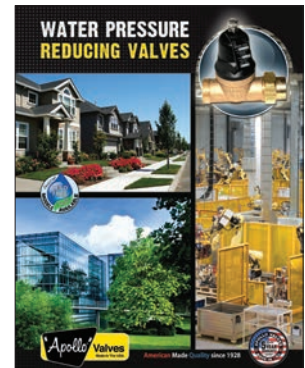
Mixing Valves Catalog



Safety & Relief Valves Catalog



Water Gauges & Liquid Level Catalog



Water Pressure Reducing Valves Catalog



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

Customer Service (704) 841-6000

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.

Conbraco®, Apollo®, Apollo Valves, and Apollo International are registered trademarks of Conbraco Industries Inc.
Conbraco Industries Inc. reserves the right to change specifications without notice.





SALES & CUSTOMER SERVICE:
 Phone: (704) 841-6000 Fax: (704) 841-6020

To find a Sales Rep in your area, visit our website.
www.apollovalves.com/relocator

REGIONAL MANAGEMENT – APOLLO VALVES, ELKHART PRODUCTS & LASCO FITTINGS

	AREAS COVERED	EMAIL	PHONE
SENIOR MANAGEMENT			
Brian Ragone	Senior VP - Sales & Marketing	brian.ragone@conbraco.com	513-200-5415
Don Russell	VP Sales - Commercial & Industrial	don.russell@conbraco.com	614-943-0688

REGIONAL SALES DIRECTORS – COMMERCIAL & INDUSTRIAL			
Mike Bedzyk	Central/Northeast	michael.bedzyk@conbraco.com	614-619-4993
Mitch Davis	S. Central/Southeast	mitch.davis@conbraco.com	678-628-4478
Phillip Merino	West	phillip.merino@conbraco.com	702-960-9935

REGIONAL SALES MANAGERS – COMMERCIAL & INDUSTRIAL			
Kevin Ashworth	Southeast	kevin.ashworth@conbraco.com	757-272-6200
Keith Baca	Southeast	keith.baca@conbraco.com	615-630-3892
Mike Blair	Central	mike.blair@conbraco.com	330-413-0035
Ken Copeland	Southwest	ken.copeland@conbraco.com	623-853-5744
Ben Lauletta	Northeast	ben.lauletta@conbraco.com	518-795-4629
Wesley Reinart	S. Central	wesley.reinart@conbraco.com	214-620-9901

INDUSTRIAL MARKET MANAGERS			
Dave Eck	Northeast	david.eck@conbraco.com	302-268-4411
Ken Griffin	Industrial & Commercial Valve Trainer	ken.griffin@conbraco.com	704-621-9296
Mark Sordelet	Central	mark.sordelet@conbraco.com	260-433-7393
Skip Wilson	Northwest	skip.wilson@conbraco.com	760-518-2222

BACKFLOW MARKET MANAGERS			
Pete Chapman	National Manager	pete.chapman@conbraco.com	559-577-2593
Cary Wiley	East	cary.wiley@conbraco.com	678-642-3356

APOLLOXPRESS MARKET MANAGERS			
John Rankel	National Manager	john.rankel@conbraco.com	702-445-0309
Todd Green	South Central	todd.green@conbraco.com	501-920-2029
Brian Jennings	North Central	brian.jennings@conbraco.com	859-394-3319
Jason Orawiec	West	jason.orawiec@conbraco.com	847-650-0170
Robert Purchia	East	robert.purchia@conbraco.com	704-960-3532

	AREAS COVERED	EMAIL	PHONE
APOLLOPUSH MARKET MANAGERS			
George Dragosz	Northeast	george.dragosz@elkhartproducts.com	574-206-3953
Mark Schanback	Southeast	mark.schanback@conbraco.com	407-916-9626
Jeremy Small	Central	jeremy.small@conbraco.com	214-766-2106
Dean Weidlein	West	dean.weidlein@elkhartproducts.com	702-355-8615

WROT/CAST MARKET MANAGERS			
Cindy Goodwin	National Manager	cindy.goodwin@elkhartproducts.com	517-294-0007

CANADA			
Jeff Cooper	General Manager	jeff.cooper@conbraco.com	416-451-9336
Andy Fretz	Commercial	andy.fretz@conbraco.com	647-281-3161
Jim Todman	Industrial	jim.todman@conbraco.com	905-407-8385

LASCO FITTINGS REGIONAL SALES MANAGERS – IRRIGATION			
David Beyer	Northeast	dbeyer@lascofittings.com	561-718-9379
Don Caver	Central	dcaver@lascofittings.com	469-628-4918
Ben Freeman	Southeast	bfreeman@lascofittings.com	205-919-4944
Bryan Jackman	West	bjackman@lascofittings.com	714-673-5875
Jimmy White	National Sales Manager	jwhite@lascofittings.com	731-234-2372
Rick Williamson	Eastern Specifications Manager	rwilliamson@lascofittings.com	386-451-2307

INTERNATIONAL SALES MANAGERS			
Bill McNamara	Director of International Sales	bill.mcnamara@elkhartproducts.com	1-574-903-3821
JR Jefferson	Central/South America & the Caribbean	jr.jefferson@conbraco.com	1-832-220-3783
Brencliff Group	Australia, New Zealand	petermcl@brencliff.com	61 477 223110
Pegler Yorkshire	United Kingdom	adrian.byrne@conbraco.com	44-7740-449858
Pegler Yorkshire Mid East	Middle East/India	peter.pydubai@gmail.com	971-4-454-2353
	Europe/Africa/Israel	customersupport@conbraco.com	1-704-841-6000

current as of 8/12/15

For more information about **Apollo Valves, Elkhart Products Corporation**, and our family of **AMERICAN MADE** products, contact:

