

# Multipurpose Ball Valves



# FB Series

- **✓** Live Loaded Seats
  - Leak-tight seal in high and low system pressures
  - Compensate for seat wear
- **▼** Floating Ball
  - Upstream pressure assists sealing against the downstream seat

- Robust Body and Stem Seals
  - Leak tight envelope
  - No need for packing adjustment
- √ Three-Piece Design
  - · Wide variety of end connections
  - Easier maintenance





At SSP we are proud to be an **American success story** and each day our products are specified and used across America and the rest of the world.

100% of our products are made in the USA and are manufactured in our 165,000 sq. ft. facility based near Cleveland, Ohio. Throughout our manufacturing we use the latest technology and quality control procedures.

Our facility is the largest single-site operation in the entire industry and includes tool and die design, production, custom closed-die forging, machining, finishing operations, assembly and rigorous product testing.

We also carefully select each of our supply chain partners, many of whom are local using the latest in Kaizen and Six Sigma methodology.

#### TABLE of CONTENTS

| ntroduction3                      | Ordering Information        |
|-----------------------------------|-----------------------------|
| Features 4                        | Options                     |
| Temperature and Pressure Ratings5 | Special Order Instructions1 |
| Materials of Construction5        | Testing, Safety, Warranty1  |

# FB Series Multipurpose Ball Valves

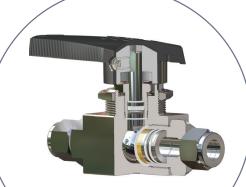
FB Series ball valves use a unique combination of features to provide leak-tight performance at high and low pressures and temperatures, high cycle-life, low maintenance, lower actuating torque, and design flexibility.

#### Features include:

- Pressure range: up to 6000 PSIG (413 bar)
- Temperature range: -15 to 400°F (-26 to 204°C)
- Flow: Cv up to 13.8
- · Live-loaded seats
- · Robust body and stem seals
- Wide variety of end connection size and type combinations
- · Choice of Duolok, Griplok and Unilok tube fitting end connections

#### LFB Series Low-Temperature Ball Valves

LFB low-temperature ball valves are designed with materials selected for applications requiring temperature ratings from -40 to 200°F (-40 to 93°C).

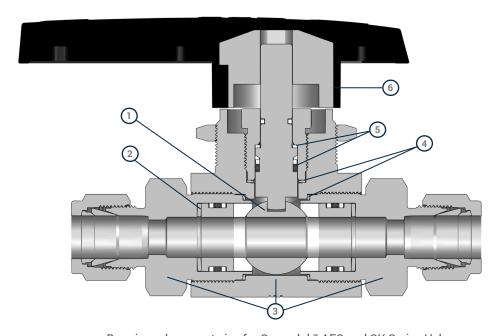


Live loaded seats enable FB series valves to maintain a leak-tight seal in high and low pressures.

## **Applications**

FB Series ball valves are very versatile. They can be used in both high and low pressure instrumentation systems, process lines, utility systems, and other applications. Designed for higher pressures than many floating ball valves, they can be used in applications such as high-pressure CNG filling station supply lines, equipment and in instrumentation and control systems. Unlike many floating ball designs, FB Series valves are also suitable for low and dynamic pressure conditions. In addition, end-screw construction allows users to specify a wide variety of end connection size and type combinations.

# Product Design



Drop in replacement size for Swagelok® AFS and SK Series Valves.

Meets ASME B31.3 design pressure calculations.

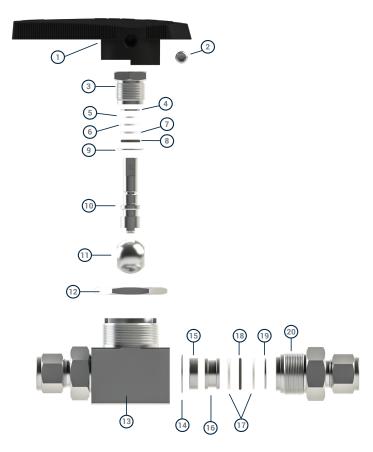
- 1 FLOATING BALL DESIGN
  - Upstream pressure assists sealing against the downstream seat
- 2 LIVE-LOADED SEATS
  - Improves sealing in high, low and dynamic pressure and flow conditions
  - Fully supported seats improve cycle-life
- 3 THREE-PIECE DESIGN
  - Wide variety of end connection type and size combinations
  - Three tube fitting designs
  - · Easier maintenance

