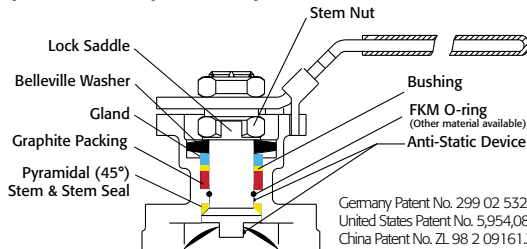


**API 607 - 6th Edition
CERTIFIED**



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.



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.

HOW TO ORDER MANUAL VALVES

SAMPLE PART #
FD9C-F3-0300-XXX

| | | | | | | |
|----------|--------------|--------------|----------------|------------|---------------|--------------------------------|
| Firesafe | Valve Series | Carbon Steel | End Connection | Valve Size | Seat Material | Additional Special Designation |
|----------|--------------|--------------|----------------|------------|---------------|--------------------------------|

See part number matrix for itemized options

Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric

FD9-F3Series(B16.34)-20200610
Copyright 2013 A-T Controls, Inc.

A-T Controls, Inc.

Series FD9-F3

FIRESAFE

300# Direct Mount Split Body Flanged Ball Valve

Sizes 1/2" -6"

Available in 316SST or WCB

ANSI Class 300

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 (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 607-6th Edition on 1/2"-4" (SST & WCB) and 6" WCB; API-607-4th Edition on 6" SST |
| Sulfide Stress Protection | NACE MR0175 |
| 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 9001:2015 |

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

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 300# Direct Mount Split Body Flanged Ball Valve

Firesafe

Series FD9-F3

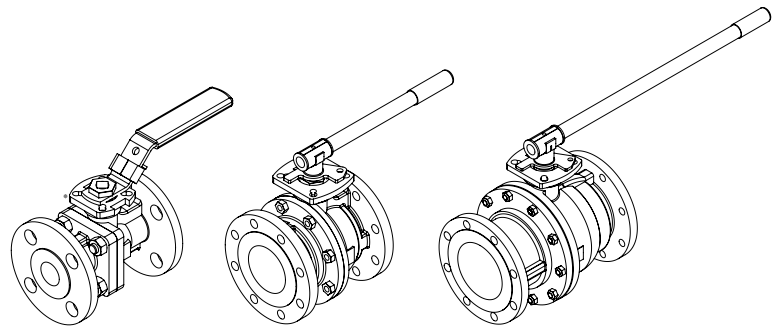
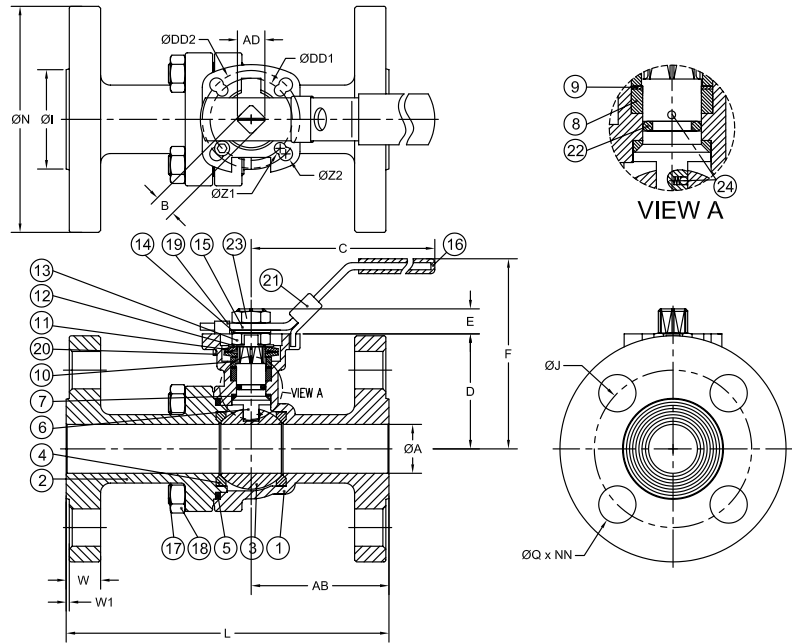
High Performance, Full Port 300# Split Body Flanged Ball Valve Series FD9-F3 (ANSI Class 300)

