

Ball valves



General parameters of ball valves

The ball valves developed and manufactured by DKG-EAST can be used to open and close the valves of pipelines conveying gas, fluid and their alloy, and can also be used as open-close valves for pressure vessels. Ball valves close securely within overall pressure rate, even at low pressure differences. It is easy to install, cost-effective to operate, simple to use, quick and cheap to renovate. Reliable construction with long life-time can be in use for 40-50 years depending on its utilization. The risk of failure is low and renovations made by changing the closing elements can raise life-time.



Demands of clients

DKG-EAST has several decades of experience in manufacturing pipeline closing valves. Consequently, after examining special individual demands, our recommendations and offers are made according to function and clients' requirements. Our mission is to help clients to find the best solution, since our marketing philosophy is to increase clients' satisfaction.

Solutions

Depending on purchasers' special requirements, DKG-EAST designs, manufactures and sells ball valves in several design variants, with standard or diverse built-in length, and making connecting surface acting on pressure rate, proper for the content and temperature of the transported medium, often satisfying the extreme demands with adequate quality of the material. The finishing of surface is made according to clients' specification including content and colour. Based on customers' demands many times executions include organizing and performing packaging and transport.

Scope

- thermal and nuclear power stations
- natural gas and thermal supply
- natural gas transmission
- crude oil and natural gas pipeline
- natural gas storage
- PB gas storage and drawer yards
- crude oil refinery
- offshore drilling points
- drinking water supply
- water well-springs
- sewage pipeline
- sewage farms
- food industries
- chemical and aluminum industries



Main references

- Petrobras, Brasil
- E-on Ruhrgas, Germany
- CH-PLUSSZ-2000 Kft., Hungary
- Emerson Process Management Kft., Hungary
- E.ON Földgáz Storage ZRT., Hungary
- GÉPKONTROLL Kft., Hungary
- K és F Regula Kft., Hungary
- KVV Kőolajvezetéképítő ZRT., Hungary
- Magyar Olaj- és Gázipari Nyrt. (MOL Nyrt.), Hungary
- MOL Földgázszállító ZRT., Hungary
- MVM Paksi Atomerőmű ZRT., Hungary
- OLAJTERV Fővállalkozó és Tervező ZRT., Hungary
- Petrolszerviz Kft., Hungary
- Petroszolg Kft., Hungary
- Turbo Tech Group Turbo Team Kft., Hungary
- Turbo Tech Group HP Team Kft., Hungary
- VABEKO Kft., Hungary
- NIOC, Iran
- Botas, Turkey
- Enex, Turkmenistan
- Eastlink Lanker, Russia
- Gazkomplektimpex, Russia
- Novatek-Yurkharovneftegaz, Russia
- Novatek-Tarkosaleneftegaz, Russia
- Rostransmash Trade Ltd., Russia
- Tomskgazprom, Russia
- Adamello, Ukraine

Design Characteristics

The ball valves of DKG-EAST are designed according to the relevant international industrial standards. The valves with forged or cast body are sized for the nominal pipeline pressure.

The design of the products complies with the following standards:

Generally:	API6D, API6A, ISO 14313, PED
Fire-safe design:	API6FA
Basic material:	ASTM, AISI, EN, GOSZT
Welding processes :	ASME Code IX., EN ISO 15614-1
Welding preparation:	ASME B 31.4 - 31.8
Welded connections:	"C"-EN 12627, "WE"-ASME B 16.25
Flanges:	ASME B 16.5, 16.47 SERIE A, EN 1092-1, GOSZT 12821
Sealing surface of flanges:	ASME B 16.5 , 16.47 SERIE A, EN1092-1, GOSZT 12815
End-to-End dimension:	ASME B 16.10, API 6D
Marking:	API 6D - MSS SP 25
Resistance to sour corrosion:	NACE MR 01. 75

The sealing system of ball valves manufactured by DKG-EAST - except the floating ball type GU ball valves - are spring assisted ones, which provide tightness at a low or high pressure range. DKG-EAST's ball valves are manufactured with screwed and welded body.



Type assortment



Ball Valves Type	Size		Pressure	
	DN [mm]	DN ["]	PN [bar]	API Class
GUB	15-40	½ - 1½	16-250	150-1500
GUBH	15-40	½ - 1½	16-250	150-1500
GTNA	50-150	2-6	16-40	150-300
GTNN	50-100	2-4	64-250	400-1500
GTNH	50-100	2-4	16-250	150-1500
GTNG	150-1400	6-56	16-400	150-2500
GTGH	150-1400	6-56	16-400	150-2500
GTNK	150-1400	6-56	16-400	150-2500
GTNH	150-1400	6-56	16-400	150-2500
GTZG	150-1400	6-56	16-400	150-2500
GZGH	150-1400	6-56	16-400	150-2500
GTZK	150-1400	6-56	16-400	150-2500
GTZH	150-1400	6-56	16-400	150-2500
GTGF,GTNF	50-600	2-16	16-160	150-900

