

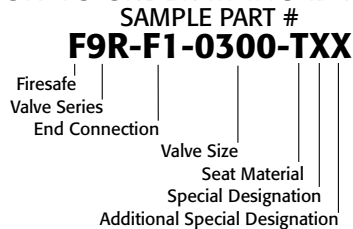
**API 607 - 7th Edition
CERTIFIED**



Triac Series F9R unibody flanged ball valves feature a high quality investment cast body and end. They are available in 1/2" through 8" regular port. Double seal design (1-1/2"-8") provides superior leak protection. Packing is adjustable without removal of actuator.

TFM™-1600 seats are standard, but various options are available for seat materials. The 50/50 TFM™/SS (STFM) seat option is excellent for services that call for higher temperatures and more difficult applications including steam. Call us for details.

HOW TO ORDER MANUAL VALVES



See part number matrix for itemized options.

Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric



A-T Controls, Inc.

Series F9R

FIRESAFE

Unibody Direct Mount Flanged Ball Valve

Sizes 1/2" – 8"

Available in 316SST or WCB

ANSI Class 150

Regular Port Design

Superior Live Loaded Packing System

ISO 5211 Actuator Mounting Pad

Blowout Proof Stem w/ Dual
Anti-Static Devices

TFM™-1600 Seats Standard

Contained Graphite

Lockable Manual Handle

Adjustable Packing w/o Actuator
Disassembly

STANDARDS

Design	ANSI/ASME B16.34 (fully conforms)
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-7th Edition
Fugitive Emissions	ISO 15848-1
ISO FE BH - C03 - SSAO - T200°C - Class 300 - ISO 15848-1	
Sulfide Stress Protection	NACE MR0175/MR0103
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015

TABLE OF CONTENTS:

- Page 2 - Materials & Dimensions
- Page 3 - Technical Data
- Page 4 - Double Acting
- Page 5 - Spring Return
- Page 6 - Electric
- Page 7 - How to Order - Manual
- Page 8 - How to Order - Automated

SERIES F9R Unibody Flanged Ball Valve

Firesafe



A-T Controls, Inc.

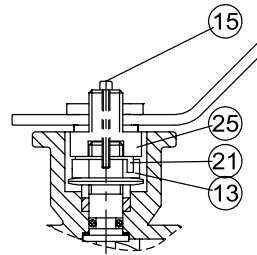
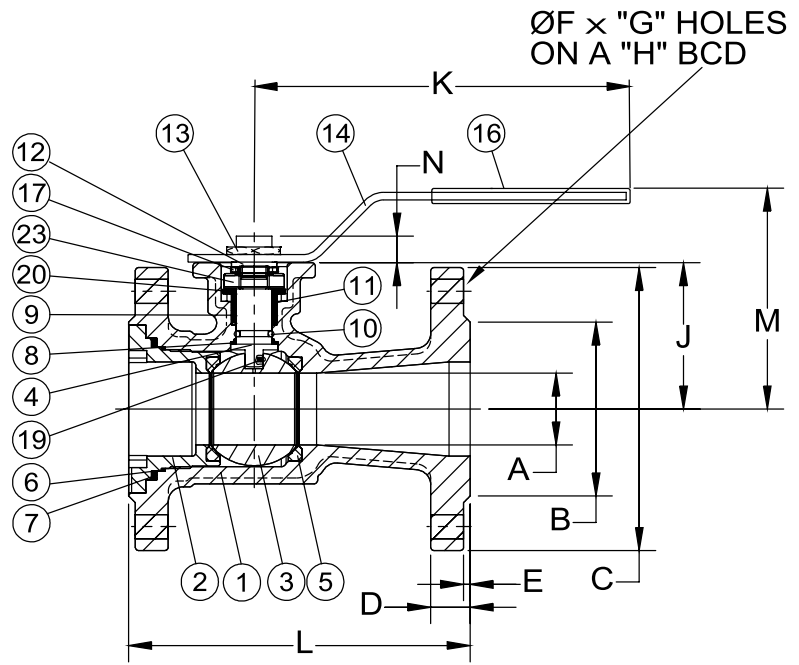
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MATERIALS LIST

