



- 200 psi (2" to 12") and 150 psi (14"-30") bubble tight shut-off
- Long stem design allows for 2" insulation
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- Completely assembled and tested, ready for installation

Application

These valves are designed to meet the needs of HVAC and commercial applications requiring bubble tight shut-off for liquids. Typical applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control, bypass and process control applications. Designed for use in Victaulic piping systems when mated to Victaulic 41 series flange nipples.

Jobsite Note

Valves should be stored in a weather protected area prior to construction. Complete installation recommendations can be found in Belimo's Installation and Maintenance Instructions for F6/F7...HD/HDU Butterfly Valves.

| Technical Data | |
|-------------------------------------|--|
| Service | chilled, hot water, 60% glycol |
| Flow characteristic | modified equal percentage |
| Action | 90° rotation |
| Sizes | 2" to 30" |
| Type of end fitting | for use with ANSI 125/150 flanges |
| Materials | |
| Body | ductile iron ASTM A536 |
| Disc | 304 stainless steel |
| Seat | EPDM standard |
| Shaft | 416 stainless steel |
| O-ring | EPDM |
| Upper bushing | RPTFE |
| Middle bushings | RPTFE |
| Lower bushing | RPTFE |
| Handle material | mild steel |
| Gear operator materials | |
| Housing | ductile iron |
| Gears | hardened steel |
| Media temperature range | -22°F to 250°F [-30°C to 120°C] |
| Operation ambient temperature range | -22°F to 122°F [-30°C to 50°C] |
| Body pressure rating | ASME/ANSI Class 125/150 (200 psi at -30°F to 275°F) |
| Close-off pressure | 200 psi (2"-12"), 150 psi (14"-30") |
| Rangeability | 10:1 (for 30° to 70° range) |
| Maximum velocity | 12 FPS |

| C _v 90° | C _v 60° | Valve Nominal Size | | Type | Manual Operators | |
|-----------------------|-----------------------|-----------------------|------------|---------|------------------|---------------|
| | | IN | DN [mm] | 2-way | Handle | Gear Wheel OP |
| 115 | 44 | 2" | 50 | F650HD | | |
| 196 | 75 | 2½" | 65 | F665HD | | |
| 302 | 116 | 3" | 80 | F680HD | | |
| 600 | 230 | 4" | 100 | F6100HD | | |
| 1022 | 392 | 5" | 125 | F6125HD | | |
| 1579 | 605 | 6" | 150 | F6150HD | | |
| 3136 | 1202 | 8" | 200 | F6200HD | | |
| 5340 | 2047 | 10" | 250 | F6250HD | | |
| 8250 | 3062 | 12" | 300 | F6300HD | | |
| 11917 | 4568 | 14" | 350 | F6350HD | | |
| 16388 | 6282 | 16" | 400 | F6400HD | | |
| 21705 | 8320 | 18" | 450 | F6450HD | | |
| 27908 | 10698 | 20" | 500 | F6500HD | | |
| 43116 | 16528 | 24" | 600 | F6600HD | | |
| 73426 | 28146 | 30" | 750 | F6750HD | | |

| Valve | Size | C _v | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
|---------|--------|----------------|------|------|------|------|-------|-------|-------|-------|-------|
| F650HD | 2" | 115 | 0.06 | 3 | 7 | 15 | 27 | 44 | 70 | 105 | 115 |
| F665HD | 2-1/2" | 196 | 0.1 | 6 | 12 | 25 | 45 | 75 | 119 | 178 | 196 |
| F680HD | 3" | 302 | 0.2 | 9 | 18 | 39 | 70 | 116 | 183 | 275 | 302 |
| F6100HD | 4" | 600 | 0.3 | 17 | 36 | 78 | 139 | 230 | 364 | 546 | 600 |
| F6125HD | 5" | 1022 | 0.5 | 29 | 61 | 133 | 237 | 392 | 620 | 930 | 1022 |
| F6150HD | 6" | 1579 | 0.8 | 45 | 95 | 205 | 366 | 605 | 958 | 1437 | 1579 |
| F6200HD | 8" | 3136 | 2 | 89 | 188 | 408 | 727 | 1202 | 1903 | 2854 | 3136 |
| F6250HD | 10" | 5340 | 3 | 151 | 320 | 694 | 1237 | 2047 | 3240 | 4859 | 5340 |
| F6300HD | 12" | 8250 | 4 | 234 | 495 | 1072 | 1911 | 3062 | 5005 | 7507 | 8250 |
| F6350HD | 14" | 11917 | 6 | 338 | 715 | 1549 | 2761 | 4568 | 7230 | 10844 | 11917 |
| F6400HD | 16" | 16388 | 8 | 464 | 983 | 2130 | 3797 | 6282 | 9942 | 14913 | 16388 |
| F6450HD | 18" | 21705 | 11 | 615 | 1302 | 2822 | 5028 | 8320 | 13168 | 19752 | 21705 |
| F6500HD | 20" | 27908 | 14 | 791 | 1674 | 3628 | 6465 | 10698 | 16931 | 25396 | 27908 |
| F6600HD | 24" | 43116 | 22 | 1222 | 2587 | 5605 | 9989 | 16528 | 26157 | 39236 | 43116 |
| F6750HD | 30" | 73426 | 37 | 2081 | 4405 | 9545 | 17011 | 28146 | 44545 | 66818 | 73426 |

