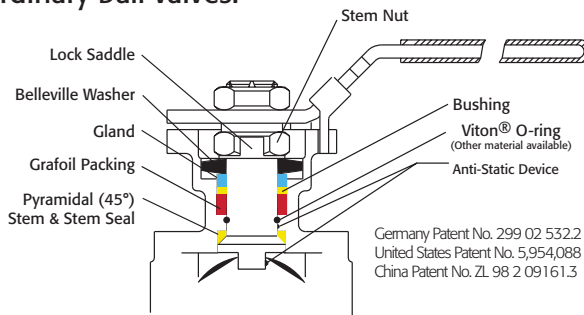


**API 607 - 6th Edition
CERTIFIED**



Triac Series F91 unibody flanged ball valves feature a high quality investment cast body and end. They are available in 1/2" through 6" regular port. Superior leak protection is accomplished by using our patented "pyramidal" stem seal system shown in the graphic below. This advanced system protects against wear and leakage experienced by ordinary ball valves.



VALVE SIZE	VALVE Cv
1/2"	9
3/4"	15
1"	42
1-1/2"	125
2"	165
2-1/2"	245
3"	350
4"	680
6"	1020

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 F91

FIRESAFE

Unibody Direct Mount Flanged Ball Valve

Sizes 1/2" - 6"

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

RTFE Seats Standard

Pyramidal Stem Seal Design

Lockable Manual Handle

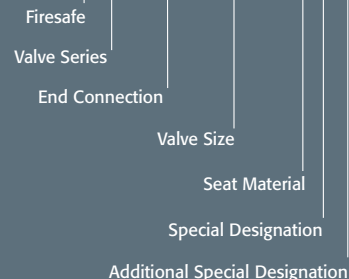
STANDARDS

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 (6" is 4th Edition)
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008

HOW TO ORDER MANUAL VALVES

SAMPLE PART #

F91-F1-0300-XXX



Additional Special Designation

See part number matrix for itemized options

SERIES F91 Unibody Flanged Ball Valve

Firesafe

AT A-T Controls, Inc.

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Cincinnati, Ohio 45246
www.atcontrols.com

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



Pneumatic Double Acting

Series F91 Unibody Direct Mount Flanged Ball Valve

Firesafe

Sizes 1/2" - 6"

Available in 316SST or WCB

ANSI Class 150

Regular Port Design

Superior Live Loaded Packing
System

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

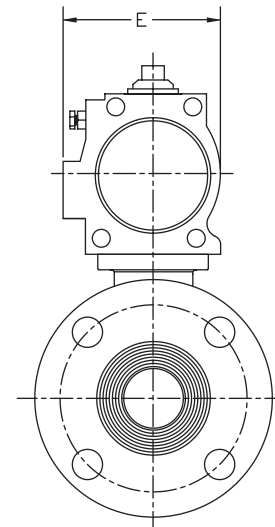
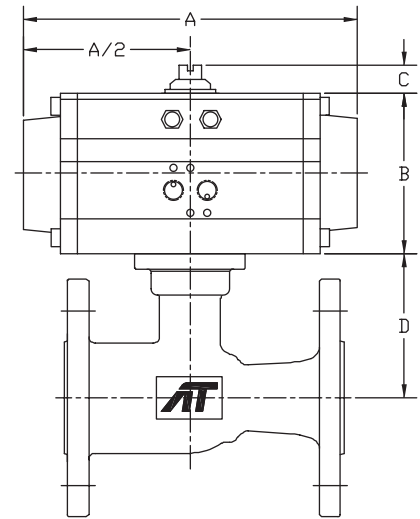
STANDARDS

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 (6" is 4th Edition)
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008

**API 607 - 6th Edition
CERTIFIED**



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



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	5.98	2.76	0.79	1.80	2.58	9
3/4"	5.98	2.76	0.79	2.02	2.58	15
1"	7.95	3.43	0.79	2.19	3.29	42
1-1/2"	9.29	4.49	0.79	2.86	4.41	125
2"	9.29	4.49	0.79	3.51	4.41	165
2-1/2"	9.29	4.49	0.79	3.80	4.41	245
3"	9.29	4.49	0.79	4.57	4.41	350
4"	11.46	5.28	0.79	5.22	5.20	680
6"	13.90	6.18	0.79	7.07	6.04	1020

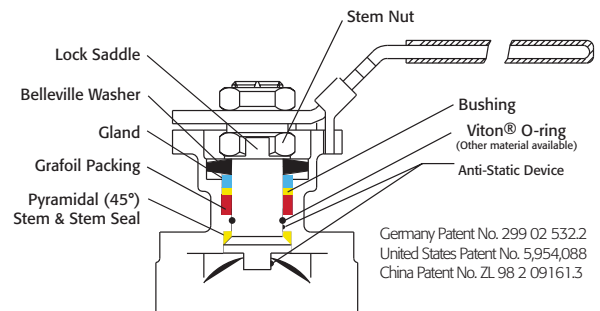
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES F91 Unibody Flanged

