

Apollo 87A-600 Series

Alloy 20 ANSI Class 300 Flanged Full Port Ball Valve - 1"

Standards Compliance

ASME B16.5 - "Pipe Flanges and Flanged Fittings"
 ASME B16.10 - "Face to Face Dimensions of Valves"
 ASME B16.34 - "Valves - Flanged, Threaded, and Welding End"
 API 607 - "Fire Test - Soft Seated Quarter Turn Valves" (-24 option)
 API 608 - "Ball Valves - Flanged, Threaded, and Welding End"
 MSS SP-25 - "Standard Marking System for Valves"
 MSS SP-61 - "Pressure Testing of Steel Valves"
 MSS SP-72 - "Ball Valves with Flanged or Butt welding Ends"
 ASME B31.1, B31.3, & B31.8 - Pressure Piping Standards

Materials of Construction

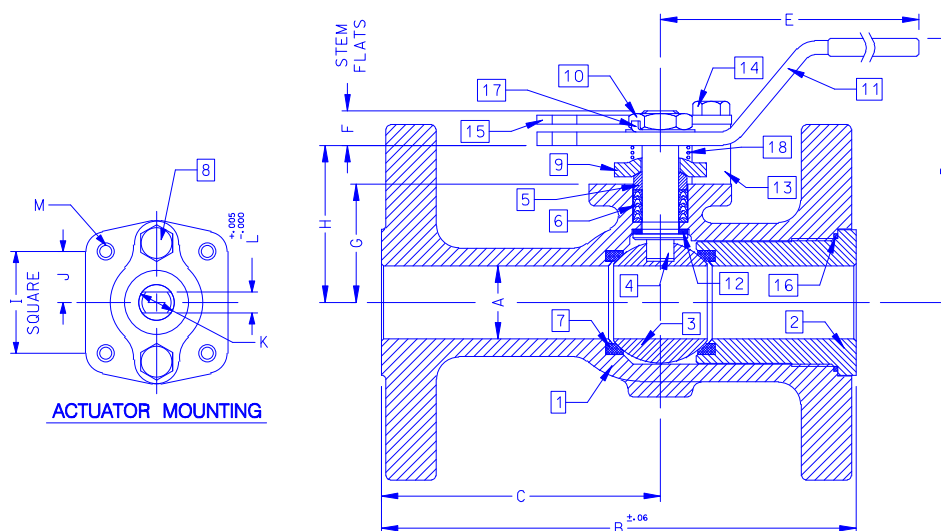
Description	Material
1. Body	ASTM A351 CN7M
2. Retainer	ASTM B473 (UNS N08020) or CN7M
3. Ball	ASTM B473 (UNS N08020) or CN7M
4. Stem	ASTM B473 (UNS N08020)
5. Packing Gland	ASTM A276 Type 316
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B8 Class 1
9. Gland Plate	302 or 304 Stainless Steel
10. Stem Nut	316 Stainless Steel
11. Lever	302 or 304 SS with Vinyl Grip
12. Stem Bearing	RPTFE
13. Stop	ASTM A276 Type 316
14. Stop Screw	18-8 Stainless Steel
15. Lock Plate	302 or 304 Stainless Steel
16. Body Seal	RPTFE
17. Lockwasher	302 or 304 Stainless Steel
18. Grounding Spring	Stainless Steel

Standard Features

Two Position Locking Device
 Antistatic Grounded Stem
 CHV Style Adjustable Stem Seals
 Blow-out Proof Stem Design
 Cast Boss for Bleed / Drain Port
 Four Point ISO 5211 Mounting Pad Bolt Circle
 Full Bore Design for Maximum Flow Efficiency
 Slot Vented Ball for Thermal Expansion
 Vacuum Service to 29 inches Hg

