



88A-100 Series

Carbon 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 A216 WCB
2. Retainer	ASTM A108 Type 1215
3. Ball	ASTM A108 Type 1215 Chrome Plated
4. Stem	ASTM A108 Type 1215
5. Packing Gland	ASTM A108 Type 1215
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B7
9. Gland Plate	302 or 304 SS
10. Stem Nut	316 SS
11. Lever	ASTM A366 Steel with Vinyl Grip
12. Stem Bearing	RPTFE
13. Stop	ASTM A108 Type 1215
14. Stop Screw	SAE J429 Grade 2
15. Lock Plate	ASTM A366 Steel
16. Body Seal	RPTFE
17. Lockwasher	302 or 304 SS
18. Grounding Spring	SS

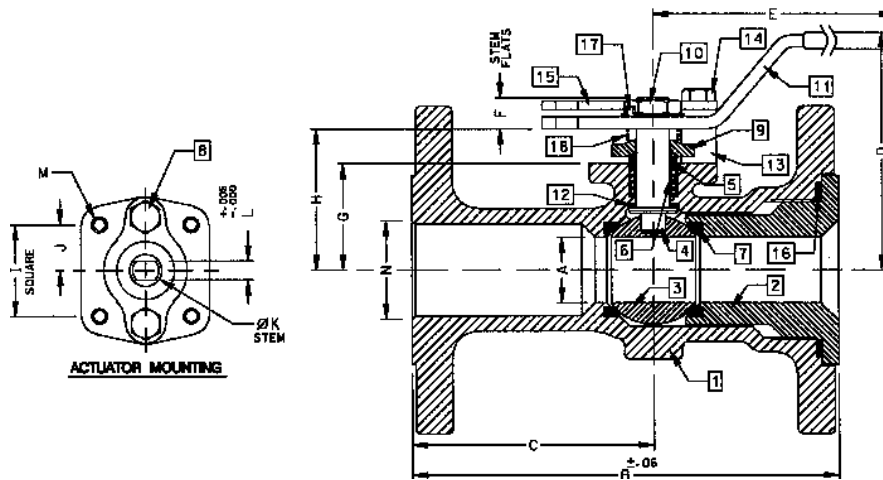
VARIATIONS AVAILABLE:

88A-140 Series (316 SS Ball & Stem)
88A-130 Series (Ni-Cu Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION
-01-	Standard
-10-	SS Lever and Nut
-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
-60-	Grounded Ball and Stem
-65-	MPTEFE 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. 1**



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	WT.
88A-107-01A	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
88A-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



88A-100 Series

Carbon 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 A216 WCB
2. Retainer	ASTM A216 WCB
3. Ball	ASTM A216 WCB or A216 WCB Chrome Plated
4. Stem	ASTM A108 Type 1215
5. Packing Gland	ASTM A108 Type 1215
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B7
9. Gland Plate	302 or 304 SS
10. Stem Nut	ASTM A194 Grade 8
11. Lever	ASTM A366 Steel with Vinyl Grip
12. Stem Bearing	RPTFE
13. Stop	ASTM A108 Type 1215
14. Stop Screw	SAE J429 Grade 2
15. Lock Plate	ASTM A366 Steel
16. Body Seal	RPTFE
17. Grounding Spring	SS
18. Body Joint Stud	ASTM A193 Grade B7
19. Body Joint Nut	ASTM A194 Grade 2H
20. Lockwasher	302 or 304 SS

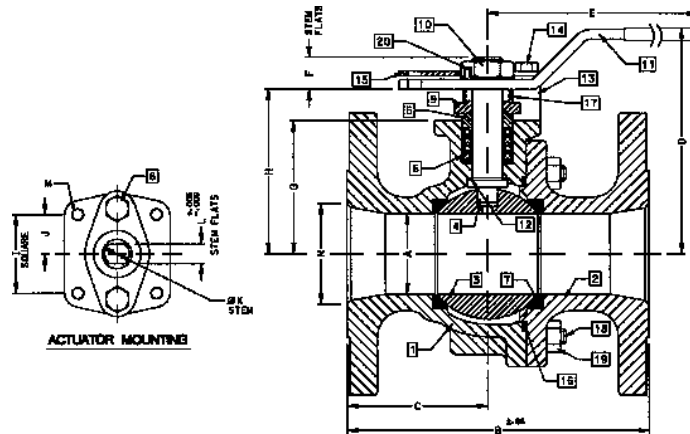
VARIATIONS AVAILABLE:

88A-140 Series (316 SS Ball & Stem)
88A-130 Series (Ni-Cu Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION
-01-	Standard
-10-	SS Lever and Nut
-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
-59-	SS External Trim
-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. 1**



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	WT.
88A-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
88A-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



88A-100 Series

Carbon 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 A216 WCB
2. Retainer	ASTM A216 WCB
3. Ball	ASTM A216 WCB or A216 WCB Chrome Plated
4. Stem	ASTM A108 Type 1215
5. Packing Gland	ASTM A108 Type 1215
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B7
9. Gland Plate	316 SS
10. Adaptor Screw	316 SS
11. Handle Adapter	ASTM A366 Steel with Vinyl Grip
12. Stem Bearing	RPTFE
13. Stop	ASTM A108 Type 1215
14. Stop Screw	SAE J429 Grade 2
15. Lock Plate	ASTM A366 Steel
16. Body Seal	RPTFE
17. Grounding Spring	SS
18. Body Joint Stud	ASTM A193 Grade B7
19. Body Joint Nut	ASTM A194 Grade 2H
20. Adapter Screw	18-8 SS
21. Pipe Handle	Galvanized Steel (not shown)

VARIATIONS AVAILABLE:

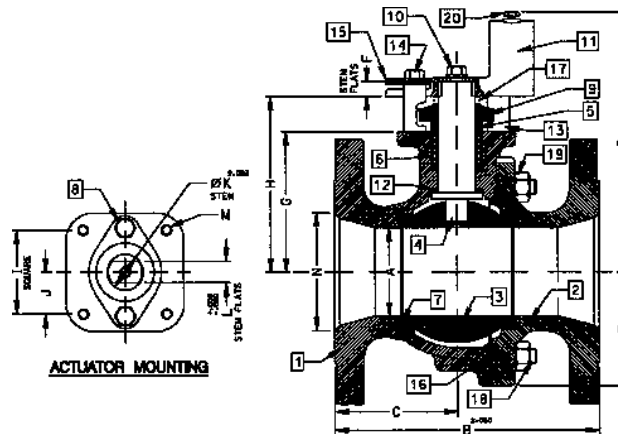
88A-140 Series (316 SS Ball & Stem)

88A-130 Series (Ni-Cu Ball & Stem)

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 (SS Valves Only)
-59-	SS External Trim
-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. 1**



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	WT.
88A-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
88A-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
88A-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



88A-100 Series

Carbon 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 A216 WCB
2. Retainer	ASTM A216 WCB
3. Ball	ASTM A108 Type 1215 or A216 WCB Chrome Plated
4. Stem	ASTM A108 Type 1215
5. Packing Gland	ASTM A108 Type 1215
6. Stem Seals	PTFE
7. Seats	RPTFE
8. Gland Screws	ASTM A193 B7
9. Gland Plate	316 SS
10. Stem Bearing	RPTFE
11. Body Seal	RPTFE
12. Body Joint Stud	ASTM A193 Grade B7
13. Body Joint Nut	ASTM A194 Grade 2H

VARIATIONS AVAILABLE:

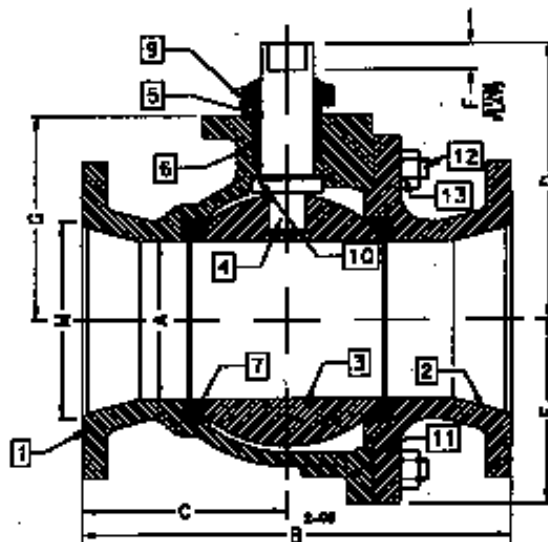
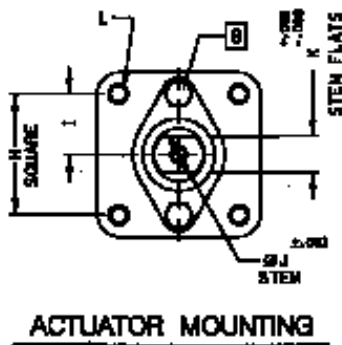
88A-130 Series (Ni-Cu Ball & Stem)

88A-140 Series (316 SS Ball & Stem)

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-	MPTEFE Seats and Graphite Packing
-67-	Cleaned For Industrial Gases
-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. 1**



NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
88A-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

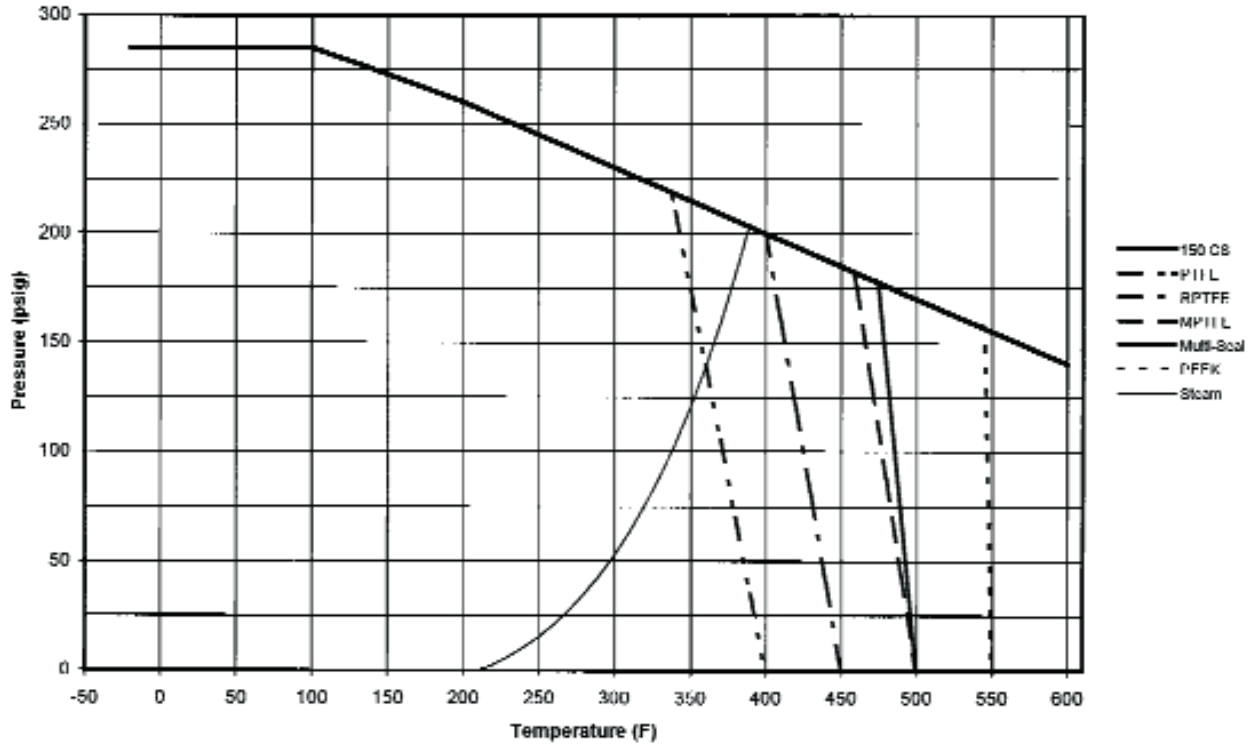
Except where specifically noted all valves within this family of products include all listed features as standard.