API 607 - 6th Edition
CERTIFIED FIRESAFE

MATERIALS LIST

| NO. | PART NAME | QTY | STAINLESS STEEL | CARBON STEEL | REPAIR KIT |
|-----|--------------------|-----|----------------------|----------------------|------------|
| 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 | GRAPHITE | GRAPHITE | ✓ |
| 6 | STEM | 1 | ASTM A276 SS316 | ASTM A276 SS316 | |
| 7 | STEM SEAL | 1 | TFM™-1600 | TFM™-1600 | ✓ |
| 8 | GLAND PACKING | 1 | GRAPHITE | GRAPHITE | ✓ |
| 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 STUD | * | ASTM A193 GRADE B8M | ASTM A193 GRADE B7M | |
| 18 | BODY NUT | * | ASTM A194 GRADE 8M | ASTM A194 GRADE 2HM | |
| 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 | FKM | FKM | ✓ |
| 23 | HANDLE NUT | 1 | AISI 304 | AISI 304 | |
| 24 | ANTI-STATIC DEVICE | 2 | AISI 316 | AISI 316 | |

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



BENT HANDLE SIZES 1/2" - 2-1/2" PIPE HANDLE SIZES 3" - 4" PIPE HANDLE SIZE 6"

NOTE: A-T CONTROLS RECOMMENDS A GEAR FOR 6" VALVES AND LARGER

DIMENSIONS (IN)

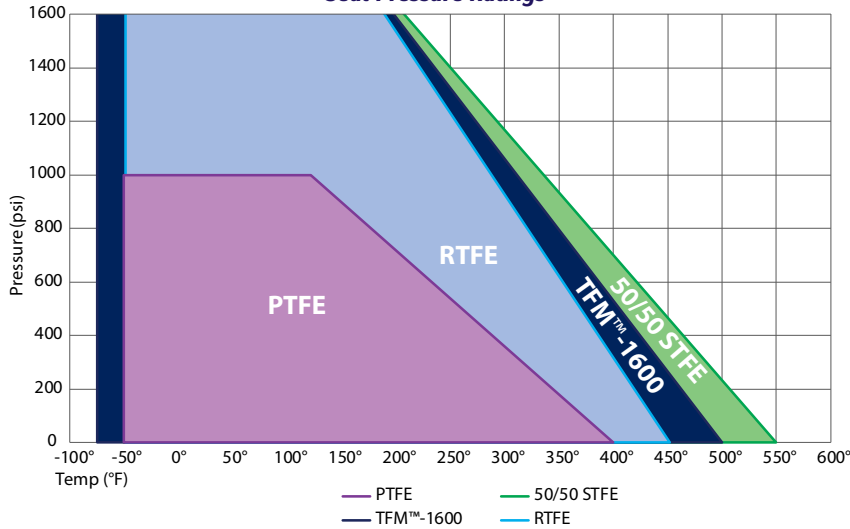
| SIZE | A | B | C | D | E | F | I | J | L | N | Q | W | W1 | Z1 | Z2 | AB | AC | AD | DD1 | DD2 | NN | ISO 5211 | LBS |
|--------|------|-------|-------|------|------|-------|------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|-------|----|----------|------|
| 1/2" | 0.59 | 0.433 | 6.50 | 1.92 | 0.39 | 3.40 | 1.38 | 2.62 | 5.50 | 3.75 | 0.63 | 0.56 | 0.06 | 0.26 | 0.28 | 2.32 | 1.17 | 0.55 | 1.654 | 1.969 | 4 | F04/F05 | 5 |
| 3/4" | 0.79 | 0.433 | 6.50 | 2.50 | 0.41 | 4.04 | 1.69 | 3.25 | 6.00 | 4.62 | 0.75 | 0.62 | 0.06 | 0.26 | 0.28 | 2.59 | 1.17 | 0.55 | 1.654 | 1.969 | 4 | F04/F05 | 8 |
| 1" | 0.98 | 0.433 | 6.50 | 2.50 | 0.41 | 4.06 | 2.00 | 3.50 | 6.50 | 4.88 | 0.75 | 0.69 | 0.06 | 0.26 | 0.28 | 2.78 | 1.17 | 0.55 | 1.654 | 1.969 | 4 | F04/F05 | 10.5 |
| 1-1/2" | 1.50 | 0.748 | 10.32 | 3.51 | 0.75 | 5.41 | 2.88 | 4.50 | 7.50 | 6.12 | 0.87 | 0.81 | 0.06 | 0.39 | 0.47 | 3.13 | 2.08 | 0.94 | 2.756 | 4.016 | 4 | F07/F10 | 22 |
| 2" | 1.97 | 0.748 | 10.32 | 3.80 | 0.75 | 5.87 | 3.62 | 5.00 | 8.50 | 6.50 | 0.75 | 0.88 | 0.06 | 0.39 | 0.47 | 3.81 | 2.08 | 0.94 | 2.756 | 4.016 | 8 | F07/F10 | 28.5 |
| 2-1/2" | 2.56 | 0.748 | 10.32 | 4.57 | 0.75 | 6.44 | 4.12 | 5.88 | 9.50 | 7.50 | 0.87 | 1.00 | 0.06 | 0.39 | 0.47 | 4.20 | 2.08 | 0.94 | 2.756 | 4.016 | 8 | F07/F10 | 42 |
| 3" | 3.15 | 0.866 | 14.37 | 5.22 | 0.91 | 8.10 | 5.00 | 6.62 | 11.12 | 8.25 | 0.87 | 1.12 | 0.06 | 0.47 | 0.55 | 5.10 | 2.55 | 1.17 | 4.016 | 4.921 | 8 | F10/F12 | 59 |
| 4" | 3.94 | 0.866 | 14.37 | 6.18 | 0.91 | 8.70 | 6.19 | 7.88 | 12.00 | 10.00 | 0.87 | 1.25 | 0.06 | 0.47 | 0.55 | 5.50 | 2.55 | 1.17 | 4.016 | 4.921 | 8 | F10/F12 | 96 |
| 6" | 5.91 | 1.063 | 29.53 | 8.28 | 1.12 | 13.00 | 8.50 | 10.62 | 15.87 | 12.50 | 0.87 | 1.44 | 0.06 | 0.55 | 0.71 | 7.30 | 3.07 | 1.40 | 4.921 | 5.512 | 12 | F12/F14 | 213 |

