



# GATE VALVES CATENA



CDG Valve Manufacturer

©**CDG Valve Manufacturer**

U.S. CDG control fluid technology company  
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# G A



## COMPANY HISTORY

- 1963 : Founded CDG.
- 1985 : CDG brand creation.
- 1989 : Production of pneumatic actuators, and Italy FABIA to establish acooperation.
- 1992 : With the United States FAIRCHILD cooperation,Production of electric actuators.
- 2001 : Focus on the production and assembly of CDG.
- 2005 : Production of hydraulic actuators.
- 2006 : Production of valves.
- 2011 : Oil station development and use.
- 2016 : Set up a number of representative offices in China.

## Company introduction

The CDG is a famous valve manufacturers, the company is headquartered in America's largest city, Detroit, Michigan is located in the northeastern United States, Canada, Detroit river north of Windsor an important port city. With strong industrial base and freight advantage.

CDG products have unique design, short delivery time, competitive price and excellent after-sales support. As a professional manufacturer of valves, it quickly became the industry leader.

CDG has more than 50 years experience in the valve industry. The r&d department USES these experiences to constantly design new products, improve existing products, and adapt to changing market demands and constantly improving international standards.

CDG can provide standard and non-standard solutions that can be customized according to customer needs.

CDG has created a wide range of reliable products. CDG is favored and admired by the world's leading EPC and oil and gas companies because of its high performance in extreme conditions. Its products are

used in power plant, petrochemical, metallurgy, papermaking,automobile and more Product certification based on customer requirements and government legislation is a guarantee of product quality. CDG USES advanced testing laboratories to ensure the durability of its products. Fire safety, high temperature and low temperature testing can be carried out under extreme conditions.

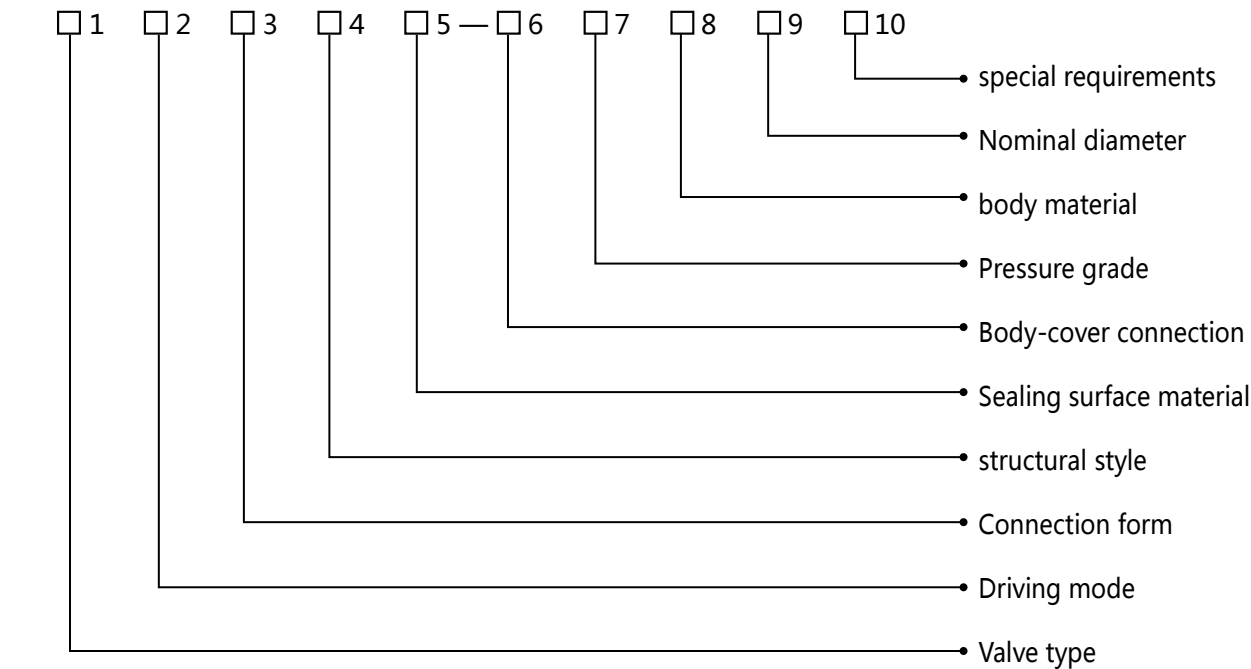
CDG good position, provide comprehensive after-sales support, fast, efficient, with unparalleled expertise. Our skilled engineers and technicians work 24 hours a day to respond to customer queries, solve problems, and provide reliable solutions. A comprehensive after-sales service creates a complete solution, customer support, covering all requirements.

CDG is a long-term, reliable, available and cost- effective partner for your existing and new business.

CDG brand is comprehensive, including valve and oil station, pneumatic actuator, electric actuator and hydraulic actuator and other related fields. To enable CDG to meet different needs it can be sold separately, and can be matched in a complete set, so that users can reduce their worries.

CDG gate valves are divided into flat gate valves and ordinary gate valves, which are widely used in petroleum, natural gas production, transportation, gathering pipeline, storage system, station, airport, refinery, chemical industry and other fields. CDG gate valves are designed and manufactured in strict accordance with the latest standard technology. In the process of design and manufacture, the harsh working conditions and the unique functions of pipeline valves are fully taken into account. CDG gate valves are high-quality valves with safety and long-term reliability.

Description of Model Formulation



1. Valve type code: GA-gate valve
2. Driving mode code: 3-worm gear and worm drive, 6-pneumatic, 9-electric (handle drive strategy)
3. Connection form code: 4-flange, 6-butt welding, 8-clamp
4. Structural code: 1-flat gate valve, 2-K double gate valve, 5-gas flat gate valve, 7-wedge elastic single/double gate valve, 8-Wedge Rigid Single/Double Gate Valve
5. Sealing material code: Y-cemented carbide, F-polytetrafluoroethylene (PTFE) FS-PTFE+carbon fiber FC-PTFE+carbon fiber+copper H-Ferroalloy and M-Monel Alloy
6. Body and cover connection code: W-welding connection, P-pressure sealing connection
7. Pressure Grade Code: Nominal Pressure Scale is Actual Number
8. Valve body material code: C-WCB, I-WC6, V-WC9, R-CF8M, S-CF3, L-CF3M, F-LCB, O-CF8, P-F91
9. Nominal Path Code: Inch
10. Special Requirements Code: S-Sulphur Resistant, L-Low Temperature, X-Lengthened Rod, I-Insulation
- Note: Carbon steel valve body, omit this code

Structure characteristics

It is equipped with stem protection device to prevent stem thread from being polluted by external impurities and prolong service life. Position indicator can indicate the degree of valve opening and prevent misoperation.

Stem without lateral load, low operating thrust. Stem protection device and intuitive gate opening indication are provided. Stem seal adopts on-line adjustable external packing cover structure and reverse stem seal design.

Normal sealing does not depend on sealing grease. When the seal is damaged by foreign impurities, it can be injected into the sealing grease for emergency repair.

The integral casting valve body structure has enough strength to resist the external force of the pipeline. Full-diameter, circular and straight channel design, low pressure loss. Pigging is accessible.

Sealing grease injection system

Normal sealing does not depend on sealing grease. When the seal is damaged by foreign impurities, it can be injected into the sealing grease for emergency repair. A grease injection valve and an embedded one-way valve are installed at each grease injection orifice. Typical grease injection valves have safety caps to ensure their safe and reliable use. The end of the grease injection valves is a quick-connection snap of the grease injection gun.

At the lowest position of the valve body, sewage holes are machined, and sewage valves are arranged to empty the valve chamber and discharge sewage. The sewage discharge valve can be an isolation valve or a special discharge joint to ensure safety, reliability and convenient use.

Protective cover

Stem

Stem Sealing Grease Injection Port

valve body

Cavity Overpressure Release

Cavity overpressure is automatically released from the seat to the upstream pipeline without the need to install a cavity pressure relief system. When the valve is closed, the upstream and downstream pressure can be separated from the valve chamber by seat seal, and the valve chamber medium can be emptied and discharged.

Flashboard

The design of gate with diversion orifice is consistent with the sealing surface whether it is fully open or fully closed. The sealing surface is protected from direct erosion by medium, thus prolonging the service life.

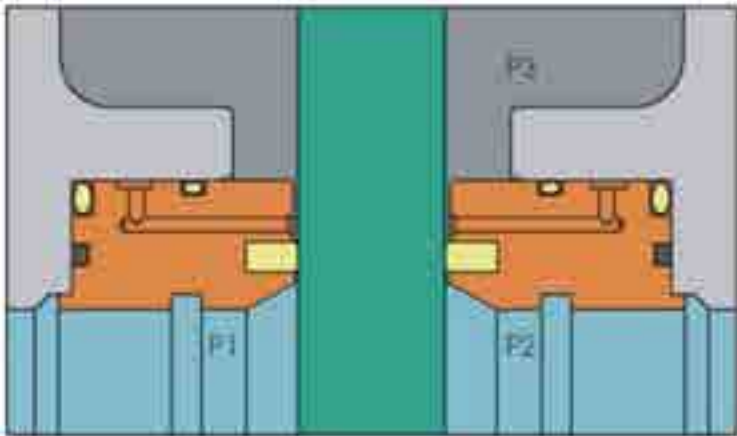
valve seat

Floating seat, floating gate design, pressure self-tightening double channel (upstream and downstream) seat seal. Soft and hard seating structure produces "bubble zero leakage" sealing performance and self-cleaning function. The floating seat is always in close contact with the gate, so that the sealing surface of the seat is protected and the service life is long.

Sewage outlet

Working principle

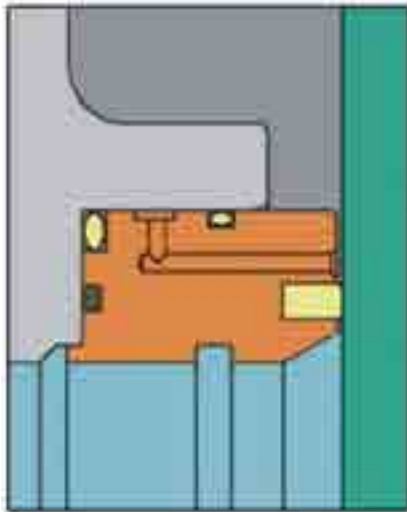
- 1. When the internal pressure of the valve P1 equals P2, the gate is in a closed state, and the soft seal ring on the surface of the valve seat forms an initial seal. Each time the valve is switched on and off, the seat ring can clean both sides of the gate.
- 2. When the upstream end pressure P1 is greater than the downstream end pressure P2, the pressure acts on the gate, forcing it to compress the soft sealing ring of the downstream end seat until the gate is close to the steel seat, thus forming a double seal.
- 3. After double seals are achieved at the downstream end, the medium pushes the upstream seat to achieve double seats (upstream and downstream) close to the gate.
- 4. When the pressure P3 in the valve body is greater than that in the pipeline, the pressure pushes the seat and releases the excess pressure into the pipeline. When P1 is larger than P2, the cavity pressure is released to the P1 end, and when P1 is equal to P2, the cavity pressure is released to both ends.



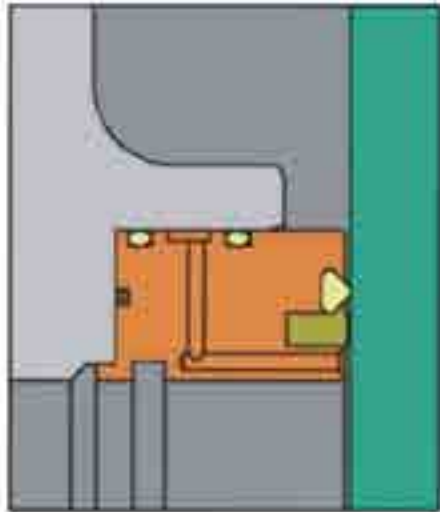
Sealing structure between valve seat and gate is designed in two ways

- 1. Traditional soft seals: Embedded soft seals are polymer-to-gate seals. Suitable for lower pressure level.
- 2. CDG combined seal: soft seal made of special elastomer material is used as main seal to ensure zero leakage required by API6D standard; beside it, an RPTFE seal is added to protect main seal and improve service life.

Traditional sealing structure



CDG combined seal structure



End connection

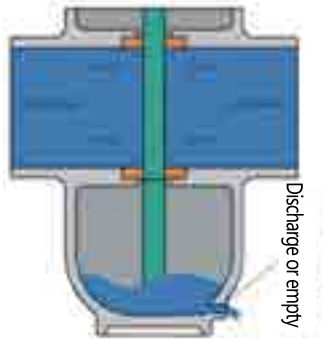
Valve end connections can be configured according to user requirements. Common connection modes are flange, butt welding, clamp or any combination.

Structural length

The length of the structure is stipulated by API6D, beyond the standard range according to CDG, and can also be produced according to user requirements.

Double Truncation and Emission (DBB)

When the gate is in full open or closed position, the medium in the body cavity can be discharged through sewage or vent device. At this time, the seats on both sides are cut off at the same time, and any side can withstand full pressure difference. It has DBB function in all closing position. With DBB function, the valve can be drained or sewed online to check the seating integrity.



Outer coating

External coating design should take full account of the various corrosion in the environment, referring to the implementation of HG/T4077, SY0043 or engineering requirements. Construction technology and inspection shall be strictly carried out in accordance with factory specifications.

Pressure test

CDG has several test platforms for hydraulic and pneumatic tests of all calibers and pressure class valves of 2" - 60" CL150 - CL2500. For each flat gate valve, CDG carries out pressure test and function test according to API6D, API598 or user requirements.