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F6...HD Butterfly Valves 2"–30" Ductile Iron Lug Body

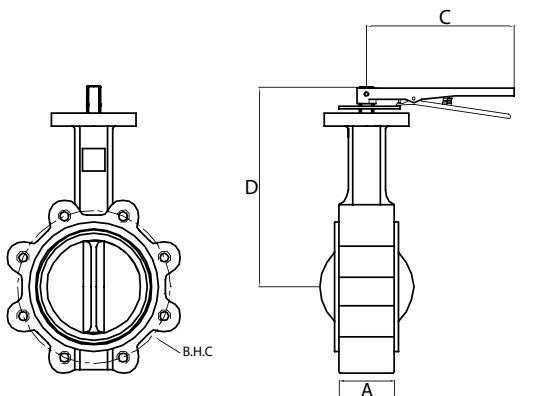
Resilient Seat, 304 Stainless Disc with Manual Handle or Gear Wheel Operator



Maximum Dimensions (Inches)

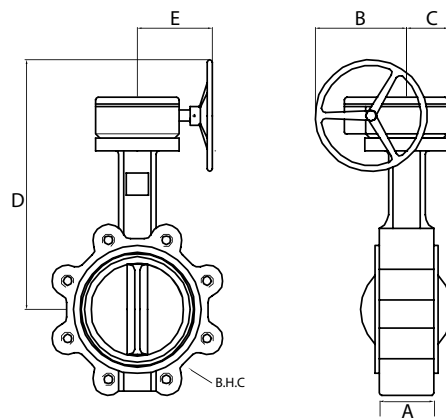
| Valve | Size | Cv 90° | Cv 60° | A | B | C | D | E | BHC | No. of Holes | Lug Bolt | Operator | Close-Off (PSI) | Wt. lbs (kg) |
|---------|------|--------|--------|------|-------|-------|-------|-------|-------|--------------|------------|----------|-----------------|--------------|
| F650HD | 2" | 115 | 44 | 1.69 | n/a | 10.44 | 7.68 | n/a | 4.75 | 4 | 5/8-11UNC | HND01 | 200 | 11.2 [5.1] |
| F665HD | 2½" | 196 | 75 | 1.81 | n/a | 10.44 | 8.27 | n/a | 5.5 | 4 | 5/8-11UNC | HND01 | 200 | 13.2 [6.0] |
| F680HD | 3" | 302 | 116 | 1.81 | n/a | 10.44 | 8.54 | n/a | 6 | 4 | 5/8-11UNC | HND01 | 200 | 13.2 [6.1] |
| F6100HD | 4" | 600 | 230 | 2.06 | n/a | 11.81 | 9.45 | n/a | 7.5 | 8 | 5/8-11UNC | HND02 | 200 | 19.2 [8.7] |
| F6125HD | 5" | 1022 | 392 | 2.19 | n/a | 11.81 | 9.76 | n/a | 8.5 | 8 | 3/4-10UNC | HND02 | 200 | 24.2 [11.0] |
| F6150HD | 6" | 1579 | 605 | 2.19 | n/a | 11.81 | 10.2 | n/a | 9.5 | 8 | 3/4-10UNC | HND02 | 200 | 29.2 [13.2] |
| F6200HD | 8" | 3136 | 1202 | 2.38 | n/a | 14.06 | 11.93 | n/a | 11.75 | 8 | 3/4-10UNC | HND03 | 200 | 43.4 [19.7] |
| Valve | Size | Cv 90° | Cv 60° | A | B | C | D | E | BHC | No. of Holes | Lug Bolt | Operator | Close-Off (PSI) | Wt. lbs (kg) |
| F650HD | 2" | 115 | 44 | 1.69 | 4.70 | 2.10 | 10.71 | 6.45 | 4.75 | 4 | 5/8-11UNC | GW01 | 200 | 19 [8.6] |
| F665HD | 2½" | 196 | 75 | 1.81 | 4.70 | 2.10 | 11.22 | 6.45 | 5.5 | 4 | 5/8-11UNC | GW01 | 200 | 21 [9.5] |
| F680HD | 3" | 302 | 116 | 1.81 | 4.70 | 2.10 | 11.50 | 6.45 | 6 | 4 | 5/8-11UNC | GW01 | 200 | 21 [9.5] |
