

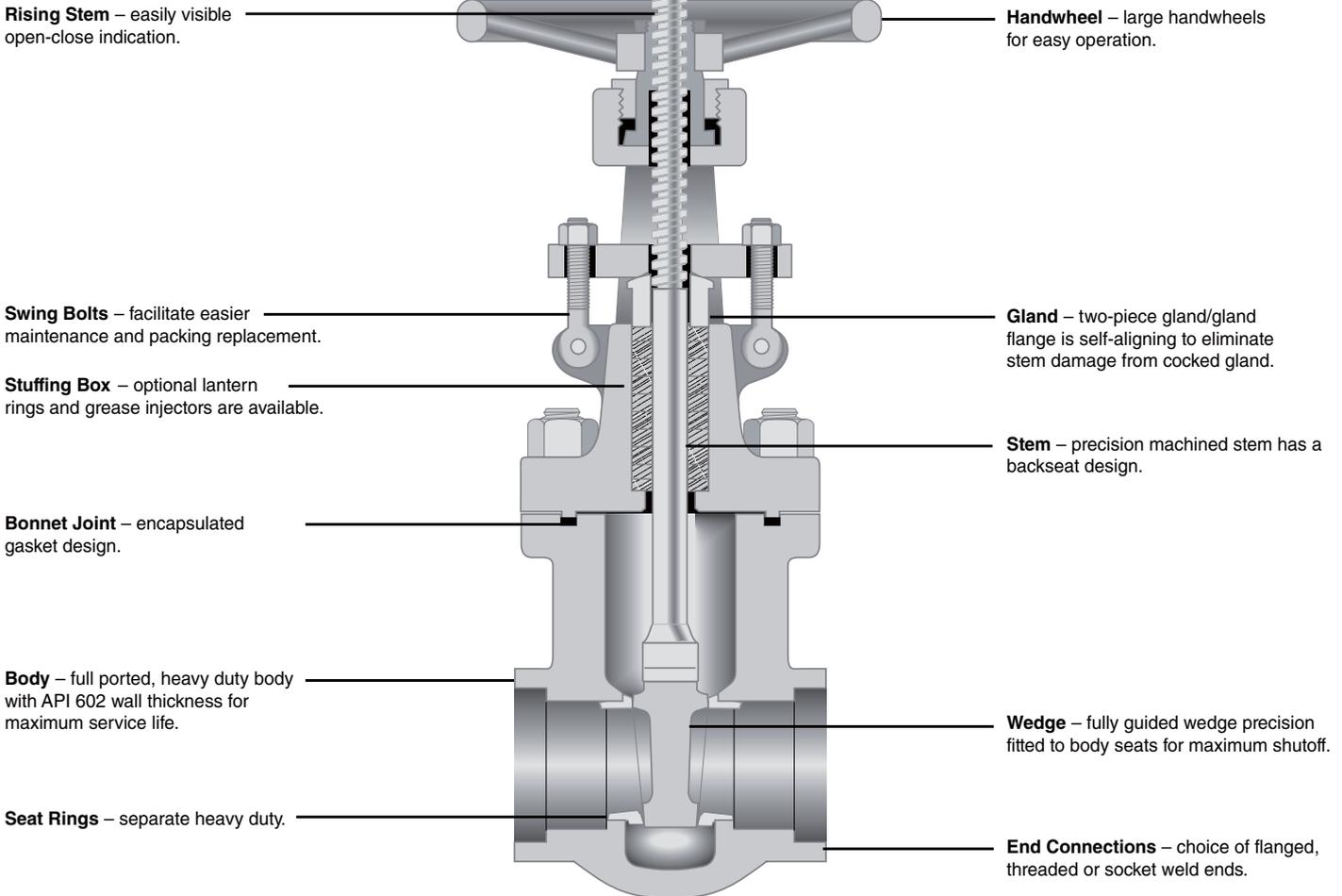


**INDUSTRIAL
VALVE**

HF ACID VALVES

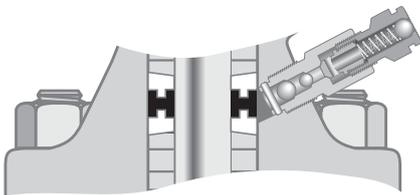


API 602 Compact Gate Features

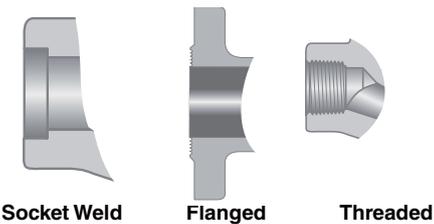


OPTIONS

GREASE INJECTOR AND LANTERN RING

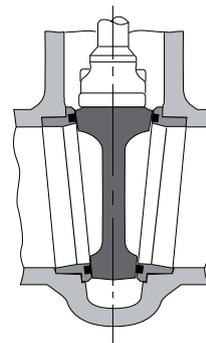


END CONNECTIONS



SOFT SEATED “T” TRIM SEAT RING

All gate valves are available with optional PTFE seat rings. The molded PTFE ring is bonded into a seat ring groove in the face for maximum service life. This design is excellent for lower temperature service where tight shutoff is required.



HF Acid Gate Valves



API 600 Bolted Bonnet Gate Features

Rising Stem – easily visible open-close indication.

Swing Bolts – facilitate easier maintenance and packing replacement.

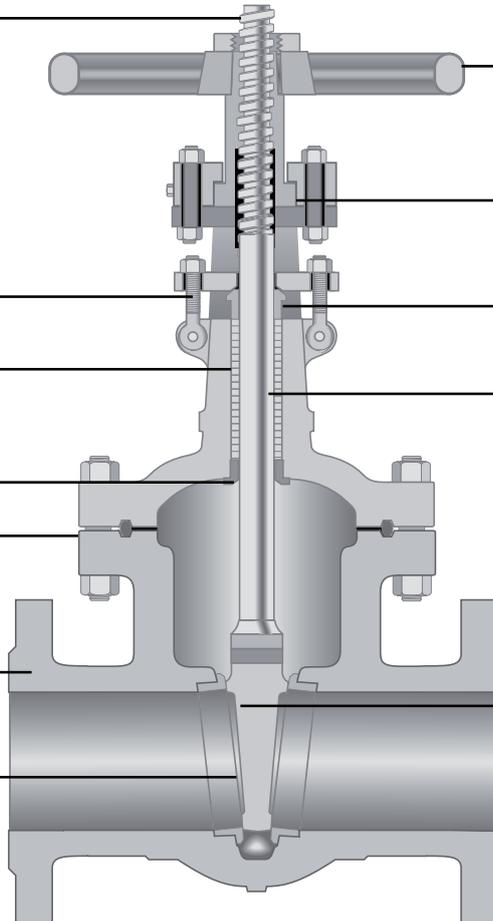
Stuffing Box – optional lantern rings and grease injectors are available.

Backseat – machined bonnet stem bushing provides back-up stem seal.

Bonnet Joint – joint design varies with ASME class rating.

Body – full ported, heavy duty body with API 600 wall thickness for maximum service life. Provided with bosses for optional by-passes or drains.

Seat Rings – separate heavy duty, full ported rings for easy maintenance.



Handwheel – large handwheels for easy operation. Also available with gearing, motor actuators or cylinder actuators for more difficult services.

Yoke Sleeves – furnished in ductile Ni-resist or aluminum-bronze to reduce operating torque.

Gland – two-piece gland/gland flange is self-aligning to eliminate stem damage from cocked gland.

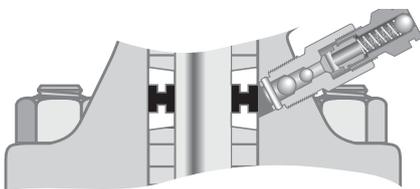
Stem – all ZGV wedge gate valves are provided with upset forged T-head stems. By forging the T-head, the stem at the stem-wedge connection is strengthened. This design also allows the wedge to self-align, eliminating the possibility of a bent stem jamming the wedge.

Wedge – heavy pattern, fully guided wedge precision fitted to body seats for maximum shutoff.

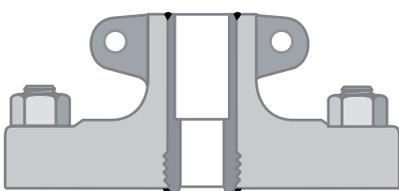
End Connections – flanged end options are raised face smooth finish or ring type joint.

OPTIONS

GREASE INJECTOR AND LANTERN RING



MONEL® SLEEVED STUFFING BOX

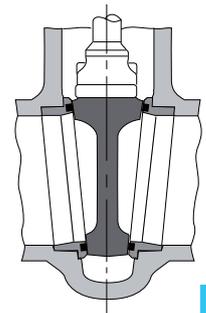


HIGH INTEGRITY SHUTOFF WEDGE

This fire safe design provides a zero leakage barrier on both upstream and downstream. Detail description is found on page 8.

SOFT SEATED “T” TRIM SEAT RING

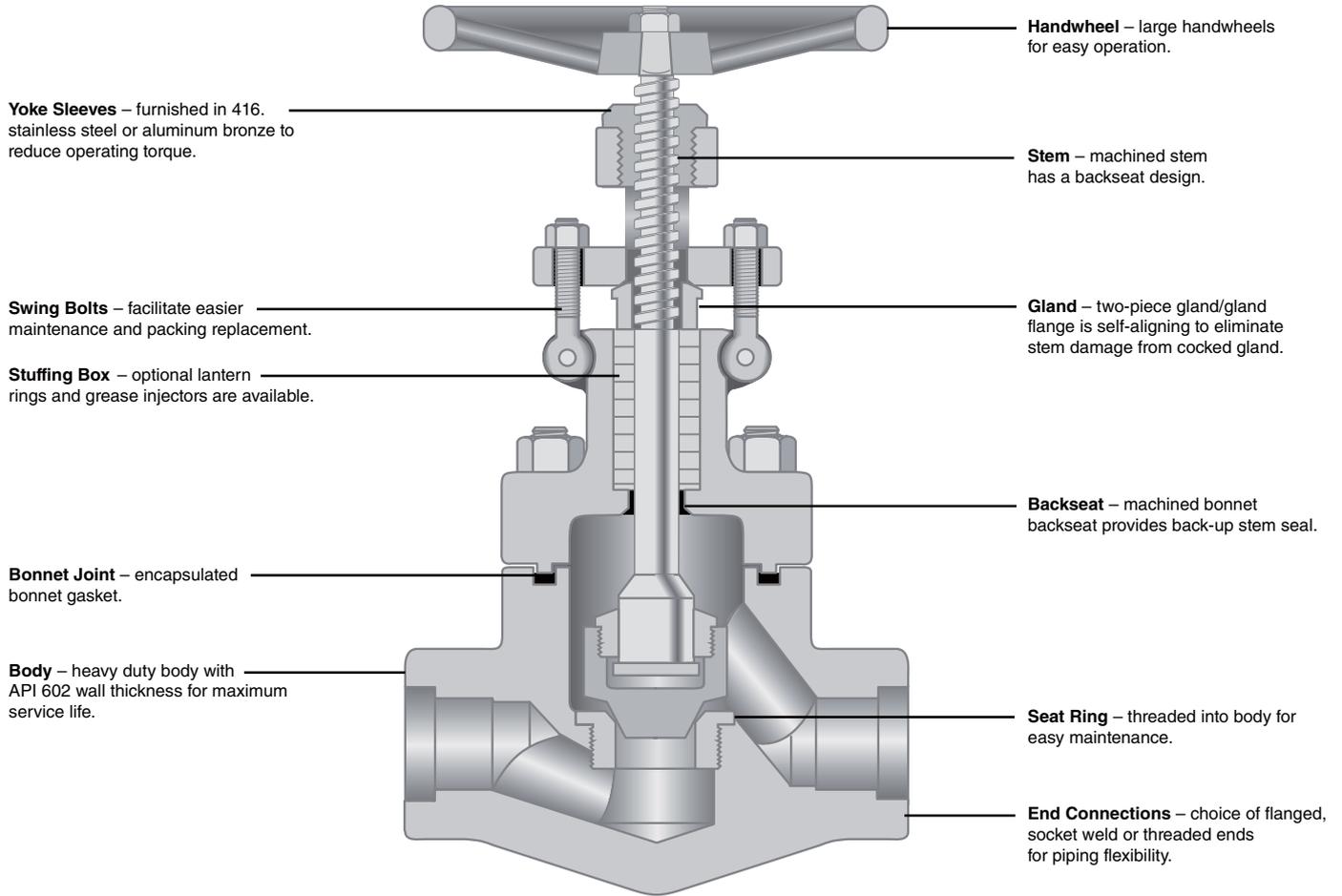
All gate valves are available with optional PTFE seat rings. The molded PTFE ring is bonded into a seat ring groove in the face for maximum service life. This design is excellent for lower temperature service where tight shutoff is required.



HF Acid Globe Valves

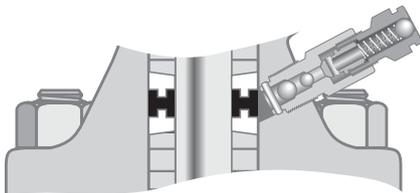


API 602 Compact Globe Valve Features

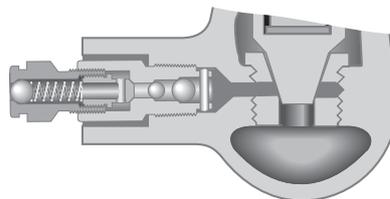


OPTIONS

GREASE INJECTOR AND LANTERN RING

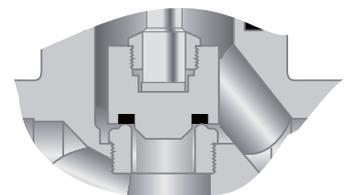


GREASE INJECTOR IN SEAT

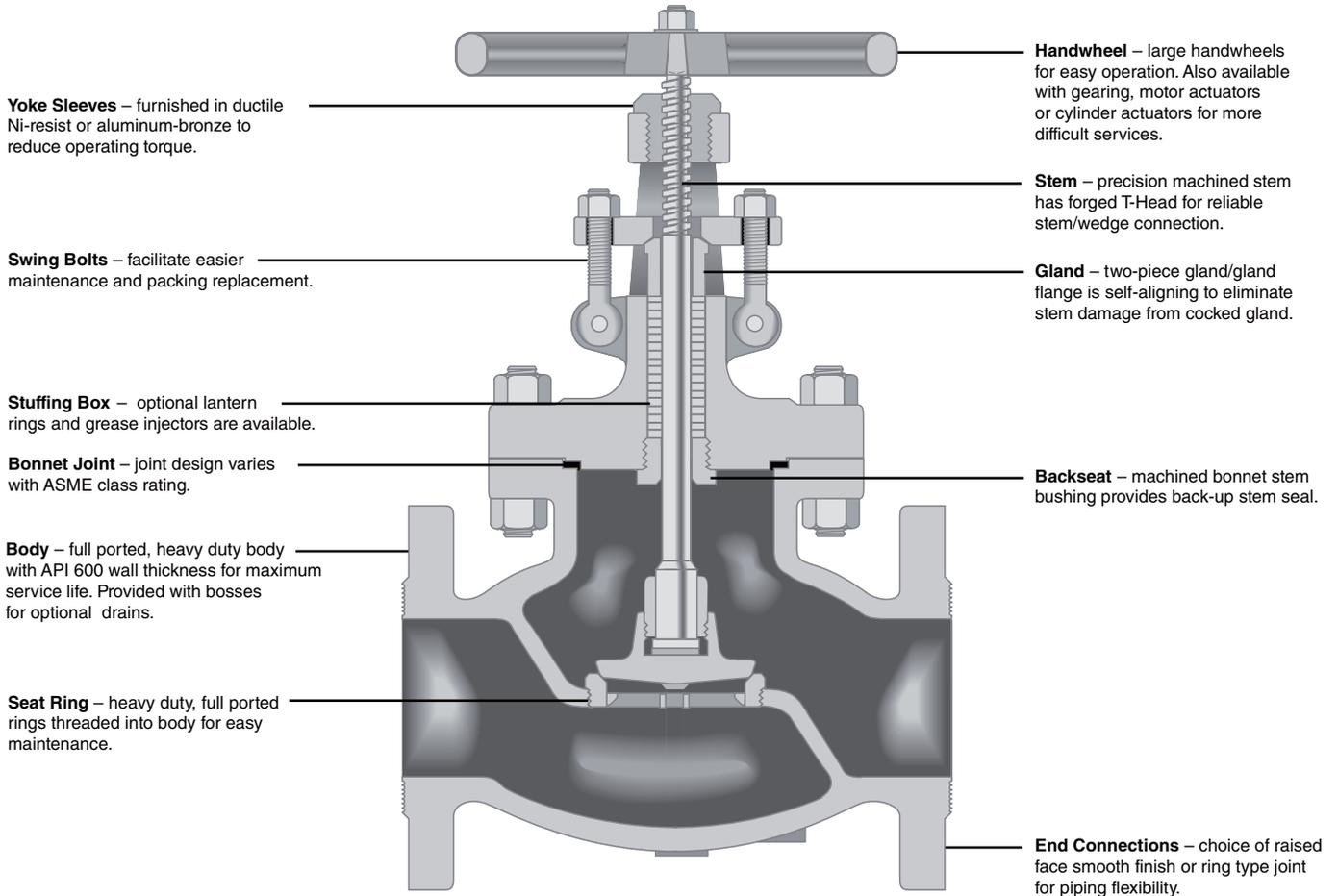


SOFT SEATED "T" TRIM

All valves are available with optional soft seated PTFE trim. The molded PTFE ring is bonded into a groove in the disc face for maximum service life. This design is excellent for lower temperature service where tight shutoff is required.

