"Apollo"® Valves

gate, globe & check valves

section J

MODEL 101S/101S-LF
SOLDER END RISING STEM GATE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 200 CWP
- Max. Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 101T/101T-LF
NPT END RISING STEM GATE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 200 CWP
- 125 SWP
- Max. Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 102S/102S-LF
SOLDER END-NON RISING STEM GATE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 200 CWP
- Max. Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 102T/102T-LF
NPT END NON-RISING STEM GATE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 200 CWP
- 125 SWP
- Max Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 102T-K
NPT END NON-RISING STEM IRRIGATION GATE VALVE

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- Bronze Cross-Handle (Irrigation)
- 200 CWP
- 125 SWP
- Max Temp: 406°F
- SS Stem Nut

STANDARDS
- MSS SP-80 Standard
- ASTM B62 Bronze

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.
30LF-03X-01K available upon request.

MODEL 103T
NPT END RISING STEM GATE VALVE

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 200 CWP
- 125 SWP
- Max. Temp: 406°F

STANDARDS
- MSS SP-80 Standard
- ASTM B62 Bronze

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 106T
CLASS 150 NPT NON-RISING STEM GATE VALVE

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 300 CWP
- 150 SWP
- Max. Temp: 406°F

STANDARDS
- Meets MSS SP-80 Standard
- ASTM B62 Bronze Materials

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 107T
CLASS 150 NPT RISING STEM GATE VALVE

FEATURES
- Union Bonnet
- Solid Bronze Disc
- 300 CWP
- 150 SWP
- Max. Temp: 406°F

STANDARDS
- Meets MSS SP-80 Standard
- ASTM B62 Bronze Materials

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 111T/116T
CLASS 300 NPT RISING STEM GATE VALVE

FEATURES
- Union Bonnet
- Solid Bronze Disc
- Model 116T has Type 316 SS Seats
- 1000 CWP
- 300 SWP
- Max. Temp: 422°F

STANDARDS
- Meets MSS SP-80 Standard
- ASTM B61 Bronze Materials

APPROVALS
- CRN 0C14667

PART NUMBER	SS SEAT PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 610F
CLASS 125 FLANGED GATE VALVE

LEADFREE OPTIONS

New!

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  125 psi (8.6 Bar) at 353° F (2"-12")
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 406° F max

STANDARD MODEL
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 180° F max

FEATURES
- Compatible with ANSI 125# & 150# Flanges
- Full Port
- Bronze Mounted Seat Rings/Trim
- Solid Wedge
- Adjustable Graphite Stem Packing
- Non-Rising Stem
- Bolted Bonnet
- Rugged Iron Hand Wheel
- Back Seat Protection
- Apollo International™

STANDARDS
- MSS SP-70 - Gray Iron Gate Valves Flanged and Threaded - Type 1
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
	6GA-108-B1-LFA	2	7.00	14.57	36.0
6GA-109-B1	6GA-109-B1-LFA	2-1/2	7.50	16.34	48.0
-	6GA-100-B1-LFA	3	8.00	18.90	59.0
	6GA-10A-B1-LFA	4	9.00	20.67	104
6GA-10B-B1	6GA-10B-B1-LFA	5	10.00	24.61	150
-	6GA-10C-B1-LFA	6	10.50	28.74	192
	6GA-10E-B1-LFA	8	11.50	32.48	260
	6GA-10G-B1-LFA	10	13.00	37.40	434
6GA-10H-B1	6GA-10H-B1-LFA	12	14.00	43.31	606

Length is measured from end-to-end. Height is measured from centerline to top of wheel in full open position.
NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

MODEL 620F
CLASS 250 FLANGED GATE VALVE

LEADFREE OPTIONS

New!

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  250 psi (17.2 Bar) at 406° F (2"-12")
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 406° F max

STANDARD AND (-LF) MODEL
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 180° F max

FEATURES
- Compatible with ANSI 250# & 300# Flanges
- Full Port
- Bronze Mounted Seat Rings/Trim
- Solid Wedge
- Adjustable Graphite Stem Packing
- Non-Rising Stem
- Bolted Bonnet
- Rugged Iron Hand Wheel
- Back Seat Protection
- Apollo International™

STANDARDS
- MSS SP-70 - Gray Iron Gate Valves Flanged and Threaded - Type 1
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LF PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	*NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
6GA-208-B1	-	6GA-208-B1-LFA	2	8.50	11.28	42.0
6GA-209-B1	6GA-209-B1-LF	6GA-209-B1-LFA	2-1/2	9.50	12.72	55.0
-	6GA-200-B1-LF	6GA-200-B1-LFA	3	11.00	13.31	66.0
6GA-20A-B1	6GA-20A-B1-LF	6GA-20A-B1-LFA	4	12.00	16.18	115
-	-	6GA-20C-B1-LFA	6	16.00	22.00	205
6GA-20E-B1	-	6GA-20E-B1-LFA	8	16.50	25.59	278
-	-	6GA-20G-B1-LFA	10	18.00	30.31	456
-	-	6GA-20H-B1-LFA	12	19.75	33.90	633

Length is measured from end-to-end. Height is measured from centerline to top of wheel in full open position.
NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

MODEL 611F
CLASS 125 FLANGED OS&Y GATE VALVE

LEADFREE OPTIONS

New!

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  125 psi (8.6 Bar) at 353° F (2"-12")
  100 psi (6.9 Bar) at 338° F (14")
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-12")
  150 psi (10.3 Bar) at 100° F (14")
- Temperature Range: -20° to 406° F max

STANDARD AND (-LF) MODELS
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 180° F max

FEATURES
- Compatible with ANSI 125# & 150# Flanges
- Full Port
- Bronze Mounted Seat Rings/Trim
- Solid Wedge
- Adjustable Graphite Stem Packing
- Outside Screw & Yoke
- Bolted Bonnet
- Rugged Iron Hand Wheel
- Back Seat Protection
- Apollo International™

STANDARDS
- MSS SP-70 - Gray Iron Gate Valves Flanged and Threaded - Type 1
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LF PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
	6GA-118-B1-LF	6GA-118-B1-LFA	2	7.00	14.96	38.0
-	6GA-119-B1-LF	6GA-119-B1-LFA	2-1/2	7.50	16.93	51.0
-	-	6GA-110-B1-LFA	3	8.00	19.09	62.0
	-	6GA-11A-B1-LFA	4	9.00	24.21	110
		6GA-11B-B1-LFA	5	10.00	27.56	154
-	-	6GA-11C-B1-LFA	6	10.50	32.87	203
-	-	6GA-11E-B1-LFA	8	11.50	37.76	284
-	-	6GA-11G-B1-LFA	10	13.00	48.03	459
6GA-11H-B1	6GA-11H-B1-LF	6GA-11H-B1-LFA	12	14.00	56.50	637
-	-	6GA-11J-B1-LFA	14	15.00	65.16	966

Length is measured from end-to-end. Height is measured from centerline to top of wheel in full open position.
NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

MODEL 621F
CLASS 250 FLANGED OS&Y GATE VALVE

LEADFREE OPTIONS

New!