Firesafe

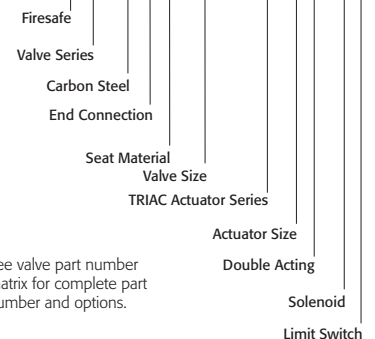
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F91-F1-050/TR1D-XX
3/4"	F91-F1-075/TR1D-XX
1"	F91-F1-100/2R2D-XX
1-1/2"	F91-F1-150/2R3D-XX
2"	F91-F1-200/2R3D-XX
2-1/2"	F91-F1-250/2R3D-XX
3"	F91-F1-300/2R3D-XX
4"	F91-F1-400/2R6D-XX
6"	F91-F1-600/2R7D-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F91-F1-050/TR1D-XX
3/4"	F91-F1-075/TR1D-XX
1"	F91-F1-100/2R2D-XX
1-1/2"	F91-F1-150/2R3D-XX
2"	F91-F1-200/2R3D-XX
2-1/2"	F91-F1-250/2R3D-XX
3"	F91-F1-300/2R4D-XX
4"	F91-F1-400/2R6D-XX
6"	F91-F1-600/2R7D-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 # F91C-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/dear fluid.



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Cincinnati, Ohio 45246
www.atcontrols.com

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



Pneumatic Spring Return

Series F91 Unibody Direct Mount Flanged Ball Valve

Firesafe

Sizes 1/2" - 6"

Available in 316SS or WCB

ANSI Class 150

Regular Port Design

Superior Live Loaded Packing System

Blowout Proof Stem w/ Dual Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

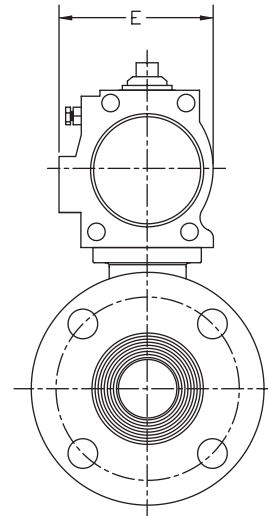
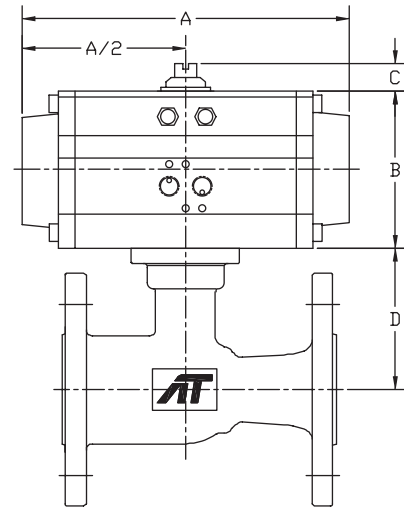
STANDARDS

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 (6" is 4th Edition)
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008

**API 607 - 6th Edition
CERTIFIED**



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



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	7.95	3.43	0.79	1.80	3.29	9
3/4"	7.95	3.43	0.79	2.02	3.29	15
1"	9.29	4.49	0.79	2.19	4.41	42
1-1/2"	9.29	4.49	0.79	2.86	4.41	125
2"	10.87	4.88	0.79	3.51	4.82	165
2-1/2"	10.87	4.88	0.79	3.80	4.82	245
3"	11.46	5.28	0.79	4.57	5.20	350
4"	13.90	6.18	0.79	5.22	6.04	680
6"	20.95	8.30	1.18	7.07	7.64	1020

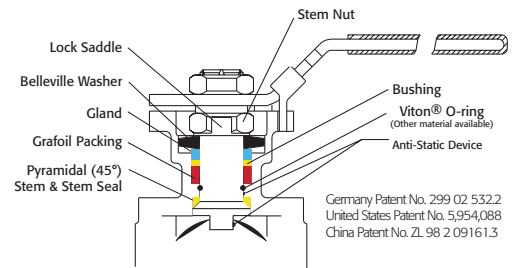
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES F91 Unibody Flanged

Firesafe

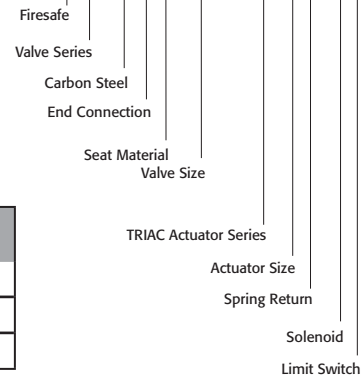
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F91-F1-050/2R2S-XX
3/4"	F91-F1-075/2R2S-XX
1"	F91-F1-100/2R3S-XX
1-1/2"	F91-F1-150/2R3S-XX
2"	F91-F1-200/2R4S-XX
2-1/2"	F91-F1-250/2R4S-XX
3"	F91-F1-300/2R5S-XX
4"	F91-F1-400/2R6S-XX
6"	F91-F1-600/2R8S-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	F91-F1-050/2R2S-XX
3/4"	F91-F1-075/2R3S-XX
1"	F91-F1-100/2R3S-XX
1-1/2"	F91-F1-150/2R3S-XX
2"	F91-F1-200/2R5S-XX
2-1/2"	F91-F1-250/2R5S-XX
3"	F91-F1-300/2R6S-XX
4"	F91-F1-400/2R7S-XX
6"	F91-F1-600/2R8S-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 #
F91C-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.