| F6100HD | 4" | 600 | 230 | 2.06 | 4.70 | 2.10 | 12.17 | 6.45 | 7.5 | 8 | 5/8-11UNC | GW02 | 200 | 27 [12.2] |
| F6125HD | 5" | 1022 | 392 | 2.19 | 4.70 | 2.10 | 12.72 | 6.45 | 8.5 | 8 | 3/4-10UNC | GW02 | 200 | 32 [14.5] |
| F6150HD | 6" | 1579 | 605 | 2.19 | 4.70 | 2.10 | 13.19 | 6.45 | 9.5 | 8 | 3/4-10UNC | GW02 | 200 | 37 [16.7] |
| F6200HD | 8" | 3136 | 1202 | 2.38 | 8.20 | 3.10 | 17.50 | 9.20 | 11.75 | 8 | 3/4-10UNC | GW03 | 200 | 58 [26.3] |
| F6250HD | 10" | 5340 | 2047 | 2.69 | 8.20 | 3.10 | 18.72 | 9.20 | 14.25 | 12 | 7/8-9UNC | GW03 | 200 | 83 [37.6] |
| F6300HD | 12" | 8250 | 3062 | 3.06 | 13.00 | 3.10 | 20.55 | 9.20 | 17 | 12 | 7/8-9UNC | GW04 | 200 | 130.0 [59.0] |
| F6350HD | 14" | 11917 | 4568 | 3.06 | 13.00 | 3.10 | 21.77 | 9.20 | 18.75 | 12 | 1-8UNC | GW04 | 150 | 179.5 [81.4] |
| F6400HD | 16" | 16388 | 6282 | 4.00 | 13.00 | 5.00 | 25.69 | 11.40 | 21.25 | 16 | 1-8UNC | GW05 | 150 | 270 [122.4] |
| F6450HD | 18" | 21705 | 8320 | 4.50 | 13.00 | 5.00 | 26.56 | 11.40 | 22.75 | 16 | 1 1/8-7UNC | GW06 | 150 | 314 [142.4] |
| F6500HD | 20" | 27908 | 10698 | 5.00 | 15.50 | 6.80 | 32.99 | 11.40 | 25 | 20 | 1 1/8-7UNC | GW07 | 150 | 477 [216.5] |
| F6600HD | 24" | 43116 | 16528 | 6.06 | 16.20 | 6.80 | 36.22 | 12.20 | 29.5 | 20 | 1 1/4-7UNC | GW08 | 150 | 725 [329.0] |
| F6750HD | 30" | 73426 | 28146 | 6.50 | 17.70 | 8.10 | 40.55 | 13.80 | 36 | 28 | 1 1/4-7UNC | GW09 | 150 | 1253 [568.1] |

Dimensions Manual Handle



Belimovalue_handle_assyModel

Dimensions Gear Wheel



Belimovalue_handle_assyModel

Dimension "A" is compressed, add 0.125" for relaxed state.

Application Notes

1. Valves are rated at 200 psi differential pressure in the closed position (SY... 150 psi 14"+).
2. Valves are furnished with lugs tapped for use with ANSI Class 125/150 flanges. Installation flanges and hardware are not included.
3. 2-way assemblies are furnished assembled and tested, ready for installation.