- 4 ROBUST BODY SEALS
  - · Leak-tight envelope
- 5 STEM BEARING AND O-RING STEM SEAL
  - Leak-tight seal
  - · Lower actuation torque
  - · No need for packing adjustments
- 6 DURABLE DIRECTIONAL HANDLE
  - Stainless steel reinforced nylon handle for durability
  - · Indicates flow direction
  - Large ergonomic handle for easier actuation

# Temperature Pressure Tables

| Seat Material         | Material PTFE PEEK           |                         |             |             |                            |             |                      |  |  |  |
|-----------------------|------------------------------|-------------------------|-------------|-------------|----------------------------|-------------|----------------------|--|--|--|
| End Connections       | All                          | D4 to D8<br>DM6 to DM12 | D12<br>DM16 | D16         | 4PF to 12PF<br>4FRT & 8FRT | 4PM to 8PM  | S6 & S8<br>SS6 & SS8 |  |  |  |
| Temperature,<br>F( C) | Working Pressure, psig (bar) |                         |             |             |                            |             |                      |  |  |  |
|                       |                              |                         | FE          | 3 Series    |                            |             |                      |  |  |  |
| -15 (-26) to 100 (37) | 1500 (103)                   |                         |             | 5500 (379)  |                            |             |                      |  |  |  |
| 150 (65)              | 1250 (86.1)                  | 5000 (450)              | 5800 (400)  |             | 6000 (413)                 | 6000 (413)  | 6000 (413)           |  |  |  |
| 200 (93)              | 1000 (68.9)                  | 6000 (413)              |             |             |                            |             |                      |  |  |  |
| 250 (121)             | 600 (41.3)                   |                         |             |             |                            |             |                      |  |  |  |
| 300 (148)             | 300 (20.6)                   | 3000 (206)              | 3000 (206)  | 3000 (206)  | 3000 (206)                 | 3000 (206)  | 3000 (206)           |  |  |  |
| 350 (176)             | 100 (6.89)                   | 2000 (138)              | 2000 (138)  | 2000 (138)  | 2000 (138)                 | 2000 (138)  | 2000 (138)           |  |  |  |
| 400 (204)             | -                            | 1000 (68.9)             | 1000 (68.9) | 1000 (68.9) | 1000 (68.9)                | 1000 (68.9) | 1000 (68.9)          |  |  |  |
| LFB Series            |                              |                         |             |             |                            |             |                      |  |  |  |
| -40 (-40) to 100 (37) | 1500 (103)                   |                         |             |             |                            |             |                      |  |  |  |
| 150 (65)              | 1250 (86.1)                  | 6000 (413)              | 5800 (400)  | 5500 (379)  | 6000 (413)                 | 6000 (413)  | 6000 (413)           |  |  |  |
| 200 (93)              | 1000 (68.9)                  |                         |             |             |                            |             |                      |  |  |  |

# Materials of Construction



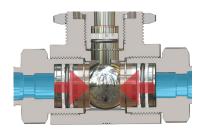
| ID  | Component              | Material /<br>Specification                     |
|-----|------------------------|---|
| 1   | Handle                 | Nylon with SS Insert                            |
| 2   | Handle Set Screw       | 17-4PH  |
| 3*  | Packing Bolt           | 316 SS/A479                                     |
| 4   | Stem Bearing           | PEEK  |
| 5   | Stem Guide Ring        | PTFE / D1710                                    |
| 6   | Chamfered Back-up Ring | PEEK  |
| 7   | Stem Back-up Ring      | PTFE / D1710                                    |
| 8*  | Stem 0-ring            | Fluorocarbon FKM (FB)<br>Low-Temp Nitrile (LFB) |
| 9*  | Packing Bolt Gasket    | Silver-Plated 316 SS/A240                       |
| 10* | Stem                   | 316 SS/A276                                     |
| 11* | Ball                   | 316 SS/A276                                     |
| 12  | Panel Nut              | Powder Metal 316 SS/B783                        |
| 13* | Body                   | 316 SS/A182                                     |
| 14* | End Screw Gasket       | Silver-Plated 316 SS/A240                       |
| 15* | Seat                   | PEEK or PTFE /D1710                             |
| 16* | Seat Gland             | 316 SS/A479                                     |
| 17* | Seat Back-up Rings     | PTFE / D1710                                    |
| 18* | Seat O-ring            | Fluorocarbon FKM (FB)<br>Low-Temp Nitrile (LFB) |
| 19* | Seat Spring            | 316 SS/A240 OR A666                             |
| 20* | End Screw              | 316 SS/A479                                     |
|     | Lubricant              | PTFE-Based                                      |