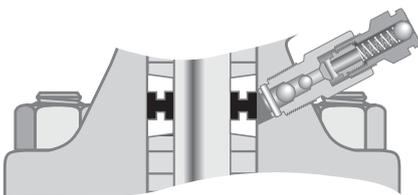


API 600 Bolted Bonnet Globe Valve Features

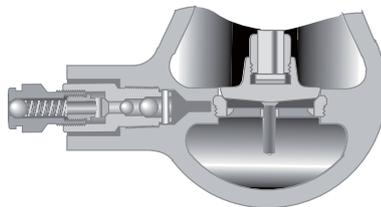


OPTIONS

GREASE INJECTOR AND LANTERN RING

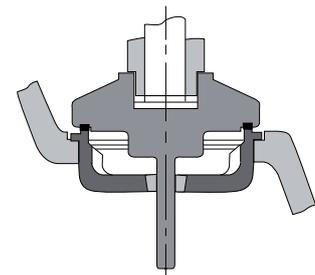


GREASE INJECTOR IN SEAT



SOFT SEATED "T" TRIM

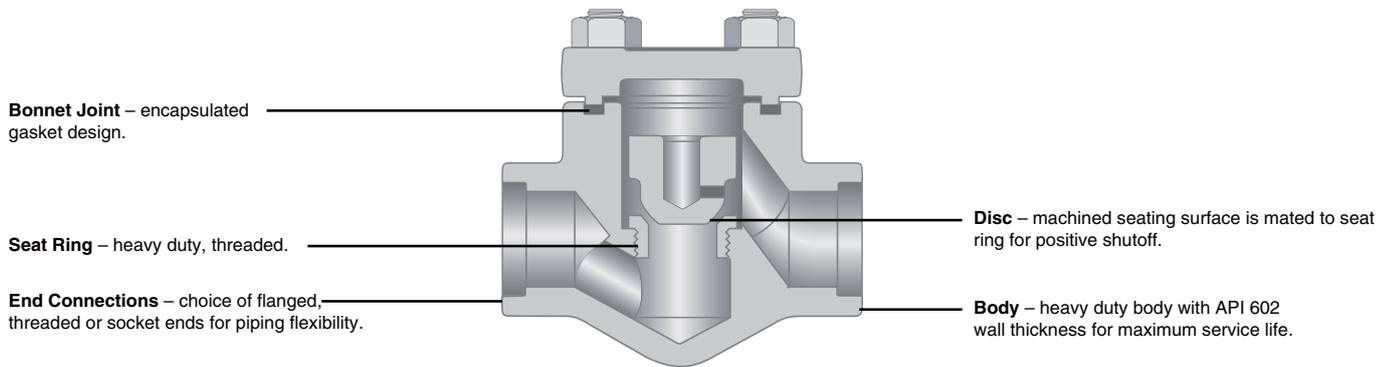
All valves are available with optional soft seated PTFE trim. The molded PTFE ring is bonded into groove in the disc face for maximum service life. This design is excellent for lower temperature service where tight shutoff is required.



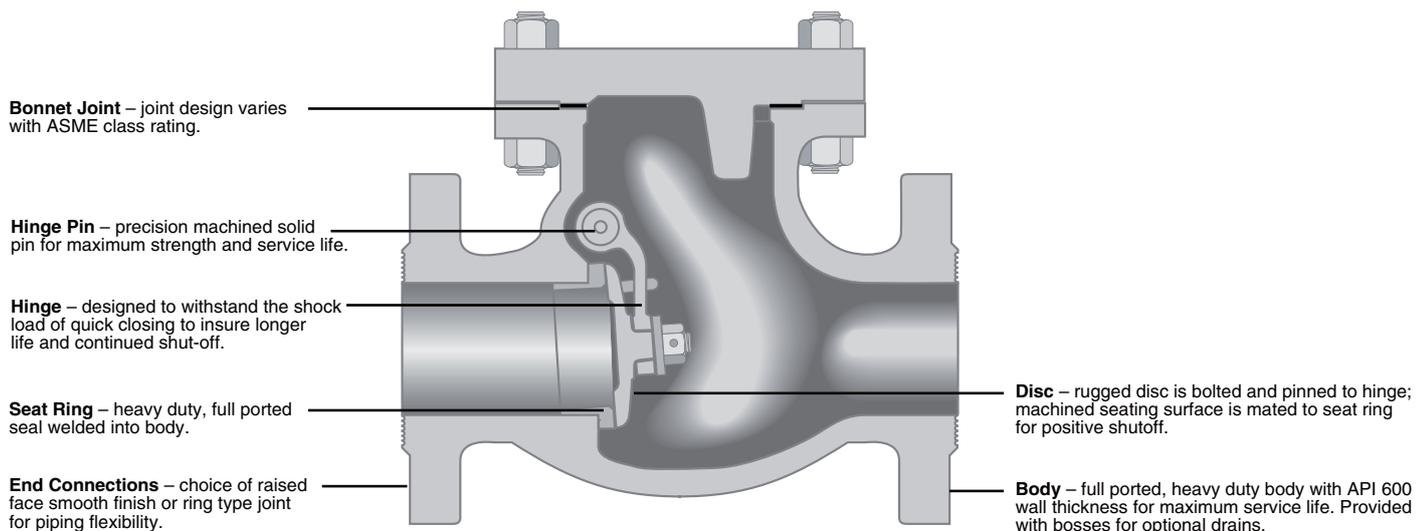
HF Acid Check Valves

API 602 and 600 Check Valve Features

API 602



API 600



Service Recommendations

Service Recommendations for Gate Valves

1. Gate valves are normally used for on-off service and are not recommended for throttling service.
2. Gate valves are normally installed in horizontal pipe runs with the stem vertical. They can also be installed in vertical or horizontal pipe runs with the stem other than vertical, but may require special construction depending on valve size, service conditions and materials. **WHEN PURCHASING VALVES FOR OTHER THAN NORMAL INSTALLATION, THE VALVE ORIENTATION SHOULD BE SPECIFIED.**
3. High Integrity Shutoff gate valves can be used for hot tapping or in pipeline services where a soft pig is used if the seat ring installation lugs are removed. Please specify.

Service Recommendations for Globe Valves

1. Globe valves are normally installed with flow and pressure under the disc. Always check with ZGV Valves before installing valves with flow in the other direction.
Under certain service conditions or when valves are equipped with cylinders or electric motor actuators, there may be a cost advantage in the designing and installing the valves with flow over the disc. If actuators are sized for these conditions, care must be taken to assure valves are installed correctly.
2. Threaded seat rings for valves in services with high velocity (turbulent) flow or thermal cycling should be lock welded to the body to avoid loosening. Please specify.
3. Conventional globe valves are suitable for most throttling applications and will provide the greatest service life where pipe line velocity in FT/SEC does not exceed $240\sqrt{v}$. (v is a specific volume of flowing medium, $\text{ft.}^3/\text{lb.}$) Prolonged throttling at less than 10% open is not recommended due to the possibility of excessive vibration, noise and damage to disc and seats. Use of smaller valves or V-Port trim with lower flow capacity may permit the valve to be open at a greater percentage, thus avoiding damage. Continuous severe throttling applications may require a control valve.

Service Recommendations and Limitations of Check Valves

Check valves are best suited for low to moderate velocity applications. Correct sizing of check valves is important. Either too low a line velocity or too high a velocity can damage valve internals and shorten valve life.

Service in systems involving frequent flow reversals and pulsation should be avoided. Check valves should be located as far away from equipment such as pumps and compressors as possible. Suspected problem systems should be reviewed with ZGV Valves Engineers before selecting and purchasing check valves.

Threaded seat rings for valves in services with high velocity (turbulent) flow or thermal cycling should be lock welded to the body to avoid loosening. Please specify.

Limitations:

Globe pattern check valves should be used in horizontal pipe runs with the stem straight up.

UOP HF Acid Gate Valves



ASME Class 800 Sizes 1/2- 2"

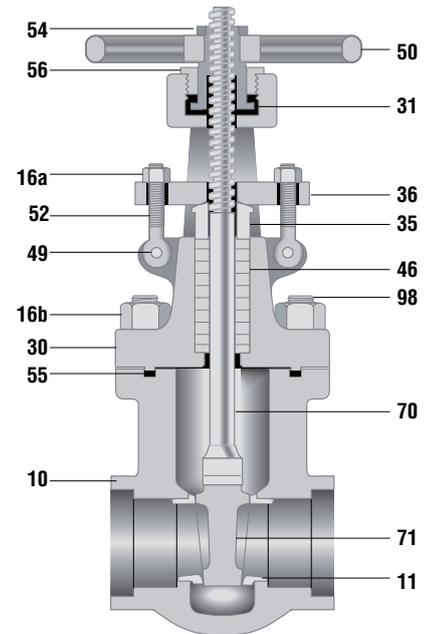
Series 3Z6SW1HFM-800M

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
		3656-HF8
10	Body	ASTM A494 GR. M35-1
11	Seat Ring	Monel
16a	Eyebolt Nut	ASTM A194 GR. 2H
16b	Bonnet Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome
35	Gland	Monel
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /Graphite
56	Jam Nut	Carbon Steel
59	Grease Fitting	Carbon Steel
70	Stem	K-Monel
71	Wedge	Monel
98	Bonnet Stud	ASTM A193 GR. B7M

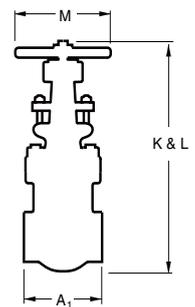
Test Pressure

Shell Test	3000 PSIG
Seat Test	2200 PSIG
Helium Shell Test	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	End to End Socket Weld End	in.					
		mm	92	111	120	140	160
K	Center to Top Open	in.					
		mm	153	185	222	279	333
L	Center to Top Closed	in.					
		mm					
M	Handwheel Dia.	in.					
		mm	100	120	160	180	200
X	Bore Depth Socket Weld End	in.					
		mm	13	13	13	13	16
Y	Bore Diameter Socket Weld End	in.					
		mm	27	27	34	49	61
	Weight	lbs.					
		kg	3.3	3.8	5.8	10.3	15.2



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P. specification includes sizes 1/2"-2".

Related data

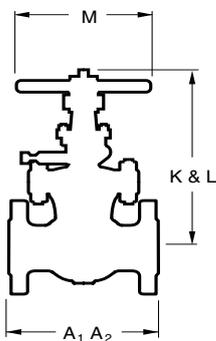
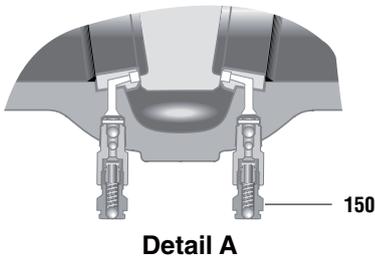
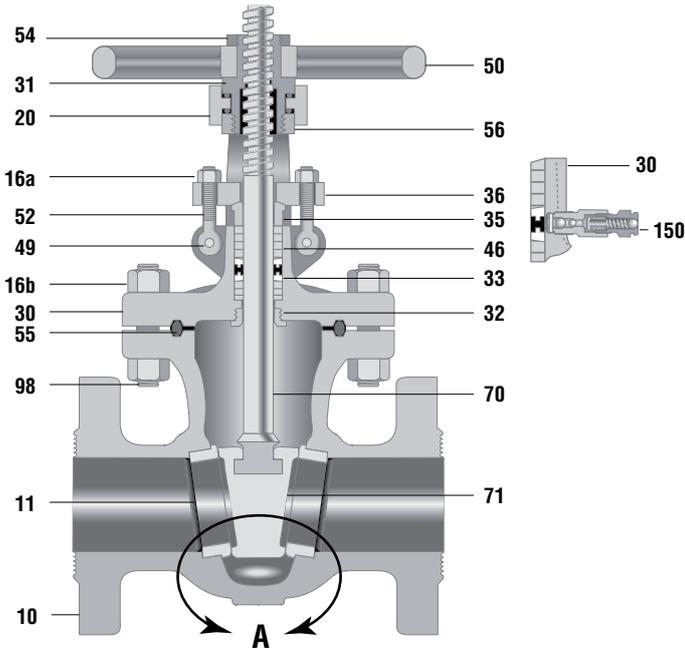
See Technical Data section for: Temperature/pressure data, Flow calculations (Cv).

Test Pressure

Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A494 GR. M35-1
11	Seat Ring	Monel W/PTFE Insert
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
16a	Eyebolt Stud Nut	ASTM A194 GR. 2H
20	Bearings	Alloy Steel
30	Bonnet	ASTM A494 GR. M35-1
31	Yoke Sleeve	Aluminum Bronze
32	Bonnet Stem Bushing	Monel
33	Lantern Ring	Monel
35	Gland	Monel
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel Ring
56	Jam Nut	Carbon Steel
70	Stem	Monel
71	Wedge	Monel
98	Bonnet Stud	ASTM A193 GR. B7M
150	Dbl. Ball Grease Injector	Carbon Steel and Monel



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)							
		1.5 ²	2 ²	2.5 ²	3 ²	4	6	8	
A ₁	Face to Face Flanged Ends	in.	7.5	8.5	9.5	11.13	12.0	15.88	16.5
		mm	191	216	241	283	305	403	419
A ₂	Face to Face RTJ	in.	8.0	9.13	10.13	11.75	12.63	16.5	17.13
		mm	203	232	257	299	321	419	435
K	Center to Top Open	in.	21.5	21.75	26.06	26.06	34.44	42.69	50.88
		mm	546	552	662	662	875	1084	1292
L	Center to Top Closed	in.	19.50	19.75	23.00	23.00	30.00	36.25	42.50
		mm	495	502	584	584	762	921	1079
M	Handwheel Dia.	in.	10	10	10	10	14	18	24
		mm	254	254	254	254	356	457	610
	Weight Flanged Ends	lbs.	67	70	126	135	215	386	654
		kg	30	32	57	61	98	175	297

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P. specification includes sizes 1½"-8".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Butt weld ends; Flow calculations (Cv).
 See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

UOP HF Acid Gate Valves



ASME Class 600 Sizes 1/2- 2"

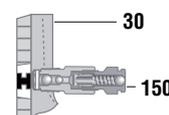
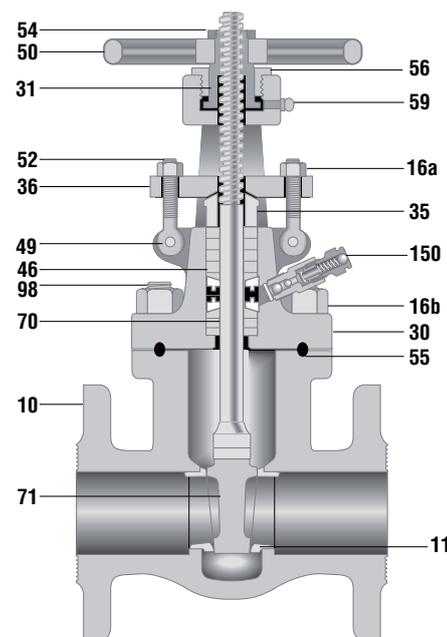
Series 3Z4RF1HFM-600MG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A494 GR. M35-1
11	Seat Ring	Monel 400
16a	Eyebolt Nut	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome
35	Gland	Monel 400
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel Ring Joint
56	Jam Nut	Carbon Steel
59	Grease Fitting	Carbon Steel
70	Stem	K-Monel
71	Wedge	Monel 400
98	Bonnet Stud	ASTM A193 GR. B7M
150	Double Ball Grease Injector	Carbon Steel & Monel

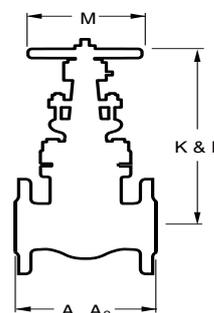
Test Pressure

Shell Test2250 PSIG
 Seat Test..... 1650 PSIG
 Helium Shell Test.....500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	Face to Face	in.	6.5	7.5	8.5	9.5	11.5
		mm	165	191	216	241	292
K	Center to Top	in.	9.50	10.25	11.25	14.88	15.83
		mm	241	261	286	378	402
L	Center to Top Closed	in.	8.63	9.21	10.00	13.00	13.65
		mm	219	234	256	330	347
M	Handwheel Dia.	in.	4.0	4.5	4.5	5.5	8
		mm	102	114	114	140	203
	Weight Flanged Ends	lbs.	11	16	22	40	60
		kg	5.0	7.3	10.0	18.2	27.3



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. UOP specification is for 1/2"-1" size only.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

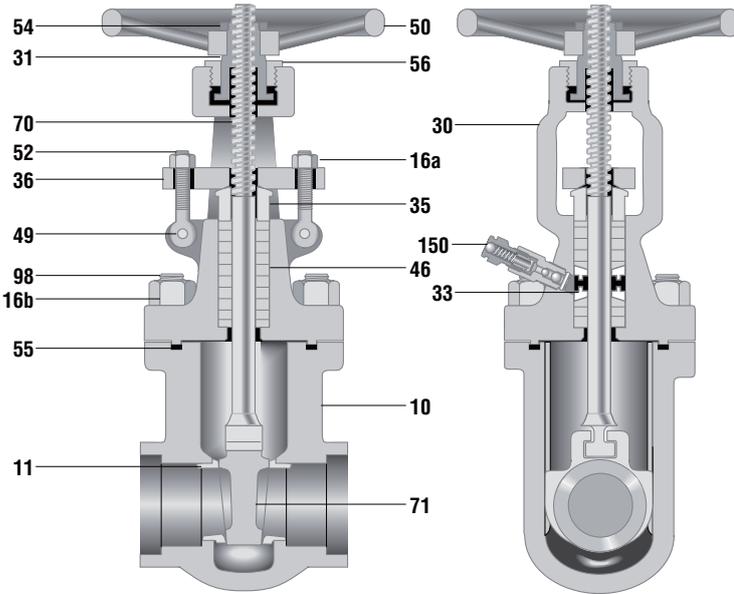
ASME Class 800 Sizes 1/2" - 2"

Series 3Z6SW1HFM-800CG

Test Pressure

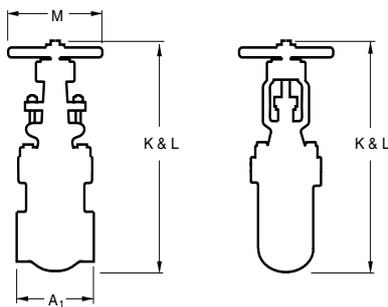
Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG

PARTS LIST



ITEM	DESCRIPTION	MATERIAL
70	Stem	K-Monel
54	Handwheel Nut	Carbon Steel
50	Handwheel	Malleable Iron
31	Yoke Sleeve	12% Chrome
56	Jam Nut	Carbon Steel
150	Grease Fitting	Carbon Steel
30	Bonnet	ASTM A216 GR. WCB or ASTM A105
150	Double Ball Grease Injector	Carbon Steel & Monel
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
35	Gland	Monel
49	Eyebolt Pin	Carbon Steel
98	Bonnet Stud	ASTM A193 GR B7M
16b	Bonnet Stud Nut	ASTM A194 GR 2HM
33	Lantern Ring	Monel
46	Packing	Graphitic
55	Bonnet Gasket	Monel /Graphite Spiral Wound
10	Body	ASTM A105
11	Seat Ring	Monel W/PTFE Insert
71	Wedge	Monel

DIMENSIONS and WEIGHTS



Dim	Description	VALVE SIZE (inches)					
		.5	.75	1	1.5	2	
A ₁	End to End Socket Weld End	in.	3.5	3.5	4.13	4.75	5.25
		mm	89	89	105	121	133
K	Center to Top Open	in.	10.18	10.18	11.09	15.83	15.83
		mm	259	259	282	402	402
L	Center to Top Closed	in.	9.28	9.28	9.93	13.65	13.65
		mm	236	236	252	347	347
M	Handwheel Dia.	in.	4.25	4.25	4.25	5.50	8
		mm	108	108	108	140	203
X	Bore Depth Socket Weld End	in.	.5	.5	.5	.5	.62
		mm	13	13	13	13	16
Y	Bore Diameter Socket Weld End	in.	1.065	1.065	1.330	1.915	2.406
		mm	27	27	34	49	61
	Weight	lbs.	9	9	14	24	39
		kg	4.1	4.1	6.4	10.9	17.7

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P. specification includes sizes 1/2"-1".

