



# Contributing to safer and smarter pipe network flow control

## Wedge Gate Valve

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EST.2012

# BRIFE INTRODUCTION

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Founded in 2012, KAMROO Holding Group is an innovative integrator focusing on "smart" manufacturing of valves. The core products are suitable for tough working applications such as low temperature, high temperature, high pressure, strong corrosion, and solids mixed medium. KAMROO products are suitable for industries such as Oil&Gas, Refinery, Chemical, Natural Gas, Power Plant, Metallurgy, Electronics, and new energy. The equivalent standards cover many industrial pipelines fields.

KAMROO strives to create an automation, digital, and intelligent platform, integrates profound technical accumulation and professional wisdom of the team. We also provide superior product support and technical services for domestic and international clients, as well as provide customized solutions for end user.

KAMROO adheres to customer-oriented principle and guarantees system compatibility. We will continue to maintain the attitude and belief of concentration and ingenuity, adhering to safer, more reliable and smarter pipeline flow control technology and advanced design concepts to help you optimize the working application, improve the efficiency and save the costs.

With a flexible and open attitude, KAMROO listens to the voice of the market and embraces multiculturalism. KAMROO focuses on the construction of a global service system, and strives to become the preferred partner in the field of flow control. No matter where you are in the world, we look forward to keeping in close contact with you to understand your specific needs and provide precise services.



CE



CE Cert

EAC



EAC Cert



API 6D cert



Service Cert

# QUALIFICATION CERTIFICATE



ISO



ISO 15848-1

ISO



ISO 14001:2015

ISO



ISO 45001:2018

ISO



ISO 9001:2015

# WEDGE GATE VALVE

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<b>DESIGN STANDARDS</b>	API600, ISO10434, ASME B16.34, etc.
<b>SIZE RANGE</b>	NPS2~NPS48, DN50~DN1200
<b>NOMINAL PRESSURE</b>	CLASS150~CLASS2500
<b>CONNECTION</b>	RF, RTJ, BW, etc.
<b>MATERIALS</b>	ASTM A216 WCB, ASTM A352 LCB, ASTM A217 WC6, ASTM A217 WC9, ASTM A351 CF8, ASTM A351 CF8M, A995 4A etc.
<b>APPLICABLE TEMPERATURE</b>	-29°C~425°C
<b>APPLICABLE MEDIUM</b>	Oil, Gas, Water, Steam, etc.
<b>OPERATION</b>	Handwheel, Gear, Pneumatic, Electric, etc.

## OUTSIDE SCREW AND YOKE

The external side of the stem is threaded, while the section inside the valve is plain. Valve stem threads are isolated from medium by packing, which keeps the stem threads outside the valve body to avoid damage from high temperatures, corrosives, and solids within the valve. The external screw can be maintained from the outside, making it the preferred choice for demanding applications.

## BODY/BONNET CONNECTION

KAMROO gate valves are available with bolted and pressure-sealed bonnet, depending on its pressure rating or customer requirements.

## BODY/BONNET SEALING

KAMROO offers stainless steel with graphite spiral wound gaskets for bolted bonnet gate valves in pressure rating Class 15 to Class 600, and Octagonal ring fittings as standard for bolted bonnet gate valves in pressure rating Class 900 and above. Pressure seal bonnet design are usually used for valve pressure rating Class900 and above to make it sealed. The common used material for the gasket is flexible steel ring or graphite.

## VALVE STEM INTEGRAL FORGING DESIGN

The valve stem adopts integral forging design, and the minimum diameter of the stem is as per AP1600. The connection between the valve stem and gate plate adopts T-head design, which is integrally formed with the valve stem. The accuracy in the dimension and surface assures a long service life with a perfect sealing in the packing area, resulting in lower fugitive emissions. The connection of the stem to the gate is designed to prevent the stem from turning or detaching from the wedge while the valve is in operation.

