



- Bubble tight shut-off to ANSI Class 150 Standards
- Long stem design allows for 2" insulation minimum
- Valve face-to-face dimensions comply with API 609 & MSS-SP-68
- Designed to be installed between ASME/ANSI B16.5 Flanges
- Completely assembled and tested, ready for installation

**Application**

These valves are designed to meet the needs of HVAC and Commercial applications requiring positive shut-off for liquids at higher pressures and temperatures. Typical applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control, bypass and process control applications.

**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	
Media service	chilled, hot water, 60% glycol, steam to 50 psi
Valve service	double dead end service
Flow characteristic	modified equal percentage, unidirectional
Recommended install	SUS (Seat Up Stream)
Action	quarter turn, mechanically limited
Sizes	2" to 24"
Type of end fitting	for use with ASME/ANSI B16.5 flanges
Materials	
Body	carbon steel full lug
Disc	316 stainless steel
Seat	RPTFE
Shaft	17-4 PH stainless
Gland seal	PTFE
Bushings	glass backed PTFE
Handle Material	ductile iron
Gear Operator Materials	
Housing	ductile iron
Gears	hardened steel
Media temperature range	ANSI Class 150 limitations
Operation ambient temperature range	-22°F to 122°F [-30°C to 50°C]
Body pressure rating	ASME/ANSI Class 150 limitations
Close-off pressure	ANSI Class 150 to 285 psi @ 100°F
Rangeability	10:1 (for 30 deg to 70 deg range)
Maximum velocity	32 FPS

C <sub>v</sub> 90°	C <sub>v</sub> 60°	Valve Nominal Size		Type	Manual Operators	
		IN	DN [mm]	ANSI 150 2-way	Handle	Gear Wheel OP
102	56	2"	50	F650-150SHP	Handle	Gear Wheel OP
146	80	2½"	65	F665-150SHP		
228	125	3"	80	F680-150SHP		
451	248	4"	100	F6100-150SHP		
714	392	5"	125	F6125-150SHP		
1103	607	6"	150	F6150-150SHP		
2064	1135	8"	200	F6200-150SHP		
3517	1934	10"	250	F6250-150SHP		
4837	2660	12"	300	F6300-150SHP		
6857	3592	14"	350	F6350-150SHP		
9287	4865	16"	400	F6400-150SHP		
11500	3270	18"	450	F6450-150SHP		
14420	7590	20"	500	F6500-150SHP		
22050	11550	24"	600	F6600-150SHP		
34388	18012	30"	750	F6750-150SHP		

Valve	Size	C <sub>v</sub>	10°	20°	30°	40°	50°	60°	70°	80°	90°
F650-150SHP	2"	102	1.5	6.1	14	26	39	56	77	99	102
F665-150SHP	2.5"	146	2.2	8.8	20	37	55	80	110	142	146
F680-150SHP	3"	228	3.4	14	32	57	87	125	171	221	228
F6100-150SHP	4"	451	7	27	63	114	171	248	338	437	451
F6125-150SHP	5"	714	11	43	100	180	271	393	536	693	714
F6150-150SHP	6"	1103	17	66	154	278	419	607	827	1070	1103
F6200-150SHP	8"	2064	31	124	289	520	784	1135	1548	2002	2064
F6250-150SHP	10"	3517	53	211	492	886	1336	1934	2638	3411	3517
F6300-150SHP	12"	4837	73	290	677	1219	1838	2660	3628	4692	4837
F6350-150SHP	14"	6857	103	411	960	1728	2606	3771	5143	6651	6857
F6400-150SHP	16"	9287	139	557	1300	2340	3529	5108	6965	9008	9287
F6450-150SHP	18"	11400	171	684	1596	2873	4332	6270	8550	11058	11400
F6500-150SHP	20"	14420	216	865	2019	3634	5480	7931	10815	13987	14420
F6600-150SHP	24"	22050	331	1323	3087	5557	8379	12128	16538	21389	22050
F6750-150SHP	30"	34388	491	1965	4585	8253	12445	18012	24563	32750	34388

M40048 - 06/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

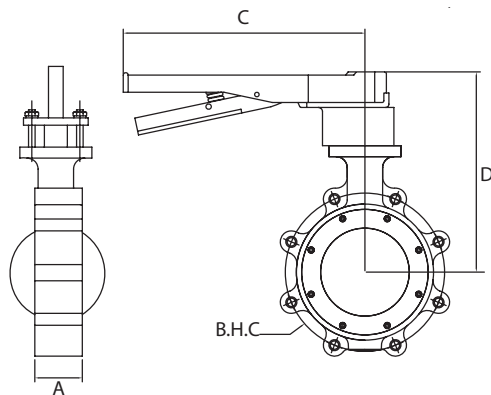
# F6 ANSI Class 150

Reinforced PTFE Seat, 316 Stainless Disc with Manual Handle or Gear Wheel Operator



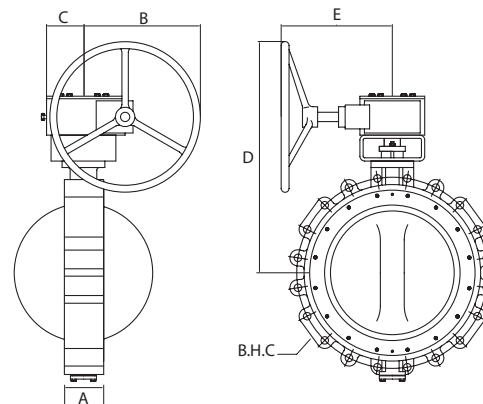
Maximum Dimensions (Inches)													
Valve	Size	Cv 90°	A	B	C	D	E	BHC	No. of Holes	Lug Bolt	Operator	Wt. lbs (kg)	Close-Off (PSI)
F650-150SHP	2"	102	1.75	n/a	10.90	9.50	n/a	4.75	4	5/8-11 UNC	HND05	18 [8.2]	ANSI Class 150 Limitations
F665-150SHP	2.5"	146	1.88	n/a	10.90	9.50	n/a	5.5	4	5/8-11 UNC	HND05	18 [8.2]	
F680-150SHP	3"	228	1.92	n/a	10.90	10.50	n/a	6	4	5/8-11 UNC	HND06	20 [9.1]	
F6100-150SHP	4"	451	2.13	n/a	10.90	11.10	n/a	7.5	8	5/8-11 UNC	HND06	32 [14.5]	
F6125-150SHP	5"	714	2.25	n/a	15.10	12.00	n/a	8.5	8	3/4-10 UNC	HND07	38 [17.2]	
F6150-150SHP	6"	1103	2.29	n/a	15.00	11.30	n/a	9.5	8	3/4-10 UNC	HND07	46 [20.9]	
F6200-150SHP	8"	2064	2.5	n/a	24.10	12.40	n/a	11.75	8	3/4-10 UNC	HND08	59 [26.8]	
F650-150SHP	2"	102	1.75	6.41	2.50	11.60	6.50	4.75	4	5/8-11 UNC	GW10	25 [11.3]	
F665-150SHP	2.5"	146	1.88	6.41	2.50	11.60	6.50	5.5	4	5/8-11 UNC	GW10	25 [11.3]	
F680-150SHP	3"	228	1.92	6.41	2.50	12.30	6.50	6	4	5/8-11 UNC	GW11	28 [12.7]	
F6100-150SHP	4"	451	2.13	6.41	2.50	13.00	6.50	7.5	8	5/8-11 UNC	GW11	38 [17.2]	
F6125-150SHP	5"	714	2.25	6.41	2.50	14.30	6.50	8.5	8	3/4-10 UNC	GW12	48 [21.8]	
F6150-150SHP	6"	1103	2.29	6.41	3.20	14.50	6.50	9.5	8	3/4-10 UNC	GW12	49 [22.2]	
F6200-150SHP	8"	2064	2.5	6.41	3.20	15.15	6.50	11.75	8	3/4-10 UNC	GW13	58 [26.3]	
F6250-150SHP	10"	3517	2.81	6.41	3.20	15.95	6.50	14.25	12	7/8-9 UNC	GW15	112 [50.8]	
F6300-150SHP	12"	4837	3.23	9.23	4.40	18.05	6.50	17	12	7/8-9 UNC	GW17	163 [73.9]	
F6350-150SHP	14"	6857	3.62	9.23	4.40	21.50	11.38	18.75	12	1-8 UNC	GW19	215 [97.5]	
F6400-150SHP	16"	9287	4	15.23	4.40	30.70	12.50	21.25	16	1-8 UNC	GW21	285 [129.3]	
F6450-150SHP	18"	11400	4.5	12.23	4.40	29.50	15.00	22.75	16	1 1/8-8 UNC	GW23	355 [161.0]	
F6500-150SHP	20"	14420	5	13.66	6.50	30.70	15.50	25	20	1 1/8-8 UNC	GW25	500 [226.8]	
F6600-150SHP	24"	22050	6.06	16.66	6.90	37.40	17.50	29.5	20	1 1/4-8 UNC	GW27	820 [371.9]	
F6750-150SHP	30"	34388	6.75	17.75	7.25	40.50	19.50	36	28	1 1/4-8 UNC	GW29	1350 [612.3]	

### Dimensions Manual Handle



BelimoAutoCAD\_Handle

### Dimensions Gear Wheel



Belimo AutoCAD\_Gear

Dimension "A" does not include flange gaskets. (2 required per valve)

### Application Notes

1. Valves are rated at 285 psi differential pressure in the closed position @ 100°F media temperature.
2. Valves are furnished with lugs tapped for use between ANSI Class 125/150 flanges conforming to ANSI B16.5 Standards.
3. 2-way assemblies are furnished assembled and ready for installation.
4. Flange gaskets (2 required, not provided with valve) MUST be used between valve and ANSI flange.
5. Flange bolts are not included with the valve. These are furnished by others.

**SHP series valves have a preferred flow direction.**

PreferredFlowrate

M40048 - 06/10 - Subject to change. © Belimo Aircontrols (USA), Inc.