



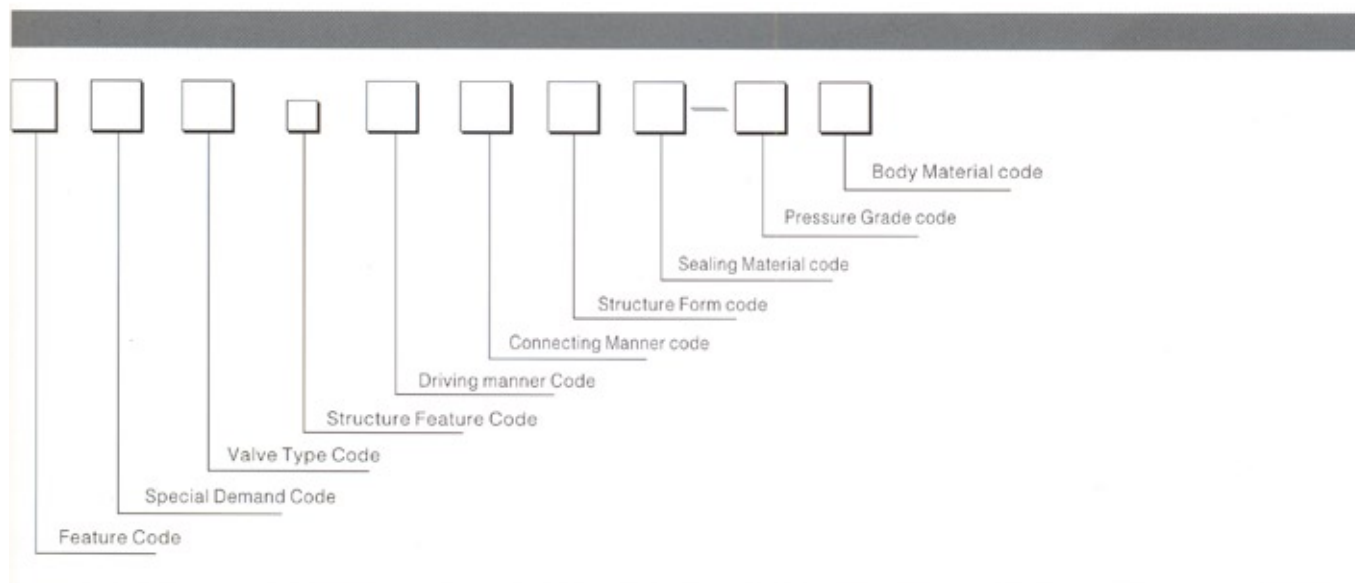
BALL VALVE SERIES



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BALL VALVE MODEL SCHEDULE ILLUSTRATOR



★ Feature Code:	The feature code of our company is W			
★ Special Demand Code:	K – anti-sulphur type	D – low-temperature type	L – Lengthened rod type	O – oxygen specific type
★ Valve Type Code:	Q – ball valve			
★ Structure Feature Code:	W – Welding Structure	T – Track Type	J – Jacketed Type	
★ Driving manner Code:	3 – worm gear operated 7 – hydro dynamically operated 9a – electric driving(explosion-proof)(handle transmission omit)	6 – air-operated 8 – air-hydro operated	6s – air-operated with handle transmission	
★ Connecting Manner Code:	1 – internal thread connecting 6 – welded connection	2 – external thread connecting 7 – wafer type	4 – flange connecting 8 – buckle connecting	
★ Structure Form Code:	1 – Straight-through Floating Type 7 – Straight-through Fixed Type	4 – Floating Type "L" mode Three-way 8 – Fixed Type "T" model Three-way	5 – Floating Type "T" mode Three-way 9 – Fixed Type "L" model Three-way	
★ Sealing Material Code:	Y – hard alloy N – nylon	F – polytetrafluoroethylene (PTFE)	PK – PEEK	P – Para-positon polyphenylene
★ Pressure Grade Code:	10 × nominal rating pressure Mpa the pound grade is actual number			
★ Valve Material Code: (Not list the forging material)	C – WCB V – WC9, ZG20CrMoV R – CF8M, ZG1Cr18Ni12Mo2Ti L – CF3M	I – WC6, ZG1Cr5Mo P – CF8, ZG1Cr18Ni9Ti S – CF3 N – LC3		

Notes: PN ≥ 2.5MPa and pressure ≥ class 150 carbon steel valve body omits the code.

Example1: WQ647Y-64R

denotes 6.4Mpa nominal rating pressure, air-operated, flange-connecting, full bore trunnion type ball valve, CF8M valve material, and hard-alloy sealing material.

Example2: WQW967F-150

denotes Class150 pressure grade electric driving, welded connection, fixed type & welded structure, carbon steel body material and PTFE sealing material.

FLOATING BALL VALVE

Product Design Features

Serial floating ball valves are mainly applied to natural gas, oil products, chemical engineering, metallurgy, city building, environment protection, pharmacy and food industries, among which the anti-sulphur series are used for long delivery pipes of natural gas that contains hydrogen sulphide medium, a lot of impurity and corrosive substances.

The design features of the floating ball valves include:

★ Specific Sealing Structure of Valve Base

Double cant elastic seal ring or V-shaped groove seal ring structural design is adopted to ensure sealing reliability. As for low-pressure, ultralow pressure or vacuum-operated ball valves, a plate spring-loaded sealing structure of valve base is adopted to ensure their longterm sealing reliability. As for moderate or high temperature ball valves, Para-position polyphenylene or mental can be adopted for valve base material.

★ Automatic pressure relief structure

When the pressure in cloaca cavity increases singularly, the cavity medium can push valve base by its own thrusting force, which results in automatic pressure relief and valve security assurance.

★ Reliable Sealing of Valve Rod

The valve rod adopts downward installation structure with back sealing. The sealing force will increase together with the heightening of medium pressure, which can ensure the sealing reliability. Moreover, even if the pressure in valve cavity increases singularly, the valve rod will not burst out.

★ Fire-resistant Structure

According to the operating condition and users requirement, ball valve can be designed with a fire resistant structure up to the fire-resistant standards of API607, API 6FA and JB/T6899. Once the soft seal ring is burnt out on fire, the structure can avoid serious leaking of the medium and prevent the fire from scaling up.

★ Anti-static Structure

While operating the valve, the friction between the sphere and the base will produce static charges accumulating on the sphere. To avoid static sparkle, the fire-resistant device is designed to derive the accumulated static sparkle, charges from the sphere.

★ Locking Device

A locking structure is designed on the full-open and full-close spots of manual ball valves to avoid abnormal open-and-close produced by misoperation or unpredictable circuit vibration. On production lines of petroleum and chemicals of flammable mediums, and during the course of outdoor piping, the design is especially advantageous and practical.

★ Full Bore Structure and Reduced Bore Structure

The two structure series are produced to meet different requirements of users. The passage inside diameter of full diameter ball valves is the same as that of valve pipe, which is convenient for pipe cleaning. The weight of retractive diameter ball valves is relatively lighter, but the fluid resistance is just 1/7 that of stop valves with the same caliber. Therefore, the application prospects of retractive diameter series is much better.

Products Performance Specification

Pressure grade		1.6~42.0MPa	Class 150~2500
Test pressure (MPa)	Shell test	1.5 × PN	
	Sealing test	1.1 × PN	
	Air test pressure	0.6MPa	
Working temperature		-196℃~+180℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

Note: PN is requested pressure for the body material under the 38℃.

FLOATING BALL VALVE

Products specification				
Serial Model		W(K)Q41、W(K)Q341、W(K)Q641、W(K)Q741、W(K)Q841、W(K)Q941 W(K)Q61、W(K)Q361、W(K)Q661、W(K)Q761、W(K)Q861、W(K)Q961		
Driving Manner and Scope of Application	Pressure Grade Range	PN1.6 ~ 10.0MPa		CLASS 150 ~ 600
	Nominal size	DN15 ~ 200mm		1/2" ~ 8"
	Handle driving	PN1.6 ~ 10.0MPa		CLASS 150 ~ 600
		DN15 ~ 200mm		1/2" ~ 8"
	Worm gear operated	PN1.6 ~ 4.0MPa	PN6.4 ~ 10.0MPa	CLASS 150 ~ 300 CLASS 400 ~ 600
		DN150 ~ 200	DN80 ~ 100	6" ~ 8" 3" ~ 4"
	Air-operating and fluid driving	PN1.6 ~ 10.0MPa		CLASS 150 ~ 600
		DN15 ~ 200mm		1/2" ~ 8"
	Electric driving	PN1.6 ~ 4.0MPa	PN6.4 ~ 10.0MPa	CLASS 150 ~ 300 CLASS 400 ~ 600
		DN50 ~ 200	DN50 ~ 100	2" ~ 8" 2" ~ 4"

* Notes: our company can provide products at customer's requirement.

(N.m) Floating ball valve torque form (N.m)												
Pressure(Mpa)	Size(mm)	15	20	25	40	50	65	80	100	125	150	200
1.6	3	5	10	16	25	50	65	125	250	340	485	
2.5	3	5	11	18	30	60	80	140	300	400	680	
4.0	5	10	24	35	50	100	150	250	450	585	996	
6.4	15	30	50	80	100	200	300	400	-	-	-	
10.0	19	35	68	130	190	360	460	770	-	-	-	

*Notes: The data in the form are not practically mensurated, and just for reference.

Pressure(Mpa)	Size(mm)	1/2	3/4	1	1½	2	2½	3	4	5	6	8
150	3	5	11	16	25	50	65	125	250	410	700	
300	7	12	26	38	60	120	160	280	600	950	1550	
400	15	30	50	90	140	240	350	540	-	-	-	
600	19	35	68	130	190	360	460	770	-	-	-	

*Notes: The data in the form are not practically mensurated, and just for reference.

W(K)Q(3, 6, 7, 8, 9)4(6)1F (N P)

CAST STEEL FLOATING BALL VALVE

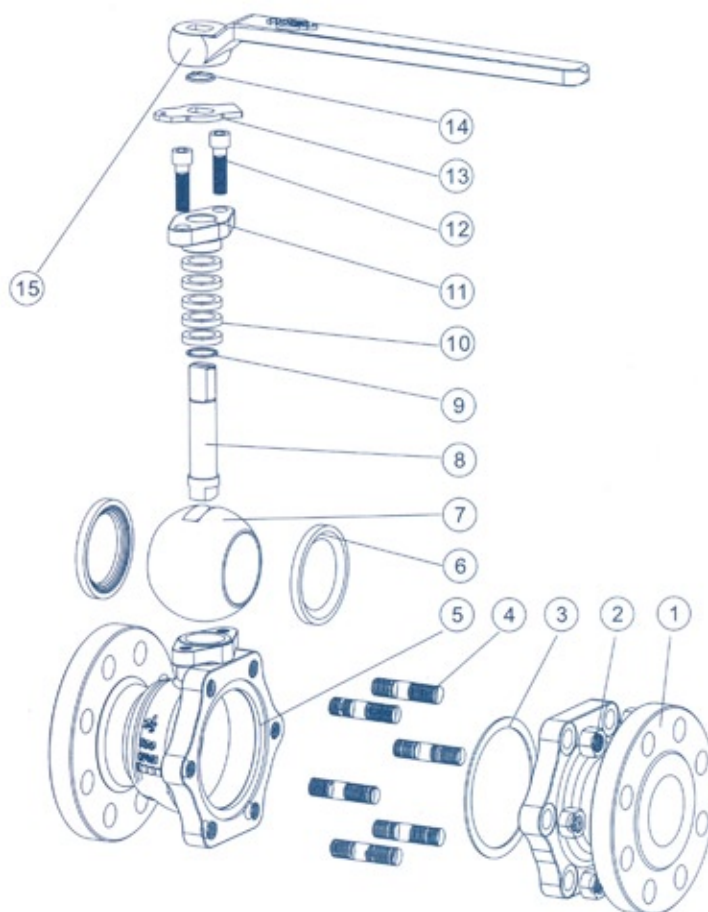
Technical specification

Design Standard	GB/T 12237	API 608
Face to Face	GB/T 12221	ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5
Test & Inspection	JB/T 9092	API 598

* Notes: The sizes of serial valve connecting flange and butt-welding terminal can be designed according to customer's requirement.

Form of Major Parts Materials

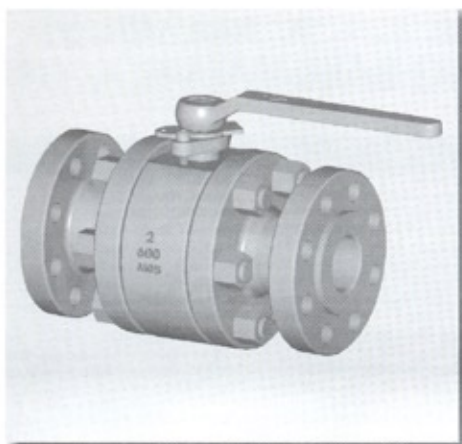
No.	Part name	Material	
		GB	ASTM
1	Bonnet	WCB	A216-WCB
2	Nut	35	A194-2H
3	Gasket	Graphite+stainless steel	Graphite+stainless steel
4	Bolt	35CrMoA	A193-B7
5	Body	WCB	A216-WCB
6	Seat	PTFE	PTFE
7	Ball*	25+ENP	A105+ENP
8	Stem**	1Cr13	A182-F6a
9	Gasket	PTFE	PTFE
10	Packing	Flexible Graphite	Flexible Graphite
11	Gland	WCB	A216-WCB
12	Screw nail	35	A194-2H
13	Locating piece	Q235A	Carbon steel
14	Ring	65Mn	AISI 1566
15	Wrench	KT330-08	A47-667 32510



Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9 + Ni.P)、ASTM (A182-304+Ni.P)

** The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9)、ASTM(A276-321)

Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P)

FORGED STEEL FLOATING BALL VALVE

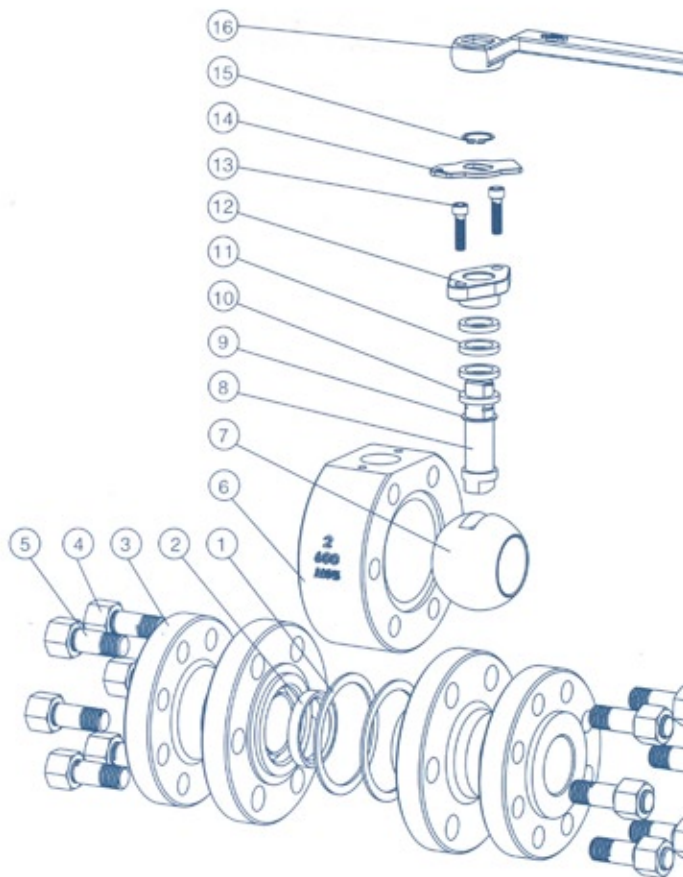
Technical specification

Design Standard	GB/T 12237	API 608
Face to Face	GB/T 12221	ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5
Test & Inspection	JB/T 9092	API 598

* Notes: The sizes of serial valve connecting flange and butt-welding terminal can be designed according to customer's requirement.

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Gasket	Graphite+stainless steel	Graphite+stainless steel
2	Seat	PTFE	PTFE
3	Bonnet	25	A105
4	Nut	35	A194-2H
5	Bolt	35CrMoA	A193-B7
6	Body	25	A105
7	Ball*	25+ENP	A105+ENP
8	Stem**	1Cr13	A182-F6a
9	Gasket	PTFE	PTFE
10	Packing seat	1Cr13	A276-410
11	Packing	Flexible Graphite	Flexible Graphite
12	Gland	WCB	A216-WCB
13	Bolt	35CrMoA	A193-B7
14	Locating piece	Q235A	Carbon steel
15	Ring	65Mn	AISI 1566
16	Wrench	KT330-08	A47-667 32510

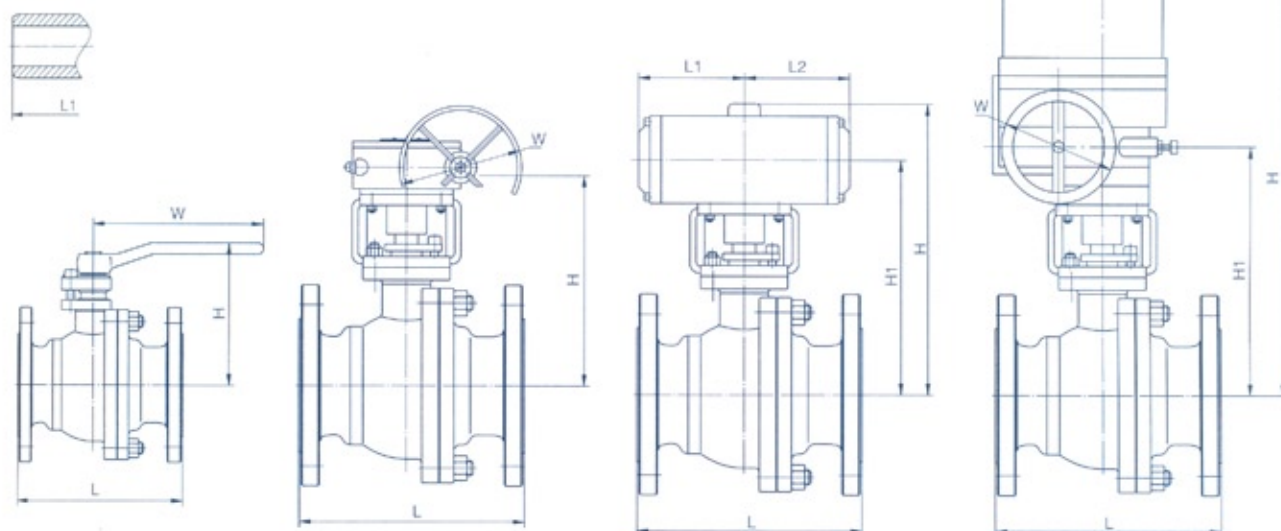


Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9 + Ni.P), ASTM (A182-304+Ni.P)

** The material of this part about the anti-sulphur type valve

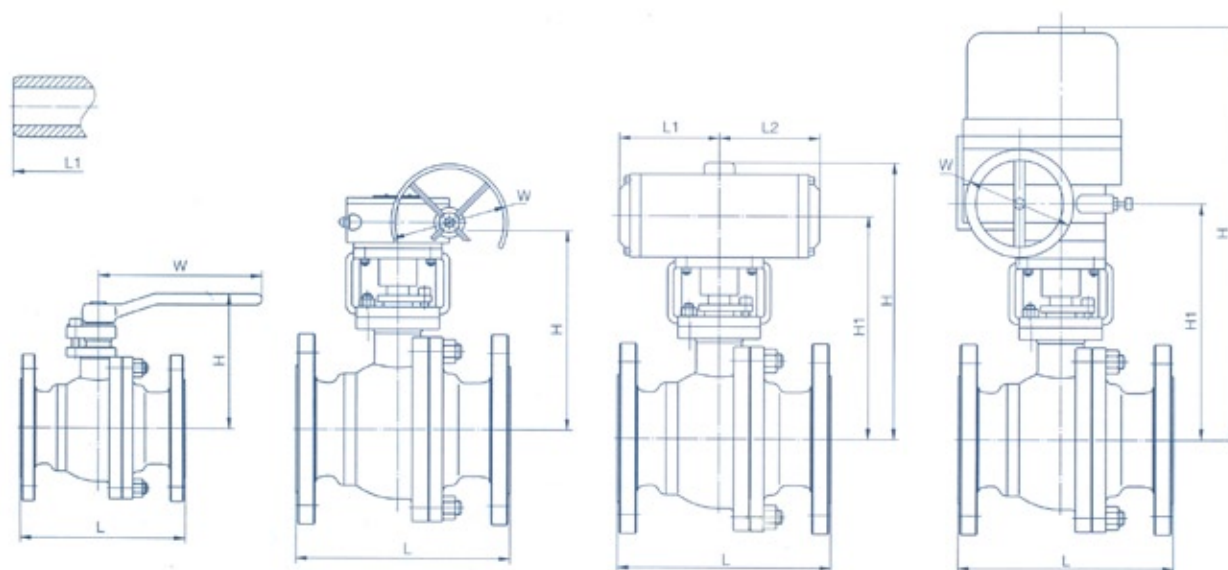
W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P)

CAST STEEL FLOATING BALL VALVE



Size and weight		PN1.6MPa CLASS 150										
DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	in	1/2	3/4	1	1½	2	2½	3	4	5	6	8
Flange	L	108	117	127	165	178	190	203	229	356	394	457
Butt Welding	L1	140	152	165	190	216	241	282	305	381	403	419
	H	59	63	75	95	107	142	152	178	252	272	342
Hand-Operated	W	130	130	160	230	230	350	400	500	750	750	900
	Kg	2.3	3.0	4.5	7.0	9.5	15.0	19.0	33.0	58.0	93.0	1600
	H	-	-	-	-	-	-	-	-	-	292	398
	W	-	-	-	-	-	-	-	-	-	400	600
Worm Gear Operated	Type	-	-	-	-	-	-	-	-	-	A	B
	Kg	-	-	-	-	-	-	-	-	-	180	240
	H	200	204	257	264	340	370	389	594	646	646	781
	H1	122	126	162	169	209	239	258	337	437	437	537
	L1	326	326	347	420	426	426	590	523	610	610	885
Air-Operating	L2	136	136	181	181	257	257	257	287	378	378	530
	Type	AG06	AG09	AG09	AG13	AG13	AG13	AG13	AW13	AW17	AW17	AW20
	Kg	6.1	6.3	8.1	14.1	16.6	38	42.1	53	95.3	105.2	207.8
	H	-	-	-	-	472	486	579	595	650	739	799
	H1	-	-	-	-	377	391	484	500	500	589	649
Electric Driving	W	-	-	-	-	190	190	190	190	400	400	400
	Type	-	-	-	-	Q60-1	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1
	Kg	-	-	-	-	23	25	60	75	97	162	226

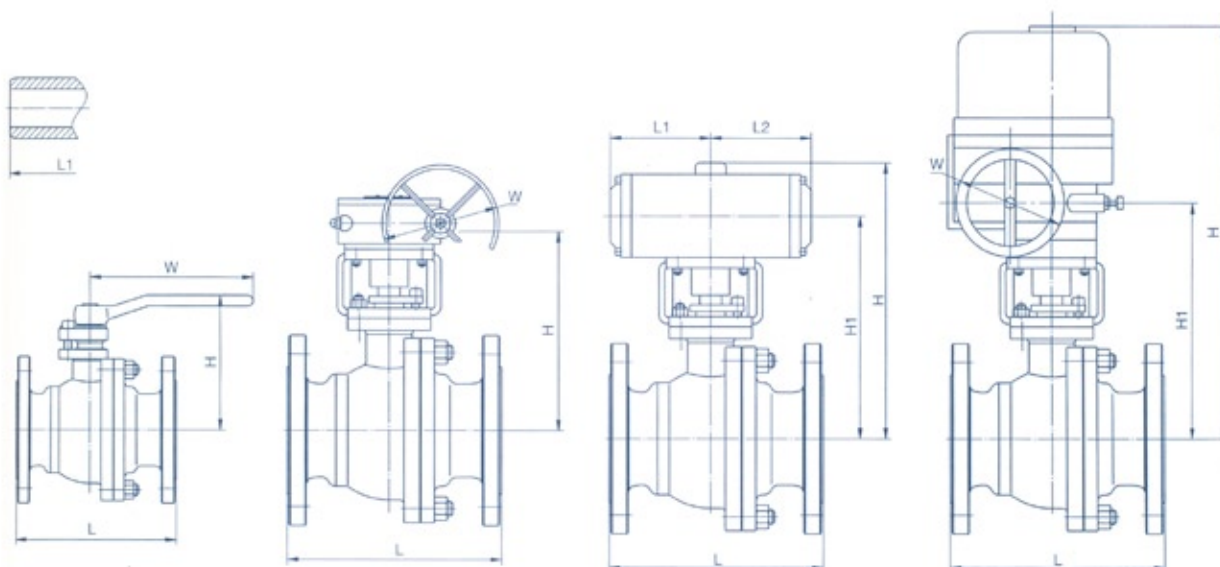
W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P) CAST STEEL FLOATING BALL VALVE



Size and weight		PN2.5 4.0MPa CLASS 300										
DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	in	1/2	3/4	1	1½	2	2½	3	4	5	6	8
Flange	L	140	152	165	190	216	241	282	305	381	403	502
	L1	140	152	165	190	216	241	282	305	381	403	502
Butt Welding	H	59	63	75	95	167	142	152	178	252	272	342
	W	130	130	160	230	230	350	400	500	750	750	900
Hand-Operated	Kg	2.5	3.5	5.5	10.5	14.5	23.5	30	55	81	118	200
	H	-	-	-	-	-	-	-	-	-	292	398
Worm Gear Operated	W	-	-	-	-	-	-	-	-	-	400	600
	Type	-	-	-	-	-	-	-	-	-	A	B
Kg	-	-	-	-	-	-	-	-	-	-	220	365
Air-Operating	H	200	204	257	264	340	379	452	594	646	744	920
	H1	122	126	162	169	209	248	295	375	437	500	615
L1	326	326	347	420	426	426	590	523	610	610	885	
	L2	136	136	181	181	257	257	257	287	378	378	530
Type	AG06	AG09	AG09	AG13	AG13	AG13	AG13	AG13	AW13	AW17	AW17	AW20
	Kg	6.2	6.4	8.5	16.9	20.9	42.5	52.7	77.9	107	130	220
H	-	-	-	-	-	472	472	579	595	650	739	799
	H1	-	-	-	-	377	391	484	500	500	589	649
W	-	-	-	-	-	190	190	190	190	400	400	400
	Type	-	-	-	-	Q60-1	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1
Kg	-	-	-	-	-	23	25	60	75	100	170	240

W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P)

CAST STEEL FLOATING BALL VALVE

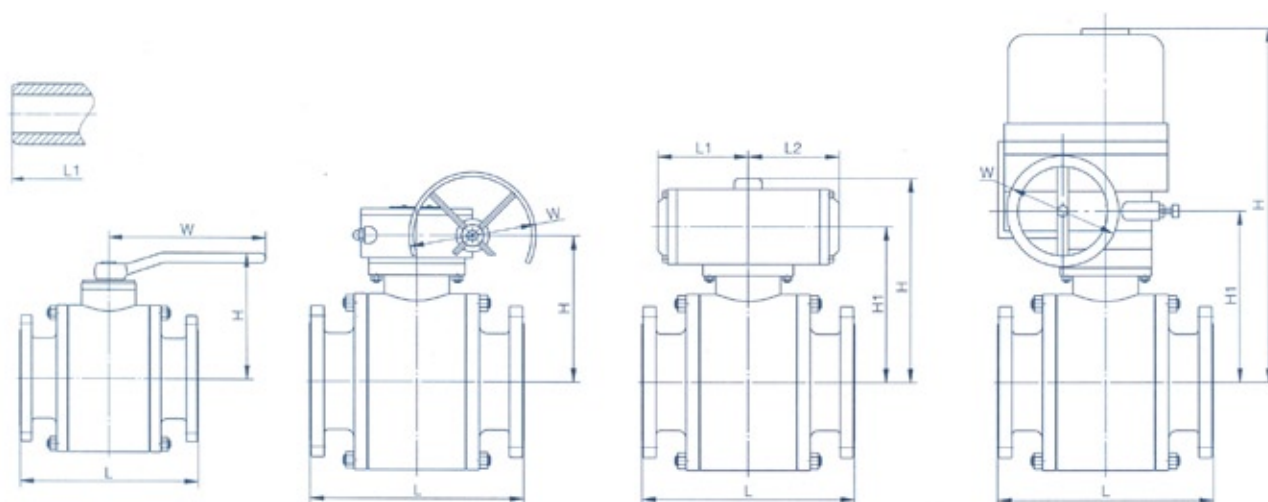


Size and weight		PN6.4 10.0MPa CLASS 400 600										
DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	1/2	3/4	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8
Flange	L	165	190	216	241	292	330	356	406(432)*	-	-	-
Butt Welding	L1	165	190	216	241	292	330	356	406(432)*	-	-	-
Hand-Operated	H	59	63	75	95	167	180	198	198	-	-	-
	W	160	160	230	400	400	650	650	1050	-	-	-
	Kg	6.5	9	13	16.5	25	30	55	66	-	-	-
Worm Gear Operated	H	-	-	-	-	-	-	292	398	-	-	-
	W	-	-	-	-	-	-	400	600	-	-	-
	Type	-	-	-	-	-	-	A	B	-	-	-
	Kg	-	-	-	-	-	-	72	85	-	-	-
Air-Operating	H	200	204	241	264	340	379	452	584	-	-	-
	H1	122	145	146	169	209	248	295	375	-	-	-
	L1	283	283	283	350	590	590	523	610	-	-	-
	L2	136	181	181	181	257	257	287	378	-	-	-
	Type	AG09	AG09	AG09	AG09	AG13	AG13	AG13	AW17	-	-	-
	Kg	6.5	6.8	9.3	17.8	33.6	45.1	59.3	81.2	-	-	-
Electric Driving	H	-	-	-	-	472	599	599	632	-	-	-
	H1	-	-	-	-	377	449	449	472	-	-	-
	W	-	-	-	-	190	190	190	190	-	-	-
	Type	-	-	-	-	Q120-1	Q120-1	Q120-1	Q120-1	-	-	-
	Kg	-	-	-	-	25	60	75	90	-	-	-

*{ } PN10.0MPa, Class600

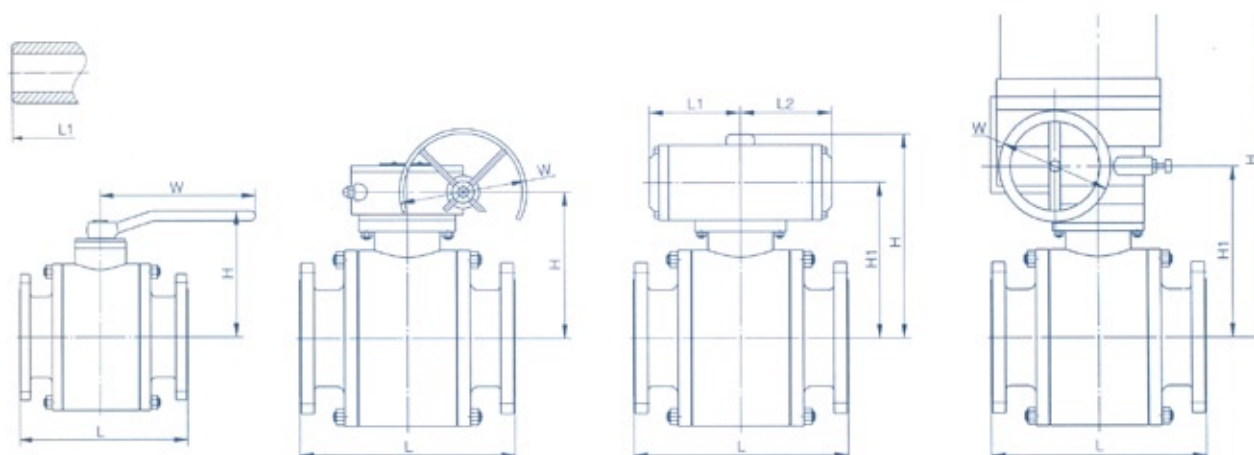
*{ } the dimension in Parentheses is for PN10.0, Class 600.