\*Wetted components



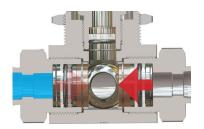
# How it works

The images below explain how live-loaded seats work to keep a leak-tight seal in high and low pressures, reduce actuation torque and improve cycle life.



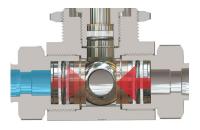
### Open

When the valve is open fluid flows through the valve (blue). Force from the springs (red arrows) apply pressure evenly to the seat gland, seat and ball.



# Closed - High Pressure

When the ball is closed under high pressure, the force of the upstream pressure forces the ball against the downstream seat to form a tight seal. Resistance from the downstream spring cushions the force of the ball against the seat to protect the seat and makes the valve easier to actuate.



#### Closed - Low Pressure

Under low pressure, there is much less upstream pressure on the ball and downstream seat. Without the mechanical force exerted by the seats and springs, the ball could disengage from the downstream seat.

# Ordering Instructions

#### Ordering FB Series valves requires the following steps:

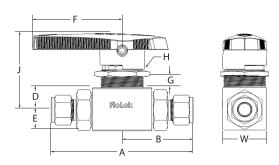
- Locate the basic part number with the required orifice size and end connection type and size.

  Example: 38PD8-316 Note: Duolok Tube Fitting end connections are standard. Unilok, and Griplok tube fitting end connections are also available. To order, please see Tube Fitting End Connections on page 8.
- (2) Add designators for other options. (See pages 8-9) Example: 38PD8-316-RD-XP98

NOTE: The Part Number and Dimensions Tables contain the most popular part numbers. Valves can be configured with different end connection types and sizes. Please use the special order table on page 10 to construct a part number for quote. *Example: 38PD86PF-316-RD-XP98* 



