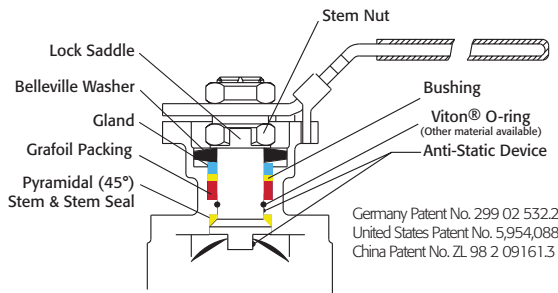


**API 607 - 6th Edition
CERTIFIED**



The F88 Series Firesafe Ball Valves have successfully passed the API-607 6th Edition test. They are available with 316SST or WCB body.



VALVE SIZE	VALVE Cv
1/4"	7
3/8"	8
1/2"	15
3/4"	40
1"	70
1-1/4"	110
1-1/2"	250
2"	430
2-1/2"	600
3"	1,100
4"	2,000

These high quality investment cast valves feature a fully machined bore. The superior live-loaded packing system is accomplished with Belleville washers, "V"- ring packing and a unique primary pyramidal stem seal. This advanced sealing system provides protection against stem leaks experienced by ordinary ball valves.

Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric

TRIAG®

Series F88

FIRESAFE

3-Piece Design

Sizes 1/4" - 4"

Full Port Design

Class 254 to 600

600 to 1480 psi (by size)

316SST or WCB

Threaded, Socket Weld, or Butt Weld Ends

Superior Live Loaded Packing System

ISO 5211 Actuator Mounting Pad

Blowout Proof Stem w/ Dual Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

Lockable Manual Handle

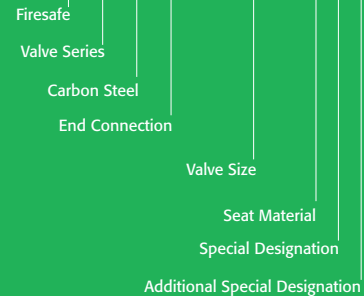
STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
FIRE TESTING	API 607-6th Edition
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015

HOW TO ORDER MANUAL VALVES

SAMPLE PART #

F88C-TH-0200-XXX



See part number matrix for itemized options

AT Controls, Inc.

9955 International Blvd.
Cincinnati, Ohio 45246
www.atcontrols.com

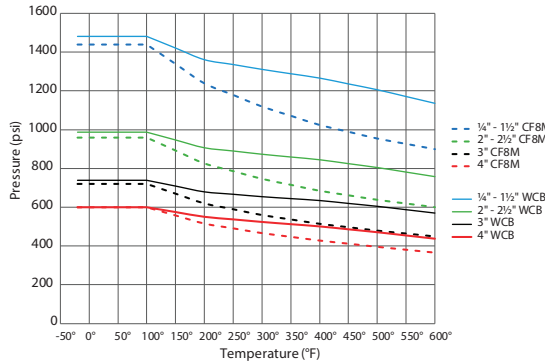
PHONE (513) 247-5465
FAX (513) 247-5462
sales@atcontrols.com

Series F88

High Performance, Full Port Class 254 to 600
3-Piece Ball Valve
ISO 5211 Direct Mount
600-1480 psi by size
1/4" to 4"

