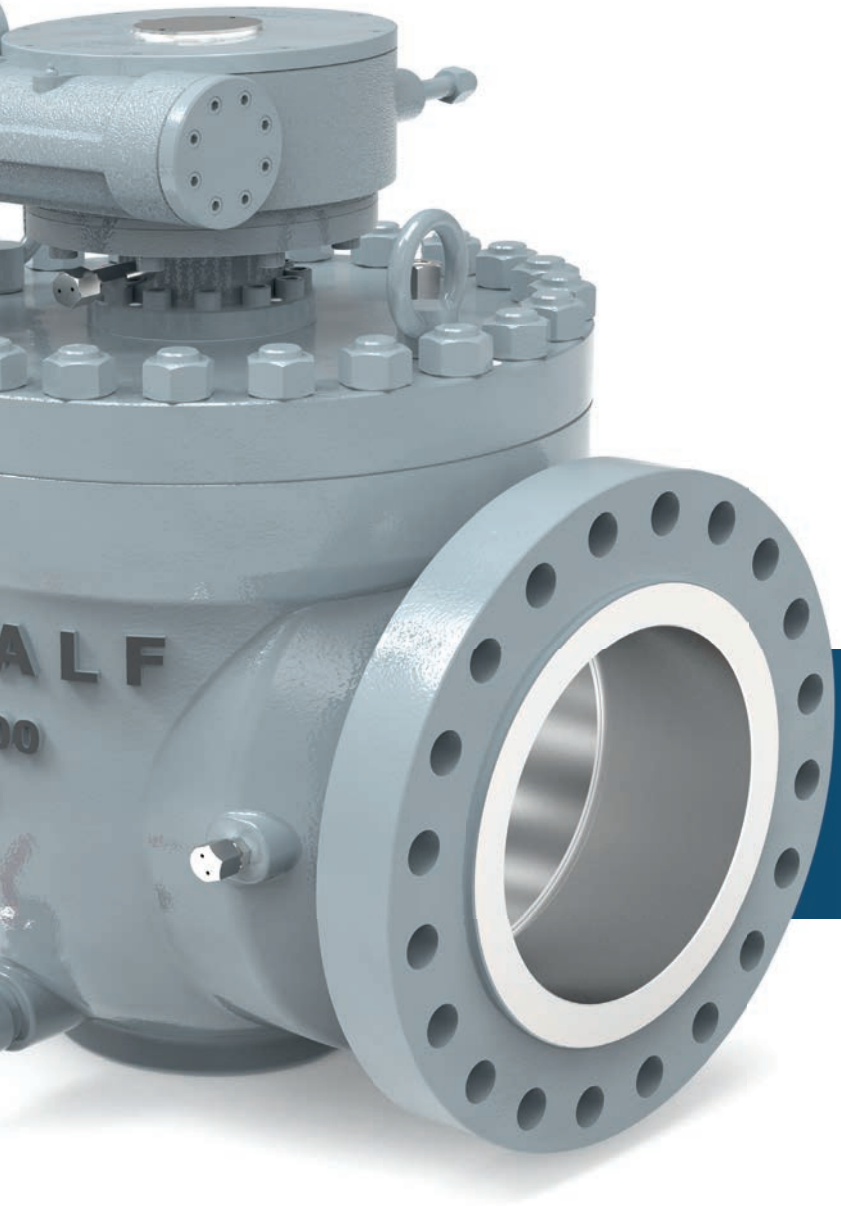
KURVALF

INDUSTRIAL VALVES AND AUTOMATION



TOP ENTRY BALL VALVES

TOP ENTRY BALL VALVES

When you need to decrease down time of critical service pipeline you should select top entry design ball valves for in line maintenance and quick repair-ability. It allows to remove ball and seats easily at site without disassembly whole valve for maintenance or repairing purpose. At Kurvalf you can order Top Entry Ball Valves with following features;

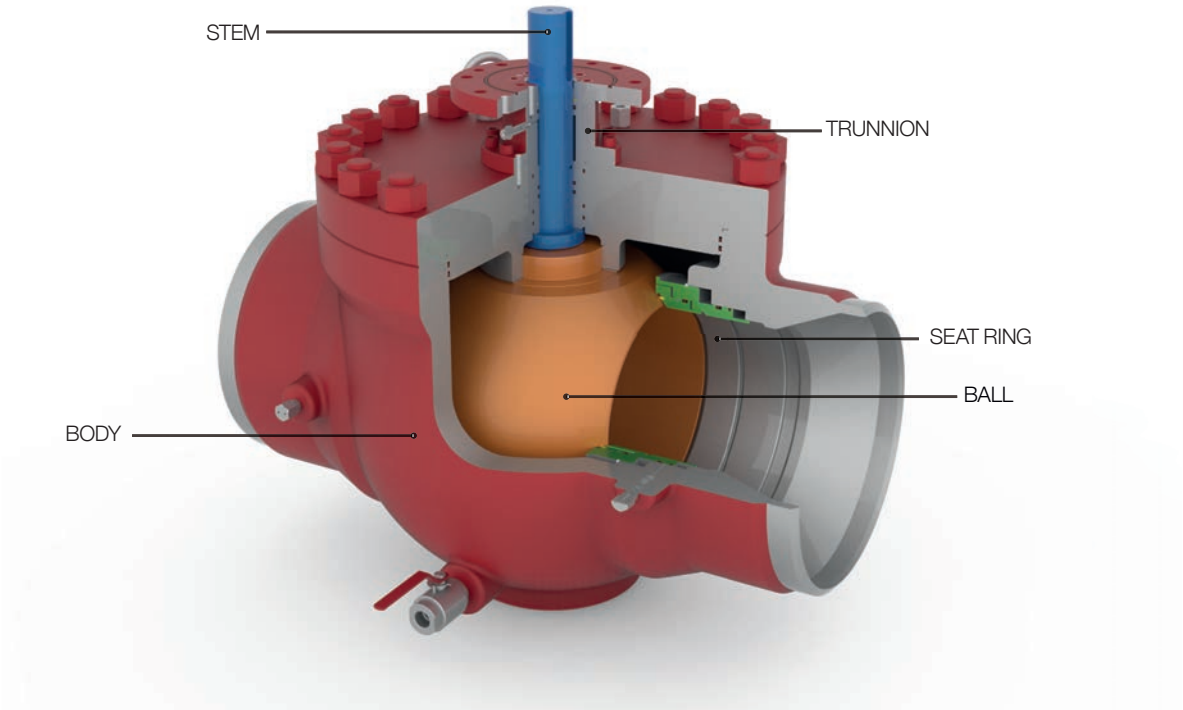
Specifitions

Valve size :	2” - 42"
Valve type :	Trunnion / Floating
Body Type :	Bolted
Pressure Class :	ANSI 150 / 300 / 600 / 900 / 1500 / 2500
End Connection :	RF / RTJ / BW
Bore :	Full Bore / Reduced Bore
Operator :	Lever / Gear / Actuator
Material :	Carbon Steel / Stainless Steel / Duplex / Alloy Steel
Operating Temperature :	Low / Standard / High
Leakage Class :	API 598 / ANSI FC70-2 / ISO 5208
Desing Standard:	ASME B16.34 / API 6D / ISO 14313 / ISO 17292
Face to Face Standard:	ASME B16.10
End Connection Standard :	ASME B16.5 / ASME B16.25 / DIN EN 1092-1
Test Standard :	API 6D / API 598 / ISO 14313
Fire Safe Standard :	API 607 / ISO 10497 / API 6FA
Certification :	EN 10204 3.1 - 3.2 / ISO 15848 Fugitive Emission / 2014-68 EU PED / SIL Capable / IP 67 (Gearbox)
Isolation Type :	DBB / DIB-1 / DIB-2

DESIGN & ANALYSIS

Reference standards and literature are scanned before valve designs are made.
With these researches, the design phase begins. The design is made taking into account reference standards. After the design is finished, a review is made. Analytical calculations are checked. If there is no problem until this stage, prototype production is started.