# Ordering Information



# Part Numbers and Dimensions

| Connec                        | ction   | Part                     | 0.5     |      | Dimensions, in. (mm) |                |                |                |                |      |       |                |                |
|-------------------------------|---------|--------------------------|---------|------|----------------------|----------------|----------------|----------------|----------------|------|-------|----------------|----------------|
| Type(s)                       | Size    | Number                   | Orifice | Cv   | Α                    | В              | D              | Е              | F              | G    | н     | J              | w              |
|                               | 1/4 in. | 36PD4-316                | 0.188   | 1.3  | 3.60<br>(91.4)       | 1.80<br>(45.7) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4) |
|                               | 3/8 in. | 36PD6-316                | 0.250   | 2.5  | 3.73<br>(91.5)       | 1.86<br>(47.2) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4) |
| Fractional<br>Tube<br>Fitting | 1/2 in. | 38PD8-316                | 0.406   | 7.2  | 4.80<br>(122)        | 2.40<br>(61.0) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50           |
| 3                             | 3/4 in. | 38PD12-316               | 0.472   | 7.1  | 4.80<br>(122)        | 2.40<br>(61.0) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50           |
|                               | 1 in.   | 38PD16-316 <sup>1</sup>  | 0.472   | 6.5  | 5.10<br>(130)        | 2.55<br>(64.8) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
|                               | 6 mm    | 36PDM6-316               | 0.188   | 1.3  | 3.60<br>(91.4)       | 1.80<br>(45.7) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
|                               | 8 mm    | 36PDM8-316               | 0.250   | 2.5  | 3.68<br>(93.5)       | 1.84<br>(46.7) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| Metric<br>Tube<br>Fitting     | 10 mm   | 36PDM10-316              | 0.250   | 2.5  | 3.75<br>(95.3)       | 1.88<br>(47.8) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| 3                             | 12 mm   | 38PDM12-316              | 0.375   | 5.2  | 4.80<br>(122)        | 2.40<br>(61.0) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
|                               | 16 mm   | 38PDM16-316              | 0.472   | 12.4 | 4.80<br>(122)        | 2.40<br>(61.0) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
|                               | 1/4 in. | 36P4PF-316               | 0.250   | 2.5  | 2.91<br>(73.9)       | 1.46<br>(37.1) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| 3/8<br>Female                 | 3/8 in. | 38P6PF-316               | 0.472   | 11.0 | 4.00<br>(102)        | 2.00<br>(50.8) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
| NPT                           | 1/2 in. | 38P8PF-316               | 0.472   | 13.8 | 4.00<br>(102)        | 2.00<br>(50.8) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
|                               | 3/4 in. | 38P12PF-316 <sup>1</sup> | 0.472   | 7.8  | 4.12<br>(105)        | 2.06<br>(52.3) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
|                               | 1/4 in. | 36P4PM-316               | 0.250   | 2.5  | 3.23<br>(82.0)       | 1.62<br>(41.0) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| Male NPT                      | 3/8 in. | 38P6PM-316               | 0.375   | 5.2  | 4.22<br>(107)        | 2.11<br>(58.6) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
|                               | 1/2 in. | 38P8PM-316               | 0.472   | 13.8 | 4.59<br>(117)        | 2.29<br>(58.3) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
| Female                        | 1/4 in. | 36P4FRT-316              | 0.250   | 2.5  | 2.91<br>(73.9)       | 1.46<br>(37.1) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| ISO                           | 1/2 in. | 38P8FRT-316              | 0.472   | 13.8 | 4.00<br>(102)        | 2.00<br>(50.8) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
| Male                          | 3/8 in. | 36PS6-316 <sup>1</sup>   | 0.250   | 2.5  | 3.10<br>(78.8)       | 1.55<br>(39.4) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| ORFS                          | 1/2 in. | 38PS8-316                | 0.378   | 5.2  | 4.06<br>(103)        | 2.03<br>(51.6) | 0.75<br>(19.1) | 0.70<br>(17.8) | 3.02<br>(81.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |
| Female                        | 3/8 in. | 36PSS6-316 <sup>1</sup>  | 0.250   | 2.5  | 3.73<br>(94.7)       | 1.87<br>(47.4) | 0.44<br>(10.8) | 0.44<br>(10.8) | 1.43<br>(36.3) | 3/16 | 25/32 | 1.53<br>(38.9) | 1.00<br>(25.4  |
| ORFS                          | 1/2 in. | 38PSS8-316               | 0.358   | 4.8  | 4.83<br>(123)        | 2.41<br>(61.3) | 0.75<br>(19.1) | 0.70<br>(17.8) | 1.43<br>(36.3) | 3/8  | 1 1/2 | 2.59<br>(65.8) | 1.50<br>(36.8  |

<sup>&</sup>lt;sup>1</sup>Not recommended for panel mounting.



# Options & Accessories

## **Tube Fitting End Connections**

SSP offers three tube fitting designs. Duolok two-ferrule tube fittings are standard. To select a different design, select the designator from the table below, then substitute it for the "D" in the part number. *Example: 38PU8-316 for Unilok tube fitting end connections.* For more information about SSP tube fittings see our tube fitting catalogs or go to www.mySSP.com

| Design  | Description | Designator |
|---------|-------------|------------|
| Duolok  | 2-Ferrule   | D          |
| Unilok  | 1-Ferrule   | U          |
| Griplok | 2-Ferrule   | G          |

## Handle Options

Stainless steel reinforced black nylon handles are standard on FB Series ball valves. To select a different handle, add the designator from the table below to the basic part number. *Example: 38PD8-316-GR* 

| Handle color | Designator |
|--------------|------------|
| Black        | None       |
| Green        | -GR        |
| Red          | -RD        |
| Blue         | -BL        |
| Yellow       | -YW        |
| Orange       | -OG        |
| No Handle    | -NH        |

### Replacement Handles

Replacement handles are shipped with the set screw installed. To order replacement handles, select the base part number from table below, then add the color designator from the Handle Options table to the end of the part number. For black replacement handles use a -BK color designator. *Example: NY-7K-38-0G* 

| Valve Series | Part Number |
|--------------|-------------|
| 36 / L36     | NY-7K-36-XX |
| 38 / L38     | NY-7K-38-XX |