Internal surface treatment

Gate, seat and stem can be treated with nickel and phosphorus plating (ENP) according to owner's requirements. The method of electroless plating is adopted to strictly comply with the technological requirements to ensure that the metal surface achieves the best hardness-to-corrosion performance ratio, and to achieve the maximum optimization of anti-erosion, anti-corrosion and friction coefficient reduction. In addition, various corrosion resistant materials or hardfacing carbides can be provided in key sealing areas according to the medium working conditions.



Advanced processing equipment

Advanced equipment is necessary for manufacturing high-performance gate valve products. The key parts of CDG gate valve are processed by machining center, CNC lathe and large-scale gantry flat CNC grinder. The one-time qualified rate of products and the interchangeability of parts are 100%. It has made an important contribution to providing users with high-quality products.



Nondestructive examination

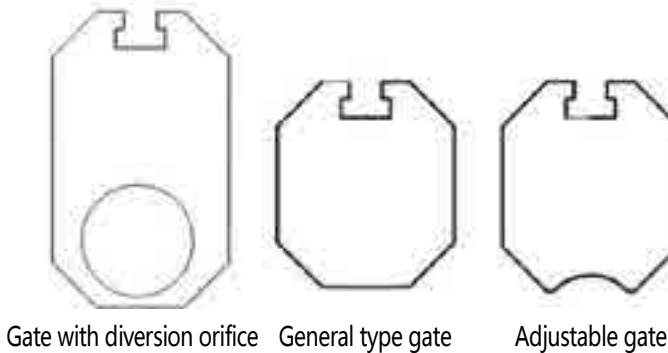
Non-destructive inspection is in accordance with ASTM specifications. CDG has its own non-destructive testing laboratory, which can carry out RT, UT, MT and PT inspection. All the experimenters have high-tech qualifications and have SNT-TC-1A certification.



Adopt standard

Design basis: API6D、ASME B16.34  
Structure length: API6D、ASME B16.10  
Flange connection: ASME B16.5、MSS SP 44  
Butt welding connection: ASME B16.25  
Inspection test: API6D、API598

Outline drawings of various types of gate

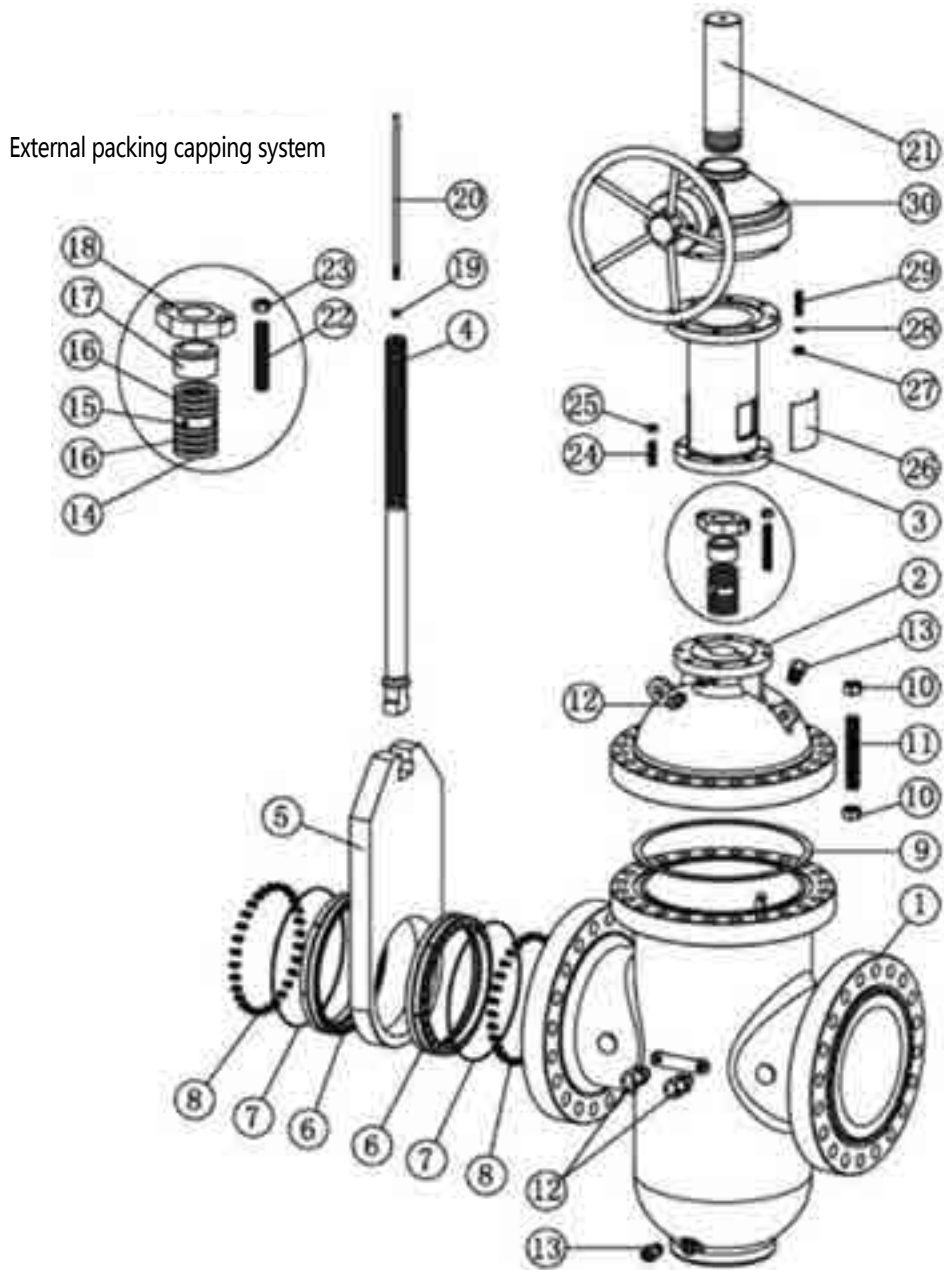


Major Parts Materials

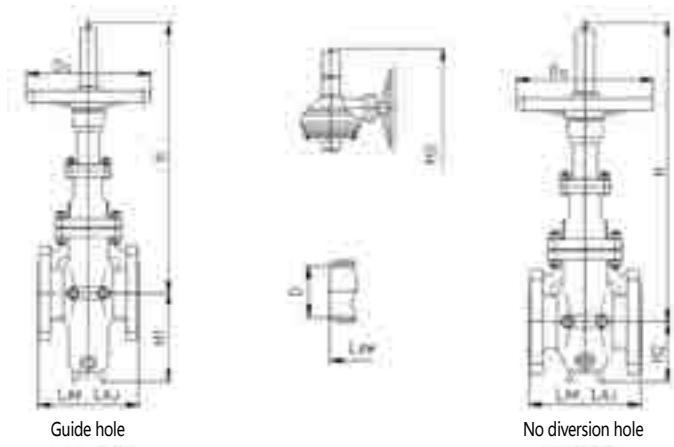
Part name	Ordinary working condition	Low temperature condition
Body and bonnet	A216 WCB、WCC	ASTM 352 LCB、LCC
Stem	Stainless steel	Low temperature resistant stainless steel
valve seat	High quality carbon steel and stainless steel	Low temperature resistant carbon steel and stainless steel
Flashboard	High quality carbon steel and stainless steel	Low temperature resistant carbon steel and stainless steel
filler	NBR/VITON+PTFE+graphite	BN18+PTFE+graphite
Stem nut	C954 or C95200	
Sealing surface	PTFE+Metal surface (hardfacing carbide)	
Surface coating	ENP or GDN	
Preload spring	Stainless steel	
Type O circle	NBR/FKM(VITON)	BN18(VITON)
Bolt	A193B7、B7M	A320L7、L7M
Nut	A1942H、2HM	A1942H、2HM

Note: Valves for sulphur medium can be manufactured according to NACE MR-0175 standard. The most suitable material for valves will be selected by the technical department of the representative office according to the requirements of different working conditions.

Flat gate valve mechanism diagram

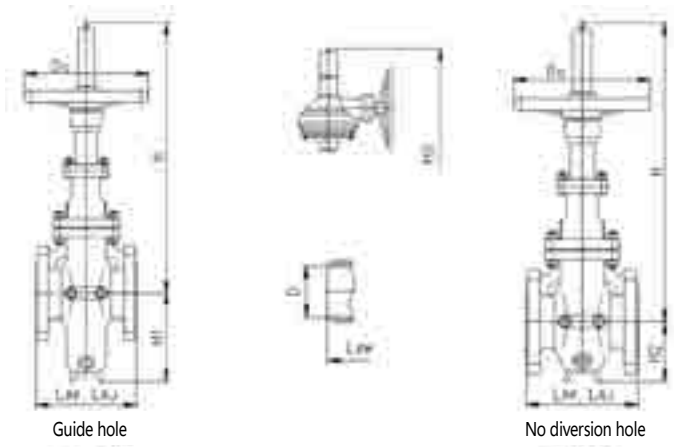


Serial number	Part name	Serial number	Part name	Serial number	Part name
1	valve body	11	Bolt	21	Shield
2	Bonnet	12	Grease injection valve	22	Bolt
3	Bracket	13	Drain valve	23	Nut
4	Stem	14	Packing gasket	24	Bolt
5	Flashboard	15	Spacer ring	25	Nut
6	valve seat	16	filler	26	Door closure
7	Type O circle	17	Packing sleeve	27	Nut
8	Spring	18	Packing plate	28	Spring washer
9	Shim	19	Nut	29	Bolt
10	Nut	20	Indicator bar	30	Bevel gear unit



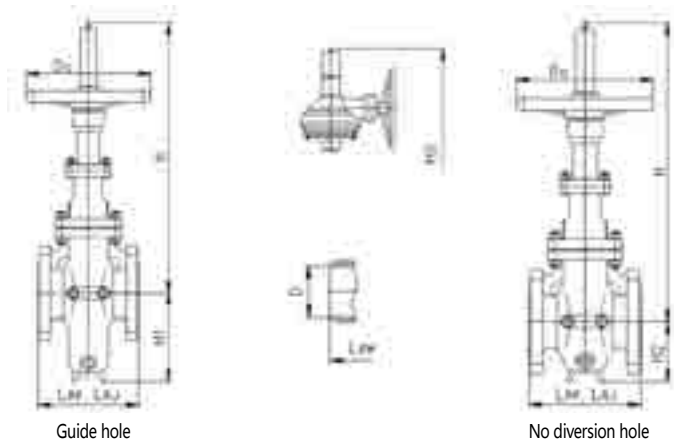
GA341F-150Lb

NPS	D (inch/mm)	LRF (inch/mm)	LRJ (inch/mm)	LBW (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	H3 (inch/mm)	D0 (inch/mm)	Weight with diversion orifice (kg)		Weight without diversion orifice (kg)	
										RF/RJ	BW	RF/RJ	BW
2"	1.93/49	7.01/178	7.52/191	8.50/216	18.50/470	5.43/138	3.66/93	-	7.87/200	50	38	40	28
2 1/2"	2.44/62	7.52/191	8.03/204	9.49/241	20.28/515	6.30/160	4.45/113	-	9.84/250	63	50	51	38
3"	2.91/74	7.99/203	8.50/216	11.14/283	23.11/587	7.83/199	4.33/110	-	9.84/250	68	55	54	41
4"	3.94/100	9.02/229	9.49/241	12.01/305	27.20/691	10.00/254	4.92/125	27.72/704	9.84/250	99	82	79	67
5"	4.92/125	10.00/254	10.51/267	15.00/381	30.31/770	10.94/278	5.35/136	31.30/795	11.81/300	128	118	102	82
6"	5.91/150	10.51/267	10.98/279	15.87/403	33.54/852	12.91/328	5.98/152	35.16/893	11.81/300	176	160	141	125
8"	7.91/201	11.50/292	12.01/305	16.50/419	41.22/1047	15.87/403	7.48/190	43.07/1094	13.78/350	290	268	232	206
10"	9.92/252	12.99/330	13.50/343	17.99/457	48.43/1230	19.69/500	8.74/222	51.38/1305	15.75/400	330	300	264	234
12"	11.93/303	14.02/356	14.49/368	19.76/502	57.28/1455	23.23/590	10.04/255	59.76/1518	17.72/450	480	430	384	334
14"	13.15/334	15.00/381	15.51/394	22.52/572	64.72/1644	25.20/640	11.02/280	66.93/1700	22.05/560	730	650	584	504
16"	15.16/385	15.98/406	16.50/419	24.02/610	71.77/1823	27.83/707	12.80/325	72.36/1838	-	990	898	792	700
18"	17.17/436	17.01/432	17.48/444	25.98/660	79.49/2019	31.54/801	13.39/340	80.16/2036	-	1270	1180	1016	925
20"	19.17/487	17.99/457	18.50/470	27.99/711	86.89/2207	34.37/873	14.76/375	88.78/2255	-	1630	1500	1300	1170
22"	21.18/538	20.00/508	-	-	98.43/2500	37.80/960	15.75/400	105.63/2683	-	2090	1840	1670	1420
24"	23.19/589	20.00/508	20.51/521	32.01/813	110.63/2810	42.52/1080	17.52/445	113.94/2894	-	2630	2480	2100	1950
26"	24.92/633	22.01/559	-	34.02/864	116.54/2960	43.70/1110	19.13/486	121.42/3084	-	3060	2760	2450	2150
28"	26.93/684	24.02/610	-	35.98/914	122.44/3110	48.43/1230	21.57/548	127.87/3248	-	3640	3200	2912	2472
30"	28.94/735	25.59/650	-	35.98/914	127.17/3230	49.61/1260	23.74/603	132.56/3367	-	4280	3760	3424	2914
32"	30.67/779	27.99/711	-	37.99/965	133.50/3391	54.41/1382	25.75/654	136.69/3472	-	5160	4210	4128	3178
34"	32.68/830	30.00/762	-	40.00/1016	157.48/4000	55.91/1420	28.15/715	163.66/4157	-	6150	5210	4920	4030
36"	34.41/874	27.99/711	-	40.00/1016	166.54/4230	58.66/1490	30.00/762	170.00/4318	-	7060	6210	5650	4800
38"	36.42/925	34.02/864	-	-	175.59/4460	61.81/1570	32.13/816	180.43/4583	-	7700	6780	6160	5240
40"	38.43/976	62.01/1575	-	-	185.04/4700	64.96/1650	34.76/883	189.61/4816	-	8300	7300	6640	5640
42"	40.16/1020	63.98/1625	-	-	194.88/4950	68.11/1730	36.89/937	200.12/5083	-	10190	8970	8152	6932
48"	45.91/1166	70.98/1803	-	-	223.23/5670	76.77/1950	40.31/1024	228.15/5795	-	13600	12200	10880	9480
54"	51.65/1312	75.39/1915	-	-	259.06/6580	86.22/2190	46.69/1186	264.06/6707	-	16800	14780	13440	11420
56"	53.54/1360	80.00/2032	-	-	268.90/6830	90.16/2290	48.82/1240	272.13/6912	-	18200	16020	14560	12380
60"	57.40/1458	-	-	-	279.53/7100	94.88/2410	52.60/1336	286.77/7284	-	21000	18500	16800	14300