W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P) FORGED STEEL FLOATING BALL VALVE



Size and weight		PN1.6MPa CLASS 150										
DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8
Flange	L	108	117	127	165	178	190	203	229	356	394	457
	L1	140	152	165	190	216	241	282	305	381	403	419
Butt Welding	H	73	78	86	102	130	142	191	200	226	242	285
	W	130	130	160	180	230	400	400	460	750	750	900
Hand-Operated	Kg	3	4	6	12	15	19	22	46	65	85	127
	H	-	-	-	-	-	-	-	-	-	260	300
Worm Gear Operated	W	-	-	-	-	-	-	-	-	-	400	600
	Type	-	-	-	-	-	-	-	-	-	A	B
	Kg	-	-	-	-	-	-	-	-	-	110	175
Air-Operating	H	203	234	242	326	354	366	415	485	607	623	742
	H1	125	139	147	195	223	235	284	328	398	414	498
	L1	326	326	347	420	426	426	590	523	610	610	885
	L2	136	136	181	181	257	257	257	287	378	378	530
	Type	AG06	AG09	AG09	AG13	AG13	AG13	AG13	AW13	AW17	AW17	AW20
Electric Driving	Kg	6.1	6.3	8.1	14.1	16.6	38.0	42.1	53.0	93.5	105.2	207.8
	H	-	-	-	-	432	443	454	493	574	646	678
	H1	-	-	-	-	337	348	359	398	424	496	528
	W	-	-	-	-	190	190	190	190	400	400	400
	Type	-	-	-	-	Q60-1	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1
	Kg	-	-	-	-	23	25	60	75	97	162	226

W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P) FORGED STEEL FLOATING BALL VALVE

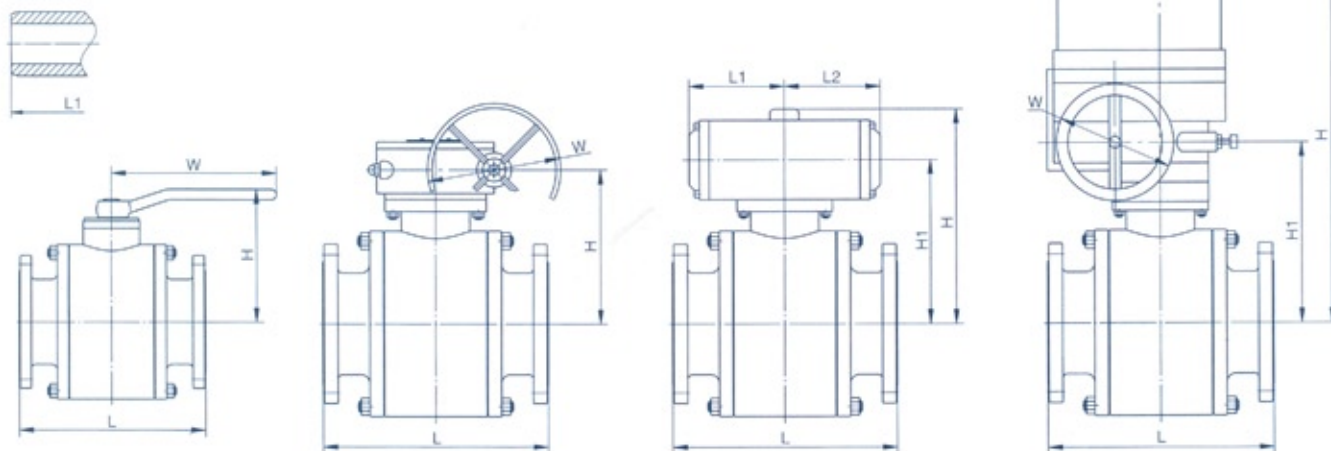


Size and weight									PN2.5	4.0MPa	CLASS 300	
DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	in	1/2	3/4	1	1½	2	2½	3	4	5	6	8
Flange	L	140	152	165	190	216	241	282	305	381	403	502
Butt Welding	L1	140	152	165	190	216	241	282	305	381	403	502
	H	73	80	86	102	136	164	191	223	240	253	307
Hand-Operated	W	140	140	180	230	240	400	400	750	750	900	1000
	Kg	4	6	6.8	11.2	18.3	32	38	78	85	102	125
	H	-	-	-	-	-	-	-	-	-	325	387
	W	-	-	-	-	-	-	-	-	-	400	600
Worm Gear Operated	Type	-	-	-	-	-	-	-	-	-	A	B
	Kg	-	-	-	-	-	-	-	-	-	148	196
	H	204	236	242	326	359	388	415	508	621	675	824
	H1	126	141	147	195	228	257	284	351	412	466	580
	L1	326	326	347	420	426	426	590	523	610	610	885
Air-Operating	L2	136	136	181	181	257	257	257	287	378	378	530
	Type	AG06	AG09	AG09	AG13	AG13	AG13	AG13	AW13	AW17	AW17	AW20
	Kg	6.2	6.4	8.5	16.9	20.9	42.5	52.7	77.9	107.0	130	220
	H	-	-	-	-	432	443	454	493	574	646	678
	H1	-	-	-	-	337	348	359	398	424	496	528
Electric Driving	W	-	-	-	-	190	190	190	190	400	400	400
	Type	-	-	-	-	Q60-1	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1
	Kg	-	-	-	-	23	35	60	75	100	170	245

special requirement.

W(K)Q(3, 6, 7, 8, 9)4(6)1F (Y, N, P)

FORGED STEEL FLOATING BALL VALVE



Size and weight		PN6.4 10.0MPa CLASS 400 600							
DN	mm	15	20	25	40	50	65	80	100
NPS	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4
Flange	L	165	190	216	241	292	330	356	406(432)*
Butt Welding	L1	165	190	216	241	292	330	356	406(432)
Hand-Operated	H	73	80	86	110	142	171	185	220
	W	160	160	230	400	400	650	650	800
	Kg	4.5	6.2	7.5	12.5	26.1	38	44	65
Worm Gear Operated	H	-	-	-	-	-	-	182	217
	W	-	-	-	-	-	-	280	400
	Kg	-	-	-	-	-	-	50	95
Air-Operating	H	229	236	242	266	366	395	470	601
	H1	134	141	147	171	235	264	313	392
	L1	283	283	283	350	590	590	523	610
	L1	136	181	181	181	257	257	287	378
		AG09	AG09	AG09	AG09	AG13	AG13	AG13	AW17
Electric Driving	Kg	6.5	6.8	9.3	17.8	33.6	45.1	55.3	81.3
	H	-	-	-	-	500	520	545	558
	H1	-	-	-	-	350	370	395	408
	W	-	-	-	-	190	190	190	190
		-	-	-	-	Q120-1	Q120-1	Q120-1	Q120-1
	Kg	-	-	-	-	26	41	72	92

PN10.0MPa, Class600.

TRUNNION TYPE BALL VALVE

Product Design Features

Serial floating ball valves are mainly applied to natural gas, oil products, chemical engineering, metallurgy, city building, environment protection pharmacy and food industries, among which the anti-sulphur series are used for long delivery pipes of natural gas that contains hydrogen sulphide medium, a lot of impurity and corrosive substances.

The design features of the floating ball valves include:

★ Construction of the shell

The valve bush of the stationary ball valve can be designed to three types: casting construction, forging construction, and full welding construction, according to user's demand or different working condition. And the ball valve of the full welding construction is mainly applied to underground operation.

★ The unique sealed structure of valve seat

Pre-ball sealed structure, post-ball sealed structure or pre-post-ball double sealed structures are available for choosing to different pressure medium properties, and sealing requirements of the fixed ball valves.

★ Automatic pressure-relieving structure

When an abnormal rising of pressure appear in the hollow cavity, the single sealed-structure takes on the function of automatic pressure reliever while the double-sealed structure can finish the job through a attached pressure-reliving device to the valve body.

★ Emergent repairman for the sealed structure

When leak was caused by damage on the valve seat or valve stick, the sealed grease injected through the grease feeding valve can seal the valve at once.

★ Fire-resistant Structure

According to the operating condition and user's requirement, ball valve can be designed with a fire-resistant structure up to the fire resistant standards of API607, API 6FA and JB/T6899. Once the soft seal ring is burnt out on fire, the structure can avoid serious leaking of the medium and prevent the fire from scaling up.

★ Anti-static Structure

While operating the valve, the friction between the sphere and the base will produce static charges accumulating on the sphere. To avoid static spark, the fire-resistant device is designed to derive the accumulated static spark, charges from the sphere.

★ Jam and release

When the valve is close, the valve seats will stop the effluence, and the precipitate in the can be released through the releasing device.

★ Locking Device

A locking structure is designed on the full-open and full-close spots of manual ball valves to avoid abnormal open-and-close produced by miss-operation or unpredictable circuit vibration. On production lines of petroleum and chemicals of flammable mediums, and during the course of outdoor piping, the design is especially advantageous and practical.

★ Full Drift Diameter Structure and Retractive Diameter Structure

The two structure series are produced to meet different requirement of users, The passage inside diameter of full diameter ball valves is the same as that of valve pipe, which is convenient for pipe cleaning. The weight of retractive diameter ball valves is relatively lighter, but the fluid resistance is just 1/7 that of stop valves with the same caliber. Therefore, the application prospects of retractive diameter series is much better.

Products Performance Specification

Pressure grade		1.6~25.0MPa	Class 150~1500
Test pressure (Mpa)	Shell test	1.5 × PN	
	Sealing test	1.1 × PN	
	Air test pressure	0.6MPa	
Working temperature		-196℃~+121℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

Note: PN is requested pressure for the body material under the 38℃.

TRUNNION TYPE BALL VALVE

Products specification

Serial Model		W(K)Q47、W(K)Q347、W(K)Q647、W(K)Q747、W(K)Q847、W(K)Q947 W(K)Q67、W(K)Q367、W(K)Q667、W(K)Q767、W(K)Q867、W(K)Q967			
Pressure Grade Range		PN1.6 ~ 10.0MPa		CLASS 150 ~ 1500	
Nominal size		DN50 ~ 800mm		2" ~ 32"	
Driving Manner and Scope of Application	Handle driving	PN1.6 ~ 4.0MPa	PN6.4 ~ 25.0MPa	CLASS 150 ~ 300	CLASS 400 ~ 1500
		DN50 ~ 150mm	DN50 ~ 80mm	2" ~ 6"	2" ~ 3"
	Worm gear operated	PN1.6 ~ 4.0MPa	PN6.4 ~ 25.0MPa	CLASS 150 ~ 300	CLASS 400 ~ 1500
		DN200 ~ 1500mm	DN100 ~ 1500mm	8" ~ 60"	4" ~ 60"
	Air-operating and fluid driving	PN1.6 ~ 25.0MPa	CLASS 150 ~ 400	CLASS 600	CLASS 900 ~ 1500
		DN50 ~ 1000mm	2" ~ 40"	2" ~ 28"	2" ~ 24"
	Electric Driving	PN1.6 ~ 25.0MPa		CLASS 150 ~ 600	CLASS 900 ~ 1500
		DN150 ~ 1500mm		6" ~ 60"	4" ~ 40"

* Notes: our company can provide products at customer's requirement.

Trunnion type ball valve torque form(N.m)

Pressure (Mpa)	Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
PN1.6	25	50	65	125	250	340	485	810	1310	1910	2860	4500	5860	8920	13320	24000	
PN2.5	30	60	80	140	300	400	680	1140	1870	2740	4150	6500	7800	13210	19830	35420	
PN4.0	50	100	150	250	450	585	996	1690	2800	4110	6300	8900	12000	20380	30670	55200	
PN6.4	100	200	300	400	650	890	1500	2560	4290	6320	9750	13500	18660	31820	48020	63800	
PN10.0	190	360	460	770	1050	1980	3280	5250	7200	9860	14500	19600	29000	42500	58000	82000	

* Notes: The data in the form are not practically mensurated, and just for reference.

Class	NPS(in)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40
150	25	50	65	125	250	410	700	1100	1750	2600	3900	6200	7500	10500	14500	21000	28000	35000	
300	60	120	160	280	600	950	1550	2000	3300	5000	7500	11800	14400	19600	28200	29800	40000	45000	
400	140	240	350	540	740	1260	1910	3250	5340	7500	10000	12400	18500	29500	40500	53000	51000	71000	
600	190	360	460	770	1050	1980	3280	5250	7200	9860	14500	19600	29000	42500	58000	62000	75000	105000	

* Notes: The data in the form are not practically mensurated, and just for reference.

TRUNNION TYPE BALL VALVE

Ball valve flow coefficient Cv valve specification

Size		Pressure Class				
mm	in	150	300	600	900	1500
15	1 / 2	25	25	20	16	16
20	3 / 4	56	56	4	34	34
25	1	95	95	64	55	55
40	1 1/2	308	308	308	165	165
50	2	500	430	370	320	320
80	3	1360	1100	1020	920	820
100	4	2500	2000	1850	1760	1600
150	6	4060	4056	3410	4300	4150
200	8	8090	7720	6730	8475	8010
250	10	13510	13090	11120	14160	13220
300	12	20440	19830	17440	21200	18800
350	14	25050	23770	22010	26700	24180
400	16	34200	32595	29980	36600	33150
450	18	44430	43200	39520	49000	45703
500	20	57665	55380	50450	64600	60750
550	22	70080	70080	68900		
600	24	87680	84720	76630		
700	28	120000	115350	107510		
750	30	141850	136600	125630		
800	32	160390	152200	140900		
900	36	205450	192995	175730		
1000	40	248700	248700	239160		
1050	42	275260	275260	275260		
1200	48	364180	364180	347080		
1400	56	529430	529430	520500		

Note:

- 1.All the sizes are in full port.
- 2.Pressure Ratings are according to API 6D.

Method of Calculation Flow

The Flow Coefficient Cv of a valve is the flow rate of water (gallons/minute) through a fully opened valve with a pressure drop of 1 psi across the valve To find the flow of liquid through the valve from the valve from the Cv, use the following formulas.

Liquid Flow

$Q_L = C_v(P/G)^{1/2}$ Q_L =Flow rate of liquid(gal./min.)

P=differential pressure across the valve(psig)

G=specific gravity of liquid(for water, G=1)

Gas Flow

$Q_g = 61 C_v (P_2/P)^{1/2}$ (For non-critical flow, $P_2/P < 1.0$)

Q_L =Flow rate of gas(CFH at STP)

P_2 =outlet pressure(psia)

G=specific gravity of gas(for air, g=1.0)



W(K)Q(3, 6, 7, 8, 9)47F(Y, N, P)

FLANGED CONNECTION CAST STEEL TRUNNION TYPE BALL VALVE

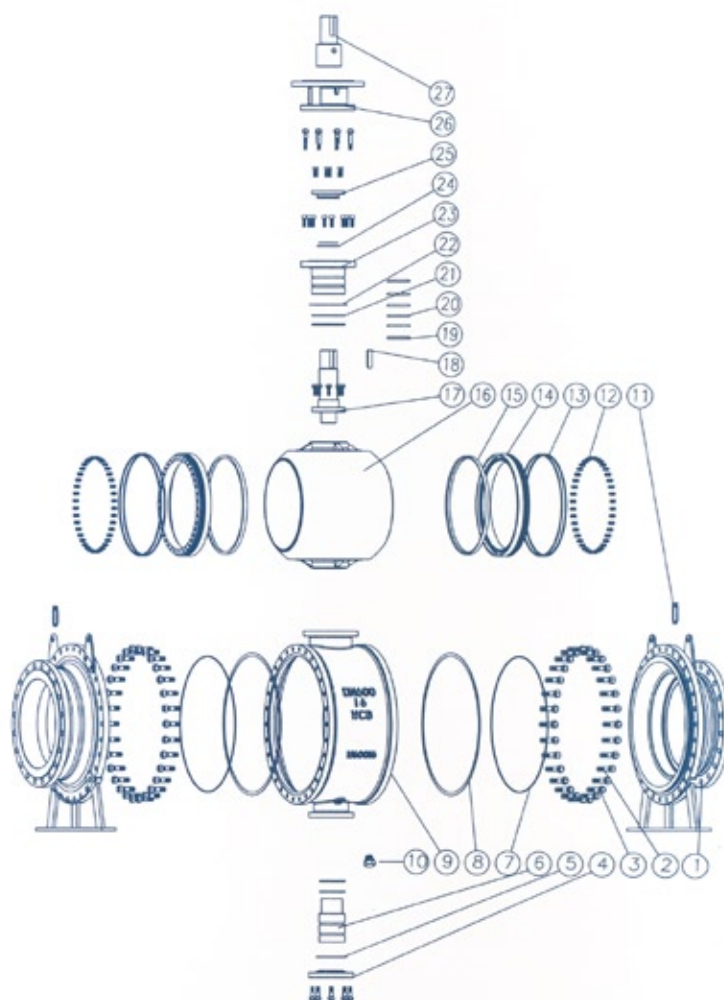
Technical specification

Design Standard	GB/T 12237	GB/T 19672	API 6D
Face to Face	GB/T 12221	API 6D	ASME B16.10
Flanged Size	GB/T 9113	JB/T 79	ASME B16.5 ASME B16.47
Test & Inspection	JB/T 9092	GB/T 19672	API 598 API 6D

* Notes: 1.The sizes of serial valve connecting flange ends can be designed according to customer's requirement.
2.DN > 1000(40"), the design standard is accordance with 《Specification of the length pipe valve》

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Bonnet	WCB	A216-WCB
2	Bolt	35CrMoA	A193-B7
3	Nut	35	A194-2H
4	Bottom Cover	25	A105
5	Gasket	Graphite+stainless steel	Graphite+stainless steel
6	Stem*	1Cr13	A182-F6a
7	"O" Ring	Viton	Viton
8	Gasket	Graphite+stainless steel	Graphite+stainless steel
9	Body	WCB	A216-WCB
10	Blow down stopple	25	A105
11	Grease injection valve	Assembled	Assembled
12	Spring	60Si2Mn	Inconel X-750
13	"O"Ring	Viton	Viton
14	Seat*	25	A105
15	Sealing ring	PTFE	PTFE
16	Ball**	WCB+ENP	A216-WCB+ENP
17	Stem*	1Cr13	A182-F6a
18	Key	45	AISI C1045
19	Packing seat	2Cr13	A276-420
20	Packing	Flexible Graphite	Flexible Graphite
21	"O"Ring	Viton	Viton
22	Gasket	Graphite+stainless steel	Graphite+stainless steel
23	Cover	25	A105
24	"O" Ring	Viton	Viton
25	Gland	WCB	A216-WCB
26	Yoke	WCB	A216-WCB
27	Connection set	45	AISI C1045



Notes: *The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9), ASTM (A276-321)
**The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+Ni.P), ASTM(A182-304, CF8+Ni.P)
Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)67F(N, P)

BUTT-WELD CONNECTION CAST STEEL TRUNNION TYPE BALL VALVE

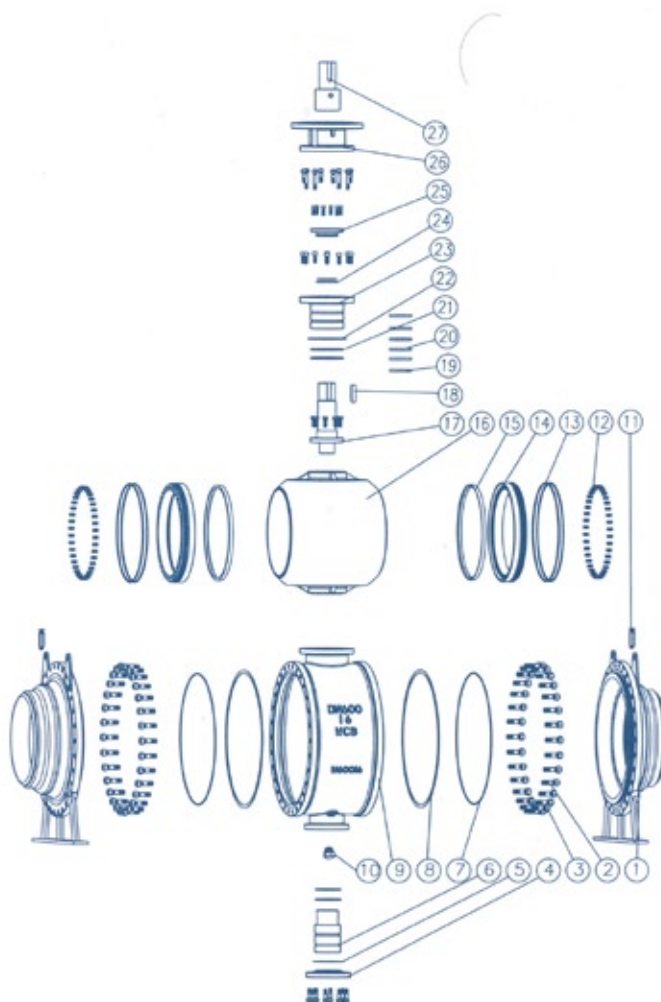
Technical specification

Design Standard	GB/T 12237	GB/T 19672	API 6D
Face to Face	GB/T 12221	API 6D	ASME B16.10
Flanged Size	GB/T 9113	JB/T 79	ASME B16.5 ASME B16.47
Test & Inspection	JB/T 9092	GB/T 19672	API 598 API 6D

* Notes: 1.The sizes of serial valve connecting flange ends can be designed according to customer's requirement.
2.DN > 1000(40"), the design standard is accordance with 《Specification of the length pipe valve》

Form of Major Parts Materials

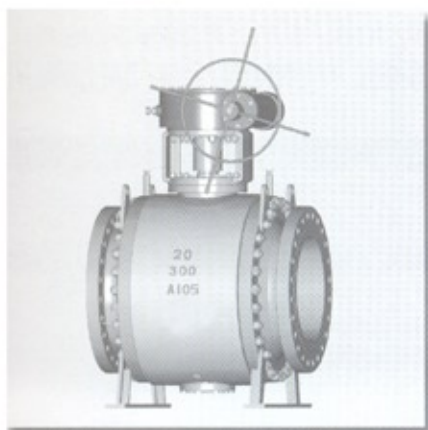
No.	Part name	Material	
		GB	ASTM
1	Bonnet	WCB	A216-WCB
2	Bolt	35CrMoA	A193-B7
3	Nut	35	A194-2H
4	Bottom Cover	25	A105
5	Gasket	Graphite+stainless steel	Graphite+stainless steel
6	Stem*	1Cr13	A182-F6a
7	*O' Ring	Viton	Viton
8	Gasket	Graphite+stainless steel	Graphite+stainless steel
9	Body	WCB	A216-WCB
10	Blow down stopple	25	A105
11	Grease injection valve	Assembled	Assembled
12	Spring	60Si2Mn	Inconel X-750
13	*O'Ring	Viton	Viton
14	Seat*	25	A105
15	Sealing ring	PTFE	PTFE
16	Ball**	WCB+ENP	A216-WCB+ENP
17	Stem*	1Cr13	A182-F6a
18	Key	45	AISI C1045
19	Packing seat	2Cr13	A276-420
20	Packing	Flexible Graphite	Flexible Graphite
21	*O'Ring	Viton	Viton
22	Gasket	Graphite+stainless steel	Graphite+stainless steel
23	Cover	25	A105
24	*O' Ring	Viton	Viton
25	Gland	WCB	A216-WCB
26	Yoke	WCB	A216-WCB
27	Connection set	45	AISI C1045



Notes: *The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9), ASTM (A276-321)

**The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+Ni.P), ASTM(A182-304, CF8+Ni.P)

Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)47F(N, P)

FLANGED CONNECTION FORGED STEEL TRUNNION TYPE BALL VALVE

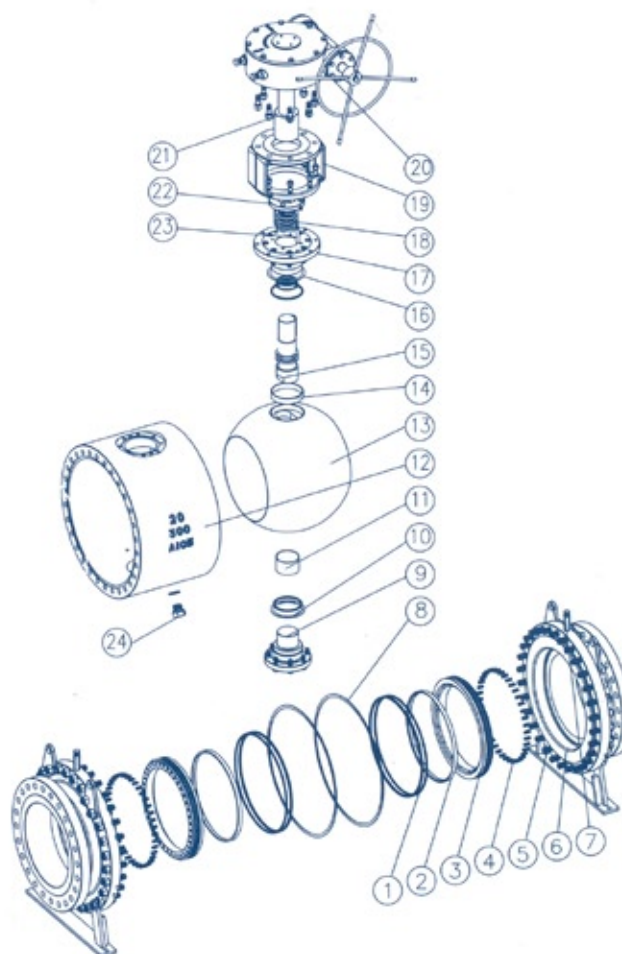
Technical specification

Design Standard	GB/T 12237	GB/T 19672	API 6D
Face to Face	GB/T 12221	API 6D	ASME B16.10
Flanged Size	GB/T 9113	JB/T 79	ASME B16.5 ASME B16.47
Test & Inspection	JB/T 9092	GB/T 19672	API 598 API 6D

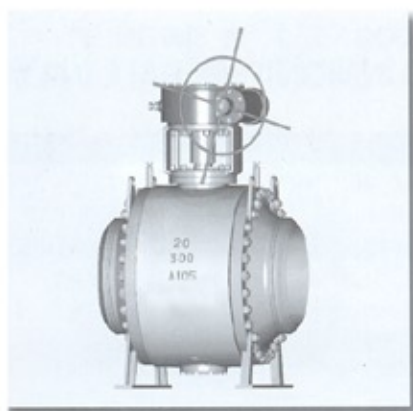
- * Notes: 1. The sizes of serial valve connecting flange ends can be designed according to customer's requirement.
2. DN > 1000(40"), the design standard is accordance with 《Specification of the length pipe valve》

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	*O* Ring	Viton	Viton
2	Sealing ring	PTFE	PTFE
3	Seat*	25	A105
4	Spring	60Si2Mn	Inconel X-750
5	Bolt	35CrMoA	A193-B7
6	Bonnet	25	A105
7	Grease injection valve	Assembled	Assembled
8	Gasket	Graphite+stainless steel	Graphite+stainless steel
9	Stem*	1Cr13	A182-F6a
10	Gasket	Graphite+stainless steel	Graphite+stainless steel
11	Bushing	PTFE&NiKealium	PTFE&NiKealium
12	Body	25	A105
13	Ball**	25+ENP	A105+ENP
14	Bushing	PTFE&NiKealium	PTFE&NiKealium
15	Stem*	1Cr13	A182-F6a
16	Gasket	Graphite+stainless steel	Graphite+stainless steel
17	Cover	25	A105
18	Packing	Flexible Graphite	Flexible Graphite
19	Yoke	WCB	A216-WCB
20	Driving	Assembled	Assembled
21	Connection set	45	AISI C1045
22	Gland	WCB	A216-WCB
23	Fitting pin	1Cr13	A276-410
24	Blow down stopple	25	A105



- Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9) ASTM (A276-321)
** The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+NiP), ASTM(182-304, CF8+NiP)
Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)67F(N, P)