High Performance, Full Port 300# Split Body Flanged Ball Valve Series FD9-F3 (ANSI Class 300)

Series FD9-F3

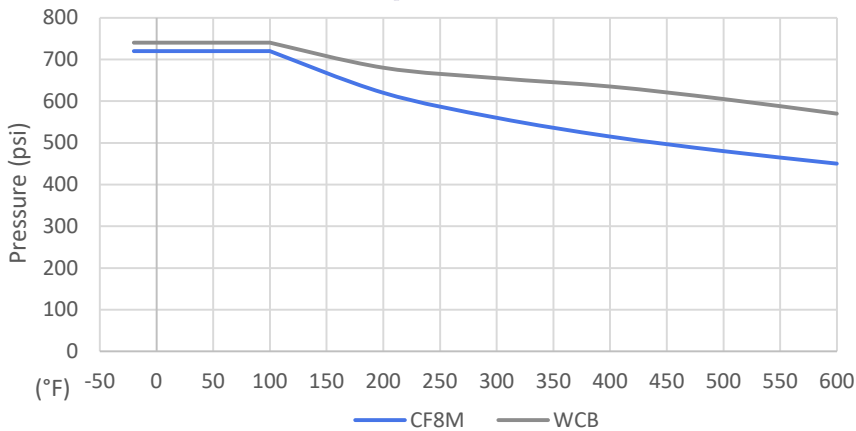
API 607 - 6th Edition
CERTIFIED FIRESAFE

Pressure vs. Temperature - Series D9/FD9-F3
Seat Pressure Ratings



| Temp | Pressure - Seat Material | | | |
|------|--------------------------|------|------|-----------|
| | RTFE | STFE | PTFE | TFM™-1600 |
| -75° | | | | 2000 |
| -50° | 2000 | 2000 | 1000 | 2000 |
| 100° | 2000 | 2000 | 1000 | 2000 |
| 122° | 2000 | 2000 | 1000 | 2000 |
| 150° | 1829 | 1869 | 899 | 1852 |
| 200° | 1524 | 1636 | 719 | 1587 |
| 250° | 1220 | 1402 | 540 | 1323 |
| 300° | 915 | 1168 | 360 | 1058 |
| 350° | 610 | 935 | 180 | 794 |
| 400° | 305 | 701 | 0 | 529 |
| 450° | 0 | 467 | | 265 |
| 500° | | 234 | | 0 |
| 550° | | 0 | | |