Related data

See Technical Data section for: Temperature/pressure data, Flow calculations (Cv). Grease injector details, see page 12 • PTFE seat details, see page 6.

UOP HF Acid Gate Valves



ASME Class 150 Sizes 1½" - 36"

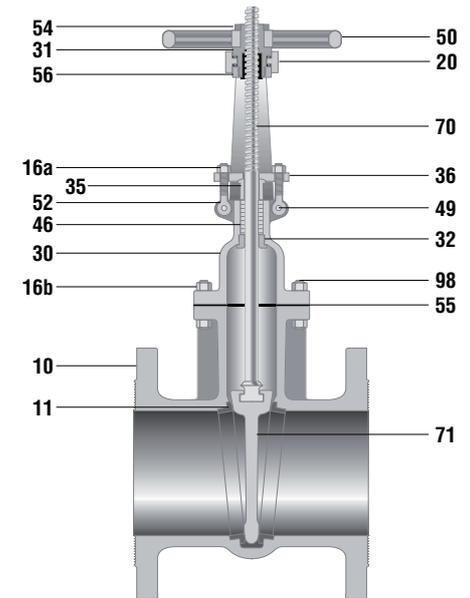
Series 2Z41HFM-150C

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A216 GR. WCB
11	Seat Ring	Monel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
16a	Eyebolt Stud Nut	ASTM A194 GR. 2H
20	Bearings	Alloy Steel
30	Bonnet	ASTM A216 GR. WCB
31	Yoke Sleeve	Aluminum Bronze
32	Bonnet Stem Bushing	Monel
35	Gland	Monel
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55*	Bonnet Gasket	Corr. Steel/PTFE Coated
56	Jam Nut	Carbon Steel
70	Stem	Monel
71	Wedge	Monel
98	Bonnet Stud	ASTM A193 GR. B7M

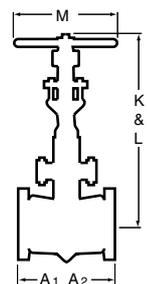
Test Pressure

Shell Test	450 PSIG
Seat Test.....	320 PSIG
Helium Shell Test.....	450 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)															
			1.5 ²	2 ²	2.5 ²	3 ²	4	6	8	10	12	14	16	18	20	24	30	36
A ₁	Face to Face Flanged Ends	in.	6.50	7.0	7.5	8.0	9.0	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0	24.0	28.0
		mm	165	178	191	203	229	267	292	330	356	381	406	432	457	508	610	711
A ₂	Face to Face RTJ	in.	7.00	7.5	8.0	8.5	9.5	11.0	12.0	13.5	14.5	15.5	16.5	17.5	18.5	20.5	24.5	28.5
		mm	178	191	203	216	241	279	305	343	368	394	419	445	470	521	622	724
K	Center to Top Open	in.	17.38	17.75	19.31	19.31	28.19	34.38	43.63	51.50	57.81	62.94	72.5	79.06	86.56	104.3	140.0	155.0
		mm	442	451	491	491	716	873	1108	1308	1468	1598	1841	2008	2198	2618	3556	3937
L	Center to Top Closed	in.	15.19	15.38	16.06	16.06	23.44	27.69	34.63	40.19	45.44	48.68	56.5	61.38	67.25	80.0	110.0	119.0
		mm	386	391	408	408	595	703	880	1020	1154	1236	1435	1560	1708	2032	2794	3023
M	Handwheel Dia.	in.	10	10	10	10	10	14	14	24	24	24	24	28	28	34	34	34
		mm	254	254	254	254	254	356	356	610	610	610	610	711	711	864	864	864
	Weight Flanged Ends	lbs.	65	68	119	128	135	232	352	593	807	1053	1337	1898	2228	3350	6145	8170
		kg	29	31	54	58	62	106	160	269	366	477	606	860	1010	1518	2787	3700



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. 1 ½" thru 3" furnished with round bonnet and Monel®/graphite spiral wound gasket.
3. U.O.P. specification includes sizes 1½"-24".
4. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data; Raised face or ring joint flanges; Flow calculations (Cv).

See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

ASME Class 300 Sizes 1½" - 36"

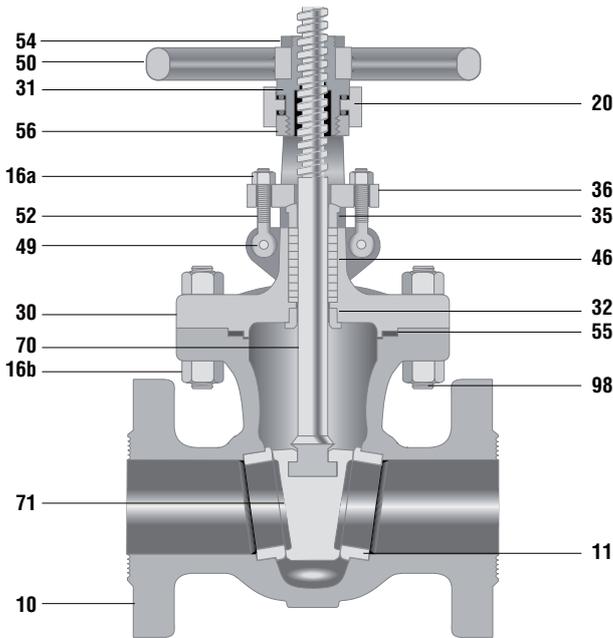
Series 2Z41HFM-300C

Test Pressure

Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG

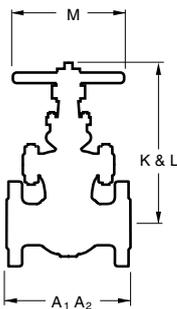
PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A216 GR. WCB
11	Seat Ring	Monel®
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
16a	Eyebolt Stud Nut	ASTM A194 GR. 2H
20	Bearings	Alloy Steel
30	Bonnet	ASTM A216 GR. WCB
31	Yoke Sleeve	Aluminum Bronze
32	Bonnet Stem Bushing	Monel®
35	Gland	Monel®
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel® Graphite Spiral Wound
56	Jam Nut	Carbon Steel
70	Stem	Monel®
71	Wedge	Monel®
98	Bonnet Stud	ASTM A193 GR. B7M



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)															
			1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30	36
A ₁	Face to Face Flanged Ends	in.	7.5	8.5	9.5	11.13	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
		mm	191	216	241	283	305	403	419	457	502	762	838	914	991	1143	1397	1727
A ₂	Face to Face RTJ	in.	8.0	9.13	10.13	11.75	12.63	16.5	17.13	18.63	20.38	30.63	33.63	36.63	39.63	45.88	56.0	69.13
		mm	203	232	257	299	321	419	435	473	518	778	854	930	1007	1165	1422	1756
K	Center to Top open	in.	17.38	17.75	19.31	19.31	28.13	36.13	43.88	51.06	57.81	66.31	72.25	79.06	88.38	102.4	138.0	156.0
		mm	442	451	491	491	715	918	1115	1297	1468	1684	1835	2008	2245	2602	3505	3962
L	Center to Top Closed	in.	15.19	15.38	16.06	16.06	23.44	29.25	34.75	40.25	44.94	52.13	56.38	61.31	68.50	78.25	108.0	121.0
		mm	386	391	408	408	595	743	883	1022	1141	1324	1432	1557	1740	1988	2743	3073
M	Handwheel Dia.	in.	10	10	10	10	14	18	24	24	24	24	28	28	28	34	34	34
		mm	254	254	254	254	356	457	610	610	610	610	711	711	711	864	864	864
	Weight Flanged Ends	lbs.	67	70	126	135	215	386	654	998	1317	1915	2608	3319	4278	7529	10817	15300
		kg	30	32	57	61	98	175	297	453	597	868	1182	1504	1938	3411	4907	6940



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
3. U.O.P. specification includes sizes 1½"-24".
4. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).
 See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

UOP HF Acid Gate Valves



ASME Class 300 Sizes 1½" - 36"

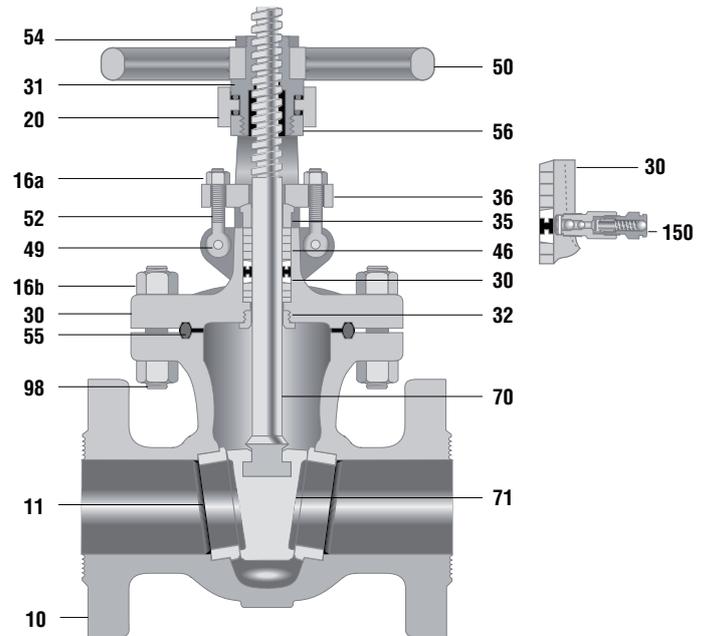
Series 2Z41HFM-300CG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A216 GR. WCB
11	Seat Ring	Monel W/PTFE Insert
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
16a	Eyebolt Stud Nut	ASTM A194 GR. 2H
20	Bearings	Alloy Steel
21	Set Screw	Alloy Steel
30	Bonnet	ASTM A216 GR. WCB
31	Yoke Sleeve	Aluminum Bronze
32	Bonnet Stem Bushing	Monel
33	Lantern Ring	Monel
35	Gland	Monel
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Soft Steel Ring
56	Jam Nut	Carbon Steel
70	Stem	Monel
71	Wedge	Monel
98	Bonnet Stud	ASTM A193 GR. B7M
150	Dbl. Ball Grease Injector	Carbon Steel & Monel

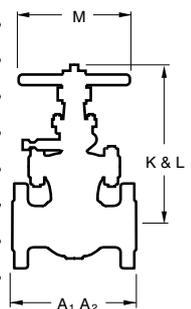
Test Pressure

Shell Test	1125 PSIG
Seat Test	825 PSIG
Helium Shell Test	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)																
		1.5 ²	2 ²	2.5 ²	3 ²	4	6	8	10	12	14	16	18	20	24	30	36	
A ₁	Face to Face Flanged Ends	in.	7.5	8.5	9.5	11.13	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
		mm	191	216	241	283	305	403	419	457	502	762	838	914	991	1143	1397	1727
A ₂	Face to Face RTJ	in.	8.0	9.13	10.13	11.75	12.63	16.5	17.13	18.63	20.38	30.63	33.63	36.63	39.63	45.88	56.0	69.13
		mm	203	232	257	299	321	419	435	473	518	778	854	930	1007	1165	1422	1756
K	Center to Top open	in.	17.38	17.75	19.31	19.31	28.13	36.13	43.88	51.06	57.81	66.31	72.25	79.06	88.38	102.4	138.0	156.0
		mm	442	451	491	491	715	918	1115	1297	1468	1684	1835	2008	2245	2602	3505	3962
L	Center to Top Closed	in.	15.19	15.38	16.06	16.06	23.44	29.25	34.75	40.25	44.94	52.13	56.38	61.31	68.50	78.25	108.0	121.0
		mm	386	391	408	408	595	743	883	1022	1141	1324	1432	1557	1740	1988	2743	3073
M	Handwheel Dia.	in.	10	10	10	10	14	18	24	24	24	24	28	28	28	34	34	34
		mm	254	254	254	254	356	457	610	610	610	610	711	711	711	864	864	864
	Weight Flanged Ends	lbs.	67	70	126	135	215	386	654	998	1317	1915	2608	3319	4278	7529	10817	15300
		kg	30	32	57	61	98	175	297	453	597	868	1182	1504	1938	3411	4907	6940



Notes:

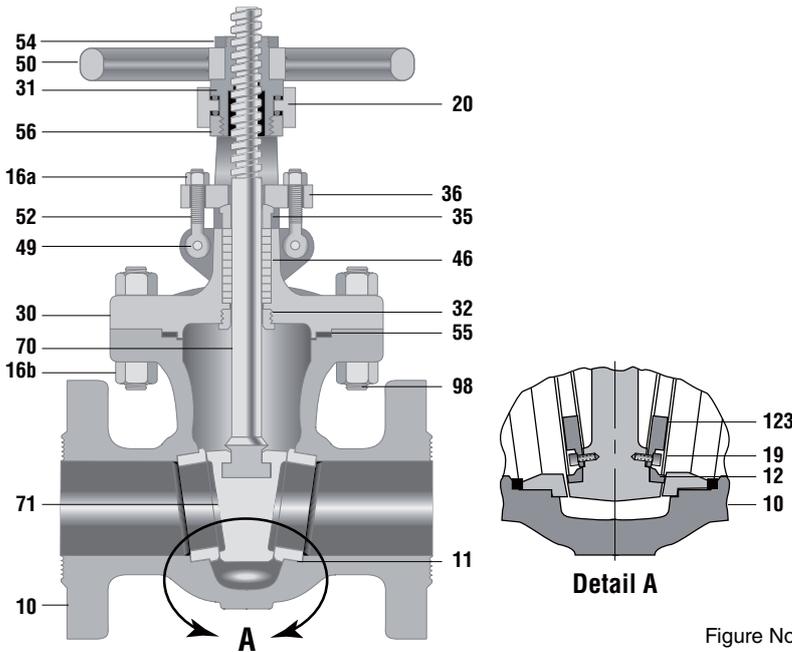
1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P. specification includes sizes 1½"-24".
3. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Butt weld ends; Flow calculations (Cv).
See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

Test Pressure

Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG



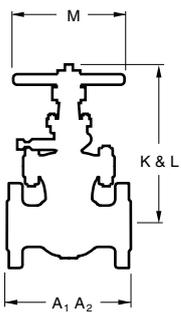
PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A216 GR. WCB
11	Seat Ring	Monel®
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
16a	Eyebolt Stud Nut	ASTM A194 GR. 2H
20	Bearings	Alloy Steel
21	Set Screw	Alloy Steel
30	Bonnet	ASTM A216 GR. WCB
31	Yoke Sleeve	Aluminum Bronze
32	Bonnet Stem Bushing	Monel®
33	Lantern Ring	Monel®
35	Gland	Monel®
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Soft Steel Ring
56	Jam Nut	Carbon Steel
70	Stem	Monel®
71	Wedge	Monel®
98	Bonnet Stud	ASTM A193 GR. B7M
150	Dbl. Ball Grease Injector	Carbon Steel & Monel®
123	Compression Ring	Monel®
19	Cap Screw	K-Monel® 500
12	Insert	PTFE

Figure No. 350 L (2) P-HF8 includes a Monel® sleeve that lines the stuffing box.