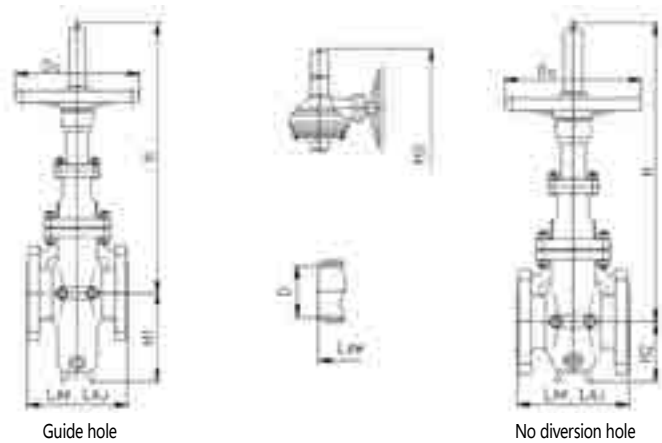
GA341F-300Lb

NPS	D (inch/mm)	LRF (inch/mm)	LRJ (inch/mm)	LBW (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	H3 (inch/mm)	D0 (inch/mm)	Weight with diversion orifice (kg)		Weight without diversion orifice (kg)	
										RF/RJ	BW	RF/RJ	BW
2"	1.93/49	8.50/216	9.13/232	8.50/216	20.08/510	6.54/166	3.90/99	-	7.87/200	55	53	44	42
2 1/2"	2.44/62	9.49/241	10.12/257	9.49/241	22.83/580	6.73/171	4.45/113	-	9.84/250	60	57	48	45
3"	2.91/74	11.14/283	11.73/298	11.14/283	23.43/595	8.62/219	5.24/133	-	9.84/250	75	70	60	55
4"	3.94/100	12.01/305	12.64/321	12.01/305	27.40/696	10.12/257	6.61/168	27.72/704	9.84/250	155	145	124	114
5"	4.92/125	15.00/381	15.63/397	15.00/381	32.48/825	10.94/278	5.75/146	33.27/845	11.81/300	160	150	128	118
6"	5.91/150	15.87/403	16.50/419	15.87/403	37.40/950	12.32/313	6.69/170	38.74/984	13.78/350	190	170	152	132
8"	7.91/201	16.50/419	17.13/435	16.50/419	42.40/1077	16.93/430	7.87/200	44.25/1124	15.75/400	330	290	264	224
10"	9.92/252	17.99/457	18.62/473	17.99/457	49.53/1258	19.61/498	9.53/242	52.56/1335	17.72/450	490	430	392	332
12"	11.93/303	19.76/502	20.39/518	19.76/502	61.61/1565	22.52/572	11.57/294	62.91/1598	19.69/500	690	625	552	487
14"	13.15/334	30.00/762	30.63/778	30.00/762	63.98/1625	25.55/649	12.52/318	66.93/1700	21.65/550	1000	890	800	690
16"	15.16/385	32.99/838	33.62/854	32.99/838	77.76/1975	29.02/737	14.57/370	80.16/2036	-	1410	1260	1128	978
18"	17.17/436	35.98/914	36.61/930	35.98/914	82.68/2100	31.61/803	16.54/420	85.91/2182	-	1910	1620	1528	1238
20"	19.17/487	39.02/991	39.76/1010	39.02/991	92.52/2350	34.53/877	18.50/470	95.47/2425	-	2410	2110	1928	1628
22"	21.18/538	42.99/1092	43.86/1114	42.99/1092	99.21/2520	37.80/960	20.75/527	105.63/2683	-	2990	2720	2392	2122
24"	23.19/589	45.00/1143	45.87/1165	45.00/1143	110.63/2810	42.52/1080	22.13/562	121.81/3094	-	3750	3410	3000	2660
26"	24.92/633	49.02/1245	50.00/1270	49.02/1245	119.69/3040	46.06/1170	24.17/614	125.35/3184	-	4390	3970	3512	3092
28"	26.93/684	52.99/1346	54.02/1372	52.99/1346	126.38/3210	48.43/1230	26.26/667	131.81/3348	-	5280	4710	4224	3654
30"	28.94/735	55.00/1397	55.98/1422	55.00/1397	137.80/3500	51.97/1320	27.28/693	142.80/3627	-	6190	5540	4952	4302
32"	30.67/779	60.00/1524	61.14/1553	60.00/1524	142.52/3620	55.51/1410	28.39/721	148.50/3772	-	7420	6690	5936	5206
34"	32.68/830	64.02/1626	65.12/1654	64.02/1626	157.48/4000	58.27/1480	30.98/787	163.66/4157	-	8850	8030	7080	6260
36"	34.41/874	67.99/1727	69.13/1756	67.99/1727	166.54/4230	61.02/1550	33.19/843	170.00/4318	-	10180	9230	8144	7194
38"	36.42/925	72.01/1829	-	72.01/1829	179.53/4560	64.96/1650	34.45/875	184.37/4683	-	11200	9870	8960	7630
40"	38.43/976	82.01/2083	-	82.01/2083	188.98/4800	66.54/1690	36.34/923	193.54/4916	-	11980	10470	9584	8074
42"	40.16/1020	83.98/2133	-	83.98/2133	202.76/5150	70.47/1790	38.46/977	207.99/5283	-	12550	11930	10040	9420
48"	45.91/1166	90.00/2286	-	90.00/2286	231.10/5870	80.31/2040	43.62/1108	236.02/5995	-	18800	17200	15040	13440
54"	51.65/1312	-	-	-	266.93/6780	89.37/2270	49.61/1260	271.93/6907	-	20580	18930	16460	14810
56"	53.54/1360	97.99/2489	-	97.99/2489	276.77/7030	92.52/2350	51.77/1315	280.00/7112	-	22700	21000	18160	16460
60"	57.40/1458	-	-	-	289.37/7350	98.39/2499	54.92/1395	294.65/7484	-	24600	23000	19680	18080



GA341F-600Lb

NPS	D (inch/mm)	LRF (inch/mm)	LRJ (inch/mm)	LBW (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	H3 (inch/mm)	D0 (inch/mm)	Weight with diversion orifice (kg)		Weight without diversion orifice (kg)	
										RF/RJ	BW	RF/RJ	BW
2"	1.93/49	11.50/292	11.61/295	11.50/292	23.82/605	6.02/153	4.21/107	-	7.87/200	80	74	64	58
2 1/2"	2.44/62	12.99/330	13.11/333	12.99/330	24.65/626	6.69/170	4.72/120	-	9.84/250	105	100	84	79
3"	2.91/74	14.02/356	14.13/359	14.02/356	25.47/647	9.02/229	5.12/130	-	9.84/250	110	105	88	83
4"	3.94/100	17.01/432	17.13/435	17.01/432	31.22/793	10.00/254	5.71/145	32.68/830	15.75/400	155	125	124	94
5"	4.92/125	20.00/508	20.12/511	20.00/508	34.96/888	11.81/300	6.38/162	35.63/905	17.72/450	260	190	208	138
6"	5.91/150	22.01/559	22.13/562	22.01/559	37.40/950	13.39/340	7.28/185	40.55/1030	17.72/450	308	260	246	198
8"	7.91/201	25.98/660	26.14/664	25.98/660	43.15/1096	16.34/415	8.11/206	44.96/1142	21.65/550	484	380	387	283
10"	9.92/252	30.98/787	31.14/791	30.98/787	53.54/1360	20.47/520	10.04/255	57.76/1467	31.50/800	750	580	600	470
12"	11.93/303	32.99/838	33.11/841	32.99/838	62.48/1587	23.23/590	11.61/295	63.31/1608	31.50/800	1350	750	1080	780
14"	13.15/334	35.00/889	35.12/892	35.00/889	70.47/1790	27.56/700	13.31/338	74.21/1885	-	1680	1390	1344	1054
16"	15.16/385	39.02/991	39.13/994	39.02/991	80.00/2032	30.71/780	14.41/366	83.74/2127	-	2015	1650	1612	1247
18"	17.17/436	42.99/1092	43.11/1095	42.99/1092	84.65/2150	33.46/850	15.75/400	87.99/2235	-	2680	2150	2144	1614
20"	19.17/487	47.01/1194	44.09/1120	47.01/1194	93.70/2380	37.40/950	17.13/435	97.44/2475	-	2995	2580	2396	1981
22"	21.18/538	50.98/1295	51.38/1305	50.98/1295	99.21/2520	40.94/1040	18.90/480	104.25/2648	-	3890	3270	3112	2492
24"	23.19/589	55.00/1397	55.39/1407	55.00/1397	111.22/2825	45.28/1150	19.88/505	114.76/2915	-	4840	3980	3872	3012
26"	24.92/633	57.01/1448	57.52/1461	57.01/1448	119.69/3040	48.43/1230	20.87/530	123.23/3130	-	5680	4990	4544	3854
28"	26.93/684	60.98/1549	61.50/1562	60.98/1549	133.07/3380	51.57/1310	21.57/548	136.22/3460	-	6890	6100	5512	4722
30"	28.94/735	65.00/1651	65.51/1664	65.00/1651	142.52/3620	56.30/1430	25.98/660	147.24/3740	-	7990	7190	6392	5592
32"	30.67/779	70.00/1778	70.63/1794	70.00/1778	152.76/3880	59.06/1500	26.77/680	158.66/4030	-	9510	8550	7608	6648
34"	32.68/830	75.98/1930	76.61/1946	75.98/1930	163.39/4150	62.20/1580	-	168.11/4270	-	11300	10300	9040	8040
36"	34.41/874	82.01/2083	82.64/2099	82.01/2083	172.44/4380	65.47/1663	-	177.95/4520	-	12000	10800	9600	8400
38"	36.42/925	87.99/2235	-	87.99/2235	181.10/4600	68.90/1750	-	186.02/4725	-	13200	12500	10560	9860
40"	38.43/976	93.98/2387	-	93.98/2387	192.13/4880	72.05/1830	-	193.90/4925	-	14800	13700	11840	10740
42"	40.16/1020	97.99/2489	-	97.99/2489	202.76/5150	75.59/1920	-	206.30/5240	-	16400	14500	13120	11220
48"	45.91/1166	105.98/2692	-	105.98/2692	231.10/5870	85.43/2170	-	235.04/5970	-	19500	18700	15600	14800



GA341F-900Lb

NPS	D (inch/mm)	LRF (inch/mm)	LRJ (inch/mm)	LBW (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	H3 (inch/mm)	D0 (inch/mm)	Weight with diversion orifice (kg)		Weight without diversion orifice (kg)	
										RF/RJ	BW	RF/RJ	BW
2"	1.93/49	14.49/368	14.61/371	14.49/368	28.54/725	7.28/185	4.84/123	-	13.78/350	100	88	80	68
2 1/2"	2.44/62	16.50/419	16.61/422	16.50/419	29.92/760	8.23/209	5.43/138	-	13.78/350	143	130	114	101
3"	2.91/74	15.00/381	15.12/384	15.00/381	31.26/794	8.86/225	6.30/160	-	13.78/350	186	170	149	133
4"	3.94/100	17.99/457	18.11/460	17.99/457	33.86/860	11.02/280	7.24/184	12.20/310	17.72/450	240	218	192	170
5"	4.92/125	22.01/559	22.13/562	22.01/559	38.39/975	12.40/315	8.46/215	13.78/350	21.65/550	342	330	274	262
6"	5.91/150	24.02/610	24.13/613	24.02/610	42.91/1090	14.57/370	9.92/252	16.54/420	25.59/650	443	421	354	332
8"	7.91/201	29.02/737	29.13/740	29.02/737	54.33/1380	18.11/460	11.42/290	18.90/480	33.46/850	707	672	565	530
10"	9.92/252	32.99/838	33.11/841	32.99/838	66.14/1680	21.65/550	13.58/345	22.44/570	-	1034	983	827	776
12"	11.93/303	37.99/965	38.11/968	37.99/965	85.00/2159	25.20/640	16.14/410	26.38/670	-	1720	1634	1376	1290
14"	12.68/322	40.51/1029	40.87/1038	40.51/1029	96.14/2442	27.95/710	17.80/452	29.33/745	-	2476	2353	1980	1857
16"	14.69/373	44.49/1130	44.88/1140	44.49/1130	103.35/2625	29.92/760	20.28/515	31.10/790	-	2750	2613	2200	2750
18"	16.65/423	47.99/1219	48.50/1232	47.99/1219	119.53/3036	35.43/900	23.62/600	37.40/950	-	3763	3575	3014	2826
20"	18.54/471	52.01/1321	52.52/1334	52.01/1321	131.65/3344	38.58/980	25.59/650	40.75/1035	-	4559	4331	3647	3419
24"	22.44/570	60.98/1549	61.73/1568	60.98/1549	154.61/3927	46.06/1170	31.10/790	49.61/1260	-	7320	6954	5856	5490
26"	24.29/617	65.00/1651	-	65.00/1651	166.73/4235	49.61/1260	33.19/843	53.94/1370	-	8614	8184	6891	6461
28"	26.18/665	75.00/1905	-	75.00/1905	176.69/4488	53.15/1350	35.43/900	58.27/1480	-	10358	9840	8286	7768
30"	28.03/712	82.99/2108	-	82.99/2108	183.62/4664	56.69/1440	-	61.42/1560	-	12412	11792	9930	9309

