



Flanged & Wafer Segmented Ball Valves

SENTINEL SERIES

**Engineered Valves For Severe Service Applications
where precise control is required**

Models:

RV-150
RV-300
RV-600
Metal or Soft Seated

Size Range:

1" - 24"

Pressure Rating :

Flanged End : 150#, 300#, 600#
Wafer Type : 150#, 300#



Standard Body Materials :

Carbon & Stainless Steel
Options: 304, 317, 2205

Flo-Tite's Sentinel Series, rugged unibody construction minimizes the number of potential leak paths. Available in flanged or flangeless end connections.



***Ideal Valve Design for Clean or Dirty Liquids, Gases and
Fibrous Suspension Applications***

Flo-Tite's Sentinel series is a quarter turn control valve generally recommended for throttling service. Our segmented ball valve combines globe control flow characteristics with the efficiency of the rotary type ball valve. The segmented ball is a V-notch design with strong cutting force and a self-cleaning design, especially suitable for control of media containing fiber and tiny solids. Segmented ball valves were designed for the pulp and paper industry. Through research and development, segmented ball valves extend to other industrial markets such as petro-chemical, petroleum, chemical, fiber, power, metallurgy, pharmacy, environmental protection and many more flow control applications.

DESIGN FEATURES

Precise contouring of the V-notch provides excellent control characteristics for an extensive variety of flow applications. An ideal control performance is designed into the geometry of the ball for critical management of flow. A locked ball-to-shaft connection ensures no lost motion during critical control.

Splined connection between the shaft and ball ensures precise control and low hysteresis.

Streamlined flow passage provides maximum efficiency and minimizes erosion inside the valve body.

Detachable seat retainer design provides easy access to trim parts of the valves through inlet of valve by simply removing the screws of retainer allowing for easy maintenance. Repair kits are available for all valve designs.

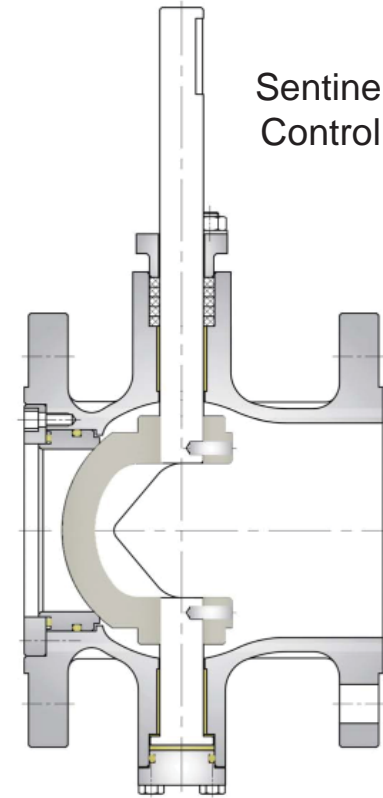
Superior trunnion bearing technology is engineered for excellent abrasion resistance.

Rugged self-adjusting metal seated option is ideally suited for higher temperature applications or slurries. Spring loaded seat maintains constant contact with the ball, providing enhanced sealing performance.

Shearing action between ball and seat promotes smooth, non-clogging operation, perfect for fibrous or slurry applications.

Optional "Chem-Tek" is a special material impregnated directly into all valve wetted surfaces that helps prevent the build up of scale commonly found in green liquor and other severe applications.

Sentinel Series Control Valves

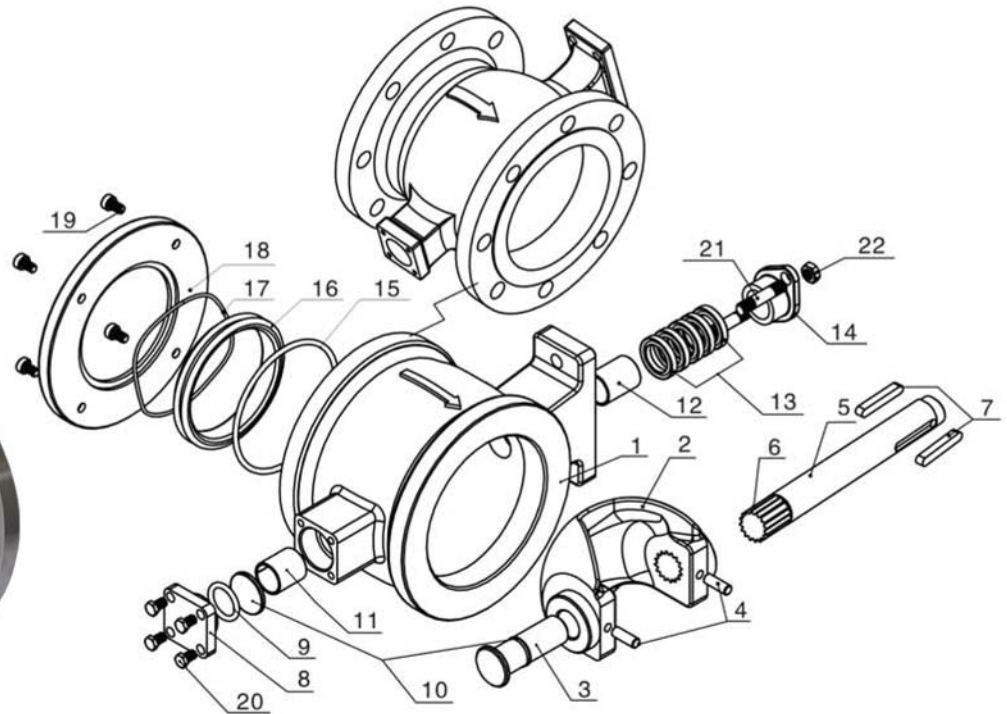


A locked ball-to-shaft connection ensures no lost motion for critical control.



BILL OF MATERIALS

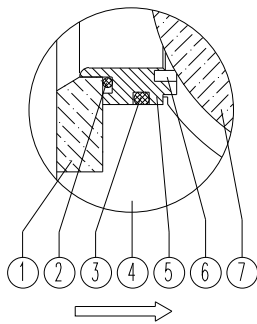
Exploded View Sentinel Series



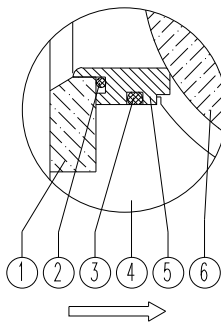
| No. | Name | Quantity | Material |
|-----|--------------------------|----------|---|
| 1 | Body | 1 | WCB, CF8, CF8M, 317, 2205 Duplex |
| 2 | Ball | 1 | CF8, CF8M, Hard Chrome Plating or Stellite Surfacing |
| 3 | Lower Shaft | 1 | 17-4PH, SS316L |
| 4 | Cylindrical Pin | 2 | SS304, SS316 |
| 5 | Upper Shaft | 1 | 17-4PH, SS316L |
| 6 | Spline | 1 | 17-4PH, SS316 |
| 7 | Flat Key | 2 | SS304, Carbon Steel |
| 8 | Blind Flange | 1 | CF8, CF8M |
| 9 | O-Ring | 1 | VITON, Graphite |
| 10 | Gasket | 1 each | PTFE, Graphite |
| 11 | Self Lubricating Bearing | 1 | Composite Material |
| 12 | Self Lubricating Bearing | 1 | Composite Material |
| 13 | Packing | 1 set | PTFE, Graphite |
| 14 | Gland | 1 | CF8 |
| 15 | O-Ring | 1 | Viton, Graphite |
| 16 | Seat | 1 | PTFE, Devlon, SS304, SS316, Hard Chrome Plating or Stellite Surfacing |
| 17 | Wave Spring | 1 | SS316 |
| 18 | Retainer | 1 | Carbon Steel, SS304, SS316 |
| 19 | Socket Head Screw | 4 | A193 B7, A193 B8 |
| 20 | Hexgon Screw | 4 | A193 B7, A193 B8 |
| 21 | Stud | 2 | A193 B7, A193 B8 |
| 22 | Hexagon Nut | 2 | A194 2H, A194 8 |

- End Connection: Wafer 1” through 10”, MFR standard. Flanged End 1” through 24”
- Face to Face Dimensions: IEC/DIN 534-3-2 or ISA S75.04
- Nominal Pressure Rating: Class 150, Class 300, Class 600
- Working Temperature: -20 - 320 °F, optional -29 - 842 °F
Consult factory for higher temperature services
- Pressure Test: Each valve undergoes hydraulic test with 1.5 times pressure rating as shell test, seat tightness test is according to ANSI FCI 70.2
- Leakage Rate: ANSI FCI 70.2 Class VI for Soft Seat;
1% of maximum allowable leakage of ANSI FCI 70.2 Class IV for Metal Seat;
Consult factory for higher tightness class requirements.
For control valves with bubble tight shut off capability, consult Tech Bulltin 120.
- International Bolting: PN10, 16, 25 and 40, with DIN 10, 16, 25 and 40; JIS 10, 16 and 20 bolting.
Options are also available in our ANSI take-out CP series, C/F.