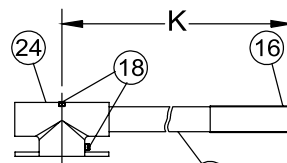
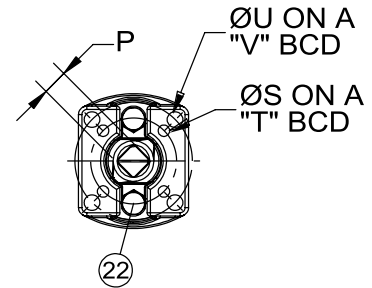
NO.	PART NAME	QTY	STAINLESS STEEL	CARBON STEEL	REPAIR KIT
1	BODY	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB	
2	RETAINER	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB	
3	BALL	1	ASTM A351 GRADE CF8M	ASTM A351 GRADE CF8M	
4	STEM	1	AISI 316 (1/2"-4")	AISI 316 (1/2"-4")	
		1	17-4 PH® (6" & 8")	17-4 PH® (6" & 8")	
5	SEAT	2	TFM™-1600	TFM™-1600	✓
6	BODY SEAL 1	1	TFM™-1600 (1-1/2"-8")	TFM™-1600 (1-1/2"-8")	✓
7	BODY SEAL 2	1	GRAPHITE (1/2"-1")	GRAPHITE (1/2"-1")	✓
		1	GRAPHITE + 316 (1-1/2"-8")	GRAPHITE + 316 (1-1/2"-8")	✓
8	THRUST WASHER	1	RTFE	RTFE	✓
9	STEM PACKING	1	GRAPHITE + MG1241	GRAPHITE + MG1241	✓
10	STEM O-RING	*	FKM	FKM	✓
11	GLAND BUSHING	1	AISI 304	AISI 304	
12	HANDLE SPACER	1	AISI 304	AISI 304	
13	HANDLE NUT	1	AISI 304 (1/2"-2")	AISI 304 (1/2"-2")	
14	HANDLE	1	AISI 304	AISI 304	
15	STEM EXT SCREW	1	AISI 304 (1/2" & 1")	AISI 304 (1/2" & 1")	
16	HANDLE COVER	1	VINYL	VINYL	
17	STOP PLATE	1	AISI 304 (1/2"-6")	AISI 304 (1/2"-6")	
18	HANDLE NUT/BOLT	#	AISI 304 (3"-8")	AISI 304 (3"-8")	
19	ANTI-STATIC BALL	1	AISI 316	AISI 316	
20	BELLEVILLE WASHER	2	AISI 301	AISI 301	
22	GLAND BOLT/NUT	2	AISI 304	AISI 304	
23	GLAND FLANGE	1	AISI 304	AISI 304	
24	HANDLE ADAPTER	1	AISI 304 (8")	AISI 304 (8")	
25	STEM EXTENSION	1	AISI 304 (1/2" & 1")	AISI 304 (1/2" & 1")	

* 1/2" THRU 2-1/2" & 8" QTY=1 PC
* 3"-6" QTY=2 PCS

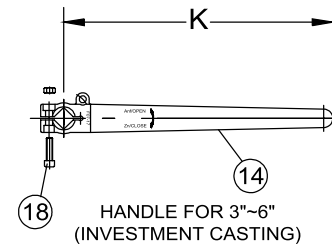
< 3" QTY=0 PCS
3"-6" QTY=1 PC
8" QTY=2 PCS



1/2"



HANDLE FOR 8"



HANDLE FOR 3"-6"
(INVESTMENT CASTING)

DIMENSIONS (IN)