Material selection for valves operating under severe service conditions is very important for many reasons. When choosing the material, the operating temperature and pressure of the process, the chemical and mechanical abrasiveness of the fluid should be taken into consideration.



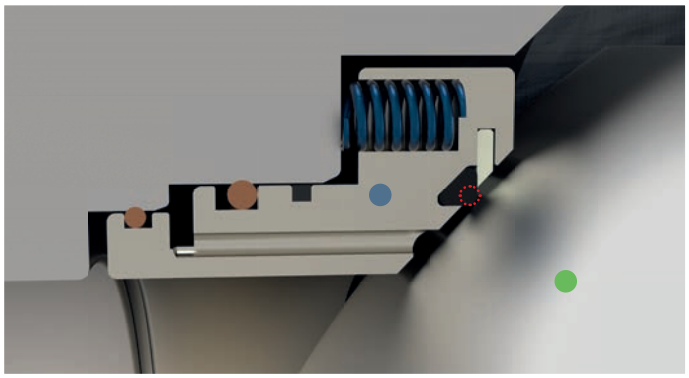
FEATURES

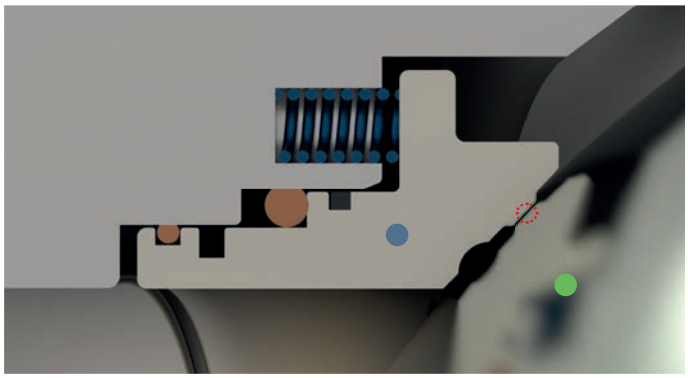
- Due to low torgue values, smaller actuator can be selected.
- Fixed lifting lugs on the valve.
- Easy maintenance.
- Emergency sealing fittings are default.
- Renewable seats.
- Available with metal and soft seats.
- Maintenance is posible without removing from the line.
- Locking device is optional.

ISOLATION TYPES

There are two main headings in the sealing design, which are affected by the operating conditions; First sytems of seat, second surface coating.

Ball valves have two types of sealing, soft seat and metal seat. Zero tightness can be achieved in soft seat ball valves. Metal seat valves are preferred for more heavy conditions. Zero leakage is not expected but it is also possible to achieve zero tightness for metal seat ball valves.





Soft Seat

Soft seats are provide excellent sealing performance and for used normal condition and normal temperature and aggressive environments.

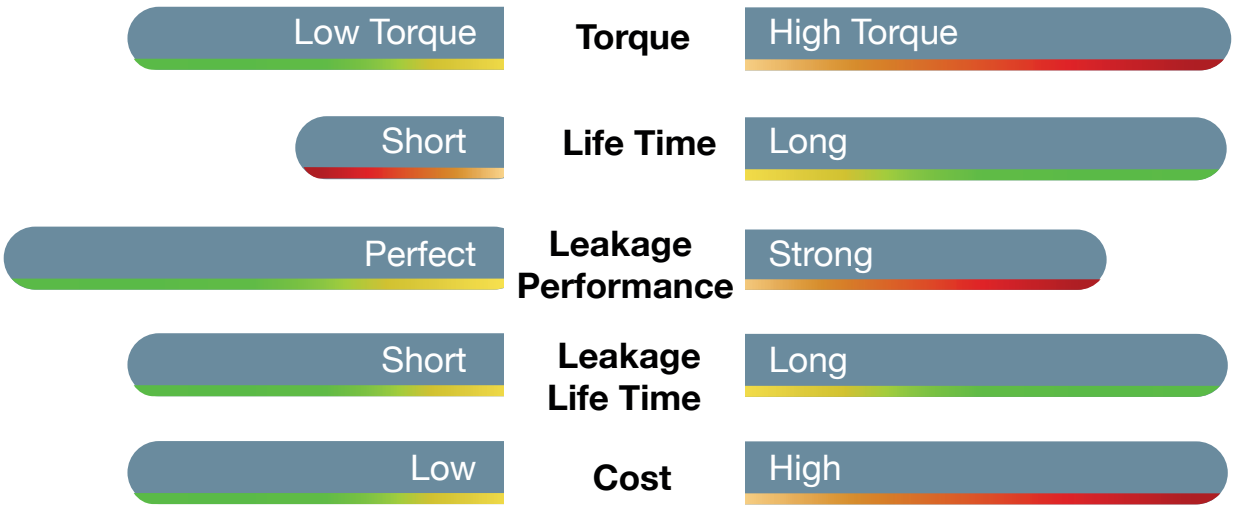
- Sealing Area
- Ball
- Seat

Metal Seat

Mainly used abrasive fluids, severe service and corrosive fluids also high temperatures and pressures.

- Sealing Area
- Ball
- Seat

Soft Seat vs Metal Comparison Table



There are differences between soft seat and metal seat designs. Depending on the conditions of use, these differences can be evaluated as an advantage or a disadvantage. In short, we can say that the soft seat is economical and the metal seat is suitable for difficult conditions.

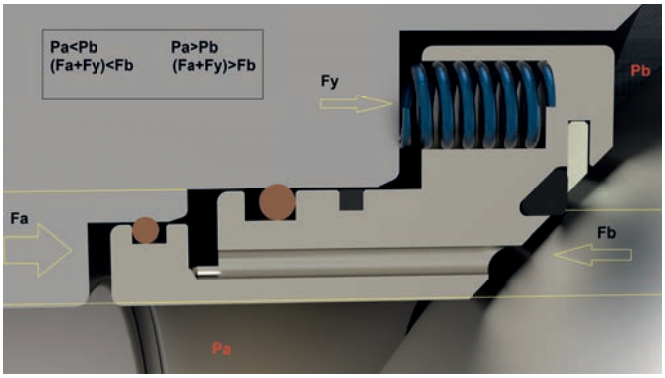
SINGLE PISTON EFFECT & DOUBLE PISTON EFFECT

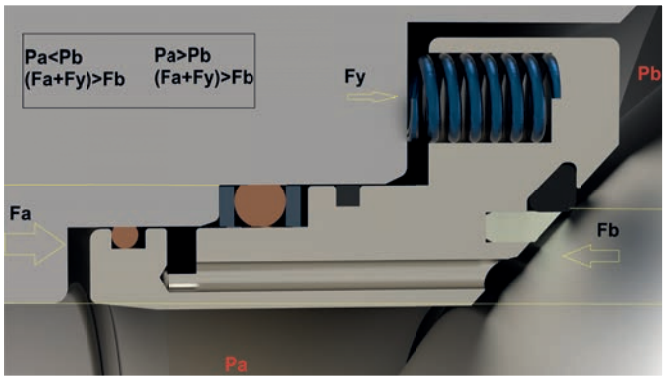
Single Piston Effect

This type of seat design can ensure a tight contact with the ball in only single direction. In fact, when the line (so the valve) is under pressure (upstream), the seat is pushed toward the ball normally. It is called single piston effect due to one side seat ring pushed toward the ball.