Pressure vs. Temperature - Series FD9-F3



| Temp (°F) | WCB psi | CF8M psi |
|-----------|---------|----------|
| -20° | 740 | 720 |
| 50° | 740 | 720 |
| 75° | 740 | 720 |
| 90° | 740 | 720 |
| 99° | 740 | 720 |
| 100° | 740 | 720 |
| 200° | 680 | 620 |
| 300° | 655 | 560 |
| 400° | 635 | 515 |
| 500° | 605 | 480 |
| 600° | 570 | 450 |

| FD9-F3 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 |
| Seats (Other Materials Available) | PTFE | -50°F to 400°F |
| | RTFE (standard) | -50°F to 450°F |
| | TFM™-1600 | -75°F to 500°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 |

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.

| Break Away Torque for RTFE Seats | |
|----------------------------------|--------|
| SIZE | IN-LBS |
| 1/2" | 125 |
| 3/4" | 175 |
| 1" | 220 |
| 1-1/2" | 450 |
| 2" | 525 |
| 2-1/2" | 750 |
| 3" | 1,400 |
| 4" | 1,900 |
| 6" | 3,050 |

NOTE: For other seat material, consult factory

| 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 |

**Pneumatic
Double Acting
Automated
Ball Valve Package**
Series FD9-F3
ANSI Class 300
Flanged Ball Valve
Direct Mount

Firesafe
Sizes 1/2" - 6"
Available in 316SST or WCB
ANSI Class 300
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

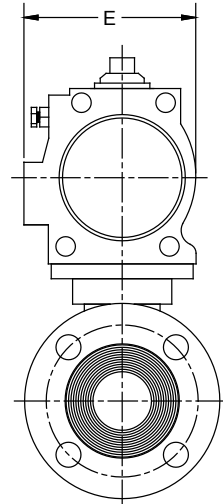
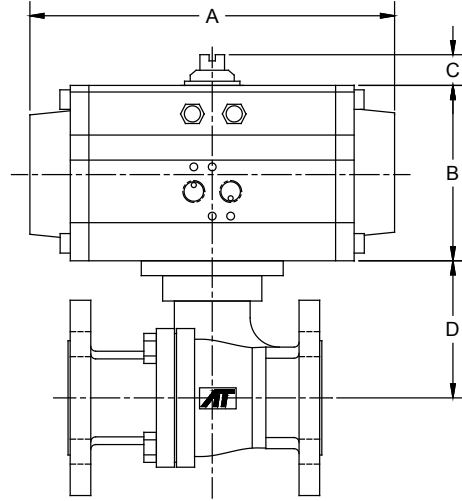
STANDARDS

| | |
|---------------------------|---|
| Design | ANSI/ASME B16.34 (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 607-6th Edition on 1/2"-4" (SST & WCB), and 6" WCB; API-607-4th Edition on 6" SST |
| Sulfide Stress Protection | NACE MR0175 |
| 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 9001:2015 |

**API 607 - 6th Edition
CERTIFIED**



**300# 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 | 1.92 | 3.29 | 15 |
| 3/4" | 7.95 | 3.43 | 0.79 | 2.50 | 3.29 | 45 |
| 1" | 7.95 | 3.43 | 0.79 | 2.50 | 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 | 1,100 |
| 4" | 13.90 | 6.18 | 0.79 | 6.18 | 5.91 | 2,200 |
| 6" | 20.95 | 8.30 | 1.18 | 8.28 | 6.89 | 5,150 |

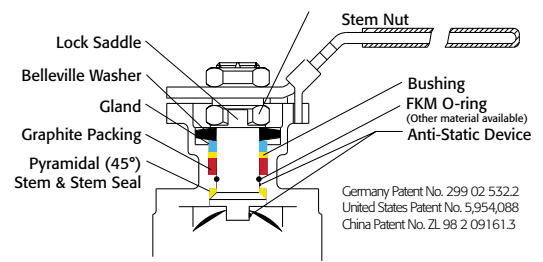
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES FD9-F3 300# Flanged Direct Mount

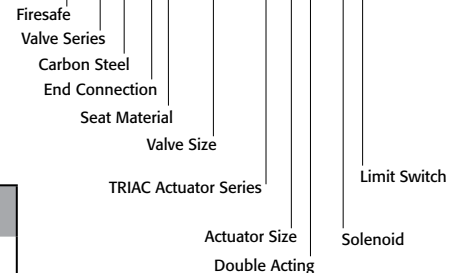
Firesafe

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

| SIZED FOR 60 psi AIR SUPPLY | |
|--------------------------------|--------------------|
| SIZE | MODEL |
| 1/2" | FD9-3X-050/2R2D-XX |
| 3/4" | FD9-3X-075/2R2D-XX |
| 1" | FD9-3X-100/2R3D-XX |
| 1-1/2" | FD9-3X-150/2R3D-XX |
| 2" | FD9-3X-200/2R3D-XX |
| 2-1/2" | FD9-3X-250/2R4D-XX |
| 3" | FD9-3X-300/2R6D-XX |
| 4" | FD9-3X-400/2R7D-XX |
| 6" | FD9-3X-600/2R9D-XX |