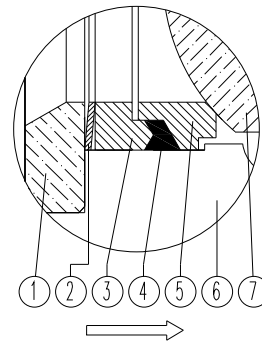
VARIOUS SEAT CONSTRUCTION



Seat A



Seat B



Seat C

| Seat A: Soft Seat | | |
|-------------------|---------------|--------------------------------|
| No. | Parts | Temperature Range |
| 1 | Retainer | -20 - 320 °F (-29 - 160 °C) |
| 2 | Spring | |
| 3 | O-Ring | |
| 4 | Valve Body | |
| 5 | Seat Retainer | |
| 6 | Seat Seal | |
| 7 | Ball | |

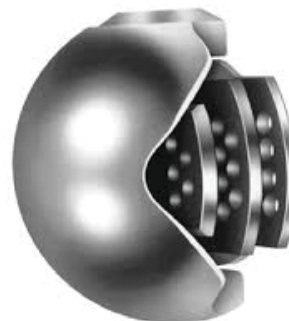
| Seat B: Standard Metal Seat | | |
|-----------------------------|------------|--------------------------------|
| No. | Parts | Temperature Range |
| 1 | Retainer | -20 - 356 °F (-29 - 180 °C) |
| 2 | Spring | |
| 3 | O-Ring | |
| 4 | Valve Body | |
| 5 | Seat | |
| 6 | Ball | |

| Seat C: High Temperature Metal Seat | | |
|-------------------------------------|---------------|-------------------------------|
| No. | Parts | Temperature Range |
| 1 | Retainer | -20- 842 °F (-29 - 450 °C) |
| 2 | Spring | |
| 3 | Plunge Ring | |
| 4 | Graphite Ring | |
| 5 | Metal Seat | |
| 6 | Valve Body | |
| 7 | Ball | |

VARIOUS TRIM DESIGNS FOR LOW CV & NOISE APPLICATIONS



When the flow rate of the application is too low and calling for valves with very low flow capacity for throttling that a standard 3/4” or 1” trim of the segment ball valves can not manage to achieve, special low Cv trim design is available, engineered as per specific Cv requirements to provide precise throttling performance, which particularly meets the control requirements of additives and coatings in paper making industry.



Low noise trim provides very good solution to applications subject to excessive noise levels with conventional trim, especially for control systems handling gas, steam and other applications that require a limited level of noise. Meanwhile, it can also prevent the potential risk of damage to piping system and affect life cycle and control performance of the control valve resulting from cavitation during controlling of water and other liquids under high differential pressure.

MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE AND TORQUES

| Valve Size | | Class 150 | | | | | | | | | | Class 300 | | | | | | | | | |
|------------|-----|------------------------------------|-----|---------|-----|-----------------------------------|-----|---------|-----|------------------|--------|------------------------------------|-----|---------|-----|-----------------------------------|-----|---------|-----|------------------|--------|
| | | Max Shut Off Differential Pressure | | | | Max Control Differential Pressure | | | | Maximum Torque * | | Max Shut Off Differential Pressure | | | | Max Control Differential Pressure | | | | Maximum Torque * | |
| | | Wafer | | Flanged | | Wafer | | Flanged | | | | Wafer | | Flanged | | Wafer | | Flanged | | | |
| NPS | DN | bar | psi | bar | psi | bar | psi | bar | psi | NM | In-Lbs | bar | psi | bar | psi | bar | psi | bar | psi | NM | In-Lbs |
| 1" | 25 | 20 | 290 | 20 | 290 | 15 | 217 | 15 | 217 | 25 | 221 | 50 | 725 | 40 | 580 | 35 | 507 | 35 | 507 | 48 | 425 |
| 1 1/4" | 32 | 20 | 290 | 20 | 290 | 15 | 217 | 15 | 217 | 25 | 221 | 50 | 725 | 40 | 580 | 35 | 507 | 35 | 507 | 55 | 487 |
| 1 1/2" | 40 | 20 | 290 | 20 | 290 | 15 | 217 | 15 | 217 | 30 | 266 | 50 | 725 | 40 | 580 | 35 | 507 | 35 | 507 | 60 | 531 |
| 2" | 50 | 20 | 290 | 20 | 290 | 15 | 217 | 15 | 217 | 35 | 310 | 50 | 725 | 40 | 580 | 35 | 507 | 35 | 507 | 70 | 620 |
| 2 1/2" | 65 | 20 | 290 | 20 | 290 | 15 | 217 | 15 | 217 | 60 | 531 | 50 | 725 | 40 | 580 | 35 | 507 | 35 | 507 | 140 | 1239 |
| 3" | 80 | 20 | 290 | 20 | 290 | 15 | 217 | 15 | 217 | 80 | 708 | 50 | 725 | 40 | 580 | 35 | 507 | 35 | 507 | 224 | 1983 |
| 4" | 100 | 16 | 232 | 16 | 232 | 12 | 174 | 12 | 174 | 140 | 1239 | 40 | 580 | 40 | 580 | 25 | 362 | 25 | 362 | 315 | 2788 |
| 5" | 125 | 16 | 232 | 16 | 232 | 12 | 174 | 12 | 174 | 160 | 1416 | 40 | 580 | 40 | 580 | 25 | 362 | 25 | 362 | 480 | 4248 |
| 6" | 150 | 16 | 232 | 16 | 232 | 12 | 174 | 12 | 174 | 220 | 1947 | 40 | 580 | 40 | 580 | 25 | 362 | 25 | 362 | 930 | 8231 |
| 8" | 200 | 16 | 232 | 16 | 232 | 12 | 174 | 12 | 174 | 350 | 3098 | 35 | 507 | 40 | 580 | 25 | 362 | 25 | 362 | 1830 | 16197 |
| 10" | 250 | 14 | 203 | 14 | 203 | 10 | 145 | 10 | 145 | 660 | 5841 | 35 | 507 | 40 | 580 | 20 | 290 | 20 | 290 | 3125 | 27659 |
| 12" | 300 | / | / | 14 | 203 | / | / | 10 | 145 | 1200 | 10621 | / | / | 40 | 580 | / | / | 20 | 290 | 4000 | 35403 |
| 14" | 350 | / | / | 12 | 174 | / | / | 8 | 116 | 1700 | 15046 | / | / | 40 | 580 | / | / | 20 | 290 | 6120 | 54167 |
| 16" | 400 | / | / | 12 | 174 | / | / | 8 | 116 | 2600 | 23012 | / | / | 40 | 580 | / | / | 20 | 290 | 8030 | 71072 |
| 18" | 450 | / | / | 10 | 145 | / | / | 6 | 87 | 3500 | 30978 | / | / | 40 | 580 | / | / | 20 | 290 | 12000 | 106209 |
| 20" | 500 | / | / | 10 | 145 | / | / | 6 | 87 | 3800 | 33633 | / | / | 30 | 435 | / | / | 10 | 145 | 15000 | 132761 |
| 24" | 600 | / | / | 8 | 116 | / | / | 4 | 58 | 6000 | 53105 | / | / | 30 | 435 | / | / | 10 | 145 | 20500 | 181440 |

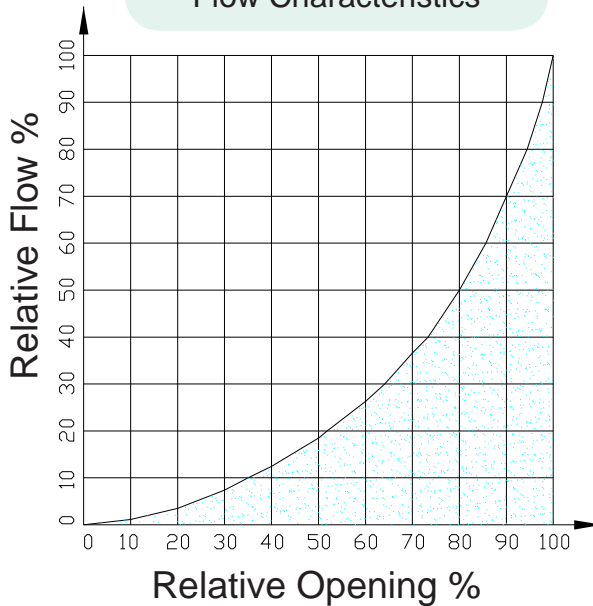
* Valve Torques Are for Metal Seated B Style Valves with MC-pulp Medium
 For Soft Seated Valve Torque, Deduct 10% off the Chart
 For Clean Liquid Media, Deduct 20% off the Chart

Consult Factory for Other Media.