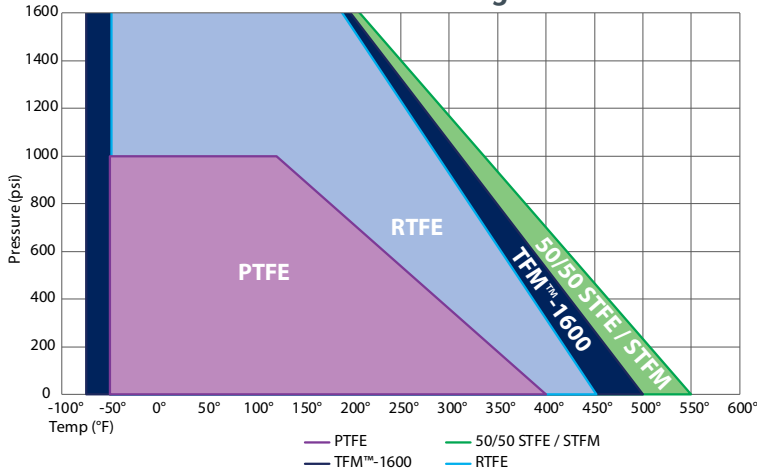
SIZE	VALVE DIMENSIONS													ACTUATOR MOUNTING DIMENSIONS						WEIGHT LBS	
	ØA	ØB	AB	ØC	D	E	F	G	ØH	J	K	L	M	N	P	S	T	U	V		ISO 5211
1/2"	0.50	1.37	2.17	3.54	0.39	0.08	0.63	4	2.38	1.91	4.72	4.25	3.46	0.46	0.354	0.24	1.417	0.24	1.654	F03/F04	3
3/4"	0.59	1.69	1.97	3.94	0.43	0.08	0.63	4	2.75	2.01	4.72	4.61	3.51	0.33	0.354	0.24	1.417	0.24	1.654	F03/F04	4
1"	0.79	2.00	2.24	4.33	0.46	0.08	0.63	4	3.13	2.50	5.98	5.00	4.02	0.44	0.433	0.24	1.654	0.28	1.969	F04/F05	5
1-1/2"	1.26	2.89	2.56	4.92	0.58	0.08	0.63	4	3.88	2.80	5.98	6.50	4.29	0.39	0.433	0.25	1.654	0.29	1.969	F04/F05	9
2"	1.50	3.63	2.56	5.91	0.64	0.08	0.75	4	4.75	3.05	7.48	7.01	4.66	0.56	0.551	0.29	1.969	0.37	2.756	F05/F07	14
2-1/2"	1.97	4.13	2.95	7.09	0.70	0.08	0.75	4	5.50	3.58	7.48	7.48	5.10	0.56	0.551	0.29	1.969	0.37	2.756	F05/F07	22
3"	2.52	5.00	3.46	7.48	0.77	0.08	0.75	4	6.00	4.49	11.81	7.99	6.78	0.68	0.669	0.37	2.756	0.44	4.016	F07/F10	30
4"	2.99	6.19	3.54	9.06	0.96	0.08	0.75	8	7.50	5.00	11.81	9.06	7.30	0.69	0.669	0.37	2.756	0.44	4.016	F07/F10	50
6"	3.86	8.50	4.53	11.02	1.02	0.08	0.88	8	9.50	6.42	11.81	10.51	8.69	0.72	0.669	0.37	2.756	0.44	4.016	F07/F10	75
8"	5.91	10.63	5.41	13.58	1.13	0.06	0.88	8	11.75	8.39	30.31	11.50	11.38	1.20	1.063	0.47	4.016	0.55	4.921	F10/F12	172

Technical Data

Series F9R

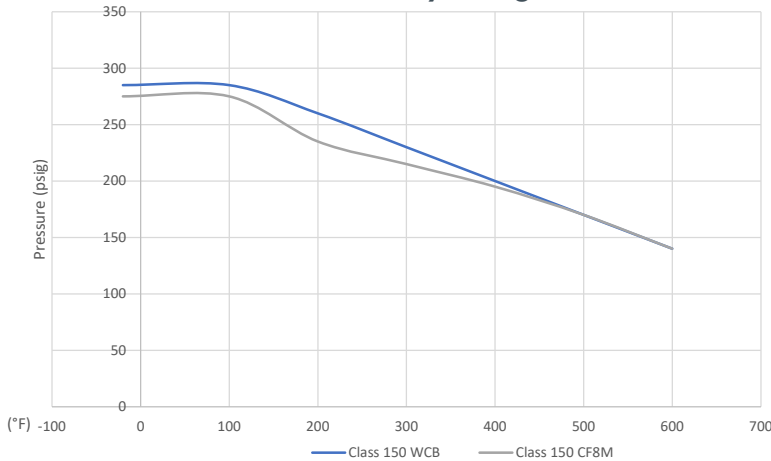
API 607 - 7th Edition
CERTIFIED

Pressure vs. Temperature - Series F9R
Seat Ratings



Temp	Pressure - Seat Material				
	TFM™-1600	STFM	STFE	PTFE	RTFE
-75°	2000				
-50°	2000	2000	2000	1000	2000
100°	2000	2000	2000	1000	2000
122°	2000	2000	2000	1000	2000
150°	1852	1869	1869	899	1852
200°	1587	1636	1636	719	1587
250°	1323	1402	1402	540	1323
300°	1058	1168	1168	360	1058
350°	794	935	935	180	794
400°	529	701	701	0	529
450°	265	467	467		265
500°	0	234	234		0
550°		0	0		

Pressure vs. Temperature - Series F9R
Body Ratings



Temp (°F)	Pressure - Body Material	
	WCB psi	CF8M psi
-20°	285	275
100°	285	275
200°	260	235
300°	230	215
400°	200	195
500°	170	170
600°	140	140

Break Away Torque for TFM™-1600 Seats

SIZE	IN.-LBS.
1/2"	50
3/4"	65
1"	145
1-1/2"	200
2"	250
2-1/2"	400
3"	600
4"	1075
6"	1650
8"	2200

NOTE: Torques are at full differential pressure and based on clean/clear fluid. Consult factory for more torque information.

