



# 87A-100 Series



Stainless Steel ANSI Class 150 Flanged Std. Port Ball Valve - 1-1/2" through 2"

## STANDARDS COMPLIANCE

Refer to page D-A

## STANDARD FEATURES

Refer to page D-A

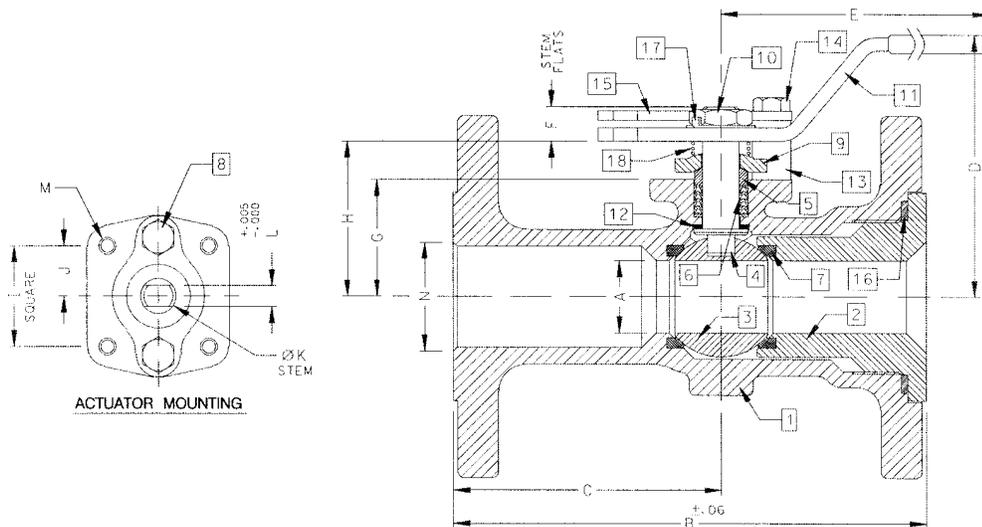
## MATERIALS OF CONSTRUCTION

Description	Material
1. Body	ASTM A351 CF8M
2. Retainer	ASTM A276 Type 316
3. Ball	ASTM A276 Type 316
4. Stem	ASTM A276 Type 316
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 SS
10. Stem Nut	316 SS
11. Lever	302 or 304 SS with Vinyl Grip
12. Stem Bearing	RPTFE
13. Stop	ASTM A276 Type 316
14. Stop Screw	18-8 SS
15. Lock Plate	302 or 304 SS
16. Body Seal	RPTFE
17. Lockwasher	302 or 304 SS
18. Grounding Spring	SS

## OPTIONS AVAILABLE:

(SUFFIX)	OPTION
-01-	Standard
-14-	Side Vented Ball (Uni-Directional)
-15-	Wheel Handle, Steel
-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
-60-	Grounded Ball and Stem
-65-	MPTFE Seats and Graphite Packing
-67-	Cleaned For Industrial Gases
-69-	Drilled and Tapped Purge Port with Plug
-70-	4" Extended Bonnet
-73-	316 SS Spiral Wound Gaskets w/PTFE Filler
-74-	316 SS Spiral Wound Gaskets w/Graphite Filler
-76-	Live Loaded 87A/88A Series (Lever)
-80-	Multi-Seal (Super TFE) 87A/88A Series

For Pressure/Temperature Ratings, Refer to Page M-7, Graph No. 2



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	WT.
87A-107-01	1-1/2"	1.25	6.50	3.50	4.85	6.53	0.47	1.85	2.38	1.392	0.696	0.500	0.287	1/4-20	1.50	9.0
87A-108-01	2"	1.50	7.00	3.69	4.62	6.65	0.72	2.41	3.09	1.949	0.974	0.625	0.412	5/16-18	2.00	18.0



# 87A-100 Series

Stainless Steel ANSI Class 150 Flanged Std. Port Ball Valve - 2-1/2" through 3"