	Ball Valves Type	GUB	GUBH	GTNA	GTNN	GTNH	GTNG	GTGH	GTNK	GTNH	GTZG	GZGH	GTZK	GTZH	GTGF
		Temperature	-60°C / +150°C												
CONSTRUCTION CHARACTERISTICS	Threated	X		X	X		X		X		X		X		X
	Welded		X			X		X		X		X		X	
	Floating ball	X	X												
	Trunnion mounted ball			X	X	X	X	X	X	X	X	X	X	X	X
	Blow off possibility of body space			X	X	X	X	X	X	X	X	X	X	X	X
	Auto-discharge of body space	X	X	X	X	X	X	X			X	X			X
	By-pass pipe								X	X			X	X	
	Spring assisted sealing			X	X	X	X	X	X	X	X	X	X	X	X
	Bi-directional sealing								X	X			X	X	
	Secondary ball sealing										X	X	X	X	
	Double stem sealing			X	X	X	X	X	X	X	X	X	X	X	X
	Secondary stem sealing						X	X	X	X	X	X	X	X	X
	Soft sealing	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Metal to metal sealing														X

* DN 50-100

** DN 150-1400

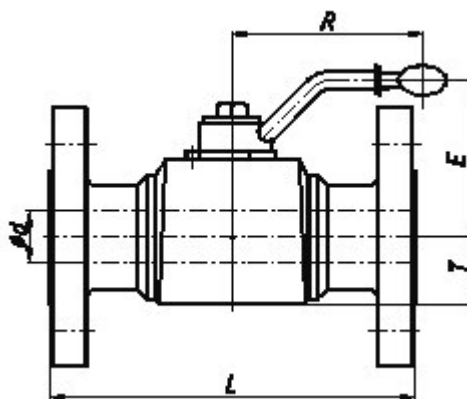
GUB

**Main Features:**

- Floating ball
- Automatic compensation of body cavity pressure
- Flanged, threaded connection
- Butt welded connections

Design variations:

- Full welded design(GUBH)
- Changeable sealing of stem
- Extended stem design
- Motor operated

**Dimensional Data for Ball Valves Type GUB, GUBH**

Class150	PN16	d	L [mm]					Other sizes [mm]			Weight[kg]
DN	[mm]		RF	WE	RTJ	B	H	T	E	R	
1/2"	15	13	108	140	-	85	130	18	71	155	5
3/4"	20	19	117	152	-	95	175	25	85	165	7
1"	25	25	127	165	140	115	180	32	90	200	9
1 1/2"	40	38	165	190	178	200	250	45	110	250	11

Class300	PN25-40	d	L [mm]					Other sizes [mm]			Weight[kg]
DN	[mm]		RF	WE	RTJ	B	H	T	E	R	
1/2"	15	13	140	140	151	85	130	18	71	155	6
3/4"	20	19	152	152	165	95	175	25	85	165	8
1"	25	25	165	165	178	115	180	32	90	200	10
1 1/2"	40	38	190	190	203	200	250	45	110	250	12

Class400	PN64	d	L [mm]					Other sizes [mm]			Weight[kg]
DN	[mm]		RF	WE	RTJ	B	H	T	E	R	
1/2"	15	13	165	165	163	85	130	18	71	155	7
3/4"	20	19	190	190	190	95	175	25	85	165	9
1"	25	25	216	216	216	115	180	32	90	200	11
1 1/2"	40	38	241	241	241	200	250	45	110	250	13

Class600	PN100	d	L [mm]					Other sizes [mm]			Weight[kg]
DN	[mm]		RF	WE	RTJ	B	H	T	E	R	
1/2"	15	13	165	165	163	85	130	18	71	155	7
3/4"	20	19	190	190	190	95	175	25	85	200	9
1"	25	25	216	216	216	115	180	32	90	200	11
1 1/2"	40	38	241	241	241	200	250	45	110	250	13

Class900	PN160	d	L [mm]					Other sizes [mm]			Weight[kg]
DN	[mm]		RF	WE	RTJ	B	H	T	E	R	
1/2"	15	13	165	165	165	85	130	18	71	155	9
3/4"	20	19	190	190	190	95	175	25	85	200	11
1"	25	25	254	254	254	115	180	32	90	200	13
1 1/2"	40	38	305	305	305	200	250	45	110	250	18

Class1500	PN250	d	L [mm]					Other sizes [mm]			Weight[kg]
DN	[mm]		RF	WE	RTJ	B	H	T	E	R	
1/2"	15	13	165	165	165	85	-	18	71	155	9
3/4"	20	19	190	190	190	95	-	25	85	200	11
1"	25	25	254	254	254	115	-	32	90	200	13
1 1/2"	40	38	305	305	305	215	-	45	110	250	18

RTJ: in case of flanged joint with Ring Joint sealing surface (ASME B 16.5)

WE: in case of Butwelded joint (ASME B 16.25)

B: Threaded joint

RF:

- Flanged joint with flat sealing surface (RF)(ASME B16.5)

- Flanged joint as per GOSZT 12815, GOSZT 12821

H:

- Flanged joint as per EN 1092-1

- Butwelded joint as per EN 12627

- Butwelded joint as per ASME B 16.11



GTNA



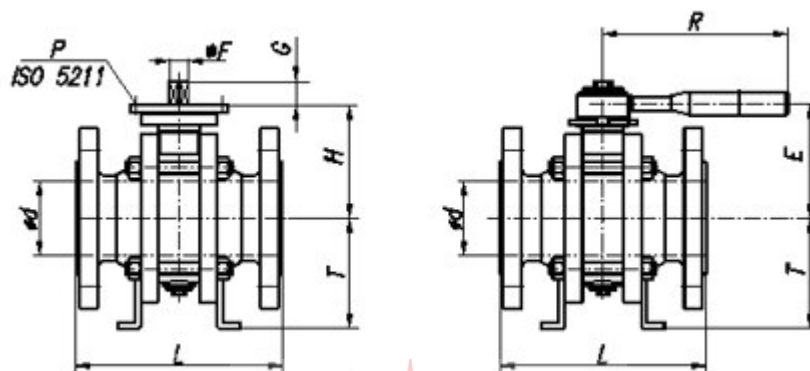
Main features:

- Trunnion mounted ball
- Spring assisted sealing system
- Single and bi-directional blow-off possibility of body cavity pressure (in closed position)
- Automatic compensation of body cavity pressure
- Double sealing system of stem
- Flanged, threaded or butt welded connections

Design variations:

- Reduced bore
- Extended stem design

Dimensional Data for GTNA



CLASS150	PN16	d	L [mm]				Overall dimensions [mm]							weight[kg]
DN		[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ
2"	50	51	178	216	191	216	82	120	100	300	F 10	22	26	~14
3"	80	76	203	283	216	283	100	135	140	400	F 10	18	25	~24
4"	100	102	229	305	241	305	160	165	165	500	F 12	22	30	~38
6"	150	152	394	457	406	-	210	220	220	800	F 14	30	40	~129

CLASS300	PN 25-40	d	L [mm]				Overall dimensions [mm]							weight[kg]
DN		[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ
2"	50	51	216	216	232	216	82	120	100	300	F 10	22	26	~15
3"	80	76	283	283	298	283	100	135	140	400	F 10	18	25	~27
4"	100	102	305	305	321	305	160	165	165	500	F 12	22	30	~44

Note: 2", 3" without support.

RTJ: In case of Ring Joint sealing surface flanged connection (ASME B 16.5)

WE: In case of butt welded connection (ASME B 16.25, EN 12627)

B: In case of threaded connection (ASME B 1.20)

RF:

- In case of grooved smooth sealing surface (RF) flanged connection (ASME B 16.5)
- Acc. to EN 1092-1 flanged connection
- Acc. to GOSZT 12821, GOSZT 12815 flanged connection

GTNA



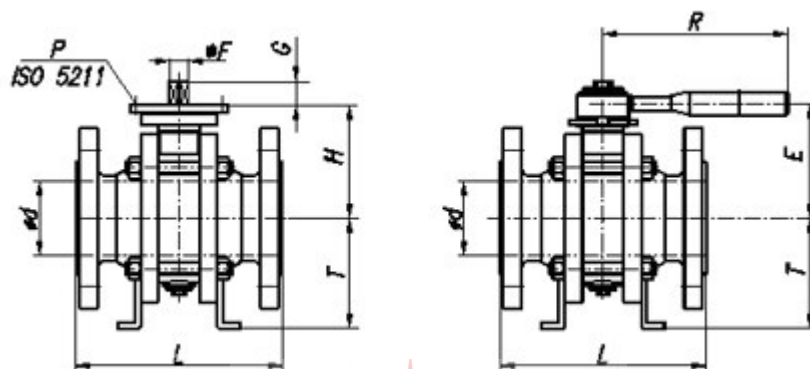
Main features:

- Trunnion mounted ball
- Spring assisted sealing system
- Single and bi-directional blow-off possibility of body cavity pressure (in closed position)
- Automatic compensation of body cavity pressure
- Double sealing system of stem
- Flanged, threaded or butt welded connections

Design variations:

- Reduced bore
- Extended stem design

Dimensional Data for GTNA



CLASS150	PN16	d	L [mm]				Overall dimensions [mm]							weight[kg]
DN		[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ
2"	50	51	178	216	191	216	82	120	100	300	F 10	22	26	~14
3"	80	76	203	283	216	283	100	135	140	400	F 10	18	25	~24
4"	100	102	229	305	241	305	160	165	165	500	F 12	22	30	~38
6"	150	152	394	457	406	-	210	220	220	800	F 14	30	40	~129

CLASS300	PN 25-40	d	L [mm]				Overall dimensions [mm]							weight[kg]
DN		[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ
2"	50	51	216	216	232	216	82	120	100	300	F 10	22	26	~15
3"	80	76	283	283	298	283	100	135	140	400	F 10	18	25	~27
4"	100	102	305	305	321	305	160	165	165	500	F 12	22	30	~44

Note: 2", 3" without support.

