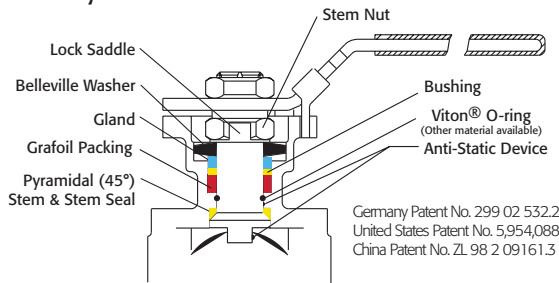


**API 607 - 6th Edition
CERTIFIED**



Triac FD9 Series Flanged Ball Valves feature a direct mount automation pad. The high quality investment castings 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.



VALVE SIZE	VALVE Cv
1/2"	15
3/4"	45
1"	85
1-1/2"	275
2"	450
2-1/2"	700
3"	1,100
4"	2,200
6"	5,150
8"	10,000

RTFE seats are standard, but various options are available for seat materials. The 50/50 STFE seat option is excellent for services that call for higher temperatures and more difficult applications, including steam. Call us for details.

Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric

TRIAC
CONTROLS

Series FD9

FIRESAFE

Direct Mount Split Body Flanged Ball Valve

Available in 316SST, Sizes 1/2"-6"

Available in WCB, Sizes 1/2"-12"
(Call factory for 10" & 12")

ANSI Class 150

Full Port Design

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
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-6th Edition on 1/2"-4" (SST & WCB) and 6"-12" (WCB only), API-607-4th Edition on 6" SST
Sulfide Stress Protection	NACE MR0175
Coast Guard Approved	Category A: 46 CFR 56.20-15(b)(2)
Safety Integrity	IEC 61508:2010; SIL 3
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2008

HOW TO ORDER MANUAL VALVES

SAMPLE PART #
FD9C-F1-0300-XXX



See part number matrix for itemized options

A-T Controls, Inc.

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

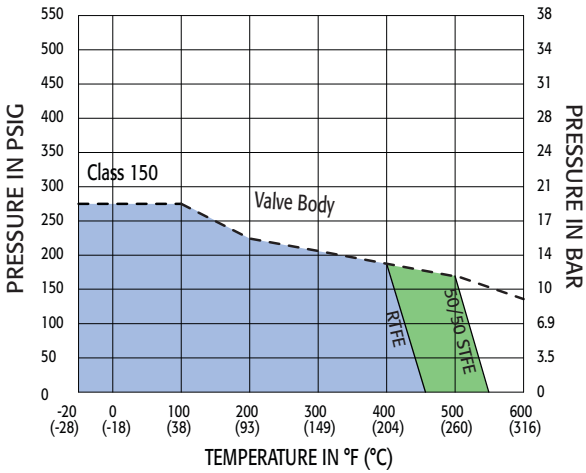
PHONE (513) 247-5465
FAX (513) 247-5462
sales@atcontrols.com

Series FD9

High Performance, Full Port Split Body Ball Valve Series FD9 (ANSI Class 150)

API 607 - 6th Edition
CERTIFIED

Pressure vs. Temperature Chart
for Valves 1/2" to 6"



NOTE: Dotted line shows the rating for valve body. Solid line shows the rating for valve seat. Both ratings need to be considered when determining the limitation of the valve for specific application. Consult factory for other seat materials.