### Seat Material

FB Series valves listed in the dimensions table, include a standard PEEK seat material. To order valves with PTFE seat material, replace the P in the basic part number with material designator T. Example: 36TD4-316

| Seat Material | Designator |
|---------------|------------|
| PEEK          | Р          |
| PTFE          | Т          |

## **Locking Devices**

Factory installed locking handle hardware can be added to any size valve by adding -LD to the part number. *Example:* 38PD8-316-LD. Locking handle kits for field installation can be ordered using the part numbers in the table below.

| Valve Series | Part Pumber |
|--------------|-------------|
| 36 / L36     | 36-LDK-316  |
| 38 / L38     | 38-LDK-316  |

#### Rebuild Kits

Rebuild kits can be ordered using a part number from the table below.

**SEAT KITS**: Seat rebuild kits contain seats, seat backup rings, seat o-rings, seat springs, end screw gaskets, lube, SDS and instructions.

**STEM AND SEAT KITS**: Stem and Seat rebuild kits contain stem o-ring, stem back-up ring, stem chamfered back-up ring, stem bearing, packing bolt gasket, seats, seat backup rings, seat o-rings, seat springs, end screw gaskets, lube, SDS and instructions.

| Carria | Seat Kits |           | Stem & S  | eat Kits |
|--------|-----------|-----------|-----------|----------|
| Series | PEEK Seat | PTFE Seat | PEEK Seat | Seat     |
| 36     | 36P-RK1   | 36T-RK1   | 36P-RK2   | 36T-RK2  |
| L36    | L36P-RK1  | L36T-RK1  | L36P-RK2  | L36T-RK2 |
| 38     | 38P-RK1   | 38T-RK1   | 38P-RK2   | 38T-RK2  |
| L38    | L38P-RK1  | L38T-RK1  | L38P-RK2  | L38T-RK2 |

## Special Cleaning

FB Series valves are available cleaned in compliance with ASTM G93 Level C and CGA G-4.1, Cleaning Methods and Cleanliness Levels for Material and Equipment Used in Oxygen-Enriched Environments. To specify special cleaning, add -XP98 to the part number. Example: 38PD8-316-XP98

For more information about other types of special cleaning, please contact your local SSP distributor or SSP Customer Service.

### ECE R110-Type Approval

LFB Series valves are available with ECE R110-type approval. Valves with this approval have low-temp Nitrile stem and seat 0-rings and PEEK seats.

• ECE R110 Manual Service Valve Type Approval Classification: Class 6

Pressure: 3988 psig (275 bar)

Temperature: -40 to 185°F (-40 to 85°C)

To order, add -R110 to the valve ordering number.

Example: L36PD4-316-R110

# **Actuator Brackets & Couplings**

Actuator brackets and couplings are available for ISO 5211 compliant actuators. Actuator kits contain the actuator bracket, coupling and fasteners required to install the actuator bracket and connect to the actuator.