## STANDARDS COMPLIANCE

Refer to page D-A

## STANDARD FEATURES

Refer to page D-A

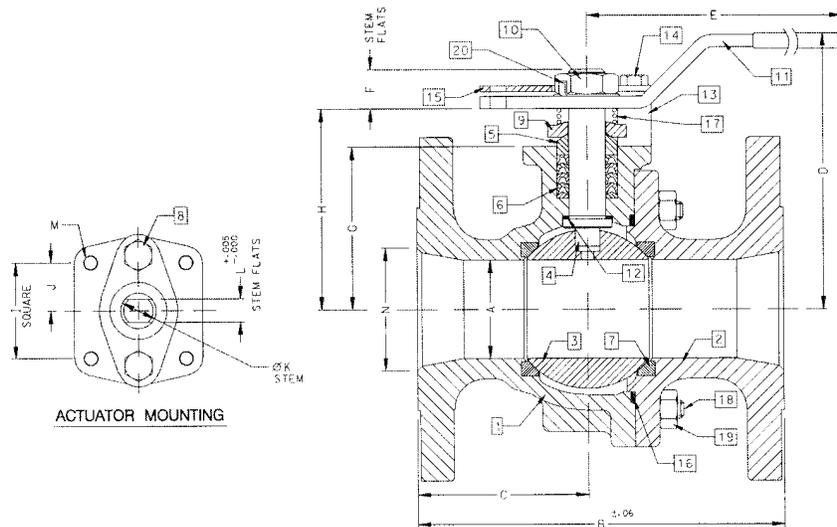
## MATERIALS OF CONSTRUCTION

Description	Material
1. Body	ASTM A351 CF8M
2. Retainer	ASTM A351 CF8M
3. Ball	ASTM A276 Type 316 or A351 CF8M
4. Stem	ASTM A276 Type 316
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 SS
10. Stem Nut	18-8 SS
11. Lever	316 SS
12. Stem Bearing	RPTFE
13. Stop	ASTM A276 Type 316
14. Stop Screw	316 SS
15. Lock Plate	302 or 304 SS
16. Body Seal	RPTFE
17. Grounding Spring	SS
18. Body Joint Stud	ASTM A193 Grade B8M
19. Body Joint Nut	ASTM A194 Grade 8
20. Lockwasher	302 or 304 SS

## OPTIONS AVAILABLE:

(SUFFIX)	OPTION
-01-	Standard
-14-	Side Vented Ball (Uni-Directional)
-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
-60-	Grounded Ball and Stem
-65-	MPTFE Seats and Graphite Packing
-67-	Cleaned For Industrial Gases
-69-	Drilled and Tapped Purge Port with Plugs
-70-	4" Extended Bonnet
-73-	316 SS Spiral Wound Gaskets w/PTFE Filler
-74-	316 SS Spiral Wound Gaskets w/Graphite Filler
-76-	Live Loaded 87A/88A Series (Lever)
-80-	Multi-Seal (Super TFE) 87A/88A Series
-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

For Pressure/Temperature Ratings, Refer to Page M-7, Graph No. 2



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	WT.
87A-109-01	2-1/2"	2.00	7.50	3.50	5.61	8.41	0.80	3.31	4.08	1.949	0.974	0.750	0.477	5/16-18	2.50	27.0
87A-100-01	3"	2.50	8.00	3.51	6.24	8.41	0.80	3.94	4.71	1.949	0.974	0.750	0.477	5/16-18	3.00	34.0



# 87A-100 Series

Stainless Steel ANSI Class 150 Flanged Std. Port Ball Valve - 4" through 8"