Options Available

Suffix	Option
-01	Standard (Locking Kit and Grounded Stem)
-14	Side Vented Ball (See Page J2)
-15	Wheel Handle
-21	UHMWPE Seats
-24	Fire Safe (Graphite Packing and Seal)
-35	PTFE Seats and Seals
-38	PEEK Seats and Graphite Packing
-49	Assembled Dry
-57	Oxygen Cleaned (Stainless Steel Valves Only)
-60	Grounded Ball and Stem
-65	MPTFE Seats and Graphite Packing
-69	Drilled and Tapped Purge Port with Plug
-70	4" Extended Bonnet



Number	Size	A	B	C	D	E	F	G	H	I	J	K	L	M
87A-605-01	1"	1.00	6.50	3.82	3.62	6.03	0.47	1.62	2.15	1.392	0.696	0.500	0.287	1/4-20

Apollo 87A-600 Series

Alloy 20 ANSI Class 300 Flanged Full Port Ball Valve - 1-1/2" through 2-1/2"

Standards Compliance

ASME B16.5 - "Pipe Flanges and Flanged Fittings"
 ASME B16.10 - "Face to Face Dimensions of Valves"
 ASME B16.34 - "Valves - Flanged, Threaded, and Welding End"
 API 607 - "Fire Test - Soft Seated Quarter Turn Valves" (-24 option)
 API 608 - "Ball Valves - Flanged, Threaded, and Welding End"
 MSS SP-25 - "Standard Marking System for Valves"
 MSS SP-61 - "Pressure Testing of Steel Valves"
 MSS SP-72 - "Ball Valves with Flanged or Butt welding Ends"
 ASME B31.1, B31.3, & B31.8 - Pressure Piping Standards

Materials of Construction

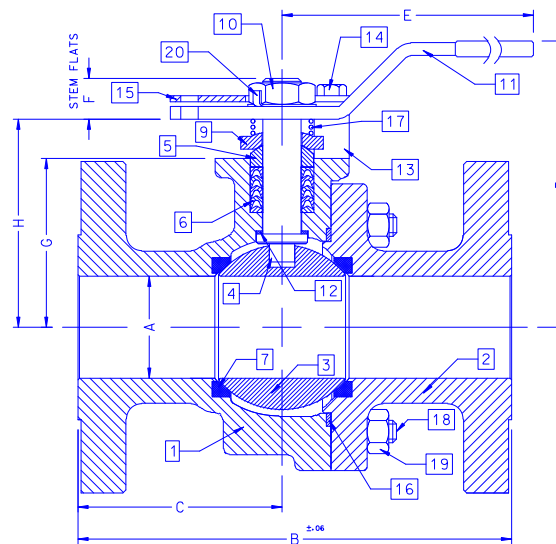
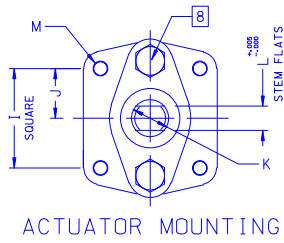
Description	Material
1. Body	ASTM A351 CN7M
2. Retainer	ASTM A351 CN7M
3. Ball	ASTM B473 (UNS N08020) or CN7M
4. Stem	ASTM B473 (UNS N08020)
5. Packing Gland	ASTM A276 Type 316
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B8 Class 1
9. Gland Plate	316 Stainless Steel
10. Stem Nut	18-8 Stainless Steel
11. Lever	316 Stainless Steel with Vinyl Grip
12. Stem Bearing	RPTFE
13. Stop	ASTM A276 Type 316
14. Stop Screw	316 Stainless Steel
15. Lock Plate	302 or 304 Stainless Steel
16. Body Seal	RPTFE
17. Grounding Spring	Stainless Steel
18. Body Joint Stud	ASTM A193 Grade B8M
19. Body Joint Nut	ASTM A194 Grade 8
20. Lockwasher	302 or 304 Stainless Steel