Double Piston Effect

As the name of it indicates, this type of seat design provide a tight contact with the ball in the normal direction, and also in the reverse direction. So, both sides upstream and downstream can be sealed for better leakage proof. Its design allows to use body cavity pressure to push downstream side ring toward the ball also. It is called double piston effect due to both side seat ring pushed toward the ball.





Options Of Seat Structural

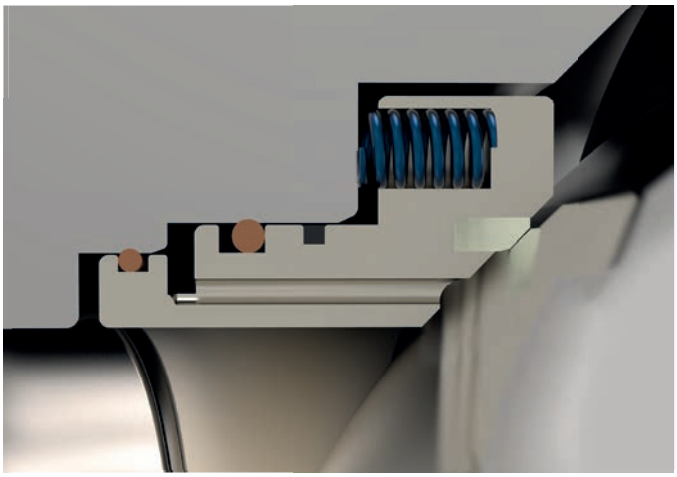
TRUNNION		2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	28"	30"	32"	36"	40"	42"	48"	56"
SOFT	DPE	O	O	O	O	O	O	O	O	O	S	S	S	S	S	S	S	S	S	S	S	S
	SPE	S	S	S	S	S	S	S	S	S	O	O	O	O	O	O	O	O	O	O	O	O
MTM	DPE	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	SPE	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
PMSS	DPE	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	SPE	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

O: Optionel S: Standard

In Trunnion Ball Valves, the operating pressure and the pressure of the seat to the ball determine the seat structure. We prefer Single Piston Effect (SPE) as standard from 2" to 16" and Double Piston Effect (DPE) seat design from 18" to 56".

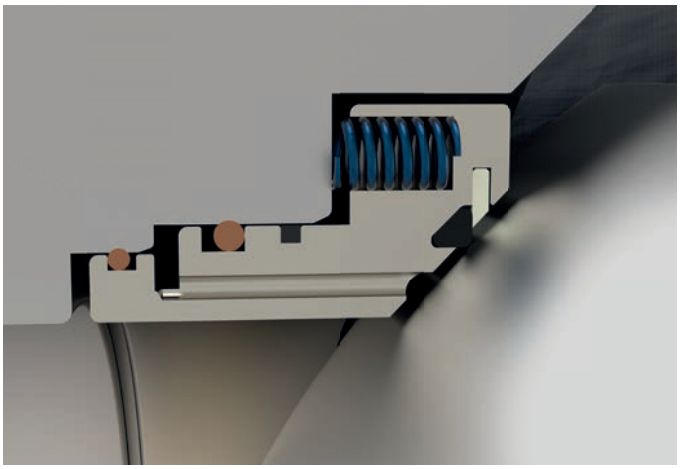
SOFT SEAT DESIGNS

Soft seat sealing is the most used ball valve sealing type. Since the sealing material is elastomer, it can provide zero leakage. Soft seat valves are preferred for general use. Elastomer materials can resist up to a certain temperature. Working pressures and working temperatures are the most important factors in the selection of elastomers.



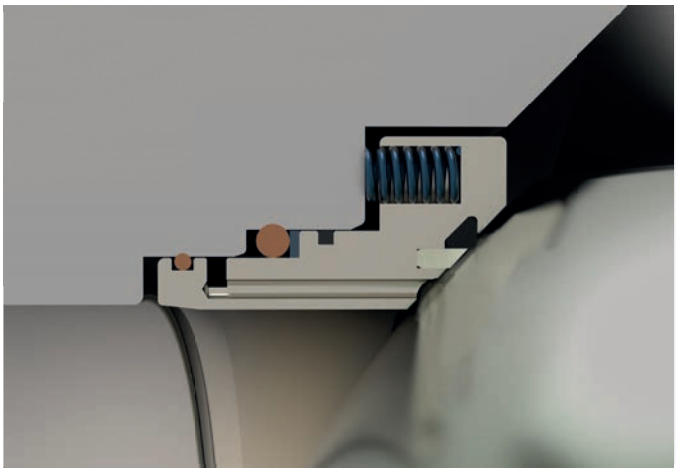
Standard Sealing

It is a spring-energised seat type with thermoplastic sealing material.It is preferred in general use.
It provides sealing by direct contact to ball surface of the thermoplastic material.



Delta Sealing

It is a spring-energised seat type with elastomer sealing. It shows excellent sealing performance because to its elastic structure. It produces less torque due to its low friction area.

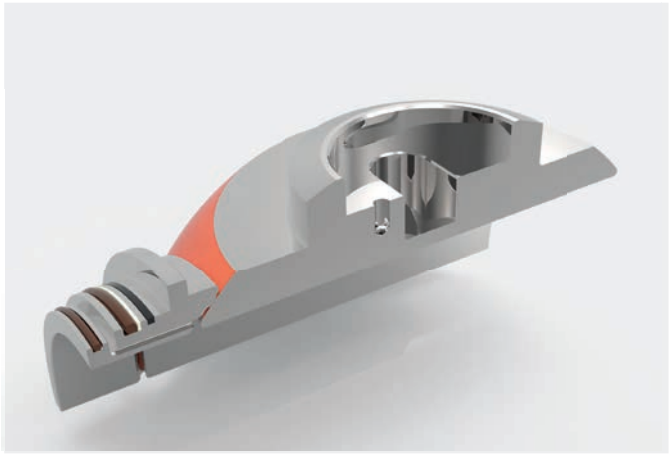


Pmss

It is called primary metal secondary soft seat. Ball surface and seat surface are coated with special coating material. Metal seat provides primary sealing. It provides secondary sealing with elastomer material. It is mainly used for high performance in dirty gas applications.

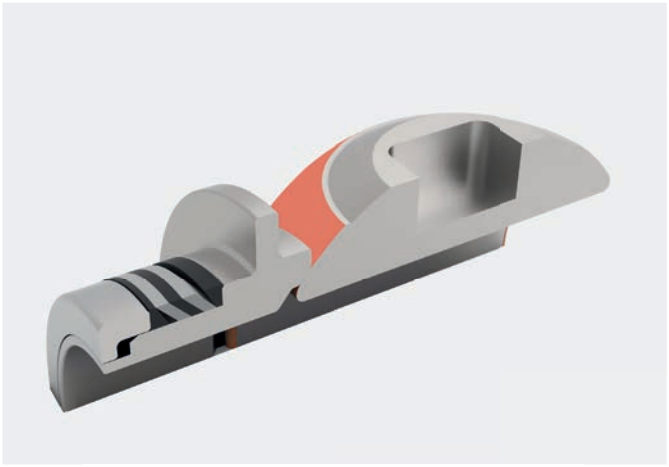
METAL SEAT DESIGNS

Metal seated ball valves are used in many industries with many different fluids. The most essential information in the design phase of the valves is the process requirements of the industries. We as KURVALF make various metal seated valve designs and offer solutions suitable for different operating conditions. Stainless steels are mostly preferred.