Break Away Torque
for RTFE Seats

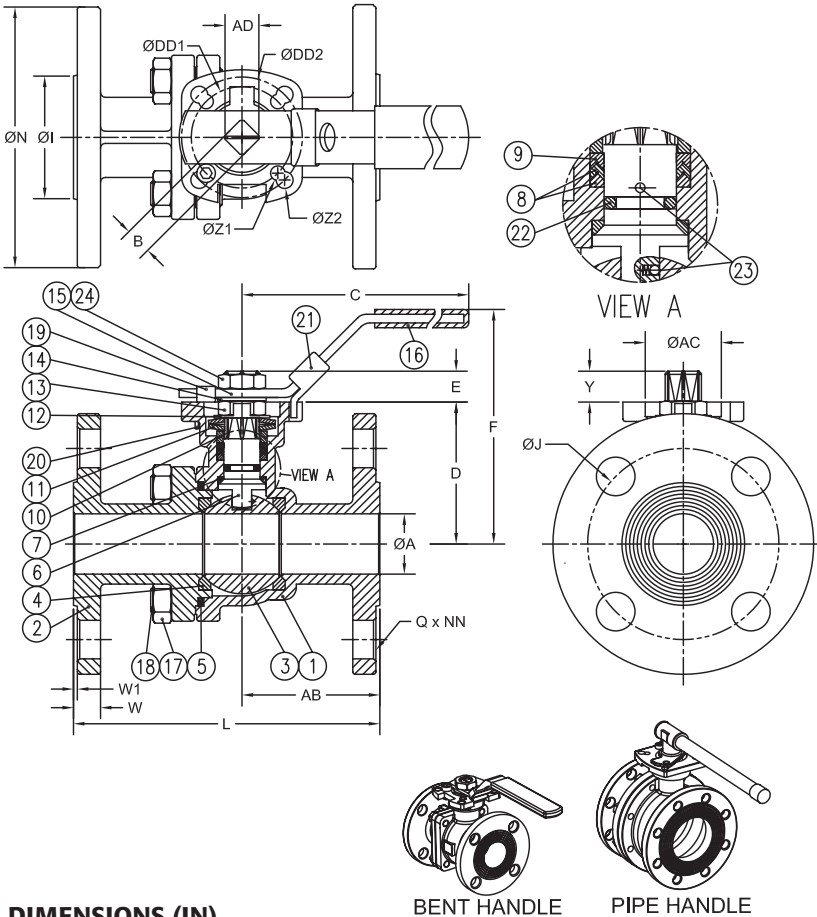
SIZE	IN-LBS.
1/2"	110
3/4"	140
1"	175
1-1/2"	400
2"	450
2-1/2"	620
3"	1,000
4"	1,600
6"	2,700
8"	7,256

NOTE: For other seat material, consult factory

MATERIALS LIST

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

* 1/2" THRU 2" QTY = 4 PCS
* 2-1/2" THRU 4" QTY = 8 PCS
* 6" QTY = 10 PCS
* 8" QTY = 12 PCS



DIMENSIONS (IN)

SIZE	A	B	C	D	E	F	I	J	L	N	Q	W	W1	Z1	Z2	AB	AC	AD	DD1	DD2	NN	ISO 5211	(LBS)
1/2"	0.59	0.433	6.50	1.84	0.39	3.30	1.38	2.38	4.26	3.50	0.63	0.44	0.06	0.26	0.28	1.84	1.26	0.55	1.654	1.969	4	F04/F05	4.0
3/4"	0.79	0.433	6.50	2.02	0.39	3.45	1.69	2.74	4.62	3.88	0.63	0.44	0.06	0.26	0.28	2.18	1.26	0.55	1.654	1.969	4	F04/F05	5.0
1"	0.98	0.433	6.50	2.31	0.41	3.81	2.00	3.12	5.00	4.25	0.63	0.44	0.06	0.26	0.28	2.21	1.26	0.55	1.654	1.969	4	F04/F05	7.0
1-1/2"	1.50	0.748	10.32	3.51	0.75	5.60	2.88	3.88	6.50	5.00	0.63	0.56	0.06	0.39	0.47	2.83	2.09	0.94	2.756	4.016	4	F07/F10	14.5
2"	1.97	0.748	10.32	3.80	0.75	5.78	3.62	4.75	7.02	6.00	0.75	0.63	0.06	0.39	0.47	3.38	2.09	0.94	2.756	4.016	4	F07/F10	20.5
2-1/2"	2.56	0.748	10.32	4.57	0.75	6.75	4.12	5.50	7.48	7.00	0.75	0.69	0.06	0.39	0.47	3.06	2.09	0.94	2.756	4.016	4	F07/F10	31.0
3"	3.15	0.866	14.37	5.22	0.91	8.05	5.00	6.00	8.01	7.50	0.75	0.75	0.06	0.47	0.55	4.01	2.55	1.18	4.016	4.921	4	F10/F12	41.0
4"	3.94	0.866	14.37	6.18	0.91	9.00	6.19	7.50	9.00	9.00	0.75	0.94	0.06	0.47	0.55	4.07	2.55	1.18	4.016	4.921	8	F10/F12	67.5
6"	5.91	1.063	29.53	8.28	1.12	12.50	8.50	9.50	15.50	11.0	0.87	1.00	0.06	0.55	0.71	7.00	2.97	1.41	4.921	5.511	8	F12/F14	145.0
8"	7.91	1.417	37.60	10.43	2.40	12.83	10.62	11.75	18.00	13.5	0.88	1.12	0.06	0.71	0.87	9.00	NA	1.81	5.51	6.50	8	F14/F16	208.0