DIMENSIONS and WEIGHTS



Dim	Description	VALVE SIZE (inches)																
		1.5 ²	2 ²	2.5 ²	3 ²	4	6	8	10	12	14	16	18	20	24	30	36	
A ₁	Face to Face Flanged Ends	in.	7.5	8.5	9.5	11.13	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
		mm	191	216	241	283	305	403	419	457	502	762	838	914	991	1143	1397	1727
A ₂	Face to Face RTJ	in.	8.0	9.13	10.13	11.75	12.63	16.5	17.13	18.63	20.38	30.63	33.63	36.63	39.63	45.88	56.0	69.13
		mm	203	232	257	299	321	419	435	473	518	778	854	930	1007	1165	1422	1756
K	Center to Top open	in.	17.38	17.75	19.31	19.31	28.13	36.13	43.88	51.06	57.81	66.31	72.25	79.06	88.38	102.4	138.0	156.0
		mm	442	451	491	491	715	918	1115	1297	1468	1684	1835	2008	2245	2602	3505	3962
L	Center to Top Closed	in.	15.19	15.38	16.06	16.06	23.44	29.25	34.75	40.25	44.94	52.13	56.38	61.31	68.50	78.25	108.0	121.0
		mm	386	391	408	408	595	743	883	1022	1141	1324	1432	1557	1740	1988	2743	3073
M	Handwheel Dia.	in.	10	10	10	10	14	18	24	24	24	24	28	28	28	34	34	34
		mm	254	254	254	254	356	457	610	610	610	610	711	711	711	864	864	864
	Weight Flanged Ends	lbs.	67	70	126	135	215	386	654	998	1317	1915	2608	3319	4278	7529	10817	15300
		kg	30	32	57	61	98	175	297	453	597	868	1182	1504	1938	3411	4907	6940

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P. specification includes sizes 1½"-24".
3. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Butt weld ends; Flow calculations (Cv).
 See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

UOP HF Acid Globe Valves



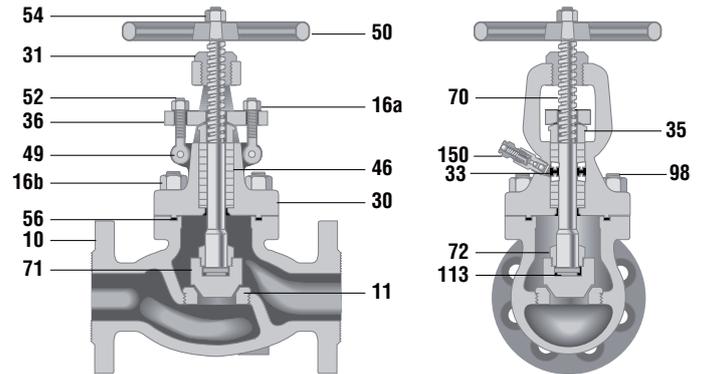
ASME Class 300 Sizes 1/2" - 2"

Series 3J4RF1HFM-300CG

PARTS LIST

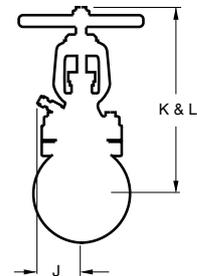
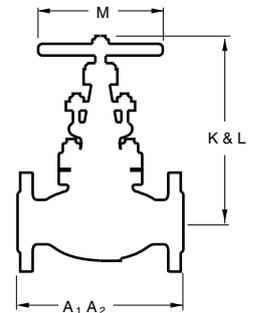
ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Ductile Iron
31	Yoke Sleeve	12% Chrome
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
35	Gland	Monel
49	Eyebolt Pin	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB
55	Bonnet Gasket	Monel /Graphite Spiral Wound
10	Body	ASTM A216 GR. WCB
70	Stem	K-Monel
46	Packing	Graphitic
150	Double Ball Grease Injector	Carbon Steel & Monel
33	Lantern Ring	Monel
72	Disc Nut	Monel
113	Thrust Plate	Monel
71	Disc	Monel w/PTFE Insert
11	Seat Ring	Monel
98	Bonnet Stud	ASTM A193 GR. B7M

Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)						
		.5	.75	1	1.25	1.5	2	
A ₁	Face to Face Flanged Ends	in.	6.0	7.0	8.0	8.5	9.0	10.5
		mm	152	1178	203	216	229	267
A ₂	Face to Face RJT	in.	6.44	7.5	8.5	9.0	9.5	11.13
		mm	164	191	216	229	241	283
J	Center to Injector End-Body	in.	3.37	3.5	3.5	3.5	3.5	3.62
		mm	86	89	89	89	89	92
K	Center to Top Open	in.	8.13	9.0	9.63	12.0	13.75	14.13
		mm	206	229	244	305	349	359
L	Center to Top Closed	in.	7.38	8.63	8.88	11.25	12.13	12.88
		mm	187	219	225	286	308	327
M	Handwheel Dia.	in.	3.5	4.5	4.5	8	8	8
		mm	89	114	114	203	203	203
	Weight	lbs.	10	15	22	36	44	63
		kg	4.5	6.8	10.0	16.3	20.0	28.6



Notes:

- This data is not to be used for construction unless confirmed by the factory.
- U.O.P specification includes sizes 1/2"-1".

Related data

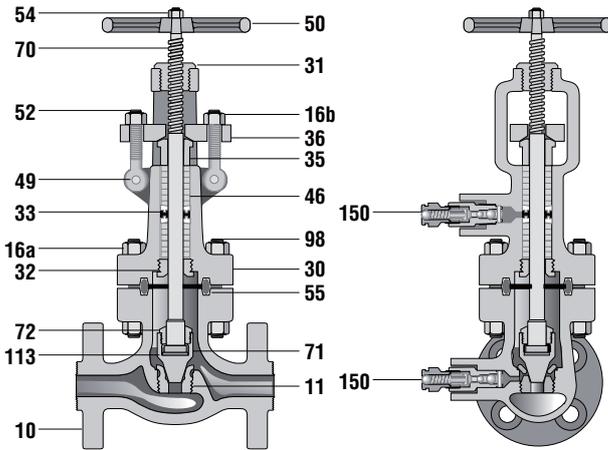
See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv). Grease injector details, see page 12 • PTFE seat details, see page 9.

Test Pressure 665-HF8

Shell Test2250 PSIG
 Seat Test..... 1650 PSIG
 Helium Shell Test.....500 PSIG

Test Pressure 665-HF8 (-M35-1)

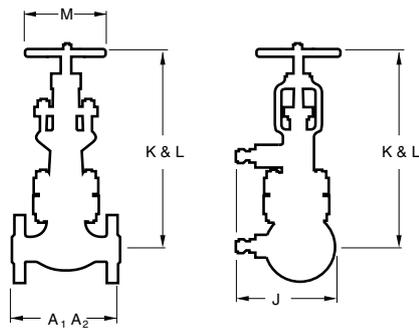
Shell Test2175 PSIG
 Seat Test..... 1600 PSIG
 Helium Shell Test.....500 PSIG



PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
54	Handwheel Nut	Carbon Steel	Carbon Steel
70	Stem	K-Monel	K-Monel
50	Handwheel	Malleable Iron	Malleable Iron
31	Yoke Sleeve	12% Chrome	12% Chrome
52	Eyebolt	Carbon Steel	Carbon Steel
16b	Eyebolt Nut	Carbon Steel	Carbon Steel
36	Gland Flange	Carbon Steel	Carbon Steel
35	Gland	Monel	Monel
49	Eyebolt Pin	Carbon Steel	Carbon Steel
46	Packing	Graphitic	Graphitic
33	Lantern Ring	Monel	Monel
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M
16a	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
55	Bonnet Gasket	Soft Steel Ring	Monel Ring
32	Bonnet Stem Bushing	Monel	Monel
150	Double Ball Grease Injector	Carbon Steel & Monel®	Carbon Steel & Monel®
72	Disc Nut	Monel	Monel
71	Disc	Monel	Monel
113	Thrust Plate	Monel	Monel
11	Seat Ring	Monel	Monel
10	Body	ASTM A216 GR. WCB	ASTM A494 GR. M35-1

DIMENSIONS and WEIGHTS



Dim	Description	VALVE SIZE (inches)			
		.5	.75	1	
A ₁	Face to Face Flanged Ends	in.	6.5	7.5	8.5
		mm	165	191	216
A ₂	Face to Face RTJ	in.	6.44	7.5	8.5
		mm	164	191	216
J	Center to Injector End-Body	in.	4.25	4.25	4.25
		mm	108	108	108
K	Center to Top Open	in.	13	14.63	14
		mm	330	371	356
L	Center to Top Closed	in.	12.63	13.63	12.75
		mm	321	346	324
M	Handwheel Dia.	in.	4.5	5.5	5.5
		mm	114	140	140
	Weight Flanged Ends	lbs.	22	31	42
		kg	10	14.1	19.1

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1/2"-1".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv). Grease injector details, see page 12.

UOP HF Acid Globe Valves



ASME Class 600 Sizes 1/2" - 2"

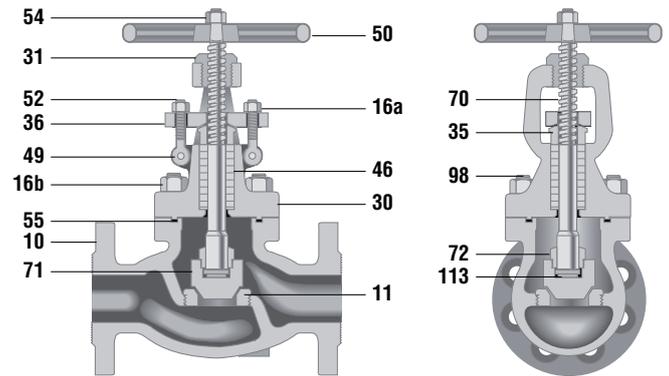
Series 3J4RF1HFM-600M

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A494 GR. M35-1
11	Seat Ring	Monel
16a	Eyebolt Nut	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome
35	Gland	Monel
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /Graphite Spiral Wound
70	Stem	K-Monel
71	Disc	Monel
72	Disc Nut	Monel
113	Thrust Plate	Monel
98	Bonnet Stud	ASTM A193 GR. B7M

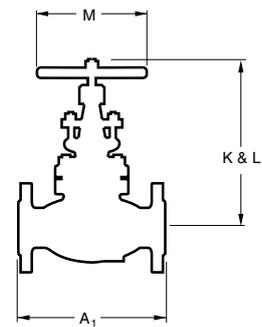
Test Pressure

Shell Test	2250 PSIG
Seat Test.....	1650 PSIG
Helium Shell Test.....	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	Face to Face Flanged End	in.	6.5	7.5	8.5	9.5	11.5
		mm	165	191	216	241	292
K	Center to Top	in.	8.13	9.0	9.63	13.75	14.13
		mm	206	229	244	350	359
L	Center to Top Closed	in.	7.38	8.63	8.88	12.13	12.88
		mm	187	219	225	308	327
M	Handwheel Dia.	in.	3.5	4.5	4.5	8	8
		mm	89	114	114	203	203
	Weight Flanged Ends	lbs.	10	15	22	44	63
		kg	4.5	6.8	10.0	20.0	28.6



Notes:

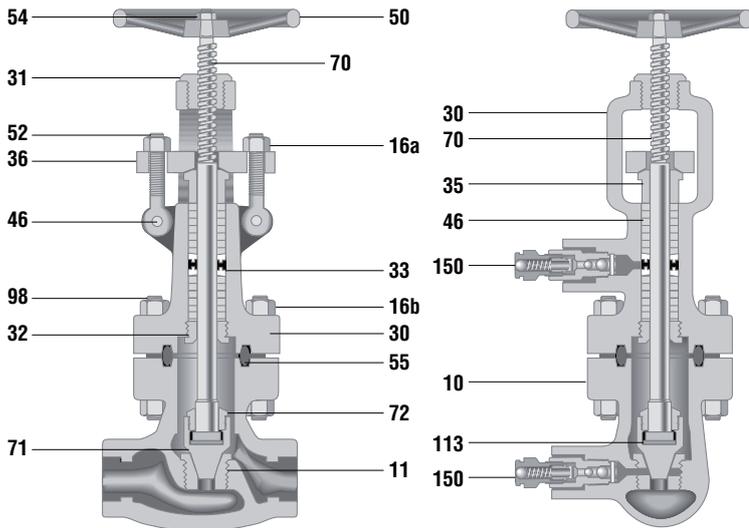
1. This data is not to be used for construction unless confirmed by the factory.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Test Pressure

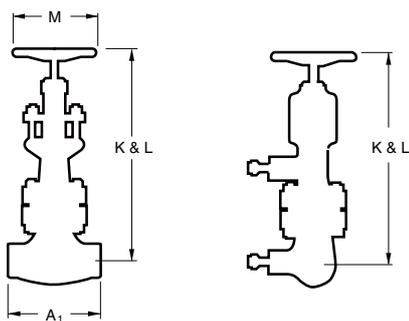
Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG



PARTS LIST

ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Malleable Iron
31	Yoke Sleeve	12% Chrome
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
46	Eyebolt Pin	Carbon Steel
98	Bonnet Stud	ASTM A193 GR. B7M
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
32	Bonnet Stem Bushing	Monel
55	Bonnet Gasket	Soft Steel Ring
72	Disc Nut	Monel
71	Disc	Monel
11	Seat Ring	Monel
30	Bonnet	ASTM A216 GR. WCB
70	Stem	K-Monel
35	Gland	Monel
46	Packing	Graphitic
150	Double Ball Grease Injector	Carbon Steel & Monel
33	Lantern Ring	Monel
10	Body	ASTM A105
113	Thrust Plate	Monel

DIMENSIONS and WEIGHTS



Dim	Description		VALVE SIZE (inches)		
			.5	.75	1
A ₁	End to End Socket Weld End	in.	4.5	5.13	5.13
		mm	114	131	131
K	Center to Top Open	in.	12	13.88	13.88
		mm	305	352	352
L	Center to Top Closed	in.	11.63	12.88	12.88
		mm	295	327	327
M	Handwheel Dia.	in.	4.5	5.5	5.5
		mm	114	140	140
X	Bore Depth Socket Weld End	in.	.37	.5	.5
		mm	10	13	13
Y	Bore Dia. Socket Weld End	in.	.855	1.065	1.330
		mm	22	27	32
	Weight	lbs.	18	25	32
		kg	8.2	11.3	14.5

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1/2"-1".

Related data

See Technical Data section for: Temperature/pressure data, Flow calculations (Cv).
 Grease injector details, see page 12.

UOP HF Acid Globe Valves



ASME Class 800 Sizes 1/2" - 2"

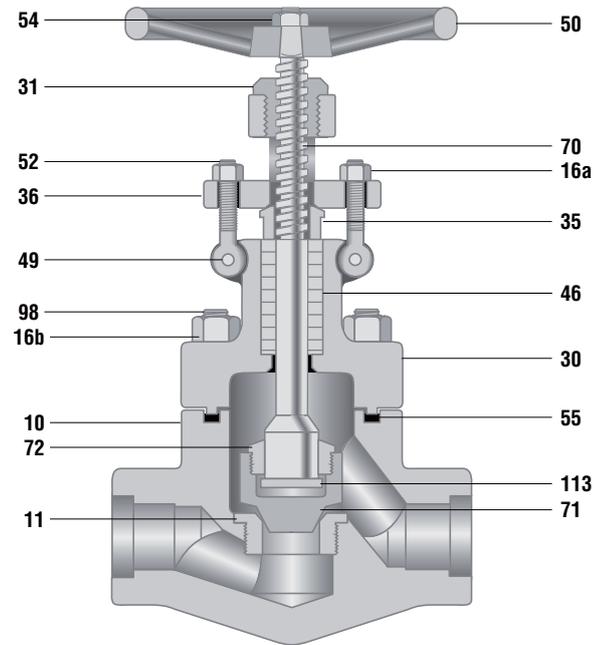
Series 3J6SW1HFM-800C

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A105
11	Seat Ring	Monel
16a	Eyebolt Nut	ASTM A194 GR. 2H
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105
31	Yoke Sleeve	12% Chrome
35	Gland	Monel
36	Gland Flange	Carbon Steel
46	Packing	Graphitic
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /Graphite Spiral Wound
70	Stem	K-Monel
71	Disc	Monel
72	Disc Nut	Monel
98	Bonnet Stud	ASTM A193 GR. B7M
113	Thrust Plate	Monel

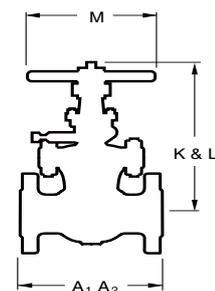
Test Pressure

Shell Test	3000 PSIG
Seat Test.....	2200 PSIG
Helium Shell Test.....	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)					
			.5	.75	1	1.25	1.5	2
A ₁	End to End Socket Weld End	in.						
		mm	92	111	120	152	172	200
K	Center to Top Open	in.						
		mm	152	192	227	240	279	329
L	Center to Top Closed	in.						
		mm						
M	Handwheel Dia.	in.						
		mm	100	120	160	160	180	200
X	Bore Depth Socket Weld End	in.						
		mm	13	13	13	13	13	16
Y	Bore Dia. Socket Weld End	in.						
		mm	27	27	34	43	49	61
	Weight	lbs.						
		kg	2.2	3.8	5.5	7.0	11.5	12.0



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1/2"-2".

Related data

See Technical Data section for: Temperature/pressure data, Flow calculations (Cv).

ASME Class 800 Sizes 1/2" - 2"

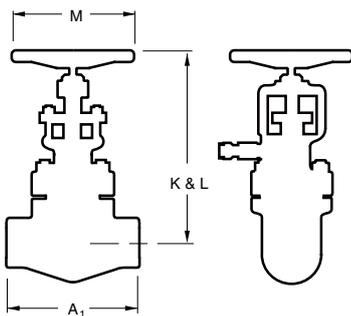
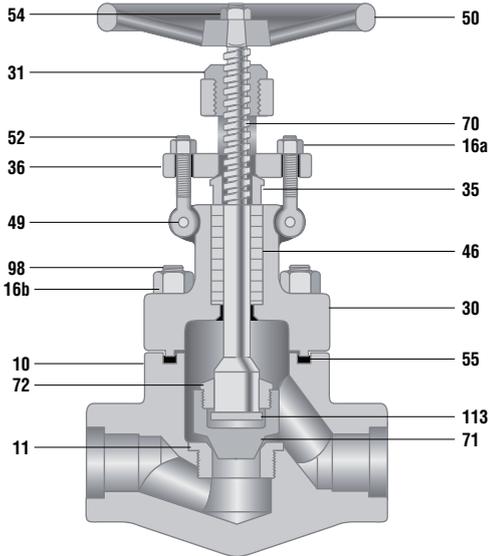
Series 3J6SW1FHM-800C

Test Pressure

Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Malleable Iron
70	Stem	K-Monel
31	Yoke Sleeve	12% Chrome
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
35	Gland	Monel
49	Eyebolt Pin	Carbon Steel
46	Packing	Graphitic
98	Bonnet Stud	ASTM A193 GR. B7M
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105
55	Bonnet Gasket	Monel /Graphite Spiral Wound
72	Disc Nut	Monel
71	Disc	Monel w/PTFE Insert
33	Lantern Ring	Monel
150	Double Ball Grease Injector	Carbon Steel
10	Body	ASTM A105
11	Seat Ring	Monel



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1/2"-1".