BUTT-WELD CONNECTION FORGED STEEL TRUNNION TYPE BALL VALVE

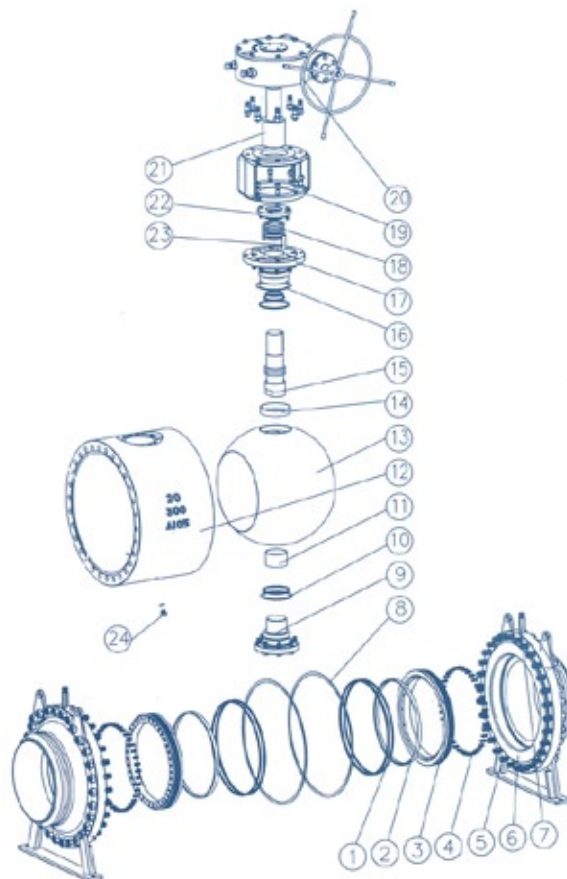
Technical specification

Design Standard	GB/T 12237	GB/T 19672	API 6D
Face to Face	GB/T 12221	API 6D	ASME B16.10
Flanged Size	GB/T 9113	JB/T 79	ASME B16.5 ASME B16.47
Test & Inspection	JB/T 9092	GB/T 19672	API 598 API 6D

* Notes: 1. The sizes of serial valve connecting flange ends can be designed according to customer's requirement.
2. DN > 1000(40"), the design standard is accordance with 《Specification of the length pipe valve》

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	"O" Ring	Viton	Viton
2	Sealing ring	PTFE	PTFE
3	Seat*	25	A105
4	Spring	60Si2Mn	Inconel X-750
5	Bolt	35CrMoA	A193-B7
6	Bonnet	25	A105
7	Grease injection valve	Assembled	Assembled
8	Gasket	Graphite+stainless steel	Graphite+stainless steel
9	Stem*	1Cr13	A182-F6a
10	Gasket	Graphite+stainless steel	Graphite+stainless steel
11	Bushing	PTFE&NiKealium	PTFE&NiKealium
12	Body	25	A105
13	Ball**	25+ENP	A105+ENP
14	Bushing	PTFE&NiKealium	PTFE&NiKealium
15	Stem*	1Cr13	A182-F6a
16	Gasket	Graphite+stainless steel	Graphite+stainless steel
17	Cover	25	A105
18	Packing	Flexible Graphite	Flexible Graphite
19	Yoke	WCB	A216-WCB
20	Driving	Assembled	Assembled
21	Connection set	45	AISI C 1045
22	Gland	WCB	A216-WCB
23	Fitting pin	1Cr13	A276-410
24	Break down stopple	25	A105



Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9) ASTM (A276-321)

** The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+Ni.P), ASTM(182-304, CF8+Ni.P)

Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)67F(N, P)

WELDED STRUCTURE TRUNNION TYPE BALL VALVE

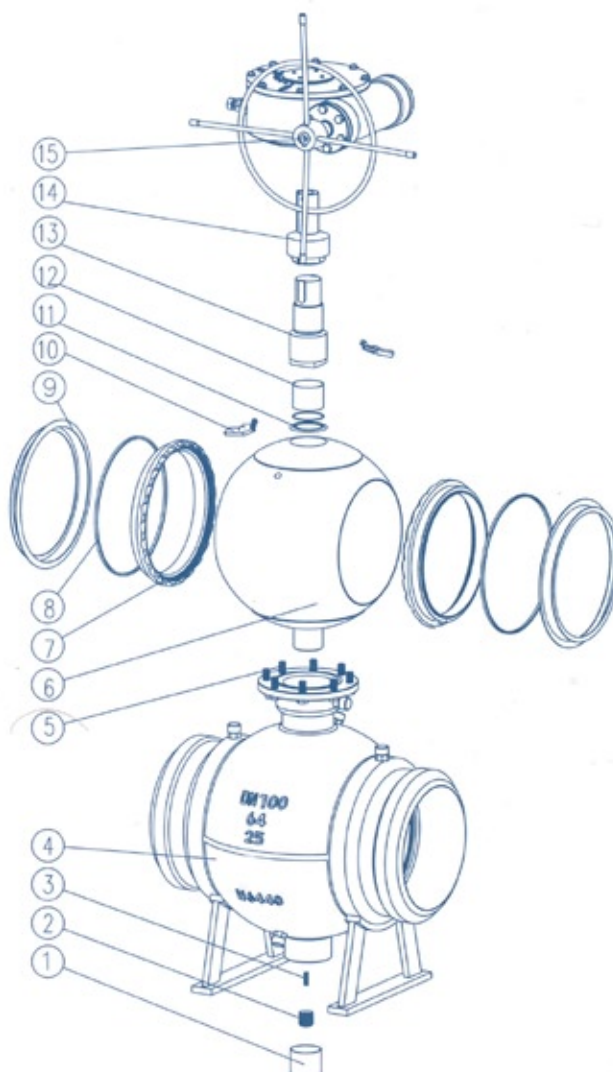
Technical specification

Design Standard	GB/T 12237	GB/T 19672	API 6D
Face to Face	GB/T 12221	API 6D	ASME B16.10 316.10
Flanged Size	GB/T 9113	JB/T 79	ASME B16.5 ASME B16.47 E B16.47
Test & Inspection	JB/T 9092	GB/T 19672	API 598 API 6D .PI 6D

* Notes: 1.The sizes of serial valve connecting flange ends can be designed according to customer's requirement.
2.DN > 1000(40"), the design standard is accordance with 《Specification of the length pipe valve》.

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Bushing	Nikealium+PTFE	Nikealium+PTFE
2	Machine screw	25	A105
3	Spring	60Si2Mn	Inconel X-750
4	Body	25	A105
5	Bolt	35CrMoA	A193-B7
6	Ball**	WCB+ENP	A216-WCB+ENP
7	Seat	25	A105
8	Sealing ring	PTFE	PTFE
9	Dish spring	60Si2Mn	AISI 9260
10	Device for seat rotating	Assembled	
11	Sealing ring for stem	PTFE	PTFE
12	Bushing	Nikealium+PTFE	Nikealium+PTFE
13	Stem*	1Cr13	A182-F6a
14	Connection set	45	AISI C 1045
15	Driving	Assembled	



Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9) ASTM (A276-321)

** The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+Ni.P), ASTM(182-304, CF8+Ni.P)

Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)47F(N, P)

WELDED STRUCTURE TRUNNION TYPE BALL VALVE

Technical specification

Design Standard	GB/T 12237	GB/T 19672	API 6D
Face to Face	GB/T 12221	API 6D	ASME B16.10
Flanged Size	GB/T 9113	JB/T 79	ASME B16.5 ASME B16.47
Test & Inspection	JB/T 9092	GB/T 19672	API 598 API 6D

* Notes: 1.The sizes of serial valve connecting flange ends can be designed according to customer's requirement.
2.DN > 1000(40"), the design standard is accordance with 《Specification of the length pipe valve》

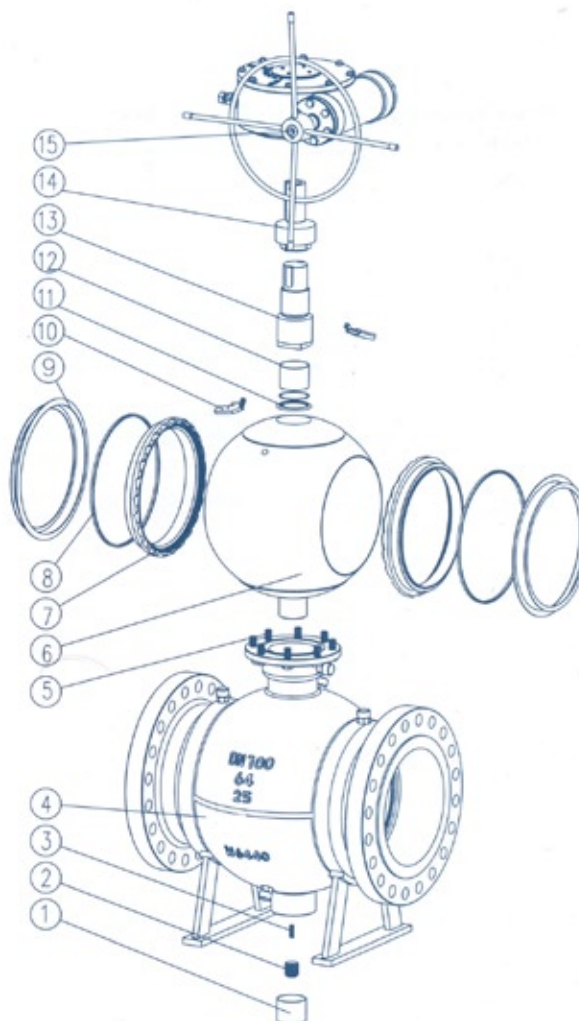
Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Bushing	Nikealium+PTFE	Nikealium+PTFE
2	Machine screw	25	A105
3	Spring	60Si2Mn	Inconel X-750
4	Body		A105
5	Bolt	35CrMoA	A193-B7
6	Ball**	WCB+ENP	A216-WCB+ENP
7	Seat	25	A105
8	Sealing ring	PTFE	PTFE
9	Dish spring	60Si2Mn	AISI 9260
10	Device for seat rotating	Assembled	
11	Sealing ring for stem	PTFE	PTFE
12	Bushing	Nikealium+PTFE	Nikealium+PTFE
13	Stem*	1Cr13	A182-F6a
14	Connection set	45	AISI C1045
15	Driving	Assembled	

Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9) ASTM (A276-321)

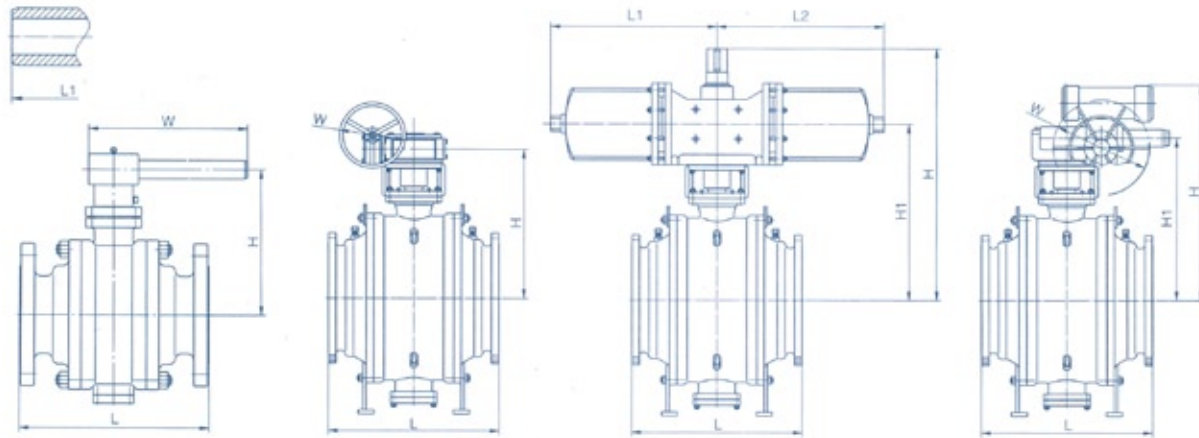
** The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+Ni.P), ASTM(182-304, CF8+Ni.P)

Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

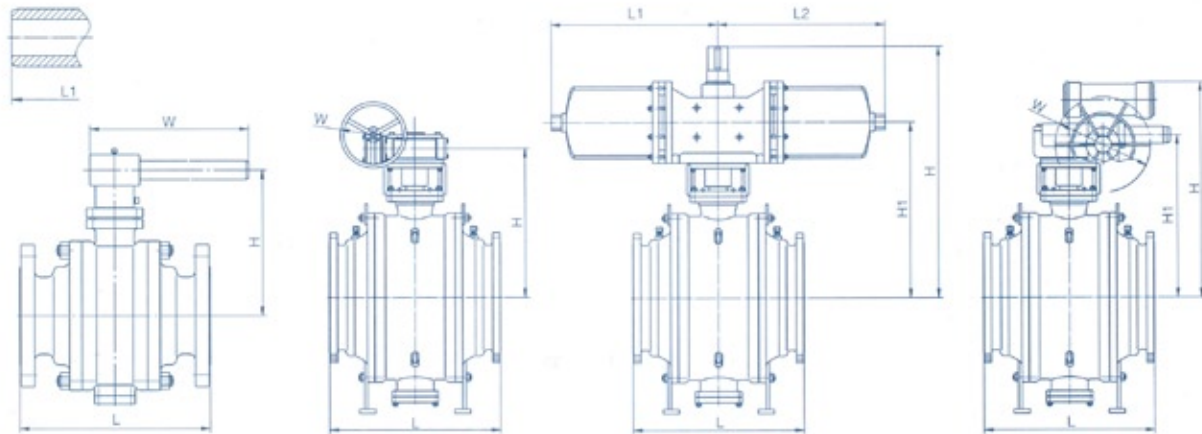
CAST STEEL TRUNNION TYPE BALL VALVE



Size and weight																	PN1.6MPa CLASS 150									
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500			
NPS	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60			
Flange	L	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245	1372	1524	1721	1829	2180	2300	2400			
	L1	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	1930	1689	2100	2250	2400			
Butt Welding	H	107	125	152	178	300	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	W	230	400	400	450	700	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Hand-Operated	kg	9.5	15	19	33	58	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	H	-	-	-	-	-	-	398	495	580	625	670	698	840	1050	1100	1150	1230	1320	1480	1610	1780	1865			
Worm Gear Operated	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800			
	Type	-	-	-	-	-	-	B	B	C	C	D	D	D	DA	DA	DB	DB	DC	DC	DD	DH	DH			
	kg	-	-	-	-	-	-	160	180	240	390	510	750	1190	2600	3000	4490	7800	12560	14280	21900	34100	46200			
	H	269	379	389	479	552	666	804	839	972	1127	1459	1529	1559	1145	1160	1460	1540	1630	-	-	-	-			
Air-Operating	H1	174	248	258	322	395	457	595	630	728	883	1154	1224	1294	915	930	1100	1180	1280	-	-	-	-			
	L1	89	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-			
	L2	181	257	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-			
	Type	AG09	AG13	AG13	AW13	AW13	AW17	AW17	AW17	AW20	AW20	AW28	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C3-600	-	-	-	-			
	kg	16.6	38	42.1	53	95.3	105.2	207.8	255	409	518	838	1067	1295	2330	3200	4750	8200	13200	-	-	-	-			
	H	-	-	-	-	-	554	600	652	761	771	831	921	943	1123	1218	1328	1696	1925	2105	2245	2395	2470			
Electric Driving	H1	-	-	-	-	-	337	382	435	480	520	580	670	770	850	945	1055	1130	1240	1420	1560	1710	1785			
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600			
	Type	-	-	-	-	-	SMC-04 +H0BC	SMC-04 +H0BC	SMC-04 +H1BC	SMC-04 +H1BC	SMC-03 +H2BC	SMC-03 +H2BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-2 +H6BC	SMC-3 +H6BC	SMC-3 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC			
	kg	-	-	-	-	-	127	210	270	420	535	862	1100	1350	2420	3410	5120	9100	14100	15200	22300	36000	47000			

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

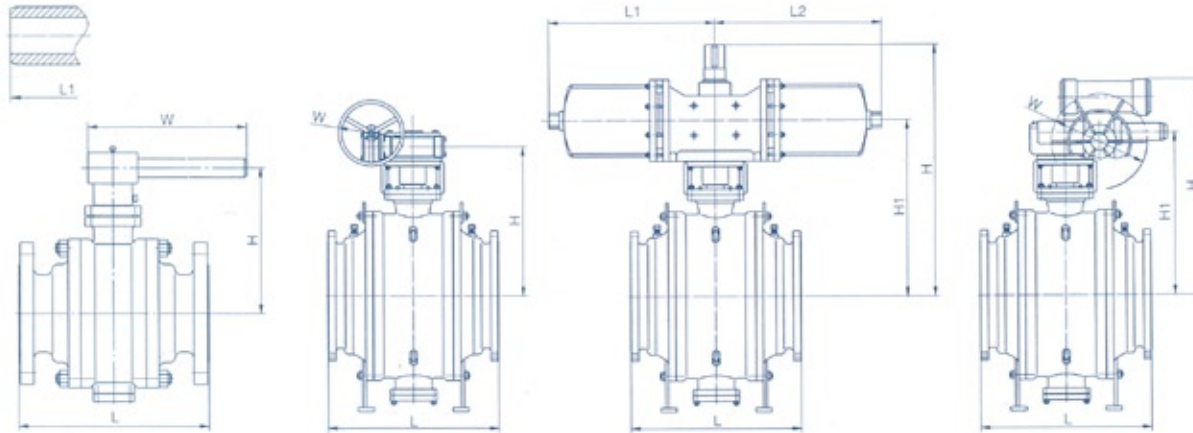
CAST STEEL TRUNNION TYPE BALL VALVE



Size and weight																	PN2.5、4.0MPa				CLASS 300			
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500	
NPS	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60	
Flange	L	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346	1524	1727	2083	2050	2180	2300	2400	
	L1	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	2083	1960	2020	2250	2400	
Butt Welding	H	107	125	152	178	300	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	W	230	400	400	600	700	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hand-Operated	kg	20.9	42.5	52.9	92	145	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	H	-	-	-	-	-	-	398	495	580	625	670	698	840	1050	1100	1150	1230	1320	1480	1610	1780	1865	
Worm Gear Operated	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800	
	Type	-	-	-	-	-	-	B	B	C	C	D	D	DA	DB	DC	DC	DD	DD	DD	DH	DH	DH	
	kg	-	-	-	-	-	-	278	500	733	1029	1418	1592	2195	3460	5770	7932	10093	13775	16105	24060	38155	52350	
	H	269	379	452	579	595	595	736	942	994	1188	1280	1480	1554	1380	1430	1749	1540	1630	-	-	-	-	
Air-Operating	H1	209	248	295	322	386	386	527	698	750	883	975	1080	1154	930	980	1149	1180	1280	-	-	-	-	
	L1	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	1960	-	-	-	-	
	L2	181	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	1960	-	-	-	-	
	Type	AG13	AG13	AW13	AW13	AW17	AW17	AW17	AW20	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C3-600	C3-600	-	-	-	-	
	kg	20.9	42.5	52.7	77.9	107	130	220	280	450	570	920	1140	1360	2450	3360	5800	7900	10200	-	-	-	-	
	H	-	-	-	-	-	554	600	652	761	771	831	921	943	1123	1218	1328	1696	1925	2105	2245	2395	2470	
Electric Driving	H1	-	-	-	-	-	337	382	435	480	520	580	670	770	850	945	1055	1130	1240	1420	1560	1710	1785	
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600	
	Type	-	-	-	-	-	SMC-04 +H0BC	SMC-04 +H1BC	SMC-04 +H1BC	SMC-03 +H0BC	SMC-03 +H2BC	SMC-06 +H3BC	SMC-06 +H3BC	SMC-06 +H4BC	SMC-06 +H4BC	SMC-1 +H5BC	SMC-2 +H6BC	SMC-2 +H6BC	SMC-3 +H6BC	SMC-3 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	
	kg	-	-	-	-	-	142	240	320	475	590	1050	1200	1470	2520	3720	6250	8300	1121	1620	2510	3940	5560	

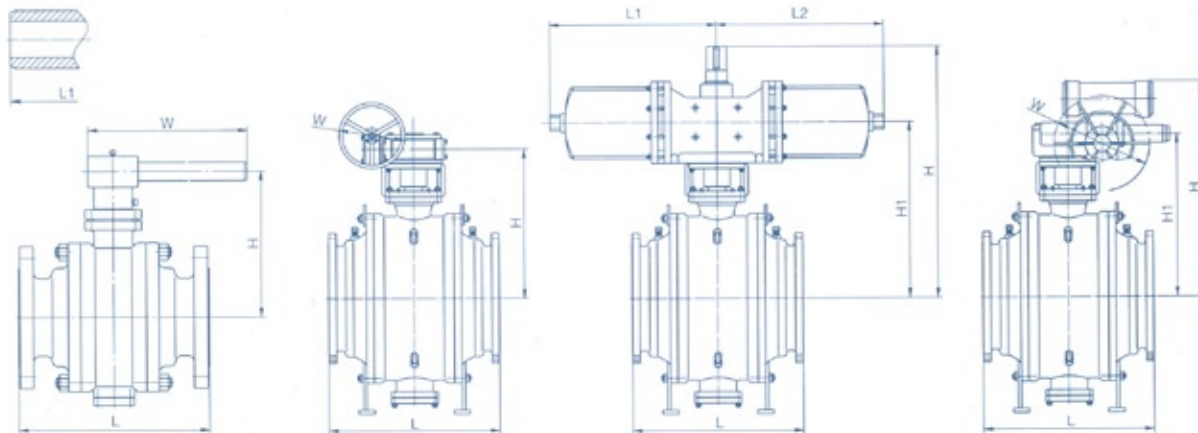
W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

CAST STEEL TRUNNION TYPE BALL VALVE



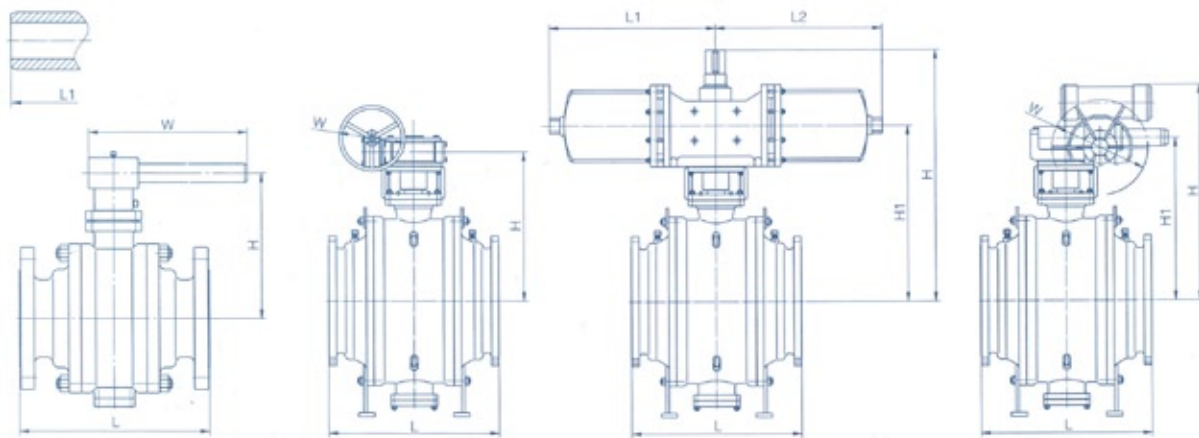
Size and weight																	PN6. 4MPa CLASS 400									
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500				
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60				
Flange	L	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2057	2400	2400	2700				
	L1	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2050	2180	2300	2400				
Butt Welding	H	108	155	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	W	230	400	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Hand-Operated	kg	25	45	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	H	-	-	-	235	300	374	445	512	550	615	750	810	1050	1100	1180	1274	1366	1540	1680	1840	1915				
Worm Gear Operated	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000				
	Type	-	-	-	B	C	C	C	D	D	DA	DA	DB	DC	DD	DD	DH	DH	DJ	DJ	DK	DK				
	kg	-	-	-	66	145	250	540	780	1000	1300	2100	3400	5000	6520	8350	11250	14100	72500	29600	42100	62500				
	H	269	-	519	636	728	839	1014	1120	1225	1480	-	1480	1365	1430	-	-	-	-	-	-	-				
Air-Operating	H1	209	-	295	322	386	527	698	750	883	1080	-	1080	915	980	-	-	-	-	-	-	-				
	L1	148	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-				
	L2	257	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-				
	Type	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	AW28	C1-355	-	C1-355	C2-490	C2-490	-	-	-	-	-	-	-				
	kg	33.6	-	55.3	81.2	133.6	236.6	480	760	1050	1400	-	2300	3600	5200	-	-	-	-	-	-	-				
	H	-	-	-	-	554	600	652	761	771	831	921	943	1123	1218	1328	1815	1925	2164	2324	2474	2544				
Electric Driving	H1	-	-	-	-	337	382	480	520	594	632	670	770	850	945	1055	1130	1240	1440	1660	1750	1820				
	W	-	-	-	-	200	200	200	280	280	280	305	305	305	460	460	600	600	600	600	600	600				
	Type	-	-	-	-	SMC-D4 +H1BC	SMC-D4 +H1BC	SMC-D3 +H2BC	SMC-D0 +H3BC	SMC-D0 +H3BC	SMC-D0 +H4BC	SMC-D0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-3 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H8BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC				
	kg	-	-	-	-	154	240	495	793	1125	1610	1800	2410	3750	5540	7900	12500	15300	18100	31000	45000	65200				

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P) CAST STEEL TRUNNION TYPE BALL VALVE



Size and weight																	PN10.0MPa CLASS 600									
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500				
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60				
Flange	L	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2100	2400	2400	2700				
	L1	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2050	2180	2300	2400				
Butt Welding	H	108	155	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	W	400	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Hand-Operated	kg	31	54	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	H	-	-	-	235	300	374	445	512	550	615	750	810	1050	1180	1250	1315	1420	1540	1680	1840	1915				
Worm Gear Operated	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000				
	Type	-	-	-	B	C	C	D	D	DA	DA	DB	DC	DD	DH	DH	DH	DH	DJ	DJ	DK	DK				
Air-Operating	kg	-	-	-	113	253	485	758	1067	1083	1525	2095	2638	4736	6758	9138	13298	18335	21356	31195	47483	65200				
	H	269	-	519	636	728	839	1014	1120	1224	1374	-	1490	1615	1760	-	-	-	-	-	-	-				
Electric Driving	H1	209	-	295	479	519	595	770	810	1004	1154	-	1210	1335	1410	-	-	-	-	-	-	-				
	L1	148	-	287	287	378	530	530	680	1445	1445	-	1665	1665	1960	-	-	-	-	-	-	-				
Air-Operating	L2	257	-	287	287	378	530	530	680	1445	1445	-	1665	1665	1960	-	-	-	-	-	-	-				
	Type	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	C1-355	C1-355	-	C2-490	C2-490	C3-600	-	-	-	-	-	-	-				
Electric Driving	kg	225	-	325	656	927	1350	1660	1820	2130	2550	-	3500	5300	6800	-	-	-	-	-	-	-				
	H	-	-	-	-	600	652	761	771	831	921	943	1123	1218	1328	1458	1855	1960	2164	2324	2474	2544				
Electric Driving	H1	-	-	-	-	382	480	520	594	632	670	770	850	945	1055	1135	1170	1285	1440	1660	1750	1820				
	W	-	-	-	-	200	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600	600				
Electric Driving	Type	-	-	-	-	SMC-04 +H18C	SMC-03 +H28C	SMC-00 +H38C	SMC-00 +H38C	SMC-0 +H48C	SMC-0 +H48C	SMC-1 +H58C	SMC-3 +H68C	SMC-3 +H68C	SMC-4 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C				
	kg	-	-	-	-	930	1410	1620	1910	2200	2600	2950	3620	5410	6920	10000	13420	18450	22300	32000	48000	66200				

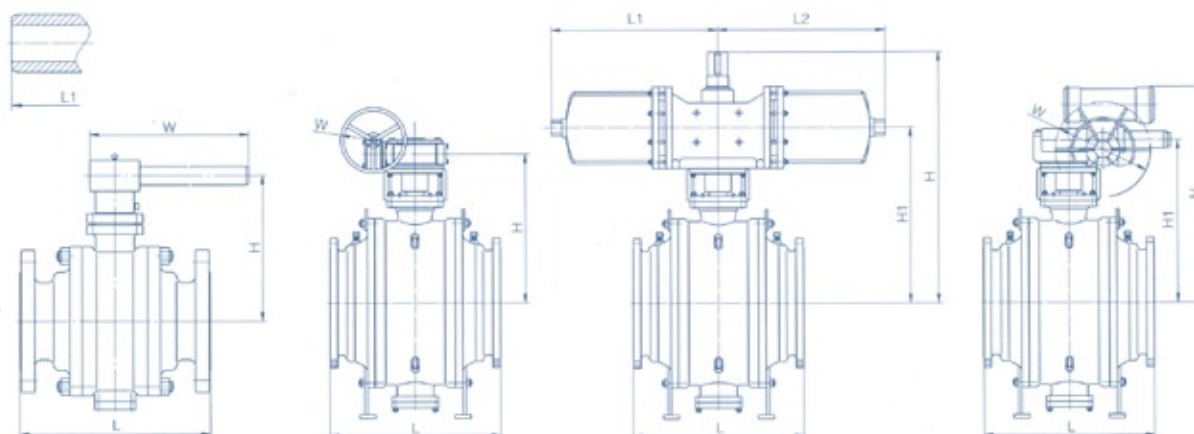
W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P) CAST STEEL TRUNNION TYPE BALL VALVE