Rated Cv

| VALVE SIZE | | CV |
|------------|-----|-------|
| NPS | DN | |
| 1" | 25 | 27 |
| 1 1/4" | 32 | 47 |
| 1 1/2" | 40 | 70 |
| 2" | 50 | 135 |
| 2 1/2" | 65 | 210 |
| 3" | 80 | 390 |
| 4" | 100 | 560 |
| 5" | 125 | 790 |
| 6" | 150 | 1130 |
| 8" | 200 | 1860 |
| 10" | 250 | 2900 |
| 12" | 300 | 4320 |
| 14" | 350 | 6640 |
| 16" | 400 | 8000 |
| 18" | 450 | 10000 |
| 20" | 500 | 12200 |
| 24" | 600 | 17270 |

Typical Inherent Equal Percentage Flow Characteristics



Important Information Required to size control valves:

1. Type of Media, ie Liquid, Gas or Steam
2. What Type of Calculation
 - a, Cv required given the Flow Rate Through the Valve
 - b, Flow Rate given the Cv
3. Flow Rate, GPM, PPH (Lb/H), SCFM
4. Inlet Pressure of Media to Valve (PSIG)
5. Outlet Pressure of Media from Valve (PSIG)
6. Inlet Temperature of Media at Valve
7. Specific Gravity of Media at Valve
8. Media Vapor Pressure (PSIA)
9. Media Critical Pressure
10. Pipe Size Upstream of Valve
11. Pipe Size Downstream of Valve

Cv: The volume of water in United States gallons per minute that will pass through a given valve opening with a pressure drop of 1 pound per square inch. (water at temp = 60 deg.f)

Capacity: Rate of flow through a valve under stated conditions. "Rated Capacity" is the flow through a valve in the full open position.

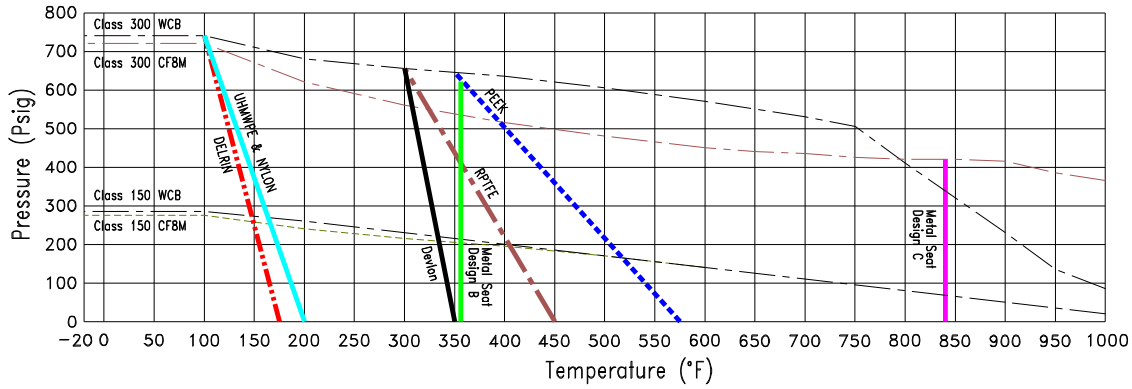
Control Valve: A final controlling element (through which a fluid passes) which adjusts the size of the flow passage as directed by a signal from a controller to modify the rate of flow of the fluid.

Equal Percentage Flow Characteristic: An inherent flow characteristic which, for equal increments of rated travel, will ideally give equal percentage changes of the existing flow.

Rangeability: It is the ratio of the maximum to the minimum controllable flow coefficients(Cv). A control valve that still does a good job of controlling when flow increases to 100 times the minimum controllable flow has a rangeability of 100 : 1.

Turndown: Turndown is a simple ratio of the maximum to the minimum controllable flow rate. For example, if the minimum flow rate were 10 gpm and maximum flow rate were 100 gpm, the turndown would be 10:1.

PRESSURE TEMPERATURE RATING



Seat Design B is standard metal seat with a temperature limit of 356 °F.
 Seat Design C is optional metal seat with a temperature limit of 842 °F.

WCB is not recommended for prolonged use above 800 °F

Flo-Tite's Manufacturing Partner

Linuo Flow Control Technology Co. Is a highly certified Company with over 15 years manufacturing segmented, trunnion ball valves, knife gate, gate, globe and check valves.

CERTIFICATIONS



API 6D



CE / PED



EAC



ISO 9001



API 607 6th

Actuator Options



Rack & Pinion
Pneumatic Type



Spring-Diaphragm
Rotary Type



Piston
Type Design



Extended Range Series, Torque Range
from 300,146 to 1,565,201 in-lb



Electric Actuator



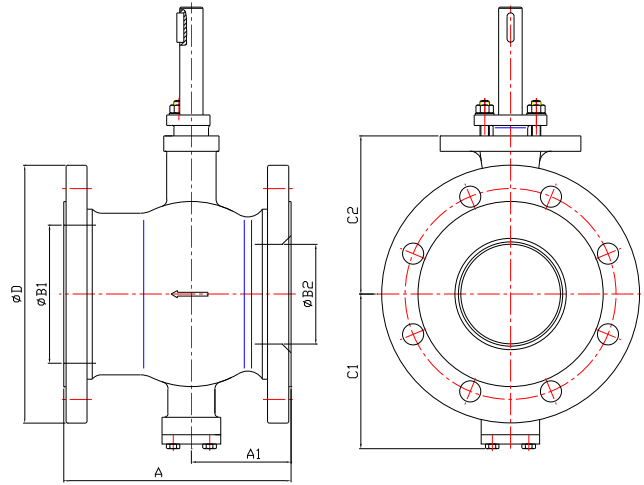
Manual Worm Gear





Valve Drawings Are Shown with Special Order Tall Stems with Optional Key Shaft.

Request Drawings for Double-D or Spline Shaft Connections.



FLANGED TYPE, CLASS 150

| SIZE | | A | A1 | B1 | B2 | C1 | C2 | D | Weight Lbs |
|--------|-----|-------|-------|-------|-------|-------|-------|-------|------------|
| NPS | DN | | | | | | | | |
| 1" | 25 | 4.02 | 2.24 | 1.50 | 0.79 | 3.46 | 3.07 | 4.25 | 9 |
| 1 1/4" | 32 | 4.02 | 2.05 | 1.89 | 0.98 | 3.46 | 3.15 | 4.62 | 12 |
| 1 1/2" | 40 | 4.50 | 2.56 | 2.05 | 1.26 | 3.46 | 3.35 | 5.00 | 13 |
| 2" | 50 | 4.88 | 2.64 | 2.36 | 1.65 | 3.94 | 3.66 | 6.00 | 17 |
| 2 1/2" | 65 | 5.71 | 3.35 | 3.15 | 2.09 | 4.65 | 4.41 | 7.00 | 21 |
| 3" | 80 | 6.50 | 3.64 | 3.90 | 2.87 | 4.76 | 4.69 | 7.50 | 31 |
| 4" | 100 | 7.62 | 4.41 | 4.65 | 3.39 | 5.24 | 5.16 | 9.00 | 47 |
| 5" | 125 | 8.39 | 4.65 | 5.43 | 4.21 | 6.02 | 5.91 | 10.00 | 51 |
| 6" | 150 | 9.00 | 4.88 | 6.57 | 5.04 | 7.09 | 7.01 | 11.00 | 82 |
| 8" | 200 | 9.56 | 4.80 | 8.27 | 6.38 | 7.87 | 8.07 | 13.50 | 128 |
| 10" | 250 | 11.69 | 5.83 | 10.39 | 8.11 | 9.65 | 9.45 | 16.00 | 187 |
| 12" | 300 | 13.31 | 6.30 | 12.20 | 9.29 | 11.42 | 10.59 | 19.00 | 289 |
| 14" | 350 | 15.75 | 7.36 | 14.37 | 11.57 | 13.78 | 12.95 | 21.00 | 439 |
| 16" | 400 | 15.75 | 7.48 | 16.14 | 13.39 | 16.14 | 15.00 | 23.50 | 761 |
| 18" | 450 | 20.47 | 9.76 | 18.11 | 14.96 | 16.85 | 16.85 | 25.00 | 1124 |
| 20" | 500 | 23.62 | 11.81 | 20.31 | 16.54 | 19.69 | 19.29 | 27.50 | 1338 |
| 24" | 600 | 26.77 | 12.60 | 24.41 | 19.69 | 22.05 | 22.05 | 32.00 | 1587 |