## STANDARDS COMPLIANCE

Refer to page D-A

## STANDARD FEATURES

Refer to page D-A

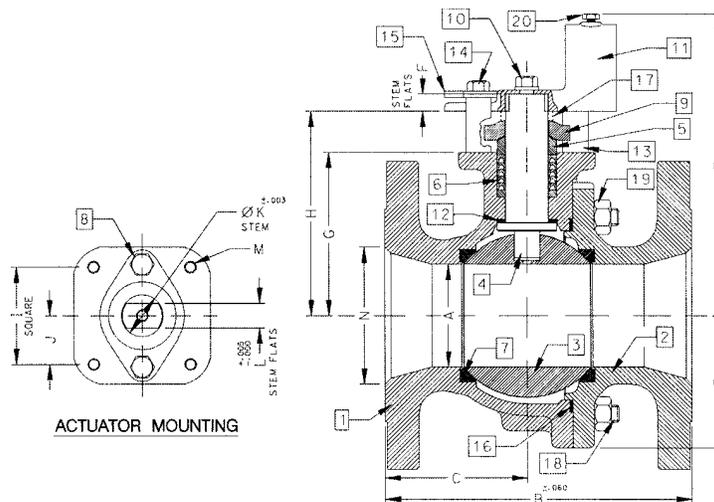
## MATERIALS OF CONSTRUCTION

Description	Material
1. Body	ASTM A351 CF8M
2. Retainer	ASTM A351 CF8M
3. Ball	ASTM A276 Type 316 or A351 CF8M
4. Stem	ASTM A276 Type 316
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 SS
10. Adapter Screw	18-8 SS
11. Handle Adapter	316 SS
12. Stem Bearing	RPTFE
13. Stop	ASTM A276 Type 316
14. Stop Screw	316 SS
15. Lock Plate	302 or 304 SS
16. Body Seal	RPTFE
17. Grounding Spring	SS
18. Body Joint Stud	ASTM A193 Grade B8M
19. Body Joint Nut	ASTM A194 Grade 8
20. Lockwasher	302 or 304 SS
21. Pipe Handle	Galvanized Steel (not Shown)

## OPTIONS AVAILABLE:

(SUFFIX)	OPTION
-01-	Standard
-14-	Side Vented Ball (Uni-Directional)
-21-	UHMWPE Seats
-24-	Fire Safe (Graphite Packing and Seal)
-35-	PTFE Seats and Seals
-49-	Assembled Dry
-57-	Oxygen Cleaned
-60-	Grounded Ball and Stem
-65-	MPTFE Seats and Graphite Packing
-67-	Cleaned For Industrial Gases
-69-	Drilled and Tapped Purge Ports with Plugs
-70-	Extended Bonnet
-73-	316 SS Spiral Wound Gaskets w/PTFE Filler
-74-	316 SS Spiral Wound Gaskets w/Graphite Filler
-76-	Live Loaded 87A/88A Series (Lever)
-80-	Multi-Seal (Super TFE) 87A/88A Series
-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

For Pressure/Temperature Ratings, Refer to Page M-7, Graph No. 2



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	WT.
87A-10A-01	4"	3.00	9.00	4.18	8.80	3.88	0.50	4.75	5.95	2.840	1.420	1.250	0.725	3/8-16	4.00	73.0
87A-10C-01	6"	4.00	10.50	4.69	9.99	5.13	0.50	5.94	7.13	2.840	1.420	1.250	0.725	3/8-16	6.00	117.0
87A-10E-01	8"	6.00	18.00	9.00	13.73	7.00	1.00	7.75	9.48	4.596	2.298	2.000	1.375	3/4-10	8.00	310.0



# 87A-100 Series

Stainless Steel ANSI Class 150 Flanged Std. Port Ball Valve - 10"