Size and weight										PN15.0MPa CLASS 900									
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	750	800	900	1000	1200
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	32	36	40	48
Flange	L	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1780	2050	2050	2180	2600
Butt Welding	L1	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1700	1780	1960	2100	2376
	H	217	241	259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hand-Operated	W	650	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	48	55	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	297	364	394	502	572	675	762	866	894	965	1210	1290	1360	1480	1630
	W	-	-	-	600	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000
Worm Gear Operated	Type	-	-	-	B	-	C	D	D	DA	DB	DC	DD	DH	DH	DJ	DJ	DK	DK
	kg	-	-	-	145	360	580	1010	1510	1450	2150	2820	4200	6800	10180	11820	18900	21500	47500
	H	519	-	728	842	1014	1120	1124	13747	1490	1615	1760	1760	1760	-	-	-	-	-
	H1	295	-	519	595	770	815	1004	1154	1210	1335	1410	1410	1410	-	-	-	-	-
Air-Operating	L1	287	-	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-	-	-	-	-
	L2	287	-	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-	-	-	-	-
	Type	AW17	-	AW17	AW20	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C3-600	-	-	-	-	-
	kg	340	-	520	760	1120	1420	1780	2050	2350	3150	3840	4580	6200	-	-	-	-	-
	H	-	-	-	600	761	771	831	921	943	1123	1218	1328	1458	1904	1984	2054	2174	2274
	H1	-	-	-	382	520	594	632	670	770	850	945	1055	1135	1180	1260	1330	1450	1560
Electric Driving	W	-	-	-	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600
	Type	-	-	-	SMC-04 +H1BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC
	kg	-	-	-	780	1110	1410	1820	2150	2400	3210	3950	4620	6320	10200	11000	17920	22500	47800

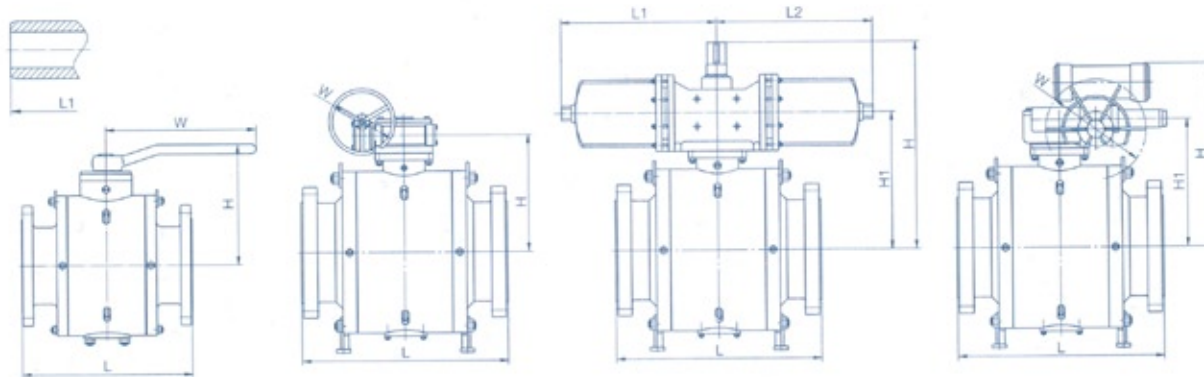
W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

CAST STEEL TRUNNION TYPE BALL VALVE



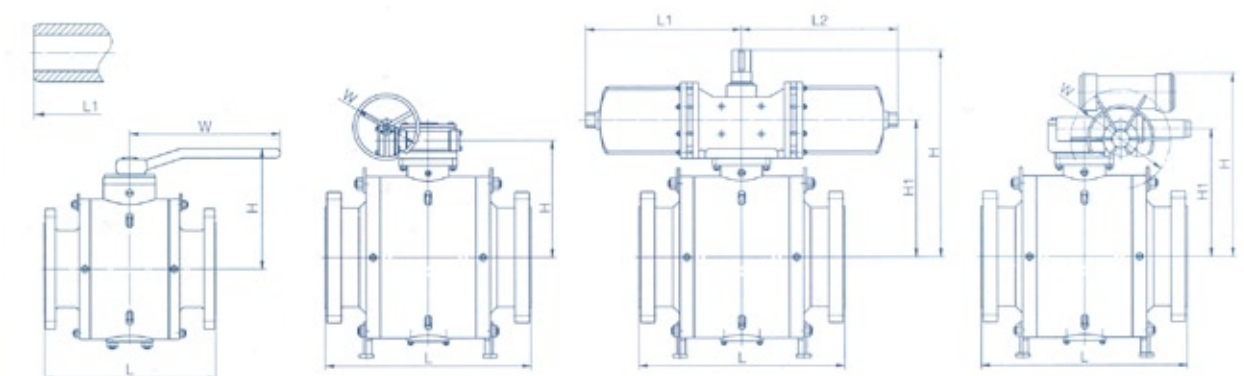
Size and weight		PN25.0MPa CLASS 1500												
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24
Flange	L	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	2043
Butt Welding	L1	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	2043
Hand-Operated	H	217	241	259	-	-	-	-	-	-	-	-	-	-
	W	650	650	650	-	-	-	-	-	-	-	-	-	-
	kg	45	56	82	-	-	-	-	-	-	-	-	-	-
Worm Gear Operated	H	217	241	259	297	364	475	578	696	761	831	900	950	1080
	W	600	600	600	600	800	800	800	800	800	800	800	800	800
	Type	A	A	B	B	C	D	D	DA	DB	DC	DD	DH	DH
Air-Operating	kg	50	72	97	198	480	820	1500	2250	2850	4070	6195	9075	14280
	H	519	728	842	1014	1120	1124	1374	1490	1615	1760	1760	1760	-
	H1	296	519	595	770	815	1004	1154	1210	1335	1410	1410	1410	-
Electric Driving	L1	287	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-
	L2	287	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-
	Type	AW17	AW17	AW17	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-429	C3-600	-
Electric Driving	kg	345	425	560	820	1150	1480	1890	2150	2430	3220	3990	4950	-
	H	-	-	652	761	771	831	921	943	1123	1218	1328	1458	-
	H1	-	-	480	520	594	632	670	770	850	945	1055	1135	-
Electric Driving	W	-	-	200	280	280	280	305	305	305	400	400	600	-
	Type	-	-	SMC-04 +H1BC	SMC-04 +H1BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC
	kg	-	-	625	810	1150	1450	1890	2165	2440	3280	4150	5120	-

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P) FORGED STEEL TRUNNION TYPE BALL VALVE



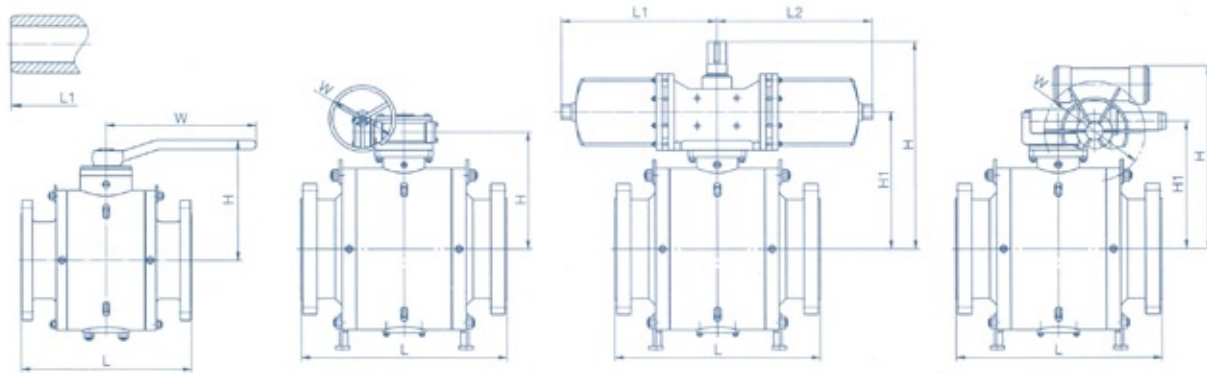
Size and weight																	PN1.6MPa CLASS 150									
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500			
NPS	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60			
Flange	L	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245	1372	1524	1721	1829	2180	2300	2400			
	L1	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	1930	1689	2100	2250	2400			
Butt Welding	H	130	142	191	200	226	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	W	230	350	400	450	750	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Hand-Operated	kg	12	28	33	50	78	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	H	-	-	-	-	-	-	337	385	414	447	545	545	585	663	723	923	986	1061	1420	1530	1640	1710			
Worm Gear Operated	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800			
	Type	-	-	-	-	-	-	B	B	C	C	D	D	D	DA	DA	DB	DB	DC	DC	DD	DH	DH			
	kg	-	-	-	-	-	-	250	390	578	770	1100	1250	1800	2400	4500	6900	9700	13000	15000	23000	37000	39500			
	H	269	379	389	479	552	666	769	824	897	937	1121	1161	1203	1145	1160	1460	1510	1610	-	-	-	-			
Air-Operating	H1	174	248	258	322	395	457	560	615	653	691	816	856	898	915	930	1100	1150	1250	-	-	-	-			
	L1	89	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-			
	L2	181	257	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-			
	Type	AG09	AG13	AG13	AW13	AW13	AW17	AW17	AW17	AW20	AW20	AW28	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C3-600	-	-	-	-			
	kg	32	42	53	100	125	157	265	410	595	795	1150	1295	1910	2400	4600	7100	10100	14200	-	-	-	-			
	H	-	-	-	-	-	559	710	744	851	859	959	999	965	1141	1233	1341	1666	1895	2114	2194	2374	2404			
Electric Driving	H1	-	-	-	-	-	342	492	527	570	608	708	748	790	866	960	1068	1100	1210	1390	1470	1650	1680			
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600			
	Type	-	-	-	-	-	SMC-04 +H09C	SMC-04 +H09C	SMC-04 +H10C	SMC-04 +H10C	SMC-03 +H20C	SMC-03 +H20C	SMC-00 +H30C	SMC-00 +H30C	SMC-0 +H40C	SMC-0 +H40C	SMC-1 +H50C	SMC-2 +H60C	SMC-3 +H60C	SMC-3 +H70C	SMC-4 +H70C	SMC-4 +H70C	SMC-4 +H70C			
	kg	-	-	-	-	-	152	245	425	610	800	1180	1300	1200	2500	4710	7300	10200	15200	16800	24000	38500	40500			

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P) FORGED STEEL TRUNNION TYPE BALL VALVE



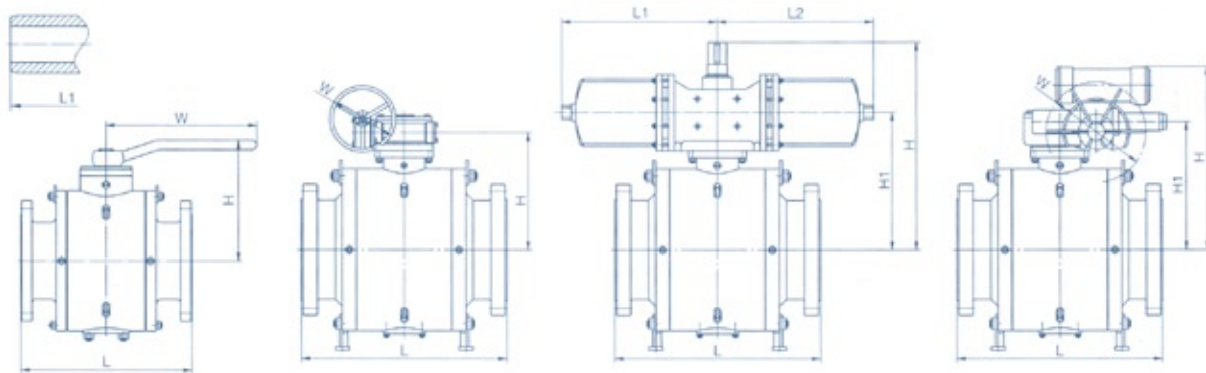
Size and weight																	PN2.5, 4.0MPa CLASS 300									
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500			
NPS	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60			
Flange	L	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346	1524	1727	2083	2050	2180	2300	2400			
	L1	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	2083	1960	2020	2250	2400			
Butt Welding	H	136	164	191	223	240	253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	240	400	400	600	750	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hand-Operated	kg	32	37	58	110	157	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	-	-	-	337	385	414	447	545	545	585	663	723	923	986	1061	1420	1530	1640	1710			
Worm Gear Operated	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
	Type	-	-	-	-	-	-	B	B	C	C	D	D	DA	DB	DC	DC	DD	DD	DD	DD	DD	DD	DD	DD	DD
	kg	-	-	-	-	-	-	280	410	760	1100	1600	1700	2300	3500	6000	8000	11000	14000	17000	25000	39500	45300			
	H	360	388	476	418	621	634	701	771	814	913	1013	1148	1190	1316	1410	1518	1740	1850	-	-	-	-			
	H1	229	257	319	361	412	425	492	527	570	608	708	748	790	866	960	1068	1140	1250	-	-	-	-			
Air-Operating	L1	148	148	287	287	378	378	530	530	680	680	680	1455	1455	1665	1665	1665	1960	1960	-	-	-	-			
	L2	181	257	287	287	378	378	530	530	680	680	680	1455	1455	1665	1665	1665	1960	1960	-	-	-	-			
	Type	AG13	AG13	AG13	AW13	AW17	AW17	AW20	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C2-490	C3-600	C3-600	-	-	-	-			
	kg	45	70	95	153	260	350	450	750	1140	1580	2550	2300	3100	4400	6000	8120	11200	14500	-	-	-	-			
	H	-	-	-	-	-	559	710	744	851	859	959	999	963	1141	1233	1341	1696	1925	2114	2194	2374	2404			
	H1	-	-	-	-	-	342	492	527	570	608	708	748	790	866	960	1068	1100	1210	1390	1470	1650	1680			
Electric Driving	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600			
	Type	-	-	-	-	-	SMC-04 +H0BC	SMC-04 +H1BC	SMC-04 +H2BC	SMC-04 +H2BC	SMC-03 +H2BC	SMC-03 +H3BC	SMC-00 +H4BC	SMC-00 +H4BC	SMC-00 +H5BC	SMC-00 +H6BC	SMC-01 +H6BC	SMC-02 +H6BC	SMC-03 +H6BC	SMC-03 +H7BC	SMC-04 +H7BC	SMC-04 +H7BC	SMC-04 +H7BC			
	kg	-	-	-	-	-	380	460	780	1150	1620	2160	2400	3120	4500	6100	8210	11400	14800	17500	26000	41000	46200			

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P) FORGED STEEL TRUNNION TYPE BALL VALVE



Size and weight																	PN6, 4MPa CLASS 400							
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500		
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60		
Butt Welding	L	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2057	2400	2400	2700		
	L1	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2050	2180	2300	2400		
	H	136	164	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Hand-Operated	W	230	400	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	kg	35	40	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Worm Gear Operated	H	-	-	-	244	303	342	382	420	458	558	598	630	759	836	915	987	1212	1460	1600	1760	1845		
	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000		
	Type	-	-	-	B	C	C	C	D	D	DA	DA	DB	DC	DD	DD	DH	DH	DJ	DJ	DK	DK		
	kg	-	-	-	180	240	296	425	780	1210	1650	1720	2400	3560	6100	8200	11500	14500	17800	26000	41050	46200		
	H	269	-	519	636	728	839	1014	1120	1225	1480	-	1480	1365	1430	-	-	-	-	-	-	-		
Air-Operating	H1	209	-	295	322	386	527	698	750	883	1080	-	1080	915	980	-	-	-	-	-	-	-		
	L1	148	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-		
	L2	257	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-		
	Type	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	AW28	C1-355	-	C1-355	C2-490	C2-490	-	-	-	-	-	-	-		
	kg	50	-	98	156	380	575	760	1150	1600	2200	-	3150	4480	6200	-	-	-	-	-	-	-		
Electric Driving	H	-	-	-	-	520	560	554	661	635	757	879	803	981	1073	1133	1287	1512	2114	2254	2424	2524		
	H1	-	-	-	-	303	342	382	420	458	558	598	630	759	836	915	987	1212	1390	1530	1700	1800		
	W	-	-	-	-	200	200	200	280	280	280	305	305	305	460	460	600	600	600	600	600	600		
	Type	-	-	-	-	SMC-04 +H1BC	SMC-04 +H1BC	SMC-03 +H2BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-00 +H4BC	SMC-00 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-3 +H7BC	SMC-3 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H8BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	
	kg	-	-	-	-	390	470	790	1250	1710	2250	2520	3220	4600	6500	8400	12000	15800	19000	27500	42000	47200		

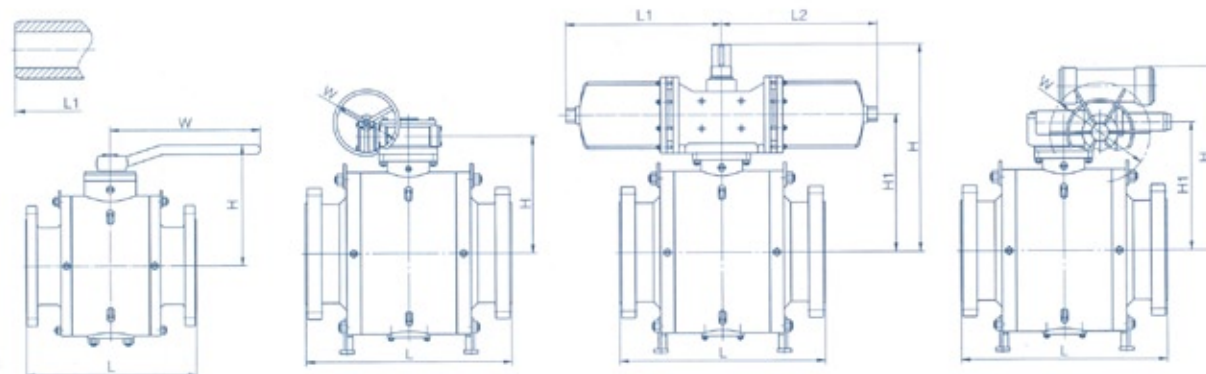
W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P) FORGED STEEL TRUNNION TYPE BALL VALVE



Size and weight																	PN10.0MPa CLASS 600									
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500				
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60				
Flange	L	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2100	2400	2400	2700				
	L1	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2050	2180	2300	2400				
Butt Welding	H	136	164	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	W	500	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Hand-Operated	kg	35	42	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	H	-	-	-	244	309	361	412	475	502	533	636	675	759	836	915	987	1212	1460	1600	1760	1845				
Worm Gear Operated	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000				
	Type	-	-	-	B	C	C	D	D	DA	DA	DB	DC	DD	DH	DH	DH	DH	DJ	DJ	DK	DK				
	kg	-	-	-	180	270	500	780	1100	1200	1600	2160	2700	5000	7000	9800	14000	19000	22000	32000	49000	56000				
	H	269	-	519	636	728	839	1014	1120	1224	1374	-	1490	1615	1760	-	-	-	-	-	-	-				
Air-Operating	H1	209	-	295	479	519	595	770	810	1004	1154	-	1210	1335	1410	-	-	-	-	-	-	-				
	L1	148	-	287	287	378	530	530	680	1445	1445	-	1665	1665	1960	-	-	-	-	-	-	-				
	L2	257	-	287	287	378	530	530	680	1445	1445	-	1665	1665	1960	-	-	-	-	-	-	-				
	Type	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	C1-355	C1-355	-	C2-490	C2-490	C3-600	-	-	-	-	-	-	-				
	kg	60	-	112	196	380	585	760	1190	1650	2250	-	3200	4520	6350	-	-	-	-	-	-	-				
	H	-	-	-	-	527	533	653	652	801	784	809	948	1038	1253	1473	1287	1512	2114	2254	2424	2524				
Electric Driving	H1	-	-	-	-	309	361	412	475	502	533	636	675	765	980	1150	987	1212	1390	1530	1700	1800				
	W	-	-	-	-	200	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600	600				
	Type	-	-	-	-	SMC-04 +H18C	SMC-03 +H28C	SMC-00 +H38C	SMC-00 +H38C	SMC-0 +H48C	SMC-0 +H48C	SMC-1 +H58C	SMC-3 +H68C	SMC-3 +H68C	SMC-4 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C				
	kg	-	-	-	-	410	480	860	1320	1750	2280	2620	3350	4720	6540	8800	14500	22000	23500	33500	51000	58500				

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

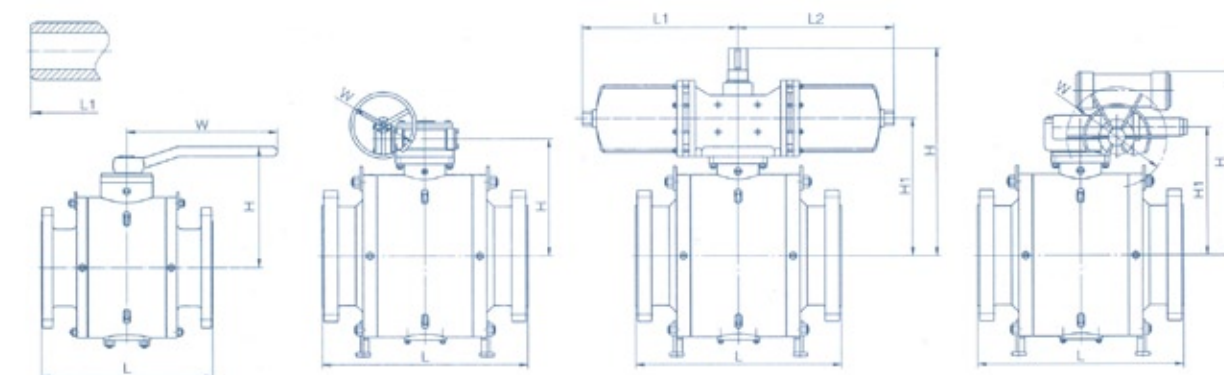
FORGED STEEL TRUNNION TYPE BALL VALVE



Size and weight																	PN15.0MPa CLASS 900				
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	750	800	900	1000	1200		
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	32	36	40	48		
Flange	L	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1780	2050	2050	2180	2600		
Butt Welding	L1	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1700	1780	1960	2100	2376		
	H	148	191	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Hand-Operated	W	650	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	kg	50	55	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	H	-	-	-	270	384	435	518	657	693	762	866	894	965	1160	1240	1310	1420	1530		
	W	-	-	-	600	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000		
Worm Gear Operated	Type	-	-	-	B	-	C	D	D	DA	DB	DC	DD	DH	DH	DJ	DJ	DK	DK		
	kg	-	-	-	150	360	620	1100	1600	1850	2200	2800	4250	7000	12500	14500	18000	22000	32000		
	H	519	-	728	842	1014	1120	1124	13747	1490	1615	1760	1760	1760	-	-	-	-	-		
	H1	295	-	519	595	770	815	1004	1154	1210	1335	1410	1410	1410	-	-	-	-	-		
Air-Operating	L1	287	-	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-	-	-	-	-		
	L2	287	-	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-	-	-	-	-		
	Type	AW17	-	AW17	AW20	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C3-600	-	-	-	-	-		
	kg	80	-	145	225	380	700	1200	1750	1900	2300	2900	4350	8100	-	-	-	-	-		
	H	-	-	-	418	625	612	817	908	866	1035	1139	1167	1279	1854	1934	2004	2114	2224		
	H1	-	-	-	270	384	435	518	657	693	762	866	894	956	1130	1210	1280	1390	1500		
Electric Driving	W	-	-	-	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600		
	Type	-	-	-	SMC-04 +H1BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC		
	kg	-	-	-	240	390	710	1300	1780	2000	2410	3110	4420	8250	13200	16000	19500	23500	33100		

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

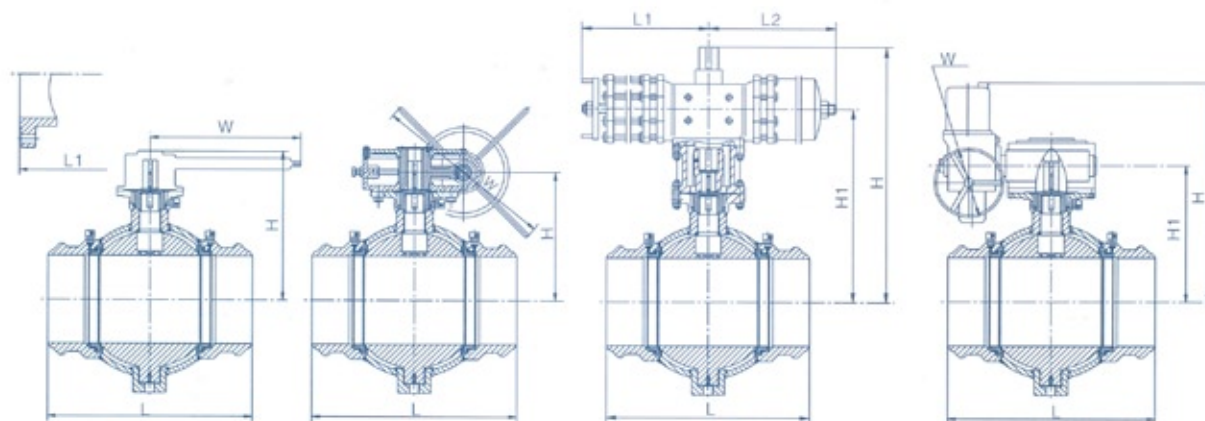
FORGED STEEL TRUNNION TYPE BALL VALVE



Size and weight		PN25.0MPa CLASS 1500												
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24
Flange	L	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	2043
	L1	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	2043
Butt Welding	H	175	191	216	-	-	-	-	-	-	-	-	-	-
	W	650	650	750	-	-	-	-	-	-	-	-	-	-
Hand-Operated	kg	60	70	85	-	-	-	-	-	-	-	-	-	-
	H	175	91	216	247	329	492	428	640	670	700	775	830	952
Worm Gear Operated	W	400	400	600	600	800	800	800	800	800	800	800	800	800
	Type	A	A	B	B	C	D	D	DA	DB	DC	DD	DH	DH
Air-Operating	kg	65	82	100	210	500	850	1600	2300	2950	4200	5000	5600	2200
	H	519	728	842	1014	1120	1124	1374	1490	1615	1760	1760	1760	-
Air-Operating	H1	295	519	595	770	815	1004	1154	1210	1335	1410	1410	1410	-
	L1	287	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-
Air-Operating	L2	287	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-
	Type	AW17	AW17	AW17	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-429	C3-600	-
Electric Driving	kg	90	135	155	280	510	900	1710	2350	3100	4410	5100	6100	-
	H	-	-	388	488	506	591	679	813	943	973	1048	1153	-
Electric Driving	H1	-	-	216	247	329	392	428	640	670	700	775	830	-
	W	-	-	200	280	280	280	305	305	305	400	400	600	-
Electric Driving	Type	-	-	SMC-04 +H1BC	SMC-04 +H1BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC
	kg	-	-	160	280	520	950	1800	2400	3300	4510	6200	7200	-

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

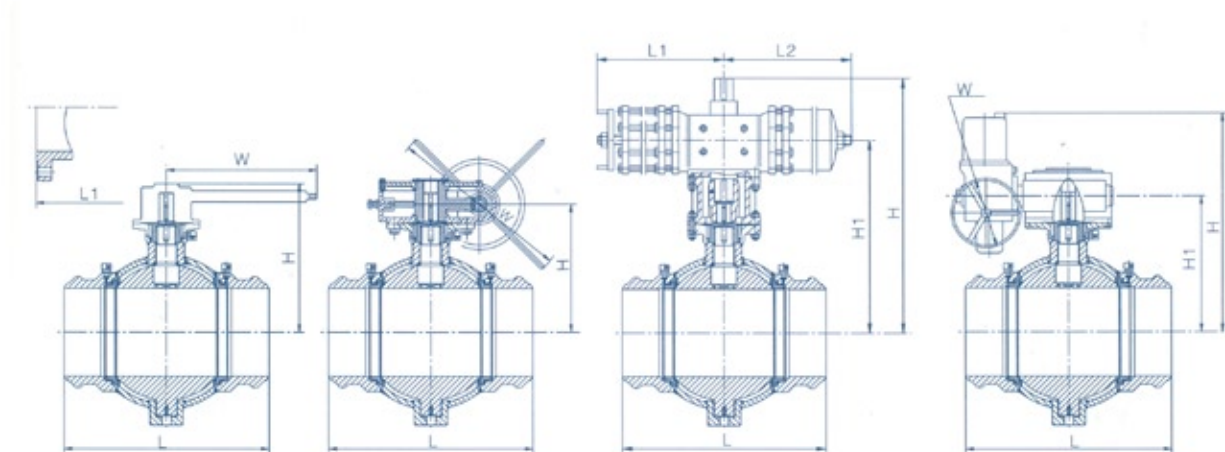
WELDED STRUCTURE TRUNNION TYPE BALL VALVE



Size and weight																	PN1.6MPa CLASS 150									
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500			
NPS	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60			
Butt Welding	L	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	1930	1829	2180	2300	2400			
	L1	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245	1372	1524	1721	1689	2100	2250	2400			
Flange	H	107	125	152	178	300	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	230	350	400	450	700	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hand-Operated	kg	23	42	50	65	70	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	-	-	-	337	385	414	447	510	538	585	665	730	930	990	1070	1260	1370	1480	1550			
Worm Gear Operated	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
	Type	-	-	-	-	-	-	B	B	C	C	D	D	D	DA	DA	DB	DB	DC	DC	DD	DH	DH			
Air-Operating	kg	-	-	-	-	-	-	133	208	312	413	577	780	1028	1706	2534	3644	4986	6800	8500	11173	12300	15800			
	H	269	379	389	479	552	666	804	839	972	1127	1459	1529	1599	1645	1160	1460	1510	1610	-	-	-	-			
Electric Driving	H1	174	248	258	322	395	457	595	630	728	883	1154	1224	1294	915	930	1100	1150	1250	-	-	-	-			
	L1	89	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-			
Air-Operating	L2	181	257	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-			
	Type	AG09	AG13	AG13	AW13	AW13	AW17	AW17	AW17	AW20	AW20	AW28	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C3-600	-	-	-	-			
Electric Driving	kg	40	50	72	80	110	130	180	300	350	450	610	820	1100	1900	2600	4000	5100	7200	-	-	-	-			
	H	-	-	-	-	-	435	480	532	600	610	670	760	763	903	982	1108	1445	1655	1954	2064	2174	2244			
Electric Driving	H1	-	-	-	-	-	215	262	315	320	360	420	510	590	630	725	835	880	970	1230	1340	1450	1520			
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600			
Electric Driving	Type	-	-	-	-	-	SMC-04 +H0BC	SMC-04 +H0BC	SMC-04 +H1BC	SMC-04 +H1BC	SMC-03 +H2BC	SMC-03 +H2BC	SMC-00 +H0BC	SMC-00 +H0BC	SMC-00 +H4BC	SMC-00 +H4BC	SMC-01 +H5BC	SMC-02 +H6BC	SMC-03 +H7BC	SMC-03 +H7BC	SMC-04 +H7BC	SMC-04 +H7BC	SMC-04 +H7BC			
	kg	-	-	-	-	-	145	196	310	360	475	625	880	1200	2100	2750	4230	6000	7800	9000	12500	14000	17000			