All (1"-16") Flanged End Valve's take-outs meet ISA S75.04

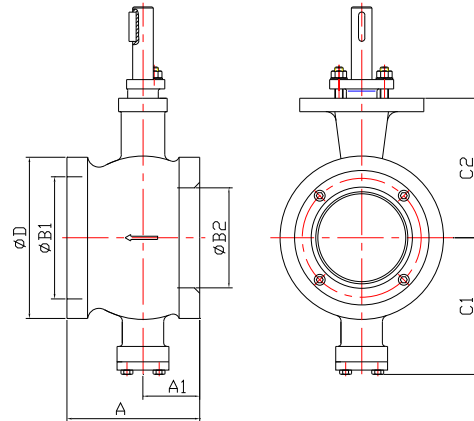
FLANGED TYPE, CLASS 300

| SIZE | | A | A1 | B1 | B2 | C1 | C2 | D | Weight Lbs |
|--------|-----|-------|------|-------|-------|-------|-------|-------|------------|
| NPS | DN | | | | | | | | |
| 1" | 25 | 4.17 | 2.24 | 1.50 | 0.79 | 3.46 | 3.19 | 4.88 | 9 |
| 1 1/4" | 32 | 4.17 | 2.13 | 1.65 | 0.98 | 3.46 | 3.46 | 5.25 | 12 |
| 1 1/2" | 40 | 4.80 | 2.72 | 1.97 | 1.26 | 3.46 | 3.35 | 6.12 | 13 |
| 2" | 50 | 4.88 | 2.44 | 2.36 | 1.50 | 4.13 | 3.94 | 6.50 | 24 |
| 3" | 80 | 6.50 | 3.25 | 3.90 | 2.68 | 5.35 | 5.31 | 8.25 | 49 |
| 4" | 100 | 7.62 | 4.02 | 4.65 | 3.15 | 5.71 | 5.59 | 10.00 | 71 |
| 6" | 150 | 9.00 | 4.51 | 6.57 | 4.92 | 8.07 | 7.83 | 12.50 | 137 |
| 8" | 200 | 9.56 | 4.39 | 8.27 | 6.30 | 8.66 | 8.62 | 15.00 | 198 |
| 10" | 250 | 11.69 | 5.31 | 10.39 | 7.87 | 10.55 | 10.94 | 17.50 | 331 |
| 12" | 300 | 13.31 | 5.98 | 12.20 | 9.06 | 11.42 | 11.54 | 20.50 | 485 |
| 14" | 350 | 15.75 | 7.28 | 14.37 | 11.42 | 13.78 | 13.98 | 23.00 | 683 |

All (2" - 14") Flanged End Valve's take-outs meet ISA S75.04

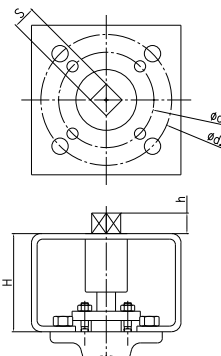
WAFFER TYPE, CLASS 150

| SIZE | | A | A1 | B1 | B2 | C1 | C2 | D | Weight Lbs |
|--------|-----|------|------|-------|------|------|------|-------|------------|
| NPS | DN | | | | | | | | |
| 1" | 25 | 2.44 | 1.06 | 1.50 | 0.79 | 3.46 | 2.95 | 2.68 | 6 |
| 1 1/4" | 32 | 2.44 | 0.87 | 1.73 | 0.98 | 3.46 | 3.15 | 3.07 | 7 |
| 1 1/2" | 40 | 2.44 | 0.87 | 1.97 | 1.26 | 3.46 | 3.35 | 3.35 | 8 |
| 2" | 50 | 2.95 | 1.22 | 2.36 | 1.50 | 3.94 | 3.54 | 3.94 | 9 |
| 2 1/2" | 65 | 3.54 | 1.38 | 2.95 | 2.09 | 4.65 | 4.33 | 4.72 | 13 |
| 3" | 80 | 3.94 | 1.57 | 3.90 | 2.68 | 4.76 | 4.69 | 5.12 | 17 |
| 4" | 100 | 4.53 | 1.77 | 4.65 | 3.15 | 5.24 | 5.16 | 6.22 | 24 |
| 5" | 125 | 5.08 | 2.01 | 5.51 | 4.21 | 6.02 | 5.91 | 7.24 | 34 |
| 6" | 150 | 6.30 | 2.56 | 6.57 | 4.92 | 7.09 | 7.01 | 8.50 | 55 |
| 8" | 200 | 7.87 | 3.23 | 8.27 | 6.30 | 7.87 | 8.07 | 10.55 | 86 |
| 10" | 250 | 9.45 | 3.58 | 10.39 | 7.87 | 9.65 | 9.45 | 12.68 | 141 |



TYPICAL VALVE MOUNTING INFORMATION (w/ standard bracket & coupler)

| SIZE | | S | h | | d1 | | | d2 | | | H | | |
|--------|-----|----|-------|----|-------|-----|------|-----|-----|------|-----|-----|------|
| NPS | DN | mm | inch | mm | inch | mm | inch | ISO | mm | inch | ISO | mm | inch |
| 1" | 25 | 17 | 0.669 | 17 | 0.669 | 70 | 2.76 | F07 | 102 | 4.02 | F10 | 90 | 3.54 |
| 1 1/2" | 40 | 22 | 0.866 | 22 | 0.866 | 70 | 2.76 | F07 | 102 | 4.02 | F10 | 90 | 3.54 |
| 2" | 50 | 22 | 0.866 | 22 | 0.866 | 70 | 2.76 | F07 | 102 | 4.02 | F10 | 90 | 3.54 |
| 2 1/2" | 65 | 22 | 0.866 | 22 | 0.866 | 70 | 2.76 | F07 | 102 | 4.02 | F10 | 90 | 3.54 |
| 3" | 80 | 22 | 0.866 | 22 | 0.866 | 70 | 2.76 | F07 | 102 | 4.02 | F10 | 90 | 3.54 |
| 4" | 100 | 27 | 1.063 | 27 | 1.063 | 70 | 2.76 | F07 | 125 | 4.92 | F12 | 90 | 3.54 |
| 5" | 125 | 36 | 1.417 | 36 | 1.417 | 102 | 4.02 | F10 | 140 | 5.51 | F14 | 130 | 5.12 |
| 6" | 150 | 36 | 1.417 | 36 | 1.417 | 102 | 4.02 | F10 | 140 | 5.51 | F14 | 130 | 5.12 |
| 8" | 200 | 36 | 1.417 | 36 | 1.417 | 102 | 4.02 | F10 | 140 | 5.51 | F14 | 130 | 5.12 |
| 10" | 250 | 46 | 1.811 | 46 | 1.811 | 165 | 6.50 | F16 | | | | 145 | 5.71 |
| 12" | 300 | 46 | 1.811 | 46 | 1.811 | 165 | 6.50 | F16 | | | | 145 | 5.71 |

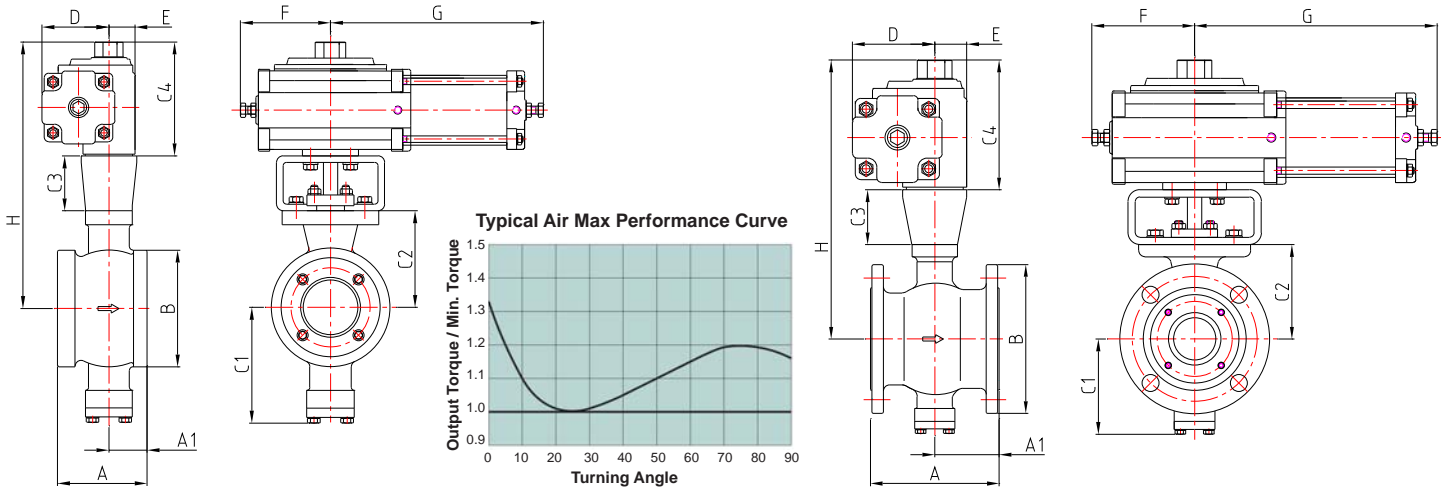


Actuator Mounting Dimensions Are for Reference and Cost Estimating Purposes Only!

Request Certified Drawing From the Factory Prior to Manufacturing Mounting Hardware.

Easy-Link Mounting Hardware Designed for ISO 5211.

This information is designed for Class 150 valves with soft seats. The same mounting may also work for other actuators and pressure classes. Consult factory for additional information.



Air-Max Cylinder actuators feature a high opening torque for on-off applications and also maintain a high operating torque throughout the full stroke for modulating service.