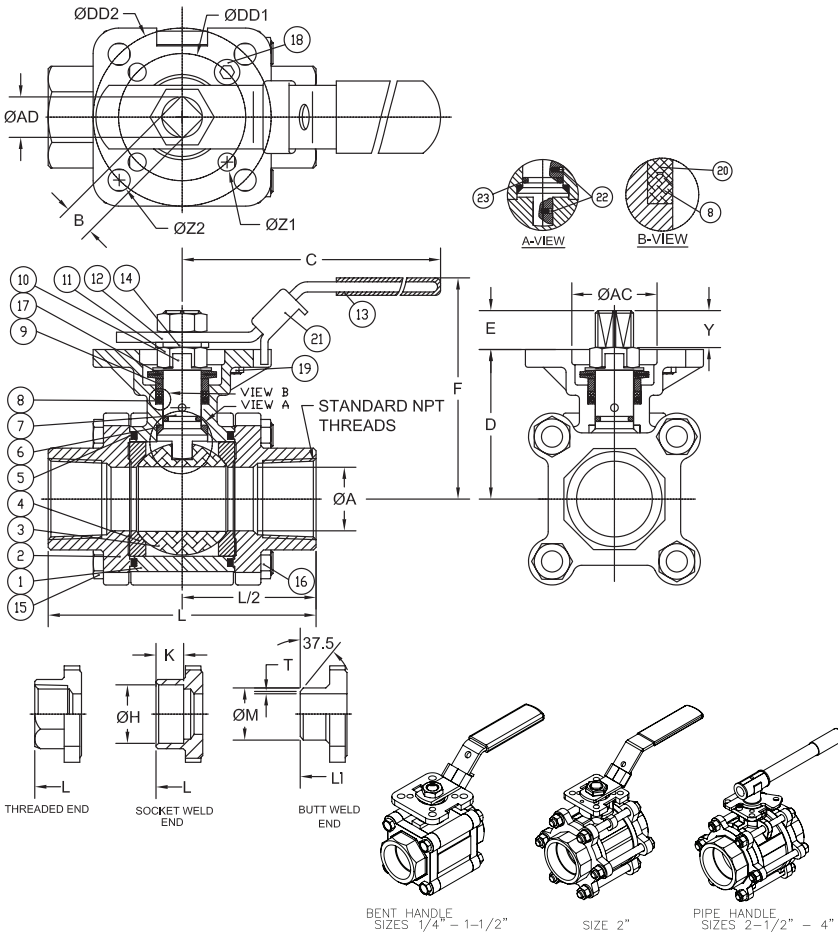
API 607 - 6th Edition
CERTIFIED

Pressure vs. Temperature Chart
Body & End Cap Pressure Ratings

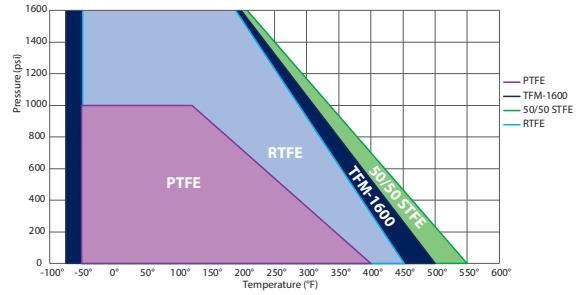


SIZE	IN-LBS.
1/4"	70
3/8"	70
1/2"	75
3/4"	100
1"	145
1-1/4"	220
1-1/2"	300
2"	420
2-1/2"	560
3"	900
4"	1,500

NOTE: For other seat material, consult factory



Pressure vs. Temperature Chart
Seat Pressure Ratings



MATERIALS LIST

NO.	PART NAME	QTY	STAINLESS STEEL	CARBON STEEL
1	BODY	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	TH END CAP	2	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	BW/SW END CAP	2	ASTM A351 GRADE CF3M	ASTM A216 GRADE WCB
3	BALL	1	1/4" THRU 3/8" ASTM A276 SS316	1/4" THRU 3/8" ASTM A276 SS316
3	BALL	1	1/2" THRU 4" ASTM A351 GRADE CF8M	1/2" THRU 4" ASTM A351 GRADE CF8M
4	SEAT	2	RTFE	RTFE
5	JOINT GASKET	2	GRAPHITE	GRAPHITE
6	STEM SEAL	1	RTFE	RTFE
7	STEM	1	ASTM A276 SS316	ASTM A276 SS316
8	GLAND PACKING	1	GRAPHITE	GRAPHITE
9	GLAND BUSHING	1	AISI 304	AISI 304
10	LOCK SADDLE	1	AISI 304	AISI 304
11	STEM NUT	1	AISI 304	AISI 304
12	HANDLE	1	AISI 304	AISI 304
13	HANDLE SLEEVE	1	VINYL	VINYL
14	STEM WASHER	1	AISI 304	AISI 304
15	BODY BOLT/STUD	*	ASTM A193 GRADE B8M	ASTM A193 GRADE B7M
16	BODY NUT	#	ASTM A194 GRADE 8M	ASTM A194 GRADE 2HM
17	BELLEVILLE WASHER	2	AISI 301	AISI 301
18	STOP BOLT	1	AISI 304	AISI 304
19	STOP BOLT NUT	1	AISI 304	AISI 304
20	GLAND WASHER	1	RTFE	RTFE
21	HANDLE LOCK	1	AISI 304	AISI 304
22	ANTI-STATIC DEVICE	2	AISI 316	AISI 316
23	STEM O-RING	1	FKM	FKM