**SAMPLE PART #
FD9C-3X-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.

**Pneumatic
Spring Return
Automated
Ball Valve Package**
Series FD9-F3
ANSI Class 300
Flanged Ball Valve
Direct Mount

Firesafe

- Sizes 1/2" - 6"
- Available in 316SST or WCB
- ANSI Class 300
- 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

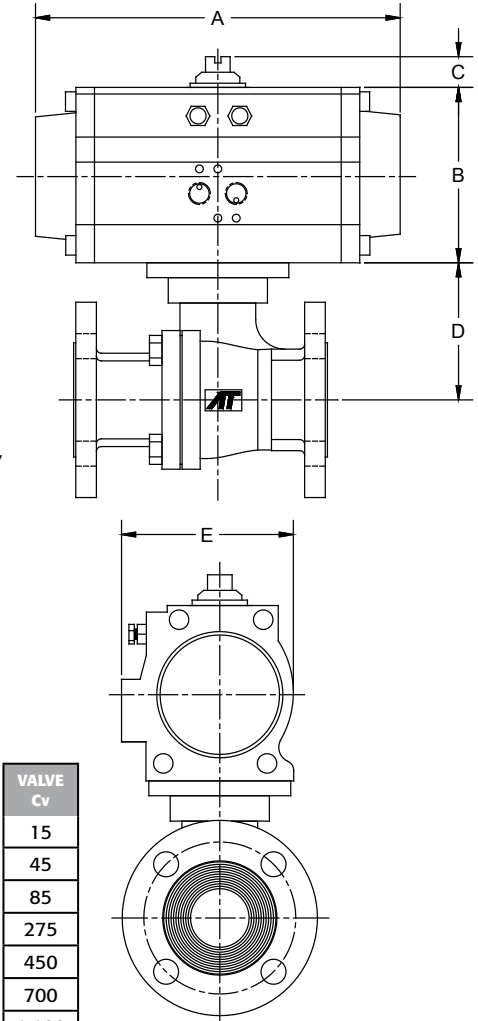
STANDARDS

- Design: ANSI/ASME B16.34 (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 607-6th Edition on 1/2"-4" (SST & WCB), and 6" WCB; API-607-4th Edition on 6" SST
- Sulfide Stress Protection: NACE MR0175
- 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 9001:2015

**API 607 - 6th Edition
CERTIFIED**



**300# 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 | 1.92 | 3.29 | 15 |
| 3/4" | 9.29 | 4.49 | 0.79 | 2.50 | 4.41 | 45 |
| 1" | 9.29 | 4.49 | 0.79 | 2.50 | 4.41 | 85 |
| 1-1/2" | 10.87 | 4.88 | 0.79 | 3.51 | 4.82 | 275 |
| 2" | 11.46 | 5.28 | 0.79 | 3.80 | 5.06 | 450 |
| 2-1/2" | 13.90 | 6.18 | 0.79 | 4.57 | 5.91 | 700 |
| 3" | 15.16 | 6.93 | 0.79 | 5.22 | 6.50 | 1,100 |
| 4" | 15.16 | 6.93 | 1.18 | 6.18 | 6.50 | 2,200 |
| 6" | 24.37 | 10.12 | 1.18 | 8.28 | 8.31 | 5,150 |

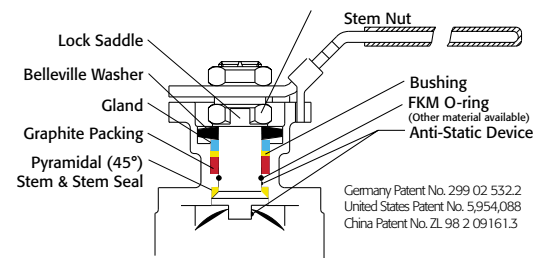
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES FD9-F3 300# Flanged Direct Mount