Class 150 Wafer Valves **Soft Seated** shown with Air-Max Spring Return pneumatic cylinder actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|------|------|-------|------|------|------|------|------|------|------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | ZDQ41-100 | 2.44 | 1.06 | 2.68 | 3.46 | 2.95 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.75 |
| 1 1/4" | 32 | ZDQ41-100 | 2.44 | 0.87 | 3.07 | 3.46 | 3.15 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.94 |
| 1 1/2" | 40 | ZDQ41-100 | 2.44 | 0.87 | 3.35 | 3.46 | 3.35 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.14 |
| 2" | 50 | ZDQ41-100 | 2.95 | 1.22 | 3.94 | 3.94 | 3.54 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.34 |
| 2 1/2" | 65 | ZDQ41-125 | 3.54 | 1.38 | 4.72 | 4.65 | 4.33 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 12.13 |
| 3" | 80 | ZDQ50-125 | 3.94 | 1.57 | 5.12 | 4.76 | 4.69 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.27 |
| 4" | 100 | ZDQ50-160 | 4.53 | 1.77 | 6.22 | 5.24 | 5.16 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.74 |
| 5" | 125 | ZDQ50-160 | 5.08 | 2.01 | 7.24 | 6.02 | 5.91 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 14.49 |
| 6" | 150 | ZDQ60-200 | 6.30 | 2.56 | 8.50 | 7.09 | 7.01 | 3.15 | 7.20 | 5.16 | 1.85 | 7.09 | 24.02 | 17.36 |
| 8" | 200 | ZDQ80-200 | 7.87 | 3.23 | 10.55 | 7.87 | 8.07 | 3.15 | 9.09 | 6.65 | 2.76 | 9.65 | 28.15 | 20.31 |
| 10" | 250 | ZDQ80-250 | 9.45 | 3.58 | 12.68 | 9.65 | 9.45 | 3.94 | 9.09 | 6.65 | 2.76 | 9.65 | 28.54 | 22.48 |

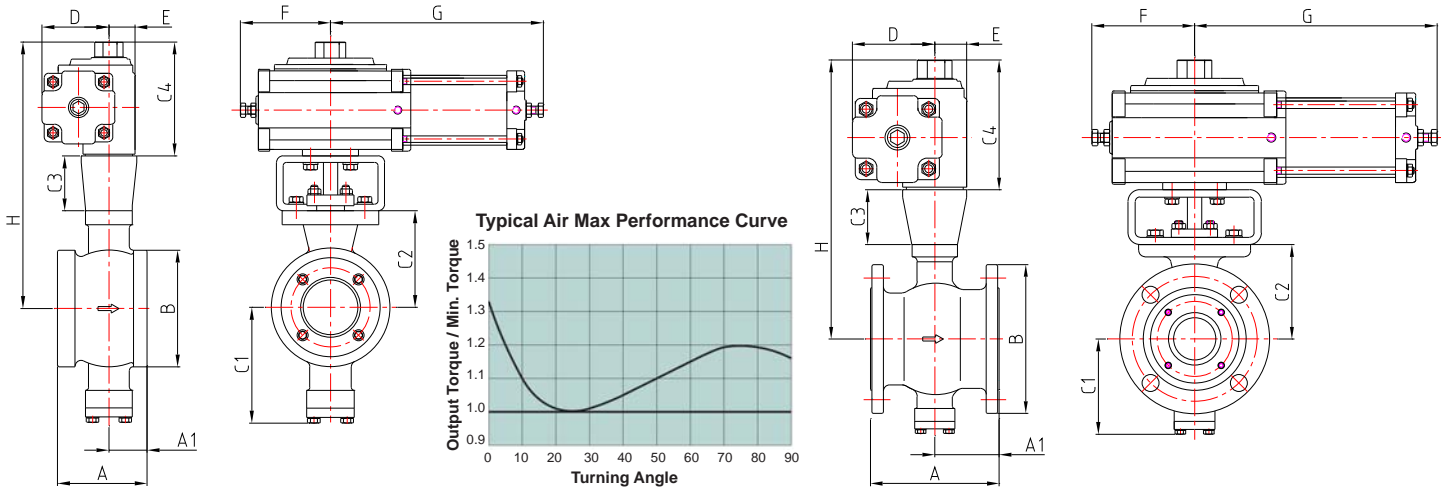
Class 150 Flanged Valves **Soft Seated** shown with Air-Max Spring Return pneumatic cylinder actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | ZDQ41-100 | 4.02 | 2.24 | 4.25 | 3.46 | 3.07 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.87 |
| 1 1/4" | 32 | ZDQ41-100 | 4.02 | 2.05 | 4.62 | 3.46 | 3.35 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.14 |
| 1 1/2" | 40 | ZDQ41-100 | 4.49 | 2.56 | 5.00 | 3.46 | 3.35 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.14 |
| 2" | 50 | ZDQ41-100 | 4.88 | 2.64 | 6.00 | 3.46 | 3.66 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.46 |
| 2 1/2" | 65 | ZDQ41-125 | 5.71 | 3.35 | 7.00 | 4.65 | 4.41 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 12.20 |
| 3" | 80 | ZDQ50-125 | 6.50 | 3.64 | 7.50 | 4.76 | 4.69 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.27 |
| 4" | 100 | ZDQ50-160 | 7.64 | 4.41 | 9.00 | 5.24 | 5.16 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.74 |
| 5" | 125 | ZDQ50-160 | 8.39 | 4.65 | 10.00 | 6.02 | 5.91 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 14.49 |
| 6" | 150 | ZDQ60-200 | 9.02 | 4.88 | 11.00 | 7.09 | 7.01 | 3.15 | 7.20 | 5.16 | 1.85 | 7.09 | 24.02 | 17.36 |
| 8" | 200 | ZDQ80-200 | 9.57 | 4.80 | 13.50 | 7.87 | 8.07 | 3.15 | 9.09 | 6.65 | 2.76 | 9.65 | 28.15 | 20.31 |
| 10" | 250 | ZDQ80-250 | 11.69 | 5.83 | 16.00 | 9.65 | 9.45 | 3.94 | 9.09 | 6.65 | 2.76 | 9.65 | 28.54 | 22.48 |
| 12" | 300 | ZDQ100-300 | 13.31 | 6.30 | 19.00 | 10.83 | 10.59 | 3.94 | 10.24 | 7.72 | 3.50 | 11.02 | 35.43 | 24.76 |

Class 300 Flanged Valves **Soft Seated** shown with Air-Max Spring Return pneumatic cylinder actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | ZDQ41-125 | 4.17 | 2.24 | 4.88 | 3.46 | 3.19 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.98 |
| 1 1/4" | 32 | ZDQ41-125 | 4.17 | 2.05 | 5.25 | 3.46 | 3.46 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.26 |
| 1 1/2" | 40 | ZDQ50-125 | 4.80 | 2.72 | 6.12 | 3.46 | 3.35 | 2.36 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 11.54 |
| 2" | 50 | ZDQ50-160 | 4.88 | 2.44 | 6.50 | 4.13 | 3.94 | 2.36 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 12.13 |
| 3" | 80 | ZDQ60-200 | 6.50 | 3.25 | 8.25 | 5.35 | 5.31 | 2.76 | 7.20 | 5.16 | 1.85 | 7.09 | 24.02 | 15.28 |
| 4" | 100 | ZDQ80-200 | 7.64 | 4.02 | 10.00 | 5.71 | 5.59 | 2.76 | 9.09 | 6.65 | 2.76 | 9.65 | 28.15 | 17.44 |
| 6" | 150 | ZDQ100-300 | 9.02 | 4.51 | 12.50 | 8.07 | 7.83 | 3.94 | 10.24 | 7.72 | 3.50 | 11.02 | 35.43 | 22.01 |
| 8" | 200 | ZDQ130-350 | 9.57 | 4.39 | 15.00 | 8.86 | 8.62 | 3.94 | 12.32 | 10.04 | 3.54 | 13.39 | 43.31 | 24.88 |
| 10" | 250 | ZDQ160-450 | 11.69 | 5.31 | 17.50 | 11.02 | 10.94 | 5.51 | 14.29 | 11.38 | 5.16 | 16.93 | 46.06 | 30.75 |
| 12" | 300 | ZDQ160-500 | 13.31 | 5.98 | 20.50 | 11.42 | 11.54 | 5.51 | | | | | | |

Actuator Sizings are for 80 psi supply air and for MC-pulp medium
 Certain dimensions such as bracket height may vary, consult factory for confirmation



Air-Max Cylinder actuators feature a high opening torque for on-off applications and also maintain a high operating torque throughout the full stroke for modulating service.