RTJ: In case of Ring Joint sealing surface flanged connection (ASME B 16.5)

WE: In case of butt welded connection (ASME B 16.25, EN 12627)

B: In case of threaded connection (ASME B 1.20)

RF:

- In case of grooved smooth sealing surface (RF) flanged connection (ASME B 16.5)
- Acc. to EN 1092-1 flanged connection
- Acc. to GOSZT 12821, GOSZT 12815 flanged connection

GTNN



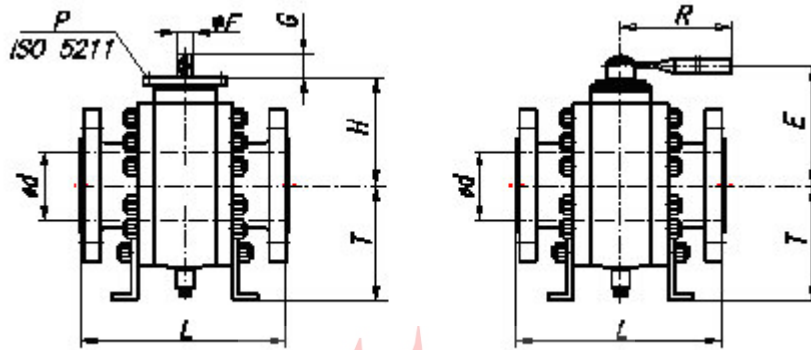
Main features:

- Trunnion mounted ball
- Spring assisted sealing system
- Body cavity pressure (in opened and closed position)
- Automatic compensation of body cavity pressure
- Double sealing system of stem
- Flanged, threaded or butt weldwd connections

Design variations:

- Reduced bore
- Extended stem design
- Complete welded system (GTNH)

Dimensional Data for GTNN



Class400	PN64	d	L [mm]				Overall dimensions [mm]							Weight[kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	292	292	295	292	130	130	150	400	F 10	18	25	~34
2 1/2"	65	64	330	330	333	330	155	155	180	500	F 12	22	30	~44
3"	80	76	356	356	359	356	155	155	180	600	F 12	22	30	~66
4"	100	102	406	406	410	432	200	190	220	800	F 14	30	40	~105

Class600	PN100	d	L [mm]				Overall dimensions [mm]							Weight[kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	292	292	295	292	130	130	150	400	F 10	18	25	~34
2 1/2"	65	64	330	330	333	330	155	155	180	500	F 12	22	30	~45
3"	80	76	356	356	359	356	155	155	180	600	F 12	22	30	~66
4"	100	102	432	432	435	432	200	190	220	800	F 14	30	40	~120

Class900	PN160	d	L [mm]				Overall dimensions [mm]							Weight[kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	368	368	371	292	130	130	150	600	F 10	18	25	~52
2 1/2"	65	64	419	419	422	330	155	155	180	600	F 12	22	30	~62
3"	80	76	381	381	384	356	155	155	180	800	F 12	22	30	~80
4"	100	102	457	457	460	432	200	190	*	*	F 14	30	40	~170

Class1500	PN250	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	368	368	371	292	130	130	150	600	F 10	18	25	~55
2 1/2"	65	64	419	419	422	330	155	155	180	800	F 12	22	30	~80
3"	80	76	470	470	473	356	155	155	*	*	F 12	22	30	~105
4"	100	102	546	546	549	432	200	190	*	*	F 14	30	40	~205

Note: 2", 2 1/2", 3" without support

* Only gear operated design.

RTJ: In case of Ring Joint sealing surface flanged connection (ASME B 16.5)

WE: In case of butt welded connection(ASME B 16.25, EN 12627)

B: In case of threaded connection (ASME B 1.20)

RF:

- In case of grooved smooth sealing surface (RF) flanged connection (ASME B16.5)

- Acc. to FN 1092-1 flanged connection

GTNG,GTNK,GTZG,GTZK

**Main features:**

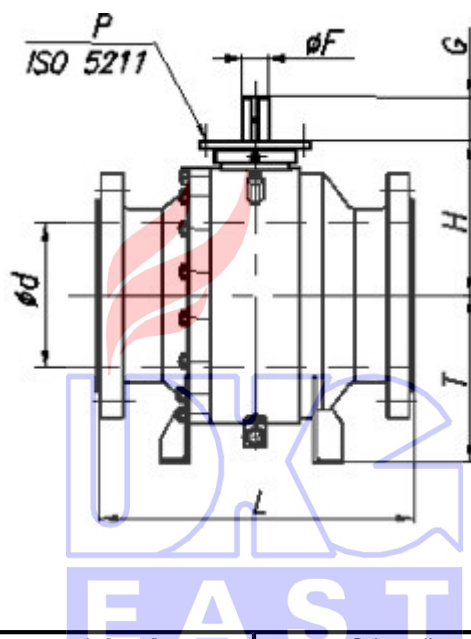
- Trunnion mounted ball
- Spiral spring assisted double sealing at the seat ring
- Body cavity pressure
- Secondary sealing
- Flanged or butt welded connections

Design variations:

- Welded design
- Reduced bore
- Extended stem design

Bolted design	Welded design
GTNG	GTGH
GTNK	GTNH
GTZG	GZGH
GTZK	GTZH

Dimensional Data for GTNG, GTNK, GTZG, GTZK



Class150	PN16	d	L [mm]			Other dimension[mm]					Weight[kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	394	457	406	260	250	F 14	40	60	~195
8"	200	201	457	521	470	300	285	F 14	40	60	~240
10"	250	252	533	559	546	350	333	F 25	50	75	~320
12"	300	303	610	635	622	400	375	F 25	60	90	~590
14"	350	335	686	762	699	420	395	F 25	60	90	~765
16"	400	385	762	838	775	475	450	F 25	60	90	~1020
18"	450	436	864	914	876	510	490	F 25	70	105	~1400
20"	500	487	914	991	927	550	530	F 25	70	105	~1860
24"	600	589	1067	1143	1080	630	615	F 30	75	115	~2900
28"	700	684	1245	1346	-	710	690	F 30	85	130	~3900
32"	800	779	1372	1524	-	790	765	F 35	115	175	~5700
36"	900	874	1727	1727	1756	880	860	F 35	115	175	~8500
40"	1000	976	1900	1840	-	980	930	F 35	130	195	~11000
42"	1050	1020	2050	1960	-	990	970	F 35	130	195	~12000
48"	1200	1166	2180	2100	-	1100	1080	F 40	150	225	~15000

Class300	PN25-40	D	L [mm]			Other dimension [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	403	457	419	260	250	F 14	40	60	~200
8"	200	201	502	521	518	300	285	F 14	40	60	~300
10"	250	252	568	559	584	350	333	F 25	50	75	~400
12"	300	303	648	635	664	400	375	F 25	60	90	~680
14"	350	335	762	762	778	420	395	F 25	60	90	~890
16"	400	385	838	838	854	475	450	F 25	60	90	~1165
18"	450	436	914	914	930	510	490	F 25	70	105	~1500
20"	500	487	991	991	1010	550	530	F 25	70	105	~2030
24"	600	589	1143	1143	1165	630	615	F 30	100	150	~3400
28"	700	684	1346	1346	1372	710	690	F 35	85	130	~4300
32"	800	779	1524	1524	1553	790	765	F 35	115	175	~6150
36"	900	874	1727	1727	1756	880	875	F 35	140	195	~8500
40"	1000	976	1900	1840	-	980	930	F 35	130	195	~11000
42"	1050	1020	2050	1960	-	990	970	F 35	130	210	~12000
48"	1200	1166	2180	2100	-	1100	1080	F 40	150	225	~15000

Class400	PN63	d	L [mm]			Other dimension [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	495	495	498	260	250	F 14	40	60	~225
8"	200	201	597	597	600	300	290	F 16	50	75	~355
10"	250	252	673	673	676	350	333	F 25	60	90	~470
12"	300	303	762	762	765	400	375	F 25	70	105	~855
14"	350	335	826	826	829	420	395	F 25	70	105	~1050
16"	400	385	902	902	905	475	450	F 25	75	115	~1330
18"	450	436	978	978	981	510	490	F 25	75	115	~1620
20"	500	487	1054	1054	1060	550	530	F 30	85	130	~2180
24"	600	589	1232	1232	1241	630	615	F 35	100	150	~3800
28"	700	684	1397	1397	1410	710	690	F 35	115	175	~4900
32"	800	779	1651	1651	1667	790	770	F 35	130	195	~6950
36"	900	874	1880	1880	1896	880	875	F 35	140	210	~9500
40"	1000	976	1960	1900	-	980	970	F 40	150	225	~12000
42"	1050	1020	2100	2000	-	1020	1000	F 40	140	210	~13000
48"	1200	1166	2400	2180	-	1150	1130	F 40	175	265	~16500

Class600	PN100	D	L [mm]			Other dimension [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	559	559	562	260	250	F 14	40	60	~245
8"	200	201	660	660	664	300	290	F 16	50	75	~390
10"	250	252	787	787	791	350	333	F 25	60	90	~565
12"	300	303	838	838	841	400	375	F 25	70	105	~970
14"	350	335	889	889	892	420	395	F 25	70	105	~1200
16"	400	385	991	991	994	475	450	F 25	75	115	~1460
18"	450	436	1092	1092	1095	510	490	F 30	75	115	~1780
20"	500	487	1194	1194	1200	550	530	F 30	85	130	~2420
24"	600	589	1397	1397	1407	630	615	F 35	100	150	~4150
28"	700	684	1549	1549	1562	710	690	F 35	115	175	~5300
32"	800	779	1778	1778	1794	790	770	F 35	130	195	~7450
36"	900	874	2083	2083	2099	880	875	F 35	140	210	~10000
40"	1000	976	1960	1900	-	980	970	F 40	150	225	~12500
42"	1050	1020	2100	2000	-	1020	1000	F 40	150	225	~13700
48"	1200	1166	2400	2180	-	1150	1130	F 48	175	265	~17500

Class900	PN160	d	L [mm]			Other dimension [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	610	610	613	260	250	F 14	40	60	~295
8"	200	201	737	737	740	300	290	F 16	50	75	~470
10"	250	252	838	838	841	350	333	F 25	60	90	~725
12"	300	303	965	965	968	400	375	F 25	70	105	~1110
14"	350	322	1029	1029	1038	430	410	F 30	75	115	~1650
16"	400	373	1130	1130	1140	485	450	F 30	85	130	~2050
18"	450	423	1219	1219	1232	525	525	F30	85	130	~2650
20"	500	471	1321	1321	1334	570	550	F35	100	150	~3550
24"	600	570	1549	1549	1568	670	645	F35	115	175	~5450
30"	750	712	1780	1700	-	800	805	F40	140	210	~9500
36"	900	855	2050	1980	-	950	937	F40	150	225	~14500