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  250 psi (17.2 Bar) at 406° F (2"-10")
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F
- Temperature Range: -20° to 406° F max

STANDARD AND (-LF) MODELS
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-10")
- Temperature Range: -20° to 180° F max

FEATURES
- Compatible with ANSI 250# & 300# Flanges
- Full Port
- Bronze Mounted Seat Rings/Trim
- Solid Wedge
- Adjustable Graphite Stem Packing
- Outside Screw & Yoke
- Bolted Bonnet
- Rugged Iron Hand Wheel
- Back Seat Protection
- Apollo International™

STANDARDS
- MSS SP-70 - Gray Iron Gate Valves Flanged and Threaded - Type 1
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LF PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
-	6GA-218-B1-LF	6GA-218-B1-LFA	2	8.50	14.96	44.0
6GA-219-B1	6GA-219-B1-LF	6GA-219-B1-LFA	2-1/2	9.50	16.93	57.0
6GA-219-B1	-	6GA-210-B1-LFA	3	11.12	19.09	71.0
-	6GA-21A-B1-LF	6GA-21A-B1-LFA	4	12.00	24.21	121
-	-	6GA-21B-B1-LFA	5	15.00	27.56	165
-	-	6GA-21C-B1-LFA	6	15.88	32.87	216
-	6GA-21E-B1-LF	6GA-21E-B1-LFA	8	16.50	39.76	302
6GA-21G-B1	-	6GA-21G-B1-LFA	10	18.00	48.03	481

Length is measured from end-to-end. Height is measured from centerline to top of wheel in full open position.
NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

MODEL 120S/120S-LF
SOLDER END GLOBE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- PTFE Disc
- 200 CWP
- Max. Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 120T/120T-LF
CLASS 125 NPT GLOBE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- PTFE Disc
- 200 CWP
- 125 SWP
- Max. Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- SS SP-80 Standard
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 121T/121T-LF
CLASS 125 NPT GLOBE VALVE

LEADFREE OPTIONS

FEATURES
- Threaded Bonnet
- Solid Bronze Disc
- 200 CWP
- 125 SWP
- Max. Temp: 406°F
- Lead Free Option (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 122T
CLASS 150 NPT GLOBE VALVE

FEATURES
- Union Bonnet
- PTFE Disc
- 300 CWP
- 150 SWP
- Max. Temp: 406°F

STANDARDS
- Meets MSS SP-80 Standard
- ASTM B62 Bronze Materials

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 127T
CLASS 300 NPT GLOBE VALVE

FEATURES
- Union Bonnet
- Bronze Disc and Seat
- 1000 CWP
- 300 SWP
- Max. Temp: 422°F

STANDARDS
- Meets MSS SP-80 Standard
- ASTM B61 Bronze Materials

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 128T
CLASS 300 GLOBE VALVE

FEATURES
- Union Bonnet
- Type 420 Stainless Steel Disc and Seat Ring
- 1000 CWP
- 300 SWP
- Max. Temp: 422°F

STANDARDS
- Meets MSS SP-80 Standard
- ASTM B61 Bronze Materials

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 711F
CLASS 125 FLANGED GLOBE VALVE

LEADFREE OPTIONS

New!

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
- Apollo International™

STANDARDS
- MSS SP-85 - Gray Iron Globe and Angle Valves Flanged and Threaded Ends
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  125 psi (8.6 Bar) at 353° F (2"-10")
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-10")
- Temperature Range: -20° to 406° F max

STANDARD AND (-LF) MODELS
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-10")
- Temperature Range: -20° to 180° F max

STANDARD PART NO. (NOT FOR STEAM)	-LF PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
-	-	6GB-118-B1-LFA	2	8.00	11.61	36.0
-	6GB-119-B1-LF	6GB-119-B1-LFA	2-1/2	8.50	12.99	49.0
-	-	6GB-110-B1-LFA	3	9.50	14.37	64.0
-	-	6GB-11A-B1-LFA	4	11.50	15.75	94.0
-	-	6GB-11B-B1-LFA	5	13.00	17.72	137
6GB-11C-B1	-	6GB-11C-B1-LFA	6	14.00	20.67	195
-	-	6GB-11E-B1-LFA	8	19.50	23.43	315
-	-	6GB-11G-B1-LFA	10	24.50	26.97	485

Length is measured from end-to-end. Height is measured from centerline to top of wheel in full open position.
NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

MODEL 721F
CLASS 250 FLANGED GLOBE VALVE

LEADFREE OPTIONS

New!

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
- Apollo International™

STANDARDS
- MSS SP-85 - Gray Iron Globe and Angle Valves Flanged and Threaded Ends
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  250 psi (17.2 Bar) at 406° F (2"-8")
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-8")
- Temperature Range: -20° to 406° F max

STANDARD MODELS
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-8")
- Temperature Range: -20° to 180° F max

STANDARD PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
-	6GB-218-B1-LFA	2	10.50	14.17	40.8
6GB-219-B1	6GB-219-B1-LFA	2-1/2	11.50	15.75	52.9
6GB-210-B1	6GB-210-B1-LFA	3	12.50	16.93	70.5
6GB-21A-B1	6GB-21A-B1-LFA	4	14.00	18.90	99.2
6GB-21C-B1	6GB-21C-B1-LFA	6	17.50	23.62	203
-	6GB-21E-B1-LFA	8	21.00	27.56	333

Length is measured from end-to-end. Height is measured from centerline to top of wheel in full open position.
NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

MODEL 161S/161S-LF
BRONZE DISC SWING CHECK

LEADFREE OPTIONS

FEATURES
- Y-Pattern
- Solder Ends
- Bronze Seat
- 200 CWP
- Lead Free Option (NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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	–	2-1/2	8.30	5.11	9.70
61Y-090-01	–	3	9.58	6.05	15.00

Height is measured from centerline to top of unit.

MODEL 161T/161T-LF
CLASS 125 BRONZE DISC SWING CHECK

LEADFREE OPTIONS

FEATURES
- Y-Pattern
- NPT
- Bronze Seat
- 200 CWP
- 125 SWP
- Lead Free Option (NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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	–	2-1/2	8.00	5.11	11.70
61Y-190-01	–	3	9.24	6.05	17.80

Height is measured from centerline to top of unit.

MODEL 162T
VITON® DISC SWING CHECK

FEATURES
- Y-Pattern
- NPT
- Viton Elastomer Seat
- 200 CWP
- 125 SWP

STANDARDS
- MSS SP-80 Standard
- ASTM B62 Bronze

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 163S/163S-LF
200 CWP PTFE DISC SWING CHECK

LEADFREE OPTIONS

FEATURES
- Y-Pattern
- Solder
- PTFE Soft Seat
- 200 CWP
- Lead Free Option (NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 163T/163T-LF
CLASS 125 PFTE DISC SWING CHECK

LEADFREE OPTIONS

FEATURES
- Y-Pattern
- NPT
- PTFE Soft Seat
- 200 CWP
- 125 SWP
- Lead Free Option (NSF/ANSI/CAN 372)

STANDARDS
- MSS SP-80 Standard
- MSS SP-139 Lead Free Option (CWP only)
- ASTM B62 Bronze (ASTM B584-C89836 Lead Free)

APPROVALS
- CRN 0C14667

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 164T
CLASS 150 BRONZE DISC SWING CHECK

FEATURES
- Y-Pattern
- NPT
- Bronze Seat
- 300 CWP
- 150 SWP

STANDARDS
- MSS SP-80 Standard
- ASTM B62 Bronze

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 168T
CLASS 300 BRONZE DISC SWING CHECK

FEATURES
- Y-Pattern
- NPT
- Bronze Seat
- 600 CWP
- 300 SWP

STANDARDS
- MSS SP-80 Standard
- ASTM B61 Bronze

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 169T
CLASS 300 PTFE DISC SWING CHECK

FEATURES
- Y-Pattern
- NPT
- PFTE Soft Seat
- 600 CWP
- 300 SWP

STANDARDS
- MSS SP-80 Standard
- ASTM B61 Bronze

APPROVALS
- CRN 0C14667

PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
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.

MODEL 910F
CLASS 125 FLANGED SWING CHECK

LEADFREE OPTIONS

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  125 psi (8.6 Bar) at 353° F (2"-12")
  100 psi (6.9 Bar) at 338° F (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° to 406° F max

STANDARD AND (-LF) MODELS
- 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° to– 180° F max

FEATURES
- Compatible with ANSI 125# & 150# Flanges
- Full Port
- Minimal Pressure Drop
- Flanged Connection
- Bolted Bonnet
- Integral Bronze Seat
- Apollo International™

STANDARDS
- MSS SP-71 - Gray Iron Swing Check Valves Flanged and Threaded Ends
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LF PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
-	-	6SC-108-B1-LFA	2	8.00	4.41	26.0
-	6SC-109-B1-LF	6SC-109-B1-LFA	2-1/2	8.50	5.24	39.0
-	-	6SC-100-B1-LFA	3	9.50	5.67	47.0
-	-	6SC-10A-B1-LFA	4	11.50	6.61	82.0
6SC-10B-B1	-	6SC-10B-B1-LFA	5	13.00	7.80	124
-	-	6SC-10C-B1-LFA	6	14.00	8.54	160
-	-	6SC-10E-B1-LFA	8	19.50	10.28	271
6SC-10G-01	-	6SC-10G-B1-LFA	10	24.50	11.30	437
6SC-10H-01	-	6SC-10H-B1-LFA	12	27.50	12.56	644
-	-	6SC-10J-01-LFA	14	31.00	17.50	950
-	-	6SC-10K-01-LFA	16	36.00	23.45	1160
6SC-10N-01	-	-	20	40.00	29.25	2094

Height is measured from centerline to top of unit.