Class 150 Wafer Valves **Metal Seated** shown with Air-Max Spring Return pneumatic cylinder actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|------|------|-------|------|------|------|------|------|------|------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | ZDQ41-100 | 2.44 | 1.06 | 2.68 | 3.46 | 2.95 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.75 |
| 1 1/4" | 32 | ZDQ41-100 | 2.44 | 0.87 | 3.07 | 3.46 | 3.15 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.94 |
| 1 1/2" | 40 | ZDQ41-100 | 2.44 | 0.87 | 3.35 | 3.46 | 3.35 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.14 |
| 2" | 50 | ZDQ41-100 | 2.95 | 1.22 | 3.94 | 3.94 | 3.54 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.34 |
| 2 1/2" | 65 | ZDQ41-125 | 3.54 | 1.38 | 4.72 | 4.65 | 4.33 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 12.13 |
| 3" | 80 | ZDQ50-125 | 3.94 | 1.57 | 5.12 | 4.76 | 4.69 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.27 |
| 4" | 100 | ZDQ50-160 | 4.53 | 1.77 | 6.22 | 5.24 | 5.16 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.74 |
| 5" | 125 | ZDQ50-160 | 5.08 | 2.01 | 7.24 | 6.02 | 5.91 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 14.49 |
| 6" | 150 | ZDQ60-200 | 6.30 | 2.56 | 8.50 | 7.09 | 7.01 | 3.15 | 7.20 | 5.16 | 1.85 | 7.09 | 24.02 | 17.36 |
| 8" | 200 | ZDQ80-200 | 7.87 | 3.23 | 10.55 | 7.87 | 8.07 | 3.15 | 9.09 | 6.65 | 2.76 | 9.65 | 28.15 | 20.31 |
| 10" | 250 | ZDQ80-250 | 9.45 | 3.58 | 12.68 | 9.65 | 9.45 | 3.94 | 9.09 | 6.65 | 2.76 | 9.65 | 28.54 | 22.48 |

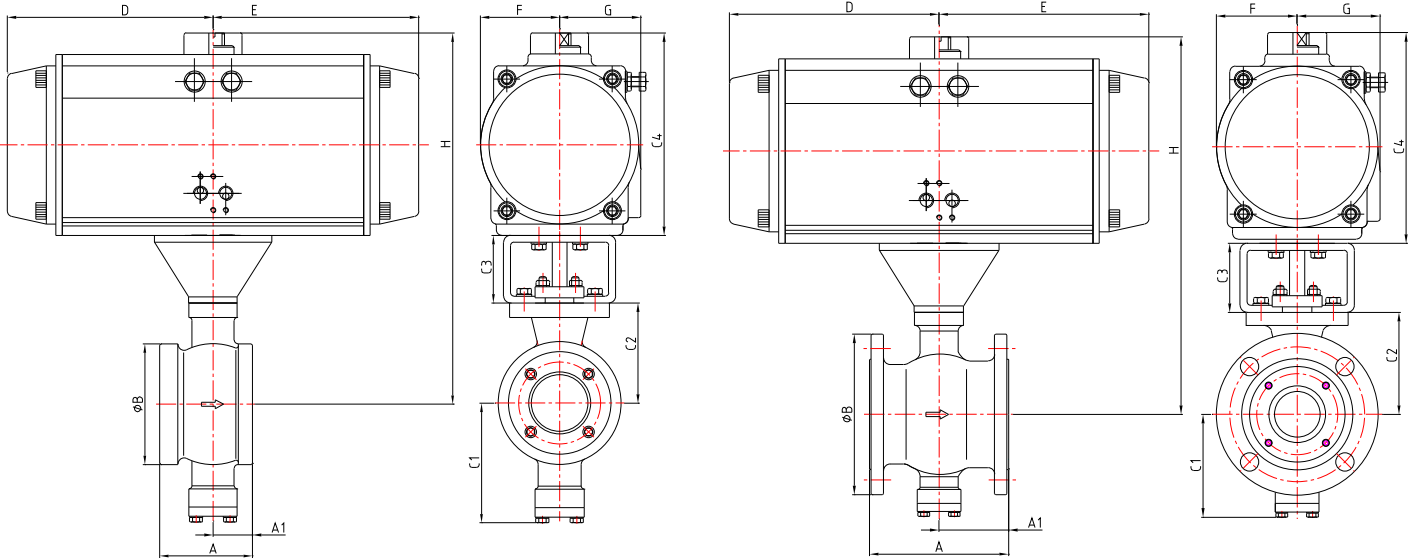
Class 150 Flanged Valves **Metal Seated** shown with Air-Max Spring Return pneumatic cylinder actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | ZDQ41-100 | 4.02 | 2.24 | 4.25 | 3.46 | 3.07 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.87 |
| 1 1/4" | 32 | ZDQ41-100 | 4.02 | 2.05 | 4.62 | 3.46 | 3.35 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.14 |
| 1 1/2" | 40 | ZDQ41-100 | 4.49 | 2.56 | 5.00 | 3.46 | 3.35 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.14 |
| 2" | 50 | ZDQ41-100 | 4.88 | 2.64 | 6.00 | 3.46 | 3.66 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.46 |
| 2 1/2" | 65 | ZDQ41-125 | 5.71 | 3.35 | 7.00 | 4.65 | 4.41 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 12.20 |
| 3" | 80 | ZDQ50-125 | 6.50 | 3.64 | 7.50 | 4.76 | 4.69 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.27 |
| 4" | 100 | ZDQ50-160 | 7.64 | 4.41 | 9.00 | 5.24 | 5.16 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 13.74 |
| 5" | 125 | ZDQ50-160 | 8.39 | 4.65 | 10.00 | 6.02 | 5.91 | 2.76 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 14.49 |
| 6" | 150 | ZDQ60-200 | 9.02 | 4.88 | 11.00 | 7.09 | 7.01 | 3.15 | 7.20 | 5.16 | 1.85 | 7.09 | 24.02 | 17.36 |
| 8" | 200 | ZDQ80-200 | 9.57 | 4.80 | 13.50 | 7.87 | 8.07 | 3.15 | 9.09 | 6.65 | 2.76 | 9.65 | 28.15 | 20.31 |
| 10" | 250 | ZDQ80-250 | 11.69 | 5.83 | 16.00 | 9.65 | 9.45 | 3.94 | 9.09 | 6.65 | 2.76 | 9.65 | 28.54 | 22.48 |
| 12" | 300 | ZDQ100-300 | 13.31 | 6.30 | 19.00 | 10.83 | 10.59 | 3.94 | 10.24 | 7.72 | 3.50 | 11.02 | 35.43 | 24.76 |

Class 300 Flanged Valves **Metal Seated** shown with Air-Max Spring Return pneumatic cylinder actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | ZDQ41-125 | 4.17 | 2.24 | 4.88 | 3.46 | 3.19 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 10.98 |
| 1 1/4" | 32 | ZDQ41-125 | 4.17 | 2.05 | 5.25 | 3.46 | 3.46 | 2.36 | 5.43 | 3.54 | 1.38 | 5.71 | 16.73 | 11.26 |
| 1 1/2" | 40 | ZDQ50-125 | 4.80 | 2.72 | 6.12 | 3.46 | 3.35 | 2.36 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 11.54 |
| 2" | 50 | ZDQ50-160 | 4.88 | 2.44 | 6.50 | 4.13 | 3.94 | 2.36 | 5.83 | 4.25 | 1.69 | 6.30 | 20.47 | 12.13 |
| 3" | 80 | ZDQ60-200 | 6.50 | 3.25 | 8.25 | 5.35 | 5.31 | 2.76 | 7.20 | 5.16 | 1.85 | 7.09 | 24.02 | 15.28 |
| 4" | 100 | ZDQ80-200 | 7.64 | 4.02 | 10.00 | 5.71 | 5.59 | 2.76 | 9.09 | 6.65 | 2.76 | 9.65 | 28.15 | 17.44 |
| 6" | 150 | ZDQ100-300 | 9.02 | 4.51 | 12.50 | 8.07 | 7.83 | 3.94 | 10.24 | 7.72 | 3.50 | 11.02 | 35.43 | 22.01 |
| 8" | 200 | ZDQ130-350 | 9.57 | 4.39 | 15.00 | 8.86 | 8.62 | 3.94 | 12.32 | 10.04 | 3.54 | 13.39 | 43.31 | 24.88 |
| 10" | 250 | ZDQ160-450 | 11.69 | 5.31 | 17.50 | 11.02 | 10.94 | 5.51 | 14.29 | 11.38 | 5.16 | 16.93 | 46.06 | 30.75 |
| 12" | 300 | ZDQ160-500 | 13.31 | 5.98 | 20.50 | 11.42 | 11.54 | 5.51 | | | | | | |

Actuator Sizings are for 80 psi supply air and for MC-pulp medium
 Certain dimensions such as bracket height may vary, consult factory for confirmation



Class 150 Wafer Valves **Soft Seated** shown with Spring Return Rack & Pinion Pneumatic Actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|------|------|-------|------|------|------|-------|-------|-------|------|------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | SR092-10 | 2.44 | 1.06 | 2.68 | 3.46 | 2.95 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 11.88 |
| 1 1/4" | 32 | SR092-10 | 2.44 | 0.87 | 3.07 | 3.46 | 3.15 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.08 |
| 1 1/2" | 40 | SR092-10 | 2.44 | 0.87 | 3.35 | 3.46 | 3.35 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.28 |
| 2" | 50 | SR092-10 | 2.95 | 1.22 | 3.94 | 3.94 | 3.54 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.47 |
| 2 1/2" | 65 | SR092-11 | 3.54 | 1.38 | 4.72 | 4.65 | 4.33 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 13.26 |
| 3" | 80 | SR125-10 | 3.94 | 1.57 | 5.12 | 4.76 | 4.69 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 15.12 |
| 4" | 100 | SR125-10 | 4.53 | 1.77 | 6.22 | 5.24 | 5.16 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 15.59 |
| 5" | 125 | SR160-08 | 5.08 | 2.01 | 7.24 | 6.02 | 5.91 | 5.12 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 19.57 |
| 6" | 150 | SR190-10 | 6.30 | 2.56 | 8.50 | 7.09 | 7.01 | 5.12 | 10.24 | 10.40 | 10.40 | 4.06 | 4.06 | 22.37 |
| 8" | 200 | SR210-10 | 7.87 | 3.23 | 10.55 | 7.87 | 8.07 | 5.12 | 11.22 | 11.10 | 11.10 | 4.45 | 4.45 | 24.41 |
| 10" | 250 | SR270-12 | 9.45 | 3.58 | 12.68 | 9.65 | 9.45 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 29.17 |