## STANDARDS COMPLIANCE

Refer to page D-A

## STANDARD FEATURES

Refer to page D-A

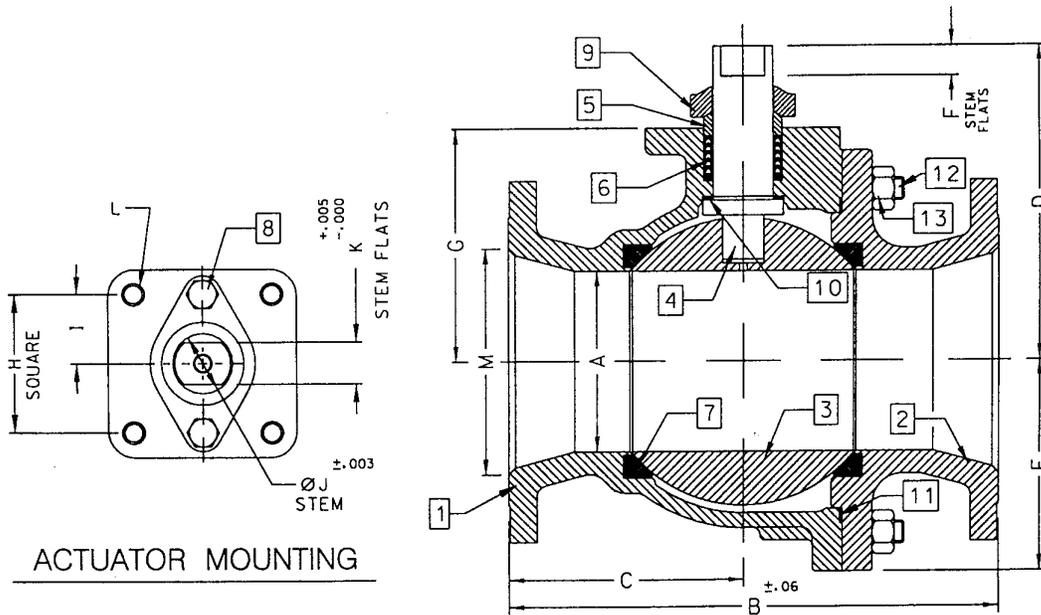
## MATERIALS OF CONSTRUCTION

Description	Material
1. Body	ASTM A351 CF8M
2. Retainer	ASTM A351 CF8M
3. Ball	ASTM A276 Type 316 or A351 CF8M
4. Stem	ASTM A276 Type 316
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 SS
10. Stem Bearing	RPTFE
11. Body Seal	RPTFE
12. Body Joint Stud	ASTM A193 Grade B8M
13. Body Joint Nut	ASTM A194 Grade 8

## OPTIONS AVAILABLE:

(SUFFIX)	OPTION
-01-	Standard
-14-	Side Vented Ball (Uni-Directional)
-21-	UHMWPE Seats
-24-	Fire Safe (Graphite Packing and Seal)
-35-	PTFE Seats and Seals
-49-	Assembled Dry
-57-	Oxygen Cleaned
-60-	Grounded Ball and Stem
-65-	MPTFE Seats and Graphite Packing
-69-	Drilled and Tapped Purge Port with Plugs
-70-	Extended Bonnet
-76-	Live Loaded 87A/88A Series (Lever)
-80-	Multi-Seal (Super TFE) 87A/88A Series
-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

For Pressure/Temperature Ratings, Refer to Page M-7, Graph No. 2



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
87A-10G-01	10"	8.00	21.00	10.37	12.83	9.18	1.00	10.22	4.596	2.298	2.000	1.375	3/4-10	10.00



# ANSI Flanged Ball Valves

87A, 87B, 88A and 88B Series

Features and Benefits

## STANDARDS COMPLIANCE

Except where specifically noted all valves within this family of products complies with the requirements of this listed standard.

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"

ASME B16.33 - "Manual Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig"

ASME B16.38 - "Large Metallic Valves for Gas Distribution (Manually Operated NPS 2-1/2" to 12", 125 psig)"

ASME B31.1 - "Power Piping"

ASME B31.3 - "Chemical Plant and Petroleum Refinery Piping"

ASME B31.8 - "Gas Transmission and Distribution Piping Systems"

API 607 - "Fire Test - Soft Seated Quarter Turn Valves" (-24 Option Required)

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 Weld Ends"

UL 125 - "Valves for Anhydrous Ammonia and LP-Gas (Other than Safety Relief)"

## STANDARD FEATURES

Except where specifically noted all valves within this family of products include all listed features as standard.

Two Position Locking Device (Valves 6" FP, 8" SP and smaller)

CHV Style Adjustable Stem Seals

Four Point ISO 5211 Mounting Pad Bolt Pattern

Slot Vented Ball for Thermal Expansion

Rated 150 psig Saturated Steam

Anti-static Grounded Ball and Stem

Blow-out Proof Stem Design

Cast Boss for Bleed / Drain Port

Vacuum Service to 29 inches of Hg

NACE MR0175-2000 Compliance on all 87A/87B

## PRODUCT APPROVALS

CSA (Reference: ASME B16.33 & B16.38)

UL (Reference: Control Number 195H)

UL (YSDT) LP-Gas Shut-Off Valves

UL (MHKZ) Manual Valves

UL (YRBX) Flammable Liquid Shut-Off Valves

UL (YRPV) Gas Shut-Off Valves

UL (YQNZ) Compressed Gas Shut-Off Valves

UL (YQAR) Anhydrous Ammonia Shut-Off Valves

**C<sub>v</sub> FACTORS**  
**87A-100 & 88A-100 SERIES**

SIZE	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10" <sup>(1)</sup>
FULL OPEN	86	104	234	375	673	1099	1902	3890