GA341F-1500Lb

NPS	D (inch/mm)	LRF (inch/mm)	LRJ (inch/mm)	LBW (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	H3 (inch/mm)	D0 (inch/mm)	Weight with diversion orifice (kg)		Weight without diversion orifice (kg)	
										RF/RJ	BW	RF/RJ	BW
2"	1.93/49	14.49/368	14.61/371	14.49/368	28.54/725	7.28/185	4.84/123	-	17.72/450	180	145	144	109
2 1/2"	2.44/62	16.50/419	16.61/422	16.50/419	29.92/760	8.46/215	5.43/138	-	17.72/450	240	210	192	162
3"	2.91/74	18.50/470	18.62/473	18.50/470	31.26/794	9.84/250	6.30/160	-	19.69/500	375	340	300	265
4"	3.94/100	21.50/546	21.61/549	21.50/546	33.86/860	11.81/300	7.24/184	12.20/310	19.69/500	445	403	356	314
5"	5.00/127	26.50/673	26.61/676	26.50/673	38.39/975	12.40/315	8.46/215	13.78/350	19.69/500	660	620	528	488
6"	5.91/150	27.76/705	27.99/711	27.76/705	42.91/1090	15.75/400	9.92/252	16.54/420	-	830	740	664	574
8"	7.91/201	32.76/832	33.11/841	32.76/832	54.33/1380	20.35/517	11.42/290	18.90/480	-	1250	1195	1000	945
10"	9.92/252	39.02/991	39.37/1000	39.02/991	66.14/1680	23.82/605	13.58/345	22.44/570	-	2100	1890	1680	1470
12"	11.93/303	44.49/1130	45.12/1146	44.49/1130	85.00/2159	25.55/649	16.14/410	26.38/670	-	3260	3090	2608	2608
14"	12.68/322	49.49/1257	50.24/1276	49.49/1257	96.14/2442	30.31/770	17.80/452	29.33/745	-	4690	4460	3752	3522
16"	14.69/373	54.49/1384	55.39/1407	54.49/1384	103.35/2625	31.34/796	20.28/515	31.10/790	-	5215	4950	4172	3907
18"	16.65/423	60.51/1537	61.38/1559	60.51/1537	119.53/3036	38.98/990	23.62/600	37.40/950	-	7130	6780	5704	5354
20"	18.54/471	65.51/1664	66.38/1686	65.51/1664	131.65/3344	42.91/1090	25.59/650	40.75/1035	-	8640	8210	6912	6482



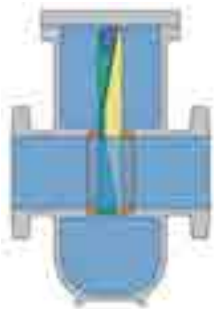
CDG K double gate flat gate valve is a high performance gate valve with remarkable characteristics. The valve has the functions of double sealing, bidirectional sealing and strengthening mechanical sealing, and it can be widely used in geothermal steam, petroleum, natural gas production, transportation, gathering pipeline and storage devices, as well as in corrosive media such as gas, acid, alkali and petrochemical process pipelines as reliable bidirectional shutoff valves with full meridian and complete pigging function.

Product characteristics

- 1) Full-path design, easy on-line cleaning, smooth channel when fully open, low flow resistance coefficient, no pressure loss.
- 2) When the valve is fully open or closed, the valve chamber and the medium are completely separated. Therefore, in an emergency state, the air vent valve and sewage valve can be opened to release pressure, and then the accident can be dealt with.
- 3) Special top-mounted design allows professional maintenance personnel to replace internal parts directly in the pipeline.
- 4) Because of the complete double sealing characteristics, when the pressure in the valve chamber rises due to temperature change or other reasons, this part of the pressure can not be released by the sealing surface of the pipeline, but by the safety device on the valve body, thus ensuring the safe operation of the pipeline and equipment.
- 5) The installation orientation of the valve is flexible. It can be installed vertically, horizontally, reversely and inclined.
- 6) Sealing design on the stem allows stem packing to be replaced under full working pressure.
- 7) Fully enclosed structure, good protection performance, can be used all-weather.

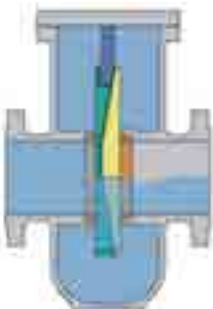
Working principle

Full open state



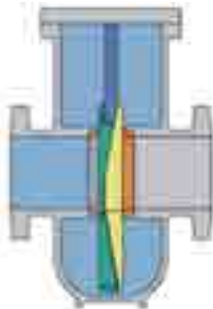
When fully opened, a pair of inclined planes on the upper surface of the combined gate plate are separated, and the sealing surfaces of the valve body are pressed on both sides of the gate plate to isolate the medium and dirt from entering the body cavity.

Start-up and shut-down operation status



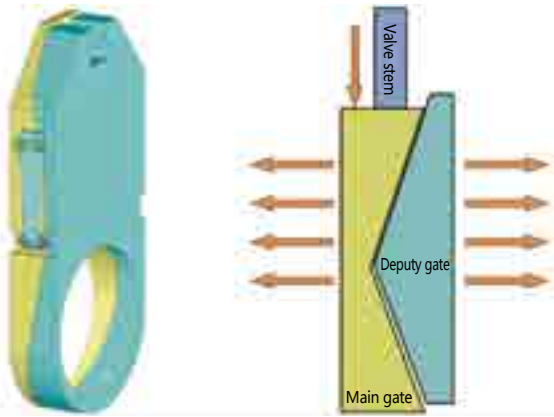
During the opening and closing process, the main and auxiliary gate slants are close to both sides of the gate, and there is a small gap with the sealing surface of the valve body to ensure that the gate moves freely.

Full pass status

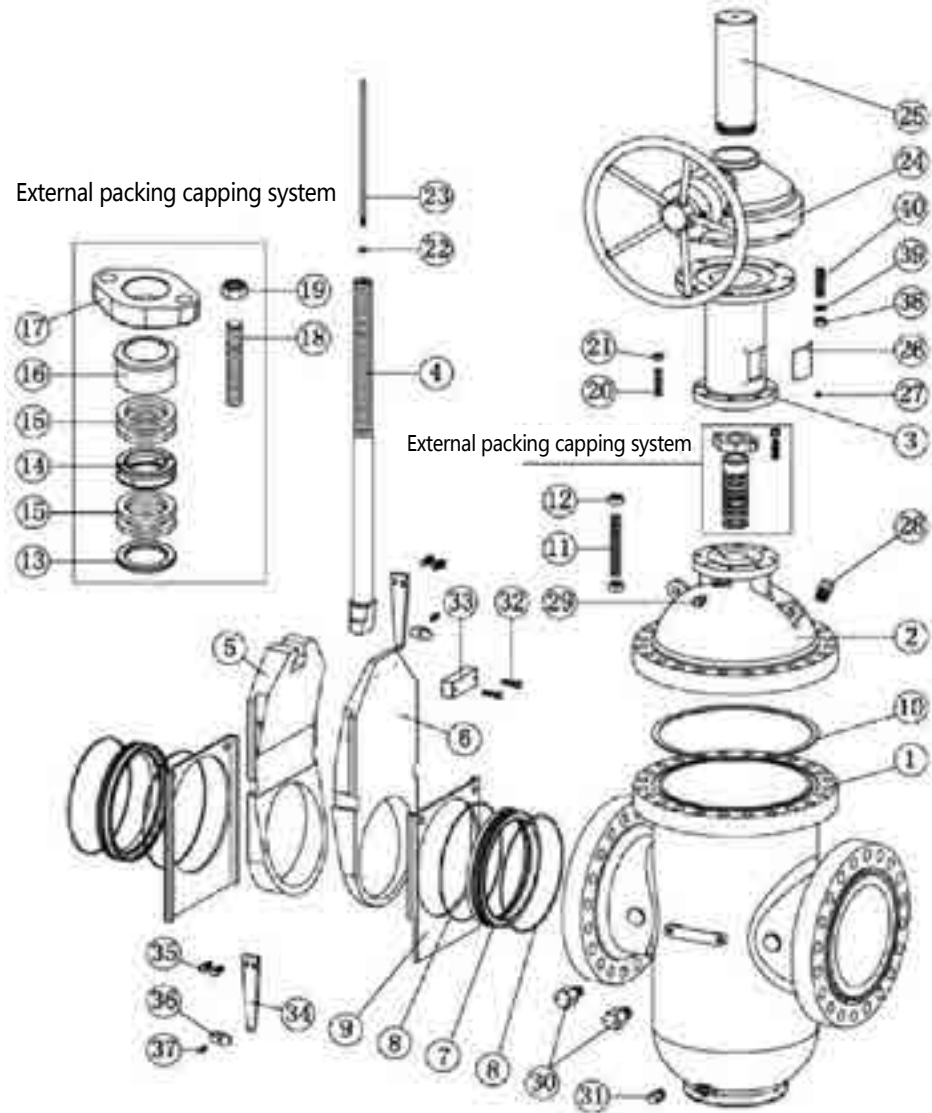


When fully closed, a pair of inclined planes under the combined gate are separated, and the two sides of the gate are pressed tightly to seal the valve reliably.

The transmission device drives the valve stem, which drives the movement of the main gate plate up and down. The auxiliary gate moves with the main gate driven by the connecting rod. Thus, the opening and closing positions of the combined gate are realized, and the flow and truncation of the upper and lower media are realized. At the beginning and end of the movement process of the combined gate, the sealing surfaces on both sides of the combined gate are tightened and opened due to the change of the position of the main and auxiliary gate in conjunction with the inclined plane, so as to achieve the protection of the sealing surface when forced sealing and opening are realized.

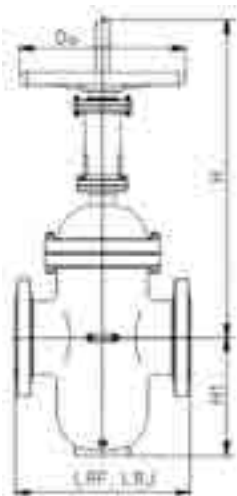


Mechanism Diagram of K-type Double-gate Flat Gate Valve



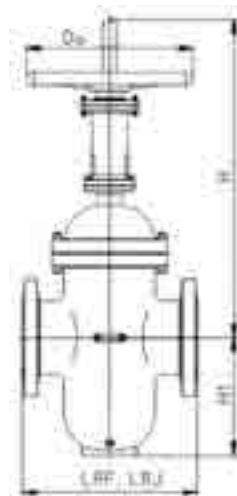
Serial number	Part name	Serial number	Part name	Serial number	Part name	Serial number	Part name
1	valve body	11	Bolt	21	Nut	31	Drain valve
2	Bonnet	12	Nut	22	Nut	32	Hexagon bolt
3	Bracket	13	Packing gasket	23	Indicator bar	33	Locating block
4	Stem	14	Spacer ring	24	Bevel gear unit	34	Lever arm
5	Main gate	15	filler	25	Shield	35	Hexagon bolt
6	Auxiliary RAM	16	Packing sleeve	26	Door closure	36	Pendulum block
7	valve seat	17	Packing plate	27	screw	37	screw
8	Type O circle	18	Bolt	28	Vent valve	38	Nut
9	Guide plate	19	Nut	29	Grease injection valve	39	Spring washer
10	Shim	20	Bolt	30	Grease injection valve	40	Bolt