NOTE: SIZES 2-1/2" THRU 4" INCLUDE SEAT RETAINER RINGS.

* 1/4" THRU 1-1/2" QTY = 4 PCS #1/2" THRU 1-1/2" QTY = 8 PCS
* 2" THRU 4" QTY = 6 PCS #2" THRU 4" QTY = 12 PCS
1/4" THRU 3/8" QTY = 4 PCS

DIMENSIONS (IN)

SIZE	øA	B	C	D	E	F	H	K	L	L1	M	T	Y	AC	AD	DD1	DD2	øZ2	øZ1	(LBS)	ISO 5211
1/4"	0.45	0.354	5.47	1.66	0.25	3.00	0.55	0.39	2.95	2.95	0.85	0.13	0.25	1.04	0.44	1.654	1.969	0.28	0.28	1.6	F04/F05
3/8"	0.50	0.354	5.47	1.66	0.25	3.00	0.69	0.39	2.95	2.95	0.85	0.11	0.25	1.04	0.44	1.654	1.969	0.28	0.28	1.6	F04/F05
1/2"	0.59	0.354	5.47	1.66	0.25	3.00	0.85	0.39	2.85	2.95	0.85	0.06	0.25	1.07	0.44	1.654	1.969	0.28	0.28	2.0	F04/F05
3/4"	0.79	0.354	5.47	1.83	0.33	3.20	1.07	0.51	3.36	3.54	1.07	0.06	0.33	1.07	0.44	1.969	2.756	0.34	0.28	3.0	F05/F07
1"	0.98	0.433	6.50	2.31	0.41	3.86	1.34	0.51	4.15	4.33	1.34	0.06	0.41	1.34	0.56	1.969	2.756	0.34	0.28	4.5	F05/F07
1-1/4"	1.26	0.433	6.50	2.46	0.41	4.00	1.69	0.51	4.37	4.53	1.68	0.06	0.41	1.34	0.56	1.969	2.756	0.34	0.28	6.0	F05/F07
1-1/2"	1.50	0.551	8.46	3.11	0.53	5.04	1.92	0.51	5.01	5.12	1.91	0.06	0.53	1.54	0.74	1.969	2.756	0.34	0.28	10.0	F05/F07
2"	1.97	0.551	8.46	3.42	0.53	5.35	2.40	0.63	5.62	5.62	2.38	0.06	0.53	1.54	0.74	1.969	2.756	0.35	0.30	13.0	F05/F07
2-1/2"	2.56	0.748	10.31	4.28	0.66	6.60	2.89	0.63	7.28	7.28	3.00	N/A	0.66	2.09	0.94	2.756	4.016	0.47	0.39	26.0	F07/F10
3"	3.15	0.748	10.31	4.63	0.70	6.96	3.54	0.63	8.07	8.07	3.54	N/A	0.70	2.09	0.94	2.756	4.016	0.47	0.39	34.0	F07/F10
4"	3.94	0.748	12.28	5.26	0.66	7.59	4.54	0.79	9.45	9.45	4.57	N/A	0.66	2.09	0.94	2.756	4.016	0.47	0.39	52.0	F07/F10

A-T Controls reserves the right to change product designs and technical/dimensional specifications without notice.