Viton® is a registered trademark of E.I. DuPont de Nemours.
A-T Controls reserves the right to change product designs and technical/dimensional specifications without notice.

A-T Controls, Inc.

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

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



Pneumatic Double Acting

Automated Ball Valve Package

Series FD9
ANSI Class 150
Flanged Ball Valve
Direct Mount

Firesafe

Available in 316SST, Sizes 1/2"-6"

Available in WCB, Sizes 1/2"-12"
(Call factory for 10" & 12")

ANSI Class 150
Full Port Design

Superior Live Loaded
Packing System

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

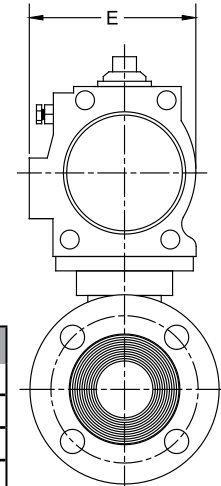
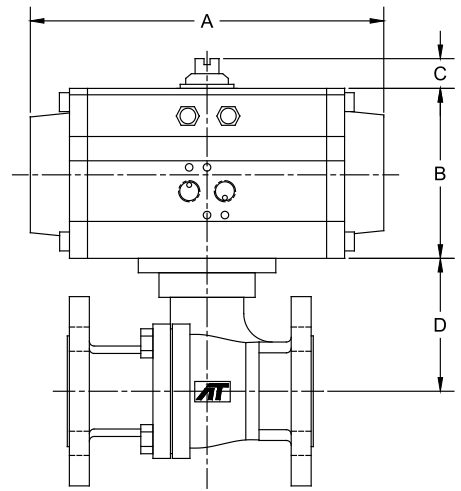
STANDARDS

Design	ANSI/ASME B16.34
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-6th Edition on 1/2"-4" (SST & WCB), and 6"-12" (WCB only), API-607-4th Edition on 6" SST
Sulfide Stress Protection	NACE MR0175
Coast Guard Approved	Category A: 46 CFR 56.20-15(b)(2)
Safety Integrity	IEC 61508:2010; SIL 3
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2008

**API 607 - 6th Edition
CERTIFIED**



150# Flanged
Firesafe Tested to API-607
Direct Mount



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	5.98	2.76	0.79	1.84	2.58	15
3/4"	5.98	2.76	0.79	2.02	2.58	45
1"	7.95	3.43	0.79	2.31	3.29	85
1-1/2"	9.29	4.49	0.79	3.51	4.41	275
2"	9.29	4.49	0.79	3.80	4.41	450
2-1/2"	10.87	4.88	0.79	4.57	4.69	700
3"	13.90	6.18	0.79	5.22	5.91	1100
4"	13.90	6.18	0.79	6.18	5.91	2200
6"	20.95	8.31	1.18	8.28	6.89	5150