Standard Features

Two Position Locking Device
 Antistatic Grounded Stem
 CHV Style Adjustable Stem Seals
 Blow-out Proof Stem Design
 Cast Bosses for Bleed / Drain Ports
 Four Point ISO 5211 Mounting Pad Bolt Circle
 Full Bore Design for Maximum Flow Efficiency
 Slot Vented Ball for Thermal Expansion
 Vacuum Service to 29 inches Hg

Options Available

Suffix	Option
-01	Standard (Locking Kit and Grounded Stem)
-14	Side Vented Ball (See Page J2)
-21	UHMWPE Seats
-24	Fire Safe (Graphite Packing and Seal)
-35	PTFE Seats and Seals
-38	PEEK Seats and Graphite Packing (3" Only)
-49	Assembled Dry
-57	Oxygen Cleaned (Stainless Steel Valves Only)
-60	Grounded Ball and Stem
-65	MPTFE Seats and Graphite Packing
-69	Drilled and Tapped Purge Ports with Plugs
-70	4" Extended Bonnet
-MG	Gear Operator with Standard Handwheel
-MH	Gear Operator with Standard Handwheel & Locking Device
-MJ	Gear Operator with Oversize Handwheel
-MK	Gear Operator with Oversize Handwheel & Locking Device



Number	Size	A	B	C	D	E	F	G	H	I	J	K	L	M
87A-607-01	1-1/2"	1.50	7.50	3.50	4.62	6.65	0.72	2.41	3.09	1.949	0.974	0.625	0.412	5/16-18
87A-608-01	2"	2.00	8.50	4.00	5.61	8.40	0.80	3.31	4.08	1.949	0.974	0.750	0.477	5/16-18
87A-609-01	2-1/2"	2.50	9.50	4.44	6.23	8.40	0.80	3.93	4.70	1.949	0.974	0.750	0.477	5/16-18

Apollo 87A-600 Series

Alloy 20 ANSI Class 300 Flanged Full Port Ball Valve - 3" through 6"

Standards Compliance

ASME B16.5 - "Pipe Flanges and Flanged Fittings"
 ASME B16.10 - "Face to Face Dimensions of Valves"
 ASME B16.34 - "Valves - Flanged, Threaded, and Welding End"
 API 607 - "Fire Test - Soft Seated Quarter Turn Valves" (-24 option)
 API 608 - "Ball Valves - Flanged, Threaded, and Welding End"
 MSS SP-25 - "Standard Marking System for Valves"
 MSS SP-61 - "Pressure Testing of Steel Valves"
 MSS SP-72 - "Ball Valves with Flanged or Butt welding Ends"
 ASME B31.1, B31.3, & B31.8 - Pressure Piping Standards

Standard Features

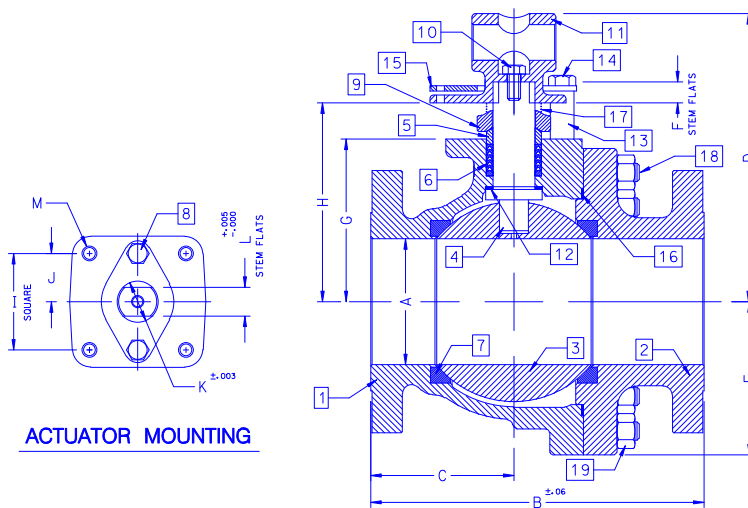
Two Position Locking Device
 Antistatic Grounded Stem
 CHV Style Adjustable Stem Seals
 Blow-out Proof Stem Design
 Cast Bosses for Bleed / Drain Ports
 Four Point ISO 5211 Mounting Pad Bolt Circle
 Full Bore Design for Maximum Flow Efficiency
 Slot Vented Ball for Thermal Expansion
 Vacuum Service to 29 inches Hg