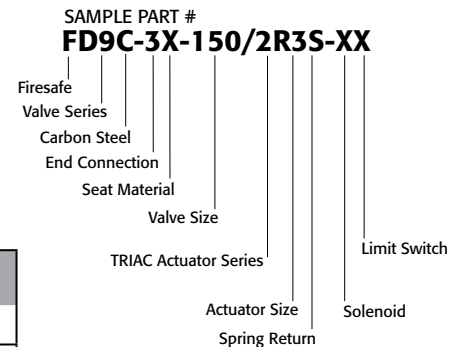
Firesafe

| SIZED FOR 80 psi AIR SUPPLY | |
|-----------------------------|--------------------|
| SIZE | MODEL |
| 1/2" | FD9-3X-050/2R2S-XX |
| 3/4" | FD9-3X-075/2R3S-XX |
| 1" | FD9-3X-100/2R3S-XX |
| 1-1/2" | FD9-3X-150/2R4S-XX |
| 2" | FD9-3X-200/2R5S-XX |
| 2-1/2" | FD9-3X-250/2R6S-XX |
| 3" | FD9-3X-300/2R7S-XX |
| 4" | FD9-3X-400/2R7S-XX |
| 6" | FD9-3X-600/2R0S-XX |

| SIZED FOR 60 psi AIR SUPPLY | |
|-----------------------------|--------------------|
| SIZE | MODEL |
| 1/2" | FD9-3X-050/2R3S-XX |
| 3/4" | FD9-3X-075/2R3S-XX |
| 1" | FD9-3X-100/2R3S-XX |
| 1-1/2" | FD9-3X-150/2R4S-XX |
| 2" | FD9-3X-200/2R5S-XX |
| 2-1/2" | FD9-3X-250/2R6S-XX |
| 3" | FD9-3X-300/2R7S-XX |
| 4" | FD9-3X-400/2R8S-XX |
| 6" | FD9-3X-600/2RAS-XX |



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



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.

Electric

**Automated
Ball Valve Package
Series FD9-F3
ANSI Class 300
Flanged Ball Valve
Direct Mount**

- Firesafe
- Sizes 1/2" - 6"
- Available in 316SST or WCB
- ANSI Class 300
- 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

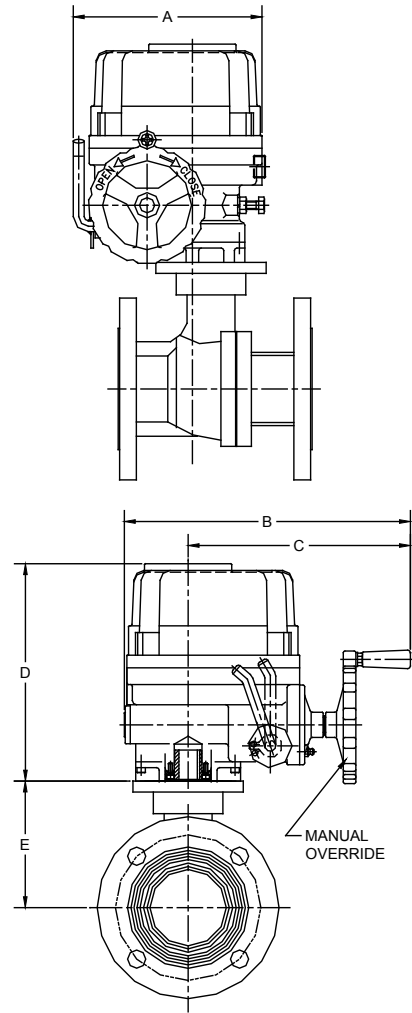
| | |
|---------------------------|---|
| Design | ANSI/ASME B16.34 (fully conforms) |
| Face to Face | ANSI/ASME B16.10 |
| Flange Dimensions | ANSI/ASME B16.5 |
| Pipeline Valves | API 6D |
| Pressure Testing | API 598 |
| Fire Testing | API 607-6th Edition on 1/2"-4" (SST & WCB), and 6" WCB; API-607-4th Edition on 6" SST |
| Sulfide Stress Protection | NACE MR0175 |
| 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 9001:2015 |



**300# 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 | 1.92 | 15 |
| 3/4" | 4.98 | 4.08 | N/A | 5.24 | 2.50 | 45 |
| 1" | 4.98 | 4.08 | N/A | 5.24 | 2.50 | 85 |
| 1-1/2" | 4.98 | 4.08 | N/A | 5.24 | 3.51 | 275 |
| 2" | 6.69 | 10.16 | 8.19 | 9.25 | 3.80 | 450 |
| 2-1/2" | 9.02 | 13.31 | 10.43 | 10.55 | 4.57 | 700 |
| 3" | 9.02 | 13.31 | 10.43 | 10.55 | 5.22 | 1,100 |
| 4" | 10.20 | 14.49 | 11.26 | 11.42 | 6.18 | 2,200 |
| 6" | 11.69 | 16.14 | 12.09 | 12.99 | 8.28 | 5,150 |