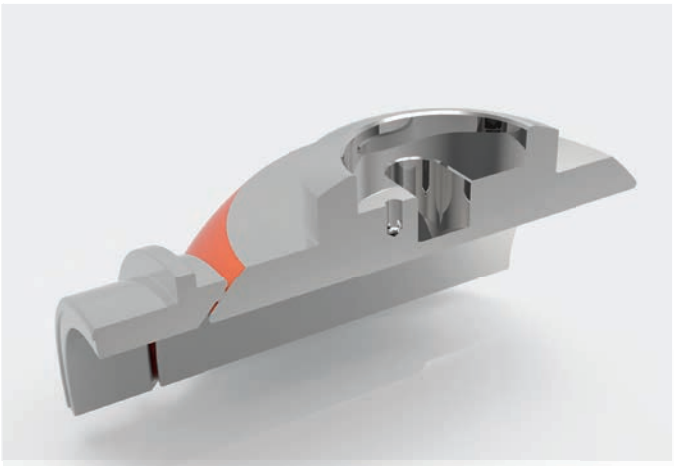
High Performance Design

Hard surfaced ball and seat works with metal to metal contact. Coated surface with a very hard alloy prevents rapid corrosion. In this design, elastomer is used in back seats. Design can work up to 230 degrees with elastomer.



Extreme Performance Design

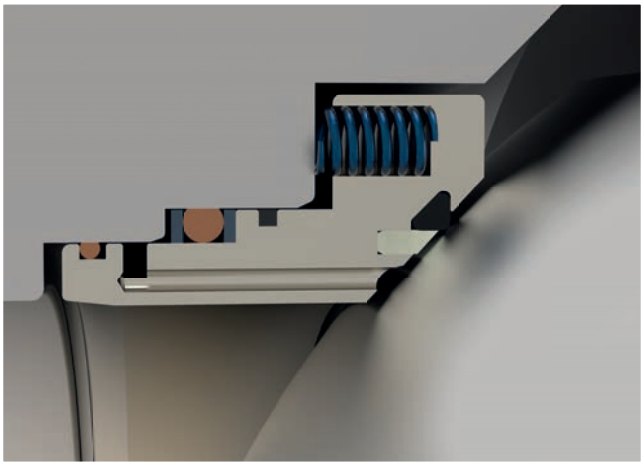
Hard surfaced ball and seat works with metal to metal contact. Coated surface with a very hard alloy prevents rapid corrosion.
Except for ball and seat contact point, in metal seated valves, the sealing behind the seat must be suitable for extreme conditions.
It is not possible to use elastomers in applications above 230 degrees. Sealing solutions are possible by using graphite-based materials instead of elastomer materials.



Full Metal Design

The sealing which cannot be achieved with elastomer and graphite materials can be achieved this meatl to metal design. This solution is designed for the toughest conditions. This design is preferred in processes where there is both chemical and mechanical wear.

FEATURES



Double Block and Bleed

When the ball is in the closed position, each seat seals off the process medium independently at the same time between the up/down stream and body cavity; it allows bleeding of the trapped cavity pressure (DBB) through drain or vent valve. The double block and bleed function makes it possible to flush the valve under pressure and verify that the seats are sealing properly.

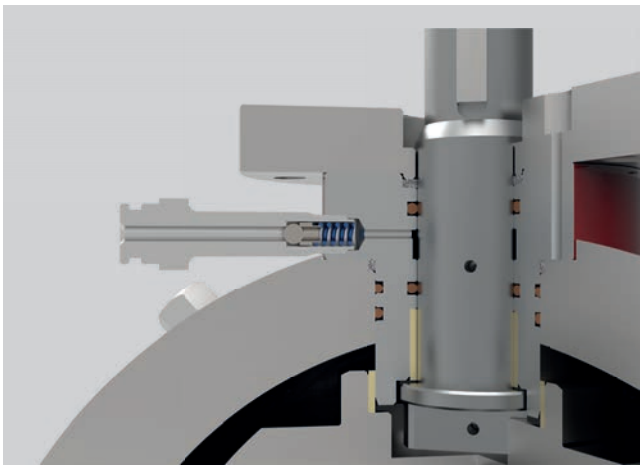
Single valve with two seating surfaces that, in the closed position, provides a seal against pressure from both ends of the valve with a means of venting/bleeding the cavity between the seating surfaces.

NOTE This valve does not provide positive double isolation when only one side is under pressure. See double isolation and bleed valve

Double Isolation Bleed

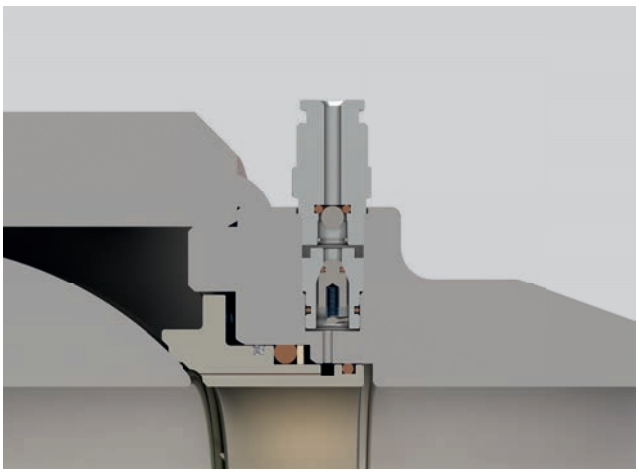
Single valve with two seating surfaces, each of which, in the closed position, provides a seal against pressure from a single source, with a means of venting/bleeding the cavity between the seating surfaces.

NOTE: This feature can be provided in one direction or in both directions.



Stem Seal

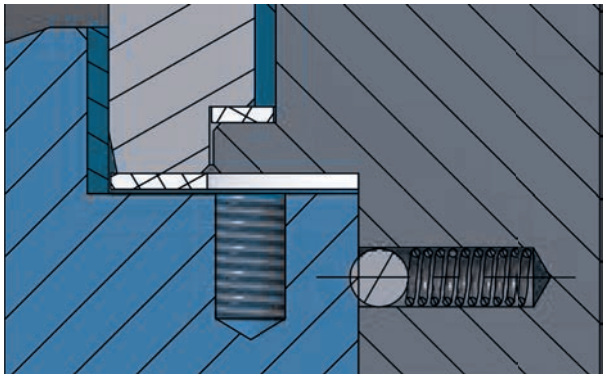
For high pressure or large size valves, double o-rings located in the upper stem area are used to ensure positive sealing. And upon request, additional stem seal injection fittings are provided to be utilized in the case of emergencies, o-ring damage, or if stem leakage occurs.



Emergency Seat Seal

In the event of damage to the valve seat, sealant can be injected to temporarily seal the valve until maintenance can be performed. It provides high integrity shut-off. On request, secondary seat sealant injection fittings are installed.

FEATURES



Anti Static Device

Spring plus graphite type antistatic device are applied between the ball, stem, gland flange and body, to keep the electrical continuity between all the metallic components, and ensure the resistance lower then the most severe service requirement.

Ball, plug and gate valves with soft seat have an antistatic device.
The electrical resistance between the obturator and valve body and between the stem/ shaft and valve body is measured using a direct-current power source not exceeding 12 V. The resistance is measured on dry valves before pressure testing and shall not exceed 10 Ω.

Blow-Out Proof Stem

This design ensures the valve stem cannot blown out of the body in the event of the gland being removed while the valve is under pressure. To prevent stem blow out from body, the stem has a shoulder in the lower part and so constructs that it may not blow out upwards.