| 63 |  |
|----|--|
| 2  |  |
|    |  |

| Valve<br>Series | ISO 5211<br>Flange<br>Size | Coupling<br>Size | Fastener<br>Type | Part<br>Number    |
|-----------------|----------------------------|------------------|------------------|-------------------|
|                 |                            | 11 100           | Metric           | 36-MB-F04-11ISO-M |
|                 | F0.4                       | 11 mm ISO        | Fractional       | 36-MB-F04-11ISO-F |
|                 | F04                        | 11 500           | Metric           | 36-MB-F04-11DIN-M |
|                 |                            | 11 mm DIN        | Fractional       | 36-MB-F04-11DIN-F |
|                 |                            | 11 100           | Metric           | 36-MB-F05-11ISO-M |
|                 |                            | 11 mm ISO        | Fractional       | 36-MB-F05-11ISO-F |
| 36 / L36        |                            | 11 500           | Metric           | 36-MB-F05-11DIN-M |
|                 |                            | 11 mm DIN        | Fractional       | 36-MB-F05-11DIN-F |
|                 | F05                        |                  | Metric           | 36-MB-F05-14ISO-M |
|                 |                            | 14 mm ISO        | Fractional       | 36-MB-F05-14ISO-F |
|                 |                            | 14 mm DIN        | Metric           | 36-MB-F05-14DIN-M |
|                 |                            |                  | Fractional       | 36-MB-F05-14DIN-F |
|                 |                            | 11 mm ISO        | Metric           | 38-MB-F05-11ISO-M |
|                 |                            |                  | Fractional       | 38-MB-F05-11ISO-F |
|                 |                            |                  | Metric           | 38-MB-F05-11DIN-M |
|                 |                            | 11 mm DIN        | Fractional       | 38-MB-F05-11DIN-F |
|                 |                            |                  | Metric           | 38-MB-F05-14ISO-M |
|                 |                            | 14 mm IS0        | Fractional       | 38-MB-F05-14ISO-F |
|                 | F05                        |                  | Metric           | 38-MB-F05-14DIN-M |
|                 |                            | 14 mm DIN        | Fractional       | 38-MB-F05-14DIN-F |
| 38 / L38        |                            |                  | Metric           | 38-MB-F05-17ISO-M |
|                 |                            | 17 mm ISO        | Fractional       | 38-MB-F05-17ISO-F |
|                 |                            |                  | Metric           | 38-MB-F05-17DIN-M |
|                 |                            | 17 mm DIN        | Fractional       | 38-MB-F05-17DIN-F |
|                 |                            |                  | Metric           | 38-MB-F07-17ISO-M |
|                 |                            | 17 mm ISO        | Fractional       | 38-MB-F07-17ISO-F |
|                 | F07                        |                  | Metric           | 38-MB-F07-17DIN-M |
|                 |                            | 17 mm DIN        | Fractional       | 38-MB-F07-17DIN-F |

### **Actuation Torque**

Use the table below to select the correct actuator for the valve and application. The values listed are minimum required actuator torque at maximum system pressure for each valve.

| Valve Series |            |             |             |              |             |               |             |  |  |
|--------------|------------|-------------|-------------|--------------|-------------|---------------|-------------|--|--|
| 36           |            | L36         |             | 38           |             | L38           |             |  |  |
| in-lb (N-m)  |            |             |             |              |             |               |             |  |  |
| Start        | End        | Start       | End         | Start        | End         | Start         | End         |  |  |
| 30<br>(3.4)  | 6<br>(0.7) | 51<br>(5.8) | 19<br>(2.1) | 96<br>(10.8) | 23<br>(2.6) | 176<br>(19.9) | 53<br>(6.0) |  |  |

### Actuated Ball Valve Assemblies

FB Series valves are available with a wide range of actuators, solenoids, and limit switches selected specifically for each valve's requirements.

For more information, see the SSP Actuated Ball Valve Assemblies Catalog, contact SSP Customer Service, or visit www.mySSP.com.



#### Sour Gas Service

Selecting valves for sour gas applications requires the consideration of several factors including the temperature, pH, partial pressure of H<sub>2</sub>S, and whether the application is above or below ground. SSP offers configurations to meet the requirements in ANSI/NACE MR0175/ISO 15156-3 and NACE MR0103/ISO 17945. To order valves for sour gas applications, add the designator below to the part number. Example: 38PD8-316-SG1

| Designator | Wetted Part <sup>1</sup>                 | Non-Wetted | Body      | O-ring |
|------------|--|------------|-----------|--------|
| SG1        | Annealed 316 SS except body <sup>2</sup> | 316 SS     | 316 SS    | EP     |
| SG2        | Annealed 316 SS                          | 316 SS     | 316 SS    | EP     |
| SG3        | Alloy 400/UNS S20910                     | 316 SS     | Alloy 400 | FFKM   |

<sup>&</sup>lt;sup>1</sup>Springs or other components may require other materials for functionality.

<sup>&</sup>lt;sup>2</sup>Compression fittings and valve bodies with compression fitting ports are exempt from lower hardness requirements per ANSI/ NACE MR0175/ISO 15156 and NACE MR0103/ISO 17945.



# Special Orders

The Basic Ordering Numbers and Dimensions tables (page 7) contain only the most popular valve configurations; many more are available. If the required valve configuration is not in the Basic Ordering Numbers and Dimensions tables, use the chart below to build part numbers for quotation purposes.