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Electric

Series F91 Unibody Direct Mount Flanged Ball Valve

Firesafe

Sizes 1/2" - 6"

Available in 316SST or WCB

ANSI Class 150

Regular Port Design

Superior Live Loaded Packing
System

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

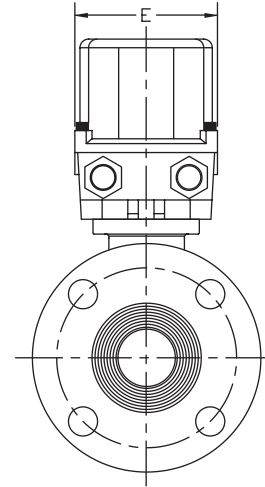
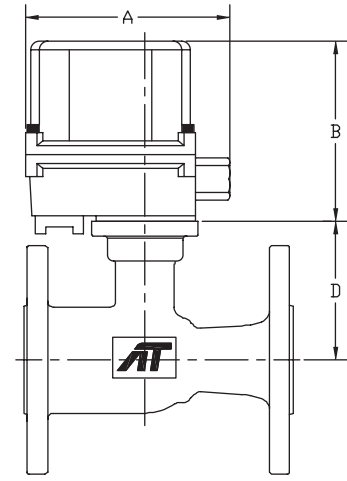
STANDARDS

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 (6" is 4th Edition)
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008

**API 607 - 6th Edition
CERTIFIED**



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



DIMENSIONS (IN)

VALVE SIZE	A	B	D	E	VALVE CV
1/2"	5.94	5.24	1.80	4.15	9
3/4"	5.94	5.24	2.02	4.15	15
1"	5.94	5.24	2.19	4.15	42
1-1/2"	5.94	5.24	2.86	4.15	125
2"	5.94	5.24	3.51	4.15	165
2-1/2"	13.31	10.55	3.80	9.02	245
3"	13.31	10.55	4.57	9.02	350
4"	14.49	11.42	5.22	10.20	680
6"	14.49	11.42	7.07	10.20	1020

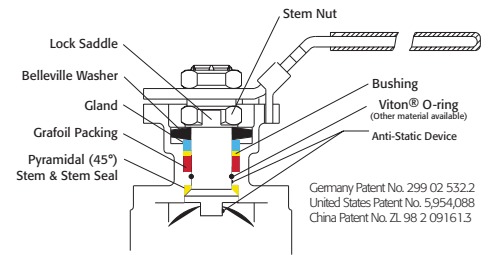
DIMENSIONS FOR ON/OFF ACTUATORS ONLY, MODULATING NOT SHOWN 2-1/2" THRU 6" HAVE HANDWHEELS THAT ARE NOT SHOWN

SERIES F91 Unibody Flanged

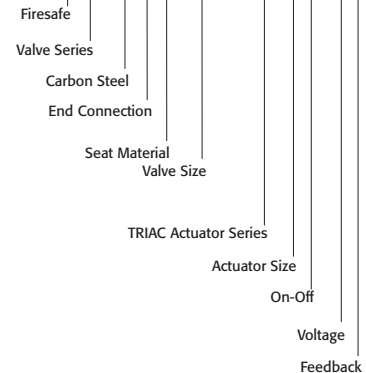
Firesafe

ON-OFF	
SIZE	MODEL
1/2"	F91-F1-050/WEA1-XX
3/4"	F91-F1-075/WEA1-XX
1"	F91-F1-100/WEA1-XX
1-1/2"	F91-F1-150/WEA1-XX
2"	F91-F1-200/WEA1-XX
2-1/2"	F91-F1-250/WEC1-XX
3"	F91-F1-300/WEC1-XX
4"	F91-F1-400/WEE1-XX
6"	F91-F1-600/WEE1-XX

MODULATING	
SIZE	MODEL
1/2"	F91-F1-050/WEA2-XX
3/4"	F91-F1-075/WEA2-XX
1"	F91-F1-100/WEA2-XX
1-1/2"	F91-F1-150/WEA2-XX
2"	F91-F1-200/WEA2-XX
2-1/2"	F91-F1-250/WEC2-XX
3"	F91-F1-300/WEC2-XX
4"	F91-F1-400/WEE2-XX
6"	F91-F1-600/WEE2-XX



SAMPLE PART # F91C-F1-150/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.



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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