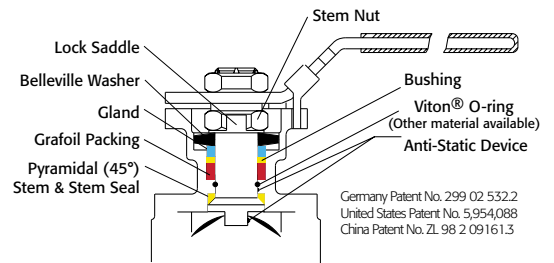
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES FD9 150# Flanged Direct Mount

Firesafe

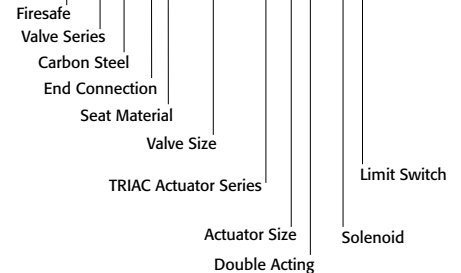
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	FD9-F1-050/TR1D-XX
3/4"	FD9-F1-075/TR1D-XX
1"	FD9-F1-100/2R2D-XX
1-1/2"	FD9-F1-150/2R3D-XX
2"	FD9-F1-200/2R3D-XX
2-1/2"	FD9-F1-250/2R4D-XX
3"	FD9-F1-300/2R6D-XX
4"	FD9-F1-400/2R6D-XX
6"	FD9-F1-600/2R8D-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	FD9-F1-050/TR1D-XX
3/4"	FD9-F1-075/2R2D-XX
1"	FD9-F1-100/2R2D-XX
1-1/2"	FD9-F1-150/2R3D-XX
2"	FD9-F1-200/2R3D-XX
2-1/2"	FD9-F1-250/2R5D-XX
3"	FD9-F1-300/2R6D-XX
4"	FD9-F1-400/2R6D-XX
6"	FD9-F1-600/2R9D-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 #
FD9C-F1-150/2R3D-XX



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

OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
NEMA 4 Solenoid	(A)	NEMA 4 Limit Switch (2) spdt	(A)
NEMA 7 Solenoid	(B)	NEMA 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.

FD9DA-20160512
Copyright 2013 A-T Controls, Inc.



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

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



Pneumatic Spring Return

Automated Ball Valve Package

Series FD9
ANSI Class 150
Flanged Ball Valve
Direct Mount

Firesafe

Available in 316SST, Sizes 1/2"-6"

Available in WCB, Sizes 1/2"-12"
(Call factory for 10" & 12")

ANSI Class 150

Full Port Design

Superior Live Loaded
Packing System

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

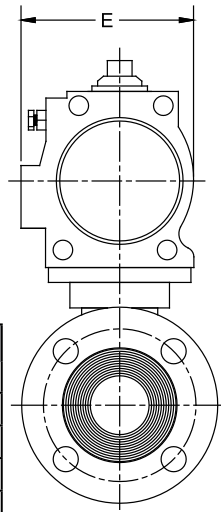
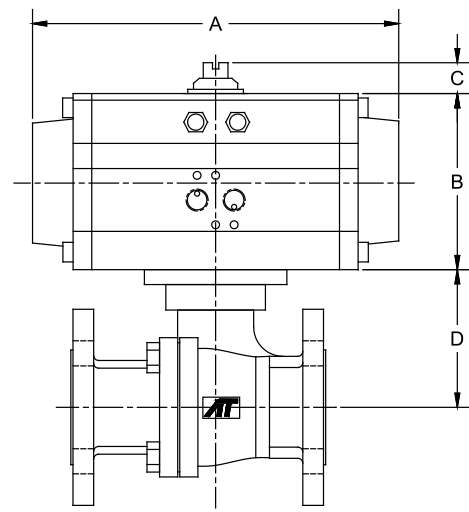
STANDARDS