Related data

See Technical Data section for: Temperature/pressure data, Flow calculations (Cv). Grease injector details, see page 12.

UOP HF Acid Globe Valves



ASME Class 150 Sizes 1½" - 12"

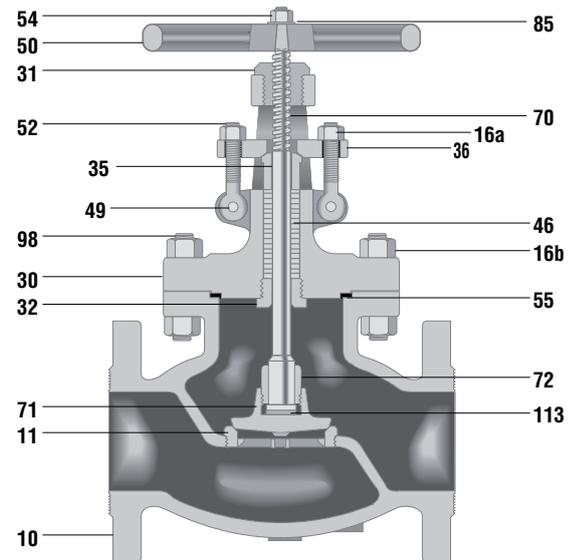
Series 2J41HFM-150C

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Ductile Iron
31	Yoke Sleeve	Aluminum Bronze
70	Stem	Monel
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
35	Gland	Monel
49	Eyebolt Pin	Carbon Steel
30	Bonnet	ASTM A216 GR. WCB
46	Packing	Graphitic
55	Bonnet Gasket	Corr. Soft Steel/PTFE Coated
32	Bonnet Stem Bushing	Monel
72	Disc Nut	Monel
11	Seat Ring	Monel
113	Thrust Plate	Monel
71	Disc	Monel
10	Body	ASTM A216 GR. WCB
98	Bonnet Stud	ASTM A193 GR. B7M
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
85	Handwheel Washer	12% Chrome

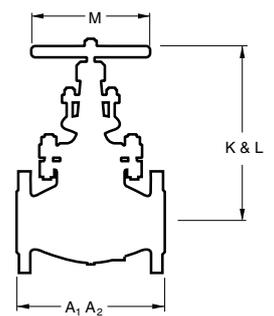
Test Pressure

Shell Test	450 PSIG
Seat Test.....	320 PSIG
Helium Shell Test.....	450 PSIG



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)									
		1.5	2	2.5	3	4	6	8	10	12	
A ₁	Face to Face Flanged Ends	in.	6.50	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50
		mm	165	203	216	241	292	406	495	622	699
A ₂	Face to Face RJT	in.	7.00	8.50	9.00	10.00	12.00	16.50	20.00	25.00	28.00
		mm	178	216	229	254	305	419	508	635	711
K	Center to Top Open	in.	12.25	14.75	15.62	16.37	19.62	25.62	28.62	29.50	35.25
		mm	311	375	397	416	498	651	727	749	895
L	Center to Top Closed	in.	11.38	13.50	14.37	14.75	17.62	23.00	26.00	26.87	31.25
		mm	289	343	365	375	448	584	660	683	794
M	Handwheel Dia.	in.	8	8	10	10	10	14	18	18	18
		mm	203	203	254	254	254	356	457	457	457
	Weight Flanged Ends	lbs.	30	50	69	84	138	238	411	598	824
		kg	14	23	32	38	63	108	186	271	374



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 2"-8".

Related data

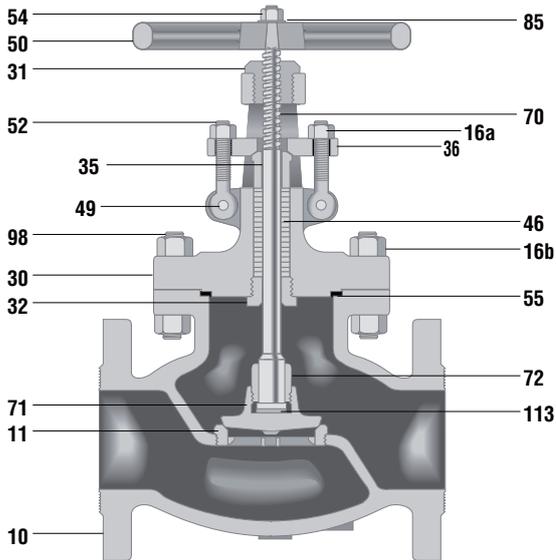
See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv):

See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

Test Pressure

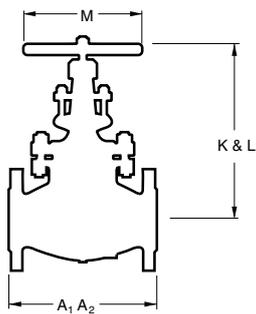
Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG

PARTS LIST



ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Ductile Iron
31	Yoke Sleeve	Aluminum-Bronze
70	Stem	Monel
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
35	Gland	Monel
49	Eyebolt Pin	Carbon Steel
30	Bonnet	ASTM A216 GR WCB
46	Packing	Graphitic
55	Bonnet Gasket	Corr. Soft Steel/PTFE Coated
32	Bonnet Stem Bushing	Monel
72	Disc Nut	Monel
11	Seat Ring Facing	Monel
113	Thrust Plate	Monel
71	Disc	Monel
10	Body	ASTM A216 GR WCB
98	Bonnet Stud	ASTM A193 GR B7M
16b	Bonnet Stud Nut	ASTM A194 GR 2HM
85	Handwheel Washer	12% Chrome

DIMENSIONS and WEIGHTS



Dim	Description		VALVE SIZE (inches)								
			1.5	2	2.5	3	4	6	8	10	12
A ₁	Face to Face Flanged Ends	in.	9.00	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
		mm	229	267	292	318	356	445	559	622	711
A ₂	Face to Face RJT	in.	9.50	11.13	12.13	13.13	14.13	18.13	22.63	25.13	28.63
		mm	241	283	308	333	371	460	575	638	727
K	Center to Top Open	in.	15.63	18.25	20.00	20.75	24.87	28.75	31.37	34.37	48.00
		mm	397	464	508	527	632	730	797	873	1219
L	Center to Top Closed	in.	14.38	13.50	14.63	15.88	17.50	21.88	26.00	32.50	36.25
		mm	365	435	476	479	581	657	724	800	1143
M	Handwheel Dia.	in.	8	8	10	10	14	18	18	34	34
		mm	203	203	254	254	356	457	457	864	864
	Weight Flanged Ends	lbs.	60	79	104	137	224	388	635	1258	1698
		kg	27	36	47	62	102	176	288	571	770

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 2"-6".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).
 See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

UOP HF Acid Globe Valves



ASME Class 300 Sizes 1½" - 12"

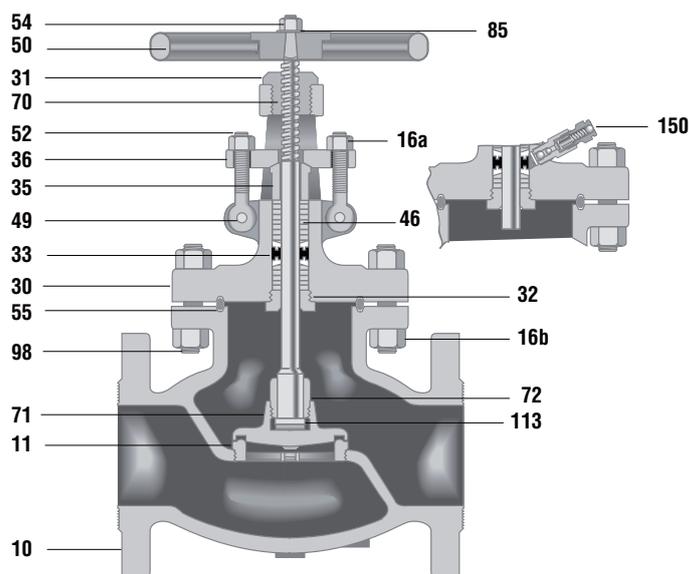
Series 2J41HFM-300CG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Ductile Iron
31	Yoke Sleeve	Aluminum Bronze
70	Stem	Monel
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
36	Gland Flange	Carbon Steel
35	Gland	Monel
49	Eyebolt Pin	Carbon Steel
30	Bonnet	ASTM A216 GR. WCB
46	Packing	Graphitic
55	Bonnet Gasket	Soft Steel Ring
32	Bonnet Stem Bushing	Monel
72	Disc Nut	Monel
11	Seat Ring	Monel
113	Thrust Plate	Monel
71	Disc	Monel w/PTFE Insert
10	Body	ASTM A216 GR. WCB
98	Bonnet Stud	ASTM A193 GR. B7M
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
150	Double Ball Grease Injector	Carbon Steel & Monel
85	Handwheel Washer	12% Chrome
33	Lantern Ring	Monel

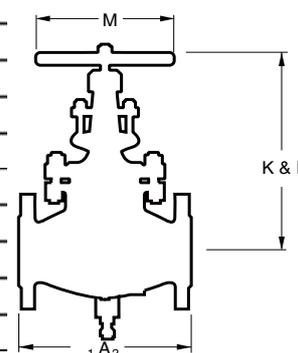
Test Pressure

Shell Test	1125 PSIG
Seat Test	825 PSIG
Helium Shell Test	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)								
			1.5	2	2.5	3	4	6	8	10	12
A ₁	Face to Face Flanged Ends	in.	9.00	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
		mm	229	267	292	318	356	445	559	622	711
A ₂	Face to Face RJT	in.	9.50	11.13	12.13	13.13	14.13	18.13	22.63	25.13	28.63
		mm	241	283	308	333	371	460	575	638	727
K	Center to Top Open	in.	15.63	14.25	15.50	16.88	18.75	23.63	28.25	35.25	39.50
		mm	397	362	394	429	477	601	718	896	1004
L	Center to Top Closed	in.	14.38	13.50	14.63	15.88	17.50	21.88	26.00	32.50	36.25
		mm	364	343	372	404	445	556	661	826	921
M	Handwheel Dia.	in.	8	8	10	10	14	18	18	22	22
		mm	203	203	254	254	356	457	457	559	559
	Weight Flanged Ends	lbs.	60	64	106	124	177	366	602	899	1589
		kg	27	29	48	56	80	165	271	405	716



Footnote

• U.O.P specification includes sizes 2½"-8".

Notes:

1. This data is not to be used for construction unless confirmed by the factory.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

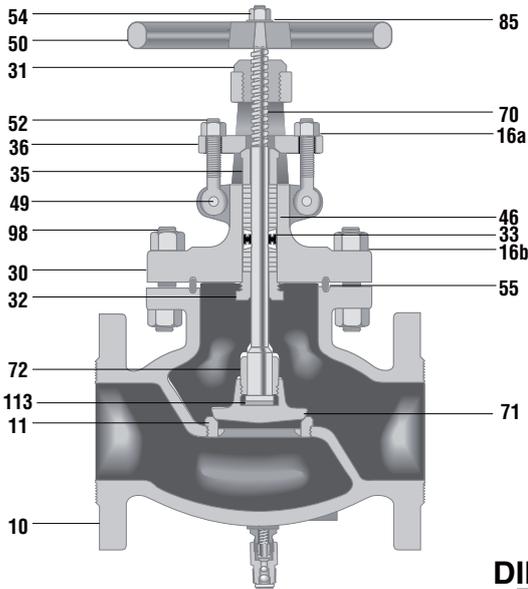
See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

Test Pressure 366-HF8

Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG

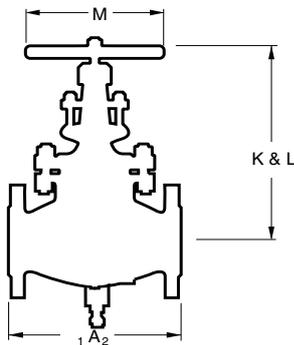
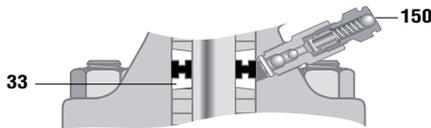
Test Pressure 366-HF8 (-M35-1)

Shell Test 1100 PSIG
 Seat Test 800 PSIG
 Helium Shell Test 500 PSIG



PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
54	Handwheel Nut	Carbon Steel	Carbon Steel
50	Handwheel	Ductile Iron	Ductile Iron
31	Yoke Sleeve	Aluminum Bronze	Aluminum Bronze
70	Stem	Monel	Monel
52	Eyebolt	Carbon Steel	Carbon Steel
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
36	Gland Flange	Carbon Steel	Carbon Steel
35	Gland	Monel	Monel
49	Eyebolt Pin	Carbon Steel	Carbon Steel
30	Bonnet	ASTM A216 GR WCB	ASTM A494 GR M35-1
33	Lantern Ring	Monel	Monel
150	Double Ball Grease Injector	Carbon Steel & Monel	Carbon Steel & Monel
46	Packing	Graphitic	Graphitic
55	Bonnet Gasket	Soft Steel Ring	Monel Ring
32	Bonnet Stem Bushing	Monel	Monel
72	Disc Nut	Monel	Monel
11	Seat Ring	Monel	Monel
113	Thrust Plate	Monel	Monel
71	Disc	Monel	Monel
10	Body	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
85	Handwheel Washer	12% Chrome	12% Chrome



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)						
			1.5	2	2.5	3	4	6	8
A ₁	Face to Face Flanged Ends	in.	9.00	10.50	11.50	12.50	14.00	17.50	22.00
		mm	229	267	292	318	356	445	559
A ₂	Face to Face RJT	in.	9.50	11.13	12.13	13.13	14.63	18.13	22.63
		mm	241	283	308	333	371	460	575
J	Center to Injector End-Body	in.	5.18	5.50	5.87	6.12	7.00	7.62	9.00
		mm	132	140	149	155	178	194	229
K	Center to Top Open	in.	15.63	14.25	15.50	16.88	18.75	23.63	28.25
		mm	397	362	394	429	477	601	718
L	Center to Top Closed	in.	14.38	13.50	14.63	15.88	17.50	21.88	26.00
		mm	365	343	372	404	445	556	661
M	Handwheel Dia.	in.	8	8	8	8	14	18	18
		mm	203	203	203	203	356	457	457
	Weight Flanged Ends	lbs.	60	64	106	124	177	366	602
		kg	27	29	48	56	80	165	271

Notes:

- This data is not to be used for construction unless confirmed by the factory.
- U.O.P specification includes sizes 1½"-8".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

UOP HF Acid Check Valves



ASME Class 800 Sizes 1/2" - 2"

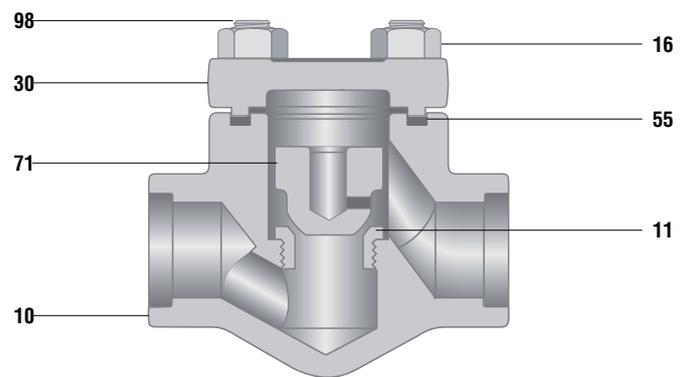
Series 3H6SW1HFM-800C/M

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
		3682-HF8	3682-HF8 (-M35-1)
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A193 GR. 2HM
30	Bonnet Cap	ASTM A216 GR. WCB or A515 GR. 70	ASTM A494 GR . M35-1
55	Bonnet Gasket	Monel /Graphite Spiral Wound	Monel /Graphite Spiral Wound
71	Disc	Monel	Monel
10	Body	ASTM A105	ASTM A494 GR . M35-1
11	Seat Ring	Monel	Monel

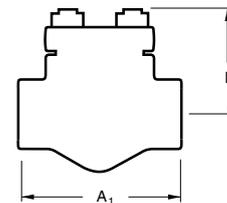
Test Pressure

Shell Test	3000 PSIG
Seat Test.....	2200 PSIG
Helium Shell Test.....	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	End to End Socket Weld End	in.	3.63	4.5	5.13	7.0	8.38
		mm	92	114	130	178	213
K	Center to Top	in.	2.5	3.0	3.38	5.0	5.5
		mm	64	76	87	127	140
X	Bore Depth Socket Weld End	in.	.37	.5	.05	.5	.62
		mm	10	13	13	13	16
Y	Bore Dia. Socket Weld End	in.	.855	1.065	1.330	1.915	2.406
		mm	22	27	34	49	61
	Weight	lbs.	3	6	9	20	35
		kg	1.4	2.7	4.1	9.1	15.9



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1/2"-2".

Related data

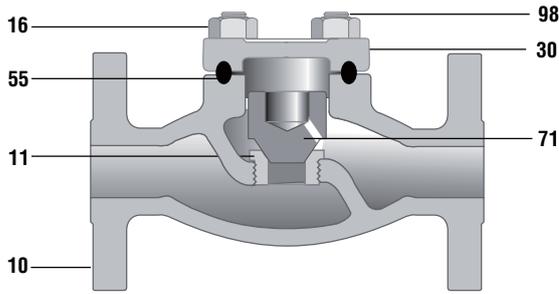
See Technical Data section for: Temperature/pressure data, Flow calculations (Cv).

