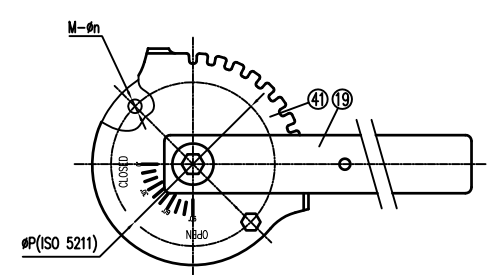
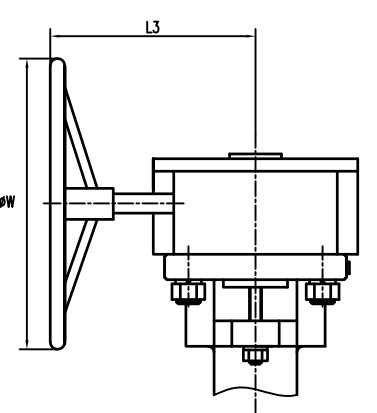


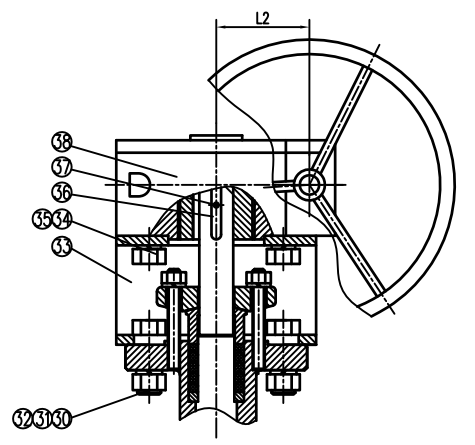
ITEM	DESCRIPTION	QTY	MATERIAL		REMARKS
			CS BODY	SS BODY	
1	BODY	1	A216 WCB	A351 CF8M	
2	RETAINER RING	1	A105	A351 CF8M	
3	SEAT	1	RTFE (25%FG)		
4	DISC	1	A351 CF8M		
5	STEM	1	A 564 630 (UNS S17400)		17-4PH
6	STEM PIN	1 SET	A 564 630 (UNS S17400)		17-4PH
7	RETAINING RING WASHER	1 SET	AISI 1066	A276 321	
8	RETAINING RING BOLT	1 SET	A193 B8		
9	SPACER	1	A182 316		
10	PACKING GLAND STUD	2	A193 B7	A193 B8	
11	PACKING GLAND NUT	2	A194 2H	A194 8	
12	PACKING GLAND WASHER	2	AISI 1066	A276 321	
13	PACKING	1	PTFE		
14	PACKING GLAND RING	1	A182 316		
15	PACKING GLAND FLANGE	1	A105	A182 F316	
16	LEVER PLATE BOLT	2	A193 B7	A193 B8	
17	LEVER PLATE NUT	2	A194 2H	A194 8	
18	LEVER PLATE WASHER	2	AISI 1066	A276 321	
19	LEVER	1	A536, GR. 65-45-12		
20	RIVET	2	A182 304		
21	NAMEPLATE	1	A182 304		
22	UPPER STEM BEARING	1	316+PTFE		
23	LOWER STEM BEARING	1	316+PTFE		
24	DISC WASHER	2	A182 316		
25	DISC SPRING	1	A182 316		
26	GASKET	1	PTFE		8-24 INCH
27	LOWER GLAND FLANGE	1	A105	A182 F316	8-24 INCH
28	LOWER GLAND BOLT	4	A193 B7	A193 B8	8-24 INCH
29	LOWER GLAND WASHER	4	AISI 1066	A276 321	8-24 INCH
30	LOWER BRACKET NUT	8	A194 2H	A194 8	14-24 INCH
31	LOWER BRACKET WASHER	8	AISI 1066	A276 321	14-24 INCH
32	LOWER BRACKET BOLT	8	A193 B7	A193 B8	14-24 INCH
33	BRACKET	1	AISI 1020		14-24 INCH
34	UPPER BRACKET BOLT	4	A193 B7	A193 B8	14-24 INCH
35	UPPER BRACKET WASHER	4	AISI 1066	A276 321	14-24 INCH
36	KEY	2	AISI 1045	A182 F321	14-24 INCH
37	PIN	2	A276 321		14-24 INCH
38	GEAR OPERATOR	1	WCB		8-24 INCH
39	LEVER RETAINING WASHER	1	AISI 1036		
40	LEVER RETAINING BOLT	1	A193 B7		
41	NOTCHED LEVER PLATE	1			