Design	ANSI/ASME B16.34
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-6th Edition on 1/2"-4" (SST & WCB), and 6"-12" (WCB only), API-607-4th Edition on 6" SST
Sulfide Stress Protection	NACE MR0175
Coast Guard Approved	Category A: 46 CFR 56.20-15(b)(2)
Safety Integrity	IEC 61508:2010; SIL 3
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2008

**API 607 - 6th Edition
CERTIFIED**



**150# Flanged
Firesafe Tested to API-607
Direct Mount**



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	7.95	3.43	0.79	1.84	3.29	15
3/4"	9.29	4.49	0.79	2.02	4.49	45
1"	9.29	4.49	0.79	2.31	4.49	85
1-1/2"	10.87	4.88	0.79	3.51	4.69	275
2"	10.87	4.88	0.79	3.80	4.69	450
2-1/2"	13.90	6.18	0.79	4.57	5.91	700
3"	13.90	6.18	0.79	5.22	5.91	1100
4"	15.16	6.93	1.18	6.18	6.50	2200
6"	24.37	10.12	1.18	8.28	8.31	5150

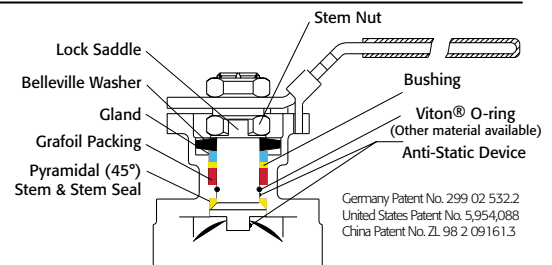
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES FD9 150# Flanged Direct Mount

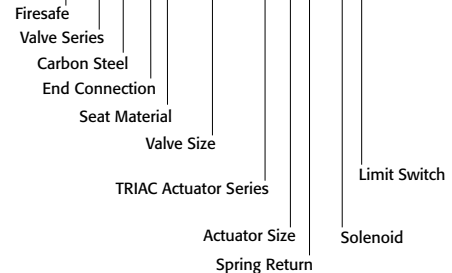
Firesafe

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	FD9-F1-050/2R2S-XX
3/4"	FD9-F1-075/2R3S-XX
1"	FD9-F1-100/2R3S-XX
1-1/2"	FD9-F1-150/2R4S-XX
2"	FD9-F1-200/2R4S-XX
2-1/2"	FD9-F1-250/2R6S-XX
3"	FD9-F1-300/2R6S-XX
4"	FD9-F1-400/2R7S-XX
6"	FD9-F1-600/2R0S-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	FD9-F1-050/2R3S-XX
3/4"	FD9-F1-075/2R3S-XX
1"	FD9-F1-100/2R3S-XX
1-1/2"	FD9-F1-150/2R4S-XX
2"	FD9-F1-200/2R5S-XX
2-1/2"	FD9-F1-250/2R6S-XX
3"	FD9-F1-300/2R6S-XX
4"	FD9-F1-400/2R7S-XX
6"	FD9-F1-600/2R0S-XX



SAMPLE PART #
FD9C-F1-150/2R3S-XX



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

OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
NEMA 4 Solenoid	(A)	NEMA 4 Limit Switch (2) spdt	(A)
NEMA 7 Solenoid	(B)	NEMA 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.

FD9SR-20160512

Copyright 2013 A-T Controls, Inc.



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

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



Electric

Automated Ball Valve Package Series FD9 ANSI Class 150 Flanged Ball Valve Direct Mount

Firesafe

Available in 316SST, Sizes 1/2"-6"

Available in WCB, Sizes 1/2"-12"
(Call factory for 10" & 12")