SIZE	Cv
1/2"	8
3/4"	15
1"	44
1-1/2"	120
2"	160
2-1/2"	250
3"	350
4"	650
6"	950
8"	1875

NOTE: At temperature, valves are limited by either the valve body/end cap pressure ratings, seat pressure ratings, or packing/stem seal/gaskets; whichever is lower.

Component Temperature Ratings

COMPONENT	MATERIAL	TEMPERATURE
Stem Packing	Graphite	-100°F to 1100°F
Stem Seal	TFM™-1600	-75°F to 500°F
Gaskets	Graphite	-100°F to 1100°F
	TFM™-1600	-75°F to 500°F
Seats (Other Materials Available)	TFM™-1600 (standard)	-75°F to 500°F
	STFM	-50°F to 550°F
	RTFE	-50°F to 450°F
	PTFE	-50°F to 400°F
	50/50 STFE	-50°F to 550°F
O-Rings	FKM (standard)	-20°F to 450°F
	Markez® Z1028	5°F to 608°F
	Kalrez® 4079	30°F to 600°F
	Chemraz® 505	-22°F to 446°F
	Kalrez® 6375	-4°F to 527°F
	Perlast® G75M	5°F to 500°F
	Chemraz® 564	-40°F to 445°F
	Low Temp Buna	-65°F to 275°F
	EPDM	-70°F to 250°F
Silicone	-60°F to 400°F	

Pneumatic Double Acting

Series F9R Unibody Direct Mount Flanged Ball Valve

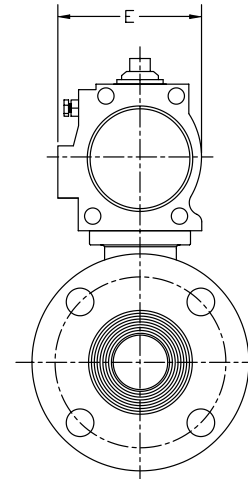
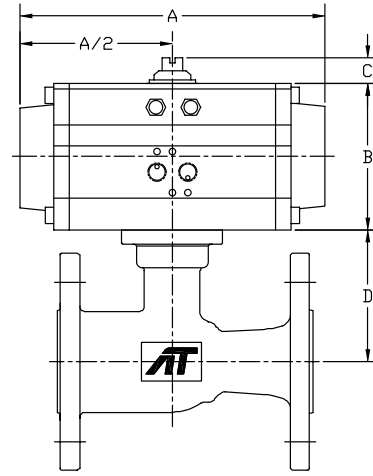
- Firesafe
- Sizes 1/2" - 8"
- Available in 316SST or WCB
- ANSI Class 150
- Regular Port Design
- Superior Live Loaded Packing System
- ISO 5211 Actuator Mounting Pad
- Blowout Proof Stem w/ Dual Anti-Static Devices
- TFM™-1600 Seats Standard
- Contained Graphite
- Lockable Manual Handle
- Adjustable Packing w/o Actuator Disassembly

STANDARDS	
Design	ANSI/ASME B16.34 (fully conforms)
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-7th Edition
Fugitive Emissions	ISO 15848-1
	ISO FE BH - C03 - SSAO - T200°C - Class 300 - ISO 15848-1
Sulfide Stress Protection	NACE MR0175/MR0103
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015

**API 607 - 7th Edition
CERTIFIED**



**150# Flanged
Firesafe tested to API-607**



**SERIES F9R Unibody Flanged
Firesafe**

DIMENSIONS (IN)

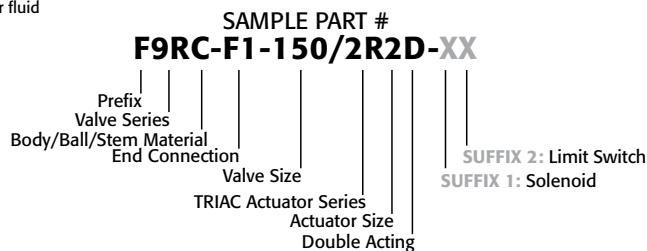
VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	5.98	2.76	0.79	1.91	2.58	8
3/4"	5.98	2.76	0.79	2.01	2.58	15
1"	7.95	3.43	0.79	2.50	3.29	44
1-1/2"	7.95	3.43	0.79	2.80	3.29	120
2"	7.95	3.43	0.79	3.05	3.29	160
2-1/2"	9.29	4.49	0.79	3.58	4.41	250
3"	10.87	4.88	0.79	4.49	4.69	350
4"	11.46	5.28	0.79	5.00	5.06	650
6"	13.90	6.18	0.79	6.42	5.91	950
8"	15.16	6.93	1.18	8.39	6.50	1875