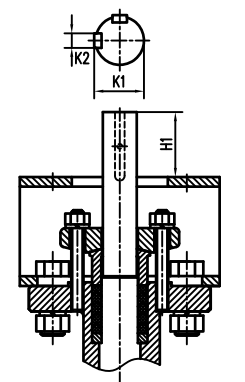
LEVER AND TOPWORKS



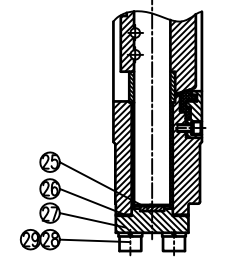
8"~12"



14" AND LARGER



14" AND LARGER



LOWER GLAND ASSEMBLY  
8" AND LARGER

APPLICABLE STANDARDS & TECHNICAL NOTES

DESIGN: API 609 CLASS 150  
FACE TO FACE DIMENSION: API 609

END FLANGES DIMENSION: ASME B16.5  
INSPECTION & TEST: API 598

SHELL TEST (SS BODY): 3.2MPa (3.0MPa)  
SEAT TEST (HYD.): 2.3MPa  
SEAT TEST (AIR): 0.6 MPa

SIZE <sup>1</sup>	Ød	ØG	ØC	LUG		WAFER		L	A	B	L1	L2	L3	W	ØP mm	M	Øn mm (Inch)	H	H1	ØX	K	K1	K2
				N <sup>2</sup>	E <sup>3</sup>	N <sup>2</sup>	E																
3	3.386	5.000	6.00	4	5/8-1UNC	2	0.748	1.89	7.087	3.150	10.51	-	-	-	Ø102 (F10)	4	12 (0.472)	0.63	-	0.63	0.55	-	-
4	4.331	6.181	7.50	8	5/8-1UNC	2	0.748	2.13	7.874	4.094	10.51	-	-	-	Ø102 (F10)	4	12 (0.472)	0.75	-	0.79	0.67	-	-
5	5.157	7.323	8.50	8	3/4-10UNC	2	0.866	2.24	9.252	4.685	12.21	-	-	-	Ø102 (F10)	4	12 (0.472)	0.83	-	0.95	0.75	-	-
6	6.142	8.346	9.50	8	3/4-10UNC	2	0.866	2.24	9.921	5.315	12.21	-	-	-	Ø102 (F10)	4	12 (0.472)	0.83	-	0.98	0.75	-	-
8	7.992	10.630	11.75	8	3/4-10UNC	2	0.866	2.52	12.205	7.480	-	2.48	9.06	11.81	Ø125 (F12)	4	14 (0.551)	1.18	-	1.10	0.87	-	-
10	10.000	12.756	14.25	12	7/8-9UNC	2	0.945	2.80	13.937	9.842	-	2.48	9.06	11.81	Ø125 (F12)	4	14 (0.551)	1.18	-	1.26	1.06	-	-
12	12.008	15.000	17.00	12	7/8-9UNC	2	0.945	3.19	17.716	11.417	-	3.15	10.63	15.75	Ø140 (F14)	4	18 (0.709)	1.18	-	1.38	1.06	-	-
14	13.268	16.260	18.75	12	1-8UNC	2	1.142	3.62	18.898	11.811	-	4.72	16.54	19.69	Ø165 (F16)	4	22 (0.866)	-	3.74	1.38	-	1.50	0.39
16	15.236	18.504	21.25	16	1-8UNC	4	1.142	4.02	19.882	13.386	-	4.72	16.54	19.69	Ø165 (F16)	4	22 (0.866)	-	4.09	1.58	-	1.65	0.47
18	17.244	20.984	22.76	16	1-1/8-8UN	4	1.260	4.49	23.622	14.961	-	4.96	18.11	23.62	Ø254 (F25)	8	18 (0.709)	-	3.23	1.81	-	1.95	0.55
20	19.252	22.992	25.00	20	1-1/8-8UN	4	1-1/8-8UN	5.00	29.134	15.354	-	5.43	20.08	23.62	Ø254 (F25)	8	18 (0.709)	-	3.27	1.97	-	2.11	0.55
24	23.268	27.244	29.50	20	1-1/4-8UN	4	1-1/4-8UN	6.06	33.858	18.504	-	5.43	20.47	29.92	Ø254 (F25)	8	18 (0.709)	-	4.13	2.36	-	2.52	0.71

- 8" and larger valves are standard with gear operator. Gear operators for 6" and smaller valves are available as an option.
- The N value for lug valves is tapped holes per side. For wafer valves, the number represents through holes unless tapped are indicated.
- Large body valves have blind tapped holes at the top and bottom of the valve, near the stem. See the Large Body Valves table for tapped depth. For high performance butterfly valves, ANSI B16.5 requires all bolts, 1-1/8" and larger, have an 8-UN three



TITLE: HP-SERIES 150# HIGH PERFORMANCE BUTTERFLY VALVE  
 DATE: 9-29-2008 BY: PEA APP'D: KMC UNITS: IN (OR NOTED) SCALE: NONE REV DATE:  
 FILE: HP\_3-24.dwg MODEL: HP DWG NO: HP\_3-24 REV: 0

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