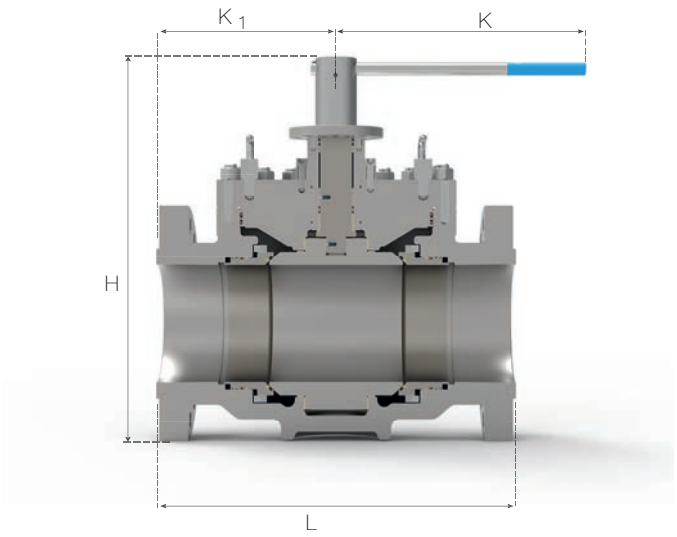
Lubrication Table

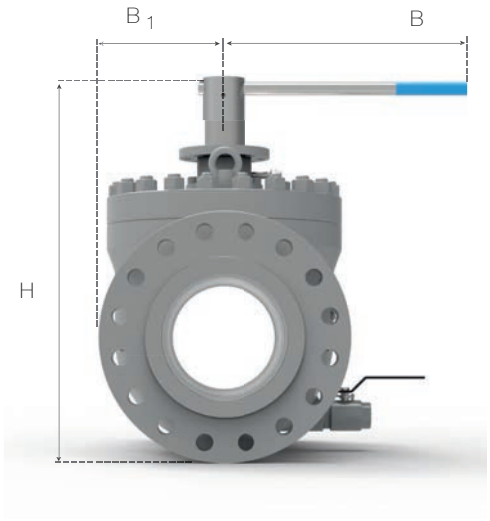
Lubrication is essential for valves with API 6A and API 6D design. Periodic lubrication is recommended for the long life time and operation of the valves. All valves of 4" and above are equipped with stem lubrication and emergency sealing as standard. Emergency sealing in 2" and 3" diameters can be offered as an option.

TRUNNION	SOFT			MTM			PMSS		
	MİL.YAĞ	SEAT.YAĞ	DRAIN	MİL.YAĞ	SEAT.YAĞ	DRAIN	MİL.YAĞ	SEAT.YAĞ	DRAIN
2"	N/A	O	√	N/A	O	√	N/A	O	√
3"	N/A	O	√	N/A	O	√	N/A	O	√
4"	√	√	√	√	√	√	√	√	√
6"	√	√	√	√	√	√	√	√	√
8"	√	√	√	√	√	√	√	√	√
10"	√	√	√	√	√	√	√	√	√
12"	√	√	√	√	√	√	√	√	√
14"	√	√	√	√	√	√	√	√	√
16"	√	√	√	√	√	√	√	√	√
18"	√	√	√	√	√	√	√	√	√
20"	√	√	√	√	√	√	√	√	√
22"	√	√	√	√	√	√	√	√	√
24"	√	√	√	√	√	√	√	√	√
28"	√	√	√	√	√	√	√	√	√
30"	√	√	√	√	√	√	√	√	√
32"	√	√	√	√	√	√	√	√	√
36"	√	√	√	√	√	√	√	√	√
40"	√	√	√	√	√	√	√	√	√
42"	√	√	√	√	√	√	√	√	√
48"	√	√	√	√	√	√	√	√	√
56"	√	√	√	√	√	√	√	√	√

O: Optionel

DIMENSIONS

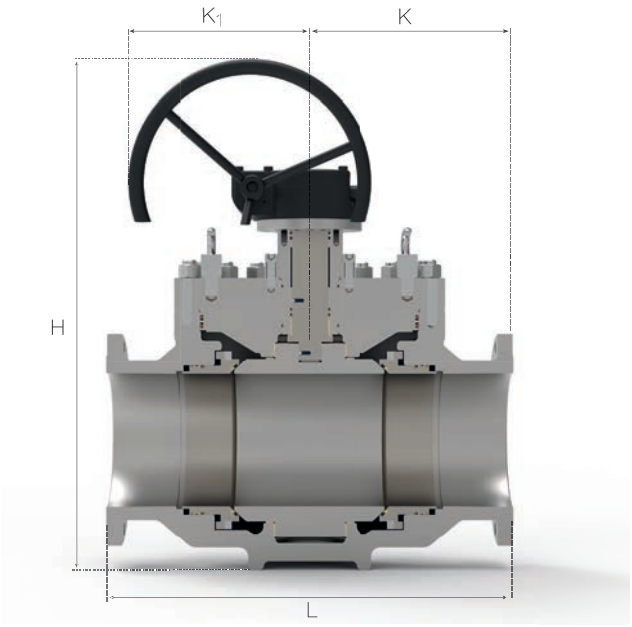


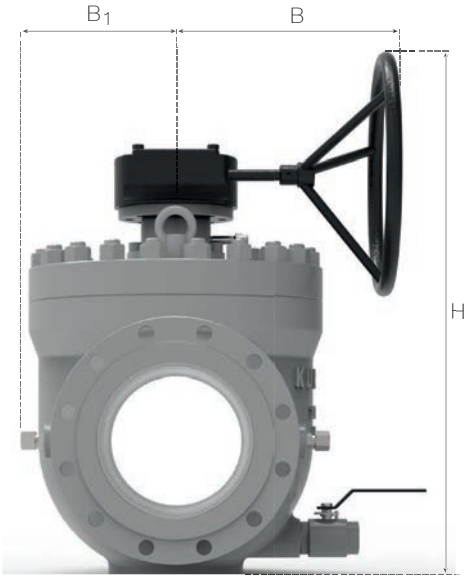


2"- 4" LEVER OP.

SIZE	CLASS	RF							RTJ						
		L	H	K1	K	B1	B	KG	L	H	K1	K	B1	B	KG
2”	150	292	322	146	412	102	412	47	295	322	146	412	102	412	48
3”	150	356	392	412	412	120	412	65	359	392	179,5	412	120	412	68
4”	150	432	436	412	412	148	412	110	435	436	217,5	412	148	412	113
2”	300	292	322	146	412	102	412	50	295	322	146	412	102	412	52
3”	300	356	392	178	412	120	412	70	359	392	179,5	412	120	412	73
4”	300	432	436	216,0	412	148	412	119	435	436	217,5	412	148	412	122
2”	600	292	322	146	412	102	412	53	295	322	146	412	102	412	55
3”	600	356	392	178	412	120	412	77	359	392	179,5	412	120	412	80
4”	600	432	436	216,0	412	148	412	135	435	436	217,5	412	148	412	138
2”	900	368	353	184	415	112	415	67	371	353	185,5	415	112	415	70
3”	900	381	415	191	415	130	415	118	384	415	192	415	130	415	121
2”	1500	368	375	184	600	110	600	76	371	375	185,5	410	110	410	79