- 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

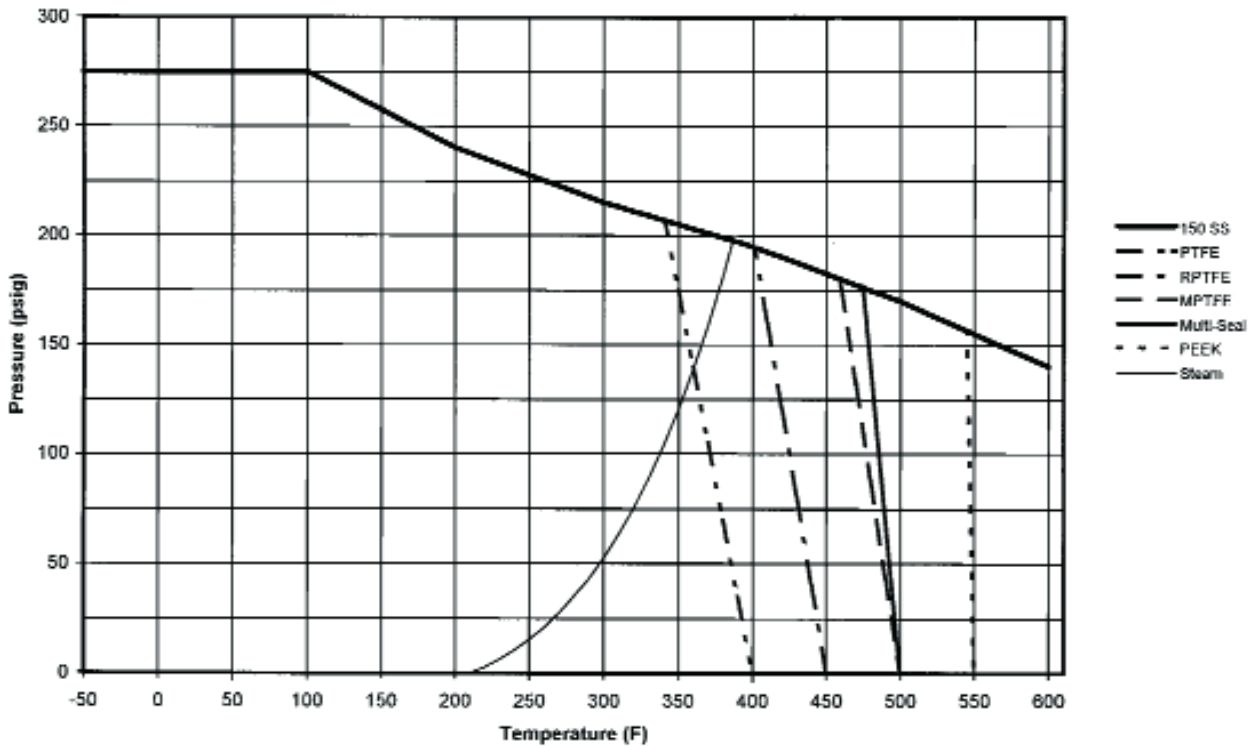
PRODUCT APPROVALS

- AAR Approval No. E989052 (87A-108-24, 88A-108-24 & 88A-148-24)
- Approval No. E989053 (87A-100-24, 88A-100-24 & 88A-140-24)
- 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

Class 150 CS P-T Rating (Graph 1)



Class 150 SS P-T Rating (Graph 2)



C_v FACTORS
87-100 & 88-100 SERIES
87A-100 & 88A-100 SERIES

SIZE	1/2" ⁽²⁾	3/4" ⁽²⁾	1" ⁽²⁾	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10" ⁽¹⁾
FULL OPEN	15	19	47	86	104	234	375	673	1099	1902	3890

C_v FACTORS
87A-200 & 88A-200 SERIES

SIZE	1"	1-1/2"	2"	2-1/2"	3"	4"	6"	8" ⁽¹⁾	10" ⁽¹⁾	12" ⁽¹⁾
FULL OPEN	75	195	410	545	1021	2016	4837	9250	15170	22390

- (1) Calculated Data
(2) 87-100 & 88-100 Only

C_v 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_v 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_v FACTORS
"72" SERIES

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