MODEL 910FLW
CLASS 125 FLANGED SWING CHECK

LEADFREE OPTIONS

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  125 psi (8.6 Bar) at 353° F (2"-12")
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 406° F max

STANDARD AND (-LF) MODELS
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100° F (2"-12")
- Temperature Range: -20° to 180° F max

FEATURES
- Compatible with ANSI 125# & 150# Flanges
- Full Port
- Minimal Pressure Drop
- Flanged Connection
- Bolted Bonnet
- Integral Seat
- Lever & Weight Design
- Apollo International™

STANDARDS
- MSS SP-71 - Gray Iron Swing Check Valves Flanged and Threaded Ends
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LF PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
-	-	6SC-108-B1L-LFA	2	8.00	4.41	38.8
6SC-109-B1L	-	6SC-109-B1L-LFA	2-1/2	8.50	5.24	45.2
-	6SC-100-B1L-LF	6SC-100-B1L-LFA	3	9.50	5.67	61.7
-	-	6SC-10A-B1L-LFA	4	11.50	6.61	99.2
-	-	6SC-10B-B1L-LFA	5	13.00	7.80	132
-	-	6SC-10C-B1L-LFA	6	14.00	8.54	170
-	-	6SC-10E-B1L-LFA	8	19.50	10.28	282
-	-	6SC-10G-B1L-LFA	10	24.50	11.30	439
-	-	6SC-10H-B1L-LFA	12	27.50	12.56	672

Height is measured from centerline to top of unit.
NOTE: Flat face mating flanges and full face gaskets must be installed to avoid damage to the cast iron body.

MODEL 920F
CLASS 250 FLANGED SWING CHECK

LEADFREE OPTIONS

PERFORMANCE RATING (-LFA) MODEL
- Saturated Steam:
  250 psi (17.6 Bar) at 406° F (2"-8")
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-8")
- Temperature Range: -20° to 406° F max

STANDARD MODEL
- Cold Working Pressure:
  500 psi (34.4 Bar) at 100° F (2"-8")
- Temperature Range: -20° to 180° F max

FEATURES
- Compatible with ANSI 250# & 300# Flanges
- Full Port
- Minimal Pressure Drop
- Flanged Connection
- Bolted Bonnet
- Integral Seat
- Apollo International™

STANDARDS
- MSS SP-71 - Gray Iron Swing Check Valves Flanged and Threaded Ends
- ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves
- ASME B1.1 - Unified Inch Screw Threads

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

STANDARD PART NO. (NOT FOR STEAM)	-LFA PART NO. (STEAM RATED)	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
6SC-208-B1	6SC-208-B1-LFA	2	10.51	4.41	30.0
-	6SC-209-B1-LFA	2-1/2	11.50	5.24	44.0
6SC-200-B1	6SC-200-B1-LFA	3	12.50	5.67	55.0
–	6SC-20A-B1-LFA	4	14.00	6.61	90.0
-	6SC-20C-B1-LFA	6	17.50	8.54	172
6SC-20E-01	6SC-20E-01-LFA	8	21.00	10.28	289

Height is measured from centerline to top of unit.
NOTE: Class 250 flanges and flanged fittings have a 0.06 inch raised face in accordance with MSS SP-6.

MODEL 910WB
CLASS 125 WAFER CHECK - NITRILE (BUNA-N)

LEADFREE OPTIONS

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

PERFORMANCE RATING
- 250 psi (17.2 Bar) Non-Shock Cold Working Pressure
  Maximum Temperature to 180°F (82°C)
- **Not For Steam Use**

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
6WC-108-N1	6WC-108-N1-LF	2	2.12	4.00	5.0
–	6WC-109-N1-LF	2-1/2	2.38	4.75	7.0
–	6WC-100-N1-LF	3	2.62	5.25	10.0
-	6WC-10A-N1-LF	4	2.62	6.75	12.0
–	6WC-10B-N1-LF	5	3.25	7.50	15.0
–	6WC-10C-N1-LF	6	3.75	8.50	22.0
–	6WC-10E-N1-LF	8	5.00	11.00	35.0
6WC-10G-N1	6WC-10G-N1-LF	10	5.50	13.25	66.0
-	6WC-10H-N1-LF	12	7.12	16.00	108

MODEL 910WE
CLASS 125 WAFER CHECK - EPDM

LEADFREE OPTIONS

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

PERFORMANCE RATING
- Cold Working Pressure:
  200 psi (13.8 Bar) at 100°F
- Temperature Range: -20°F to 180°F
- **Not For Steam Use**

APPROVALS
- CSA B51

APPROVALS (LEAD FREE ONLY)
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI/CAN 372 - Lead Free

PART NUMBER	LF PART NUMBER	NPS	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
6WC-108-E1	6WC-108-E1-LF	2	2.12	4.00	5.0
–	6WC-109-E1-LF	2-1/2	2.38	4.75	7.0
-	6WC-100-E1-LF	3	2.62	5.25	10.0
–	6WC-10A-E1-LF	4	2.62	6.75	12.0
6WC-10B-E1	6WC-10B-E1-LF	5	3.25	7.50	15.0
–	6WC-10C-E1-LF	6	3.75	8.50	22.0
–	6WC-10E-E1-LF	8	5.00	11.00	35.0
-	6WC-10G-E1-LF	10	5.50	13.25	66.0
–	6WC-10H-E1-LF	12	7.12	16.00	108

CV 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	
16	-	-	-	21564	-	8626	
18	-	-		28716	-	11488	
20	-	-	-	35762	-	14304	
24	-	-	-	52166	-	-	

BRONZE GATE VALVE
CROSS REFERENCE CHART

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	

APOLLO MODEL	102T	102T-LF	102T-K	103T	106T	107T	111T	116T
APOLLO P/N	30-03X-01	30LF-03X-01	30-03X-01K	30-05X-01	30-28X-01	30-20X-01	30-44X-01	30-45X-01
SIZE RANGE	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"
DESCRIPTION	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
DESIGN STANDARD	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
CRANE MODEL	438			428UB	437	431UB	622E	634E
HAMMOND MODEL	IB645			IB617	IB646	IB629	IB652	IB654
KITZ MODEL	40				46	42	37	
MILWAUKEE MODEL	105	UP105		1152	1140	1151	1182	1184
NIBCO MODEL	T113	T113-LF	T113-K	T124	T133	T134	T174A	T174SS
STOCKHAM MODEL	B103K			B105K	B128K	B120K	B144K	B145K
WALWORTH MODEL	4			2	14	11	3048	

BRONZE CHECK VALVE
CROSS REFERENCE CHART

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		

APOLLO MODEL	163S	163S-LF	163T	163T-LF	164T	168T	169T
APOLLO P/N	61Y-10X-T1	61YLF-10X-T1	61Y-20X-T1	61YLF-20X-T1	61Y-21X-01	61Y-75X-01	61Y-75X-T1
`SIZE RANGE	1/2" to 2"	1/2" to 2"	1/2" to 2"	1/2" to 2"	1/4" to 3"	1/2" to 2"	1/2" to 2"
DESCRIPTION	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
DESIGN STANDARD	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-139	MSS SP-80	MSS SP-80	MSS SP-80
CRANE MODEL			41TF		137	76E	
HAMMOND MODEL	IB423		IB940			IB949	
KITZ MODEL	23T	823T	22T	822T	29	19	
MILWAUKEE MODEL	1509T		509T		510	507	
NIBCO MODEL	S413Y	S413Y-LF	T413Y	T413Y-LF	T433b	T473B	T473Y
STOCKHAM MODEL	B310TY		B320TYK		B321K	B375K	
WALWORTH MODEL	3095SJ					3428	