ASME Class 600 Sizes 1/2" - 1"

Series 3H4RF1HFM-600M

Test Pressure

Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG

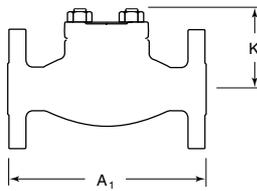


PARTS LIST

ITEM	DESCRIPTION	MATERIAL
98	Bonnet Stud	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR. 2Hm
30	Bonnet Cap	ASTM A494 GR. M35-1
55	Bonnet Gasket	Monel® Ring
71	Disc	Monel®
10	Body	ASTM A494 GR. M35-1
11	Seat Ring	Monel®

DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)			
		.5	.75	1	
A ₁	End to End Flanged Ends	in.	6.50	7.50	8.50
		mm	165	191	216
K	Center to Top	in.	2.60	3.15	3.55
		mm	66	80	90
	Weight Flanged Ends	lbs.	8	14	19
		kg	3.6	6.4	8.6



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1/2"-1".

Related data

See Technical Data section for: Temperature/pressure data, Flow calculations (Cv).

UOP HF Acid Check Valves



ASME Class 150 Sizes 1½" - 30"

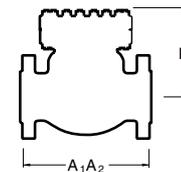
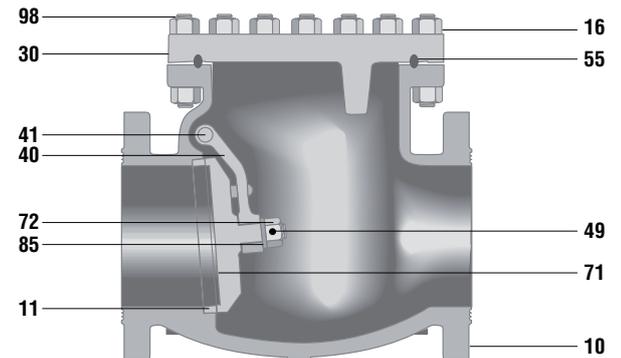
Series 2H44HFM-150C

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
98	Bonnet Stud	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR. 2HM
55	Bonnet Gasket	Corr. Steel/PTFE Coated
30	Bonnet Cap	ASTM A216 GR .WCB or A515 GR. 70
40	Hinge	Monel
41	Hinge Pin	Monel
10	Body	ASTM A216 GR. WCB
11	Seat Ring	Monel
49	Disc Nut Pin	Monel
71	Disc	Monel
85	Disc Nut Washer	Monel
72	Disc Nut	Monel

Test Pressure

Shell Test	450 PSIG
Seat Test.....	320 PSIG
Helium Shell Test.....	450 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)														
			1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30
A ₁	Face to Face Flanged Ends	in.	6.50	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	60.00
		mm	165	203	216	241	292	356	495	622	699	787	864	978	978	1295	1524
A ₂	Face to Face RJT	in.	7.00	8.50	9.00	10.00	12.00	14.50	20.00	25.00	28.00	31.50	34.50	39.00	39.00	51.50	61.00
		mm	178	216	229	254	305	368	508	635	711	800	876	991	991	1308	1550
K	Center to Top	in.	3.88	5.37	6.00	6.50	7.50	9.25	11.25	11.87	13.62	15.87	21.12	22.25	24.75	34.00	39.25
		mm	98	137	152	165	191	235	286	302	346	403	536	565	629	864	997
	Weight Flanged Ends	lbs.	26	39	50	65	104	180	336	519	703	900	1175	1497	2370	4580	5900
		kg	12	18	23	29	47	82	152	235	319	408	533	679	1075	2077	2667

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 2"-16".
3. Helium shell test performed on sizes up through 14".

Related data

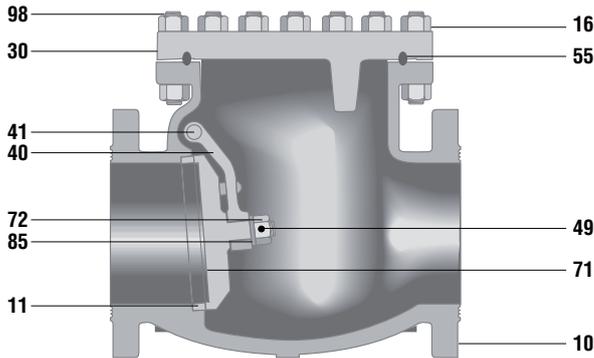
See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

ASME Class 300 Sizes 1½" - 30"

Series 2H44HFM-300C

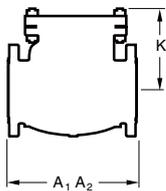
Test Pressure

Shell Test 1125 PSIG
 Seat Test.....825 PSIG
 Helium Shell Test.....500 PSIG



PARTS LIST

ITEM	DESCRIPTION	MATERIAL
98	Bonnet Stud	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet Cap	ASTM A216 GR. WCB or A515 GR. 70
55	Bonnet Gasket	Corr. Steel/PTFE Coated
41	Hinge Pin	Monel
40	Hinge**	Monel
10	Body	ASTM A216 GR. WCB
72	Disc Nut	Monel
85	Disc Nut Washer	Monel
71	Disc	Monel
49	Disc Nut Pin	Monel
11	Seat Ring Facing	Monel



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)														
			1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30
A ₁	Face to Face Flanged Ends	in.	9.50	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	62.75
		mm	241	267	292	318	356	445	533	622	711	838	864	978	1015	1346	1594
A ₂	Face to Face RJT	in.	10.00	11.13	12.13	13.13	14.63	18.13	21.63	25.13	28.63	33.63	34.63	39.13	40.75	53.88	63.75
		mm	254	283	309	334	372	461	550	639	728	855	880	994	1036	1369	1619
K	Center to Top	in.	6.38	7.25	8.00	8.75	9.75	12.00	13.25	16.00	18.00	20.75	23.13	24.63	27.88	31.50	39.25
		mm	163	185	204	223	248	305	337	407	458	528	588	626	709	801	997
	Weight Flanged Ends	lbs.	50	55	84	119	185	298	459	783	1191	1764	1984	2446	3343	5733	6600
		kg	23	25	36	54	84	135	207	353	536	794	893	1101	1505	2580	2994

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 2"-16".
3. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

UOP HF Acid Check Valves



ASME Class 300 Sizes 1½" - 30"

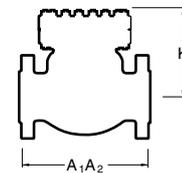
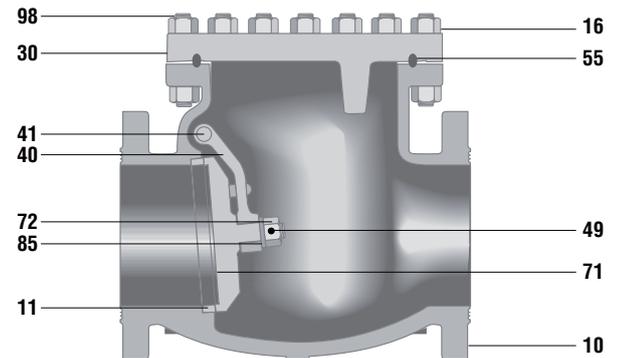
Series 2H44HFM-300CD

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
98	Bonnet Stud	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet Cap	ASTM A216 GR. WCB or A515 GR. 70
55	Bonnet Gasket	Soft Steel Ring
40	Hinge	Monel
41	Hinge Pin	Monel
10	Body	ASTM A216 GR. WCB
72	Disc Nut	Monel
85	Disc Nut Washer	Monel
71	Disc	Monel
49	Disc Nut Pin	Monel
11	Seat Ring Facing	Monel

Test Pressure

Shell Test	1125 PSIG
Seat Test	825 PSIG
Helium Shell Test	450 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)														
			1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30
A ₁	Face to Face Flanged Ends	in.	9.50	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	62.75
		mm	241	267	292	318	356	445	533	622	711	838	864	978	1015	1346	1594
A ₂	Face to Face RJT	in.	10.00	11.13	12.13	13.13	14.63	18.13	21.63	25.13	28.63	33.63	34.63	39.13	40.75	53.88	63.75
		mm	254	283	309	334	372	461	550	639	728	855	880	994	1036	1369	1619
K	Center to Top	in.	6.38	7.00	7.37	8.00	8.87	11.37	13.25	15.25	18.00	19.25	20.87	22.25	22.87	33.25	39.25
		mm	163	178	187	203	225	289	337	387	458	489	530	565	581	845	997
	Weight Flanged Ends	lbs.	50	65	87	110	160	331	510	784	1280	1490	2032	2446	2980	4840	6600
		kg	23	29	39	50	73	150	231	356	581	676	922	1110	1352	2195	2994

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. U.O.P specification includes sizes 1½"-30".
3. Helium shell test performed on sizes up through 14".

Related data

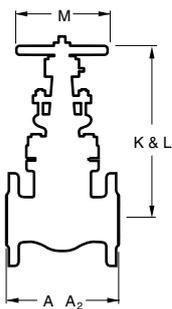
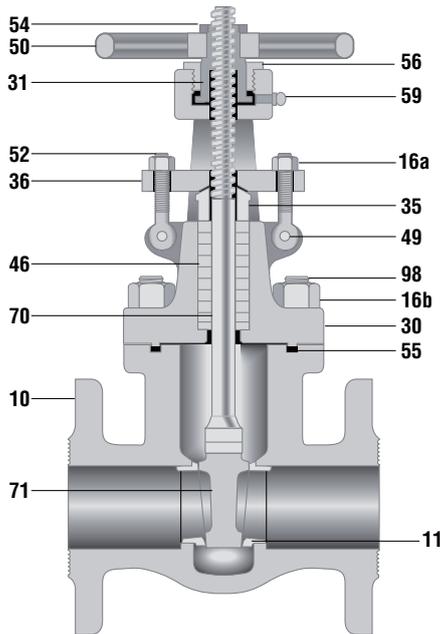
See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Test Pressure 3354P-HF8

Shell Test 1125 PSIG
 Seat Test.....825 PSIG
 Helium Shell Test.....500 PSIG

Test Pressure 3354P-HF8 (-M35-1)

Shell Test 1100 PSIG
 Seat Test.....800 PSIG
 Helium Shell Test.....500 PSIG



PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
10	Body	ASTM A105	ASTM A494 GR. M35-1
11	Seat Ring	Monel 400	Monel 400
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome	12% Chrome
35	Gland	Monel 400	Monel 400
36	Gland Flange	Carbon Steel	Carbon Steel
46	Packing	PTFE	PTFE
49	Eyebolt Pin	Carbon Steel	Carbon Steel
50	Handwheel	Malleable Iron	Malleable Iron
52	Eyebolt	Carbon Steel	Carbon Steel
54	Handwheel Nut	Carbon Steel	Carbon Steel
55	Bonnet Gasket	Monel® /PTFE Spiral Wound	Monel® /PTFE Spiral Wound
56	Jam Nut	Carbon Steel	Carbon Steel
59	Grease Fitting	Carbon Steel	Carbon Steel
70	Stem	K-Monel®	K-Monel®
71	Wedge	Monel® 400	Monel® 400
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M

DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	Face to Face	in.	5.5	6.0	6.5	7.5	8.5
		mm	140	152	165	191	216
K	Center to Top	in.	9.5	10.5	11.75	14.75	16.13
		mm	241	267	298	375	410
L	Center to Top Closed	in.	8.75	9.63	10.63	13	15.75
		mm	222	245	270	330	400
M	Handwheel Dia.	in.	3.5	4.5	4.5	5.5	8
		mm	89	114	114	140	203
	Weight Flanged Ends	lbs.	12	17	22	38	55
		kg	5.4	7.7	10	17.2	24.9

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification is for 2" size only.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Phillips HF Acid Gate Valves



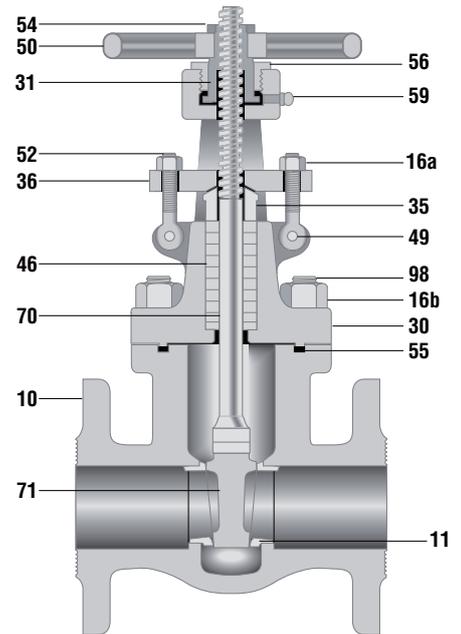
ASME Class 600 Sizes 1/2" - 2" Series 3Z4RF1HFM-600C/M

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
10	Body	ASTM A216 GR. WCB or ASTM A105	ASTM A494 GR. M35-1
11	Seat Ring	Monel 400	Monel 400
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome	12% Chrome
35	Gland	Monel 400	Monel 400
36	Gland Flange	Carbon Steel	Carbon Steel
46	Packing	PTFE	PTFE
49	Eyebolt Pin	Carbon Steel	Carbon Steel
50	Handwheel	Malleable Iron	Malleable Iron
52	Eyebolt	Carbon Steel	Carbon Steel
54	Handwheel Nut	Carbon Steel	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound	Monel /PTFE Spiral Wound
56	Jam Nut	Carbon Steel	Carbon Steel
59	Grease Fitting	Carbon Steel	Carbon Steel
70	Stem	K-Monel	K-Monel
71	Wedge	Monel 400	Monel 400
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M

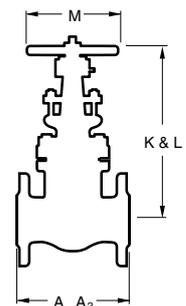
Test Pressure

Shell Test	2250 PSIG
Seat Test.....	1650 PSIG
Helium Shell Test.....	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	Face to Face	in.	6.44	7.5	8.5	9.5	11.5
		mm	164	191	216	241	292
K	Center to Top	in.	9.00	10.00	11.00	14.25	17.25
		mm	229	254	280	362	439
L	Center to Top Closed	in.	8.13	9.00	9.69	12.44	15.00
		mm	207	229	247	316	381
M	Handwheel Dia.	in.	3.5	4.5	4.5	5.5	8
		mm	89	114	114	140	203
	Weight Flanged Ends	lbs.	13	18	24	42	64
		kg	5.9	8.2	10.9	19.1	29.0



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification is for 2" size only.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

ASME Class 800 Sizes 1/2" - 2"

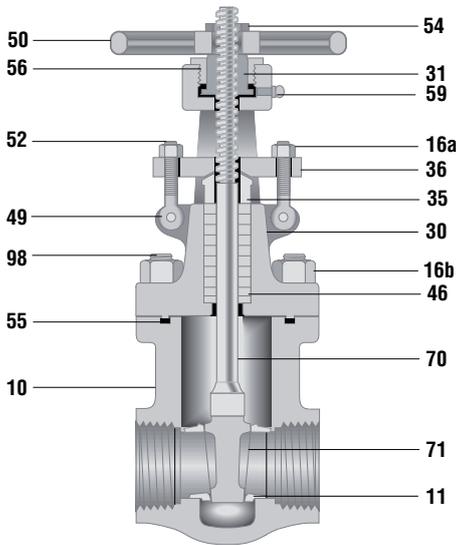
Series 3Z1NPT1HFM-800M

Test Pressure 3655P-HF8

Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG

Test Pressure 3655P-HF8 (-M35-1)

Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG

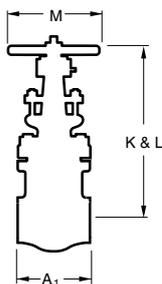


PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A493 Gr. M35-1
11	Seat Ring	Monel 400
16a	Eyebolt Nut	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A493 GR. M35-1
31	Yoke Sleeve	12% Chrome
35	Gland	Monel 400
36	Gland Flange	Carbon Steel
46	Packing	PTFE
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound
56	Jam Nut	Carbon Steel
59	Grease Fitting	Carbon Steel
70	Stem	K-Monel
71	Wedge	Monel 400
98	Bonnet Stud	ASTM A193 GR. B7M

DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)					
		.5	.75	1	1.5	2	
A ₁	Face to Face	in.	3.0	3.5	4.13	4.75	5.25
		mm	76	89	105	121	133
K	Center to Top	in.	9.00	10.00	11.00	14.25	17.25
		mm	229	254	280	362	439
L	Center to Top Closed	in.	8.13	9.00	9.69	12.44	15.00
		mm	207	229	247	316	381
M	Handwheel Dia.	in.	4	4.25	4.25	5.50	8
		mm	102	108	108	140	203
	Weight	lbs	7	9	14	24	39
		kg	3.2	4.1	6.4	10.9	17.7



Phillips HF Acid Gate Valves



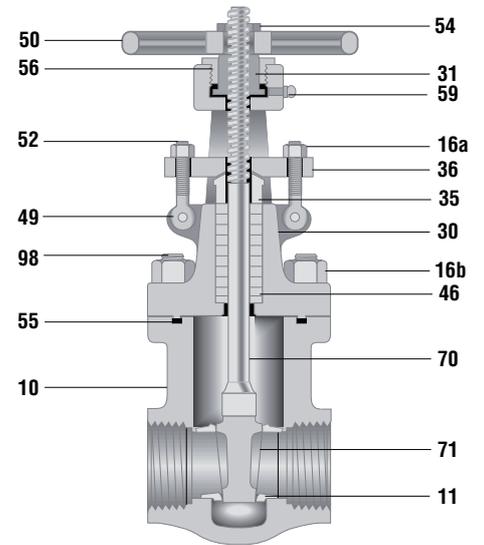
ASME Class 800 Sizes 1/2" - 2" Series 3Z1NPT1HFM-800C

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A216 GR. WCB or ASTM A105
11	Seat Ring	Monel 400
16a	Eyebolt Nut	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105
31	Yoke Sleeve	12% Chrome
35	Gland	Monel 400
36	Gland Flange	Carbon Steel
46	Packing	PTFE
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound
56	Jam Nut	Carbon Steel
59	Grease Fitting	Carbon Steel
70	Stem	K-Monel
71	Wedge	Monel 400
98	Bonnet Stud	ASTM A193 GR. B7M

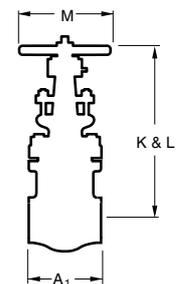
Test Pressure

Shell Test	3000 PSIG
Seat Test.....	2200 PSIG
Helium Shell Test.....	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	Face to Face	in.	3.5	3.5	4.13	4.75	5.25
		mm	89	89	105	121	133
K	Center to Top	in.	10.00	10.00	11.00	14.25	17.25
		mm	254	254	280	362	439
L	Center to Top Closed	in.	9.00	9.00	9.69	12.44	15.00
		mm	229	229	247	316	381
M	Handwheel Dia.	in.	4.25	4.25	4.25	5.50	8
		mm	108	108	108	140	203
	Weight	lbs	9	9	14	24	39
		kg	4.1	4.1	6.4	10.9	17.7



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 1/2"-1" sizes only.