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F9R-F1-050/TR1D-XX
3/4"	F9R-F1-075/TR1D-XX
1"	F9R-F1-100/2R2D-XX
1-1/2"	F9R-F1-150/2R2D-XX
2"	F9R-F1-200/2R2D-XX
2-1/2"	F9R-F1-250/2R3D-XX
3"	F9R-F1-300/2R4D-XX
4"	F9R-F1-400/2R5D-XX
6"	F9R-F1-600/2R6D-XX
8"	F9R-F1-800/2R7D-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F9R-F1-050/TR1D-XX
3/4"	F9R-F1-075/TR1D-XX
1"	F9R-F1-100/2R2D-XX
1-1/2"	F9R-F1-150/2R2D-XX
2"	F9R-F1-200/2R3D-XX
2-1/2"	F9R-F1-250/2R3D-XX
3"	F9R-F1-300/2R4D-XX
4"	F9R-F1-400/2R6D-XX
6"	F9R-F1-600/2R6D-XX
8"	F9R-F1-800/2R7D-XX

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



OPTIONS

SUFFIX 1	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVC6-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVC6-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000

SUFFIX 2	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N/APL-310N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S

See automated part number matrix on back cover for complete part number and options.

Pneumatic Spring Return

Series F9R Unibody Direct Mount Flanged Ball Valve

Firesafe

Sizes 1/2" - 8"

Available in 316SS or WCB

ANSI Class 150

Regular Port Design

Superior Live Loaded Packing System

ISO 5211 Actuator Mounting Pad

Blowout Proof Stem w/ Dual Anti-Static Devices

TFM™-1600 Seats Standard

Contained Graphite

Lockable Manual Handle

Adjustable Packing w/o Actuator Disassembly

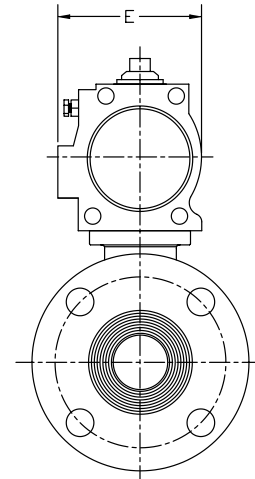
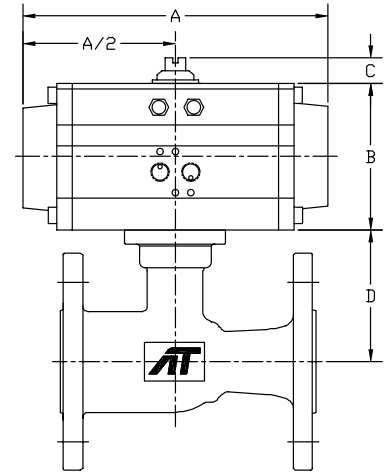
STANDARDS

Design	ANSI/ASME B16.34 (fully conforms)
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-7th Edition
Fugitive Emissions	ISO 15848-1
	ISO FE BH - C03 - SSAO - T200°C - Class 300 - ISO 15848-1
Sulfide Stress Protection	NACE MR0175/MR0103
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015

**API 607 - 7th Edition
CERTIFIED**



**150# Flanged
Firesafe tested to API-607**



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	7.60	2.76	0.79	1.91	2.58	8
3/4"	7.95	3.43	0.79	3.58	3.29	15
1"	9.29	4.49	0.79	2.50	4.41	44
1-1/2"	9.29	4.49	0.79	2.80	4.41	120
2"	10.87	4.88	0.79	3.05	4.69	160
2-1/2"	11.46	5.28	0.79	3.58	5.06	250
3"	13.90	6.18	0.79	4.49	5.91	350
4"	15.16	6.93	1.18	5.00	6.50	650
6"	20.95	8.31	1.18	6.42	6.89	950
8"	22.68	9.17	9.17	11.39	7.60	1875

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

**SERIES F9R Unibody Flanged
Firesafe**

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F9R-F1-050/TR1S-XX
3/4"	F9R-F1-075/2R2S-XX
1"	F9R-F1-100/2R3S-XX
1-1/2"	F9R-F1-150/2R3S-XX
2"	F9R-F1-200/2R4S-XX
2-1/2"	F9R-F1-250/2R5S-XX
3"	F9R-F1-300/2R6S-XX
4"	F9R-F1-400/2R7S-XX
6"	F9R-F1-600/2R8S-XX
8"	F9R-F1-800/2R9S-XX