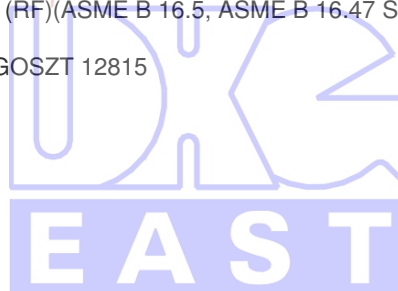
Class1500	PN250	d	L [mm]			Other dimension [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	144	705	705	711	270	265	F16	50	75	~370
8"	200	192	832	832	841	315	300	F25	60	90	~620
10"	250	239	991	991	1000	370	355	F25	70	105	~940
12"	300	287	1130	1130	1146	430	415	F30	75	115	~1450
14"	350	315	1257	1257	1276	475	455	F30	85	130	~1810
16"	400	260	1384	1384	1406	530	500	F30	100	150	~2400
18"	450	413	1537	1537	1559	550	550	F35	100	150	~3300
20"	500	457	1664	1664	1686	620	610	F35	115	175	~4400
24"	600	549	1943	1943	1972	730	720	F40	130	195	~6550

RTJ: Flanged joint with Ring Joint sealing surface (ASME B 16.5 , ASME B 16.47 SERIA A)

WE: Butwelded joint (ASME B 16.25, EN 12627)

RF:

- Flanged joint with flat sealing surface (RF)(ASME B 16.5, ASME B 16.47 SERIA A)
- Flanged joint as per EN 1092-1
- Flanged joint as per GOSZT 12821, GOSZT 12815



GTGF, GTNF



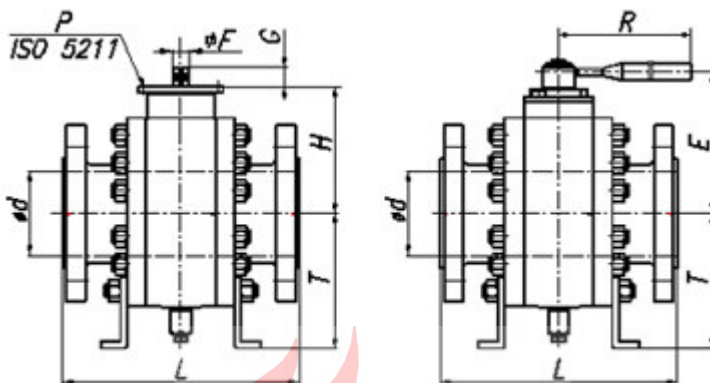
Main features:

- Metal to metal sealing (hard-metal facing)
- Trunnion mounted ball
- Spiral spring assisted double sealing at the seat ring
- Single blow-off possibility of body cavity pressure
- Automatic compensation of body cavity pressure
- Secondary sealing of stem "plastic" energised
- Flanged, threaded or butt welded connections

Design variations:

- Reduced bore
- Extended stem design

Dimensional Data for GTGF (2"-4")



Class150	PN16	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	178	216	191	216	82	120	100	300	F 10	18	25	~28
2 1/2"	65	76	241	241	257	241	100	135	140	400	F 10	22	30	~40
3"	80	76	203	283	216	283	100	135	140	400	F 10	22	30	~43
4"	100	102	229	305	241	305	160	165	165	500	F 12	30	40	~74

Class300	PN25-40	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	216	216	232	216	82	120	100	300	F 10	18	25	~30
2 1/2"	65	76	241	241	257	241	100	135	140	500	F 10	22	30	~41
3"	80	76	283	283	298	283	100	135	140	400	F 10	22	30	~46
4"	100	102	305	305	321	305	160	165	165	500	F 12	30	40	~84

Class400	PN64	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	292	292	295	292	130	130	150	400	F 10	18	25	~34
2 1/2"	65	64	330	330	333	330	155	155	180	500	F 12	22	30	~44
3"	80	76	356	356	359	356	155	155	180	600	F 12	22	30	~66
4"	100	102	406	406	410	432	200	190	220	800	F 14	30	40	~105

Class600	PN100	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN	[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ	
2"	50	51	292	292	295	292	130	130	150	400	F 10	18	25	~34
2 1/2"	65	64	330	330	333	330	155	155	180	500	F 12	22	30	~45
3"	80	76	356	356	359	356	155	155	180	600	F 12	22	30	~66
4"	100	102	432	432	435	432	200	190	220	800	F 14	30	40	~120

Class900	PN160	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN		[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ
2"	50	51	368	368	371	292	130	130	150	600	F 10	18	25	~52
2 1/2"	65	64	419	419	422	330	155	155	180	600	F 12	22	30	~62
3"	80	76	381	381	384	356	155	155	180	800	F 12	22	30	~80
4"	100	102	457	457	460	432	200	190	*	*	F 14	30	40	~170

Class1500	PN250	d	L [mm]				Overall dimensions [mm]							Weight [kg]
DN		[mm]	RF	WE	RTJ	B	T	H	E	R	P	F	G	RF, RTJ
2"	50	51	368	368	371	292	130	130	150	600	F 10	18	25	~55
2 1/2"	65	64	419	419	422	330	155	155	180	800	F 12	22	30	~80
3"	80	76	470	470	473	356	155	155	*	*	F 12	22	30	~105
4"	100	102	546	546	549	432	200	190	*	*	F 14	30	40	~205

Note: 2", 2 1/2", 3" without support.