Materials of Construction

Description	Material
1. Body	ASTM A351 CN7M
2. Retainer	ASTM A351 CN7M
3. Ball	ASTM B473 (UNS N08020) or CN7M
4. Stem	ASTM B473 (UNS N08020)
5. Packing Gland	ASTM A276 Type 316
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B8 Class 1
9. Gland Plate	316 Stainless Steel
10. Adapter Screw	18-8 Stainless Steel
11. Handle Adapter	316 Stainless Steel
12. Stem Bearing	RPTFE
13. Stop	ASTM A276 Type 316
14. Stop Screw	316 Stainless Steel
15. Lock Plate	302 or 304 Stainless Steel
16. Body Seal	RPTFE
17. Grounding Spring	Stainless Steel
18. Body Joint Stud	ASTM A193 Grade B8M
19. Body Joint Nut	ASTM A194 Grade 8
20. Pipe Handle	Galvanized Steel (not shown)

Options Available

Suffix	Option
-01	Standard (Locking Kit and Grounded Stem)
-14	Side Vented Ball (See Page J2)
-21	UHMWPE Seats
-24	Fire Safe (Graphite Packing and Seal)
-35	PTFE Seats and Seals
-38	PEEK Seats and Graphite Packing (3" Only)
-49	Assembled Dry
-57	Oxygen Cleaned (Stainless Steel Valves Only)
-60	Grounded Ball and Stem
-65	MPTFE Seats and Graphite Packing
-69	Drilled and Tapped Purge Ports with Plugs
-70	4" Extended Bonnet (3" & 4" Valves Only)
-MG	Gear Operator with Standard Handwheel
-MH	Gear Operator with Standard Handwheel & Locking Device
-MJ	Gear Operator with Oversize Handwheel
-MK	Gear Operator with Oversize Handwheel & Locking Device



Number	Size	A	B	C	D	E	F	G	H	I	J	K	L	M
87A-600-01	3"	3.00	11.12	5.24	8.80	3.88	0.50	4.75	5.95	2.840	1.420	1.250	0.725	3/8-16
87A-60A-01	4"	4.00	12.00	5.44	9.99	5.13	0.50	5.94	7.13	2.840	1.420	1.250	0.725	3/8-16
87A-60C-01	6"	6.00	15.88	6.82	13.73	7.00	1.00	7.75	9.48	4.596	2.298	2.000	1.375	3/4-10

Apollo 87A-600 Series

Alloy 20 ANSI Class 300 Flanged Full Port Ball Valve - 8” through 12”

Standards Compliance

ASME B16.5 - “Pipe Flanges and Flanged Fittings”
 ASME B16.10 - “Face to Face Dimensions of Valves”
 ASME B16.34 - “Valves - Flanged, Threaded, and Welding End”
 API 607 - “Fire Test - Soft Seated Quarter Turn Valves” (-24 option)
 API 608 - “Ball Valves - Flanged, Threaded, and Welding End”
 MSS SP-25 - “Standard Marking System for Valves”
 MSS SP-61 - “Pressure Testing of Steel Valves”
 MSS SP-72 - “Ball Valves with Flanged or Butt welding Ends”
 ASME B31.1, B31.3, & B31.8 - Pressure Piping Standards