GA342F-150Lb

NPS	D (inch/mm)	L <sub>RF</sub> (inch/mm)	L <sub>RJ</sub> (inch/mm)	L <sub>BW</sub> (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	D <sub>0</sub> (inch/mm)
2"	1.93/49	7.01/178	7.52/191	8.50/216	18.50/470	5.43/138	-	7.87/200
2 1/2"	2.44/62	7.52/191	8.03/204	9.49/241	20.28/515	6.30/160	-	7.87/200
3"	2.91/74	7.99/203	8.50/216	11.14/283	23.11/587	7.83/199	-	9.84/250
4"	3.94/100	9.02/229	9.49/241	12.01/305	27.20/691	10.00/254	-	9.84/250
5"	4.92/125	10.00/254	10.51/267	15.00/381	30.31/770	10.94/278	-	11.81/300
6"	5.91/150	10.51/267	10.98/279	15.87/403	33.54/852	12.91/328	-	11.81/300
8"	7.91/201	11.50/292	12.01/305	16.50/419	41.22/1047	15.87/403	46.85/1190	13.78/350
10"	9.92/252	12.99/330	13.50/343	17.99/457	48.43/1230	19.69/500	53.54/1360	15.75/400
12"	11.93/303	14.02/356	14.49/368	19.76/502	57.28/1455	23.23/590	61.42/1560	17.72/450
14"	13.15/334	15.00/381	15.51/394	22.52/572	64.72/1644	25.20/640	68.50/1740	-
16"	15.16/385	15.98/406	16.50/419	24.02/610	71.77/1823	27.83/707	75.79/1925	-
18"	17.17/436	17.01/432	17.48/444	25.98/660	79.49/2019	31.54/801	84.45/2145	-
20"	19.17/487	17.99/457	18.50/470	27.99/711	86.89/2207	34.37/873	94.49/2400	-



GA342F-600Lb

NPS	D (inch/mm)	L <sub>RF</sub> (inch/mm)	L <sub>RJ</sub> (inch/mm)	L <sub>BW</sub> (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	D <sub>0</sub> (inch/mm)
2"	1.93/49	11.50/292	11.61/295	11.50/292	19.45/494	6.93/176	-	11.81/300
2 1/2"	2.44/62	12.99/330	13.11/333	12.99/330	21.61/549	8.50/216	-	11.81/300
3"	2.91/74	14.02/356	14.13/359	14.02/356	23.86/606	8.94/227	-	11.81/300
4"	3.94/100	17.01/432	17.13/435	17.01/432	28.39/721	10.63/270	-	15.75/400
5"	4.92/125	20.00/508	20.12/511	20.00/508	32.24/819	11.26/286	-	15.75/400
6"	5.91/150	22.01/559	22.13/562	22.01/559	37.95/964	13.46/342	-	19.69/500
8"	7.91/201	25.98/660	26.14/664	25.98/660	45.55/1157	17.44/443	46.85/1190	23.62/600
10"	9.92/252	30.98/787	31.14/791	30.98/787	62.76/1594	20.16/512	53.54/1360	31.50/800
12"	11.93/303	32.99/838	33.11/841	32.99/838	71.65/1820	23.15/588	61.42/1560	31.50/800
14"	13.15/334	35.00/889	35.12/892	35.00/889	77.64/1972	26.46/672	68.50/1740	-
16"	15.16/385	39.02/991	39.13/994	39.02/991	81.14/2061	29.29/744	75.79/1925	-
18"	17.17/436	42.99/1092	43.11/1095	42.99/1092	86.50/2197	30.98/787	84.45/2145	-
20"	19.17/487	47.01/1194	44.09/1120	47.01/1194	98.11/2492	35.24/895	94.49/2400	-

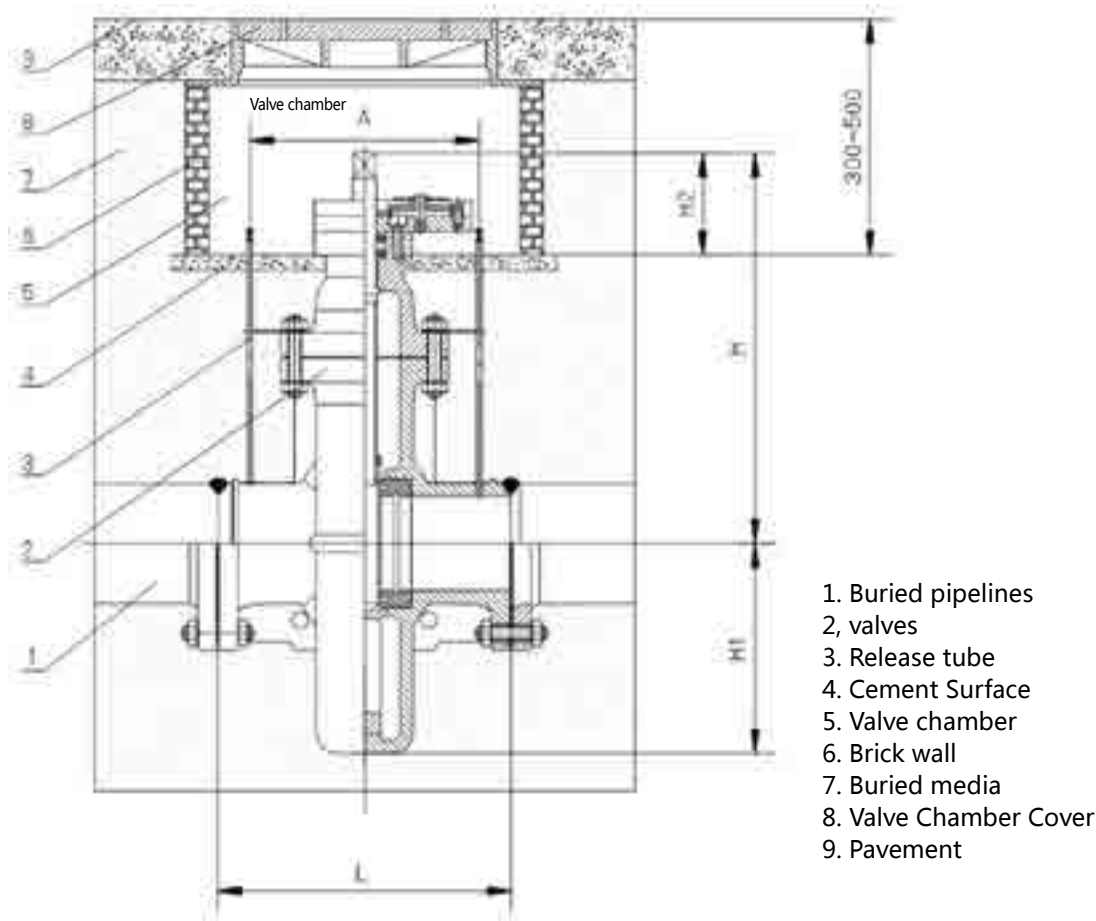
GA342F-300Lb

NPS	D (inch/mm)	L <sub>RF</sub> (inch/mm)	L <sub>RJ</sub> (inch/mm)	L <sub>BW</sub> (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	D <sub>0</sub> (inch/mm)
2"	1.93/49	8.50/216	9.13/232	8.50/216	18.50/470	6.34/161	-	7.87/200
2 1/2"	2.44/62	9.49/241	10.12/257	9.49/241	20.28/515	7.87/200	-	9.84/250
3"	2.91/74	11.14/283	11.73/298	11.14/283	23.11/587	8.27/210	-	9.84/250
4"	3.94/100	12.01/305	12.64/321	12.01/305	27.20/691	10.00/254	-	9.84/250
5"	4.92/125	15.00/381	15.63/397	15.00/381	30.31/770	10.63/270	-	11.81/300
6"	5.91/150	15.87/403	16.50/419	15.87/403	37.95/964	12.76/324	-	13.78/350
8"	7.91/201	16.50/419	17.13/435	16.50/419	45.55/1157	16.73/425	47.24/1200	15.75/400
10"	9.92/252	17.99/457	18.62/473	17.99/457	62.76/1594	20.87/530	64.45/1637	17.72/450
12"	11.93/303	19.76/502	20.39/518	19.76/502	71.65/1820	23.62/600	73.35/1863	17.72/450
14"	13.15/334	30.00/762	30.63/778	30.00/762	73.74/1873	25.24/641	75.59/1920	-
16"	15.16/385	32.99/838	33.62/854	32.99/838	83.54/2122	28.11/714	85.39/2169	-
18"	17.17/436	35.98/914	36.61/930	35.98/914	86.81/2205	30.98/787	88.66/2252	-
20"	19.17/487	39.02/991	39.76/1010	39.02/991	106.26/2699	35.24/895	108.11/2746	-

GA342F-900Lb

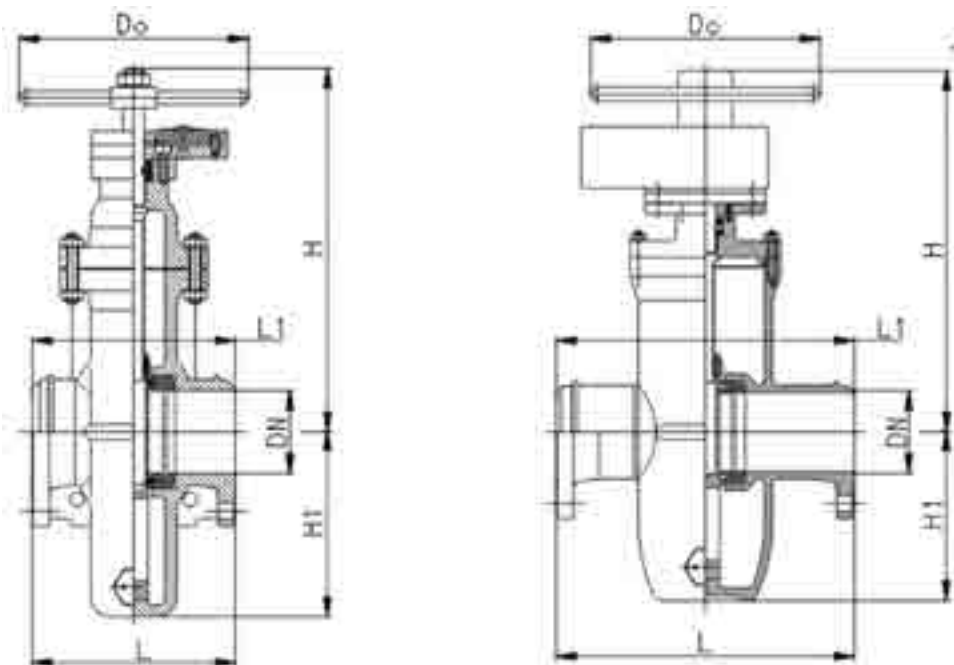
NPS	D (inch/mm)	L <sub>RF</sub> (inch/mm)	L <sub>RJ</sub> (inch/mm)	L <sub>BW</sub> (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	D <sub>0</sub> (inch/mm)
2"	1.93/49	14.49/368	14.61/371	14.49/368	20.87/530	7.32/186	-	11.81/300
2 1/2"	2.44/62	16.50/419	16.61/422	16.50/419	23.43/595	8.90/226	-	11.81/300
3"	2.91/74	15.00/381	15.12/384	15.00/381	25.59/650	9.49/241	-	13.78/350
4"	3.94/100	17.99/457	18.11/460	17.99/457	30.75/781	12.20/310	-	17.72/450
5"	4.92/125	22.01/559	22.13/562	22.01/559	34.45/875	13.11/333	-	19.69/500
6"	5.91/150	24.02/610	24.13/613	24.02/610	46.26/1175	15.31/389	-	19.69/500
8"	7.91/201	29.02/737	29.13/740	29.02/737	56.26/1429	19.33/491	59.53/1512	26.77/680
10"	9.92/252	32.99/838	33.11/841	32.99/838	66.14/1680	21.93/557	69.41/1763	-
12"	11.93/303	37.99/965	38.11/968	37.99/965	73.74/1873	24.53/623	77.01/1956	-
14"	13.15/334	40.51/1029	40.87/1038	40.51/1029	75.87/1927	28.03/712	79.13/2010	-
16"	15.16/385	44.49/1130	44.88/1140	44.49/1130	81.14/2061	30.94/786	84.41/2144	-
18"	17.17/436	47.99/1219	48.50/1232	47.99/1219	92.01/2337	32.87/835	95.28/2420	-
20"	19.17/487	52.01/1321	52.52/1334	52.01/1321	102.99/2616	37.28/947	106.26/2699	-

Gas Flat Gate Valve



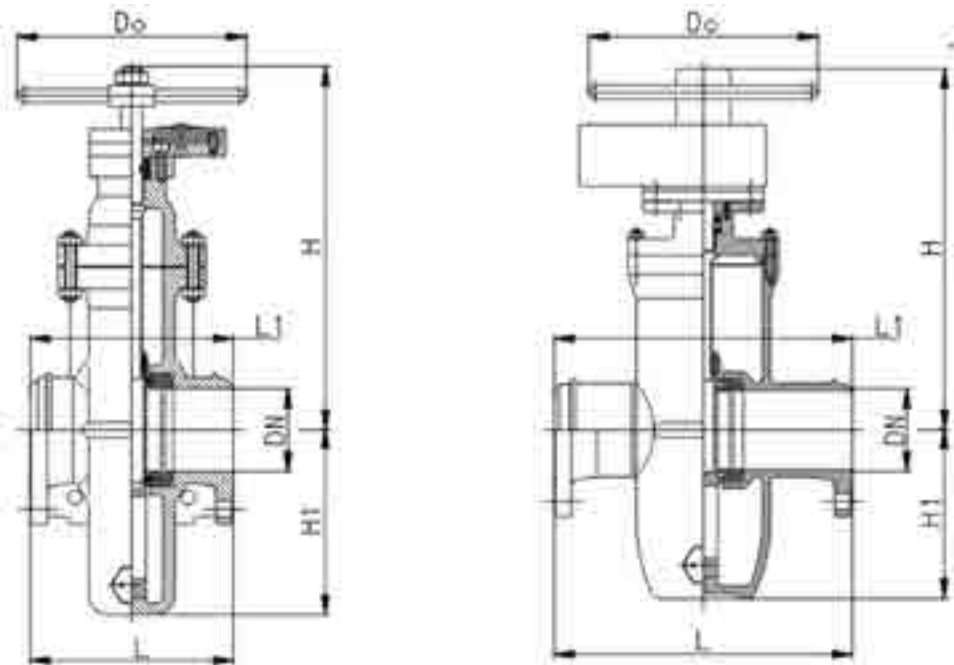
Formal dimensions buried underground

NPS	L butt welding (inch/mm)	L flange (inch/mm)	H (inch/mm)	H1 (inch/mm)	H2 (inch/mm)	A (inch/mm)
4"	12.01/305	9.02/229	16.54/420	8.43/214	5.51/140	8.86/225
6"	15.87/403	10.51/267	21.26/540	11.81/300	5.91/150	11.81/300
8"	16.50/419	11.50/292	23.62/600	15.28/388	5.91/150	12.60/320
10"	17.99/457	12.99/330	27.56/700	18.70/475	5.91/150	14.17/360
12"	19.76/502	14.02/356	31.50/800	21.54/547	6.30/160	15.75/400
14"	22.52/572	15.00/381	35.43/900	24.61/625	7.09/180	18.50/470
16"	24.02/610	15.98/406	43.31/1100	28.03/712	7.09/180	19.69/500
20"	27.99/711	17.99/457	51.18/1300	34.65/880	7.09/180	22.44/570
24"	32.01/813	20.00/508	59.06/1500	41.14/1045	7.87/200	26.38/670
28"	35.98/914	24.02/610	66.93/1700	46.85/1190	7.87/200	30.31/770