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

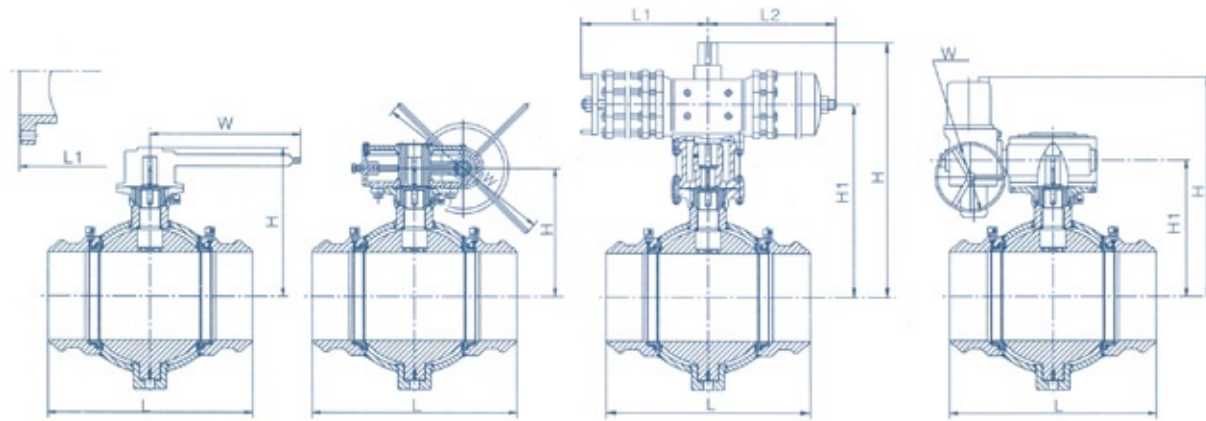
WELDED STRUCTURE TRUNNION TYPE BALL VALVE



Size and weight																	PN2.5、4.0MPa CLASS 300									
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500			
NPS	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60			
Butt Welding	L	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	2083	2050	2180	2300	2400			
	L1	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346	1524	1727	2083	1960	2020	2250	2400			
Flange	H	107	125	152	178	300	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	230	400	400	600	750	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hand-Operated	kg	32	48	65	75	82	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	-	-	-	278	375	460	465	510	538	660	830	880	930	990	1070	1260	1370	1480	1550			
Worm Gear Operated	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
	Type	-	-	-	-	-	-	B	B	C	C	D	D	DA	DB	DC	DC	DD	DD	DD	DD	DD	DD	DD	DD	DD
Air-Operating	kg	-	-	-	-	-	-	152	242	376	489	708	950	1247	2066	3101	4374	6050	8185	9500	13413	14200	17500			
	H	269	379	452	579	595	595	736	942	994	1188	1280	1480	1554	1380	1430	1599	1790	1850	-	-	-	-	-	-	-
Electric Driving	H1	209	248	295	322	386	386	527	698	750	883	975	1080	1154	930	980	1149	1190	1250	-	-	-	-	-	-	-
	L1	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	1960	-	-	-	-	-	-	-
Type	L2	181	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	1960	-	-	-	-	-	-	-
	Type	AG13	AG13	AW13	AW13	AW17	AW17	AW17	AW20	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C3-600	C3-600	-	-	-	-	-	-	-
kg	kg	49	64	70	82	112	145	220	310	395	510	752	1000	1320	2200	3200	4520	6500	9100	-	-	-	-	-	-	-
	H	-	-	-	-	-	434	480	432	641	611	670	761	763	903	998	1108	1565	1655	2105	2245	2385	2470			
H1	H1	-	-	-	-	-	217	263	315	360	360	420	510	590	670	725	835	880	970	1420	1560	1710	1785			
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	460	460	460	600	600	600	600			
Type	Type	-	-	-	-	-	SMC-04 +H6BC	SMC-04 +H1BC	SMC-04 +H1BC	SMC-03 +H2BC	SMC-03 +H2BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-00 +H4BC	SMC-00 +H4BC	SMC-1 +H5BC	SMC-2 +H5BC	SMC-2 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC			
	kg	-	-	-	-	-	170	290	330	415	525	780	1200	1380	2400	3500	4630	6850	10500	11000	14000	15200	18100			

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

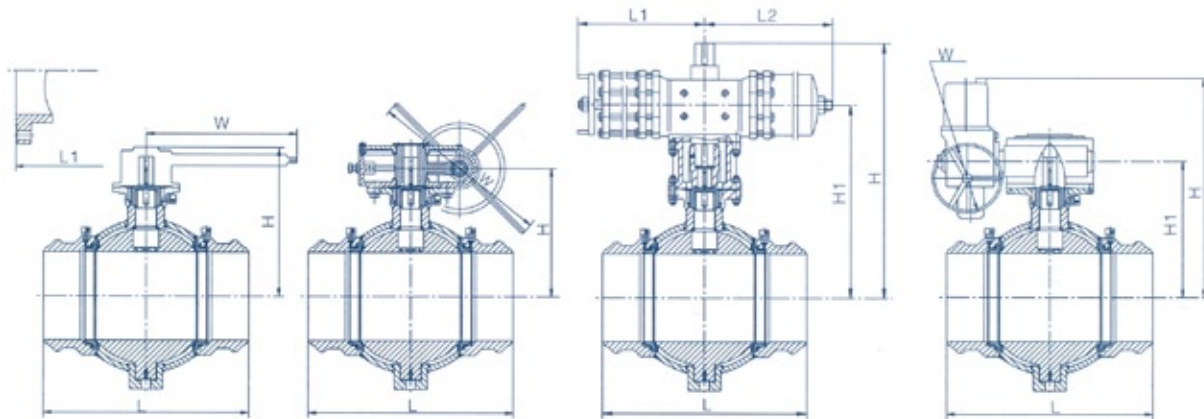
WELDED STRUCTURE TRUNNION TYPE BALL VALVE



Size and weight																	PN6.4MPa CLASS 400							
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500		
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60		
Butt Welding	L	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2057	2400	2400	2700		
	L1	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2050	2180	2300	2400		
Flange	H	108	155	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	230	400	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hand-Operated	kg	38	52	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	115	180	254	325	392	390	455	590	630	759	836	915	987	1212	1260	1370	1480	1550		
Worm Gear Operated	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000		
	Type	-	-	-	B	C	C	C	D	D	DA	DA	DB	DC	DD	DD	DH	DH	DJ	DJ	DK	DK		
Air-Operating	kg	-	-	-	88	105	169	260	420	525	820	1120	1400	2400	3400	4800	7200	9600	11500	16000	18000	22000		
	H	269	-	519	636	728	839	1014	1120	1225	1675	-	1675	1945	1945	-	-	-	-	-	-	-	-	-
Electric Driving	H1	209	-	295	322	386	527	698	750	883	1080	-	1080	980	980	-	-	-	-	-	-	-	-	-
	L1	148	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-	-	-
Air-Operating	L2	257	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-	-	-
	Type	AG13	-	AW13	AW13	AW17	AW20	AW28	AW28	C1-355	-	-	C1-355	C2-490	C2-490	-	-	-	-	-	-	-	-	-
Electric Driving	kg	55	-	85	96	142	200	315	425	580	820	-	1450	2520	3800	-	-	-	-	-	-	-	-	-
	H	-	-	-	-	434	480	432	640	611	671	761	763	903	998	1108	1260	1505	1954	2064	2174	2244		
Electric Driving	H1	-	-	-	-	217	262	360	400	434	472	510	590	630	725	835	960	1205	1230	1340	1450	1520		
	W	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600		
Electric Driving	Type	-	-	-	-	SMC-04 +H18C	SMC-04 +H18C	SMC-03 +H28C	SMC-00 +H38C	SMC-00 +H38C	SMC-0 +H48C	SMC-0 +H48C	SMC-1 +H58C	SMC-3 +H68C	SMC-3 +H68C	SMC-3 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-5 +H88C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C		
	kg	-	-	-	-	172	235	340	465	600	850	1200	1500	2600	4200	5200	7900	9500	12500	17500	19000	23500		

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

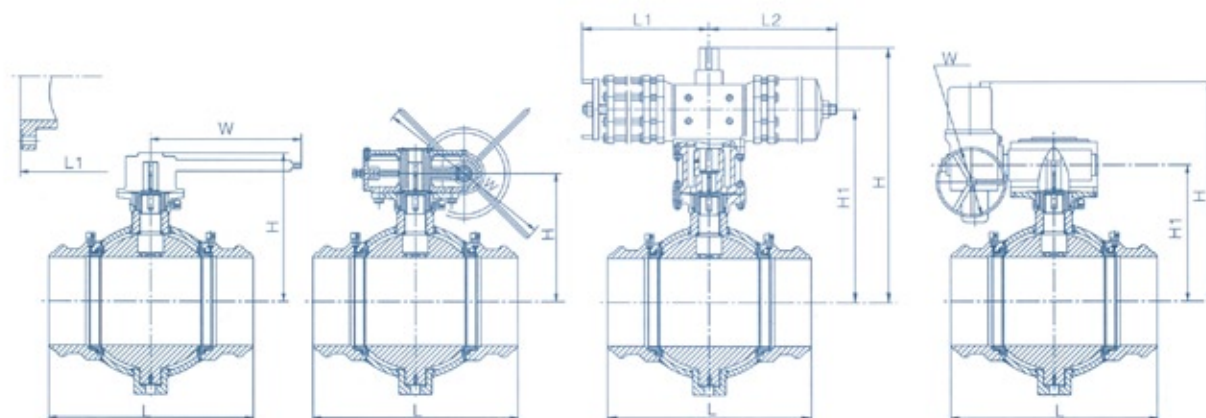
WELDED STRUCTURE TRUNNION TYPE BALL VALVE



Size and weight																	PN10.0MPa CLASS 600					
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60
Butt Welding	L	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2100	2400	2400	2700
	L1	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2060	2180	2300	2400
	H	108	155	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hand-Operated	W	500	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	45	60	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	115	180	254	325	392	390	455	590	630	830	960	1030	1171	1250	1260	1370	1480	1550
Worm Gear Operated	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000
	Type	-	-	-	B	C	C	D	D	DA	DA	DB	DC	DD	DH	DH	DH	DH	DJ	DJ	DK	DK
	kg	-	-	-	95	116	189	296	466	597	860	1154	1568	2613	3841	5508	7597	10370	10500	17136	21000	23400
Air-Operating	H	269	-	519	636	728	839	1014	1120	1224	1374	-	1490	1615	1760	-	-	-	-	-	-	-
	H1	209	-	295	479	519	595	770	815	1004	1154	-	1210	1335	1410	-	-	-	-	-	-	-
	L1	148	-	287	287	378	530	530	680	1455	1455	-	1665	1665	1960	-	-	-	-	-	-	-
Electric Driving	L2	257	-	287	287	378	530	530	680	1455	1455	-	1665	1665	1960	-	-	-	-	-	-	-
	Type	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	C1-355	C1-355	-	C2-490	C2-490	C3-600	-	-	-	-	-	-	-
	kg	60	-	105	112	160	220	320	470	610	890	-	1600	2700	4000	-	-	-	-	-	-	-
Electric Driving	H	-	-	-	-	480	532	641	651	670	761	783	943	998	1108	1238	1350	1400	1954	2064	2174	2244
	H1	-	-	-	-	262	360	400	474	472	510	610	670	725	835	915	1050	1100	1230	1340	1450	1520
	W	-	-	-	-	200	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600	600
Electric Driving	Type	-	-	-	-	SMC-04 +H18C	SMC-03 +H28C	SMC-00 +H38C	SMC-0 +H38C	SMC-0 +H48C	SMC-0 +H48C	SMC-1 +H68C	SMC-3 +H68C	SMC-3 +H68C	SMC-4 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-4 +H78C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C	SMC-5 +H78C
	kg	-	-	-	-	175	240	350	495	625	920	1200	1820	2900	4350	5800	8200	11200	14100	19000	23000	24000

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

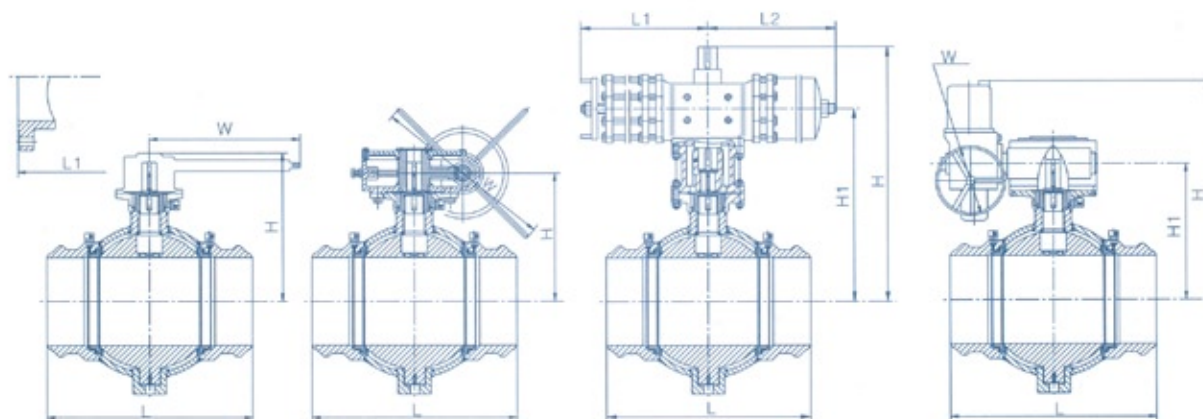
WELDED STRUCTURE TRUNNION TYPE BALL VALVE



Size and weight		PN15.0MPa CLASS 900																	
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	750	800	900	1000	1200
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	32	36	40	48
Butt Welding	L	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1780	2050	2050	2180	2600
	Flange	L1	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1700	1780	1960	2100
Hand-Operated	H	217	241	259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	650	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	58	76	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worm Gear Operated	H	-	-	-	177	244	274	382	452	515	602	706	714	736	1050	1090	1150	1230	1350
	W	-	-	-	600	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000
	Type	-	-	-	B	-	C	D	D	DA	DB	DC	DD	DH	DH	DJ	DJ	DK	DK
	kg	-	-	-	115	125	225	377	559	776	1124	1503	2049	3351	6008	7147	9908	11500	19000
Air-Operating	H	519	-	728	842	1014	1120	1224	1374	1490	1615	1760	1760	1760	-	-	-	-	-
	H1	295	-	519	595	770	815	1004	1154	1210	1335	1410	1410	1410	-	-	-	-	-
	L1	287	-	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-	-	-	-	-
	L2	287	-	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-	-	-	-	-
	Type	AW17	-	AW17	AW20	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C3-600	-	-	-	-	-
	kg	70	-	115	125	165	240	390	620	790	1240	1700	2250	3420	-	-	-	-	-
Electric Driving	H	-	-	-	480	641	651	711	811	783	963	1058	1148	1238	1744	1784	1844	1924	2044
	H1	-	-	-	262	400	474	512	550	610	690	785	875	915	1020	1060	1120	1200	1320
	W	-	-	-	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600
	Type	-	-	-	SMC-04 +H1BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC
	kg	-	-	-	128	175	265	395	635	812	1320	1750	2350	3560	4200	8100	11800	12500	20000

W(K)Q(3, 6, 7, 8, 9)4(6)7F (Y, N, P)

WELDED STRUCTURE TRUNNION TYPE BALL VALVE



Size and weight											PN25.0MPa CLASS 1500			
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24
But Welding	L	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	2043
	L1	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	2043
Hand-Operated	H	217	241	259	-	-	-	-	-	-	-	-	-	-
	W	650	650	650	-	-	-	-	-	-	-	-	-	-
Worm Gear Operated	kg	75	82	105	-	-	-	-	-	-	-	-	-	-
	H	137	161	169	177	244	355	458	576	601	671	740	770	860
Air-Operating	W	600	600	600	600	800	800	800	800	800	800	800	800	800
	Type	A	A	B	B	C	D	D	DA	DB	DC	DD	DH	DH
Electric Driving	kg	85	98	115	125	145	240	395	610	820	1250	1680	2400	3580
	H	519	728	842	1014	1120	1224	1374	1490	1615	1760	1760	1760	-
Air-Operating	H1	295	519	595	770	815	1004	1154	1210	1335	1410	1410	1410	-
	L1	287	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-
Electric Driving	L2	287	378	530	530	680	1455	1455	1665	1665	1960	1960	1960	-
	Type	AW17	AW17	AW17	AW20	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C3-600	C3-600	-
Electric Driving	kg	95	115	120	145	180	290	420	700	890	1300	1820	2610	-
	H	-	-	542	641	651	711	801	823	965	1058	1168	1238	-
Electric Driving	H1	-	-	370	400	474	512	550	650	690	785	895	915	-
	W	-	-	200	280	280	280	305	305	305	400	400	600	-
Electric Driving	Type	-	-	SMC-04 +H1BC	SMC-04 +H1BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-4 +H7BC	-
	kg	-	-	142	160	196	320	452	850	910	1420	1960	2820	-

TRACK BALL VALVE

Product Design Features

The series of the track ball valve is a new type of line pipe valve which is developed and designed by foreign advanced technology. It can be applied to natural gas ,petroleum product, chemical industry, metallurgy etc for adjusting, opening and closing the line pipe fluid. The series of the anti-sulfur products can be applied to the medium which has much impurity and to the long distance pipeline of the natural gas which is seriously corroded.

1. The construction of the single valve seat under the static state can ensure the tightness, credibility and zero leak of the two surface seal.
2. The top equipment type can make the system service in line.
3. The cam framework under the valve stem can supply a tight power of the mechanical wedge to ensure the continuous tight seal.
4. The opening and the closing course are completed in two segments, the rising and falling distance is short which is easy to operate.
5. In the course of the opening and closing operation, the sealed surface separates from touching completely without abrasion. The operating torsion is short and the life-span is long.
6. The vacuum which is formed by the course of sphere spinning accelerates the velocity of flow of the medium in the channel and this course can achieve the clean out of the sealed surface.
7. The fire-resistant design of the ball valve enforces the standard of API 607, API 6FA and JB/T6899. When the soft seal burns, the fireproofing construction of the ball valve can prevent the medium from much leaking, and the extension of the fire in case of fire.
8. The driving equipment of the valve can be divided into wrench operation, worm gear and worm drive, electric operation, The electric valve is easy to be auto-controlled and to be operated, with its safety and credibility.

Products Performance Specification

Pressure grade		1.6~15.0MPa	Class 150~900
I(Mpa)	Shell test	1.5 × PN	
Test pressure	Sealing test	1.1 × PN	
Working temperature		-196℃~+570℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

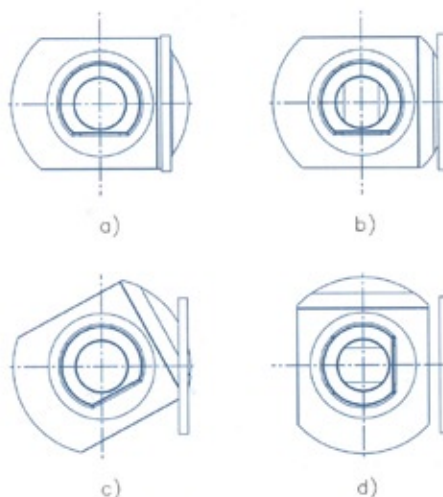
Note: PN is requested pressure for the body material under the 38℃.

TRACK BALL VALVE

The analysis of the opening and closing theory

(1) The course of opening

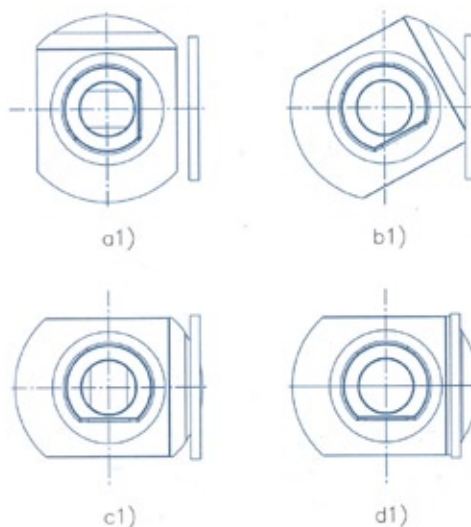
- I) In the location of the closing, the sphere closely presses on the valve seat by the mechanical pressure of the valve stem. See picture a).
- II) When the hand wheel is anti-clockwise, the valve stem will counter move, then the surface of the angle at the bottom will make the sphere disconnect the valve seat. See picture b).
- III) The valve stem continues rising and interacts with the guide pin in the spin slot of the valve stem, The course makes the sphere begin rotating without rub. See picture c).
- IV) Until to the full opening, the valve stem will ascend to the limited location and the sphere will switch to the full opening. See picture d).



The course of opening

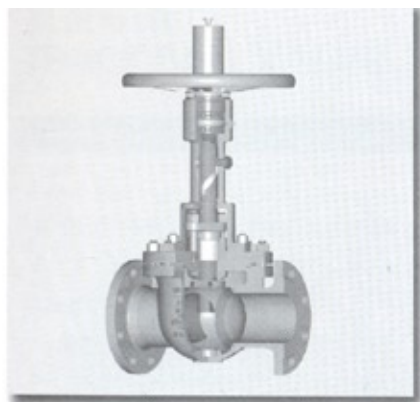
(2) The course of closing

- I) The hand wheel is clockwise when closing, then the valve stem will fall and it will make the sphere separate from the valve seat and begin to rotate. See picture a1)
- II) Continue to turn the hand wheel, the valve stem is affected by the guide finger in the spin slot which is embedded over it, and it can make the valve stem and the sphere spin 90° at the same time. See picture b1)
- III) When approaching closing, the sphere has switched 90° without touching the valve seat. See picture c1)
- IV) The last circles of the hand wheel, the surface of the angle at the bottom of the valve stem automatically wedges to the forced sphere and presses it closely on the full seal. See picture d1)



The course of closing

W(K)QT(3,9)4(6)7F (H,Y) TRACK BALL VALVE



Technical specification

Design Standard	GB	ASME
Face to Face	JB/T 7745 GB/T 12221	ASME B16.10
Flanged Size	GB/T 9113, JB/T 79	ASME B16.5 MSS SP44
Butt welding End	GB/T 12224	ASME B16.25
Test and Inspection	JB/T 9092	API 598

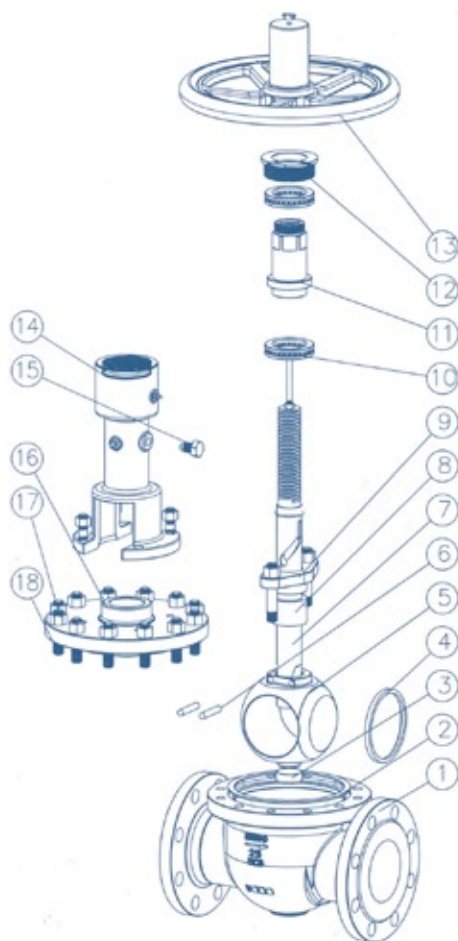
*Notes: The sizes of serial valve connecting flange and butt-welding end can be designed according to customer's requirement.

No.	Part name	Material	
		GB	ASTM
1	Body	WCB	A216-WCB
2	Machine screw	Graphite+stainless steel	Graphite+stainless steel
3	Bushing	Nikealium+PTFE	Nikealium+PTFE
4	Sealing ring	PTFE, STEEL	PTFE, STEEL
5	Ball	WCB+HCr/STL	WCB+HCr/STL
6	Pin	1Cr13	A276-410
7	Stem	1Cr13	A182-F6a
8	Packing	Flexible Graphite	Flexible Graphite
9	Gland	WCB	A276-WCB
10	Bearing	Assembled	
11	Stem nut	ZA19-4	A439-D2C
12	Cover	35	ANSI C1036
13	Hand wheel	QT400-17	QT400-17
14	Yoke	WCB	A276-WCB
15	Fitting pin	1Cr13	A276-410
16	Bonnet	WCB	A276-WCB
17	Nut	35	A194-2H
18	Bolt	35CrMoA	A193-B7

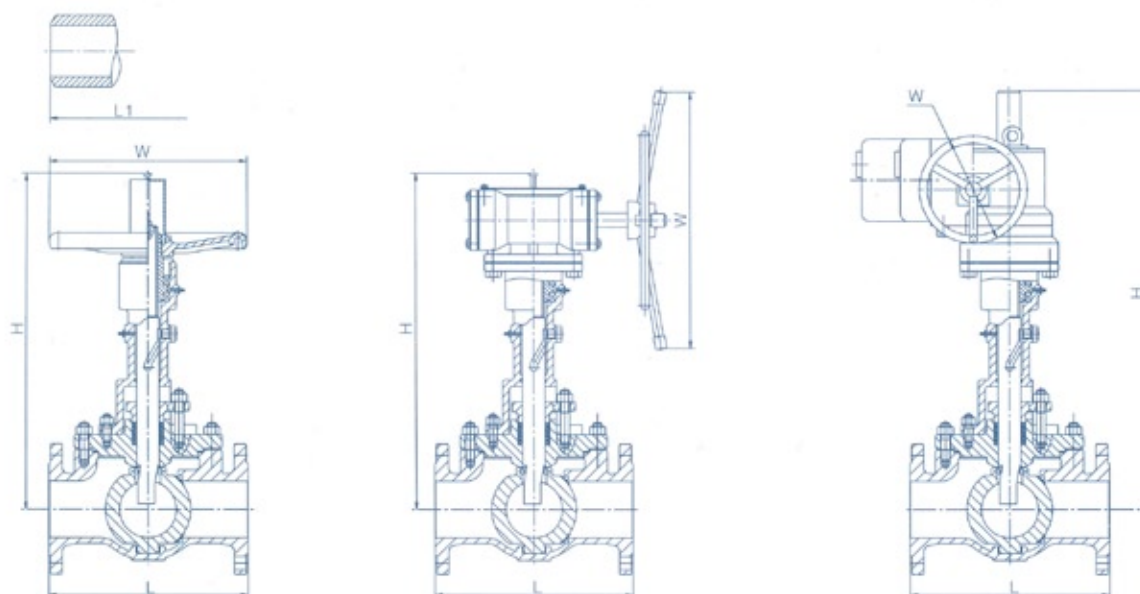
Notes: * The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9) ASTM (A276-321)

** The material of this part about the anti-sulphur type valve is GB(1Cr18Ni9, CF8+Ni.P), ASTM(182-304, CF8+Ni.P)

Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



W(K)QT(3, 9)4(6)7F (H, Y) TRACK BALL VALVE

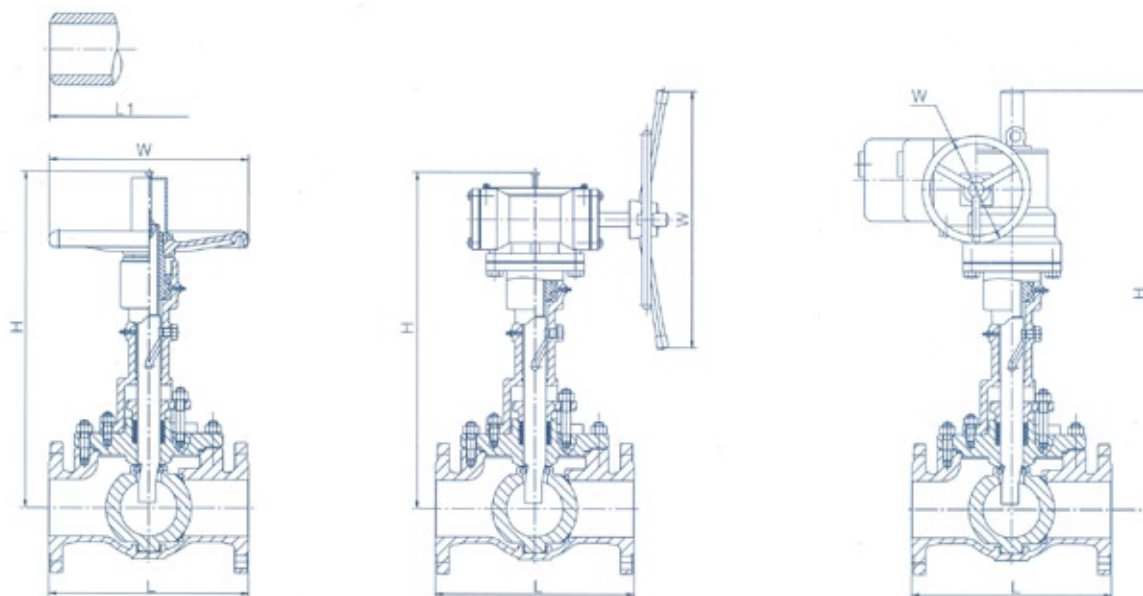


Size and weight

PN4.0MPa CLASS 300

Nominal Size		Class 300	PN4.0MPa		Hand-Operated			Driving of Worm Gear				Electric Driving			
DN	NPS	L/L1	L	L1	H	W	Kg	H	W	Device of Worm Gear	Kg	H	W	Electric Driving Device	Kg
15	1/2	140	130	140	310	180	7	-	-	-	-	215	200	SMC-04	47
20	1/4	152	150	152	325	180	9	-	-	-	-	235	200	SMC-04	49
25	1	165	160	165	345	200	13	420	200	O (Type)	225	250	500	SMC-03	53
32	1 1/4	178	180	178	360	200	18	440	200	O (Type)	32	300	305	SMC-00	60
40	1 1/2	190	200	190	380	200	28	455	200	O (Type)	40	305	305	SMC-00	70
50	2	216	230	216	385	200	30	465	200	O (Type)	55	585	460	ZA2-10	72
65	2 1/2	241	290	241	393	300	45	480	300	A (Type)	70	650	460	ZA2-10	89
80	3	283	310	283	402	300	66	500	300	A (Type)	85	775	460	ZA2-20	110
100	4	305	350	305	510	300	78	510	300	A (Type)	105	795	460	ZA2-20	122
150	6	403/457	480	457	690	400	152	680	400	B (Type)	185	895	460	ZA25-40	217
200	8	502/521	600	521	785	500	230	820	400	B (Type)	280	900	460	ZA3-30	295
250	10	568/559	730	559	995	600	375	910	400	B (Type)	410	973	460	ZA25-40	440
300	12	648/635	850	635	1183	600	446	1090	600	C (Type)	480	1135	460	ZA3-90	551
350	14	762	980	762	1254	650	795	1370	600	C (Type)	850	1302	460	ZA3-120	900
400	16	838	1100	838	1565	650	950	1430	600	C (Type)	1020	1514	460	ZA4-160	1090
450	18	914	1200	914	1637	700	1130	1450	800	D (Type)	1210	1534	460	ZA4-240	1270
500	20	991	1250	991	1705	700	1270	1840	800	D (Type)	1350	1625	458	SMC-2	1410
600	24	1143	1450	1143	1883	800	1713	1870	800	DA (Type)	1780	1686	458	SMC-2	1881
700	28	1346	1346	1346	2108	800	2650	2130	800	DA (Type)	2550	1780	610	SMC-3	2830
800	32	1524	1524	1524	-	-	2720	-	-	-	-	1940	610	SMC-4	2950
900	36	1727	1727	1727	-	-	2850	-	-	-	-	2320	610	SMC-4	3100