Materials of Construction

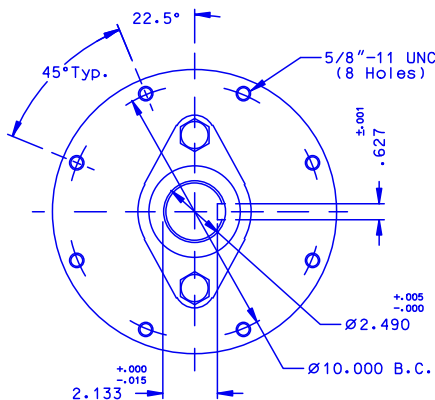
Description	Material
1. Body	ASTM A351 CN7M
2. Retainer	ASTM A351 CN7M
3. Ball	ASTM B473 (UNS N08020) or CN7M
4. Stem	ASTM B473 (UNS N08020)
5. Packing Gland	ASTM A276 Type 316
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B8 Class 1
9. Gland Plate	316 Stainless Steel
10. Stem Bearing	RPTFE
11. Body Seal	RPTFE
12. Body Joint Stud	ASTM A193 Grade B8M
13. Body Joint Nut	ASTM A194 Grade 8

Standard Features

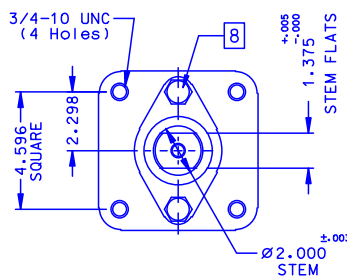
CHV Style Adjustable Stem Seals
 Blow-out Proof Stem Design
 Cast Bosses for Bleed / Drain Ports
 ISO 5211 Mounting Pad Bolt Circle
 Full Bore Design for Maximum Flow Efficiency
 Slot Vented Ball for Thermal Expansion
 Vacuum Service to 29 inches Hg

Options Available

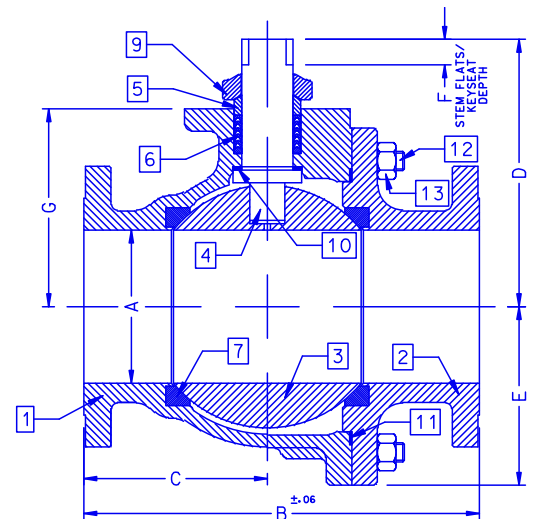
Suffix	Option
-01	Standard (Less Gear Operator)
-14	Side Vented Ball (See Page J2)
-21	UHMWPE Seats
-24	Fire Safe (Graphite Packing and Seal)
-35	PTFE Seats and Seals
-49	Assembled Dry
-57	Oxygen Cleaned (Stainless Steel Valves Only)
-60	Grounded Ball and Stem
-65	MPTFE Seats and Graphite Packing
-69	Drilled and Tapped Purge Ports with Plugs
-MG	Gear Operator with Standard Handwheel
-MH	Gear Operator with Standard Handwheel & Locking Device
-MJ	Gear Operator with Oversize Handwheel
-MK	Gear Operator with Oversize Handwheel & Locking Device



ACTUATOR MOUNTING: 10" & 12"



ACTUATOR MOUNTING: 8"



Number	Size	A	B	C	D	E	F	G
87A-60E-01	8"	8.00	19.75	9.38	12.96	9.56	1.00	10.22
87A-60G-01	10"	10.00	22.38	10.95	17.20	11.33	2.25	12.80
87A-60H-01	12"	12.00	25.50	12.84	19.31	13.40	2.25	14.92