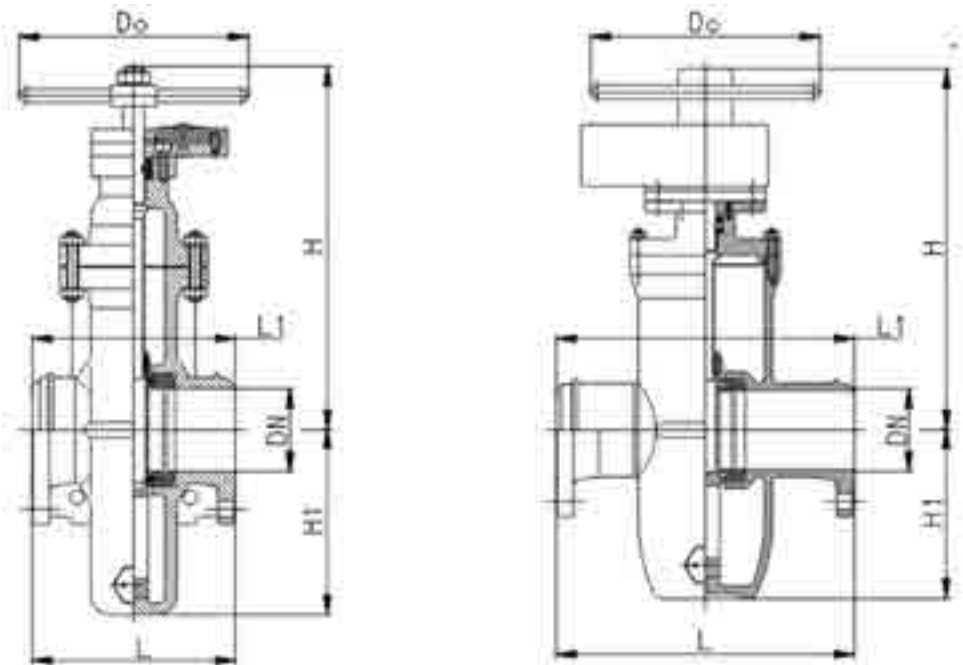
GA345F-150Lb

NPS	L (inch/mm)	L1 (inch/mm)	H (inch/mm)	H1 (inch/mm)	D0 (inch/mm)	weight (kg)
1"	6.50/165	-	8.98/228	3.35/85	7.09/180	15
1-1/4"	6.50/165	-	9.09/231	4.06/103	7.09/180	21
1-1/2"	7.01/178	-	9.45/240	4.53/115	9.84/250	23
2"	7.01/178	8.50/216	10.04/255	5.12/130	9.84/250	26
2-1/2"	7.48/190	9.49/241	13.98/355	6.30/160	11.81/300	47
3"	7.99/203	11.14/283	14.17/360	7.09/180	11.81/300	53
4"	9.02/229	12.01/305	15.75/400	8.43/214	11.81/300	63
6"	10.51/267	15.87/403	19.69/500	11.81/300	13.78/350	134
8"	11.50/292	16.50/419	22.44/570	15.28/388	13.78/350	173
10"	12.99/330	17.99/457	26.77/680	18.70/475	15.75/400	293
12"	14.02/356	19.76/502	29.53/750	21.54/547	17.72/450	387
14"	15.00/381	22.52/572	34.45/875	24.61/625	17.72/450	550
16"	15.98/406	24.02/610	39.37/1000	28.03/712	19.69/500	663
18"	17.01/432	25.59/650	44.49/1130	30.91/785	19.69/500	1056
20"	17.99/457	27.99/711	47.24/1200	34.65/880	23.62/600	1338
24"	20.00/508	32.01/813	55.91/1420	41.14/1045	31.50/800	2017
28"	24.02/610	35.98/914	64.96/1650	46.85/1190	31.50/800	3146
32"	25.98/660	37.99/965	74.02/1880	53.54/1360	39.37/1000	3992
36"	30.35/771	40.00/1016	82.68/2100	59.45/1510	39.37/1000	5350
40"	31.93/811	-	90.55/2300	67.52/1715	47.24/1200	6688



GA345F-300Lb

NPS	L (inch/mm)	L1 (inch/mm)	H (inch/mm)	H1 (inch/mm)	D0 (inch/mm)	weight (kg)
1"	6.50/165	6.50/165	9.37/238	3.35/85	7.09/180	19
1-1/4"	7.01/178	7.01/178	9.37/238	4.06/103	7.09/180	25
1-1/2"	7.48/190	7.48/190	9.65/245	4.53/115	9.84/250	30
2"	8.50/216	8.50/216	10.43/265	5.12/130	9.84/250	40
2-1/2"	9.49/241	9.49/241	14.37/365	6.30/160	11.81/300	59
3"	11.14/283	11.14/283	14.76/375	7.09/180	11.81/300	71
4"	12.01/305	12.01/305	16.54/420	8.43/214	11.81/300	78
6"	15.98/406	15.98/406	21.26/540	11.81/300	13.78/350	173
8"	16.50/419	16.50/419	24.02/610	15.28/388	13.78/350	330
10"	17.99/457	17.99/457	27.95/710	18.70/475	15.75/400	429
12"	19.76/502	19.76/502	31.89/810	21.54/547	17.72/450	648
14"	22.52/572	30.00/762	36.22/920	24.61/625	17.72/450	965
16"	24.02/610	32.99/838	44.09/1120	28.03/712	21.65/550	1463
18"	25.98/660	35.98/914	48.43/1230	30.91/785	27.56/700	1725
20"	27.99/711	39.02/991	51.57/1310	34.65/880	31.50/800	2211
24"	30.98/787	45.00/1143	59.84/1520	41.14/1045	39.37/1000	3333



GA345F-400Lb

NPS	L (inch/mm)	L1 (inch/mm)	H (inch/mm)	H1 (inch/mm)	D0 (inch/mm)	weight (kg)
2"	9.84/250	9.84/250	10.43/265	6.22/158	9.84/250	57
2-1/2"	11.02/280	11.02/280	14.37/365	7.48/190	11.81/300	83
3"	12.20/310	12.20/310	14.76/375	8.86/225	11.81/300	89
4"	13.78/350	13.78/350	16.54/420	10.04/255	11.81/300	102
6"	17.72/450	17.72/450	20.47/520	10.83/275	13.78/350	214
8"	21.65/550	21.65/550	23.23/590	16.14/410	13.78/350	366
10"	25.59/650	25.59/650	27.56/700	19.29/490	15.75/400	514
12"	29.53/750	29.53/750	30.71/780	22.44/570	17.72/450	794
14"	33.46/850	33.46/850	35.83/910	24.61/625	17.72/450	1630
16"	37.40/950	37.40/950	40.16/1020	28.94/735	19.69/500	1793



Contrast Table for Torque and Stem of Flat Gate Valve

caliber	150LB				300LB				600LB				900LB				1500LB			
	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust
2"	Tr18×4LH	F10	5N.M	1500N	Tr18×4LH	F10	13N.M	3800N	Tr18×4LH	F10	25N.M	7612N	Tr24×5LH	F12	40N.M	12KN	Tr24×5LH	F12	40N.M	12KN
2-1/2"	Tr22×5LH	F10	8N.M	2050N	Tr22×5LH	F10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3"	Tr22×5LH	F10	10N.M	2600N	Tr22×5LH	F10	25N.M	6520N	Tr24×5LH	F12	60N.M	15KN	Tr28×5LH	F14	110N.M	23KN	Tr28×5LH	F14	170N.M	36KN
4"	Tr24×5LH	F12	18N.M	4100N	Tr24×5LH	F12	45N.M	10KN	Tr28×5LH	F14	100N.M	23KN	Tr32×6LH	F14	200N.M	36KN	Tr34×6LH	F16	680N.M	60KN
5"	Tr28×5LH	F14	28N.M	5840N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6"	Tr28×5LH	F14	38N.M	7800N	Tr32×6LH	F14	106N.M	20KN	Tr38×6LH	F16	251N.M	40KN	Tr42×6LH	F25	415N.M	63KN	Tr46×8LH	F25	770N.M	116KN
8"	Tr32×6LH	F14	75N.M	14KN	Tr34×6LH	F14	195N.M	34KN	Tr42×6LH	F25	495N.M	75KN	Tr46×8LH	F25	910N.M	118KN	Tr52×8LH	F30	1110N.M	150KN
10"	Tr34×6LH	F14	120N.M	20KN	Tr38×6LH	F16	310N.M	50KN	Tr46×8LH	F25	840N.M	110KN	Tr52×8LH	F30	1300N.M	170KN	Tr60×10LH	F30	1890N.M	225KN
12"	Tr38×6LH	F16	185N.M	30KN	Tr40×6LH	F16	465N.M	70KN	Tr48×8LH	F30	1211N.M	152KN	Tr56×8LH	F30	2000N.M	246KN	-	-	-	-
14"	Tr42×6LH	F16	270N.M	40KN	Tr44×8LH	F25	635N.M	86KN	Tr56×8LH	F30	1655N.M	185KN	Tr60×10LH	F30	2840N.M	288KN	-	-	-	-
16"	Tr46×8LH	F25	360N.M	46KN	Tr46×8LH	F25	885N.M	115KN	Tr60×10LH	F30	1800N.M	245KN	Tr65×10LH	F35	3356N.M	365KN	-	-	-	-
18"	Tr46×8LH	F25	480N.M	60KN	Tr48×8LH	F25	1160N.M	145KN	Tr65×10LH	F30	2765N.M	310KN	Tr70×10LH	F35	4460N.M	452KN	-	-	-	-
20"	Tr48×8LH	F25	600N.M	73KN	Tr52×8LH	F30	1420N.M	183KN	Tr70×10LH	F35	3600N.M	363KN	Tr76×10LH	F35	5680N.M	554KN	-	-	-	-
22"	Tr56×8LH	F30	700N.M	90KN	Tr56×8LH	F30	1640N.M	216KN	Tr76×10LH	F35	4520N.M	433KN	Tr80×10LH	F35	7182N.M	690KN	-	-	-	-
24"	Tr56×8LH	F30	800N.M	100KN	Tr60×10LH	F30	2100N.M	260KN	Tr76×10LH	F35	5470N.M	524KN	Tr80×10LH	F35	9442N.M	852KN	-	-	-	-
28"	Tr60×10LH	F30	1155N.M	138KN	Tr65×10LH	F35	3140N.M	341KN	Tr80×10LH	F35	7800N.M	700KN	-	-	-	-	-	-	-	-
30"	Tr60×10LH	F30	1200N.M	145KN	Tr70×10LH	F35	4000N.M	400KN	Tr85×12LH	F35	9500N.M	792KN	-	-	-	-	-	-	-	-
32"	Tr60×10LH	F30	1475N.M	176KN	Tr76×10LH	F35	4550N.M	436KN	Tr90×12LH	F40	11020N.M	890KN	-	-	-	-	-	-	-	-
36"	Tr65×10LH	F30	1930N.M	210KN	Tr80×10LH	F35	7700N.M	640KN	Tr100×12LH	-	15200N.M	1100KN	-	-	-	-	-	-	-	-
40"	Tr70×10LH	F30	2660N.M	270KN	Tr85×12LH	-	-	-	Tr100×12LH	-	-	-	-	-	-	-	-	-	-	-
42"	Tr76×10LH	F35	3090N.M	296KN	Tr90×12LH	-	-	-	Tr110×12LH	-	22300N.M	1480KN	-	-	-	-	-	-	-	-
48"	Tr80×10LH	F35	4220N.M	387KN	Tr100×12LH	-	-	-	Tr120×12LH	-	-	-	-	-	-	-	-	-	-	-

Note: Stem label Tr20 \*4LH, left-handed (LH) trapezoidal external thread (Tr), nominal diameter d = 20mm, pitch = 4mm.