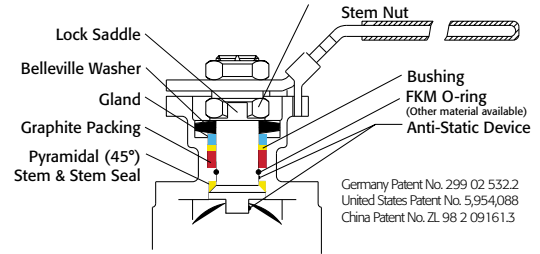


SERIES FD9-F3 300# Flanged Direct Mount

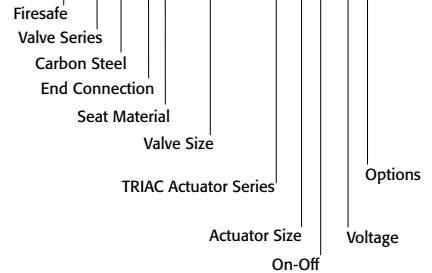
Firesafe

| ON-OFF | |
|--------|--------------------|
| SIZE | MODEL |
| 1/2" | FD9-3X-050/WEA1-XX |
| 3/4" | FD9-3X-075/WEA1-XX |
| 1" | FD9-3X-100/WEA1-XX |
| 1-1/2" | FD9-3X-150/WEA1-XX |
| 2" | FD9-3X-200/WEB1-XX |
| 2-1/2" | FD9-3X-250/WEC1-XX |
| 3" | FD9-3X-300/WED1-XX |
| 4" | FD9-3X-400/WEE1-XX |
| 6" | FD9-3X-600/WEH1-XX |

| MODULATING | |
|------------|--------------------|
| SIZE | MODEL |
| 1/2" | FD9-3X-050/WEA2-XX |
| 3/4" | FD9-3X-075/WEA2-XX |
| 1" | FD9-3X-100/WEA2-XX |
| 1-1/2" | FD9-3X-150/WEA2-XX |
| 2" | FD9-3X-200/WEB2-XX |
| 2-1/2" | FD9-3X-250/WEC2-XX |
| 3" | FD9-3X-300/WED2-XX |
| 4" | FD9-3X-400/WEE2-XX |
| 6" | FD9-3X-600/WEH2-XX |



**SAMPLE PART #
FD9C-3X-150/WEA1-XX**



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

OPTIONS

| DESCRIPTION |
|------------------------|
| 24 VAC/24 VDC/220VAC |
| Feedback potentiometer |

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

HOW TO ORDER: Manual Valves

Series FD9-F3

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

| 2 | Valve Series |
|----|----------------------|
| D9 | Direct Mount Flanged |

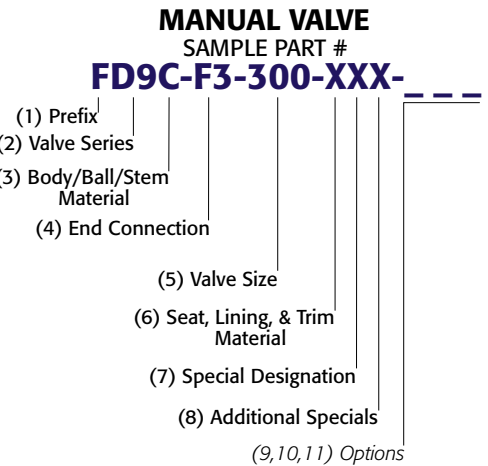
| 3 | Body/Ball/Stem Material |
|-------|-------------------------------------|
| Blank | Valve Series Standard (316SST) |
| A | Alloy 20 Body, Ball, & Stem |
| C | Carbon Steel Body |
| L | Low Carbon 316L Stainless Steel |
| H | Carbon Body / Hastelloy Ball & Stem |
| Q | Carbon Body/Monel Ball & Stem |
| R | 316 SST Body/Monel Ball & Stem |
| R | 316 SST Body/Monel Ball & Stem |

| 4 | End Connection |
|----|-------------------|
| F3 | 300# Flanged Ends |

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

| 6 | Seat, Lining & Trim Materials |
|---|--------------------------------------|
| X | Reinforced TFE Seats (RTFE) |
| P | Virgin TFE (PTFE) |
| U | UHMWPE Seats |
| S | 50/50 STFE Seats |
| C | 25% CS Powder / 75% TFE Seats (CTFE) |
| T | TFM™-1600 |
| A | 50% SS Powder / 50% TFM™-1600 (STFM) |
| M | MG1241 |
| Z | PEEK |