 **A-T Controls, Inc.**

9955 International Blvd. PHONE (513) 247-5465
Cincinnati, Ohio 45246 FAX (513) 247-5462
www.atcontrols.com sales@atcontrols.com



**Pneumatic
Double Acting
Automated
Ball Valve Package
Series F88
3-Piece Ball Valve**

Firesafe

Sizes 1/4" - 4"

Full Port Design

Class 254 to 600

600-1480 psi (by size)

316SST or WCB

TH, SW, or BW Ends

Superior Live Loaded

Packing System

Blowout Proof Stem w/ Dual

Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

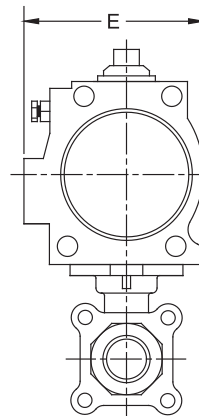
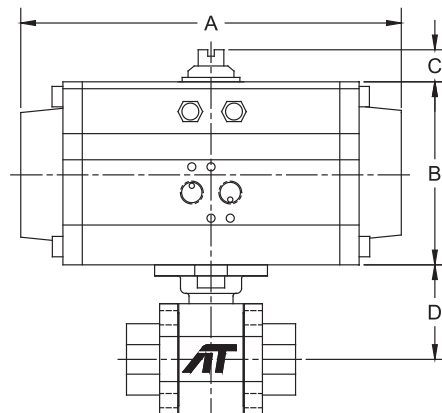
STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
FIRE TESTING	API 607-6th Edition
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015

**API 607 - 6th Edition
CERTIFIED**



**Direct Mount
Firesafe tested to API-607**



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/4"	5.98	2.76	0.79	1.66	2.58	7
3/8"	5.98	2.76	0.79	1.66	2.58	8
1/2"	5.98	2.76	0.79	1.66	2.58	15
3/4"	7.95	3.43	0.79	1.83	3.29	40
1"	7.95	3.43	0.79	2.31	3.29	70
1-1/4"	7.95	3.43	0.79	2.46	3.29	110
1-1/2"	9.29	4.49	0.79	3.11	4.41	250
2"	9.29	4.49	0.79	3.42	4.41	430
2-1/2"	10.87	4.88	0.79	4.28	4.82	600
3"	11.46	5.28	0.79	4.63	5.20	1,100
4"	13.90	6.18	0.79	5.26	6.04	2,000

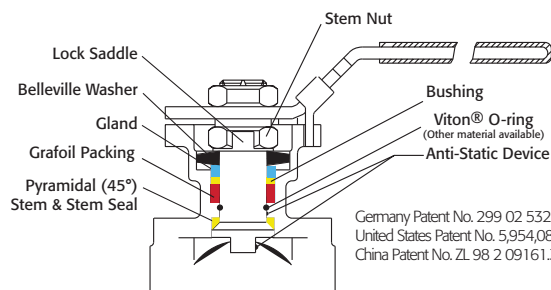
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES F88 3-Piece

Firesafe

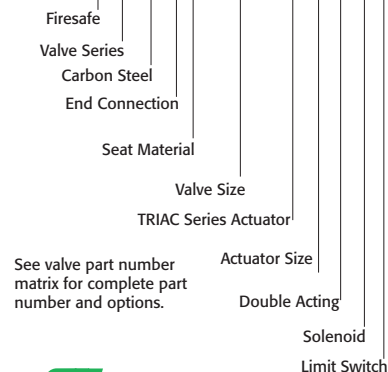
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/4"	F88-TX-025/TR1D-XX
3/8"	F88-TX-038/TR1D-XX
1/2"	F88-TX-050/TR1D-XX
3/4"	F88-TX-075/2R2D-XX
1"	F88-TX-100/2R2D-XX
1-1/4"	F88-TX-125/2R2D-XX
1-1/2"	F88-TX-150/2R3D-XX
2"	F88-TX-200/2R3D-XX
2-1/2"	F88-TX-250/2R4D-XX
3"	F88-TX-300/2R5D-XX
4"	F88-TX-400/2R6D-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/4"	F88-TX-025/TR1D-XX
3/8"	F88-TX-038/TR1D-XX
1/2"	F88-TX-050/TR1D-XX
3/4"	F88-TX-075/2R2D-XX
1"	F88-TX-100/2R2D-XX
1-1/4"	F88-TX-125/2R2D-XX
1-1/2"	F88-TX-150/2R3D-XX
2"	F88-TX-200/2R3D-XX
2-1/2"	F88-TX-250/2R4D-XX
3"	F88-TX-300/2R5D-XX
4"	F88-TX-400/2R6D-XX



Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

**SAMPLE PART #
F88C-TX-050/2R2D-XX**



See valve part number matrix for complete part number and options.

OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
TYPE 4 Solenoid	(A)	TYPE 4 Limit Switch (2) spdt	(A)
TYPE 7 Solenoid	(B)	TYPE 7 Limit Switch (2) spdt	(B)
Intrinsically Safe Solenoid	(C)	Intrinsically Safe Limit Switch	(C)

Other options available - call for details
Actuators are sized based on clean/clear fluid.





**Pneumatic
Spring Return
Automated
Ball Valve Package
Series F88
3-Piece Ball Valve**

Firesafe

Sizes 1/4" - 4"

Full Port Design

Class 254 to 600

600-1480 psi (by size)

316SST or WCB

TH, SW, or BW Ends

Superior Live Loaded

Packing System

Blowout Proof Stem w/ Dual

Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

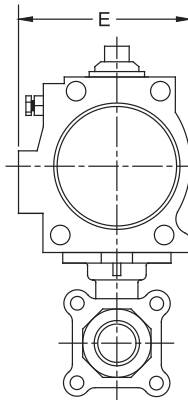
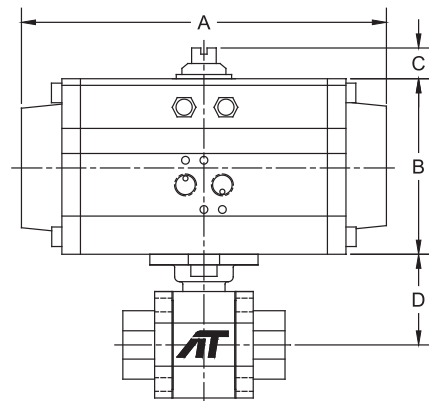
STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
FIRE TESTING	API 607-6th Edition
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015

**API 607 - 6th Edition
CERTIFIED**



**Direct Mount
Firesafe tested to API-607**



DIMENSIONS (IN)

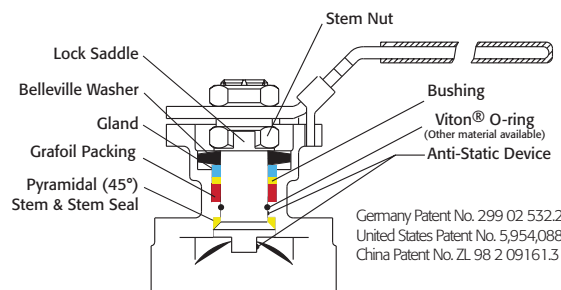
VALVE SIZE	A	B	C	D	E	VALVE Cv
1/4"	7.60	2.76	0.79	1.66	2.58	7
3/8"	7.60	2.76	0.79	1.66	2.58	8
1/2"	7.95	3.43	0.79	1.66	3.29	15
3/4"	9.29	4.49	0.79	1.83	4.41	40
1"	9.29	4.49	0.79	2.31	4.41	70
1-1/4"	9.29	4.49	0.79	2.46	4.41	110
1-1/2"	9.29	4.49	0.79	3.11	4.41	250
2"	10.87	4.88	0.79	3.42	4.82	430
2-1/2"	11.46	5.28	0.79	4.28	5.20	600
3"	15.16	6.93	1.18	4.63	6.69	1,100
4"	15.16	6.93	1.18	5.26	6.69	2,000