DIMENSIONS

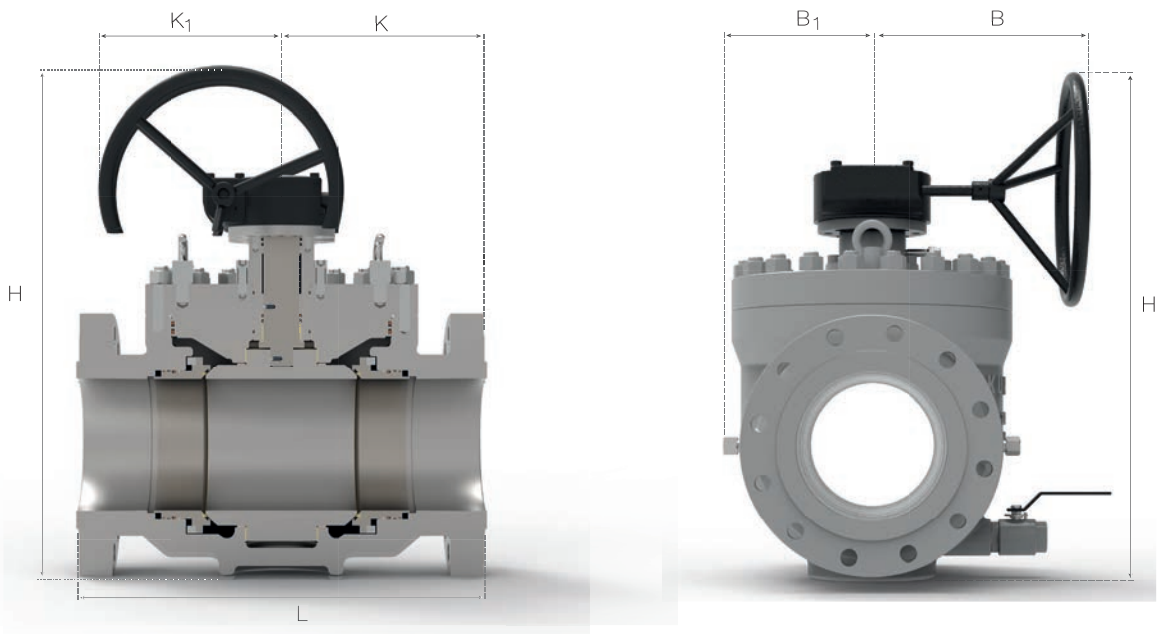




6"- 56" ANSI 150 GEAR OP.

SIZE	CLASS	RF							RTJ						
		L	H	K1	K	B1	B	KG	L	H	B1	B	K1	K	KG
6"	**150**	559	687	284,5	279,5	195	349	210	562	687	195	349	284,5	281	213
8"	**150**	660	771	299,5	330	235	349	370	664	771	235	349	299,5	332	375
10"	**150**	787	854	318	393,5	283	378	460	787	854	283	378	318	393,5	465
12"	**150**	838	950	318	419	315	378	660	841	950	315	378	318	421	665
14"	**150**	889	1100	393,5	444,5	328	493	1030	892	1100	328	493	393,5	446	1035
16"	**150**	991	1206	393,5	496	381	493	1400	994	1206	381	493	393,5	497	1415
18"	**150**	1092	1320	445,5	546	432	502	2150	1095	1320	432	502	445,5	548	2155
20"	**150**	1194	1450	445,5	597	450	502	3090	1200	1450	464	502	445,5	600	4005
24"	**150**	1397	1735	445,5	698,5	540	502	4550	1407	1735	540	502	445,5	703,5	4570
26"	**150**	1448	1845	445,5	724	575	502	5020	1461	1845	575	502	445,5	731	5040
28"	**150**	1549	1900	445,5	774,5	625	502	5600	1562	1900	625	502	445,5	781	5625
30"	**150**	1651	2030	460	826	660	703	8100	1664	2030	660	703	460	832	8170
32"	**150**	1778	2120	460	889	696	703	10550	1794	2120	696	703	460	897	10620
36"	**150**	2083	2185	460	1042	762	703	15100	2099	2185	762	703	460	1050	15230
40"	**150**	2337	2270	460	1168,5	1016	703	16650	2350	2270	1038	703	460	1175	16720
42"	**150**	2570	2350	460	1285	1160	703	18520	2585	2350	1177,5	703	460	1285	18550
48"	**150**	2730	2440	460	1365	1247,5	703	19940	2745	2440	1270	703	460	1365	19970
56"	**150**	2970	2680	460	1485	1485	703	26200	2990	2680	1495	703	460	1485	26250

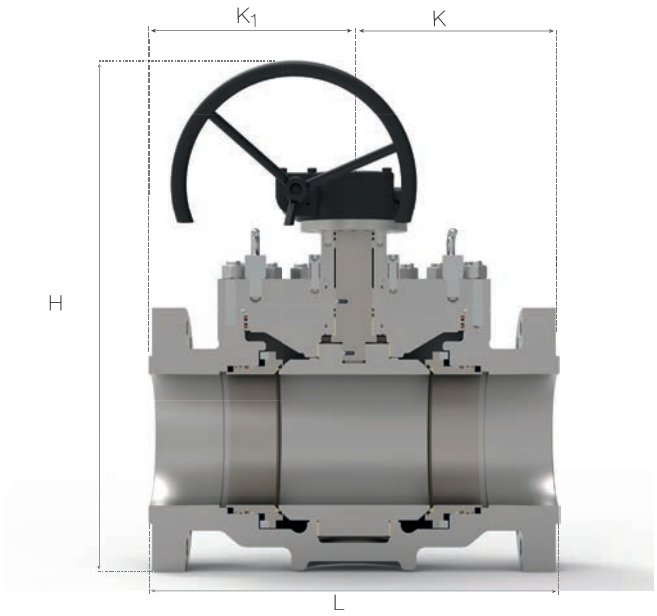
DIMENSIONS

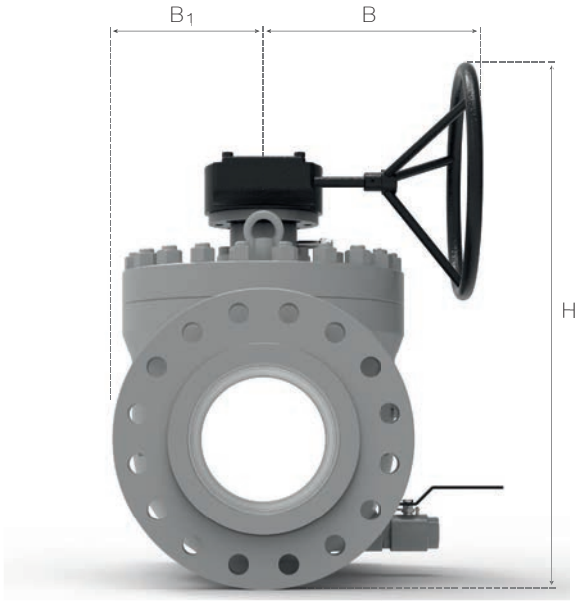


6"- 56" ANSI 300 GEAR OP.

SIZE	CLASS	RF							RTJ						
		L	H	K1	K	B1	B	KG	L	H	B1	B	K1	K	KG
6”	300	559	687	284,5	279,5	195	349	226	562	687	195	349	284,5	281	229
8”	300	660	771	299,5	330	235	349	395	664	771	235	349	299,5	332	400
10”	300	787	854	318	393,5	283	378	496	791	854	283	378	318	393,5	501
12”	300	838	950	318	419	315	378	712	841	950	315	378	318	421	717
14”	300	889	1100	393,5	444,5	328	493	1105	892	1100	328	493	393,5	446	1110
16”	300	991	1206	393,5	496	381	493	1507	994	1206	381	493	393,5	497	1512
18”	300	1092	1320	445,5	546	432	502	2244	1095	1320	432	502	445,5	548	2249
20”	300	1194	1450	445,5	597	450	502	3280	1200	1450	464	502	445,5	600	3295
24”	300	1397	1735	445,5	698,5	540	502	4810	1407	1735	540	502	445,5	703,5	4830
26”	300	1448	1845	445,5	724	575	502	5340	1461	1845	575	502	445,5	731	5360
28”	300	1549	1900	445,5	774,5	625	502	6045	1562	1900	625	502	445,5	781	6070
30”	300	1651	2030	460	826	660	703	8575	1664	2030	660	703	460	832	8645
32”	300	1778	2120	460	889	696	703	11135	1794	2120	696	703	460	897	11205
36”	300	2083	2185	460	1042	762	703	15740	2099	2185	762	703	460	1050	15870
40”	300	2337	2270	460	1168,5	1016	703	17520	2350	2270	1038	703	460	1175	17590
42”	300	2570	2350	460	1285	1160	703	19130	2585	2350	1177,5	703	460	1285	19180
48”	300	2730	2440	460	1365	1247,5	703	20540	2745	2440	1270	703	460	1365	2*610
56”	300	2970	2680	460	1485	1485	703	26845	2990	2680	1495	703	460	1485	26895