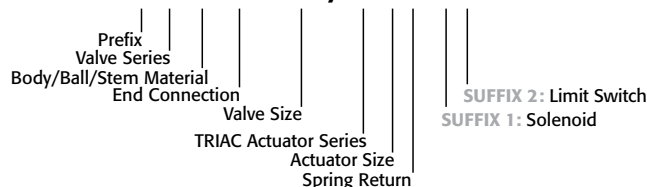
NOTE: Heater and thermostat standard
(2) auxiliary switches standard
Other options available - call for details
Actuators are sized based on clean/clear fluid

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F9R-F1-050/TR1S-XX
3/4"	F9R-F1-075/2R2S-XX
1"	F9R-F1-100/2R4S-XX
1-1/2"	F9R-F1-150/2R5S-XX
2"	F9R-F1-200/2R5S-XX
2-1/2"	F9R-F1-250/2R6S-XX
3"	F9R-F1-300/2R7S-XX
4"	F9R-F1-400/2R8S-XX
6"	F9R-F1-600/2R9S-XX
8"	F9R-F1-800/2R9S-XX

OPTIONS		
SUFFIX 1	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVCS-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVCS-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
SUFFIX 2	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N/APL-310N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S

See automated part number matrix on back cover for complete part number and options.

SAMPLE PART # F9RC-F1-150/2R3S-XX



Electric

Series F9R Unibody Direct Mount Flanged Ball Valve

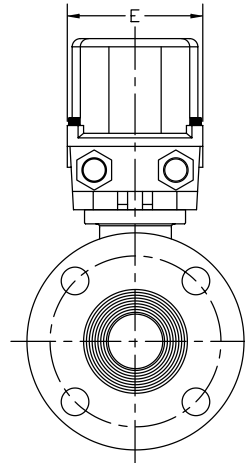
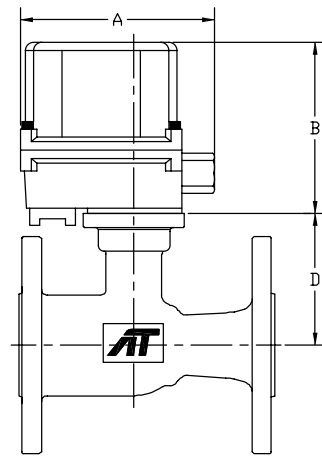
- Firesafe
- Sizes 1/2" - 8"
- Available in 316SST or WCB
- ANSI Class 150
- Regular Port Design
- Superior Live Loaded Packing System
- ISO 5211 Actuator Mounting Pad
- Blowout Proof Stem w/ Dual Anti-Static Devices
- TFM™-1600 Seats Standard
- Contained Graphite
- Lockable Manual Handle
- Adjustable Packing w/o Actuator Disassembly

STANDARDS	
Design	ANSI/ASME B16.34 (fully conforms)
Face to Face	ANSI/ASME B16.10
Flange Dimensions	ANSI/ASME B16.5
Pipeline Valves	API 6D
Pressure Testing	API 598
Fire Testing	API 607-7th Edition
Fugitive Emissions	ISO 15848-1
	ISO FE BH - C03 - SSAO - T200°C - Class 300 - ISO 15848-1
Sulfide Stress Protection	NACE MR0175/MR0103
Mounting	ISO 5211
Marking System for Valves	MSS SP-25
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015

**API 607 - 7th Edition
CERTIFIED**



**150# Flanged
Firesafe tested to API-607**



**SERIES F9R Unibody Flanged
Firesafe**

DIMENSIONS (IN)

VALVE SIZE	A	B	D	E	VALVE Cv
1/2"	5.92	5.32	1.91	4.09	8
3/4"	5.92	5.32	2.01	4.09	15
1"	5.92	5.32	2.50	4.09	44
1-1/2"	5.92	5.32	2.80	4.09	120
2"	5.92	5.32	3.05	4.09	160
2-1/2"	6.69	9.25	3.58	10.16	250
3"	9.02	10.55	4.49	13.31	350
4"	9.02	10.55	5.00	13.31	650
6"	10.20	11.42	6.42	14.49	950
8"	10.20	11.42	8.39	14.49	1875