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

**SERIES F88
3-Piece
Firesafe**

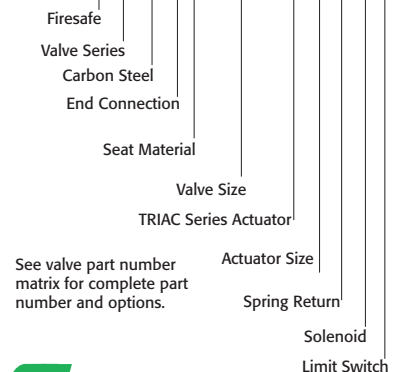
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/4"	F88-TX-025/TR1S-XX
3/8"	F88-TX-038/TR1S-XX
1/2"	F88-TX-050/2R2S-XX
3/4"	F88-TX-075/2R3S-XX
1"	F88-TX-100/2R3S-XX
1-1/4"	F88-TX-125/2R3S-XX
1-1/2"	F88-TX-150/2R3S-XX
2"	F88-TX-200/2R4S-XX
2-1/2"	F88-TX-250/2R5S-XX
3"	F88-TX-300/2R7S-XX
4"	F88-TX-400/2R7S-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/4"	F88-TX-025/TR1S-XX
3/8"	F88-TX-038/TR1S-XX
1/2"	F88-TX-050/2R2S-XX
3/4"	F88-TX-075/2R3S-XX
1"	F88-TX-100/2R3S-XX
1-1/4"	F88-TX-125/2R3S-XX
1-1/2"	F88-TX-150/2R4S-XX
2"	F88-TX-200/2R5S-XX
2-1/2"	F88-TX-250/2R6S-XX
3"	F88-TX-300/2R7S-XX
4"	F88-TX-400/2R7S-XX



Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

**SAMPLE PART #
F88C-TX-050/2R2S-XX**



See valve part number matrix for complete part number and options.

OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
TYPE 4 Solenoid	(A)	TYPE 4 Limit Switch (2) spdt	(A)
TYPE 7 Solenoid	(B)	TYPE 7 Limit Switch (2) spdt	(B)
Intrinsically Safe Solenoid	(C)	Intrinsically Safe Limit Switch	(C)

Other options available - call for details
Actuators are sized based on clean/clear fluid.



A-T Controls, Inc.

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Electric

Automated Ball Valve Package Series F88 3-Piece Ball Valve

Firesafe

Sizes 1/4" - 4"

Full Port Design

Class 254 to 600

600-1480 psi (by size)

316SST or WCB

TH, SW, or BW Ends

Superior Live Loaded
Packing System

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

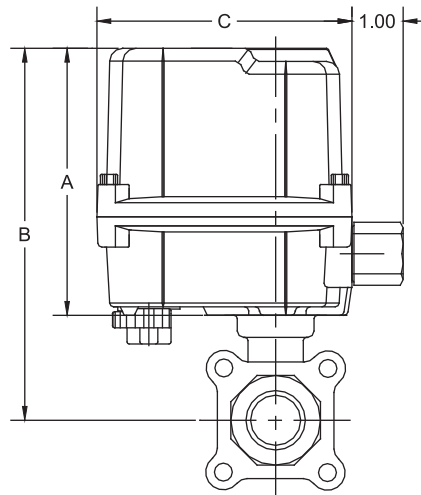
STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
FIRE TESTING	API 607-6th Edition
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015

**API 607 - 6th Edition
CERTIFIED**



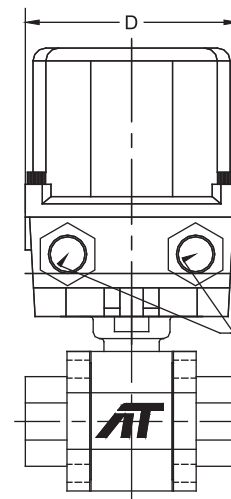
Direct Mount
Firesafe tested to API-607



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D
1/4"	5.24	6.90	4.94	4.08
3/8"	5.24	6.90	4.94	4.08
1/2"	5.24	6.90	4.94	4.08
3/4"	5.24	7.07	4.94	4.08
1"	5.24	7.55	4.94	4.08
1-1/4"	5.24	7.70	4.94	4.08
1-1/2"	5.24	8.35	4.94	4.08
2"	5.24	8.66	4.94	4.08
2-1/2"	9.25	13.53	6.69	10.16
3"	10.55	15.18	9.02	13.31
4"	10.55	15.81	9.02	13.31