BRONZE GLOBE VALVE
CROSS REFERENCE CHART

APOLLO MODEL	120S	120S-LF	120T	120T-LF	121T	121T-LF	122T	127T	128T
APOLLO P/N	33-14X-01	33LF-14X-01	33-13X-01	33LF-13X-01	33-16X-01	33LF-16X-01	33-22X-01	33-66X-01	33-74X-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"	1/4" to 3"	1/2" to 2"	1/2" 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	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	MSS SP-139	MSS SP-80	MSS SP-139 MSS SP-80	MSS SP-80	MSS SP-80	MSS SP-80
CRANE MODEL			5TF		1		7TF		382P
HAMMOND MODEL					IB440		IB413T	IB412	IB444
KITZ MODEL					11		9	17	17S
MILWAUKEE MODEL		UP1502			502	UP502	590T	572	593A
NIBCO MODEL	S211Y		T211Y		T211b		T235Y	T275B	T276-AP
STOCKHAM MODEL	B14TK		B13TK		B16K		B22TK	B66K	B74K
WALWORTH MODEL	3095SJ				3058		3095	3205	

IRON GLOBE VALVE
CROSS REFERENCE CHART

APOLLO MODEL	711F	721F
APOLLO P/N	6GB-11X-B1	6GB-21X-B1
SIZE RANGE	2" to 10"	2" to 8"
DESCRIPTION	Class 125 Flanged Globe Valve Cast Iron OS&Y IBBM	Class 250 Flanged Globe Valve Cast Iron OS&Y IBBM
DESIGN STANDARD	MSS SP-85	MSS SP-85
CRANE MODEL	351	21E
HAMMOND MODEL	IR116	IR313
KITZ MODEL		
MILWAUKEE MODEL	2981M	2983M
NIBCO MODEL	F718B	F768B
STOCKHAM MODEL	G512	F532
WALWORTH MODEL	W906F	W955F

IRON GATE VALVE
CROSS REFERENCE CHART

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 12"	2" to 12"	2" to 14"	2" to 10"
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

IRON CHECK VALVE
CROSS REFERENCE CHART

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 20"	2" to 12"	2" to 8"	2" to 12"	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 Nitrile Cast Iron	Class 125 Wafer Check EPDM Cast Iron
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		

STANDARDS (GATE, GLOBE, SWING & WAFER CHECKS ONLY)

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 Gate, 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/CAN 61 - Water Quality, 3rd party certified (lead free versions only)
NSF/ANSI/CAN 372 - Lead Free, 3rd party certified (lead free versions only)

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
ASTM 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-0C14467.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/CAN 61 - Water Quality, 3rd party certified (lead free versions only)
NSF/ANSI/CAN 372 - Lead Free, 3rd party certified (lead free versions only)

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.

IN-LINE CHECK VALVES

Series 61 and lead free (61LF) check valves feature bronze body construction and are available in sizes 1/4" to 3" for use with water, steam, oil, air and inert gases. Series 62 model in stainless steel with investment cast body are sized from 1/4" to 2" for use in more severe applications and corrosive environments.

61 and 62 Series check valves are available with either RPTFE ball cone or elastomer soft seats. They come equipped with 316 stainless steel springs. All wetted parts are bronze/brass (61 Series) or stainless steel (62 Series).

SPRING ASSISTED CLOSING

Apollo's 61 and 62 Series feature short check travel and spring assisted closing. This ensures the valve closes quickly, before reversal of flow, helping to eliminate water hammer, its associated noise, and damage to piping and machinery.

LOW CRACKING PRESSURE

Apollo's standard 61 and 62 Series checks operate at a low 1/2 psi cracking pressure. An extra-light-spring version of the valve is available as an option. A 5-pound or 10-pound cracking pressure spring is also available on models through 1".

TIGHT...OR BUBBLE TIGHT

Patented Apollo Ball Cone® check valves (61-100, 61-200 and 62-100) feature a tight-sealing RPTFE ball-shaped check which seats against the conical interior face of the valve's metal retainer. This simple design provides exceptional resistance to wear and corrosion. But, where even tighter sealing is required, choose the 61-500 or 61-600, featuring EPDM (elastomer) seat or 62-500, featuring a Fluorocarbon (Viton®) seat, for a bubble-tight seal. A Nitrile seat is optional.

CHECK VALVES EXTEND SYSTEM LIFE

In any liquid or gas system where reverse flow cannot be tolerated, a quick-responding check valve is a necessity. Check valves that close slowly permit flow reversal to occur in the line which can cause severe mechanical shock. As the valve finally seats, high peak pressure pulses and shock waves are generated on the downstream side due to the media being forced to a sudden stop. Upstream, the momentum is not restricted which can create voids in the flow, filling with air or vapor to cause additional, lower frequency shock waves. These shock waves added together are known as water hammer. It can cause extensive damage or failure to pipelines, gaskets, supports, hardware and equipment. The result can be expensive, troublesome; even dangerous.

With Apollo check valves, the potential for water hammer is greatly reduced since the check returns to its seat before flow velocity reaches zero. Apollo's check valves set the standard for compact, economical protection against reverse flow. They provide reliable service in liquids or gases at various temperature and pressure combinations. Because of their simple design, they're versatile and easy to maintain.

USE IN ANY POSITION

Horizontal, vertical or upside down; liquid, air and gases; Apollo's in-line checks operate in any orientation. Where frequent opening and closing cycles occur, vertical orientation with upward flow is best. This saves time and money, eliminating the need to stock separate vertical and horizontal-operating valves. It also makes new or replacement installation less of a headache.
*Not recommended for use with reciprocating pumps and similar applications. Low flows may result in undesirable noise and premature valve failure.

BROAD RANGE OF APPLICATIONS

Apollo check valves are at home in applications from residential boilers to tough process systems, including:

Industries where Apollo's check valves are used include Pulp & Paper, Chemical Processing, Agrichemical, Rubber, Petroleum, Primary Metals, Mining, Power Generation, Textiles, Food and Beverage, Building Construction and Maintenance.

- Evaporators
- Boiler Feed
- Water Lines
- Steam Lines
- Cookers
- Chiller Systems
- Steam Tracer Lines
- Salt Water Injection
- Rubber/Plastic Presses
- Autoclaves
- Sterilizers
- Air and Gas Lines
- Metering Pumps
- Casing Vents
- Condensate Return Lines
- Chemical Lines

61-100 & 61-200 SERIES
IN-LINE BALL CONE® CHECK VALVE

LEADFREE OPTIONS

61-100
FEMALE X FEMALE THREADED
1/4" THROUGH 3"

61-200
MALE X FEMALE THREADED
1/4" THROUGH 2"

The Apollo 61 Series check valve with rugged bronze body and patented design (U.S. Pat. No. 4,172,465) RPTFE ball-cone check provides reliable protection against reverse flow. It is spring-loaded for fast seating and center guided for optimum alignment.