Class 150 Flanged Valves **Soft Seated** shown with Spring Return Rack & Pinion Pneumatic Actuator

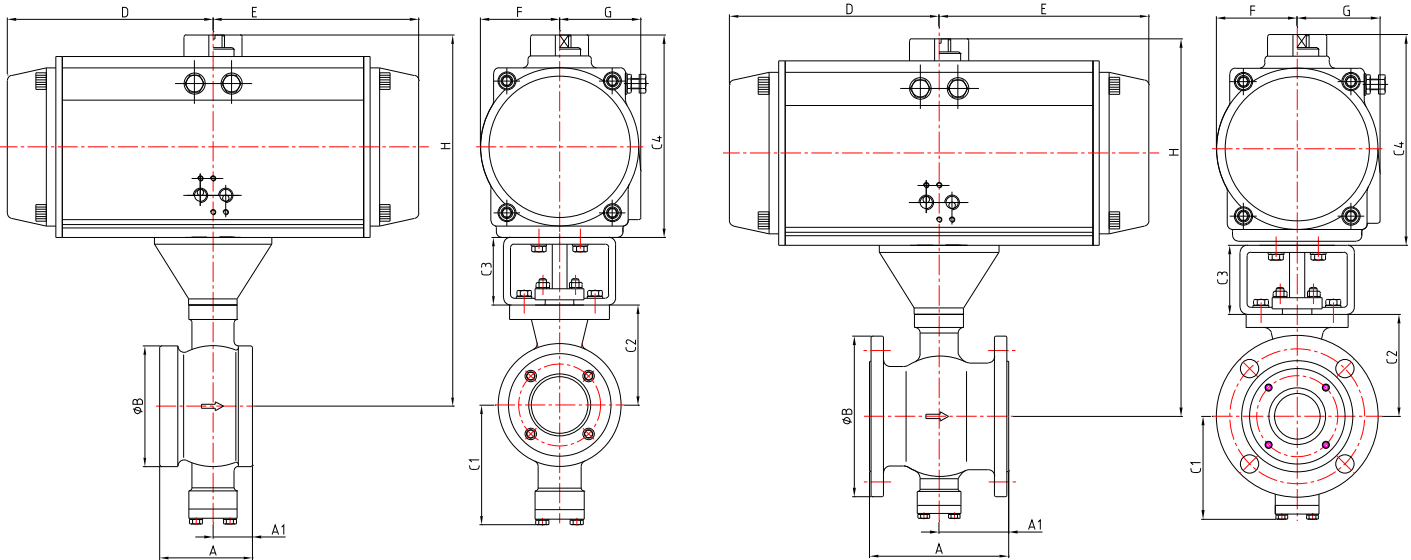
| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | SR092-10 | 4.02 | 2.24 | 4.25 | 3.46 | 3.07 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.00 |
| 1 1/4" | 32 | SR092-10 | 4.02 | 2.05 | 4.62 | 3.46 | 3.15 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.08 |
| 1 1/2" | 40 | SR092-10 | 4.49 | 2.56 | 5.00 | 3.46 | 3.35 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.28 |
| 2" | 50 | SR092-10 | 4.88 | 2.64 | 6.00 | 3.94 | 3.66 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.59 |
| 2 1/2" | 65 | SR092-11 | 5.71 | 3.35 | 7.00 | 4.65 | 4.41 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 13.34 |
| 3" | 80 | SR125-10 | 6.50 | 3.64 | 7.50 | 4.76 | 4.69 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 15.12 |
| 4" | 100 | SR125-10 | 7.64 | 4.41 | 9.00 | 5.24 | 5.16 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 15.59 |
| 5" | 125 | SR160-08 | 8.39 | 4.65 | 10.00 | 6.02 | 5.91 | 5.12 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 19.57 |
| 6" | 150 | SR190-10 | 9.02 | 4.88 | 11.00 | 7.09 | 7.01 | 5.12 | 10.24 | 10.40 | 10.40 | 4.06 | 4.06 | 22.37 |
| 8" | 200 | SR210-10 | 9.57 | 4.80 | 13.50 | 7.87 | 8.07 | 5.12 | 11.22 | 11.10 | 11.10 | 4.45 | 4.45 | 24.41 |
| 10" | 250 | SR270-12 | 11.69 | 5.83 | 16.00 | 9.65 | 9.45 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 29.17 |
| 12" | 300 | SR300-12 | 13.31 | 6.30 | 19.00 | 11.42 | 10.59 | 5.71 | 14.90 | 14.60 | 14.60 | 6.40 | 6.40 | 31.20 |

Class 300 Flanged Valves **Soft Seated** shown with Spring Return Rack & Pinion Pneumatic Actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | SR092-10 | 4.17 | 2.24 | 4.88 | 3.46 | 3.19 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.12 |
| 1 1/2" | 40 | SR105-09 | 4.80 | 2.72 | 6.12 | 3.46 | 3.35 | 3.54 | 6.02 | 5.28 | 5.28 | 2.26 | 2.52 | 12.91 |
| 2" | 50 | SR105-10 | 4.88 | 2.44 | 6.50 | 4.13 | 3.94 | 3.54 | 6.02 | 5.28 | 5.28 | 2.26 | 2.52 | 13.50 |
| 3" | 80 | SR140-10 | 6.50 | 3.25 | 8.25 | 5.35 | 5.31 | 4.72 | 7.54 | 7.68 | 7.68 | 2.95 | 3.03 | 17.57 |
| 4" | 100 | SR160-09 | 7.64 | 4.02 | 10.00 | 5.71 | 5.59 | 4.72 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 18.85 |
| 6" | 150 | SR240-09 | 9.02 | 4.51 | 12.50 | 8.07 | 7.83 | 5.71 | 12.56 | 11.85 | 11.85 | 5.12 | 5.12 | 26.10 |
| 8" | 200 | SR270-12 | 9.57 | 4.39 | 15.00 | 8.66 | 8.62 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 28.34 |
| 10" | 250 | SRB-350-10 | 11.69 | 5.31 | 17.50 | 10.55 | 10.94 | 7.28 | 17.00 | 16.95 | 16.95 | 7.50 | 7.50 | 35.22 |
| 12" | 300 | SRB400-11 | 13.31 | 5.98 | 20.50 | 11.42 | 11.54 | 7.28 | 19.40 | 18.20 | 18.20 | 10.15 | 10.15 | 38.22 |

Actuator Sizings are for 80 psi supply air and for MC-pulp medium

Certain dimensions such as bracket height may vary, consult factory for confirmation



Class 150 Wafer Valves **Metal Seated** shown with Spring Return Rack & Pinion Pneumatic Actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|------|------|-------|------|------|------|-------|-------|-------|------|------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | SR092-12 | 2.44 | 1.06 | 2.68 | 3.46 | 2.95 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 11.88 |
| 1 1/2" | 40 | SR092-10 | 2.44 | 0.87 | 3.35 | 3.46 | 3.35 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.28 |
| 2" | 50 | SR105-12 | 2.95 | 1.22 | 3.94 | 3.94 | 3.54 | 3.54 | 6.02 | 5.28 | 5.28 | 2.26 | 2.52 | 13.10 |
| 2 1/2" | 65 | SR125-12 | 3.54 | 1.38 | 4.72 | 4.65 | 4.33 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 14.76 |
| 3" | 80 | SR125-12 | 3.94 | 1.57 | 5.12 | 4.76 | 4.69 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 15.12 |
| 4" | 100 | SR140-12 | 4.53 | 1.77 | 6.22 | 5.24 | 5.16 | 3.54 | 7.54 | 7.68 | 7.68 | 2.95 | 3.03 | 16.24 |
| 5" | 125 | SR160-10 | 5.08 | 2.01 | 7.24 | 6.02 | 5.91 | 5.12 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 19.57 |
| 6" | 150 | SR190-10 | 6.30 | 2.56 | 8.50 | 7.09 | 7.01 | 5.12 | 10.24 | 10.40 | 10.40 | 4.06 | 4.06 | 22.37 |
| 8" | 200 | SR210-10 | 7.87 | 3.23 | 10.55 | 7.87 | 8.07 | 5.12 | 11.22 | 11.10 | 11.10 | 4.45 | 4.45 | 24.41 |
| 10" | 250 | SR270-10 | 9.45 | 3.58 | 12.68 | 9.65 | 9.45 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 29.17 |