VALVE Cv
7
8
15
40
70
110
250
430
600
1,100
2,000



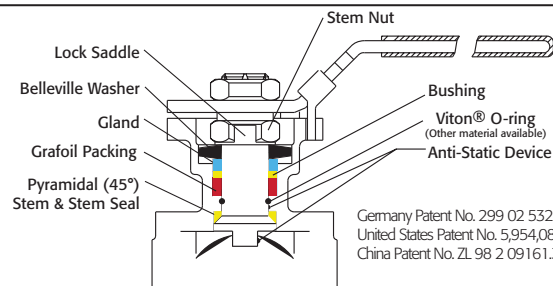
1/2" NPT
CONDUIT
CONNECTION

SERIES F88 3-Piece

Firesafe

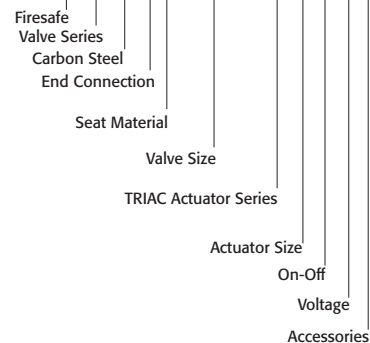
ON-OFF	
SIZE	MODEL
1/4"	F88-TX-025/WEA1-XX
3/8"	F88-TX-038/WEA1-XX
1/2"	F88-TX-050/WEA1-XX
3/4"	F88-TX-075/WEA1-XX
1"	F88-TX-100/WEA1-XX
1-1/4"	F88-TX-125/WEA1-XX
1-1/2"	F88-TX-150/WEA1-XX
2"	F88-TX-200/WEA1-XX
2-1/2"	F88-TX-250/WEB1-XX
3"	F88-TX-300/WEC1-XX
4"	F88-TX-400/WED1-XX

MODULATING	
SIZE	MODEL
1/4"	F88-TX-025/WEA2-XX
3/8"	F88-TX-038/WEA2-XX
1/2"	F88-TX-050/WEA2-XX
3/4"	F88-TX-075/WEA2-XX
1"	F88-TX-100/WEA2-XX
1-1/4"	F88-TX-125/WEA2-XX
1-1/2"	F88-TX-150/WEA2-XX
2"	F88-TX-200/WEA2-XX
2-1/2"	F88-TX-250/WEB2-XX
3"	F88-TX-300/WEC2-XX
4"	F88-TX-400/WED2-XX



Germany Patent No. 299 02 5322
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

SAMPLE PART #
F88C-TX-050/WEA1-XX



See valve part number matrix for complete part number and options.

OPTIONS

DESCRIPTION
24 VAC/24 VDC/220VAC
Feedback potentiometer

NOTE: Heater and thermostat standard
(2) auxiliary switches standard
Other options available - call for details
Actuators are sized based on clean/clear fluid.



Valve Options

Various Seat Materials

PTFE, RTFE, 50/50 STFE, 25% CTFE, Delrin, PEEK, UHMWPE, TFM-1600

Operator Options

Quarter-turn Gear Operators
Spring Return "Deadman" Handles
Oval handles, TEE Handles

Specials and Solutions

Steam Jackets
Stem Extensions
V-ported Control Valves
Multi-port Valve Solutions
Fugitive Emissions Bonnets (TSM's)
Oxygen Cleaning
Lockout Brackets
Vented Balls
"No Play" Mounting Kits

• FM Approved Valves and Assemblies



Manual and automated valve assemblies for gas burner management applications and safety shutoff

Other Products

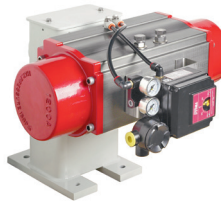
Special Seats Balls and Seal Designs



Steam Jacketed Valves



Floor Mounted Damper Drives



Limit Switches Mounted on Manual Valves



Fusible Link Assemblies



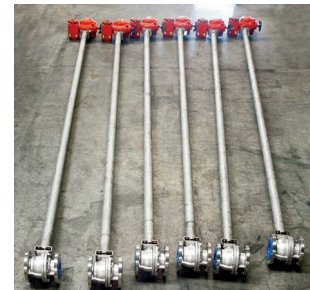
180° Actuators



Lockout Mounting Kits



Stem Extensions



Special Multi-Port Valves



Dual Valve Assemblies