DIMENSIONS FOR ON/OFF ACTUATORS ONLY, MODULATING NOT SHOWN 2-1/2" THRU 6" HAVE HANDWHEELS THAT ARE NOT SHOWN

ON-OFF	
SIZE	MODEL
1/2"	F9R-F1-050/WEA1-XX
3/4"	F9R-F1-075/WEA1-XX
1"	F9R-F1-100/WEA1-XX
1-1/2"	F9R-F1-150/WEA1-XX
2"	F9R-F1-200/WEA1-XX
2-1/2"	F9R-F1-250/WEB1-XX
3"	F9R-F1-300/WEC1-XX
4"	F9R-F1-400/WEC1-XX
6"	F9R-F1-600/WEE1-XX
8"	F9R-F1-800/WEE1-XX

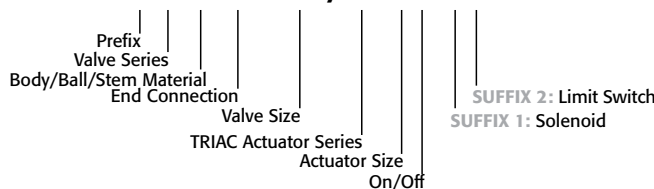
NOTE: Heater and thermostat standard
(2) auxiliary switches standard
Other options available - call for details
Actuators are sized based on clean/clear fluid

MODULATING	
SIZE	MODEL
1/2"	F9R-F1-050/WEA2-XX
3/4"	F9R-F1-075/WEA2-XX
1"	F9R-F1-100/WEA2-XX
1-1/2"	F9R-F1-150/WEA2-XX
2"	F9R-F1-200/WEA2-XX
2-1/2"	F9R-F1-250/WEB2-XX
3"	F9R-F1-300/WEC2-XX
4"	F9R-F1-400/WEC2-XX
6"	F9R-F1-400/WEE2-XX
8"	F9R-F1-400/WEF2-XX

OPTIONS		
SUFFIX 1	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVCS-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVCS-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
SUFFIX 2	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N/APL-310N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S

See automated part number matrix on back cover for complete part number and options.

SAMPLE PART # F9RC-F1-150/WEA1-XX



HOW TO ORDER: Manual Valves w/ Options

Series F9R

API 607 - 7th Edition
CERTIFIED

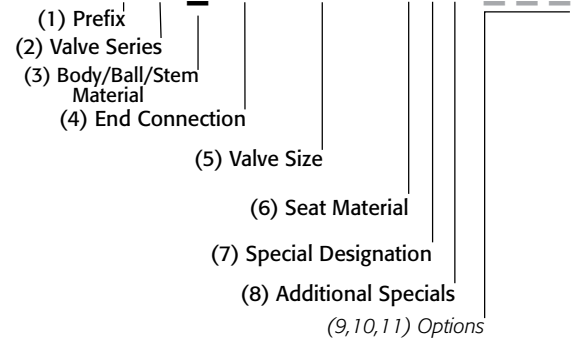
1	Prefix
F	Firesafe Tested (see valve series for details & testing)

4	End Connection
F1	150# Flanged Ends

2	Valve Series
9R	Unibody Regular Port Flanged

3	Body/Ball/Stem Material
Blank	Valve Series Standard (CF8M Stainless Steel)
C	Carbon Steel Body

SAMPLE PART #
F9R -F1-0300-TXX-



5	Valve Size
0050	1/2"
0075	3/4"
0100	1"
0150	1-1/2"
0200	2"
0250	2-1/2"
0300	3"
0400	4"
0600	6"
0800	8"

6	Seat, Lining & Trim Materials
T	TFM™-1600
X	Reinforced TFE Seats (RTFE)
A	50% SS Powder / 50% TFM™ -1600 (STFM)
S	50/50 STFE Seats

7	Special Designations
X	No Specials, Series Standard
G	Gear Operator
H	Gear Operator with Lockout Plate
S	Spring Return Handle
4	4" Lockable Stem Extension

8	Additional Specials
X	No Specials, Series Standard
O	Oxygen Cleaned
V	Vented Ball
D	Degreased & Bagged
A	Vented Ball, Degreased & Bagged
B	Vented Ball, Oxygen Cleaned

OPTIONS:

9	Additional Specials
Blank	Standard
X	Multiple Option Designation
A	17-4 PH® Stem
B	XM-19 (Nitronic 50) Stem

10	Additional Specials
Blank	Standard
X	Multiple Option Designation
2	Markez® Z1028
4	Kalrez 4079
5	Chemraz® 505
6	Kalrez 6375
7	Perlast® G75M
9	Chemraz® 564
B	Low Temp Buna
E	EPDM
S	Silicone

11	Additional Specials
Blank	Standard
X	Multiple Option Designation
M	Marine Epoxy Coating

Chemraz® is a registered trademark of Greene, Tweed & Co.
Markez® is a registered trademark of Marco Rubber & Plastic Products Inc.
Perlast® is a registered trademark of Precision Polymer Engineering Limited.
TFM™ is a trademark of Dyneon™, a 3M Company.