Related data

See Technical Data section for: Temperature/pressure data: Flow calculations (Cv).

ASME Class 300 Sizes 1½" - 36"

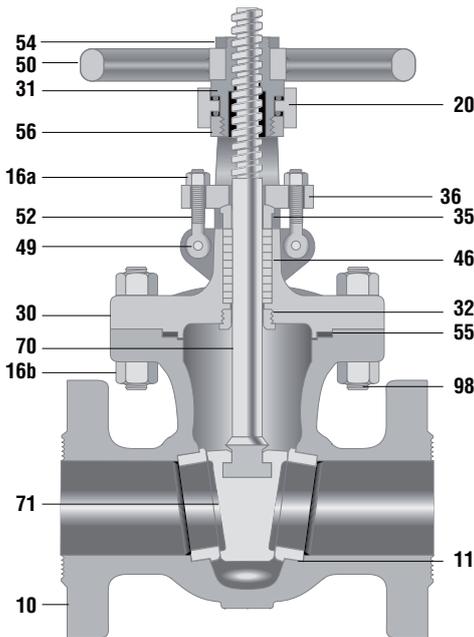
Series P2Z41HFM-300C/M

Test Pressure 350P-HF8

Shell Test 1125 PSIG
 Seat Test 825 PSIG
 Helium Shell Test 500 PSIG

Test Pressure 350P-HF8 (-M35-1)

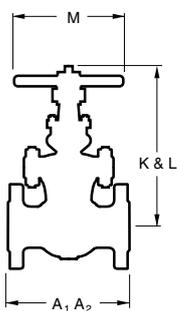
Shell Test 1100 PSIG
 Seat Test 800 PSIG
 Helium Shell Test 500 PSIG



PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
10	Body	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
11	Seat Ring	Monel 400	Monel 400
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
20	Bearings	Alloy Steel	Alloy Steel
30	Bonnet	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
31	Yoke Sleeve	Alum. Brz. or 12% Chrome	Alum. Brz. or 12% Chrome
32	Bonnet Stem Bushing	Monel 400	Monel 400
35	Gland	Monel 400	Monel 400
36	Gland Flange	Carbon Steel	Carbon Steel
46	Packing	John Crane 124	John Crane 124
49	Eyebolt Pin	Carbon Steel	Carbon Steel
50	Handwheel	Malleable Steel	Malleable Iron
52	Eyebolt	Carbon Steel	Carbon Steel
54	Handwheel Nut	Carbon Steel	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound	Monel /PTFE Spiral Wound
56	Jam Nut	Carbon Steel	Carbon Steel
70	Stem	Monel	Monel
71	Wedge	Monel 400	Monel 400
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M

DIMENSIONS and WEIGHTS



Dim	Description		VALVE SIZE (inches)															
			1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30	36
A ₁	Face to Face Flanged Ends	in.	7.5	8.5	9.5	11.13	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
		mm	191	216	241	283	305	403	419	457	502	762	838	914	991	1143	1397	1727
A ₂	Face to Face RJT	in.	8.0	9.13	10.13	11.75	12.63	16.5	17.13	18.63	20.38	30.63	33.63	36.63	39.63	45.88	56.0	69.13
		mm	203	232	257	299	321	419	435	473	518	778	854	930	1007	1165	1422	1756
K	Center to Top open	in.	17.38	17.75	19.31	19.31	28.13	36.13	43.88	51.06	57.81	66.31	72.25	79.06	88.38	102.4	138.0	156.0
		mm	442	451	491	491	715	918	1115	1297	1468	1684	1835	2008	2245	2602	3505	3962
L	Center to Top Closed	in.	15.19	15.38	16.06	16.06	23.44	29.25	34.75	40.25	44.94	52.13	56.38	61.31	68.50	78.25	108.0	121.0
		mm	386	391	408	408	595	743	883	1022	1141	1324	1432	1557	1740	1988	2743	3073
M	Handwheel Dia.	in.	10	10	10	10	14	18	24	24	24	24	28	28	28	34	34	34
		mm	254	254	254	254	356	457	610	610	610	610	711	711	711	864	864	864
	Weight Flanged Ends	lbs.	67	70	126	135	215	386	654	998	1317	1915	2608	3319	4278	7529	10817	15300
		kg	30	32	57	61	98	175	297	453	597	868	1182	1504	1938	3411	4907	6940

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 2"-36" sizes only.
3. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).
 See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

Phillips HF Acid Gate Valves



ASME Class 300 Sizes 1½" - 36"

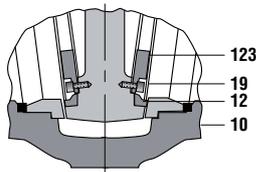
Series P2Z41HFM-300C/MZ

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
10	Body	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
11	Seat Ring	Monel 400	Monel 400
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
20	Bearings	Alloy Steel	Alloy Steel
30	Bonnet	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
31	Yoke Sleeve	Alum. Brz. or 12% Chrome	Alum. Brz. or 12% Chrome
32	Bonnet Stem Bushing	Monel 400	Monel 400
35	Gland	Monel 400	Monel 400
36	Gland Flange	Carbon Steel	Carbon Steel
46	Packing	John Crane 124	John Crane 124
49	Eyebolt Pin	Carbon Steel	Carbon Steel
50	Handwheel	Malleable Steel	Malleable Iron
52	Eyebolt	Carbon Steel	Carbon Steel
54	Handwheel Nut	Carbon Steel	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound	Monel /PTFE Spiral Wound
56	Jam Nut	Carbon Steel	Carbon Steel
70	Stem	Monel	Monel
71	Wedge	Monel 400	Monel 400
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M
123	Compression Ring	Monel	Monel
19	Cap Screw	K-Monel 500	K-Monel 500
12	Insert	PTFE	PTFE

Test Pressure

Shell Test	1125 PSIG
Seat Test.....	825 PSIG
Helium Shell Test.....	500 PSIG



Detail A

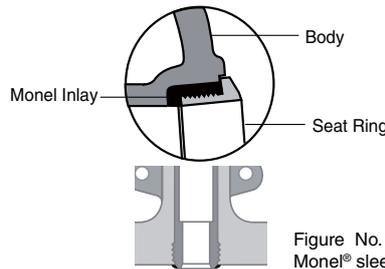
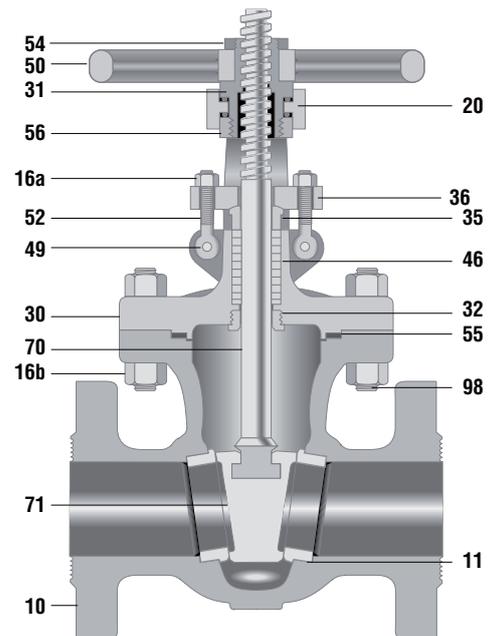
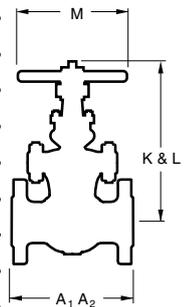


Figure No. 350PL (2) HF8 includes a Monel® sleeve that lines the stuffing box.



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)															
			1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30	36
A ₁	Face to Face Flanged Ends	in.	7.5	8.5	9.5	11.13	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
		mm	191	216	241	283	305	403	419	457	502	762	838	914	991	1143	1397	1727
A ₂	Face to Face RJT	in.	8.0	9.13	10.13	11.75	12.63	16.5	17.13	18.63	20.38	30.63	33.63	36.63	39.63	45.88	56.0	69.13
		mm	203	232	257	299	321	419	435	473	518	778	854	930	1007	1165	1422	1756
K	Center to Top open	in.	17.38	17.75	19.31	19.31	28.13	36.13	43.88	51.06	57.81	66.31	72.25	79.06	88.38	102.4	138.0	156.0
		mm	442	451	491	491	715	918	1115	1297	1468	1684	1835	2008	2245	2602	3505	3962
L	Center to Top Closed	in.	15.19	15.38	16.06	16.06	23.44	29.25	34.75	40.25	44.94	52.13	56.38	61.31	68.50	78.25	108.0	121.0
		mm	386	391	408	408	595	743	883	1022	1141	1324	1432	1557	1740	1988	2743	3073
M	Handwheel Dia.	in.	10	10	10	10	14	18	24	24	24	24	28	28	28	34	34	34
		mm	254	254	254	254	356	457	610	610	610	610	711	711	711	864	864	864
	Weight Flanged Ends	lbs.	67	70	126	135	215	386	654	998	1317	1915	2608	3319	4278	7529	10817	15300
		kg	30	32	57	61	98	175	297	453	597	868	1182	1504	1938	3411	4907	6940



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 2"-36" sizes only.
3. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

See Actuators & Accessories section for: Bevel gear, spur gear, chain wheel, motor or cylinder actuators; Bypasses, drains or auxiliary piping; Special packing, etc.

Phillips HF Acid Globe Valves

ASME Class 300 Sizes 1/2" - 2"

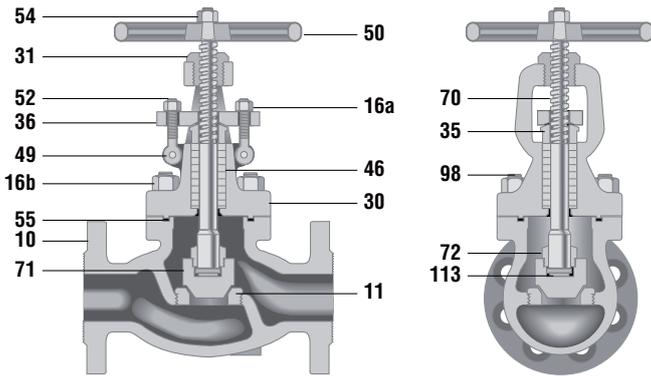
Series P3J4RF1HFM-300C

Test Pressure

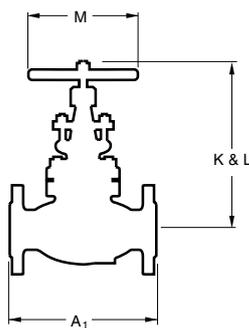
Shell Test 1125 PSIG
 Seat Test.....825 PSIG
 Helium Shell Test.....500 PSIG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A216 GR. WCB
11	Seat Ring	Monel 400
16a	Eyebolt Nut	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB
31	Yoke Sleeve	12% Chrome
35	Gland	Monel 400
36	Gland Flange	Carbon Steel
46	Packing	PTFE
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound
70	Stem	K-Monel
71	Disc	Monel 400
72	Disc Nut	Monel 400
113	Thrust Plate	K-Monel
98	Bonnet Stud	ASTM A193 GR. B7M



DIMENSIONS and WEIGHTS



Dim	Description	VALVE SIZE (inches)					
		.5	.75	1	1.5	2	
A ₁	Face to Face Flanged End	in.	6.0	7.0	8.0	9.0	10.5
		mm	152	178	203	229	267
K	Center to Top	in.	8.13	9.0	9.63	13.75	14.13
		mm	206	229	244	350	359
L	Center to Top Closed	in.	7.38	8.63	8.88	12.13	12.88
		mm	187	219	225	308	327
M	Handwheel Dia.	in.	3.5	4.5	4.5	8	8
		mm	89	114	114	203	203
	Weight Flanged Ends	lbs.	10	15	22	44	63
		kg	4.5	6.8	10.0	20.0	28.6

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 2" size only.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Phillips HF Acid Globe Valves



ASME Class 600 Sizes 1/2" - 2"

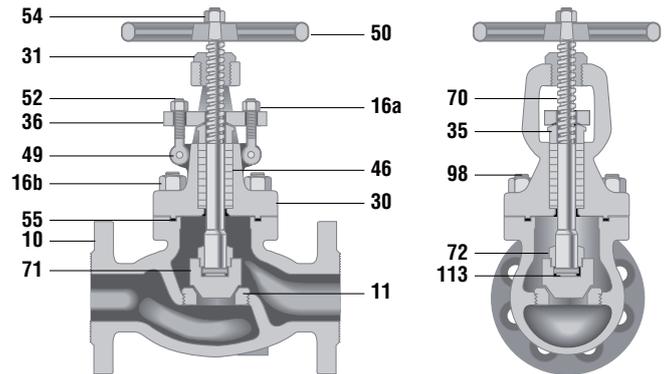
Series P3J4RF1HFM-600C

PARTS LIST

ITEM	DESCRIPTION	MATERIAL
10	Body	ASTM A105
11	Seat Ring	Monel 400
16a	Eyebolt Nut	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105
31	Yoke Sleeve	12% Chrome or Aluminum Bronze
35	Gland	Monel 400
36	Gland Flange	Carbon Steel
46	Packing	PTFE
49	Eyebolt Pin	Carbon Steel
50	Handwheel	Malleable Iron
52	Eyebolt	Carbon Steel
54	Handwheel Nut	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound
70	Stem	K-Monel
71	Disc	Monel 400
72	Disc Nut	Monel 400
113	Thrust Plate	K-Monel
98	Bonnet Stud	ASTM A193 GR. B7M

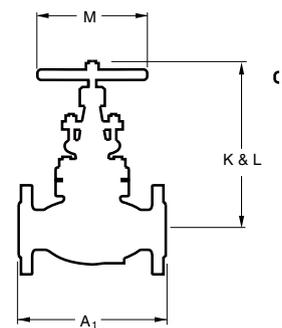
Test Pressure

Shell Test	2250 PSIG
Seat Test	1650 PSIG
Helium Shell Test	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)					
			.5	.75	1	1.25	1.5	2
A ₁	Face to Face Flanged End	in.	6.5	7.25	8.5	9.0	9.5	11.5
		mm	165	184	216	229	241	292
K	Center to Top	in.	7.25	9	9.38	11.5	12.13	15.25
		mm	184	229	238	292	308	388
L	Center to Top Closed	in.	6.88	8.38	8.88	10.88	11.25	13.25
		mm	175	213	226	276	286	337
M	Handwheel Dia.	in.	3	3.75	4.5	7	7	8
		mm	76	95	114	178	178	203
	Weight Flanged Ends	lbs	12	18	23	39	49	66
		kg	5	8	10	18	22	30



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 2" size only.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Phillips HF Acid Globe Valves

ASME Class 800 Sizes 1/2" - 2"

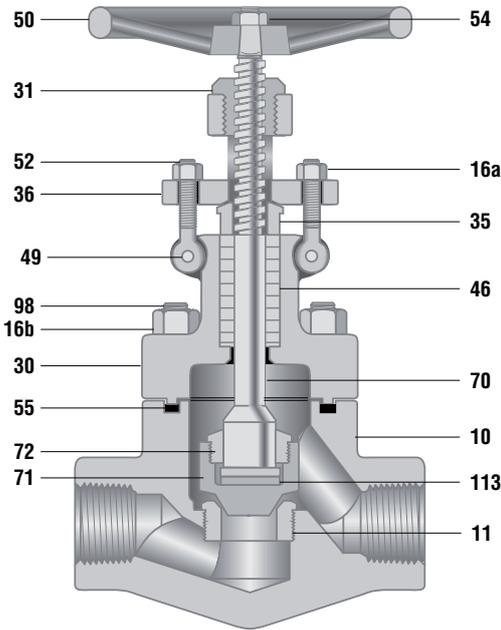
Series P3J1NPT1HFM-800C/M

Test Pressure

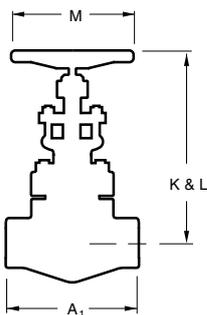
Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
10	Body	ASTM A105	ASTM A494 GR. M35-1
11	Seat Ring	Monel 400	Monel 400
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome	12% Chrome
35	Gland	Monel 400	Monel 400
36	Gland Flange	Carbon Steel	Carbon Steel
46	Packing	PTFE	PTFE
49	Eyebolt Pin	Carbon Steel	Carbon Steel
50	Handwheel	Malleable Iron	Malleable Iron
52	Eyebolt	Carbon Steel	Carbon Steel
54	Handwheel Nut	Carbon Steel	Carbon Steel
55	Bonnet Gasket	Monel /PTFE Spiral Wound	Monel /PTFE Spiral Wound
70	Stem	K-Monel	K-Monel
71	Disc	Monel 400	Monel 400
72	Disc Nut	Monel 400	Monel 400
113	Thrust Plate	K-Monel	K-Monel
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M



DIMENSIONS and WEIGHTS



Dim	Description	VALVE SIZE (inches)						
		.5	.75	1	1.25	1.5	2	
A ₁	Face to Face Flanged End	in.	3.63	4.5	5.13	6.25	7.0	8.38
		mm	92	114	130	159	178	213
K	Center to Top	in.	7.50	8.63	9.50	11.75	13.13	14.25
		mm	191	220	242	299	334	362
L	Center to Top Closed	in.	7.00	8.38	8.88	11.25	12.13	13.00
		mm	178	213	226	286	309	331
M	Handwheel Dia.	in.	3.5	4.5	4.5	8	8	8
		mm	89	114	114	203	203	203
	Weight Flanged Ends	lbs	6	9	13	26	30	49
		kg	2.7	4.1	5.9	11.8	13.6	22.2

Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 1" size only.