## STEM PACKING

Molded flexible graphite is used for packing material. PTFE or composite packing material can also be used according to customer requirements. The inner surface of the stuffing box has a high surface finish at the contact area with the packing. The surface of the contact between the valve stem and the packing has been precisely machined to achieve the required high finish and density, ensuring the reliable sealing of the valve stem.

## BACK SEAT DESIGN

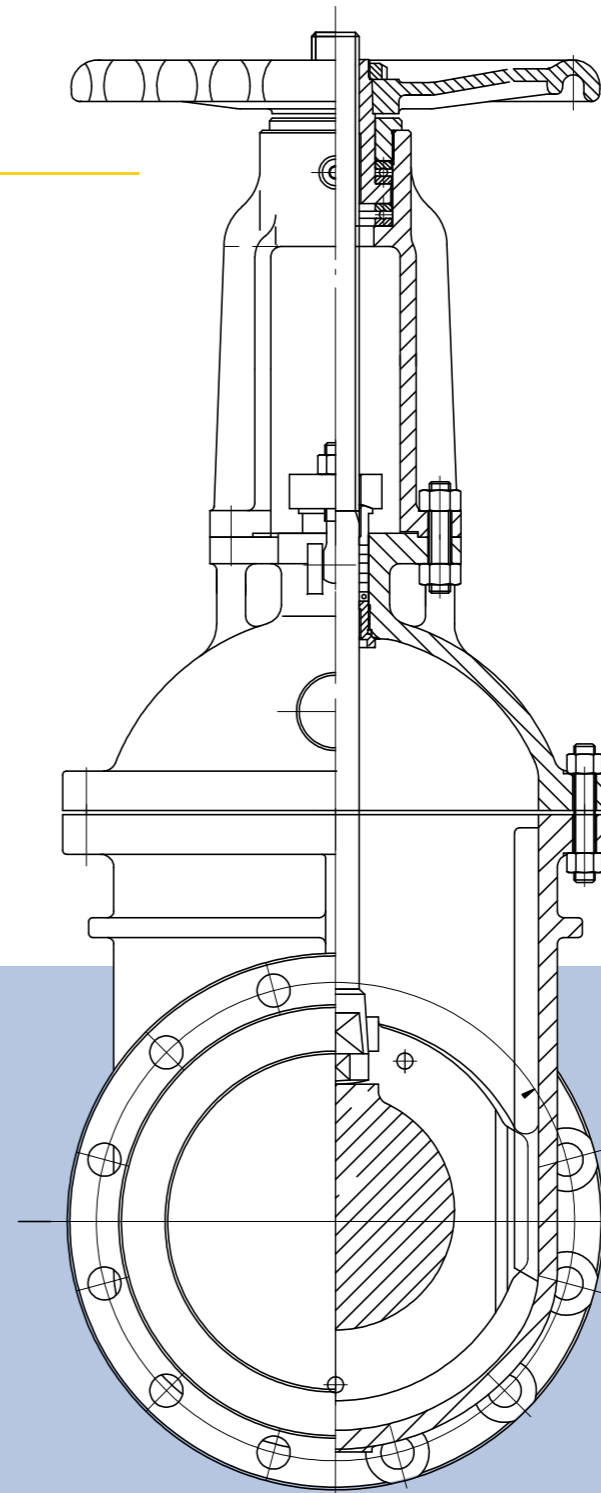
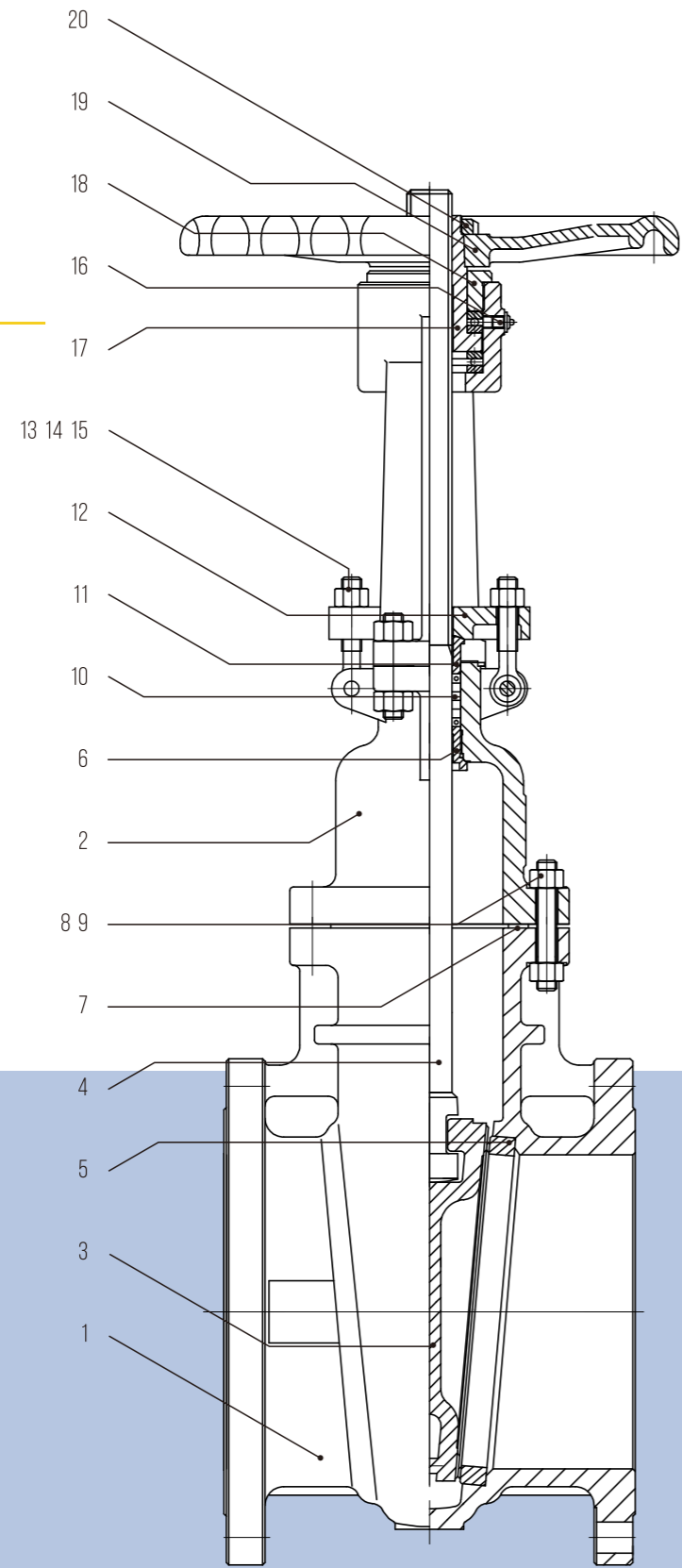
KAMROO gate valves adopt the back seat design. In most cases, the carbon steel gate valve is fitted with a renewable back seat. For the stainless steel gate valve, the back seat is machined directly in the bonnet or after welding. The sealing of the back-seat is reliable when the gate valve is in a fully open position.