(basic ordering number)

(options)











38P

D8 6PF -316

-GR -LD -SG1



Blank Standard (FB)
L Low-Temperature (LFB)



#### **VALVE SIZE/SEAT MATERIAL**

36P 0.250 Ball Orifice - PEEK Seats
36T 0.250 Ball Orifice - PTFE Seats
38P 0.472 Ball Orifice - PEEK Seats
38T 0.472 Ball Orifice - PTFE Seats



#### INLET TYPE<sup>2</sup> + OUTLET TYPE<sup>2</sup>

Duolok® Tube Fitting Ħ Unilok® Tube Fitting G Griplok® Tube Fitting DM Duolok® Metric PF Female NPT PM Male NPT FRT Female ISO Tapered S Male ORES SS Female ORFS

# Fractional Sizes: Metric Sizes: 4 1/4 in. M6 6 mm

6 3/8 in. M8 8 mm 8 1/2 in. M10 10 mm 12 3/4 in. M12 12 mm 16 1 in. M16 16 mm



#### **BODY MATERIAL**

-316 316 SS

#### Additional Valve Materials

Alloy 400/405 and Alloy C-276 materials are available for FB series valves. Contact SSP for more information



| HANDLES |           |  |  |  |
|---------|-----------|--|--|--|
| (Blank) | Black     |  |  |  |
| -GR     | Green     |  |  |  |
| -RD     | Red       |  |  |  |
| -BL     | Blue      |  |  |  |
| -YW     | Yellow    |  |  |  |
| -OG     | Orange    |  |  |  |
| -NH     | No Handle |  |  |  |

#### **SPECIAL CLEANING**

-XP98 Per ASTM G93 Level C and CGA G-4.1

#### OTHER OPTIONS

-LD Locking Hardware
-SG\* Sour Gas
\*See Sour Gas Options on
page 8.

-R110 ECE R110 Approved valve (L36P/L38P series only)

<sup>2</sup> Tube end connection part numbers are formatted "Type" followed by "Size." Example: D6. Pipe end connections are formatted "Size" followed by "Type." Example: 6PF If both ends of the valve are the same, then only designate the end connection one time. Example 38P**D8**-316. If they are different, use both designators together. Example: 38P**D88PF**-316.

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# Important Information



IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE PERSONAL INJURY AND PROPERTY DAMAGE. It is the sole responsibility of the system designers and users to properly select and use products for their specific applications. This document has been provided to users with technical expertise as a reference for further investigation to determine specific product needs relative to their design requirements.



FB Series ball valves should only be used in the full on or full off position. Throttling may damage the valve.

# Testing

All FB Series valves are factory tested with Nitrogen to 1000 psig (69 bar) at 70°F (20°C).

## Warranty

SSP valves are backed by the SSP Limited Life Time Warranty. This warranty is available from your local distributor or at www.mySSP.com.

<sup>&</sup>lt;sup>1</sup> Add options designators to the end of the Base Part Number in alphabetical order.

# More SSP Products



#### **Tube Fittings**

Duolok and Griplok twoferrule and Unilok® single ferrule tube fittings provide leak-tight installation even when intermixed with Swagelok®, Hoke Gyrolok® and Parker CPI™ fittings.



#### **Valves**

The FloLok valve offering includes ball, check, metering, needle, toggle, plug, bleed, and purge valves for pressures up to 10,000 psig.



#### **Tubing**

SSP offers straight and coiled seamless 316 stainless steel instrumentation tubing for instrumentation, process and utility applications.



#### **Pipe Fittings**

TruFit and TruFit
10K pipe fittings are
available in a wide range
of weld, threaded and
flared connections.



#### **Filters**

FloLok in-line and teetype filters trap particles to clean sample fluids and protect sensitive process and analytical instrumentation components and equipment.



#### Hose

TruFit PTFE-lined and flexible metal core hose assemblies are used in a variety of instrumentation, utility, biopharm and other applications.



#### Tools & Accessories

SSP TurnPro professional hand tools, power tools and installation training make quality tube system installation faster and easier.



#### **Quick Connects**

SSP offers single-end shutoff, double-end shut off, and full-flow quick connects for instrumentation and process applications.



#### Founded 1926

Privately owned, third generation business

Modern single-site vertically integrated manufacturing facility

DFARS-compliant raw material

ISO 9001 quality management system

Limited Lifetime Warranty











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