Series F9R

HOW TO ORDER: Automated Valves w/ Options

API 607 - 7th Edition
CERTIFIED

1	Prefix
F	Firesafe Tested (see valve series for details & testing)

2	Valve Series
9R	Unibody Regular Port Flanged

3	Body/Ball/Stem Material
Blank	Valve Series Standard (CF8M Stainless Steel)
C	Carbon Steel Body

4	End Connection
F	150# Flanged Ends

5	Seat, Lining & Trim Materials
1	Valve Series Standard (TFM™-1600)
X	Reinforced TFE Seats (RTFE)
A	50% SS Powder / 50% TFM™-1600 (STFM)
S	50/50 STFE Seats

6	Valve Size	
050	1/2"	250 2-1/2"
075	3/4"	300 3"
100	1"	400 4"
150	1-1/2"	600 6"
200	2"	800 8"

7	Actuator - Pneumatic (DA)			
TRYD	TR10DA	2R7D	2R500DA	
TR1D	TR20DA	2R8D	2R850DA	
2R2D	2R40DA	2R9D	2R1200DA	
2R3D	2R80DA	2R0D	2R1750DA	
2R4D	2R130DA	2RAD	2R2500DA	
2R5D	2R200DA	2RBD	2R3500DA	
2R6D	2R300DA			

7	Actuator - Pneumatic (SR)			
TR1S	TR20SR	2R7S	2R500SR	
2R2S	2R40SR	2R8S	2R850SR	
2R3S	2R80SR	2R9S	2R1200SR	
2R4S	2R130SR	2R0S	2R1750SR	
2R5S	2R200SR	2RAS	2R2500SR	
2R6S	2R300SR	2RBS	2R3500SR	

7	Actuator - Pneumatic Stainless (DA)			
S21D	S2-052DA	S25D	S2-125DA	
S22D	S2-063DA	S26D	S2-140DA	
S23D	S2-083DA	S27D	S2-160DA	
S24D	S2-105DA	S28D	S2-210DA	

7	Actuator - Pneumatic Stainless (SR)			
S21S	S2-052SR	S25S	S2-125SR	
S22S	S2-063SR	S26S	S2-140SR	
S23S	S2-083SR	S27S	S2-160SR	
S24S	S2-105SR	S28S	S2-210SR	

7	Actuator - Electric (On-Off)			
WEX1	WE-350	WEG1	WE-5200	
WEA1	WE-500	WEH1	WE-6900	
WEB1	WE-690	WEJ1	WE-10500	
WEC1	WE-1350	WEK1	WE-17500	
WED1	WE-1700	WEL1	WE-25900	
WEE1	WE-2640	WEM1	WE-53000	
WEF1	WE-4400	WEN1	WE-80000	

7	Actuator - Electric (Modulating)			
WEA2	WEM-500	WEH2	WEM-6900	
WEB2	WEM-690	WEJ2	WEM-10500	
WEC2	WEM-1350	WEK2	WEM-17500	
WED2	WEM-1700	WEL2	WEM-25900	
WEE2	WEM-2640	WEM2	WEM-53000	
WEF2	WEM-4400	WEN2	WEM-80000	
WEG2	WEM-5200			

OPTIONS:

8	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVC6-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVC6-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
R	24VDC Electric Actuator	
S	220VAC Electric Actuator	
T	Other Voltage Electric Actuator	
W	12VDC Electric Actuator	
Y	24VAC Electric Actuator	

Blank * No voltage specified on electric assemblies denotes 120VAC

9	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N/APL-310N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S
Z	180° Operation	
1	HS1 High Speed Electric	
2	HS2 High Speed Electric	

10	Special Designation
Blank	No Designation, SST Stem
A	17-4® PH Stem
B	XM-19 (Nitronic 50) Stem

17-4 PH® is a registered trademark of AK Steel Corporation.
TFM™ is a trademark of Dyneon™, a 3M Company.

AUTOMATED VALVE

SAMPLE PART #

F9RC-F1-150/2R2D-XX

- (1) Prefix
- (2) Valve Series
- (3) Body/Ball/Stem Material
- (4) End Connection
- (5) Seat, Lining & Trim Material
- (6) Valve Size
- (7) TRIAC Actuator Series
- (7) Actuator Size
- (7) Double Acting
- (8) Accessory
- (9) Accessory
- (10) Special Designation



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