## FLEXIBLE WEDGE AND SOLID WEDGE

Gate valve wedge is made for one integral casting piece, the commonly used types are flexible wedge and solid wedge. Flexible wedge can minimize stress concentration and its flexibility ensures tight sealing over a wide range of differential pressures and temperatures. It adapts to slight misalignment caused by pipeline deflection, pressure and temperature differences, as well as thermal deformation. The stem-to-wedge thrust is applied close to the wedge centre, which could reduce lateral stem loading and provides more accurate wedge movement. Solid wedge can provide a tight sealing action but it is prone to getting locked in position if there is a slight deformation in valve body due to thermal expansion or bending loads.

## REPLACEABLE AND INTEGRAL SEAT DESIGN

KAMROO cast steel gate valves are available of both replaceable seat and integral seat design. Carbon steel gate valves are usually with replaceable seat ring either threaded with welding or welded on to body directly. For stainless steel and high temperature alloy steel gate valves, it is recommended that the valve seat is designed as integral valve seat or body sealing surface with hard surfacing welding.



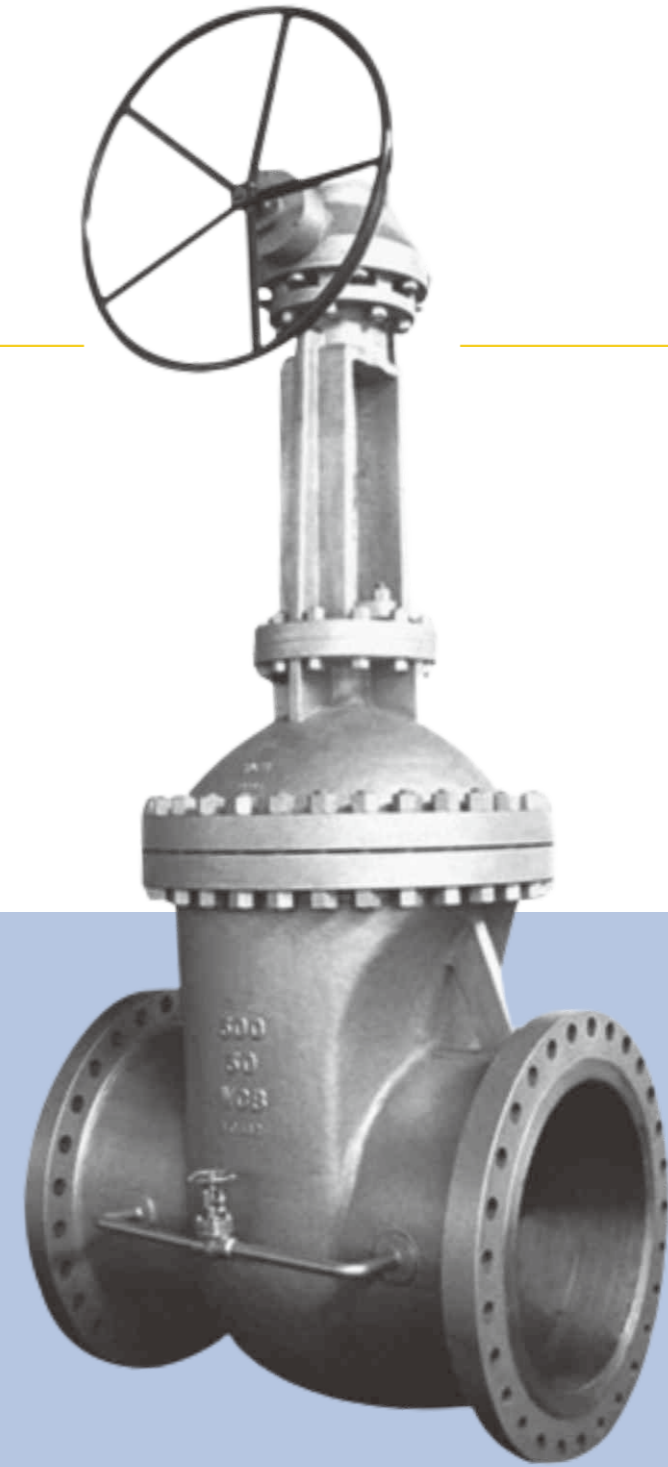
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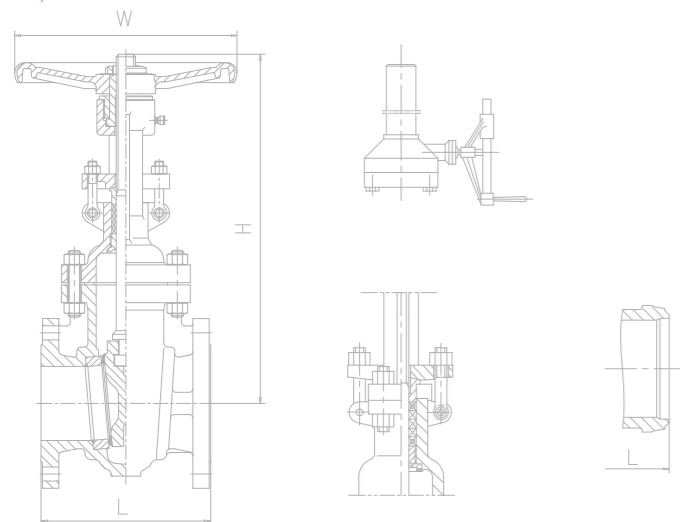
No.	Part Name	Carbon Steel	Cr-Mo Steel	Stainless Steel	L.T. Carbon Steel	Duplex SS	AL-Bronze
1	Body	A216 WCB	A217 WC6	A351 CF8M	A352 LCB	A995 5A	B148 C95800