Related data

See Technical Data section for: Temperature/pressure data; Flow calculations (Cv).

Phillips HF Acid Globe Valves



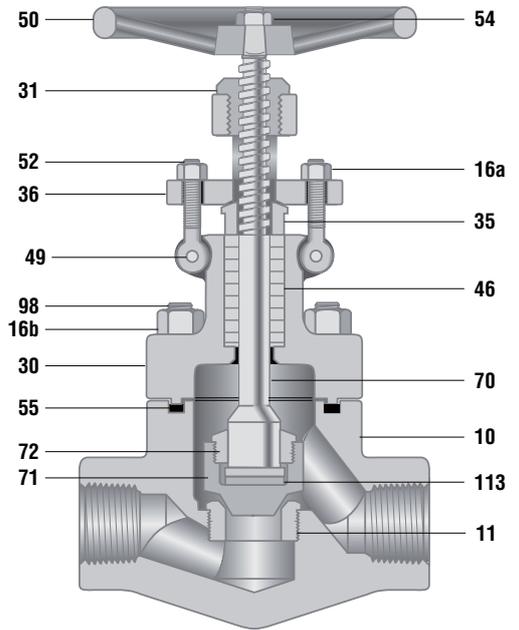
ASME Class 800 Sizes 1/2" - 2" Series P3J1NPT1HFM-800C/M

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
		3668P-HF8T	3668P-HF8T (-M35-1)
10	Body	ASTM A216 GR. WCB or ASTM A105	ASTM A494 GR. M35-1
11	Seat Ring	Monel® 400	Monel® 400
16a	Eyebolt Nut	Carbon Steel	Carbon Steel
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB or ASTM A105	ASTM A494 GR. M35-1
31	Yoke Sleeve	12% Chrome	12% Chrome
35	Gland	Monel® 400	Monel® 400
36	Gland Flange	Carbon Steel	Carbon Steel
46	Packing	PTFE	PTFE
49	Eyebolt Pin	Carbon Steel	Carbon Steel
50	Handwheel	Malleable Iron	Malleable Iron
52	Eyebolt	Carbon Steel	Carbon Steel
54	Handwheel Nut	Carbon Steel	Carbon Steel
55	Bonnet Gasket	Monel®/PTFE Spiral Wound	Monel®/PTFE Spiral Wound
70	Stem	K-Monel®	K-Monel®
71	Disc	Monel® 400/PTFE Insert	Monel® 400/PTFE Insert
72	Disc Nut	Monel® 400	Monel® 400
113	Thrust Plate	K-Monel®	K-Monel®
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M

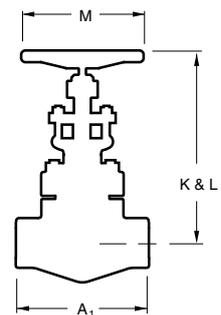
Test Pressure 3668P-HF8T

Shell Test	3000 PSIG
Seat Test	2200 PSIG
Helium shell Test	500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)						
		.5	.75	1	1.25	1.5	2	
A ₁	Face to Face Screwed End	in.	3.63	4.5	5.13	6.25	7.0	8.38
		mm	92	114	130	159	178	213
K	Center to Top Open	in.	7.50	8.63	9.50	11.75	13.13	14.25
		mm	191	220	242	299	334	362
L	Center to Top Closed	in.	7.00	8.38	8.88	11.25	12.13	13.00
		mm	178	213	226	286	309	331
M	Handwheel Dia.	in.	3.5	4.5	4.5	8	8	8
		mm	89	114	114	203	203	203
	Weight	lbs	6	9	13	26	30	49
		kg	2.7	4.1	5.9	11.8	13.6	22.2



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 3/4" size only.

Related data

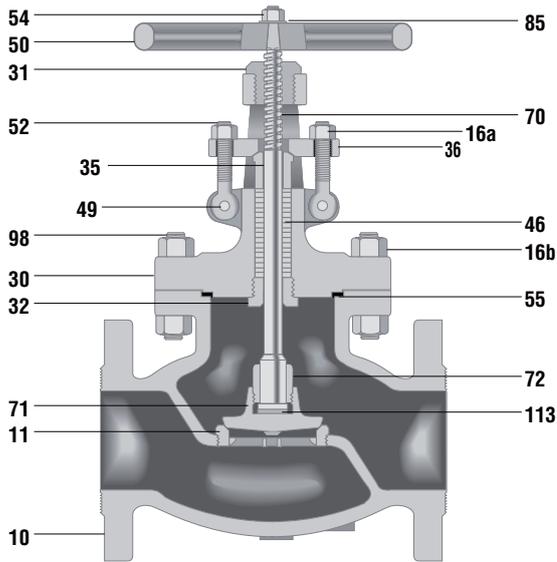
See Technical Data section for: Temperature/pressure data: Flow calculations (Cv).

Test Pressure

Shell Test 1125 PSIG
 Seat Test.....825 PSIG
 Helium Shell Test.....500 PSIG

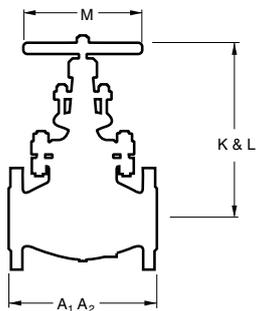
PARTS LIST

ITEM	DESCRIPTION	MATERIAL
54	Handwheel Nut	Carbon Steel
50	Handwheel	Ductile Iron
36	Gland Flange	Carbon Steel
35	Gland	Monel 400
46	Packing	John Crane 124
98	Bonnet Stud	ASTM A193 GR. B7M
16b	Bonnet Stud Nut	ASTM A194 GR. 2HM
30	Bonnet	ASTM A216 GR. WCB
55	Bonnet Gasket	Monel /PTFE Spiral Wound
32	Bonnet Stem Bushing	Monel
70	Stem	Monel
72	Disc Nut	Monel 400
71	Disc	Monel 400
11	Seat Ring	Monel 400
10	Body	ASTM A216 GR. WCB
31	Yoke Sleeve	Aluminum Bronze or 12% chrome
52	Eyebolt	Carbon Steel
16a	Eyebolt Nut	Carbon Steel
49	Eyebolt Pin	Carbon Steel
85	Handwheel Washer	12% Chrome
113	Thrust Plate	K-Monel



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)									
		1.5	2	2.5	3	4	6	8	10	12	
A ₁	Face to Face Flanged Ends	in.	9.00	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
		mm	229	267	292	318	356	445	559	622	711
A ₂	Face to Face RJT	in.	9.50	11.13	12.13	13.13	14.63	18.13	22.63	25.13	28.63
		mm	241	283	308	333	371	460	575	638	727
K	Center to Top Open	in.	15.63	18.25	20.00	20.75	24.87	28.75	31.37	34.37	48.00
		mm	397	464	508	527	632	730	797	873	1219
L	Center to Top Closed	in.	14.38	17.12	18.75	18.87	22.87	25.87	28.50	31.50	45.00
		mm	365	435	476	479	581	657	724	800	1143
M	Handwheel Dia.	in.	8	8	10	10	14	18	18	34	34
		mm	203	203	254	254	356	457	457	864	864
	Weight Flanged Ends	lbs	60	79	104	137	224	388	635	1258	1698
		kg	27	36	47	62	102	176	288	571	770



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 2"-12" sizes.
3. 8" and above have hammerblow handwheels as a standard.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Phillips HF Acid Check Valves



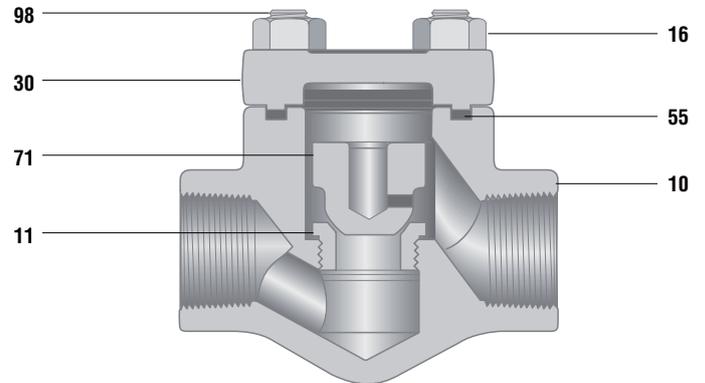
ASME Class 800 Sizes 1/2" - 2" Series P3H1NPT1HFM-800C/M

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR 2HM	ASTM A194 GR 2HM
30	Bonnet Cap	ASTM A493 GR. WCB or ASTM A515 GR. 70	ASTM A493 GR. M35-1
55	Bonnet Gasket	Monel /PTFE Spiral Wound	Monel /PTFE Spiral Wound
71	Disc	Monel 400	Monel 400
10	Body	ASTM A216 GR. WCB or ASTM A105	ASTM A493 GR. M35-1
11	Seat Ring	Monel 400	Monel 400

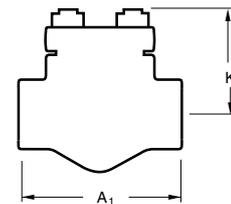
Test Pressure

Shell Test3000 PSIG
 Seat Test.....2200 PSIG
 Helium Shell Test.....500 PSIG



DIMENSIONS and WEIGHTS

Dim	Description		VALVE SIZE (inches)				
			.5	.75	1	1.5	2
A ₁	Face to Face Screwed End	in.	3.63	4.5	5.13	7.0	8.38
		mm	92	114	130	178	213
K	Center to Top	in.	2.5	3.0	3.38	5.0	5.5
		mm	64	76	87	127	140
	Weight	lbs	3	6	9	17	35
		kg	1.4	2.7	4.1	9.1	15.9



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 3/4"-1" sizes.

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

Test Pressure

Shell Test 1125 PSIG
 Seat Test.....825 PSIG
 Helium Shell Test.....500 PSIG

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	
98	Bonnet Stud	ASTM A193 GR. B7M	ASTM A193 GR. B7M
16	Bonnet Stud Nut	ASTM A194 GR. 2HM	ASTM A194 GR. 2HM
30	Bonnet Cap	ASTM A216 GR. WCB or A515 GR. 70	ASTM A494 GR. M35-1
55	Bonnet Gasket	Monel /PTFE Spiral Wound	Monel /PTFE Spiral Wound
41	Hinge Pin	K-Monel	K-Monel
40	Hinge	Monel 400	
10	Body	ASTM A216 GR. WCB	ASTM A494 GR. M35-1
72	Disc Nut	Monel 400	Monel 400
85	Disc Nut Washer	Monel 400	Monel 400
71	Disc	Monel 400	ASTM A494 GR. M35-1
49	Disc Nut Pin	Monel 400	Monel 400
12	Seat Ring	Monel 400	Monel 400

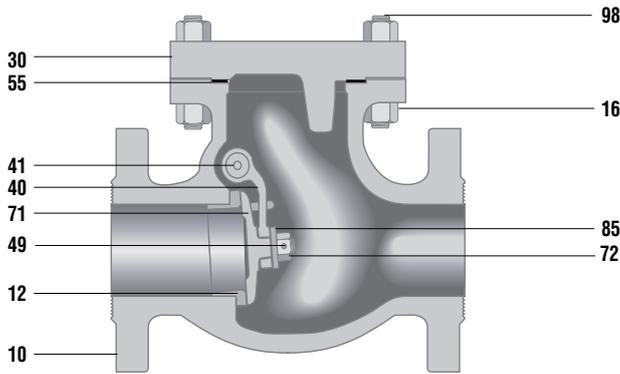
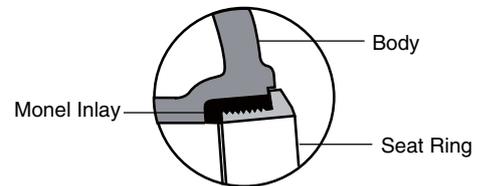
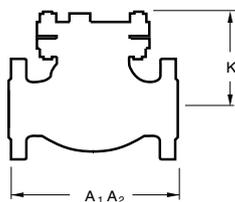


Figure No. 380PX-HF8 includes screwed in seat ring with threaded area of body, undercut and inlaid with Monel® 400.



DIMENSIONS and WEIGHTS

Dim	Description	VALVE SIZE (inches)															
		1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30	
A ₁	Face to Face Flanged Ends	in.	9.50	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	62.75
		mm	241	267	292	318	356	445	533	622	711	838	864	978	1015	1346	1594
A ₂	Face to Face RJT	in.	10.00	11.13	12.13	13.13	14.63	18.13	21.63	25.13	28.63	33.63	34.63	39.13	40.75	53.88	63.75
		mm	254	282	308	333	372	460	549	638	727	854	880	994	1035	1368	1619
K	Center to Top	in.	6.38	7.00	7.37	8.00	8.87	11.37	13.25	15.25	18.00	19.25	20.87	22.25	22.87	33.25	39.25
		mm	163	178	187	203	225	289	337	387	458	489	530	565	581	845	997
	Weight Flanged Ends	lbs	50	65	87	110	160	331	510	784	1280	1490	2032	2446	2980	4840	6600
		kg	23	29	39	50	73	150	231	356	581	676	922	1110	1352	2195	2994



Notes:

1. This data is not to be used for construction unless confirmed by the factory.
2. Phillips specification includes 2"-24" sizes.
3. Helium shell test performed on sizes up through 14".

Related data

See Technical Data section for: Temperature/pressure data: Raised face or ring joint flanges; Flow calculations (Cv).

HF Acid Valves



Figure Number System

For cast gate valve 2Z EFG HS- WV-SIZE

ZGV 2Z – Valve type – Gate valve

E – CONTROL METHOD

- 4...By hand wheel
- 5...By gear box
- 9...Electric actuator
- 6...Pneumatic

H --"HF" ACID SERVICE

S --Trim, "M" MONEL

F – CONNECTION INTO PIPELINE

- 4...Flange RF/RJ
- 6...Welded-on ends
- 1...Threaded NPT
- 8...Combined

W --PRESSURE CLASS

- 150-150lbs 300-300lbs
- 600-600lbs
- 900-900lbs 1500-1500lbs
- 2500-2500lbs

V – MATERIAL OF BODY

TM ..Monel

C..Carbon steel

G --TYPE OF WEDGE

- 0 Flexible Wedge
- 1 Solid Wedge

For cast globe valve 2J EFG HS- WV-SIZE

ZGV 2Z – Valve type – Gate valve

E – CONTROL METHOD

- 4...By hand wheel
- 5...By gear box
- 9...Electric actuator
- 6...Pneumatic

H --"HF" ACID SERVICE

S --Trim, "M" MONEL

W --PRESSURE CLASS

- 150-150lbs 300-300lbs
- 600-600lbs
- 900-900lbs 1500-1500lbs
- 2500-2500lbs

F – CONNECTION INTO PIPELINE

- 4...Flange RF/RJ
- 6...Welded-on ends
- 1...Threaded NPT
- 8...Combined

V – MATERIAL OF BODY

TM ..Monel

C..Carbon steel

G --TYPE OF WEDGE

- 1 Solid Disc

For forged GGC valve 3X EFG HS-WV-SIZE

ZGV --THE FEATURE CODE OF COMPANY

X --TYPE OF VALVE

- Z Gate Valve
- J Globe Valve
- H Check Valve

E – CONTROL METHOD

- 4...By hand wheel
- 5...By hand wheel with gear box
- 9...Electric actuator
- 6...Pneumatic

F – CONNECTION INTO PIPELINE

- 4...Flange End, 4RF-RF Flange, 4RJ-RTJ Flange
- 6...Welded End, 6SW-Socket Welded, 6BW-Butt Welding
- 1...Thread End, 1NPT-NPT thread, 1BSP-BSP thread
- 8...Combined

G --TYPE OF DISC

- 1 Solid Wedge/Disc

H --"HF" ACID SERVICE

S --Trim, "M" MONEL

W --PRESSURE CLASS

- 150-150lbs 300-300lbs
- 600-600lbs
- 900-900lbs 1500-1500lbs
- 2500-2500lbs

V – MATERIAL OF BODY

TM ..Monel

C..Carbon steel

For cast swing check valve H EF HS- WV-SIZE

ZGV H – Valve type – Swing check valve

E – CONNECTION INTO PIPELINE

- 4...Flange RF/RJ
- 6...Welded-on ends
- 1...Threaded NPT
- 8...Combined

W --PRESSURE CLASS

- 150-150lbs 300-300lbs
- 600-600lbs
- 900-900lbs 1500-1500lbs
- 2500-2500lbs

F --TYPE OF DISC

- 4 Swing type disc

H --"HF" ACID SERVICE

S --Trim, "M" MONEL

V – MATERIAL OF BODY

TM ..Monel

C..Carbon steel