FEATURES
- Standard 1/2 psi Cracking Pressure
- Tight Shut-Off with Liquid Media
- Male and Female NPT Inlet Options
- 400 psig CWP @ 100°F
- 125 psig Steam Rating @ 350°F max
- Straight-Through Flow Minimizes Pressure Loss
- ASTM B584 Bronze
- Lead Free Option 61LF (NSF/ANSI/CAN 61 & NSF/ANSI/CAN 372)
- **Proudly Made in USA**

STANDARD MATERIALS LIST

BODY	Bronze, ASTM B584, UNS C84400 or Lead Free Bronze, C89836
RETAINER	(1/4" - 1-1/4") Brass, ASTM B16 or C27451 (1-1/2" - 3") Bronze, ASTM B584 or C89836
BALL CHECK	RPTFE
GUIDE	Brass, ASTM B16 or LF Brass, C27451
SPRING	Stainless Steel

FLOW RATE (C_V)

SIZE	GPM
1/4"	0.85
3/8"	1.21
1/2"	1.4
3/4"	3.53
1"	6
1-1/4"	44
1-1/2"	65
2"	81
2-1/2"	175
3"	265

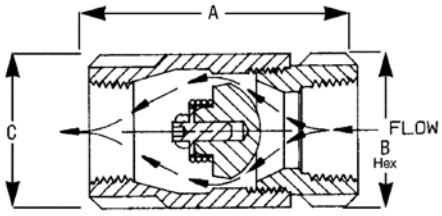
GPM=gallons per minute at 1 psi pressure differential

PRESSURE TEMPERATURE RATING

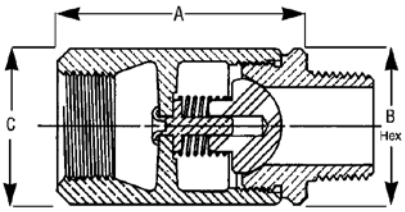
DEGREE (F)	PSIG
-20 TO 100	400
200	200
250	160
275	150
300	140
325	130
353	125

DIMENSIONS

BRONZE FNPT X FNPT	LF BRONZE FNPT X FNPT	BRONZE MNPT X FNPT	SIZE	DIMENSIONS (IN.) A	B	C	61-100 SERIES WT./100	61-200 SERIES WT./100
61-101-01	61LF-101-01	61-201-01	1/4"	2.06	1.12	1.12	38	38
61-102-01	61LF-102-01	61-202-01	3/8"	2.12	1.12	1.12	37	37
61-103-01	61LF-103-01	61-203-01	1/2"	2.31	1.12	1.12	36	36
61-104-01	61LF-104-01	61-204-01	3/4"	2.87	1.37	1.50	75	76
61-105-01	61LF-105-01	61-205-01	1"	3.50	1.75	1.93	145	145
61-106-01	61LF-106-01	61-206-01	1-1/4"	4.18	2.12	2.37	275	237
61-107-01	61LF-107-01	61-207-01	1-1/2"	4.93	2.50	2.81	394	381
61-108-01	61LF-108-01	61-208-01	2"	6.00	3.00	3.68	630	636
61-109-01	61LF-109-01	-	2-1/2"	7.00	3.50	4.50	1400	-
61-100-01	61LF-100-01	-	3"	8.12	4.12	5.31	1665	-



61-100



61-200

NOTE: Not recommended for use with reciprocating pumps and similar applications. Low flows may result in undesirable noise and premature valve wear.

PART NO. MATRIX

61 x x	- X	X	X	- XX
TYPE	CHECK	SPRING TYPE	SIZE (IN.)	OPTIONS
61 - BRONZE	1 - BALL CONE (NPT-F X F)	0 - .5 PSIG CRACKING PRESSURE	1 - 1/4"	01 - STANDARD
61LF- LEAD FREE BRONZE	2 - BALL CONE (NPT-M X F)	2 - .2 PSIG CRACKING PRESSURE	2 - 3/8"	PO1 - BSPP THREAD** (STD. MATERIALS ONLY)
	0 - BALL CONE REPAIR KIT		3 - 1/2"	TO1 - BSPT THREAD** (STD. MATERIALS ONLY)
			4 - 3/4"	17 - SATIN CHROME PLATED
			5 - 1"	57 - OXYGEN CLEANED
			6 - 1-1/4"	A1 - LESS SPRING
			7 - 1-1/2"	B1 - NITRILE SEAT (BUNA N)
			8 - 2"	E05 - 5 PSIG OPENING PRESSURE*
			9 - 2-1/2"	E10 - 10 PSIG OPENING PRESSURE*
			0 - 3"	

**Available in 1/4" through 1" only. | **Minimums apply*
(Note: Not all combinations are available. Contact Customer Service for verification.)

62-100 SERIES
STAINLESS STEEL BALL CONE® CHECK VALVE

62-100
FEMALE X FEMALE THREADED
1/4" THROUGH 2"

The Apollo 62-100 Series is uniquely suited for applications in corrosive environments, including chemical processing, pulp and paper and other process industries. The rugged stainless steel body and RPTFE ball cone check provide reliable, patented protection against reverse flow.

FEATURES
- Standard 1/2 psi Cracking Pressure
- Unique Design (U.S. Patent # 4,172,465)
- Spring-Loaded For Fast Seating Action
- Center Guided; Radial Alignment Never Needed
- Straight-Through Flow Minimizes Pressure Loss
- 400 psig CWP Non-Shock @ 100°F
- 125 psig SWP @ 350°F
- RoHS and REACH Compliant
- ASTM A351, CF8M
- **Proudly Made in USA**

STANDARD MATERIALS LIST

BODY	SS, ASTM A351, CF8M
RETAINER	SS, ASTM A276, 316 (1/4" - 1") SS, ASTM A351, CF8M (1-1/4" - 2")
BALL CHECK	RPTFE
GUIDE	SS, ASTM A276, 316
SPRING	Stainless Steel

FLOW RATE (C_V)

SIZE	GPM
1/4"	0.85
3/8"	1.21
1/2"	1.4
3/4"	3.53
1"	6
1-1/4"	44
1-1/2"	65
2"	81

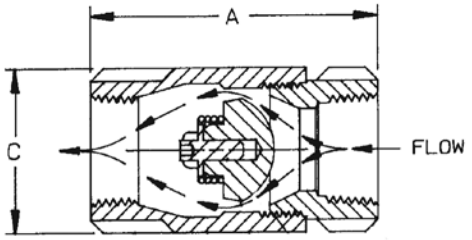
GPM=gallons per minute at 1 psi pressure differential

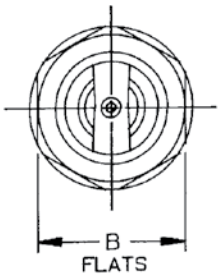
PRESSURE TEMPERATURE RATING

DEGREE (F)	PSIG
-20 TO 100	400
200	200
250	160
275	150
300	140
325	130
353	125

DIMENSIONS

PART NO. FNPT X FNPT	SIZE	DIMENSIONS (IN.)			WT./100
		A	B	C	
62-101-01	1/4"	2.06	1.12	1.12	38
62-102-01	3/8"	2.12	1.12	1.12	37
62-103-01	1/2"	2.31	1.12	1.12	36
62-104-01	3/4"	2.87	1.37	1.50	75
62-105-01	1"	3.50	1.75	1.93	145
62-106-01	1-1/4"	4.18	2.12	2.37	237
62-107-01	1-1/2"	4.93	2.50	2.81	381
62-108-01	2"	6.00	3.00	3.68	636





NOTE: Not recommended for use with reciprocating pumps and similar applications. Low flows may result in undesirable noise and premature valve wear.

PART NO. MATRIX

62	- X	X	X	- XX
TYPE	CHECK	SPRING TYPE	SIZE (IN.)	OPTIONS
62 - STAINLESS STEEL (316)	1 - BALL CONE (NPT-F X F)	0 - .5 PSIG CRACKING PRESSURE	1 - 1/4"	01 - STANDARD
	0 - BALL CONE REPAIR KIT	2 - .2 PSIG CRACKING PRESSURE	2 - 3/8"	PO1 - BSPP THREAD**
			3 - 1/2"	TO1 - BSPT THREAD**
			4 - 3/4"	17 - SATIN CHROME PLATED
			5 - 1"	57 - OXYGEN CLEANED
			6 - 1-1/4"	A1 - LESS SPRING
			7 - 1-1/2"	E05 - 5 PSIG OPENING PRESSURE*
			8 - 2"	E10 - 10 PSIG OPENING PRESSURE*

**Available in 1/4" through 1" only.*
***Minimums apply*
(Note: Not all combinations are available. Contact Customer Service for verification.)