DIMENSIONS

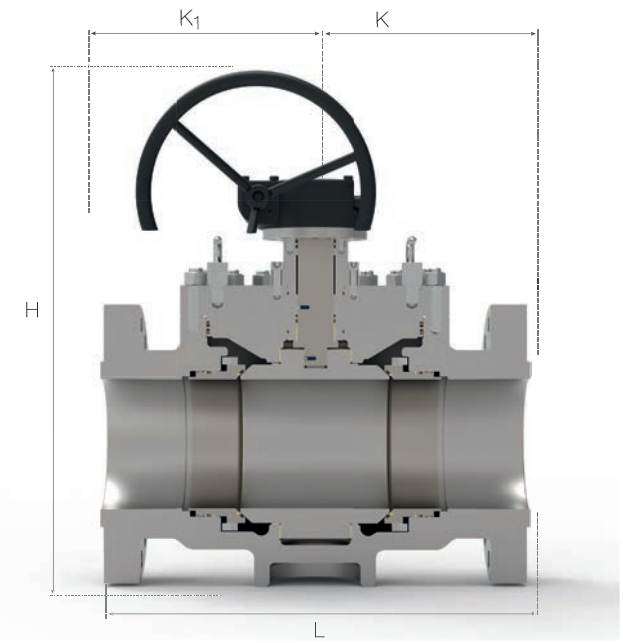


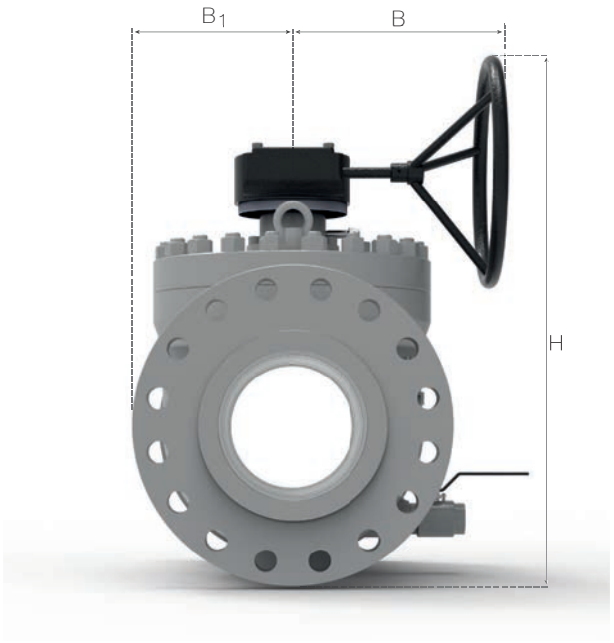


6"- 56" ANSI 600 GEAR OP.

SIZE	CLASS	RF							RTJ						
		L	H	K1	K	B1	B	KG	L	H	B1	B	K1	K	KG
6”	600	559	687	284,5	279,5	195	349	262	562	687	195	349	284,5	281	265
8”	600	660	771	299,5	330	235	349	440	664	771	235	349	299,5	332	445
10”	600	787	854	318	393,5	283	378	585	791	854	283	378	318	393,5	590
12”	600	838	950	318	419	315	378	797	841	950	315	378	318	421	802
14”	600	889	1100	393,5	444,5	328	493	1320	892	1100	328	493	393,5	446	1325
16”	600	991	1206	393,5	496	381	493	1740	994	1206	381	493	393,5	497	1750
18”	600	1092	1320	445,5	546	432	502	2512	1095	1320	432	502	445,5	548	2517
20”	600	1194	1450	445,5	597	450	502	3612	1200	1450	464	502	445,5	600	3632
24”	600	1397	1735	445,5	698,5	540	502	5254	1407	1735	540	502	445,5	703,5	5280
26”	600	1448	1845	445,5	724	575	502	5740	1461	1845	575	502	445,5	731	5770
28”	600	1549	1900	445,5	774,5	625	502	6525	1562	1900	625	502	445,5	781	6575
30”	600	1651	2030	460	826	660	703	9005	1664	2030	660	703	460	832	9045
32”	600	1778	2120	460	889	696	703	11585	1794	2120	696	703	460	897	11625
36”	600	2083	2185	460	1042	762	703	16230	2099	2185	762	703	460	1050	16250
40”	600	2983	2270	460	1168,2	1016	703	18220	2350	2270	1038	703	460	1175	18240
42”	600	2570	2350	460	1285	1160	703	19680	2585	2350	1177,5	703	460	1285	19730
48”	600	2730	2440	460	1365	1247,5	703	21260	2745	2440	1270	703	460	1365	21310
56”	600	2970	2680	460	1485	1485	703	27490	2990	2680	1495	703	460	1485	27540

DIMENSIONS

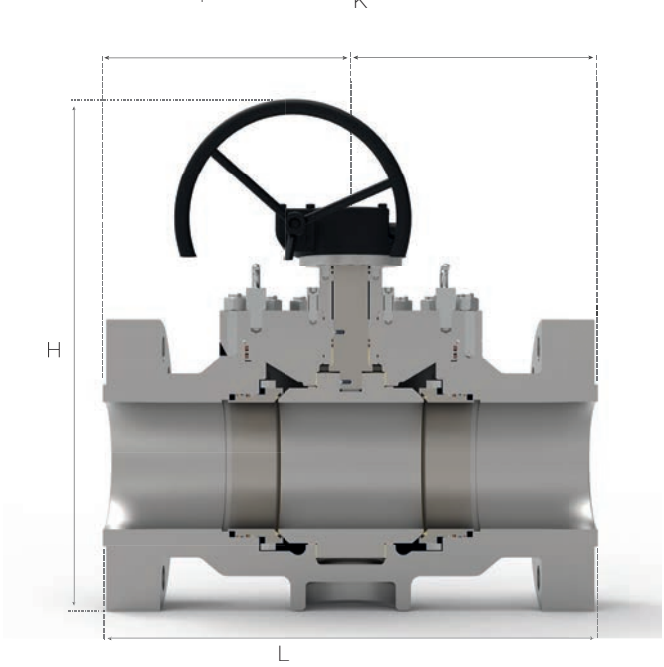


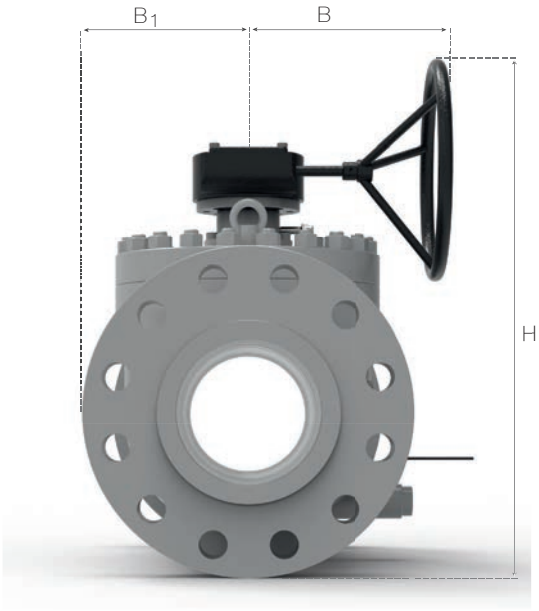


6"- 56" ANSI 900 GEAR OP.