W(K)QT(3, 9)4(6)7F (H, Y) TRACK BALL VALVE

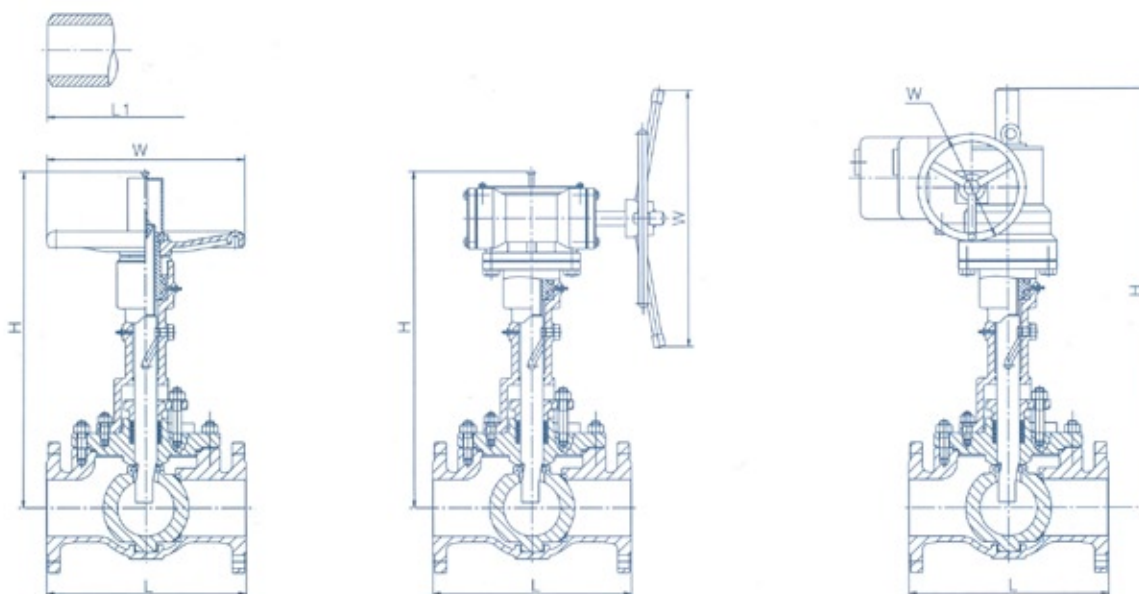


Size and weight

PN6.4MPa CLASS 400

Nominal Size		L	L1	Hand-Operated			Driving of Worm Gear				Electric Driving			
DN	NPS			H	W	Kg	H	W	Device of Worm Gear	Kg	H	W	Electric Driving Device	Kg
15	1/2	165	165	320	200	8	390	200	O (Type)	25	215	500	SMC-03	48
20	1/4	190	190	340	200	11	415	200	O (Type)	30	240	500	SMC-03	51
25	1	216	216	360	200	16	435	200	O (Type)	45	250	500	SMC-03	56
32	1 1/4	229	229	370	250	21	455	200	O (Type)	50	300	305	SMC-00	61
40	1 1/2	241	241	395	300	33	465	200	O (Type)	62	305	305	SMC-00	73
50	2	292	292	430	300	36	501	200	A (Type)	68	585	460	ZA2-10	78
65	2 1/2	330	330	465	400	54	535	300	A (Type)	85	650	460	ZA2-20	96
80	3	356	356	515	500	79	575	300	A (Type)	98	775	460	ZA2-20	123
100	4	406	406	572	600	80	625	400	B (Type)	112	800	460	ZA2-30	124
150	6	495	495	773	600	174	790	400	B (Type)	215	895	460	ZA25-40	239
200	8	597	597	967	650	222	900	400	B (Type)	360	900	460	ZA25-40	387
250	10	673	673	1225	650	323	1090	600	C (Type)	425	970	460	ZA3-60	525
300	12	762	762	1350	700	435	1350	600	C (Type)	580	1135	460	ZA3-120	675
350	14	826	826	1490	700	954	1490	600	C (Type)	975	1305	460	ZA3-120	1094
400	16	902	902	1590	750	1140	1640	800	D (Type)	1280	1515	460	ZA4-240	1316
450	18	978	978	1720	750	1355	1740	800	D (Type)	1420	1585	460	ZA4-240	1534
500	20	1054	1054	1805	800	1524	1930	800	DA (Type)	1690	1625	610	SMC-3	1740
600	24	1232	1232	1945	800	2055	2005	800	DA (Type)	2150	1710	610	SMC-3	2225
700	28	1397	1397	2180	800	2740	2180	800	DB (Type)	2880	1815	610	SMC-3	2950
800	32	1651	1651	-	-	2880	-	-	-	-	1975	610	SMC-4	3120
900	36	1880	1880	-	-	3100	-	-	-	-	2370	610	SMC-4	3350

W(K)QT(3, 9)4(6)7F (H, Y) TRACK BALL VALVE

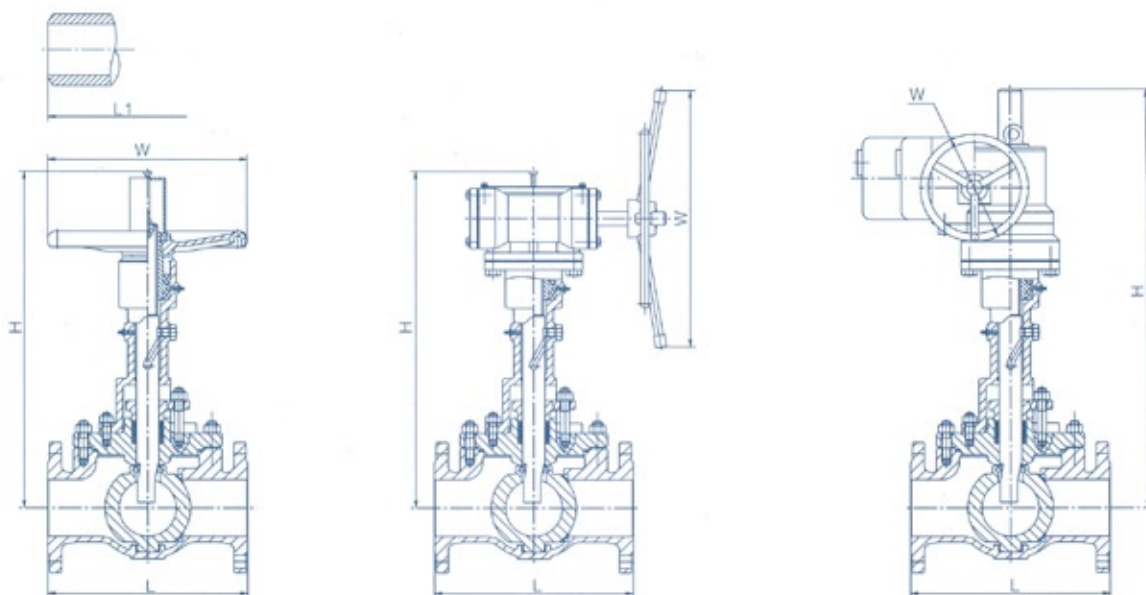


Size and weight

PN10.0MPa CLASS 600

Nominal Size		L	L1	Hand-Operated			Driving of Worm Gear				Electric Driving			
DN	NPS			H	W	Kg	H	W	Device of Worm Gear	Kg	H	W	Electric Driving Device	Kg
15	1/2	165	165	320	200	10	390	200	O (Type)	25	230	500	SMC-03	50
20	1/4	190	190	340	200	13	415	200	O (Type)	35	250	500	SMC-03	53
25	1	216	216	360	200	26	435	200	O (Type)	48	300	305	SMC-00	66
32	1 1/4	229	229	370	250	28	455	200	O (Type)	59	305	305	SMC-0	70
40	1 1/2	241	241	395	300	52	465	200	O (Type)	76	585	305	SMC-0	94
50	2	292	292	430	300	60	501	300	A (Type)	85	650	460	ZA2-20	104
65	2 1/2	330	330	465	400	86	535	300	A (Type)	115	725	460	ZA2-20	130
80	3	356	356	515	500	103	575	300	A (Type)	127	800	460	ZA2-30	147
100	4	432	432	572	600	110	625	400	B (Type)	148	835	460	ZA2-30	175
150	6	559	559	773	600	287	790	400	B (Type)	325	895	460	ZA3-60	392
200	8	660	660	967	650	520	900	400	B (Type)	602	900	460	ZA2-60	625
250	10	787	787	1225	650	770	1090	600	C (Type)	890	970	460	ZA3-90	910
300	12	838	838	1350	700	910	1350	600	C (Type)	980	1135	460	ZA4-160	1090
350	14	889	889	1490	700	1045	1490	600	C (Type)	1180	1305	460	ZA4-160	1225
400	16	991	991	1590	750	1880	1640	800	D (Type)	1980	1515	460	ZA4-240	2060
450	18	1092	1092	1720	750	2050	1740	800	D (Type)	2090	1585	458	SMC-2	2150
500	20	1194	1194	1805	800	2230	1930	800	DA (Type)	2320	1625	610	SMC-3	2420
600	24	1397	1397	1945	800	2580	2005	800	DA (Type)	2680	1710	610	SMC-3	2710
700	28	1549	1549	2180	800	2910	2180	800	DB (Type)	3150	1815	610	SMC-4	3120
800	32	1778	1778	-	-	3050	-	-	-	-	1975	610	SMC-4	3300
900	36	2083	2083	-	-	3300	-	-	-	-	2370	610	SMC-4	3480

W(K)QT(3, 9)4(6)7F (H, Y) TRACK BALL VALVE



Size and weight

PN15.0MPa CLASS 900

Nominal Size		L	L1	Hand-Operated			Driving of Worm Gear				Electric Driving			
DN	NPS			H	W	Kg	H	W	Device of Worm Gear	Kg	H	W	Electric Driving Device	Kg
25	1	254	254	387	250	13	435	200	C (Type)	45	300	305	SMC-00	66
32	1 1/4	279	279	400	250	26	490	200	O (Type)	68	305	305	SMC-0	80
40	1 1/2	305	305	457	250	63	505	200	O (Type)	95	585	305	SMC-0	103
50	2	368	368	480	300	74	560	300	A (Type)	102	650	460	ZA2-20	116
65	2 1/2	419	419	500	300	108	590	300	A (Type)	127	775	460	ZA2-20	152
80	3	381	381	560	360	129	610	300	A (Type)	146	800	460	ZA2-30	173
100	4	457	457	575	400	138	690	400	B (Type)	182	835	460	ZA2-30	200
150	6	610	610	780	450	372	705	400	B (Type)	415	895	460	ZA3-60	478
200	8	737	737	980	500	650	930	600	C (Type)	720	900	460	ZA2-60	790
250	10	838	838	1170	550	960	1130	600	C (Type)	1020	920	460	ZA3-90	1143
300	12	965	965	1330	550	1021	1330	800	D (Type)	1120	1135	460	ZA4-160	1200
350	14	1029	1029	1520	600	1250	1480	800	D (Type)	1370	1305	460	ZA4-160	1430
400	16	1130	1130	1730	650	1430	1710	800	DA (Type)	1510	1585	460	ZA4-240	1610
450	18	1219	1219	1840	700	1625	1920	800	DA (Type)	1720	1625	456	SMC-2	1790
500	20	1321	1321	1920	800	1750	2080	800	DB (Type)	1890	1710	610	SMC-3	1940

THREE WAYS BALL VALVE

Products Design Features

The three ways ball valve is divided into two types: T shape and L shape. The latter can connect the two vertical pipes; The former can be applied to the distributary, inter flow and switching, the pore canal of the T shape can connect the three passes or the two passes of the three. The three ways ball valve usually uses the construction of the two valve seat and it can also use the construction of the four valve seat according to the user's demands. In this installation, any entrance can be used as inlet which will not leak in any case. The seal construction has two constructions: soft seal and metal seal which can be applied to different industrial and mineral conditions accordingly.

Products specification

Serial models		WQ44、WQ644、WQ944 WQ45、WQ645、WQ945	
Class		PN1.6 ~ 4.0MPa	Class 150 ~ 300
Size		DN15 ~ 300mm	1/2" ~ 12"
Driving manner and scope of application	Wrench	PN1.6 ~ 4.0MPa	Class 150 ~ 300
		DN15 ~ 300mm	1/2" ~ 12"
	Air Operated	PN1.6 ~ 4.0MPa	Class 150 ~ 300
		DN15 ~ 300mm	1/2" ~ 12"
	Electric	PN1.6 ~ 4.0MPa	Class 150 ~ 300
		DN80 ~ 300mm	3" ~ 12"

Notes: Our Company can provide products at customer's request.

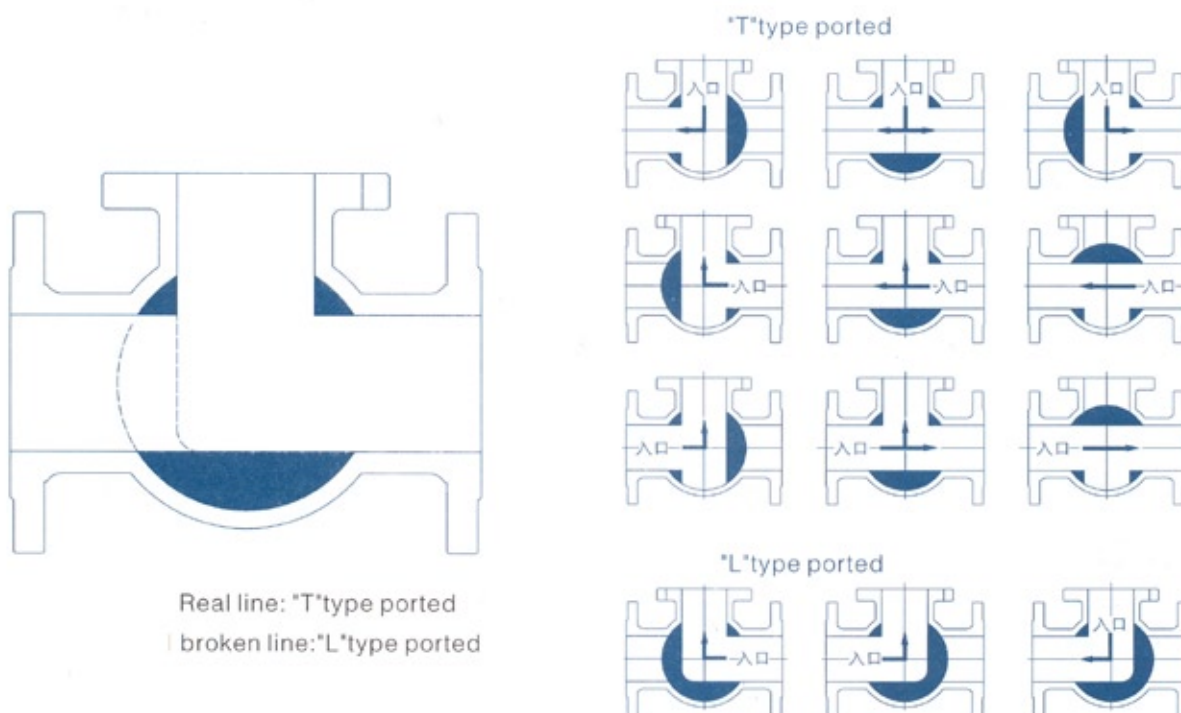
Products Performance specification

Pressure		1.6~5.0MPa	Class 150~300
Test pressure (Mpa)	Shell test	1.5 × PN	< PN
	Sealing test	1.1 × PN	< PN
Working temperature		-196℃~+330℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

Note: PN is requested pressure for the body material under the 38℃.

THREE WAYS BALL VALVE

Diagram of medium circulation of the three ways ball valve



Three ways ball valve torque form (N.m)

(MPa) Pressure	(mm) Size	15	20	25	40	50	65	80	100	125	150	200	250	300
PN 1.6		5	8	15	24	35	75	100	180	350	500	730	1210	1950
PN 2.5		5	8	16	27	45	90	120	210	450	600	1000	1600	2800
PN 4.0		8	15	36	50	75	145	220	350	650	850	1450	2400	4200

Notes: The data in the form are not practically mensurated, and just for reference.

(MPa) Pressure	(mm) Size	1/2	3/4	1	1½	2	2½	3	4	5	6	8	10	12
Class 150		5	8	16	24	38	75	95	185	380	600	1050	1650	2625
Class 300		8	18	38	58	90	180	240	420	900	1425	2300	3000	4950

Notes: The data in the form are not practically mensurated, and just for reference.



WQ(3, 6, 9) 44(5) (N, P) THREE WAYS BALL VALVE

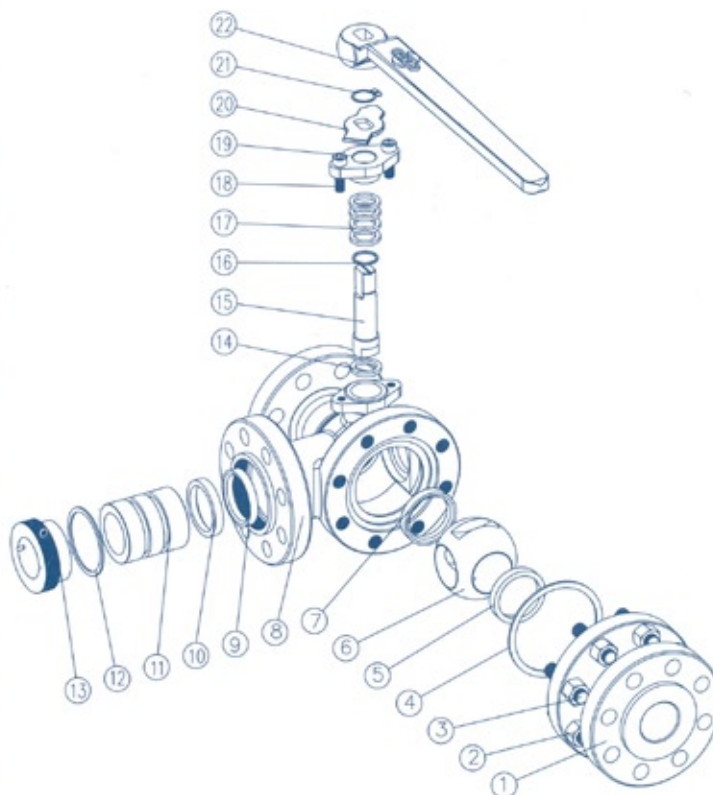
Technical specification

Design Reference	GB	ASME
Design Standard	GB/T 12237	ASME B16.34
Face to Face	GB/T 12221	ASME B16.10
Flanged Ends	JB/T 79	ASME B16.5
Test and Inspection	JB/T 9092	API 598

*Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

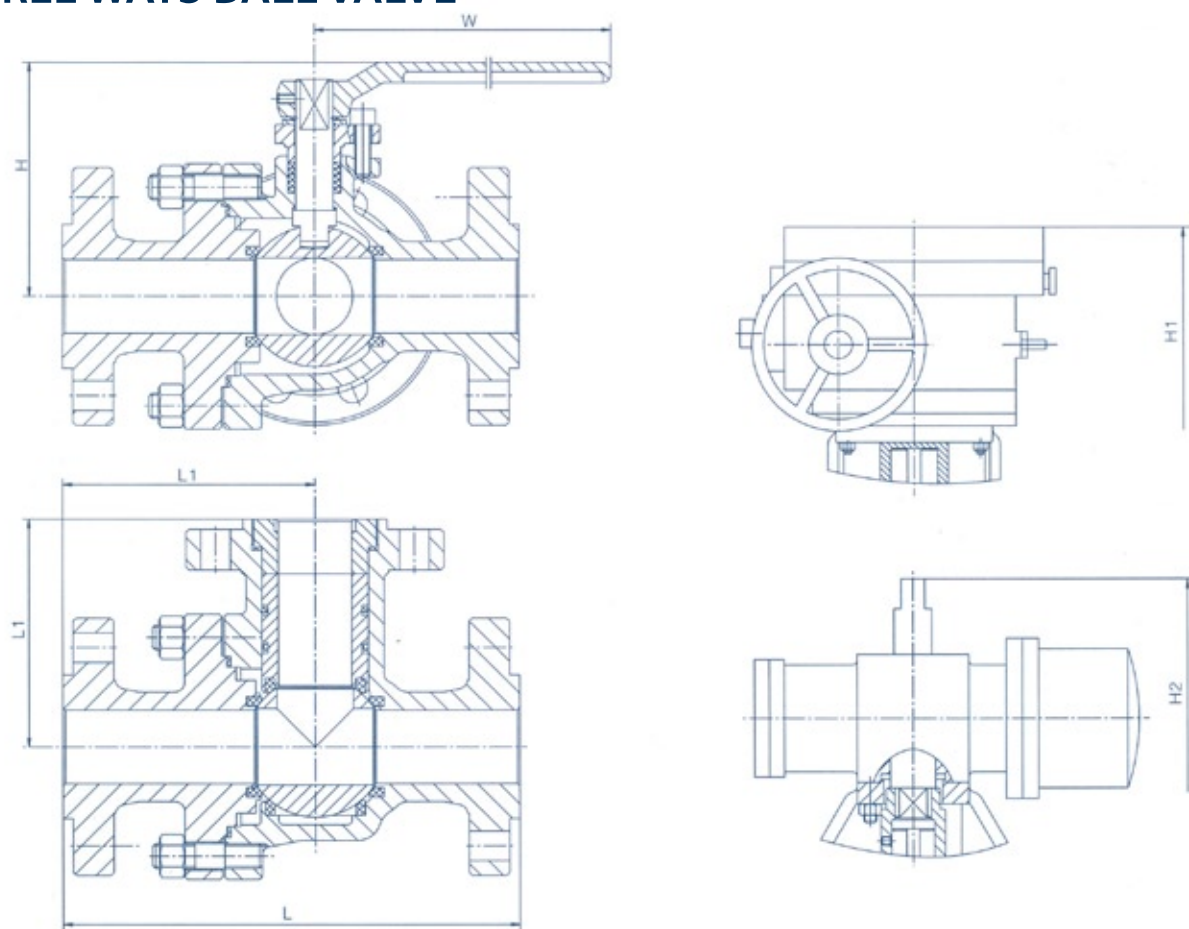
Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Bonnet	WCB	A216-WCB
2	Nut	35	A194-2H
3	Bolt	35CrMoA	A193-B7
4	Gasket	Graphite + stainless steel	Graphite+ stainless steel
5	Sealing ring	PTFE	PTFE
6	Ball	25+ENP	A105+ENP
7	Sealing ring	PTFE	PTFE
8	Body	WCB	A216-WCB
9	Sealing ring	PTFE	PTFE
10	Sealing ring	PTFE	PTFE
11	Seat	25	A105
12	"O" Ring	Viton	Viton
13	Nut	25	A105
14	Packing seat	1Cr13	A276-410
15	Stem	1Cr13	A182-F6a
16	Gasket	PTFE	PTFE
17	Packing	Flexible Graphite	Flexible Graphite
18	Screw nail	35CrMoA	A193-B7
19	Gland	WCB	A216-WCB
20	Locating piece	Q235A	Carbon steel
21	Ring	65Mn	AISI 1566
22	Wrench	KT330-08	A47-667 32510



Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

WQ(3, 6, 9) 44(5) (N, P) THREE WAYS BALL VALVE



Main size of outside									PN1.6~4.0MPa			CLASS150~300		
DN(mm)	15	20	25	40	50	65	80	100	125	150	200	250	300	
NPS(in)	1/2	3/4	1	1½	2	2½	3	4	5	6	8	10	12	
L	140	165	165	250	260	320	320	370	510	510	580	670	720	
L1	70	83	83	125	130	160	160	185	255	255	290	335	360	
Hand Operated	H	64	84	84	152	157	183	183	195	355	355	430	475	550
	W	130	160	200	500	500	600	600	700	850	850	1000	1000	1000
	Kg	3.5	4.5	6.8	10.5	14.2	22.1	28.5	49.5	58.4	65.2	75.8	95.2	125
Electric Driving	H1	—	—	—	—	—	—	546	558	718	742	817	878	946
	Electric Driving Device	—	—	—	—	—	—	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1	Q120-1
Air- Operating	H2	215	235	260	328	400	427	488	500	660	756	831	952	1020
	Air-Operating Device	AG09	AG09	AG13	AG13	AW13	AW13	AW13	AW17	AW17	AW20	AW20	AW28	AW28

JACKETED BALL VALVE

Products Design Features

The series of the jacketed ball valves are mainly applied to petroleum, chemical industry, metallurgy, pharmacy, etc., used to deliver the high viscous medium which will be solidified easily, under the ordinary temperature. The jacket of the jacketed ball valve is welded between two flanges of the valve, and there are jacketed connections on the side and bottom. The size of the connecting flange of the valve is two norms bigger than the normal ball valve of the same norm, because adding the jacket, but the length of the construction is same, and the surface connecting type divides into Flange and Wafer. The vapour and other keep warming mediums can be flowed freely, thus to ensure that the ropy medium flows through the valve smoothly.

Products specification

Serial models		WQ43、WQ643、WQ943 WQ73、WQ673、WQ973	
Class		PN1.6 ~ 4.0MPa	Class 150 ~ 300
Size		DN15 ~ 200mm	1/2" ~ 8"
Driving manner and scope of application	Wrench	PN1.6 ~ 4.0MPa	Class 150 ~ 300
		DN15 ~ 200mm	1/2" ~ 8"
	Air Operated	PN1.6 ~ 4.0MPa	Class 150 ~ 300
		DN15 ~ 200mm	1/2" ~ 8"
	Electric	PN1.6 ~ 4.0MPa	Class 150 ~ 300
		DN80 ~ 200mm	3" ~ 8"

Notes: Our Company can provide products at customer's request.

Products Performance specification

Pressure		1.6~5.0MPa	Class 150~300
(Mpa) Test pressure	Shell test	1.5 x PN	
	Sealing test	1.1 x PN	
	Jacketed test	0.6~1.5MPa	
Working temperature		-196℃~+180℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

Note: PN is requested pressure for the body material under the 38℃.

WQJ(3, 6, 9) 41F(N, P) FLANGED CONNECTION JACKETED BALL VALVE

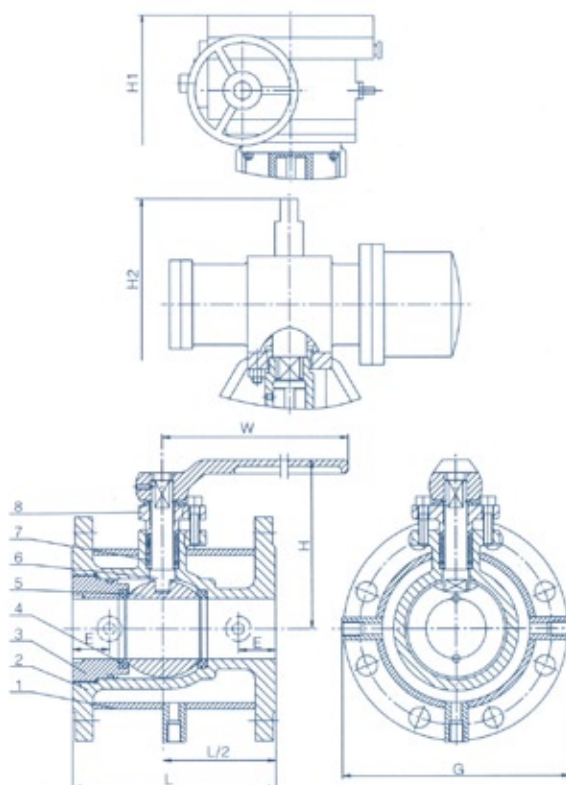
Technical specification

Design Standard	GB/T 12224	ASME B16.34
Face to Face	GB/T 12221	ASME B16.10
Flanged Ends	GB/T 9113 JB/T 79	ASME B16.5
Driving Manner	Wrench operated, Electric driving, Air operated	
Test and Inspection	GB/T 13927 JB/T 9092	API 598

*Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Jacket	25	A105
2	Body	WCB	A216-WCB
3	Seat	25	A105
4	Sealing ring	PTFE, RTFE, PTFE, RTFE, nylon, polyphenylene	
5	Ball	25+ENP	A105+ENP
6	Stem	1Cr13	A182-F6a
7	Packing	Flexible Graphite	Flexible Graphite
8	Gland	WCB	A216-WCB



Notes: Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.