* Only gear actuation.

RTJ: Flanged joint with Ring Joint sealing surface (ASME B 16.5)

WE: Butwelded joint (ASME B 16.25, EN 12627)

B: Threaded joint (ASME B 1.20)

RF:

- Flanged joint with flat sealing surface (RF)(ASME B 16.5)
- Flanged joint as per EN 1092-1
- Flanged joint as per GOSZT 12821, GOSZT 12815

Dimensional Data for GTNF (6"-16") ball valves

Class150	PN16	d	L [mm]			Overall dimensions [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	394	457	406	260	250	F 14	40	60	~195
8"	200	201	502	521	518	300	290	F 16	50	75	~290
10"	250	252	568	559	584	350	333	F 25	60	90	~390
12"	300	303	648	635	664	400	375	F 25	70	105	~665
14"	350	335	762	762	778	420	395	F 25	70	105	~860
16"	400	385	838	838	854	475	450	F 25	75	115	~1150

Class300	PN25-40	d	L [mm]			Overall dimensions [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	403	457	419	260	250	F 14	40	60	~141
8"	200	201	502	521	518	300	290	F 16	50	75	~290
10"	250	252	568	559	584	350	333	F 25	60	90	~390
12"	300	303	648	635	664	400	375	F 25	70	105	~665
14"	350	335	762	762	778	420	395	F 25	70	105	~860
16"	400	385	838	838	854	475	450	F 25	75	115	~1150

Class600	PN100	d	L [mm]			Overall dimensions [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	559	559	562	260	250	F 14	40	60	~240
8"	200	201	660	660	664	300	290	F 16	50	75	~380
10"	250	252	787	787	791	350	333	F 25	60	90	~550
12"	300	303	838	838	841	400	375	F 25	70	105	~950

Class400	PN64	d	L [mm]			Overall dimensions [mm]					Weight [kg]
DN		[mm]	RF	WE	RTJ	T	H	P	F	G	RF, RTJ
6"	150	152	495	495	498	260	250	F 14	40	60	~220
8"	200	201	597	597	600	300	290	F 16	50	75	~345
10"	250	252	673	673	676	350	333	F 25	60	90	~460
12"	300	303	762	762	765	400	375	F 25	70	105	~840
14"	350	335	826	826	829	420	395	F 25	70	105	~1020
16"	400	385	902	902	905	475	450	F 30	75	115	~1300

RTJ: Flanged joint with Ring Joint sealing surface (ASME B 16.5)

WE: Butwelded joint (ASME B 16.25, EN 12627)

RF:

- Flanged joint with flat sealing surface (RF)(ASME B 16.5)
- Flanged joint as per EN 1092-1
- Flanged joint as per GOSZT 12821, GOSZT 12815





Identification system

The notation of Ball valve product line:

Code:	X	X	X	X	-	X	X	-	X	X	-	X	X	-	X	X	X	/	X
Character:	1	2	3	4	-	5	6	-	7	8	-	9	10	-	11	12	13	/	V
Sample:	G	T	N	K	-	2	A	-	H	X	-	G	K	-	E	2	2	/	V

Identifying characters:

1st- 4th characters: Ball valve identifier

Code:	Type:
GUB	1/2", 3/4", 1", 1 1/4", 1 1/2" with floating ball
GUBH	GUB welded design
GTNA	2"-6" screwed, for only low pressure (2"-4": 16-40 bar, 6": 16-25 bar)
GTNN	2"-4" screwed
GTNH	GTNN welded design
GTNG	6"-56", screwed, auto-discharge of body space
GTGH	GTNG welded design
GTNK	6"-56" screwed, bi-directional sealing system
GTNH	GTNK welded design
GTZG	6"-56", screwed, auto-discharge of body space, secondary sealing with grease injection
GZGH	GTZG welded design
GTZK	6"-56", screwed, bi-directional sealing system, sec. sealing with grease injection
GTZH	GTZK welded design
GTGF	2"-16" metal to metal sealing, automatic compensation of body space pressure

5th character: Temperature identifier

By API Spec. 6D (Certificate of quality number: 6D-0227)

Code:	Temperature range	Code:	Temperature range
2	- 29 °C ~ + 120 °C	21	- 29 °C ~ + 200 °C
22	- 29 °C ~ + 150 °C	23	- 29 °C ~ + 230 °C
5	- 46 °C ~ + 120 °C	51	- 46 °C ~ + 200 °C
52	- 46 °C ~ + 150 °C	53	- 46 °C ~ + 230 °C
7	- 60 °C ~ + 80 °C	71	- 60 °C ~ + 200 °C
72	- 60 °C ~ + 150 °C	73	- 60 °C ~ + 230 °C
8	- 70 °C ~ + 80 °C	9	- 80 °C ~ + 80 °C

By API Spec. 6A (if determined in Psi or non-standard class)

Code:	Temperature range:	Code:	Temperature range:
P	- 29 °C ~ + 82 °C	U	- 18 °C ~ + 120 °C
PU	- 29 °C ~ + 120 °C	other	