Wedge Elastic Single/Double Plate Gate Valve and Wedge Rigid Single/Double Plate Gate Valve

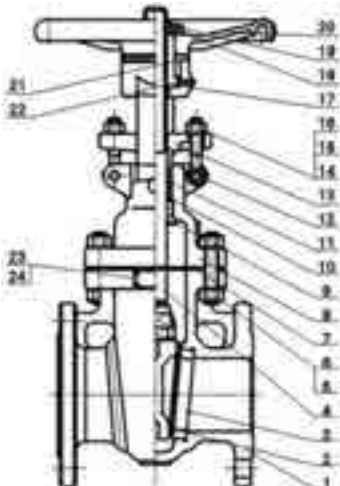
The following structure is adopted:

full bore  
Elastic or rigid gate or soft sealing structure  
Replaceable upper seal seat  
Bolted connection, wound gasket octagonal gasket  
sealing cover and pressure self-tightening cover,  
high temperature creep resistance design  
Nitriding Precipitation Hardening Stainless Steel  
for Valve Stem

The following criteria are used:

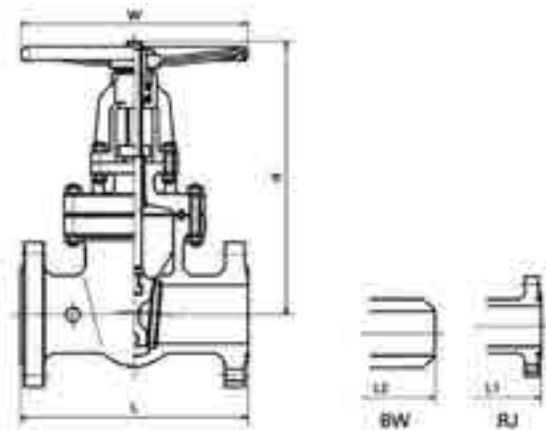
Flange end conformity: ASME B16.5 ASME B16.47A  
Conformity of butt welding end: ASME B16.25  
Structural Length Consistent: ASME B16.10 API600  
API6D  
The operation mode can be changed into electric,  
pneumatic, hydraulic and gear transmission.

Wedge Elastic Single/Double Plate Gate Valve



Serial number	Part name	WCB	C5	WC6	CF8	CF8M
1	valve body	A216 WCB	A217 C5	A217 WC6	A351 CF8	A351 CF8M
2	Flashboard	A216 WCB/STL.6	A217 C5/STL.6	A217 WC6/STL.6	A351 CF8	A351 CF8M
3	valve seat	A105/STL.6	A182 F11/STL.6	A182 F304/STL.6	A182 F304/STL.6	A182 F316/STL.6
4	Stem	A182 F6a	A182 F6a	A182 F6a	A182 304	A479 316
5	Bolt	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8M
6	Nut	A194 2H	A194 2H	A194 2H	A194 8	A194 8M
7	Shim 150Lb	304 Pack of Flexible Graphite				316 pack graphite
	Shim 300Lb	304 Pack of Flexible Graphite				Spiral wound
	Shim ≥ 600Lb	F304				Spiral wound
8	Bonnet	A216 WCB	A217 C5	A217 WC6	A351 CF8	A351 CF8M
9	Upper sealing block	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F316
10	filler	304 Wire + Flexible Graphite				Pillar 6610+6528
11	Spacer ring	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
12	Packing sleeve	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
13	Packing plate	A216 WCB	A216 WCB	A216 WCB	A351 CF8	A351 CF8
14	Live bolt	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8
15	Nut	A194 2H	A194 2H	A194 2H	A194 8	A194 8
16	Cross pin	1035	1035	1035	304	304
17	Stem nut	A439 Type D2	A439 Type D2	A439 Type D2	A439 Type D2	A439 Type D2
18	Lock nut	1035	1035	1035	1035	1035
19	Check screw	1035	1035	1035	1035	1035
20	handwheel	AISI 1118	AISI 1118	AISI 1118	AISI 1118	AISI 1118
21	bearing cover	1035	1035	1035	1035	1035
22	Oil cup	finished product	finished product	finished product	finished product	finished product
23	Nameplate	AISI 304	AISI 304	AISI 304	AISI 304	AISI 304
24	rivet	AL	AL	AL	AL	AL

Note: Rings are installed when customers need them.

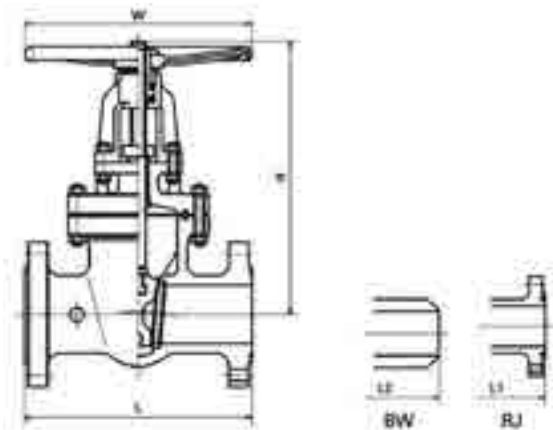


GA347F-150Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	7.01/178	7.52/191	8.50/216	13.43/341	7.87/200	20
2 1/2"	7.48/190	7.99/203	9.49/241	14.61/371	7.87/200	30
3"	7.99/203	8.50/216	11.14/283	15.83/402	9.84/250	33
4"	9.02/229	9.49/241	12.01/305	18.58/472	11.02/280	49
5"	10.00/254	10.51/267	15.00/381	20.87/530	11.81/300	60
6"	10.51/267	10.98/279	15.87/403	23.11/587	11.81/300	75
8"	11.50/292	12.01/305	16.50/419	29.25/743	13.78/350	120
10"	12.99/330	13.50/343	17.99/457	35.59/904	15.75/400	205
12"	14.02/356	14.49/368	19.76/502	41.22/1047	17.72/450	290
14"	15.00/381	15.51/394	22.52/572	46.14/1172	19.69/500	400
16"	15.98/406	16.50/419	24.02/610	51.06/1297	23.62/600	511
18"	17.01/432	17.52/445	25.98/660	56.42/1433	26.77/680	650
20"	17.99/457	18.50/470	27.99/711	62.60/1590	29.53/750	789
24"	20.00/508	20.51/521	32.01/813	74.72/1898	31.50/800	1200
28"	24.02/610	-	35.98/914	80.71/2050	-	1800
30"	24.02/610	-	35.98/914	91.73/2330	-	2560
32"	25.98/660	-	37.99/965	99.72/2533	-	3060
36"	27.99/711	-	41.73/1060	110.24/2800	-	3500
40"	30.00/762	-	42.01/1067	-	-	-
42"	30.98/787	-	44.02/1118	-	-	-
48"	35.98/914	-	-	-	-	-
60"	42.01/1067	-	-	-	-	-

GA347F-300Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	8.50/216	9.13/232	8.50/216	13.58/345	7.87/200	24
2 1/2"	9.49/241	10.12/257	9.49/241	14.80/376	7.87/200	36
3"	11.14/283	11.73/298	11.14/283	16.02/407	9.84/250	47
4"	12.01/305	12.64/321	12.01/305	18.82/478	11.81/300	69
5"	15.00/381	15.63/397	15.00/381	21.06/535	11.81/300	89
6"	15.87/403	16.50/419	15.87/403	24.33/618	13.78/350	123
8"	16.50/419	17.13/435	16.50/419	30.12/765	15.75/400	196
10"	17.99/457	18.62/473	17.99/457	36.57/929	17.72/450	333
12"	19.76/502	20.39/518	19.76/502	43.07/1094	19.69/500	440
14"	30.00/762	30.63/778	30.00/762	46.57/1183	21.65/550	710
16"	32.99/838	33.62/854	32.99/838	52.32/1329	26.77/680	950
18"	35.98/914	36.61/930	35.98/914	57.28/1455	29.53/750	1405
20"	39.02/991	39.76/1010	39.02/991	73.23/1860	36.22/920	1720
24"	45.00/1143	45.87/1165	45.00/1143	79.92/2030	-	2770
28"	52.99/1346	53.98/1371	52.99/1346	-	-	3312
30"	55.00/1397	55.98/1422	55.00/1397	-	-	4100
32"	60.00/1524	61.10/1552	60.00/1524	-	-	5200
36"	67.99/1727	69.09/1755	67.99/1727	-	-	6700

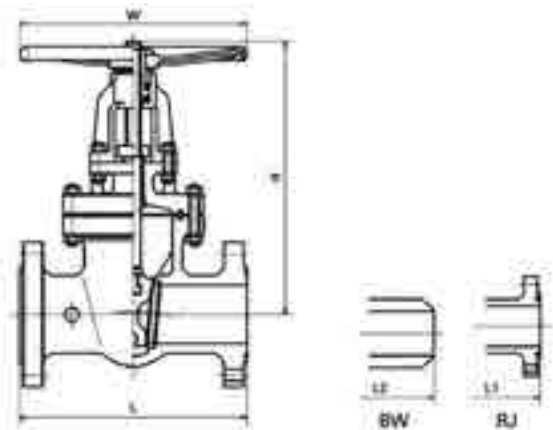


GA347F-600Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	11.50/292	11.61/295	11.50/292	14.84/377	7.87/200	39
2 1/2"	12.99/330	13.11/333	12.99/330	17.44/443	9.84/250	52
3"	14.02/356	14.13/359	14.02/356	18.31/465	11.02/280	88
4"	17.01/432	17.13/435	17.01/432	20.67/525	11.81/300	114
5"	20.00/508	20.12/511	20.00/508	24.02/610	15.75/400	-
6"	22.01/559	22.13/562	22.01/559	26.46/672	17.72/450	285
8"	25.98/660	26.14/664	25.98/660	32.28/820	19.69/500	413
10"	30.98/787	31.14/791	30.98/787	38.70/983	26.77/680	650
12"	32.99/838	33.11/841	32.99/838	44.09/1120	29.53/750	800
14"	35.00/889	35.12/892	35.00/889	50.51/1283	31.50/800	1140
16"	39.02/991	39.13/994	39.02/991	56.26/1429		1700
18"	42.99/1092	43.11/1095	42.99/1092	61.89/1572		2268
20"	47.01/1194	47.24/1200	47.01/1194	69.17/1757		2850
24"	55.00/1397	55.39/1407	55.00/1397	78.15/1985		3500
28"	60.98/1549	61.50/1562	60.98/1549	87.80/2230		-
30"	65.00/1651	65.51/1664	65.00/1651	97.44/2475		-
32"	70.00/1778	70.63/1794	70.00/1778	90.55/2300		-
36"	82.01/2083	82.52/2096	82.01/2083	116.14/2950		-

GA347F-900Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	14.49/368	14.61/371	14.49/368	17.52/445	11.81/300	72
2 1/2"	16.50/419	16.61/422	16.50/419	18.90/480	11.81/300	101
3"	15.00/381	15.12/384	15.00/381	20.20/513	13.78/350	130
4"	17.99/457	18.11/460	17.99/457	24.13/613	15.75/400	197
5"	22.01/559	22.13/562	22.01/559	28.74/730	19.69/500	285
6"	24.02/610	24.13/613	24.02/610	32.83/834	23.62/600	404
8"	29.02/737	29.13/740	29.02/737	34.45/875	23.62/600	650
10"	32.99/838	33.11/841	32.99/838	40.94/1040	25.59/650	1376
12"	37.99/965	38.11/968	37.99/965	45.28/1150	27.56/700	1177
14"	40.51/1029	40.91/1039	40.51/1029	53.54/1360	-	1500
16"	44.49/1130	44.88/1140	44.49/1130	59.84/1520	-	1920
18"	47.99/1219	48.50/1232	47.99/1219	72.05/1830	-	-
20"	52.01/1321	52.52/1334	52.01/1321	82.68/2100	-	-
24"	60.98/1549	61.73/1568	60.98/1549	102.76/2610	-	-



GA347F-1500Lb

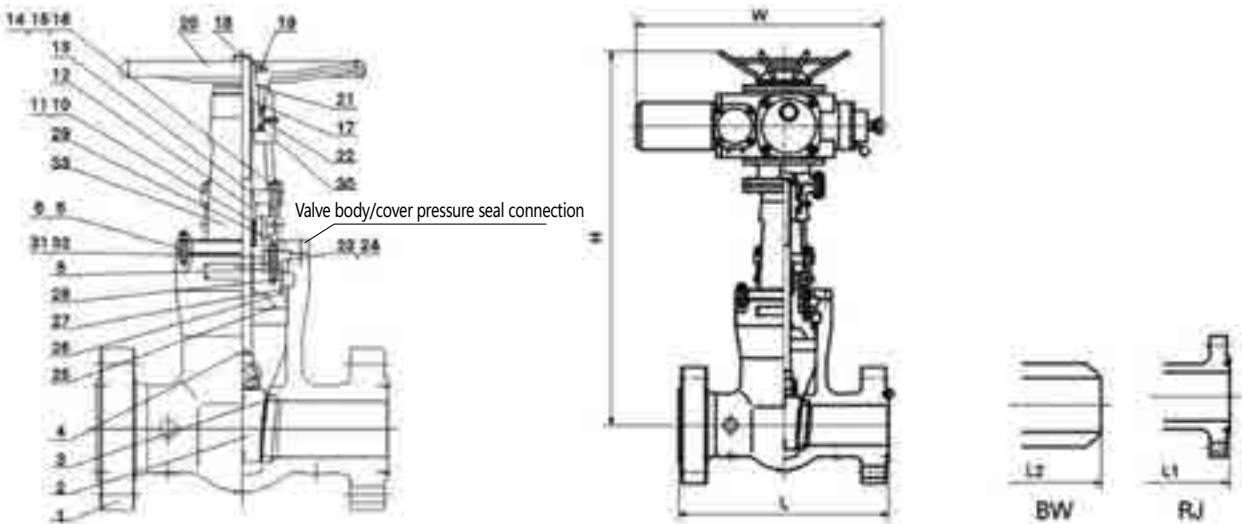
NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	14.49/368	14.61/371	14.49/368	18.19/462	11.81/300	85
2 1/2"	16.50/419	16.61/422	16.50/419	20.16/512	13.78/350	130
3"	18.50/470	18.62/473	18.50/470	21.65/550	15.75/400	170
4"	21.50/546	21.61/549	21.50/546	29.61/752	21.65/550	304
5"	26.50/673	26.61/676	26.50/673	36.50/927	21.65/550	530
6"	27.76/705	27.99/711	27.76/705	44.09/1120	23.62/600	646
8"	32.76/832	33.15/842	32.76/832	54.72/1390	27.56/700	1100
10"	35.87/911	39.41/1001	35.87/911	60.00/1524	31.50/800	1600
12"	44.49/1130	45.12/1146	44.49/1130	72.83/1850	-	2106
14"	49.49/1257	50.24/1276	49.49/1257	85.83/2180	-	2700
16"	54.49/1384	55.35/1406	54.49/1384	87.01/2210	-	3500
18"	60.51/1537	61.38/1559	60.51/1537	-	-	-
20"	65.51/1664	66.38/1686	65.51/1664	-	-	-
24"	76.50/1943	77.60/1971	76.50/1943	-	-	-