2	Bonnet	A216 WCB	A217 WC6	A351 CF8M	A352 LCB	A995 5A	B148 C95800
3	Wedge	A216 WCB+13Cr	A217 WC6+HF	A351 CF8M+HF	A352 LCB+13Cr	A995 5A	B148 C95800
4	Stem	A182 F6a	A182 F6a	A182 F316	A182 F6a	A182 F53	B148 C95800
5	Seat ring	A105+13Cr	A182 F11+HF	A182 F316+HF	A350 LF2+13Cr	A182 F53	INTEGRAL
6	Backseat	A276 420	A276 304	HF	A276 420	HF	INTEGRAL
7	Bonnet gasket	SPW SS304+GRAPHITE	SPW SS304+GRAPHITE	SPW SS304+GRAPHITE	SPW SS304+GRAPHITE	SPW SS304+GRAPHITE	SPW SS304+GRAPHITE
8	Bonnet stud	A193 B7	A193 B16	A193 B8M	A320-L7	A193 B8M	A193 B8M
9	Bonnet stud Nut	A194 2H	A194 7	A194 8M	A194-4	A194 8M	A194 8M
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite	Flexible Graphite	Flexible Graphite	PTFE
11	Gland	A276 420	A276 304	A276 316	A276-420	A182 F53	B148 C95800
12	Gland flange	A216 WCB	A217 WC6	A351 CF8M	A352-LCB	A995 5A	B148 C95800
13	Eye bolt pin	A276 410	A276 420	A276 316	A276 410	A276 316	A276 316
14	Eye bolt	A193 B7	A193 B7	A193 B8M	A193 B7	A193 B8M	A193 B8M
15	Eye bolt nut	A194 2H	A194 2H	A194 8M	A194 2H	A194 8M	A194 8M
16	Grease cup	Brass + Steel	Brass + Steel	Brass + Steel	Brass + Steel	Brass + Steel	Brass + Steel
17	Stem nut	Aluminum-Bronze	Aluminum-Bronze	Aluminum-Bronze	Aluminum-Bronze	Aluminum-Bronze	Aluminum-Bronze
18	Bearing gland	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
19	Hand wheel	Malleable Iron	Malleable Iron	Malleable Iron	Malleable Iron	Malleable Iron	Malleable Iron
20	Lock nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