6th character: Medium, TRIM identifier (can be more than one character)

By API Spec.6D (Certificate of quality number: 6A-0403)

Code:	Medium:
A	Non-corrosive agent
A1,A2	Low corrosive agent
S	Middling corrosive agent
K	Hard corrosive agent
D	Non-corrosive agent + "NACE"
E	Middling corrosive agent + "NACE"
F	Hard corrosive agent + "NACE"
G	Steam, hot water
CO	CO ₂
PB	Propane-butane

By API Spec. 6A (if determined in Psi or non-standard class)

Code:	Medium, TRIM:
AA	Non-corrosive agent
BB	Low corrosive agent
CC	Middling or hard corrosive agent
DD	Non-corrosive agent + "NACE"
EE	Low corrosive agent + "NACE"
FF	Middling or hard corrosive agent + "NACE"
other	

7th character: Connection identifier (can be more than one character)

Code:	Connection type:
A	Flange with raised sealing surface (16-40 Bar) by EN 1092 type B1
E	Flange with raised sealing surface (63-250 Bar) by EN 1092-1 type B2
H	Flange with groove sealing surface (16-160 Bar) by EN 1092-1 type D
K	Flange with spigot sealing surface by EN 1092-by 1 type E
U	Flange with recess sealing surface by EN 1092-1 type F
SZ	Flange with tongue sealing surface by (16-160 Bar), EN 1092-1 type C
C	Butt welding end (by standard or order) EN 12627
CP	Butt welding end with welded pipe (after 'CP' length of pipe in mm)
F	Flange (RF type) with raised sealing surface by ASME B16.5, ASME B16.47 SERIE A
J	Flange (RTJ type) with Ring Joint sealing surface by ASME B16.5, ASME B16.47 SERIE A
W	Butt welding end (WE type) (by standard or order) ASME B16.25
WP	Butt welding end with welded pipe (after 'WP' length of pipe in mm)
R	Flange (RTJ type) with Ring Joint sealing surface by API Sp. 6A
S	Socket-welded by (SW) ASME B16.11, DIN 3239
M	External thread (up to 4") by (LP - API Std. 5L)
B	Internal thread (up to 4") by (LP - API Std. 5B)
GA	Flange with raised sealing surface by GOSZT 12815-80 1. design (up to 40 bar) + GOSZT 12821-80
GB	Flange with recess sealing surface by GOSZT 12815-80 3. design (up to 40 bar) + GOSZT 12821-80
GJ	Flange with ovalring sealing surface by GOSZT 12815-80 7.design (up to 64 bar) + GOSZT 12821-80

8th character: Connection design identifier (can be omitted or more than one character):

Code:	Connection design:
X	Counterflange (both sides) (by standard or order)
Y	Counterflange (one side) (by standard or order)
V	Blank flange (one side)
XS	Socket-welded counterflange (mindkét oldal)
X/B	Counterflange (one side), threaded counterflange (the other side)
other	

9-10th character: Actuator identifier (the type of actuator should be determined exactly. It can be two characters)

Code:	Actuator type:
O	Free end of stem
K	Hand lever
GK	Manually operated gear
GM	Electro-motor operated gear
DM	Electric actuator
H	Hydraulic actuator
HE	Electro-hydraulic actuator
P	Pneumatic actuator

The type of actuator is defined by the customer or recommended by the valve producer.

11th character: Other design identifier (can be omitted or more than one character)

Code:	Other design:
V	Greasing pipe (GTZG, GTZK, GTGH, GTZH)
L	Extended length
E	Buriable design

12-13th character: burying or extending size identifier (can be omitted)

Code: Size in mm/100

14th character: Other special design identifier:

Code:	After sign " / ", uniquely given identifier:
/ G	Blow-off system (GTNN types)
/ V	Limit Switch
/ L	Locking device
/ SZ	Insulated
/ SM	Seawater resistant paint (SUBMARINE)
/ R	Different length from ANSI/ASME B16.10 ex.: by DIN 3202 or EN 558
/ D	Different diameter of bore from API 6D
/ BP	By-pass system
/ F	Different size of gear connection rim from basic design
other	

Example 1 for notation:

Nominal diameter	DN 300
Nominal pressure	PN 64
Ball valve type	GTNK
Temperature range	-29°C ~ +120°C
Medium	Non-corrosive agent
Connection	Flange with groove sealing surface
Connection design	Counterflanges on the both sides
Actuator type	Manually operated gear
Other design	Buriable valve
Length of extended stem	2200 mm
Short notation: DN 300; PN 64 GTNK-2A-HX-GK-E22	

Example 2 for notation

Nominal diameter	DN 8"
Nominal pressure	ANSI/ASME CLASS 400
Ball valve type	GTZK
Temperature range	-60°C ~ +80°C
Medium	NACE Non-corrosive agent
Connection	DN 10" Flange with ANSI/ASME RTJ sealing surface
Connection design	Counterflange on one side with butt welding end, Blank flange
Actuator type	Electro-motor operated gear
Other design	Greasing pipe
Length of extended stem	1600 mm
Short notation: DN 10"/8"/10"; CLASS 400 GTZK-7D-JYV-GM-VL16	

Gallery