GA347F-2500Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	17.76/451	17.87/454	17.76/451	20.47/520	11.81/300	-
2 1/2"	20.00/508	20.24/514	20.00/508	24.80/630	13.78/350	-
3"	22.76/578	22.99/584	22.76/578	28.74/730	15.75/400	-
4"	26.50/673	26.89/683	26.50/673	34.65/880	19.69/500	-
5"	31.26/794	31.77/807	31.26/794	40.16/1020	23.62/600	-
6"	35.98/914	36.50/927	35.98/914	44.09/1120	27.56/700	-
8"	40.24/1022	40.87/1038	40.24/1022	53.15/1350	31.50/800	-
10"	50.00/1270	50.87/1292	50.00/1270	62.99/1600	-	-
12"	55.98/1422	56.85/1444	55.98/1422	74.80/1900	-	-



Wedge Rigid Single/Double Plate Gate Valve (Power Station)



Serial number	Part name	WCB	C5	WC6	CF8	CF8M
1	valve body	A216 WCB	A217 C5	A217 WC6	A351 CF8	A351 CF8M
2	Flashboard	A216 WCB/STL.6	A217 C5/STL.6	A217 WC6/STL.6	A351 CF8	A351 CF8M
3	valve seat	A105/STL.6	A182 F11/STL.6	A182 F11/STL.6	A182 F304/STL.6	A182 F316/STL.6
4	Stem	A182 F6a	A182 F6a	A182 F6a	A182 304	A479 316
5	Bolt	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8M
6	Nut	A194 2H	A194 2H	A194 2H	A194 8	A194 8M
8	Bonnet	A216 WCB	A217 C5	A217 WC6	A351 CF8	A351 CF8M
10	filler	304 Wire + Flexible Graphite				Pillar 6610+6528
11	Spacer ring	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
12	Packing sleeve	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
13	Packing plate	A216 WCB	A216 WCB	A216 WCB	A351 CF8	A351 CF8
14	Live bolt	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8
15	Nut	A194 2H	A194 2H	A194 2H	A194 8	A194 8
16	Cross pin	1035	1035	1035	304	304
17	Stem nut	A439 Type D2	A439 Type D2	A439 Type D2	A439 Type D2	A439 Type D2
18	Lock nut	1035	1035	1035	1035	1035
19	Check screw	1035	1035	1035	1035	1035
20	handwheel	AISI 1118	AISI 1118	AISI 1118	AISI 1118	AISI 1118
21	bearing cover	1035	1035	1035	1035	1035
22	Oil cup	finished product	finished product	finished product	finished product	finished product
23	Nameplate	AISI 304	AISI 304	AISI 304	AISI 304	AISI 304
24	rivet	AL	AL	AL	AL	AL
25	Self sealing seat	A216 WCB	A217 C5	A217 WC6	A351 CF8	A351 CF8M
26	Self sealing gasket	304 Wire + Flexible Graphite				
27	Self sealing ring	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
28	Four open loop	A182 F6a	A182 F11	A182 F11	A182 F304	A182 F316
29	Suspension bracket	A216 WCB	A216 WCB	A216 WCB	A351 CF8	A351 CF8
30	Bearing	40Cr	40Cr	40Cr	40Cr	40Cr
31	Hanging bolt	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8M
32	Nut	A194 2H	A194 2H	A194 2H	A194 8	A194 8M
33	Bracket	A216 WCB	A216 WCB	A216 WCB	A351 CF8	A351 CF8

Note: Rings are installed when customers need them.

GA948F-P900Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	14.49/368	14.61/371	8.50/216	17.52/445	11.81/300	50
2 1/2"	16.50/419	16.61/422	10.00/254	18.90/480	11.81/300	74
3"	15.00/381	15.12/384	12.01/305	25.98/660	13.78/350	90
4"	17.99/457	18.11/460	14.02/356	26.22/666	15.75/400	110
6"	24.02/610	24.13/613	20.00/508	36.54/928	23.62/600	195
8"	29.02/737	29.13/740	25.98/660	-	-	505
10"	32.99/838	33.11/841	30.98/787	-	-	745
12"	37.99/965	38.11/968	35.98/914	-	-	1060
14"	40.51/1029	40.91/1039	39.02/991	-	-	1410
16"	44.49/1130	44.88/1140	42.99/1092	-	77.17/1960	-

GA948F-P1500Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	14.49/368	14.61/371	8.50/216	19.09/485	11.81/300	50
2 1/2"	16.50/419	16.61/422	10.00/254	21.81/554	13.78/350	74
3"	18.50/470	18.62/473	12.01/305	26.46/672	15.75/400	90
4"	21.50/546	21.61/549	15.98/406	30.24/768	22.05/560	158
6"	27.76/705	27.99/711	22.01/559	-	-	350
8"	32.76/832	33.15/842	27.99/711	-	-	690
10"	35.87/911	39.41/1001	34.02/864	-	-	1030
12"	44.49/1130	45.12/1146	39.02/991	-	-	1460
14"	49.49/1257	50.24/1276	42.01/1067	-	-	1810
16"	54.49/1384	55.35/1406	43.46/1104	-	-	2760

GA948F-P2000Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	17.76/451	17.87/454	10.98/279	23.39/594	15.75/400	55
2 1/2"	20.00/508	20.24/514	12.99/330	29.65/753	22.05/560	88
3"	22.76/578	22.99/584	14.49/368	33.07/840	23.62/600	100
4"	26.50/673	26.89/683	17.99/457	34.65/880	23.62/600	185
6"	35.98/914	36.50/927	24.02/610	-	-	430
8"	40.24/1022	40.87/1038	30.00/762	-	-	720
10"	50.00/1270	50.87/1292	35.98/914	-	-	1320
12"	55.98/1422	56.85/1444	40.98/1041	-	-	2610

GA948F-P2500Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
2"	17.76/451	17.87/454	10.98/279	23.39/594	13.78/350	60
2 1/2"	20.00/508	20.24/514	12.99/330	29.65/753	15.75/400	100
3"	22.76/578	22.99/584	14.49/368	33.07/840	22.05/560	110
4"	26.50/673	26.89/683	17.99/457	34.65/880	23.62/600	200
6"	35.98/914	36.50/927	24.02/610	-	-	530
8"	40.24/1022	40.87/1038	30.00/762	-	-	750
10"	50.00/1270	50.87/1292	35.98/914	-	-	1610
12"	55.98/1422	56.85/1444	40.98/1041	-	-	3010

GA948F-P3500Lb

NPS	L(inch/mm)	L1(inch/mm)	L2(inch/mm)	H(inch/mm)	W(inch/mm)	Weight (kg)
3"	-	-	17.32/440	37.76/959	22.05/560	305
4"	-	-	21.26/540	43.31/1100	23.62/600	437
6"	-	-	27.24/692	-	-	691
8"	-	-	33.31/846	-	-	1179
10"	-	-	39.37/1000	-	-	2031
12"	-	-	44.25/1124	-	-	3180

Note: Specifications and sizes not listed in the list. For further information, please consult the CDG Engineer.

Contrast Table of Torque and Stem of Wedge Gate Valve

caliber	150LB				300LB				600LB				900LB				1500LB			
	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust	Stem	ISO disk	torque	thrust
2"	Tr20×4LH	F10	20N.M	7700N	Tr20×4LH	F10	40N.M	14KN	Tr20×4LH	F10	60N.M	23KN	Tr26×5LH	F14	180N.M	58KN	Tr26×5LH	F14	180N.M	58KN
2-1/2"	Tr20×4LH	F10	25N.M	10KN	Tr20×4LH	F10	50N.M	20KN	Tr22×5LH	F12	100N.M	23KN	-	-	-	-	-	-	-	-
3"	Tr22×5LH	F10	40N.M	13KN	Tr22×5LH	F10	70N.M	25KN	Tr26×5LH	F14	150N.M	40KN	Tr30×6LH	F14	200N.M	62KN	Tr32×6LH	F14	445N.M	105KN
4"	Tr26×5LH	F14	65N.M	19KN	Tr26×5LH	F14	120N.M	35KN	Tr28×5LH	F14	250N.M	62KN	Tr32×6LH	F14	350N.M	95KN	Tr36×6LH	F16	600N.M	140KN
5"	Tr28×5LH	F14	100N.M	25KN	Tr28×5LH	F14	210N.M	50KN	Tr32×6LH	F14	360N.M	95KN	Tr38×6LH	F16	550N.M	120KN	-	-	-	-
6"	Tr28×5LH	F14	110N.M	31KN	Tr32×6LH	F14	250N.M	65KN	Tr38×6LH	F16	510N.M	115KN	Tr42×6LH	F25	700N.M	160KN	Tr46×8LH	F25	1400N.M	270KN
8"	Tr32×6LH	F14	200N.M	49KN	Tr36×6LH	F16	420N.M	105KN	Tr42×6LH	F25	900N.M	190KN	Tr48×8LH	F25	1500N.M	255KN	Tr56×10LH	F30	2500N.M	380KN
10"	Tr36×6LH	F16	300N.M	70KN	Tr38×6LH	F16	680N.M	150KN	Tr48×8LH	F30	1550N.M	270KN	Tr56×8LH	F30	2300N.M	400KN	Tr65×10LH	F35	4500N.M	615KN
12"	Tr38×6LH	F16	420N.M	94KN	Tr42×6LH	F25	950N.M	210KN	Tr52×8LH	F30	2350N.M	380KN	Tr58×10LH	F30	3500N.M	520KN	Tr70×10LH	F35	5700N.M	800KN
14"	Tr42×6LH	F25	650N.M	120KN	Tr44×8LH	F25	1400N.M	260KN	Tr58×10LH	F30	2800N.M	450KN	Tr60×10LH	F35	4400N.M	630KN	Tr76×10LH	F35	8900N.M	1020KN
16"	Tr46×8LH	F25	830N.M	150KN	Tr48×8LH	F25	1850N.M	330KN	Tr60×10LH	F35	4000N.M	580KN	Tr65×10LH	F35	6000N.M	780KN	Tr76×10LH	F40	10500N.M	1105KN
18"	Tr48×8LH	F25	1050N.M	182KN	Tr52×8LH	F30	2500N.M	400KN	Tr65×10LH	F35	5500N.M	710KN	Tr76×10LH	F35	8500N.M	970KN	-	-	-	-
20"	Tr52×8LH	F25	1400N.M	225KN	Tr54×8LH	F30	3150N.M	490KN	Tr70×10LH	F35	7100N.M	870KN	Tr76×10LH	F40	11800N.M	1190KN	Tr110×12LH	F48	20000N.M	1790KN
22"	Tr56×8LH	F30	1650N.M	265KN	Tr60×10LH	F35	3500N.M	590KN	-	-	-	-	-	-	-	-	-	-	-	-
24"	Tr58×10LH	F30	2000N.M	320KN	Tr65×10LH	F35	5400N.M	700KN	Tr76×10LH	F40	10500N.M	1215KN	Tr95×12LH	F48	16500N.M	1670KN	-	-	-	-
26"	Tr60×10LH	F30	2400N.M	350KN	Tr70×10LH	F35	6500N.M	800KN	-	-	-	-	-	-	-	-	-	-	-	-
28"	Tr65×10LH	F30	3100N.M	400KN	Tr80×10LH	F35	7300N.M	900KN	-	-	-	-	-	-	-	-	-	-	-	-
30"	Tr65×10LH	F35	3500N.M	455KN	Tr85×12LH	F35	8300N.M	1050KN	Tr90×12LH	F48	18200N.M	2010KN	-	-	-	-	-	-	-	-
32"	Tr65×10LH	F35	3900N.M	510KN	Tr85×12LH	F35	10500N.M	1200KN	-	-	-	-	-	-	-	-	-	-	-	-
34"	Tr70×10LH	F35	4700N.M	570KN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36"	Tr70×10LH	F35	5100N.M	630KN	Tr90×12LH	F40	14000N.M	1500KN	Tr110×12LH	F60	30600N.M	2810KN	-	-	-	-	-	-	-	-
40"	Tr80×10LH	F35	5900N.M	765KN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42"	Tr85×12LH	F35	7500N.M	830KN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48"	Tr105×12LH	F40	12000N.M	1060KN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52"	Tr105×12LH	F40	14250N.M	1250KN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54"	Tr105×12LH	F40	15000N.M	1310KN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Stem label Tr20 \*4LH, left-handed (LH) trapezoidal external thread (Tr), nominal diameter d = 20mm, pitch = 4mm.