**Optional Body Material:**

A105/WCC, A217 WC6/WC9/C5/C12, A352 LCB/LCC, A351 CF8/CF3/CF8M/CF3M, A890 4A/5A/6A, B148 C95800, Alloy Steel ect..

# WEDGE GATE VALVE

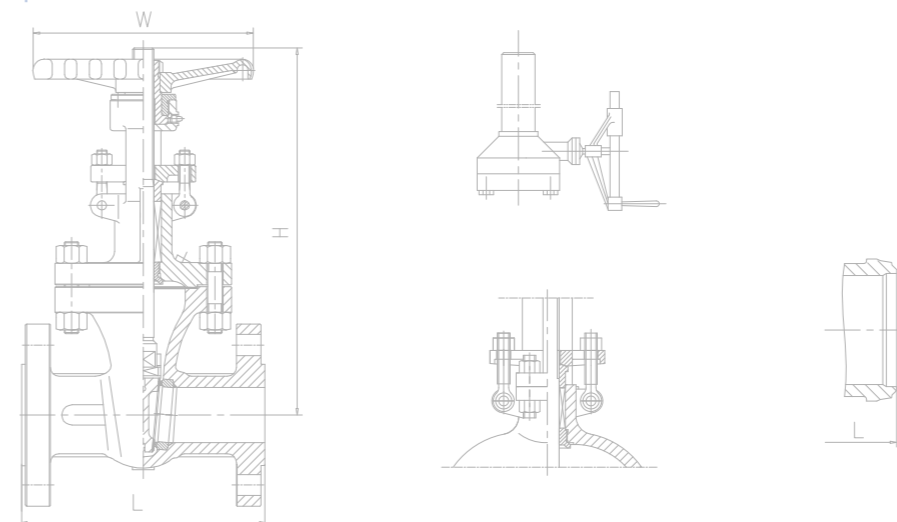




Remark: "/in tablet are non-standard size, please confirm with KAMROO

**CLASS 150**

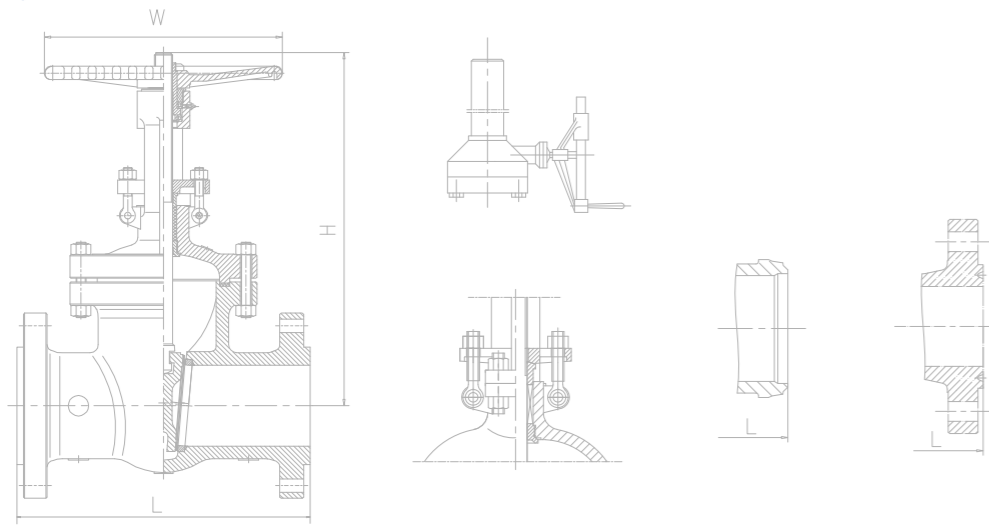
		L				Weight (kg)	
DN	NPS	RF/FF	BW	H	W	RF/RJ	BW
50	2	178	216	386	200	18	15
65	2 1/2	191	241	434	200	25	18
80	3	203	283	480	250	32	26
100	4	229	305	584	300	50	41
150	6	267	403	765	300	77	69
200	8	292	419	956	350	121	108
250	10	330	457	1149	400	178	156
300	12	356	502	1350	450	265	248
350	14	381	572	1508	500	463	424
400	16	406	610	1703	550	463	424
450	18	432	660	1892	600	621	587
500	20	457	711	2119	640	792	752
600	24	508	813	2500	700	1521	1570
650	26	559	964	2806	720	1521	1570
700	28	610	914	2960	800	1838	1900
750	30	610	914	3150	800	2261	3310
800	32	711	965	3280	950	2490	2540
900	36	711	1016	3720	1000	3310	3380