61-500 & 61-600 SERIES
IN-LINE SOFT SEAT CHECK VALVE

LEADFREE OPTIONS

61-500
FEMALE X FEMALE THREADED
1/4" THROUGH 2"

61-600
FEMALE X FEMALE SWEAT
1/2" THROUGH 2"

The Apollo 61 Series check valve is ideally suited for hydronic heating and other low flow applications. The rugged bronze body and check provide reliable protection against reverse flow.

FEATURES
- Female NPT Sizes: 1/4" to 2"
- Solder Sizes: 1/2" to 1"
- Bubble-Tight Shut-Off, Ideally Suited for Gaseous Service
- NPT Threaded; 400 psig CWP Non-Shock @ 100°F
- EPDM Check Disc (61-500)
- Straight-Through Flow Minimizes Pressure Loss
- 1/2 psi Cracking Pressure
- RoHS Compliant (61LF and 62 Series)
- NSF/ANSI/CAN 61 - Water Quality (LF Models)
- NSF/ANSI/CAN 372 - Lead Free (LF Models)
- **Proudly Made in USA**

STANDARD MATERIALS LIST

BODY	Bronze, ASTM B584, UNS C84400 or Lead Free Bronze, C89836
RETAINER	(1/4" - 1-1/4") Brass, ASTM B16 or LF Brass, ASTM (1-1/2" - 3") Bronze, ASTM B584 or C89836
SEAT	EPDM
GUIDE PIN	Stainless Steel
SPRING	Stainless Steel
CHECK	Brass, ASTM B16 or Lead Free Brass, ASTM 27451
GUIDE	Brass, ASTM B16 or Lead Free Brass, ASTM 27451

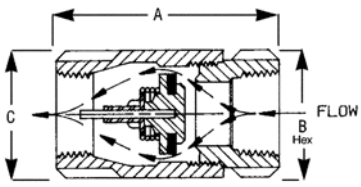
FLOW RATE (C_v)

SIZE	GPM	
	61-500	61-600
1/4"	0.85	-
3/8"	1.21	-
1/2"	1.4	2.20
3/4"	3.53	4.78
1"	6	6
1-1/4"	44	44
1-1/2"	65	65
2"	81	81

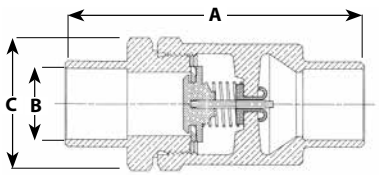
GPM=gallons per minute at 1 psi pressure differential

DIMENSIONS

PART NO.	LF PART NO.	SIZE	DIMENSIONS (IN.)			WT./100
			A	B	C	
61-500 (FNPT)						
61-501-01	61LF-501-01	1/4"	2.31	1.12	1.12	38
61-502-01	61LF-502-01	3/8"	2.31	1.12	1.12	37
61-503-01	61LF-503-01	1/2"	2.31	1.12	1.12	36
61-504-01	61LF-504-01	3/4"	2.87	1.37	1.50	75
61-505-01	61LF-505-01	1"	3.50	1.75	1.93	145
61-506-01	61LF-506-01	1-1/4"	4.18	2.12	2.37	275
61-507-01	61LF-507-01	1-1/2"	4.93	2.50	2.81	394
61-508-01	61LF-508-01	2"	6.00	3.00	3.68	630
61-600 (SOLDER)						
61-603-01	61LF-603-01	1/2"	2.75	1.12	1.25	38
61-604-01	61LF-604-01	3/4"	3.68	1.50	1.62	75
61-605-01	61LF-605-01	1"	4.50	1.93	2.12	145
61-606-01	61LF-606-01	1-1/4"	6.11	2.13	2.38	330
61-607-01	61LF-607-01	1-1/2"	6.87	2.50	2.81	610
61-608-01	61LF-608-01	2"	7.46	3.38	3.75	1010



61-500



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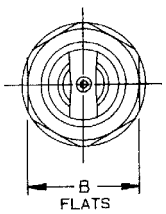


NOTE: Not recommended for use with reciprocating pumps and similar applications. Low flows may result in undesirable noise and premature valve wear.

PART NO. MATRIX

61 x x	- X	X	X	- XX
TYPE	CHECK	SPRING TYPE	SIZE (IN.)	OPTIONS
61 - BRONZE	5 - SOFT SEAT (NPT-F X F)	0 - .5 PSIG CRACKING PRESSURE	1 - 1/4"	01 - STANDARD (EPDM SEAT)
61LF - LEAD FREE BRONZE	6 - SOFT SEAT (SOLDER)	2 - .2 PSIG CRACKING PRESSURE	2 - 3/8"	PO1 - BSPP THREAD (ISO 228)** (STD. MATERIALS ONLY)
	9 - SOFT SEAT REPAIR KIT		3 - 1/2"	TO1 - BSPT THREAD (EN 10226)** (STD. MATERIALS ONLY)
	(EPR ONLY)		4 - 3/4"	17 - SATIN CHROME PLATED
			5 - 1"	57 - OXYGEN CLEANED
			6 - 1-1/4"	A1 - LESS SPRING
			7 - 1-1/2"	B1 - NITRILE SEAT (BUNA N)
			8 - 2"	V1 - VITON SEAT
				E05 - 5 PSIG OPENING PRESSURE*
				E10 - 10 PSIG OPENING PRESSURE*

**Available in 1/4" through 1" only. | **Minimums apply*
(Note: Not all combinations are available. Contact Customer Service for verification.)

62-500 SERIES
IN-LINE SOFT SEAT CHECK VALVE

LEADFREE OPTIONS

62-500
FEMALE X FEMALE THREADED
1/4" THROUGH 1"

The Apollo 62-500 Series is ideal for fluid flow applications in tough industrial environments. The stainless steel body and check provide lasting protection against reverse flow.

FEATURES
- Bubble-Tight Shut-Off, Ideally Suited for Gaseous Service
- 400 psig CWP non-shock
- Viton® Check Disc
- 1/2 psi Cracking Pressure
- RoHS and REACH Compliant
- CRN OC 11218.5C
- **Proudly Made in USA**

STANDARD MATERIALS LIST

BODY	Stainless Steel, ASTM A351,CF8M
RETAINER	Stainless Steel, ASTM A276, 316
SEAT	Viton®
SPRING	Stainless Steel, 316
CHECK	Stainless Steel, ASTM A276, 316

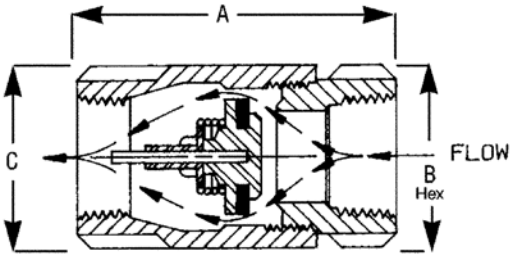
FLOW RATE (C_v)

SIZE	GPM
1/4"	0.47
3/8"	1.57
1/2"	2.20
3/4"	4.78
1"	6

GPM=gallons per minute at 1 psi pressure differential

DIMENSIONS

PART NO. FNPT X FNPT	SIZE	DIMENSIONS (IN.)			WT./100
		A	B	C	
62-501-01	1/4"	2.312	1.125	1.125	38
62-502-01	3/8"	2.312	1.125	1.125	37
62-503-01	1/2"	2.312	1.125	1.125	36
62-504-01	3/4"	2.875	1.375	1.500	75
62-505-01	1"	3.500	1.750	1.937	150



NOTE: Not recommended for use with reciprocating pumps and similar applications. Low flows may result in undesirable noise and premature valve wear.

PART NO. MATRIX

62	- X	X	X	- XX
TYPE	CHECK	SPRING TYPE	SIZE (IN.)	OPTIONS
62 - STAINLESS STEEL (316)	5 - SOFT SEAT (NPT-F X F)	0 - .5 PSIG CRACKING PRESSURE	1 - 1/4"	01 - STANDARD (VITON SEAT)
	9 - SOFT SEAT REPAIR KIT	2 - .2 PSIG CRACKING PRESSURE	2 - 3/8"	PO1 - BSPP THREAD (ISO 228)**
	(VITON ONLY)		3 - 1/2"	TO1 - BSPT THREAD (EN 10226)**
			4 - 3/4"	57 - OXYGEN CLEANED
			5 - 1"	A1 - LESS SPRING
				B1 - NITRILE SEAT (BUNA N)
				F1 - EPDM SEAT
				E05 - 5 PSIG OPENING PRESSURE*
				E10 - 10 PSIG OPENING PRESSURE*

**Available in 1/4" through 1" only.*
***Minimums apply*
(Note: Not all combinations are available. Contact Customer Service for verification.)