Main size of outside						PN1.6~4.0MPa		CLASS150~300	
DN(mm)	15	20	25	40	50	80	100	150	200
NPS(in)	1/2	3/4	1	1 1/2	2	3	4	6	8
The norm of the flange	15/40	20/40	25/50	40/65	50/80	80/150	100/200	150/250	200/350
L	110	117	127	165	178	229	254	292	330
E	58.5	58.5	63.5	62.5	68	82	83	95	100
G	147	147	156	181	218	275	300	403	492
H	101	101	106	125	135	193	265	355	410
Hand Operated	W	130	160	160	230	230	400	700	1100
	H1	-	-	-	-	643	715	848	903
Electric Driving	Electric Driving Device	-	-	-	-	Q60-1	Q60-1	Q120-1	Q120-1
	H2	285	285	305	330	345	440	470	710
Air-Operating	Air-Operating Device	AG06	AG06	AG09	AG09	AG13	AG13	AW13	AW17
								AW17	AW17

WQJ(6, 9) 71F(N, P) WAFFER TYPE JACKETED BALL VALVE

Technical specification

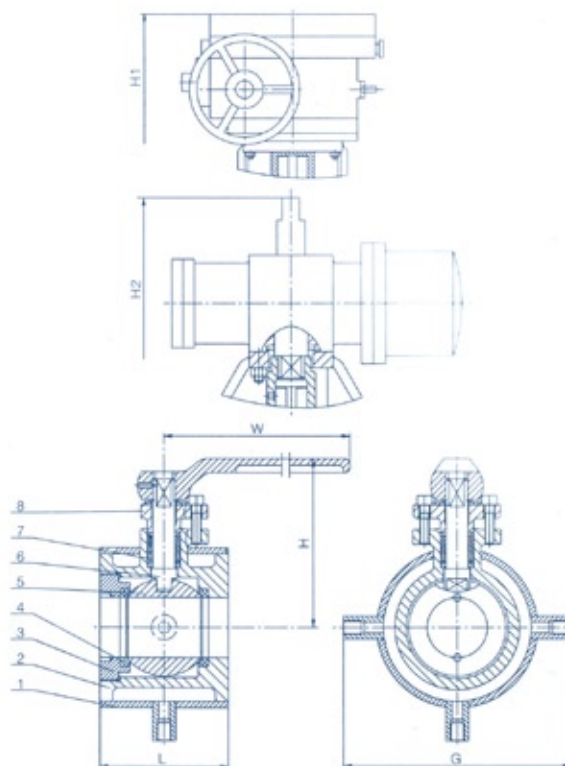
Design Standard	GB/T 12224	ASME B16.34
Face to Face	Wafer type	
Flanged Ends	GB/T 9113 JB/T 79	ASME B16.5
Driving Manner	Wrench operated, Electric driving, Air operated	
Test and Inspection	GB/T 13927 JB/T 9092	API 598

*Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Jacket	25	A105
2	Body	WCB	A216-WCB
3	Seat	25	A105
4	Sealing ring	PTFE, RTFE, PTFE, RTFE, nylon, polyphenylene	
5	Ball	25+ENP	A105+ENP
6	Stem	1Cr13	A182-F6a
7	Packing	Flexible Graphite	Flexible Graphite
8	Gland	WCB	A216-WCB

Notes: Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



Main Size of outside						PN1.0~4.0MPa		CLASS150~300	
DN(mm)	15	20	25	40	50	80	100	125	150
NPS(in)	1/2	3/4	1	1½	2	3	4	5	6
The norm of the piping flange									
L	50	55	60	80	90	120	140	160	180
G	110	117	127	165	178	229	254	292	330
Hand Operated	H	101	101	106	125	135	193	265	355
	W	130	160	160	230	230	400	700	1100
Electric Driving	H1	—	—	—	—	—	643	715	848
	Electric Driving Device	—	—	—	—	—	Q60-1	Q60-1	Q120-1
Air- Operating	H2	285	295	305	330	345	440	470	670
	Air-Operating Device	AG06	AG06	AG09	AG09	AG13	AG13	AW13	AW17

THREADED ENDS BALL VALVE

Products design features

The series of the thread ends ball valves are mainly used in the equipment for sea prospecting, which takes helium as medium, and also applied to the system which takes water, oil, acid and etc. as medium, for cutting of or releasing the gas or liquid.

The main features of construction

1. Compact construction, light weight, little flow resistance.
2. Quick start and stop, excellent seal performance.
3. The type of construction divided into one-sided type, two-sided type, three-sided type, and the parts can be maintained and changed conveniently.
4. Two sides are connected with pipe by internal and outer thread screw. Installed quickly.
5. Can provide different type of connecting ends on the right or left side, according to user's demand.
6. Can set up the corresponding electric or pneumatic installations for remote control or automatic control, according to user's demand.

Technical specification

Face to face	Internal thread screw connecting	GB/T 15188.3
	Outer thread screw connecting	GB/T 7073
Internal thread screw connecting end		GB/T 15188.4
Outer thread screw connecting end		JB/T 9092
Test and Inspection		JB/T 1752、JB/T 1754、JB/T 1755

Products Performance specification

No.	Accessory name	Material	
		GB	ASTM
1	Body	WCB、CF8、CF8M、CF3、CF3M	A216-WCB、A351-CF8、CF8M、CF3、CF3M
2	Bonnet	WCB、CF8、CF8M、CF3、CF3M	A216-WCB、A351-CF8、CF8M、CF3、CF3M
3	Ball	1Cr13、0Cr18Ni9、1Cr18Ni12Mo2Ti	A276-410、304、316、304L、316L
4	Stem	1Cr13、0Cr18Ni9、1Cr18Ni12Mo2Ti	A276-410、304、316、304L、316L
5	Sealing ring	PTFE、nylon、polyphenylene	PTFE、nylon、polyphenylene

Notes: Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.

Form of Major Parts Materials

Pressure		1.6~25.0MPa	Class 150~1500
Test pressure (Mpa)	Shell test	1.5 × PN	
	Sealing test	1.1 × PN	
Working temperature		-196℃~+300℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

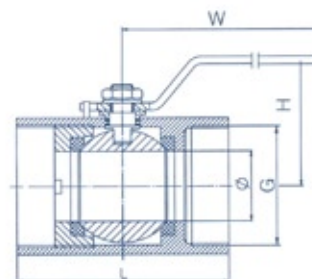
Note: PN is requested pressure for the body material under the 38℃.

WQ1(2)1F (N, P) THREADED ENDS BALL VALVE

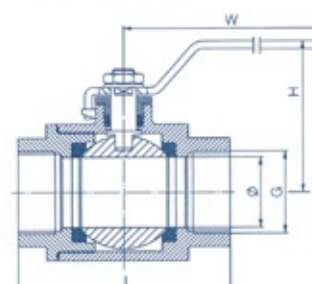
Main size of outside Internal thread screw connecting PN1.6~4.0MPa

DN	One-side type							Two-side type						
(mm)	Φ	G	L	W	H	Kg		Φ	G	L	W	H	Kg	
6	4.2	1/4	40	80	22	0.2		10	1/4	55	95	42	0.25	
10	6	3/8	45	80	26	0.2		10	3/8	55	95	42	0.3	
15	8	1/2	57	88	31	0.3		15	1/2	64	108	51	0.4	
20	12	3/4	60	88	34	0.4		20	3/4	75	115	58	0.55	
25	15	1	72	105	38	0.6		25	1	85	135	77	1.0	
32	19	1 1/4	79	105	43	1.1		32	1 1/4	102	150	83	1.6	
40	24	1 1/2	85	124	50	1.5		38	1 1/2	108	175	97	2.3	
50	32	2	101	124	57	2.8		50	2	124	190	106	3.3	
65	-	-	-	-	-	-		65	2 1/2	163	220	122	6.0	
80	-	-	-	-	-	-		80	3	185	250	133	9.8	

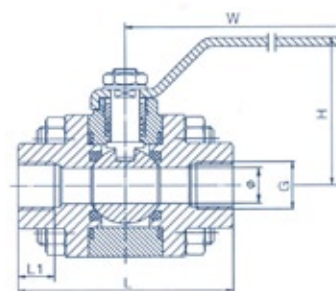
DN	Three-side type						
(mm)	Φ	G	L	L1	W	H	Kg
10	12	3/8	65	12	95	46	0.34
15	15	1/2	75	14	110	46	0.47
20	20	3/4	85	16	110	54	0.68
25	25	1	90	18	140	65	1.2
32	32	1 1/4	112	20	140	69	1.9
40	38	1 1/2	120	22	155	76	2.7
50	50	2	145	24	180	86	3.9
65	65	2 1/2	170	28	220	120	7.1
80	80	3	200	32	260	150	11.5



One-side type



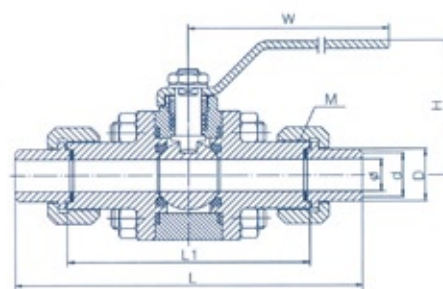
Two-side type



Three-side type

Main size of outside Outer thread screw connecting PN1.6~4.0MPa

DN	Outer thread screw connecting								
(mm)	Φ	d	D	L	L1	W	M	H	Kg
6	8	10	14	150	85	96	20×1.5	57	0.5
10	10	12	18	150	85	96	24×1.5	57	0.71
15	15	17	22	175	108	110	30×2	68	1.21
20	20	22	28	190	120	120	36×2	70	1.45
25	25	27	33	200	132	135	42×2	80	1.92
32	32	34	40	230	158	160	52×2	84	2.4



Outer thread screw connecting

WAFER TYPE BALL VALVE

Products Design Features

The series of the wafer type ball valves can be applied to petroleum, chemical industry, metallurgy, pharmacy, food, etc, used to block or connect the medium in the pipe. The wafer type ball valve divides into normal type and thin type, by its length of construction. The series of the thin types are the improved products, designed and developed by ourselves, which combine the advanced technology of abroad with the feature of the normal type, according to user's demand. Compared with other ball valves, the main characters of construction of the wafer type ball valve are: with one-sided, and compact construction, small volume, light weight, well-sealed, non-limitation of medium direction, little flow resistance, quick start and stop convenient operation. And it is possible for the normal type to set up the corresponding electric or pneumatic installations, for remote control or automatic control, according to user's demand.

Products specification

Serial models	WQ71、WQ671、WQ971	WQ7b1
Pressure	PN1.6~2.5MPa、Class 150	PN1.6~4.0MPa
Size	DN15~100mm、1/2"~4"	DN10~200
Driving manner and scope of application	Wrench operated、Air operated & Electric driving	Wrench operated

Notes:Our Company can provide products at customer's request.

Products Performance specification

Pressure	1.6~25.0MPa	Class 150~1500
(Mpa)		
Test pressure	Shell test	1.5 × PN
	Sealing test	1.1 × PN
	Working temperature	-196°C~+300°C
	Working medium	Water, oil, natural gas, corrosive medium, etc.

Note: PN is requested pressure for the body material under the 38°C.

WQ(6, 9) 71F (N, P) WAFFER TYPE BALL VALVE

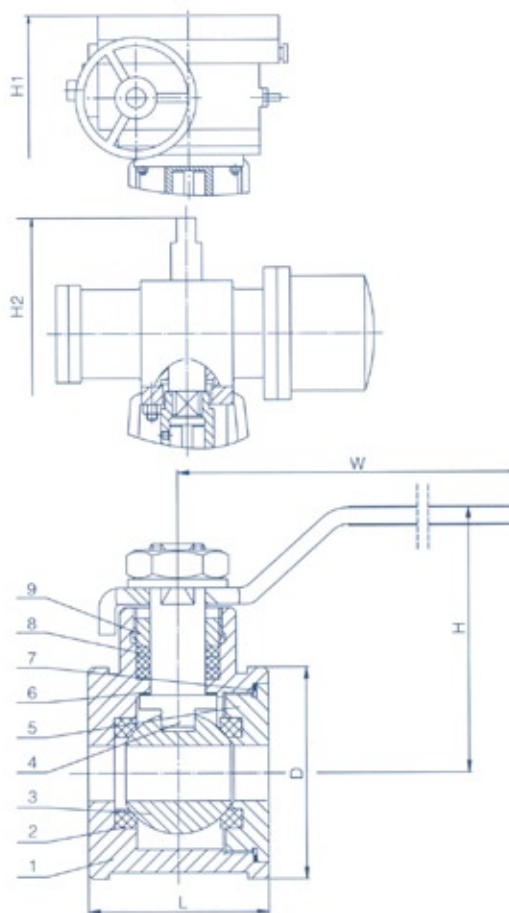
Technical specification

Structure Form	Wafer type	
Flanged Ends	GB/T 9113 JB/T 79	ASME B16.5
Driving Manner	Wrench, Electro driving, Air operated	
Test and Inspection	GB/T 13927 JB/T 9092	API 598

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Body	CF8	A351-CF8
2	Sealing ring	PTFE PTFE, nylon, polyphenylene	
3	Ball	0Cr18Ni9+ENP	A182 F304+ENP
4	Stem	0Cr18Ni9	A182-F304
5	Seat	0Cr18Ni9	A182-F304
6	Gasket	PTFE	
7	Gasket	Graphite+stainless steel	
8	Packing	Flexible Graphite	Flexible Graphite
9	Stuffing cover	0Cr18Ni9	A276-304

Notes: Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.



Main Size of outside				PN1.0~2.5MPa				CLASS150	
DN(mm)	15	20	25	32	40	50	65	80	100
NPS(in)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
L	40	45	50	60	70	80	110	120	140
	PN1.0, 1.6MPa	53	63	73	84	94	109	129	144
	PN2.5MPa	53	63	73	84	94	109	129	144
	PN2.0MPa, Class150	47	57	66	75	85	103	122	135
D	H	82	82	104	113	122	132	144	155
	W	140	180	180	200	200	250	300	350
Hand Operated	H1	324	323	345	354	363	373	385	455
	Electric Driving Device	Q45-1	Q45-1	Q45-1	Q45-1	Q60-1	Q60-1	Q60-1	Q60-1
	H2	228	230	238	263	275	284	365	382
	Air-Operating Device	AG06	AG06	AG09	AG09	AG09	AG13	AG13	AG13
Air- Operating									AW17

WQ7b1F (N, P) WAFER TYPE THIN BALL VALVE

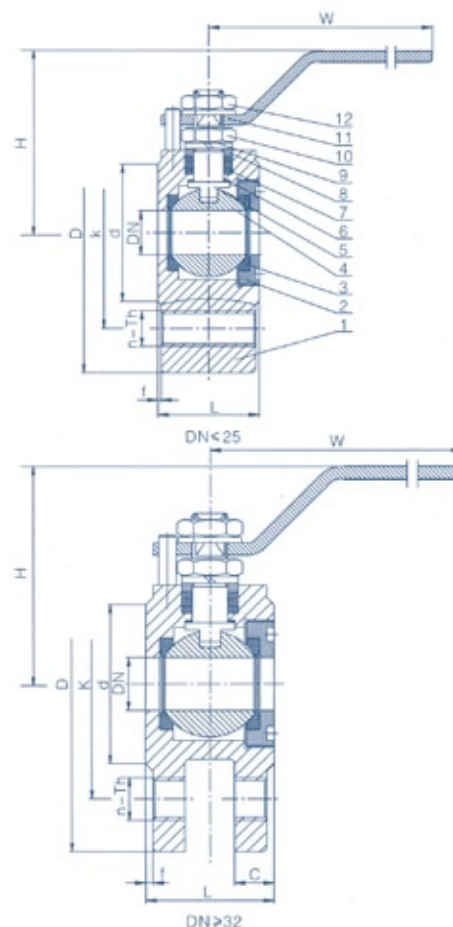
Technical specification

Structure Form	Wafer type	
Flanged Ends	GB/T 9113 JB/T 79	ASME B16.5
Driving Manner	Wrench	
Test and Inspection	GB/T 13927 JB/T 9092	API 598

Form of Major Parts Materials

No.	Part name	Material	
		GB	ASTM
1	Body	CF8	A351-CF8
2	Seat	0Cr18Ni9	A182-F304
3	Sealing ring	PTFE, PTFE, nylon, polyphenylene	
4	Ball	0Cr18Ni9+ENP	A182-F304+ENP
5	Stem	0Cr18Ni9	A182-F304
6	Gasket	PTFE	
7	Packing	Flexible Graphite	
8	Stuffing cover	0Cr18Ni9	A276-304
9	Spring lock washers	0Cr18Ni9	A276-304
10	Lock nut	0Cr18Ni9	A276-304
11	Wrench	0Cr18Ni9	A182-F304
12	Pin	0Cr18Ni9	A276-304

Notes: Major parts of the valve series and materials of sealing surface differ according to actual working condition and customer's special requirement.

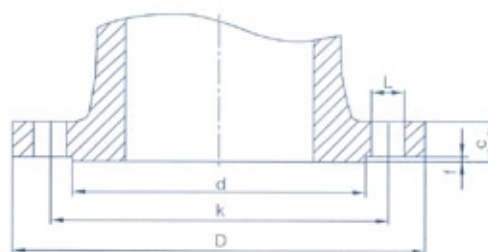


Main size of outside

PN1.6~4.0MPa

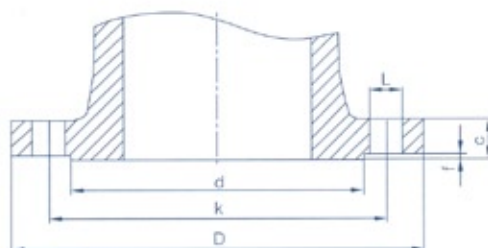
DN	L	PN1.6MPa					PN2.5MPa					PN4.0MPa					f	H	W
		D	K	d	C	n-Th	D	K	d	C	n-Th	D	K	d	C	n-Th			
10	32	85	60	42	-	4-M12	85	60	42	-	4-M12	85	60	42	-	4-M12	2	80	150
15	32	90	65	47	-	4-M12	90	65	47	-	4-M12	90	65	47	-	4-M12	2	80	150
20	38	100	75	58	-	4-M12	100	75	58	-	4-M12	100	75	58	-	4-M12	2	85	150
25	42	110	85	68	-	4-M12	110	85	68	-	4-M12	110	85	68	-	4-M12	2	95	170
32	50	130	100	78	16	4-M16	130	100	78	16	4-M16	130	100	78	18	4-M16	2	100	180
40	60	140	110	88	16	4-M16	140	110	88	16	4-M16	140	110	88	18	4-M16	2	105	210
50	70	155	125	102	18	4-M16	155	125	102	18	4-M16	155	125	102	20	4-M16	2	115	230
65	94	180	145	125	20	4-M16	180	145	125	22	8-M16	180	145	125	22	8-M16	2	130	280
80	118	195	160	138	20	8-M16	195	160	138	24	8-M16	195	160	138	24	8-M16	2	145	300
100	140	215	180	160	22	8-M16	230	190	160	24	8-M20	230	190	160	24	8-M20	2	175	400
125	195	245	210	188	22	8-M16	270	220	188	26	8-M24	270	220	188	26	8-M24	2	190	500
150	225	280	240	212	24	8-M20	300	250	212	28	8-M24	300	250	212	28	8-M24	2	220	600
200	275	335	295	266	24	8-M22	360	310	274	30	8-M24	375	320	285	34	8-M27	2	260	700

RAISED FACE INTEGRAL STEEL PIPE FLANGE



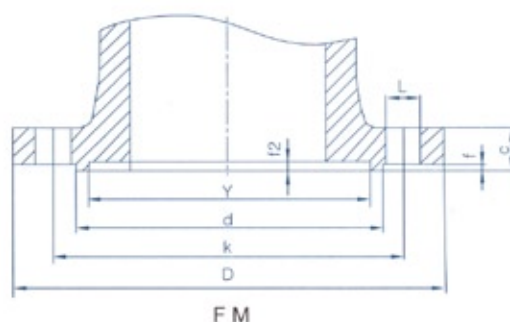
JB/T 79.1-94 PN1.6MPa											
DN Nominal size	Size ends					Sealing size		C Thickness of flange	Welding neck		
	Outside diameter of flange series1/series2	Diameter of bolt Circle	Diameter of bolt holes series1/ series2	Number of bolts	Bolt Thread series1/ series2	d	f		N _{max}	S _{max}	R
15	95	65	14	4	M12	45	2	14	39	12	4
20	105	75	14	4	M12	55	2	14	44	12	4
25	115	85	14	4	M12	65	2	14	49	12	4
32	140/135	100	18	4	M16	78	2	16	56	12	4
40	150/145	110	18	4	M16	85	3	16	64	12	4
50	165/160	125	18	4	M16	100	3	16	74	12	5
65	185/180	145	18	4	M16	120	3	18	95	15	5
80	200/195	160	18	8	M16	135	3	20	110	15	5
100	220/215	180	18	8	M16	155	3	20	130	15	5
125	250/245	210	18	8	M16	185	3	22	161	18	6
150	285/280	240	23	8	M20	210	3	24	186	18	6
(175)	310	270	23	8	M20	240	3	26	215	20	6
200	340/335	295	23	12	M20	265	3	26	240	20	6
(225)	365	325	23	12	M20	295	3	26	269	22	6
250	405	355	26/25	12	M24/M22	320	3	30	298	24	8
300	460	410	26/25	12	M24/M22	375	4	30	348	24	8
350	520	470	26/25	16	M24/M22	435	4	34	402	26	8
400	580	525	30	16	M27	485	4	36	456	28	10
450	640	585	30	20	M27	545	4	40	510	30	10
500	715/705	650	34	20	M30	608	4	44	564	32	10
600	840	770	36/41	20	M33/M36	718	5	48	672	36	10
700	910	840	36/41	24	M33/M36	788	5	50	776	38	12
800	1025/1020	950	41	24	M36	898	5	52	880	40	12
900	1125/1120	1050	41	28	M36	998	5	54	984	42	12
1000	1255	1170	42/48	28	M39/M42	1110	5	56	1084	42	12
1200	1485	1390	48/54	32	M45/M48	1325	5	58	1288	44	15
1400	1685	1590	48/54	36	M45/M48	1525	5	60	1492	46	15
1600	1930	1820	58	40	M52	1750	5	68	1704	52	15

RAISED FACE INTEGRAL STEEL PIPE FLANGE



JB/T 79.1-94 PN2.5MPa											
DN	Size ends					Sealing size		C	Welding neck		
	Nominal size	Outside diameter of flange series1/series2	Diameter of bolt Circle	Diameter of bolt holes series1/series2	Number of bolts				Thread series1/series2	d	f
15	95	65	14	4	M12	45	2	16	39	12	4
20	105	75	14	4	M12	55	2	16	44	12	5
25	115	85	14	4	M12	65	2	16	49	12	5
32	140/135	100	18	4	M16	78	2	18	62	15	5
40	150/145	110	18	4	M16	85	3	18	70	15	5
50	165/160	125	18	4	M16	100	3	20	80	15	5
65	185/180	145	18	8	M16	120	3	22	101	18	6
80	200/195	160	18	8	M16	135	3	22	116	18	6
100	230	190	23	8	M20	160	3	24	136	18	6
125	270	220	26/25	8	M24/M22	188	3	28	169	22	8
150	300	250	26/25	8	M24/M22	218	3	30	198	24	8
(175)	330	280	26/25	12	M24/M22	248	3	32	223	24	8
200	360	310	26/25	12	M24/M22	278	3	34	252	26	8
(225)	395	340	30	12	M27	302	3	36	281	28	8
250	425	370	30	12	M27	332	3	36	306	28	10
300	485	430	30	16	M27	390	4	40	360	30	10
350	555/550	490	34	16	M30	448	4	44	418	34	10
400	620/610	550	36/34	16	M33/M30	505	4	48	472	36	10
450	670/660	600	36/34	20	M33/M30	555	4	50	522	38	12
500	730	660	36/41	20	M33/M36	610	4	52	580	40	12
600	845/840	770	41	20	M36	718	5	56	684	42	12
700	960/955	875	42/48	24	M39/M42	815	5	60	792	46	12
800	1085/1070	990	48	24	M45/M42	930	5	64	896	48	15
900	1185/1180	1090	48/54	28	M45/M48	1025	5	66	1000	50	15
1000	1320/1305	1210	58	28	M52	1140	5	68	1104	52	18
1200	1520/1525	1420	58	32	M52	1350	5	72	1308	54	18
1400	1755/1750	1640	65	36	M56	1560	5	78	1516	58	18

MALE-FEMALE FACE INTEGRAL STEEL PIPE FLANGE

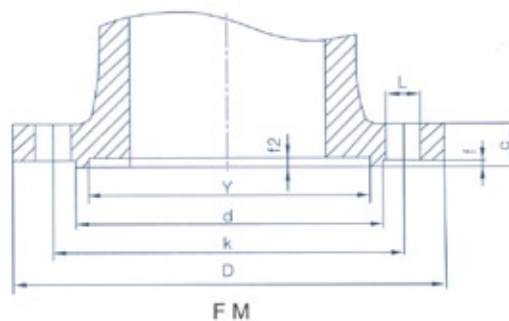


JB/T 79.2-94

PN4.0MPa

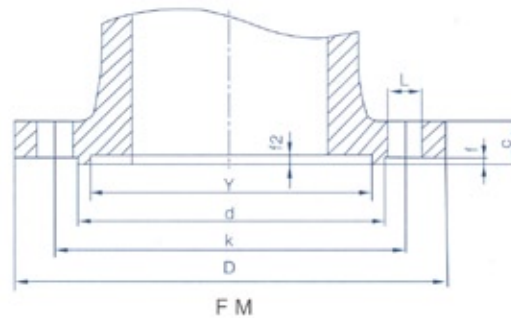
DN	Size ends					Sealing size					C	Welding neck					
	Nominal size	Outside diameter of flange series1/series2	Diameter of bolt Circle	Diameter of bolt holes series1/series2	Number of bolts	Thread series1/series2	d	X		Y		f	f1, f2	Thickness of flange	Nmax	Smax	R
								Series1/ Series2	Series1/ Series2								
15	95	65	14	4	M12	45	39	40	2	4	16	39	12	4			
20	105	75	14	4	M12	55	50	51	2	4	16	44	12	5			
25	115	85	14	4	M12	65	57	58	2	4	16	49	12	5			
32	140/135	100	18	4	M16	78	65	66	2	4	18	62	15	5			
40	150/145	110	18	4	M16	85	75	76	3	4	18	70	15	5			
50	165/160	125	18	4	M16	100	87	88	3	4	20	80	15	5			
65	185/180	145	18	8	M16	120	109	110	3	4	22	101	18	6			
80	200/195	160	18	8	M16	135	120	121	3	4	22	116	18	6			
100	235/230	190	23	8	M20	160	149	150	3	4.5	24	140	20	6			
125	270	220	26/25	8	M24	188	175	176	3	4.5	28	169	22	8			
150	300	250	26/25	8	M24/M22	218	203	204	3	4.5	30	198	24	8			
(175)	350	295	30	12	M27	258	233	234	3	4.5	34	231	28	10			
200	375	320	30	12	M27	282	259	260	3	4.5	38	256	28	10			
(225)	415	355	34	12	M30	315	286	287	3	4.5	40	285	30	10			
250	450/445	385	34	12	M30	345	312	313	3	4.5	42	314	32	10			
300	515/510	450	34	16	M30	408	363	364	4	4.5	46	368	34	12			
350	580/570	510	36/34	16	M33/M30	465	421	422	4	5	52	430	40	12			
400	660/655	585	41	16	M36	535	473	474	4	5	58	488	44	12			
450	685/680	610	41	20	M36	560	523	524	4	5	60	542	46	14			
500	755	670	42/48	20	M39/M42	612	575	576	4	5	62	592	46	15			
600	890	795	48/54	20	M45/M48	730	675/677	676/678	5	6	62	696	48	15			
700	995	900	48/54	24	M45/M48	835	777/767	778/768	5	6	68	804	52	18			
800	1140/1135	1030	58	24	M52	960	882/875	883/876	5	6	76	920	60	18			

MALE-FEMALE FACE INTEGRAL STEEL PIPE FLANGE



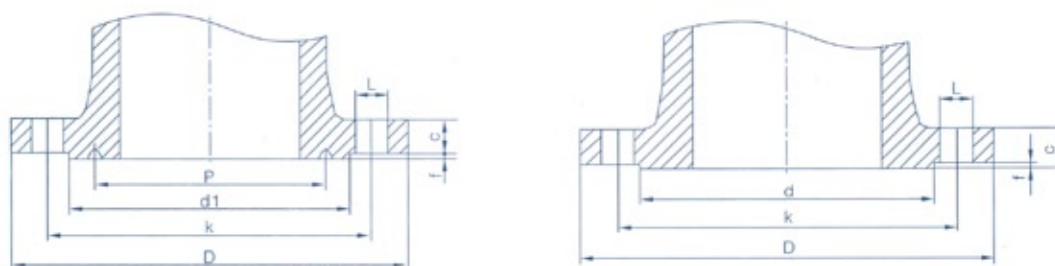
JB/T 79.2-94												PN6.3MPa				
DN	Size ends					Sealing size					C	Welding neck				
	Nominal size	Outside diameter of flange series1/ series2	Diameter of bolt Circle	Diameter of bolt holes series1/ series2	Number of bolts	Bolt	d	X	Y	f		f1, f2	Thickness of flange	Nmax	Smax	R
								Series1/ Series2	Series1/ Series2							
15	105	75	14	4	M12	55	39	40	2	4	18	45	15	4		
20	130/125	90	18	4	M16	68	50	51	2	4	20	52	16	5		
25	140/135	100	18	4	M16	78	57	58	2	4	22	61	18	5		
32	155/150	110	23	4	M20	82	65	66	2	4	24	68	18	5		
40	170/165	125	23	4	M20	95	75	76	3	4	24	80	20	5		
50	180/175	135	23	4	M20	105	87	88	3	4	26	90	20	5		
65	205/200	160	23	8	M20	130	109	110	3	4	28	111	23	6		
80	215/210	170	23	8	M20	140	120	121	3	4	30	128	24	6		
100	250	200	26/25	8	M24/M22	168	149	150	3	4.5	32	152	26	6		
125	295	240	30	8	M27	202	175	176	3	4.5	36	181	28	8		
150	345/340	280	34	8	M30	240	203	204	3	4.5	38	210	30	8		
(175)	370	310	34	12	M30	270	233	234	3	4.5	42	239	32	10		
200	405	345	36/34	12	M33/M30	300	259	260	3	4.5	44	268	34	10		
(225)	430	370	36/34	12	M33/M30	325	286	287	3	4.5	46	301	38	10		
250	470	400	36/41	12	M33/M36	352	312	313	3	4.5	48	326	38	10		
300	530	460	36/41	16	M33/M36	412	363	364	4	4.5	54	384	42	12		
350	600/595	525	41	16	M36	475	421	422	4	5	60	442	46	12		
400	670	585	42/48	16	M39/42	525	473	474	4	5	66	500	50	12		
500	800	705	48/54	20	M45/M48	640	575	576	4	5	70	610	55	18		
600	930	820	58	20	M52	750	675/677	676/678	5	6	76	720	60	18		