ANSI Class 150

Full Port Design

Superior Live Loaded
Packing System

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Monel Ball & Stem Available

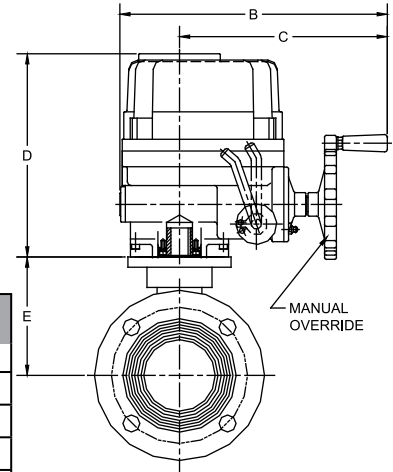
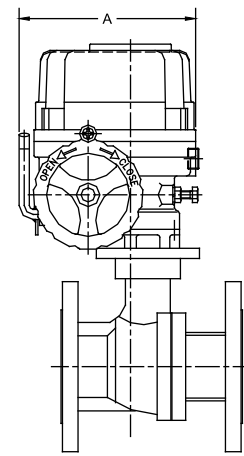
STANDARDS

Design	ANSI/ASME B16.34
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-6th Edition on 1/2"-4" (SST & WCB), and 6"-12" (WCB only), API-607-4th Edition on 6" SST
Sulfide Stress Protection	NACE MR0175
Coast Guard Approved	Category A: 46 CFR 56.20-15(b)(2)
Safety Integrity	IEC 61508:2010; SIL 3
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2008

**API 607 - 6th Edition
CERTIFIED**



**150# Flanged
Firesafe Tested to API-607
Direct Mount**



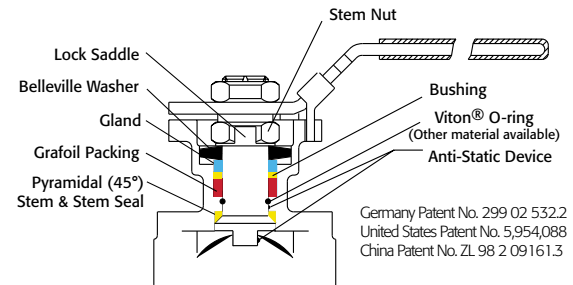
DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE CV
1/2"	4.98	4.08	N/A	5.24	1.84	15
3/4"	4.98	4.08	N/A	5.24	2.02	45
1"	4.98	4.08	N/A	5.24	2.31	85
1-1/2"	4.98	4.08	N/A	5.24	3.51	275
2"	4.98	4.08	N/A	5.24	3.80	450
2-1/2"	9.02	13.31	8.19	10.55	4.57	700
3"	9.02	13.31	8.19	10.55	5.22	1,100
4"	10.20	14.49	10.43	11.42	6.18	2,200
6"	10.20	14.49	11.26	11.97	8.28	5,150

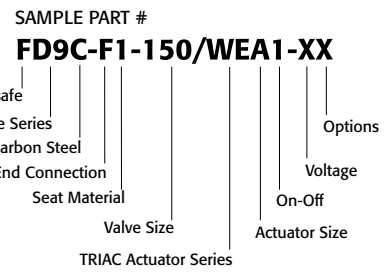
SERIES FD9 150# Flanged Direct Mount Firesafe

ON-OFF	
SIZE	MODEL
1/2"	FD9-F1-050/WEA1-XX
3/4"	FD9-F1-075/WEA1-XX
1"	FD9-F1-100/WEA1-XX
1-1/2"	FD9-F1-150/WEA1-XX
2"	FD9-F1-200/WEA1-XX
2-1/2"	FD9-F1-250/WEC1-XX
3"	FD9-F1-300/WEC1-XX
4"	FD9-F1-400/WEE1-XX
6"	FD9-F1-600/WEF1-XX

MODULATING	
SIZE	MODEL
1/2"	FD9-F1-050/WEA2-XX
3/4"	FD9-F1-075/WEA2-XX
1"	FD9-F1-100/WEA2-XX
1-1/2"	FD9-F1-150/WEA2-XX
2"	FD9-F1-200/WEA2-XX
2-1/2"	FD9-F1-250/WEC2-XX
3"	FD9-F1-300/WEC2-XX
4"	FD9-F1-400/WEE2-XX
6"	FD9-F1-600/WEF2-XX



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



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.

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

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