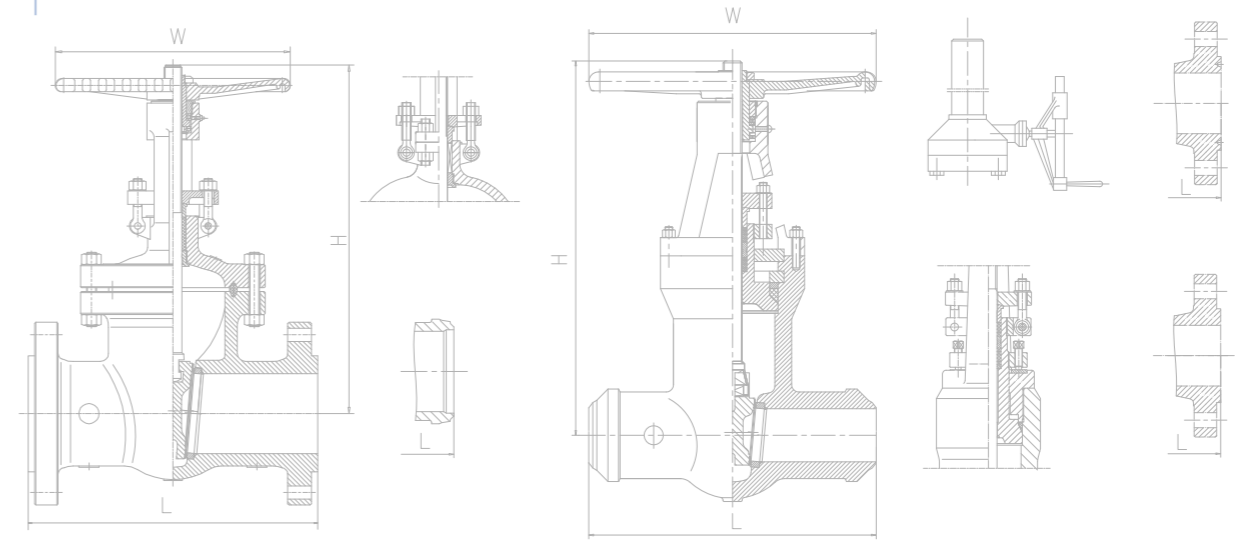
**CLASS 300**

		L				Weight (kg)	
DN	NPS	RF/FF	BW	H	W	RF/RJ	BW
50	2	216	232	410	200	23	17
65	2 1/2	241	257	453	200	35	26
80	3	283	298	509	250	50	39
100	4	305	321	612	300	71	53
150	6	403	419	805	350	144	113
200	8	419	435	1000	400	209	164
250	10	457	473	1210	450	322	256
300	12	502	518	1415	500	482	390
350	14	762	778	1580	550	683	565
400	16	838	854	1725	550	950	805
450	18	914	930	1960	600	1145	965
500	20	991	1010	2195	640	1635	1410
600	24	1143	1165	2590	720	2660	2305
650	26	1245	1270	2975	720	3090	2450
700	28	1346	1372	3100	800	3310	2725
750	30	1397	1422	3200	800	3595	3055
800	32	1524	1553	3300	950	3720	3360
900	36	1727	1756	3860	1000	3985	3630