MALE-FEMALE FACE INTEGRAL STEEL PIPE FLANGE



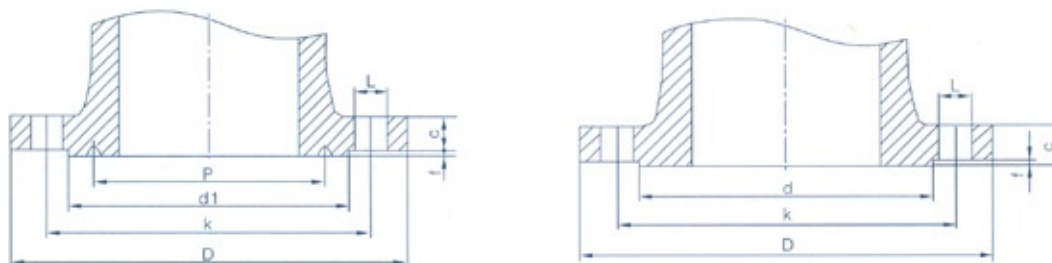
JB/T 79.2-94											PN10.0MPa			
DN	Size ends					Sealing size					C	Welding neck		
	Nominal size	Outside diameter of flange series1/ series2	Diameter of bolt Circle	Diameter of bolt holes series1/ series2	Number of bolts	Bolt Thread series1/ series2	d	X Series1/ Series2	Y Series1/ Series2	f		f1, f2	Thickness of flange	Nmax
15	105	75	14	4	M12	55	39	40	2	4	20	45	15	4
20	130/125	90	18	4	M16	68	50	51	2	4	22	54	17	4
25	140/135	100	18	4	M16	78	57	58	2	4	24	61	18	4
32	155/150	110	23	4	M20	82	65	66	2	4	24	68	18	4
40	170/165	125	23	4	M20	95	75	76	3	4	26	80	20	4
50	195	145	26/25	4	M24/M22	112	87	88	3	4	28	94	22	4
65	220	170	26/25	8	M24/M22	138	109	110	3	4	32	115	25	5
80	230	180	26/25	8	M24/M22	148	120	121	3	4	34	132	26	5
100	265	210	30	8	M27	172	149	150	3	4.5	38	160	30	5
125	315/310	250	34	8/12	M30	210	175	176	3	4.5	42	189	32	6
150	355/350	290	34	12	M30	250	203	204	3	4.5	46	222	36	6
(175)	380	320	34	12	M30	280	233	234	3	4.5	48	251	38	8
200	430	360	36/41	12	M33/M36	312	259	260	3	4.5	54	284	42	8
(225)	470	400	41	12	M36	352	286	287	3	4.5	56	313	44	8
250	505/500	430	41	12	M36	385	312	313	3	4.5	60	346	48	8
300	585	500	42/48	16	M39/M42	442	363	364	4	4.5	70	408	54	10
350	655	560	48/54	16	M45/M48	498	421	422	4	5	76	466	58	12
400	715	620	48/54	16	M45/M48	558	473	474	4	5	80	520	60	12

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE



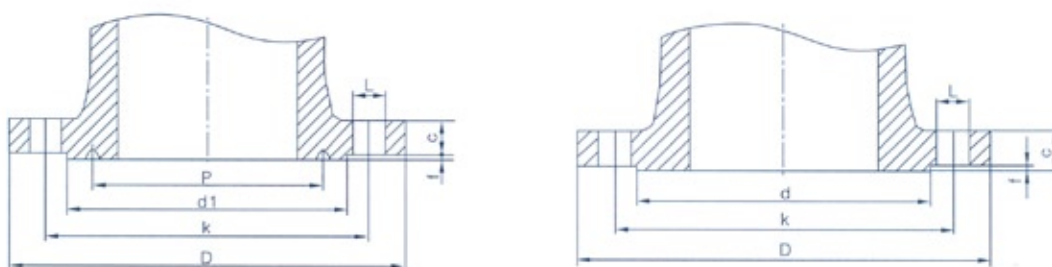
GB/T 9113.1-2000 PN1.6MPa 16bar										
DN	Size ends				Bolt	Sealing size		C	Welding neck	
	Dominal size	Outside diameter of flange	Diameter of bolt Circle	Diameter of bolt holes		d	f		N	R
10		90	60	14	4	M12	41	2	14	3
15		95	95	14	4	M12	46	2	14	3
20		105	75	14	4	M12	56	2	16	4
25		115	85	14	4	M12	65	2	16	4
32		140	100	18	4	M16	76	2	18	5
40		150	110	18	4	M16	84	2	18	5
50		165	125	18	4	M16	99	2	20	5
65		185	145	18	4	M16	118	2	20	6
80		200	160	18	8	M16	132	2	20	6
100		220	180	18	8	M16	156	2	22	6
125		250	210	18	8	M16	184	2	22	6
150		285	240	22	8	M20	211	2	24	8
200		340	295	22	12	M20	266	2	24	8
250		405	355	26	12	M24	319	2	26	10
300		460	410	26	12	M24	370	2	28	10
350		520	470	26	16	M24	429	2	30	10
400		580	525	30	16	M27	480	2	32	10
450		640	585	30	20	M27	548	2	40	12
500		715	650	33	20	M30	609	2	44	12
600		840	770	36	20	M33	720	2	54	12
700		910	840	36	24	M33	794	5	40	12
800		1025	950	39	24	M36	901	5	42	12
900		1125	1050	39	28	M36	1001	5	44	12
1000		1255	1170	42	28	M39	1112	5	46	12
1200		1485	1390	48	32	M45	1328	5	52	12
1400		1685	1590	48	36	M45	1530	5	58	12
1600		1930	1820	55	40	M52	1750	5	64	12

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE



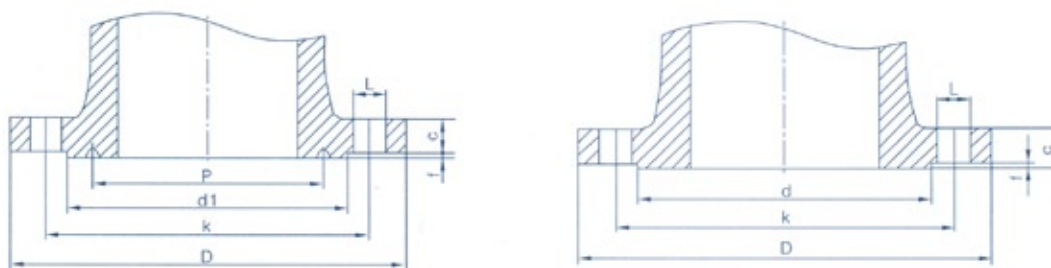
GB/T 9113.1-2000								PN2.5MPa 25bar		
DN	Size ends					Sealing size		C	Welding neck	
	Nominal size	Outside diameter of flange	Diameter of bolt Circle	Diameter of bolt holes	Number of bolts	Diameter of bolt	d		f	Thickness of flange
10	90	60	14	4	M12	41	2	14	28	3
15	95	95	14	4	M12	46	2	14	32	3
20	105	75	14	4	M12	56	2	16	40	4
25	115	85	14	4	M12	65	2	16	50	4
32	140	100	18	4	M16	76	2	18	60	5
40	150	110	18	4	M16	84	2	18	70	5
50	165	125	18	4	M16	99	2	20	84	5
65	185	145	18	4	M16	118	2	22	104	6
80	200	160	18	8	M16	132	2	24	120	6
100	235	190	22	8	M20	156	2	24	142	6
125	270	220	26	8	M24	184	2	26	162	6
150	300	250	26	8	M24	211	2	28	192	8
200	360	310	26	12	M24	274	2	30	252	8
250	425	370	30	12	M27	330	2	32	304	10
300	485	430	30	16	M27	389	2	34	364	10
350	555	490	33	16	M30	448	2	38	418	10
400	620	550	36	16	M33	503	2	40	472	10
450	670	600	36	20	M33	548	2	46	520	12
500	730	660	36	20	M33	609	2	48	580	12
600	845	770	39	20	M36	720	2	58	684	12
700	960	875	42	24	M39	820	5	50	780	12
800	1085	990	48	24	M45	928	5	54	882	12
900	1185	1090	48	28	M45	1028	5	58	982	12
1000	1320	1210	55	28	M52	1140	5	62	1086	12
1200	1530	1420	55	32	M52	1350	5	70	1296	12
1400	1755	1640	60	36	M56	1560	5	76	1508	12
1600	1975	1860	60	40	M56	1780	5	84	1726	12

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE



GB/T 9113.1-2000 PN4.0MPa 40bar										
DN	Size ends			Bolt		Sealing size		C	Welding neck	
	Nominal size	Outside diameter of flange	Diameter of bolt Circle	Diameter of bolt holes	Number of bolts	Diameter of bolt	d	f	Thickness of flange	N R
10	90	60	14	4	M12	41	2	14	28	3
15	95	95	14	4	M12	46	2	14	32	3
20	105	75	14	4	M12	56	2	16	40	4
25	115	85	14	4	M12	65	2	16	50	4
32	140	100	18	4	M16	76	2	18	60	5
40	150	110	18	4	M16	84	2	18	70	5
50	165	125	18	4	M16	99	2	20	84	5
65	185	145	18	4	M16	118	2	22	104	6
80	200	160	18	8	M16	132	2	24	120	6
100	235	190	22	8	M20	156	2	24	142	6
125	270	220	26	8	M24	184	2	26	162	6
150	300	250	26	8	M24	211	2	28	192	8
200	375	320	30	12	M27	284	2	34	254	8
250	450	385	33	12	M30	345	2	38	312	10
300	515	450	33	16	M30	409	2	42	378	10
350	580	510	36	16	M33	465	2	46	432	10
400	660	585	39	16	M36	535	2	50	498	10
450	685	610	39	20	M36	560	2	57	522	12
500	755	670	42	20	M39	615	2	57	576	12
600	890	795	48	20	M45	735	2	72	686	12

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE

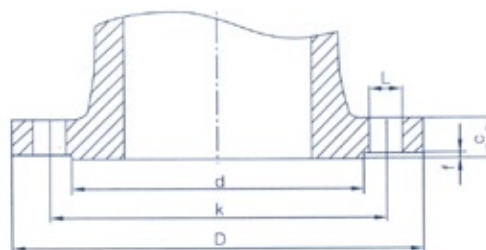


GB/T 9113.1-2000 PN6.3MPa 63bar										
DN	Size ends					Sealing size		C	Welding neck	
	Nominal size	Outside diameter of flange	Diameter of bolt Circle	Diameter of bolt holes	Number of bolts	Diameter of bolt	d	f	Thickness of flange	N R
10	100	70	14	4	M12	41	2	20	40	4
15	105	75	14	4	M12	46	2	20	45	4
20	130	90	18	4	M16	56	2	20	50	4
25	140	100	18	4	M16	65	2	24	61	4
32	155	110	22	4	M20	76	2	24	68	4
40	170	125	22	4	M20	84	2	26	82	4
50	180	135	22	4	M20	99	2	26	90	5
65	205	160	22	8	M20	118	2	26	105	5
80	215	170	22	8	M20	132	2	28	122	5
100	250	200	26	8	M24	156	2	30	146	5
125	295	240	30	8	M27	184	2	34	177	6
150	345	280	33	8	M30	211	2	36	204	6
200	415	345	36	12	M33	284	2	42	264	8
250	470	400	36	12	M33	345	2	46	320	8
300	530	460	36	16	M33	409	2	52	378	10
350	600	525	39	16	M36	465	2	56	434	10
400	670	585	42	16	M39	535	2	60	490	12

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE

GB/T 9113.1-2000 PN10.0MPa 100bar										
10	100	70	14	4	M12	41	2	20	40	4
15	105	75	14	4	M12	46	2	20	45	4
20	130	90	18	4	M16	56	2	20	50	4
25	140	100	18	4	M16	65	2	24	61	4
32	155	110	22	4	M20	76	2	24	68	4
40	170	125	22	4	M20	84	2	26	82	4
50	195	145	26	4	M24	99	2	28	96	5
65	220	170	26	8	M24	118	2	30	113	5
80	230	180	26	8	M24	132	2	32	128	5
100	265	210	30	8	M27	156	2	36	150	5
125	315	250	33	8	M30	184	2	40	185	6
150	355	290	33	12	M30	211	2	44	216	6
200	430	360	36	12	M33	284	2	52	278	8
250	505	430	39	12	M36	345	2	60	340	8
300	585	500	42	16	M39	409	2	68	402	10
350	655	560	48	16	M45	465	2	74	460	10
400	715	620	48	16	M45	535	2	82	518	12
GB/T 9113.1-2000 PN16.0MPa 160bar										
10	100	70	14	4	M12	41	2	24	40	4
15	105	75	14	4	M12	46	2	26	45	4
20	130	90	18	4	M16	56	2	30	50	4
25	140	100	18	4	M16	65	2	32	61	4
32	155	110	22	4	M20	76	2	34	68	4
40	170	125	22	4	M20	84	2	6	82	4
50	195	145	26	4	M24	99	2	38	96	5
65	220	170	26	8	M24	118	2	42	113	5
80	230	180	26	8	M24	132	2	46	128	5
100	265	210	30	8	M27	156	2	52	150	5
125	315	250	33	8	M30	184	2	56	184	6
150	355	290	33	8	M30	211	2	62	224	6
200	430	660	36	12	M33	284	2	66	288	8
250	515	430	42	12	M39	345	2	76	346	8
300	585	500	42	16	M39	409	2	88	414	10

INTEGRAL STEEL PIPE FLANGE



CLASS 150, 300, 400, 600 R F ASME B 16.5, B 16.47

CLASS 150 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	152	120.5	18	4-M16	92	2	16
2-1/2	178	139.5	18	4-M16	105	2	18
3	190	152.5	18	4-M16	127	2	19
4	229	190.5	18	8-M16	157	2	24
5	254	216	22	8-M20	186	2	24
6	279	241.5	22	8-M20	216	2	26
8	343	298.5	22	8-M20	270	2	29
10	406	362	26	12-M24	324	2	31
12	483	432	26	12-M24	381	2	32
14	533	476	29.5	12-M27	413	2	35
16	597	540	29.5	16-M27	470	2	37
18	635	578	32.5	16-M30	533	2	40
20	699	635	32.5	20-M30	584	2	43
24	813	749.5	35.5	30-M33	692	2	48
26	870	806.5	35	24-M33	749	2	68
28	927	863.6	35	28-M33	800	2	72
30	984	914	35	28-M33	857	2	75
32	1060	978	41	28-M39	914	2	81
36	1168	1086	41	32-M39	1022	2	90
40	1289	1200	41	36-M39	1124	2	90
42	1346	1257	41	36-M39	1194	2	97
48	1511	1422	41	44-M39	1359	2	108

CLASS 600 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	165	127	19	8-M16	92	6.4	25.5
2-1/2	190	149.2	22	8-M20	105	6.4	29
3	210	168.3	22	8-M20	127	6.4	32
4	254	200	26	8-M24	157	6.4	35
5	279	234.9	26	8-M24	186	6.4	38.5
6	318	269.9	26	12-M24	216	6.4	41.5
8	381	330.2	29	12-M27	270	6.4	48
10	445	387.3	32	16-M30	324	6.4	54
12	520	450.8	35	16-M33	381	6.4	57.5
14	585	514.3	35	20-M33	413	6.4	60.5
16	650	571.5	39	20-M36	470	6.4	63.5
18	710	628	39	24-M36	533	6.4	67
20	775	685.8	42	24-M39	584	6.4	70
24	915	812.8	48	24-M45	692	6.4	76.5
26	851	781	39	28-M36	711	6.4	89
28	914	838	41	24-M39	762	6.4	95
30	972	895.4	41	28-M39	819	6.4	102
32	1035	952.5	44	28-M42	873	6.4	108

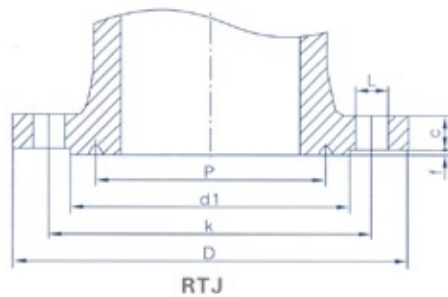
CLASS 300 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	165	127	18	8-M16	92	2	23
2-1/2	190	149	18	8-M20	105	2	26
3	210	168.5	18	8-M20	127	2	29
4	254	200	18	8-M20	157	2	32
5	279	235	22	8-M20	186	2	35
6	318	270	22	12-M20	216	2	37
8	381	330	22	12-M24	270	2	42
10	445	387.5	26	16-M27	324	2	48
12	521	451	26	16-M30	381	2	51
14	584	514.5	29.5	20-M30	413	2	54
16	648	571.5	29.5	20-M33	470	2	58
18	711	628.5	32.5	24-M33	533	2	61
20	775	686	32.5	24-M33	584	2	64
24	914	813	35.5	24-M39	692	2	70
26	972	876	35	28-M42	749	2	79
28	1035	940	35	28-M42	800	2	86
30	1092	997	35	28-M45	857	2	92
32	1149	1054	41	28-M48	914	2	99
36	1270	1168	41	32-M52	1022	2	105
40	1238	1156	41	32-M42	1086	2	114
42	1289	1206.5	41	32-M42	1137	2	119
48	1467	1372	41	32-M48	1302	2	133

CLASS 600 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	165	127	19	8-M16	92	6.4	26
2-1/2	190	149	22	8-M20	100	6.4	29
3	210	168	22	8-M20	127	6.4	32
4	273	216	26	8-M24	157	6.4	38
5	330	266.5	29	8-M27	186	6.4	45
6	356	292	29	12-M27	216	6.4	48
8	419	349	32	12-M30	270	6.4	56
10	508	432	35	16-M33	324	6.4	64
12	559	489	35	20-M33	381	6.4	67
14	603	527	38	20-M36	413	6.4	70
16	686	603	41	20-M39	470	6.4	77
18	743	654	44	20-M42	533	6.4	83
20	813	724	44	24-M42	584	6.4	89
24	940	838	52	24-M48	692	6.4	102
26	1016	914.4	51	28-M48	749	6.4	108
28	1073	965.2	54	28-M48	800	6.4	111
30	1130	1022.4	54	28-M52	857	6.4	114
32	1194	1079.5	60	28-M56	914	6.4	117

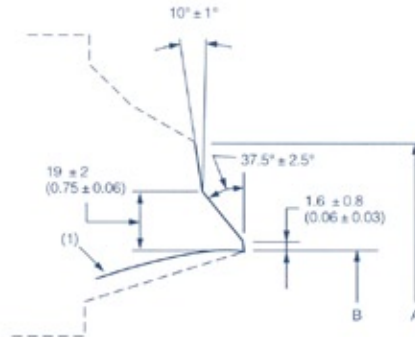
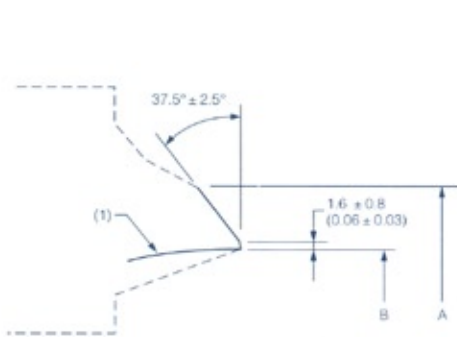
INTEGRAL STEEL PIPE FLANGE



CLASS 900		RTJ	ASME B 16.5		ASME B 16.47			
DN	D	K	L	(Bolt)n-Th	d1	P	f	C
2	216	165.1	26	8-M24	124	95.25	8	38.5
2-1/2	244	190.5	29	8-M27	137	107.95	8	41.5
3	241	190.5	26	8-M27	168	123.82	8	38.5
4	292	234.9	32	8-M30	194	149.22	8	44.5
5	349	279.4	35	8-M33	229	180.98	8	51
6	381	317.5	32	12-M30	248	211.12	8	56
8	470	393.7	39	12-M36	318	269.88	8	63.5
10	545	469.9	39	16-M36	371	323.85	8	70
12	610	533.4	39	20-M36	438	381	11.13	79.5
14	640	558.8	42	20-M39	489	419.1	11.13	86
16	705	615.9	45	20-M42	546	469.9	12.7	89
18	785	685.8	51	20-M48	613	533.4	12.7	102
20	855	749.3	54	20-M52	673	584.2	15.88	108
24	1040	901.7	67	20-M64	794	692.15	17.48	140
26	1086	952.5	73	20-M70	832	749.3	17.48	140
28	1168	1022.4	79	20-M76	889	800.1	17.48	143
30	1232	1085.9	79	20-M76	946	857.25	17.48	149
32	1314	1155.7	86	20-M84	1003	914.4	17.48	159

CLASS 1500		RTJ	ASME B 16.5					
DN	D	K	L	(Bolt)n-Th	d1	P	f	C
2	215	165	26	8-M24	92	95.25	7.92	38.5
2-1/2	245	190.5	29.5	8-M27	105	107.95	7.92	41.5
3	265	203	32.5	8-M30	127	136.52	7.92	48
4	310	241.5	35.5	8-M33	157	161.92	7.92	54
5	375	292	42	8-M39	186	193.68	7.92	73.5
6	395	317.5	39	12-M36	216	211.12	9.52	83
8	485	393.5	45	12-M42	270	269.88	11.13	92
10	585	482.5	51	12-M48	324	323.85	11.13	108
12	675	571.5	55	16-M52	381	381	14.27	124
14	750	635	60	16-M56	413	419.1	15.88	133.5
16	825	705	68	16-M64	470	469.9	17.48	146.5
18	915	774.5	74	16-M70	533	533.4	17.48	162
20	985	832	80	16-M76	584	584.2	17.48	178
24	1170	990.5	94	16-M90	692	692.15	20.62	203.5

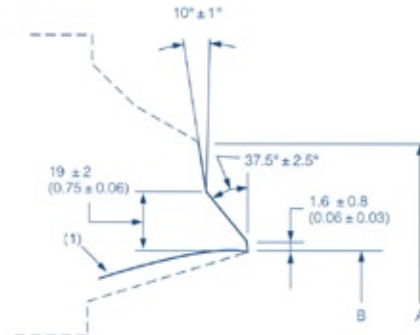
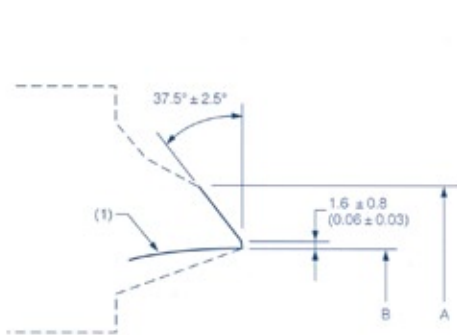
BUTT-WELDING ENDS



DN65-250						
Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
65	40	73.0	75	62.5	662.93	5.16
	80	73.0	75	59	59.69	7.01
	160	73.0	75	54	55.28	9.35
	XXS	73.0	75	45	47.43	14.02
80	40	88.9	91	78	78.25	5.49
	80	88.9	91	73.5	74.53	7.62
	160	88.9	91	66.5	68.38	11.13
	XXS	88.9	91	58.5	61.19	15.24
90	40	101.6	105	90	90.52	5.74
	80	101.6	105	85.5	86.42	8.08
	120	114.3	117	102	102.73	6.02
	160	114.3	117	97	98.28	8.56
100	120	114.3	117	92	93.78	11.13
	160	114.3	117	87.5	89.65	13.49
	XXS	114.3	117	80	83.30	17.12
125	40	141.3	144	128	128.80	6.55
	80	141.3	144	122	123.58	9.3
	120	141.3	144	116	118.04	12.70
	160	141.3	144	109.5	112.47	15.88
150	XXS	141.3	144	103	106.92	19.05
	40	168.3	172	154	154.82	7.11
	80	168.3	172	146.5	148.06	10.97
	120	168.3	172	140	142.29	14.27
200	160	168.3	172	132	135.31	18.26
	XXS	168.3	172	124.5	128.85	21.95
	40	219.1	223	203	203.75	8.18
	60	219.1	223	198.5	200.02	10.31
250	80	219.1	223	193.5	195.84	12.70
	100	219.1	223	189	191.65	15.09
	120	219.1	223	182.5	186.11	18.26
	140	219.1	223	178	181.98	20.62
300	XXS	219.1	223	174.5	179.16	22.23
	160	219.1	223	173	177.79	23.01
	40	273.0	278	254.5	255.74	9.27
	60	273.0	278	247.5	249.74	12.70
350	80	273.0	278	243	245.55	15.09
	100	273.0	278	236.5	240.01	18.26
	120	273.0	278	230	234.44	21.44
	140	273.0	278	222	227.51	25.40
400	160	273.0	278	216	221.95	28.58

DN300-450						
Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
300	STD	323.8	329	305	306.08	9.53
	40	323.8	329	303	304.72	10.31
	XS	323.8	329	298.5	300.54	12.70
	60	323.8	329	295	297.79	14.27
350	80	323.8	329	289	292.17	17.48
	100	323.8	329	281	285.24	21.44
	120	323.8	329	273	278.31	25.40
	140	323.8	329	266.5	272.75	28.58
400	160	323.8	329	257	264.45	33.32
	STD	355.6	362	336.5	337.88	9.53
	40	355.6	362	333.5	335.08	11.13
	XS	355.6	362	330	332.34	12.70
450	60	355.6	362	325.5	328.15	15.09
	80	355.6	362	317.5	321.22	19.05
	100	355.6	362	308	312.86	23.83
	120	355.6	362	300	305.93	27.79
500	140	355.6	362	292	299.00	31.75
	160	355.6	362	284	292.07	35.71
	STD	406.4	413	387.5	388.68	9.53
	40	406.4	413	381	383.14	12.70
550	60	406.4	413	373	376.21	16.66
	80	406.4	413	363.5	367.84	21.44
	100	406.4	413	354	359.53	26.19
	120	406.4	413	344.5	351.18	30.96
600	140	406.4	413	333.5	341.43	36.53
	160	406.4	413	325.5	334.50	40.49
	STD	457.2	464	438	439.48	9.53
	40	457.2	464	432	433.94	12.70
650	60	457.2	464	428.5	431.19	14.27
	80	457.2	464	419	422.82	19.05
	100	457.2	464	409.5	414.46	23.83
	120	457.2	464	398.5	404.78	29.36
700	140	457.2	464	387.5	395.03	34.93
	160	457.2	464	378	386.77	39.67
	STD	508.0	515	490	491.25	9.53
	40	508.0	515	484	485.71	12.70

BUTT-WELDING ENDS



DN500-800

Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
500	STD	508.0	516	489	490.28	9.53
	XS	508.0	516	482.5	484.74	12.70
	40	508.0	516	478	480.55	15.09
	60	508.0	516	467	470.88	20.62
	80	508.0	516	455.5	461.13	26.19
	100	508.0	516	443	450.02	32.54
	120	508.0	516	432	440.29	38.10
	140	508.0	516	419	429.17	44.45
550	160	508.0	516	408	419.44	50.01
	STD	558.8	567	539	541.08	9.53
	XS	558.8	567	533	535.54	12.70
	60	558.8	567	514	518.86	22.23
	80	558.8	567	501	507.75	28.58
	100	558.8	567	488.5	496.63	34.93
	120	558.8	567	476	485.52	41.28
	140	558.8	567	463	474.41	47.63
600	160	558.8	567	450.5	463.30	53.98
	STD	609.6	619	590.5	591.88	9.53
	XS	609.6	619	584	586.34	12.70
	30	609.6	619	581	583.59	14.27
	40	609.6	619	574.5	577.97	17.48
	60	609.6	619	560.5	565.49	24.61
	80	609.6	619	547.5	554.38	30.96
	100	609.6	619	532	540.49	38.89
650	120	609.6	619	517.5	528.03	46.02
	140	609.6	619	505	516.91	52.37
	160	609.6	619	490.5	504.37	59.54
	10	660.4	670	645.5	645.50	7.92
	20	660.4	670	635	637.14	12.70
	10	711.2	721	695.5	696.30	7.92
	20	711.2	721	686	687.94	12.70
	30	711.2	721	679.5	682.37	15.88
700	10	762.0	772	746	747.10	7.92
	20	762.0	772	736.5	738.74	12.70
	30	762.0	772	730	733.17	15.88
	10	812.8	825	797	797.90	7.92
	20	812.8	825	787.5	789.54	12.70
	30	812.8	825	781	783.97	15.88
	40	812.8	825	778	781.17	17.48

DN850-900

Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
850	10	863.6	876	848	848.70	7.92
	20	863.6	876	838	840.34	12.70
	30	863.6	876	832	834.77	15.88
	40	863.6	876	828.5	831.97	17.48
900	10	914.4	927	898.5	889.50	7.92
	20	914.4	927	889	891.14	12.70
	30	914.4	927	882.5	885.57	15.88
	40	914.4	927	876.5	880.02	19.05

Note:(1)Characters stand for:

(a)STD=Standard schedule thickness

(b)XS=Thickened

(c)XXS=Super thickened

(2)All the diameters are not required size, just be convenient for users.

(3)Gasket rings for Dn50 and below size are not considered to manufacture.



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