**C<sub>v</sub> FACTORS**  
**87A-200 & 88A-200 SERIES**

SIZE	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10" <sup>(1)</sup>
FULL OPEN	15	19	75	195	410	545	1021	2016	4837	9250	15170

(1) Calculated Data

**C<sub>v</sub> FACTORS**  
**9A-100, 90-100, 91-100,**  
**92-100, 93-100 & 96-100 SERIES**

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
OPEN   90°	8.3	6.7	5.7	10	16	25	40	62

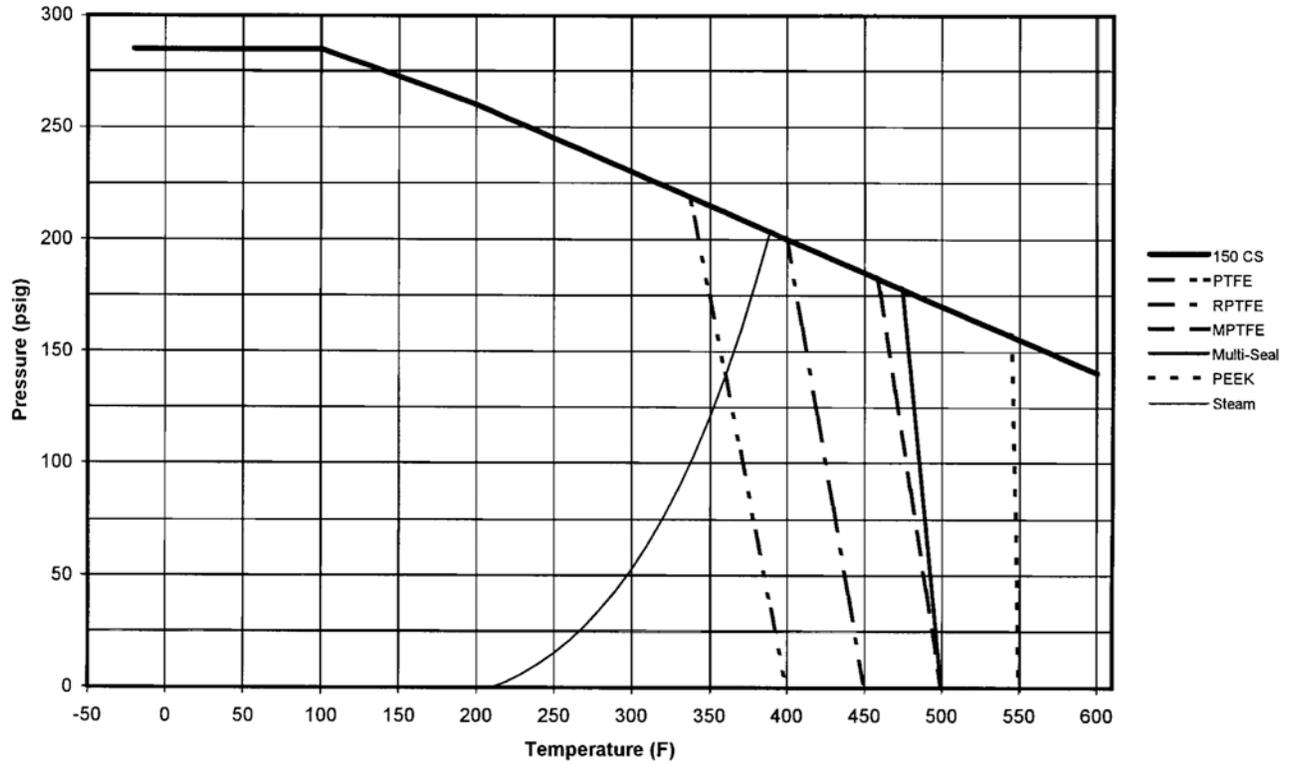
**C<sub>v</sub> FACTORS**  
**70-600 & 76-600 SERIES**

SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
FULL OPEN	5.4	12	14	21	34	47

**C<sub>v</sub> FACTORS**  
**"72" SERIES**

SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
FULL OPEN	26	48	65	125	170	216

## Class 150 CS P-T Rating (Graph 1)



## Class 150 SS P-T Rating (Graph 2)