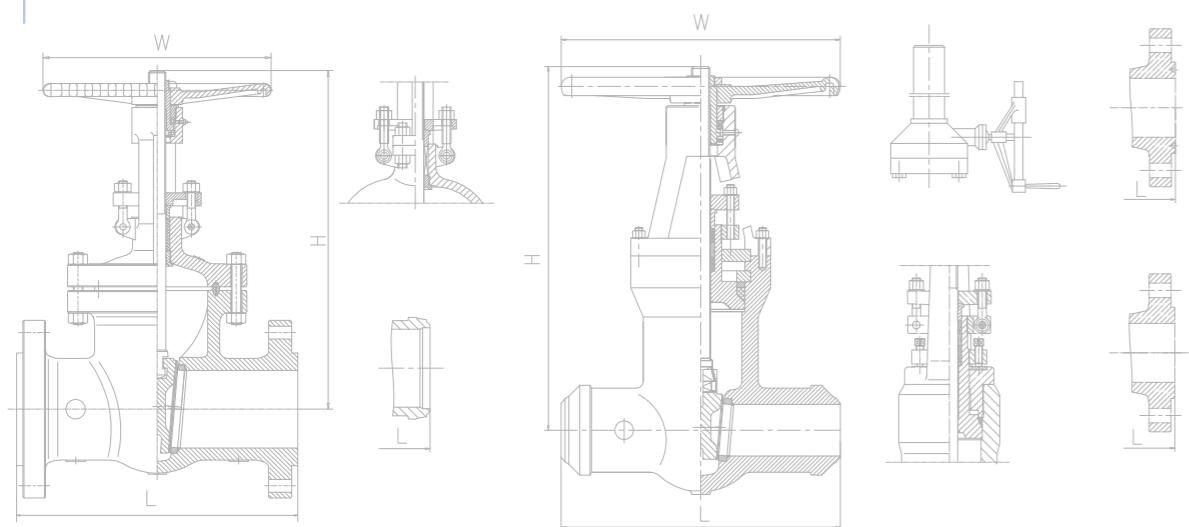



**CLASS 600**

		L				Weight (kg)	
DN	NPS	RF/FF	BW	H	W	RF/RJ	BW
50	2	292	295	418	200	36	29
65	2 1/2	330	333	476	250	52	42
80	3	356	359	518	250	67	53
100	4	432	435	646	300	112	83
150	6	559	562	840	450	170	125
200	8	660	664	1025	500	393	310
250	10	787	791	1230	600	610	472
300	12	838	841	1450	600	890	730
350	14	889	892	1575	600	1245	1055
400	16	991	994	1795	600	1530	1240
450	18	1092	1095	1930	640	1965	1625
500	20	1194	1200	2210	640	2450	2030
600	24	1397	1407	2580	720	2995	2590
650	26	1448	1461	2665	720	3475	2855
700	28	1549	1562	2780	800	3725	3065
750	30	1651	1664	2895	800	4045	3440
800	32	1778	1794	3150	950	4185	3780
900	36	2083	2099	3560	1000	4480	4085


**CLASS 900**

		L				Weight (kg)	
DN	NPS	RF/FF	BW	H	W	RF/RJ	BW
50	2	368	371	498	250	74	54
65	2 1/2	419	422	547	250	131	105
80	3	381	384	573	300	101	78
100	4	457	460	678	450	172	135
150	6	610	613	900	500	335	260
200	8	737	740	1103	600	640	515
250	10	838	841	1345	640	1100	920
300	12	965	968	1525	720	1600	1380
350	14	1029	1038	1900	800	2250	2010
400	16	1130	1140	2055	800	2850	2565
450	18	1219	1232	2215	950	3060	3485
500	20	1321	1334	2565	950	3935	3250
600	24	1549	1568	2640	1000	4900	4065



**CLASS 1500**

DN	NPS	RF/FF	L		H	W	Weight (kg)	
			BW	RTJ			RF/RJ	BW
50	2	368	368	371	285	500	49	33
65	2 1/2	419	419	422	305	500	67	44
80	3	470	470	473	338	600	106	73
100	4	546	546	549	506	600	153	87
150	6	705	705	711	852	600	268	145
200	8	832	832	841	1000	800	540	345
250	10	991	991	1000	1045	800	1020	685
300	12	1130	1130	1146	1255	800	1475	1050
350	14	1257	1257	1276	1270	800	1885	1385
400	16	1384	1384	1407	1485	800	2455	1735

**CLASS 2500**

DN	NPS	RF/FF	L		H	W	Weight (kg)	
			BW	RTJ			RF/RJ	BW
50	2	451	451	454	304	500	55	41
65	2 1/2	508	508	540	327	600	76	55
80	3	578	578	584	362	600	120	91
100	4	673	673	683	540	600	173	110
150	6	914	914	927	911	800	302	182
200	8	1022	1022	1038	1070	800	612	430
250	10	1270	1270	1292	1120	800	1150	855
300	12	1422	1422	1445	1345	800	1665	1315