61-700 SERIES
MINI CHECK VALVE

61-700
FEMALE X FEMALE PIPE THREAD
1/4" THROUGH 1"

The Apollo 61-700 Series check valve is ideally suited for cold water, and air applications for prevention of reverse flow. The modular check cartridge provides superior leak-tight performance with low pressure loss. It is rated at 230 PSIG with a maximum temperature of 200°F.

FEATURES
- Sizes: 1/4" to 1"
- FNPT x FNPT
- Acetyl Check Valve Body
- Nitrile (Buna-N) Check Seals
- ASTM B16 Brass Housing
- 1/2 psi Cracking Pressure
- **Proudly Made in USA**

STANDARD MATERIALS LIST

BODY	Brass, ASTM B16"
CHECK	Acetal/Brass/Silicone/Buna-N
SPRING	Stainless Steel 302

**Not intended for use in potable water applications.*

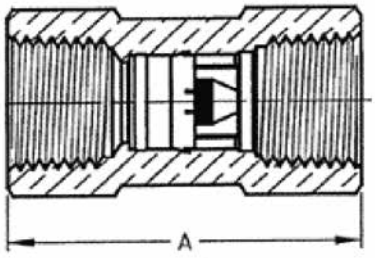
FLOW RATE (C_v)

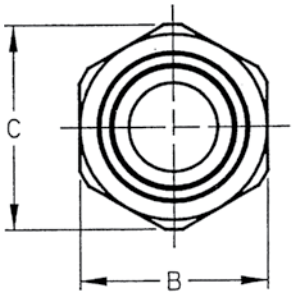
SIZE	GPM
1/4"	0.78
3/8"	1.81
1/2"	6.00
3/4"	11.50
1"	17.50

GPM=gallons per minute at 1 psi pressure differential

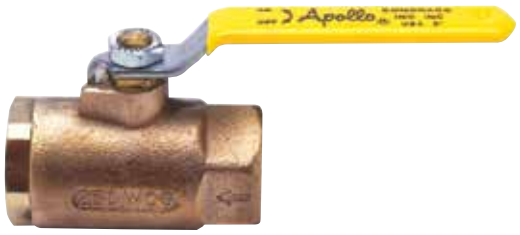
DIMENSIONS

PART NUMBER	SIZE	DIMENSIONS (IN.)			WT./100
		A	B	C	
61-701-01	1/4"	1.72	0.81	0.92	22
61-702-01	3/8"	1.79	0.93	1.05	29
61-703-01	1/2"	2.02	1.06	1.17	38
61-704-01	3/4"	2.50	1.25	1.40	54
61-705-01	1"	2.95	1.62	1.76	110





70-100-BC SERIES
BALL VALVE WITH INTEGRAL CHECK



70-100-BC
FEMALE X FEMALE THREADED
1/2" THROUGH 2"

The 70-100-BC Series ball valve combines two functions in a single design: positive shut-off and bubble-tight check capabilities. The BC Series is a unidirectional version of the industry-standard Apollo 70 Series ball valve. An easy flow design and superior check valve make these valves a smart choice for water or air in mechanical systems or OEM applications. Rated at 250 psi CWP and maximum temperature of 200°F.

FEATURES
- Blowout-Proof Stem
- RPTFE Seats and Stuffing Box Ring
- Adjustable Packing Gland
- Chromium-Plated Ball
- Positive Shut-Off and Bubble-Tight Check Capability
- 1/2 psi Cracking Pressure
- **Proudly Made in USA**

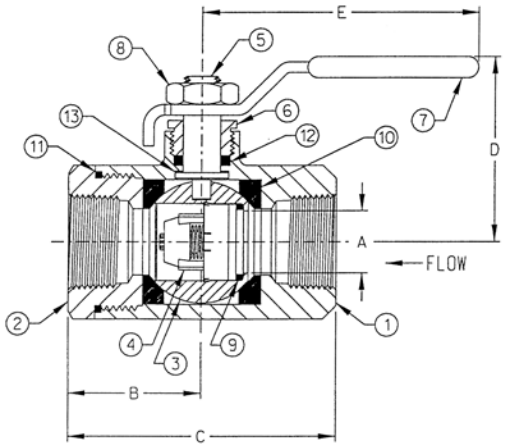
STANDARD MATERIALS LIST

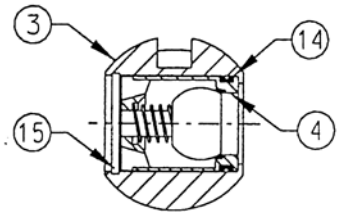
1	BODY	B584-C84400
2	RETAINER	B16 (1/2" - 1") B584-C84400 (1-1/4" - 2")
3	BALL	Brass, B16 (Chrome Plated)
4	CHECK INSERT	Acetal
5	STEM	Brass, B16
6	GLAND NUT	Brass, B16
7	LEVER/GRIP	Steel, Zinc-Plated w/ Vinyl
8	LEVER NUT	Steel, Zinc-Plated
9	O-RING	Buna-N
10	SEATS	RPTFE
11	BODY SEAL	TFE (1-1/4" - 2")
12	STEM PACKING	RPTFE
13	STEM BEARING	RPTFE
14	SEAL	EPDM (1/2")
15	RETAINING RING	Spring Steel (1/2")

**Not intended for use in potable water applications.*

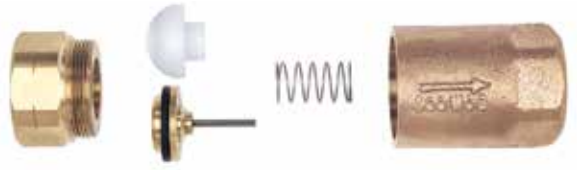
DIMENSIONS

PART NUMBER	SIZE	DIMENSIONS (IN.)					WT./100
		A	B	C	D	E	
70-103-BC	1/2"	0.50	1.12	2.25	1.80	3.87	0.63
70-104-BC	3/4"	0.68	4.50	3.00	2.12	4.87	1.33
70-105-BC	1"	0.87	1.68	3.37	2.25	4.87	1.77
70-106-BC	1-1/4"	1.00	2.00	4.00	2.73	5.50	3.29
70-107-BC	1-1/2"	1.25	2.18	4.37	3.09	8.00	4.63
70-108-BC	2"	1.50	2.34	4.68	3.28	8.00	6.01





REPAIR KITS
IN-LINE CHECK VALVES



61-100/61LF-100 REPAIR KITS INCLUDE:
SPRING, BALL CONE CHECK & INSTRUCTIONS

SIZE (IN.)	CHECK VALVE PART NO.	LF CHECK VALVE PART NO.	STANDARD (LEAD FREE) REPAIR KIT PART NO.
1/4"	61-101-01	61LF-101-01	61-001-01
3/8"	61-102-01	61LF-102-01	61-002-01
1/2"	61-103-01	61LF-103-01	61-003-01
3/4"	61-104-01	61LF-104-01	61-004-01
1"	61-105-01	61LF-105-01	61-005-01
1-1/4"	61-106-01	61LF-106-01	61-006-01
1-1/2"	61-107-01	61LF-107-01	61-007-01
2"	61-108-01	61LF-108-01	61-008-01
2-1/2"	61-109-01	61LF-109-01	61-009-01
3"	61-100-01	61LF-100-01	61-010-01