| 7 | Special Designations |
|---|-----------------------------------|
| X | No Specials/Series Standard |
| G | Gear Operator |
| H | Gear Operator with Lockout Plate |
| O | Oval Handle (available on some) |
| S | Spring Return (Direct Mount Only) |
| 4 | 4" Lockable Stem Extension |



| 8 | Additional Specials |
|---|----------------------------------|
| X | No Specials, Series Standard |
| O | Oxygen Cleaned |
| V | Vented Ball |
| E | Bonnet Extension Lockable Handle |
| D | Degreased & Bagged |
| A | Vented Ball, Degreased & Bagged |
| B | Vented Ball, Oxygen Cleaned |

OPTIONS:

| 9 | Special Designation |
|-------|---------------------------------------|
| Blank | No Designation, Valve Series Standard |
| X | Multiple Option Designation |
| A | 17-4 PH® Stem |

| 10 | O-Ring |
|----|-----------------------------|
| X | Multiple Option Designation |
| 2 | Markez® Z1028 |
| 4 | Karlez 4079 |
| 6 | Karlez 6375 |
| 7 | Perlast® G75M |
| 9 | Chemraz® 564 |
| B | Low Temp Buna |
| E | EPDM |

| 11 | Additional Specials |
|----|-----------------------------|
| X | Multiple Option Designation |
| B | B7M Bolting |
| M | Marine Epoxy Coating |

17-4 PH® is a registered trademark of AK Steel Corporation.
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 FD9-F3

HOW TO ORDER: Automated Valves w/ Options

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

| 2 | Valve Series |
|----|----------------------|
| D9 | Direct Mount Flanged |

| 3 | Body/Ball/Stem Material |
|-------|-------------------------------------|
| Blank | Valve Series Standard (316SST) |
| A | Alloy 20 Body, Ball, & Stem |
| C | Carbon Steel Body |
| L | Low Carbon 316L Stainless Steel |
| H | Carbon Body / Hastelloy Ball & Stem |
| Q | Carbon Body/Monel Ball & Stem |
| R | 316 SST Body/Monel Ball & Stem |
| R | 316 SST Body/Monel Ball & Stem |

| 4 | End Connection |
|---|-------------------|
| 3 | 300# Flanged Ends |

| 5 | Seat, Lining & Trim Materials |
|---|--------------------------------------|
| X | Reinforced TFE Seats (RTFE) |
| P | Virgin TFE (PTFE) |
| U | UHMWPE Seats |
| S | 50/50 STFE Seats |
| C | 25% CS Powder / 75% TFE Seats (CTFE) |
| T | TFM™-1600 |
| A | 50% SS Powder / 50% TFM™-1600 (STFM) |
| M | MG1241 |
| Z | PEEK |

| 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" | |

| 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 | 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 |
| R | 24VDC Electric Actuator | |
| S | 220VAC Electric Actuator | |
| T | Other Voltage Electric Actuator | |
| W | 12VDC Electric Actuator | |
| Y | 24VAC Electric Actuator | |

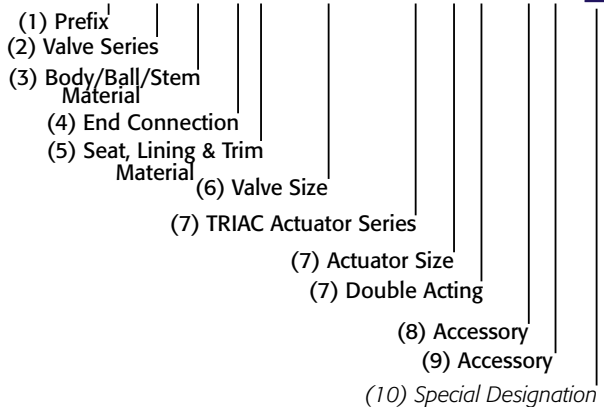
* No voltage specified on electric assemblies denotes 120VAC

| 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 |
| 1 | HS1 High Speed Electric | |
| 2 | HS2 High Speed Electric | |

| 10 | Special Designation | |
|-------|---------------------------------------|--|
| Blank | No Designation, Valve Series Standard | |
| X | Multiple Option Designation | |
| A | 17-4 PH® 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 # FD9C-3X-150/2R3D-XX-



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

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