Class 150 Flanged Valves **Metal Seated** shown with Spring Return Rack & Pinion Pneumatic Actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | SR092-12 | 4.02 | 2.24 | 4.25 | 3.46 | 3.07 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.00 |
| 1 1/2" | 40 | SR092-10 | 4.49 | 2.56 | 5.00 | 3.46 | 3.35 | 3.54 | 5.39 | 5.16 | 5.16 | 1.97 | 2.30 | 12.28 |
| 2" | 50 | SR105-12 | 4.88 | 2.64 | 6.00 | 3.94 | 3.66 | 3.54 | 6.02 | 5.28 | 5.28 | 2.26 | 2.52 | 13.22 |
| 2 1/2" | 65 | SR125-12 | 5.71 | 3.35 | 7.00 | 4.65 | 4.41 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 14.84 |
| 3" | 80 | SR125-12 | 6.50 | 3.64 | 7.50 | 4.76 | 4.69 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 15.12 |
| 4" | 100 | SR140-12 | 7.64 | 4.41 | 9.00 | 5.24 | 5.16 | 3.54 | 7.54 | 7.68 | 7.68 | 2.95 | 3.03 | 16.24 |
| 5" | 125 | SR160-10 | 8.39 | 4.65 | 10.00 | 6.02 | 5.91 | 5.12 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 19.57 |
| 6" | 150 | SR190-10 | 9.02 | 4.88 | 11.00 | 7.09 | 7.01 | 5.12 | 10.24 | 10.40 | 10.40 | 4.06 | 4.06 | 22.37 |
| 8" | 200 | SR210-10 | 9.57 | 4.80 | 13.50 | 7.87 | 8.07 | 5.12 | 11.22 | 11.10 | 11.10 | 4.45 | 4.45 | 24.41 |
| 10" | 250 | SR270-10 | 11.69 | 5.83 | 16.00 | 9.65 | 9.45 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 29.17 |
| 12" | 300 | SRB350-09 | 13.31 | 6.30 | 19.00 | 11.42 | 10.59 | 5.71 | 17.00 | 16.95 | 16.95 | 7.50 | 7.50 | 33.30 |

Class 300 Flanged Valves **Metal Seated** shown with Spring Return Rack & Pinion Pneumatic Actuator

| SIZE | | Spring Return Actuator Model | A | A1 | B | C1 | C2 | C3 | C4 | D | E | F | G | H |
|--------|-----|------------------------------|------|------|-------|------|------|------|-------|-------|-------|------|------|-------|
| NPS | DN | | | | | | | | | | | | | |
| 1" | 25 | SR105-10 | 4.17 | 2.24 | 4.92 | 3.46 | 3.19 | 3.54 | 6.02 | 5.28 | 5.28 | 2.26 | 2.52 | 12.75 |
| 1 1/2" | 40 | SR125-09 | 4.80 | 2.72 | 6.10 | 3.46 | 3.35 | 3.54 | 6.89 | 5.83 | 5.83 | 2.66 | 2.93 | 13.78 |
| 2" | 50 | SR125-09 | 4.88 | 2.44 | 6.50 | 4.13 | 3.94 | 3.54 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 16.02 |
| 3" | 80 | SR160-10 | 6.50 | 3.25 | 8.27 | 5.35 | 5.31 | 4.72 | 8.54 | 9.02 | 9.02 | 3.43 | 3.43 | 18.57 |
| 4" | 100 | SR190-09 | 7.64 | 4.02 | 10.04 | 5.71 | 5.59 | 4.72 | 10.24 | 10.40 | 10.40 | 4.06 | 4.06 | 20.55 |
| 6" | 150 | SR270-10 | 9.02 | 4.51 | 12.60 | 8.07 | 7.83 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 27.55 |
| 8" | 200 | SRB350-09 | 9.57 | 4.39 | 14.96 | 8.66 | 8.62 | 5.71 | 14.01 | 13.90 | 13.90 | 5.79 | 5.79 | 28.34 |

Actuator Sizings are for 80 psi supply air and for MC-pulp medium

Certain dimensions such as bracket height may vary, consult factory for confirmation

| | | | | | | | | | | | | | |
|------|----|----|---|----|----|----|----|---|----|----|----|----|---|
| Size | RV | F1 | - | 01 | SS | 51 | S7 | B | 56 | R | V | N | |
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | * |
| Size | RV | F1 | - | 03 | CS | 51 | S7 | B | 56 | R | V | N | |
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | * |
| Size | RV | F1 | - | 01 | SS | 50 | SL | A | DO | R | V | N | |
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | * |

Model Numbers
Are Shown For
the More Standard
Inventory Valves

1. Valve Sizes

| | | | | | | | | | | | |
|-----|--------|------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 025 | 1" | DN25 | 080 | 3" | DN80 | 300 | 12" | DN300 | 550 | 22" | DN550 |
| 032 | 1 1/4" | DN32 | 100 | 4" | DN100 | 350 | 14" | DN350 | 600 | 24" | DN600 |
| 040 | 1 1/2" | DN40 | 150 | 6" | DN150 | 400 | 16" | DN400 | 650 | 26" | DN650 |
| 050 | 2" | DN50 | 200 | 8" | DN200 | 450 | 18" | DN450 | 700 | 28" | DN700 |
| 065 | 2 1/2" | DN65 | 250 | 10" | DN250 | 500 | 20" | DN500 | 750 | 30" | DN750 |

2. Valve Series

| | | |
|----|--------------------|-------|
| RV | Segment Ball Valve | * * * |
|----|--------------------|-------|

3. Connection Type

| | | |
|----|----------------------|-------|
| F1 | Flanged, Raised Face | * * * |
| D1 | Wafer, Raised Face | |

4. Pressure Rating

| | | |
|----|-------|-----|
| 01 | 150 # | * * |
| 03 | 300 # | * |
| 06 | 600 # | |

5. Body Material

| | | |
|----|-----------------------------|-----|
| CS | WCB / Carbon Steel | * |
| S4 | CF8 / SS304 | |
| S3 | CF3 / SS304L | |
| SS | CF8M / SS316 | * * |
| SL | CF3M / SS316L | |
| S1 | CG8M / SS317 | |
| LC | LCB / Low Temp Carbon Steel | |
| C6 | WC6 / Alloy Steel | |
| DP | Duplex 2205 | |

6. Ball Material and Treatment

Select both material and treatment

| Ball Material | | Surface Treatment | |
|---------------|------------|-------------------|--------------------|
| 3 | CF8 | 0 | No Treatment * |
| 4 | CF3 | 1 | Hard Chrome * * |
| 5 | CF8M * * * | 3 | Nickle Based Alloy |
| 6 | CF3M | 4 | Tungsten Carbide |
| 7 | CG8M | 5 | Nitriding |
| 8 | Duplex SS | 6 | Stellite |

7. Stem Material

| | | |
|----|---------------|-----|
| S4 | CF8 / SS304 | |
| S3 | CF3 / SS304L | |
| SS | CF8M / SS316 | |
| SL | CF3M / SS316L | * |
| S1 | CG8M / SS317 | |
| S7 | 17-4Ph | * * |
| DP | Duplex 2205 | |

8. Seat Style Selection

| | | |
|---|----------------------|-----|
| A | Soft Seat | * |
| B | Standard Metal Seat | * * |
| C | High Temp Metal Seat | |

9. Seat Material Selection

Metal Seat Material & Treatment

Select both material and treatment, metal seat only

| Seat Material | | Surface Treatment | |
|---------------|-------------|-------------------|--------------------|
| 3 | 304 | 1 | Hard Chrome |
| 4 | 304L | 2 | Chrome Carbide |
| 5 | 316 * * | 3 | Nickle Based Alloy |
| 6 | 316L | 4 | Tungsten Carbide |
| 7 | 317 | 5 | Nitriding |
| 8 | Duplex 2205 | 6 | Stellite * * |

Soft Seat Material

Soft seat only

| Seat Material | |
|---------------|----------|
| TO | PTFE |
| FO | TFM |
| NO | Nylon |
| RO | RPTFE |
| PO | PEEK |
| DO | DEVLON * |
| Others | S/F |

10. Packing Material

| | | |
|---|----------|-------|
| T | PTFE | |
| R | RTFE | * * * |
| F | TFM | |
| G | Graphite | |

11. O-Ring Material

| | | |
|---|-----------|-----------------------------------|
| E | EPDM, | -20 ~ 248 °F (-29 ~ 120 °C) |
| V | VITON, | -20 ~ 356 °F (-29 ~ 180 °C) * * * |
| A | PFA, | -20 ~ 446 °F (-29 ~ 230 °C) |
| F | FEP, | -20 ~ 320 °F (-29 ~ 160 °C) |
| G | Graphite, | -20 ~ 797 °F (-29 ~ 425 °C) |

12. Operator

| | | |
|---|--------------------|-------|
| L | Locking Lever | |
| P | 10 Position Handle | |
| G | Gear Operator | |
| A | Actuator | |
| N | Bare Stem | * * * |

Flo-Tite's Sentinel Series

Special Alloy Options - Consult Factory



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