61-200 REPAIR KITS INCLUDE:
SPRING, BALL CONE CHECK & INSTRUCTIONS

SIZE (IN.)	CHECK VALVE PART NO.	STANDARD (LEAD FREE) REPAIR KIT PART NO.
1/4"	61-201-01	61-001-01
3/8"	61-202-01	61-002-01
1/2"	61-203-01	61-003-01
3/4"	61-204-01	61-004-01
1"	61-205-01	61-005-01
1-1/4"	61-206-01	61-006-01
1-1/2"	61-207-01	61-007-01
2"	61-208-01	61-008-01

61-500/61LF-500 REPAIR KITS INCLUDE:
SPRING, CHECK ASSEMBLY & INSTRUCTIONS

SIZE (IN.)	CHECK VALVE PART NO.	LF CHECK VALVE PART NO.	STANDARD (LEAD FREE) REPAIR KIT PART NO.
1/4"	61-501-01	61LF-501-01	61-901-01
3/8"	61-502-01	61LF-502-01	61-902-01
1/2"	61-503-01	61LF-503-01	61-903-01
3/4"	61-504-01	61LF-504-01	61-904-01
1"	61-505-01	61LF-505-01	61-905-01
1-1/4"	61-506-01	-	61-906-01
1-1/2"	61-507-01	-	61-907-01
2"	61-508-01	-	61-908-01

61-600 REPAIR KITS INCLUDE:
SPRING, CHECK ASSEMBLY & INSTRUCTIONS

SIZE (IN.)	CHECK VALVE PART NO.	REPAIR KIT ART NO.
1/2"	61-603-01	61-903-01
3/4"	61-604-01	61-904-01
1"	61-605-01	61-905-01
1-1/4"	61-606-01	61-906-01
1-1/2"	61-607-01	61-907-01
2"	61-608-01	61-908-01

62-100 REPAIR KITS INCLUDE:
SPRING, BALL CONE CHECK & INSTRUCTIONS

SIZE (IN.)	CHECK VALVE PART NO.	REPAIR KIT PART NO.
1/4"	62-101-01	62-001-01
3/8"	62-102-01	62-002-01
1/2"	62-103-01	62-003-01
3/4"	62-104-01	62-004-01
1"	62-105-01	62-005-01
1-1/4"	62-106-01	62-006-01
1-1/2"	62-107-01	62-007-01
2"	62-108-01	62-008-01

62-500 REPAIR KITS INCLUDE:
SPRING, CHECK ASSEMBLY & INSTRUCTIONS

SIZE (IN.)	CHECK VALVE PART NO.	REPAIR KIT PART NO.
1/4"	62-501-01	62-901-01
3/8"	62-502-01	62-902-01
1/2"	62-503-01	62-903-01
3/4"	62-504-01	62-904-01
1"	62-505-01	62-905-01

CV COEFFICIENTS
FOR FLOW ESTIMATION ONLY

FLOW OF LIQUID

$$Q = \sqrt{\frac{\Delta P}{SG}}$$

$$\text{or } \Delta P = \frac{(Q)^2\,(SG)}{(Cv)^2}$$

WHERE:
- Q = flow rate (gpm)
- Cv = device flow coefficient
- ΔP = change in fluid pressure across the device (psi)
- SG = Specific Gravity of fluid

FLOW OF GAS

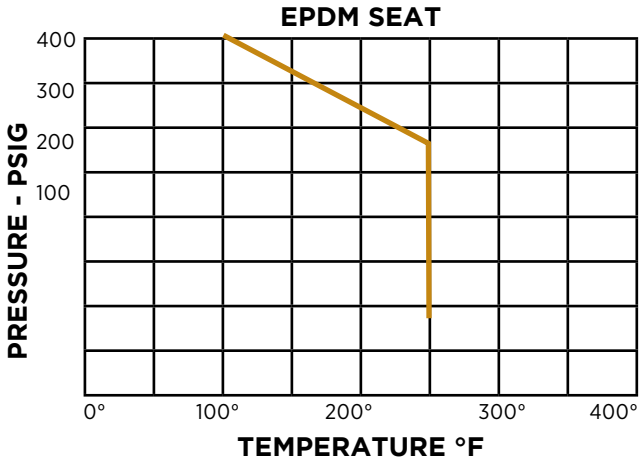
$$Q = 1360\ Cv \sqrt{\frac{\Delta P\,(P_2)}{(SG)\,(T)}}$$

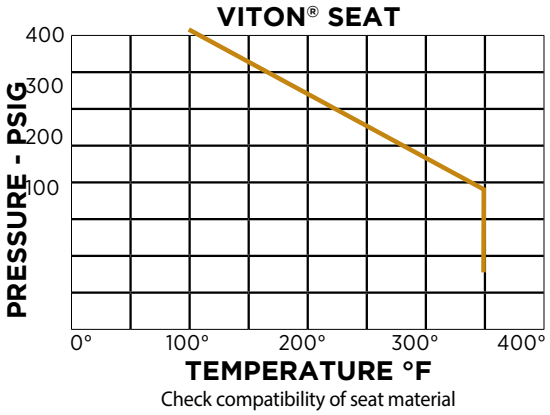
$$\text{or } \Delta P = \frac{5.4 \times 10^{-7}\,(SG)\,(T)\,(Q)^2}{(Cv)^2\,(P_2)}$$

WHERE:
- Q = flow rate (SCFH)
- ΔP = change in fluid pressure across the device (psi)
- SG = Specific Gravity (Air - 1.0)
- P_2 = outlet pressure - psia (psig + 14.7)
- T = (temp. °F + 460)
- Cv = valve constant

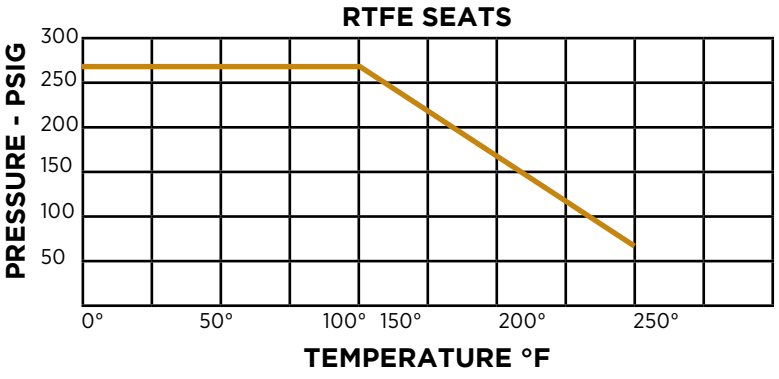
Note: The Cv (Valve Constant) is the gallons of water per minute that the valve will pass with a 1 PSIG pressure drop across the valve.

NOTE:
Not recommended for use with reciprocating pumps and similar applications which may induce repetitious vibrations. Low flow rates which do not fully open the valve, may result in undesirable noise and premature valve failure. Upstream flow disturbances, which create turbulence, may also result in rapid wear. Therefore, it is recommended that a minimum of 10 diameters of straight pipe be provided between the check valve and any upstream flow disturbances such as pumps, control valves, elbows, etc.





Check compatibility of seat material



GLOSSARY

BRONZE VALVE TYPES:

Apollo offers cast bronze alloy gate, globe, swing check and in-line check valves in a variety of configurations and sizes. Select models are also available with lead free materials suitable for potable water applications.

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.

IN-LINE CHECK VALVES: Apollo in-line check valves are available 1/4" - 3".

CAST IRON VALVE TYPES:

Apollo 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 initials for "Cold Working Pressure" and is the allowable working pressure for the device in the temperature range of -20°F to 100°F (-29°C to 38°C)

The CWP for Apollo ANSI Class valves is as follows:
Class 125: 200 psig
Class 150: 300 psig
Class 250: 300 psig
Class 300: 1000 psig (600 psig for swing checks)

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

Unless otherwise specified herein, the SWP for Apollo ANSI Class Metal-to-Metal seated valves is as follows:
125 SWP: Class 125 is 125 psig.* (353° F)
150 SWP: Class 150 is 150 psig.* (366° F)
300 SWP: Class 300 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.

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:

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 0.25% 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 swing 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 swing check valves are tested in compliance with MSS SP-80 and MSS SP-139. 61 and 62 Series in-line check valves are tested in accordance with Apollo specifications

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 applicable.