SIZE	CLASS	RF							RTJ						
		L	H	K1	K	B1	B	KG	L	H	B1	B	K1	K	KG
4"	900	457	688	284,5	229	160	349	222	460	688	160	349	284,5	230	225
6”	900	610	863	284,5	305	205	349	415	613	863	205	349	284,5	306,5	418
8”	900	737	959	299,5	369	265	337	732	740	959	265	337	299,5	370	735
10”	900	838	1060	318	419	315	378	1040	841	1060	315	378	318	420,5	1045
12”	900	965	1140	318	483	360	378	1430	968	1140	360	378	318	484	1435
14”	900	1029	1238	393,5	514,5	430	493	1770	1038	1238	430	493	393,5	519	1780
16”	900	1130	1362	393,5	565	565	493	2650	1140	1362	570	493	393,5	570	2660
18”	900	1219	1439	445,5	609,5	609,5	493	3384	1232	1439	616	493	445,5	6161	3394
20”	900	1321	1531	445,5	661	660,6	502	4239	1334	1531	667	502	445,5	667	4249
24”	900	1549	1780	445,5	774,5	774,5	502	5250	1568	1780	784	502	445,5	784	5265
26”	900	1651	1895	445,5	826	825,5	502	6800	1673	1895	836,5	502	445,5	837	6800
28”	900	1753	1990	445,5	876,5	876,5	502	9900	1775	1990	887,5	502	445,5	888	9900
30”	900	1880	2150	460	940	940	703	12180	1902	2150	951	703	460	951	12180
32”	900	2032	2220	460	1016	1016	703	15500	2054	2220	1027	703	460	1027	15500
36”	900	2286	2350	460	1143	1143	703	17200	2315	2350	1177,5	703	460	1158	17200
40”	900	2489	2430	460	1244,5	1016	703	19320	2504	2430	1038	703	460	1175	19370
42”	900	2600	2500	460	1300	1160	703	21648	2615	2500	1177,5	703	460	1308	21703
48”	900	2850	2620	460	1425	1247,5	703	23400	2865	2620	1270	703	460	1433	23450
56”	900	3100	2750	460	1550	1485	703	30240	3115	2750	1495	703	460	1558	30295

DIMENSIONS





6"- 56" ANSI 1500 GEAR OP.

SIZE	CLASS	RF							RTJ						
		L	H	K1	K	B1	B	KG	L	H	B1	B	K1	K	KG
3”	**1500**	470	639	265	235	140	251	152	473	639	140	251	127	266,5	155
4”	**1500**	546	714	284,5	273	190	349	297	549	714	190	349	284,5	275	300
6”	**1500**	705	889	284,5	352,5	250	349	615	711	889	250	349	284,5	355,5	620
8”	**1500**	832	1070	299,5	416	340	337	1050	841	1070	340	337	299,5	421	1055
10”	**1500**	991	1165	318	495,5	420	378	1560	1000	1165	420	378	318	500	1565
12”	**1500**	1130	1269	318	565	490	378	2410	1146	1269	490	378	318	573	2415
14”	**1500**	1257	1356	393,5	628,5	580	493	3035	1276	1356	580	493	393,5	638	3040
16”	**1500**	1384	1428	393,5	692	670	493	4200	1407	1428	670	493	393,5	704	4210
18”	**1500**	1537	1495	445,5	768,5	769	493	7035	1559	1495	769	493	445,5	779,5	7050
20”	**1500**	1664	1568	445,5	832	832	502	10200	1686	1568	832	502	445,5	843	10210
24”	**1500**	1960	1800	445,5	980	891	502	15829	1972	1800	905	502	445,5	986	15840
26”	**1500**	1943	1960	445,5	972	971,5	502	17080	1965	1960	982,5	502	445,5	983	17095
28”	**1500**	2083	2040	445,5	1041,5	1047,5	502	20740	2095	2040	1052,5	502	445,5	1048	20760
30”	**1500**	2180	2200	460	1090	1090	703	21425	2195	2200	1097,5	703	460	1098	21440
32”	**1500**	2300	2280	460	1150	1130	703	22450	2315	2280	1142	703	460	1158	22480
36”	**1500**	2450	2390	460	1225	1178	703	29130	2465	2390	1191,5	703	460	1233	29190
40”	**1500**	2600	2500	460	1300	1245	703	35270	2615	2500	1255	703	460	1307,5	35350
42”	**1500**	2750	2570	460	1375	1290,5	703	42350	2765	2570	1298	703	460	1383	42400
48”	**1500**	2950	2690	460	1475	1330	703	46850	2965	2690	1344	703	460	1483	46900
56”	**1500**	3250	2850	460	1625	1370	703	59000	3265	2850	1387	703	460	1633	59000

QUALITY CONTROL

All products are tested According to customer specification with digitally aided valve test benches which correspond %100 of modern requirements . Each valve is delivered to customers as EN10204 3.1 certificated.

- Pressure & Functional Tests according to API 6D, API 6A, API 598, and ISO 5208
- Annex F Design Validation Tests according to API 6D, and API 6A
- Fugutive Emission Tests according to ISO 15848-1

- NDE (Non-destructive testing) activities
  - Visual Examinations
  - Radiographic Tests
  - Ultrasonic Tests
  - Magnetic Particle Examinaions
  - Liquid Penetrant Tests
  - Positive Material Identification - PMI Tests

- Surface Quality Measurements
- Salt Spray Tests
- Adhesion tests
- Cross - Cut Tests
- Pull - Of Tests

- Dimension and Visual Controls

- Torque Tests

- Destructive Tests
  - Tensile Tests
  - Charpy Tests
  - Chemical Impact Tests with - Spectrometer
  - Hardness Tests

CERTIFICATION

Certificate of Authority to use the Official API Monogram
License Number: 6D-0714 ORIGINAL

American Petroleum Institute

The American Petroleum Institute hereby grants to

KURVALF VANA ANONIM SIRKETI
Cali Mahallesi
Cinarlik Caddesi No:8 Nilufer
Bursa, Nilüfer
Turkey

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API-6D and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: 6D-0714

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Check Valves, Ball Valves and Plug Valves

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: NOVEMBER 10, 2020
Expiration Date: DECEMBER 29, 2023

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President of Global Industry Services

Certificate of Authority to use the Official API Monogram
License Number: 6A-1513 ORIGINAL

American Petroleum Institute

The American Petroleum Institute hereby grants to

KURVALF VANA ANONIM SIRKETI
Cali Mahallesi
Cinarlik Caddesi No:8 Nilufer
Bursa, Nilüfer
Turkey

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API-6A and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: 6A-1513

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Casing and Tubing Heads, Chokes, Tees and Crosses, Top Connectors, Slip-Type Hangers, Mandrel-Type Hangers, Gate, Ball, Plug Valves at PSL 1, PSL 2, PSL 3; Surface Safety Valves at PSL 2, PSL 3; Pneumatic and Hydraulic Actuators

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: AUGUST 27, 2021
Expiration Date: DECEMBER 29, 2023

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President of Global Industry Services

CERTIFICATE

TÜV AUSTRIA

Quality Management System as per
TS EN ISO 9001:2015

KURVALF

KURVALF VANA A.Ş.
ÇALI MAH. ÇINARLIK CAD. NO: 8 NİLÜFER BURSA

Designing, Production, Sales and Maintenance of Ball, Plug, Check, Gate and Globe Valves; Wellhead and Tree Equipments; Actuator Products

TÜV AUSTRIA SILA KALİTE

EN ISO 15848-1 QUALIFICATION CERTIFICATE

Certifies that the company KURVALF VANA A.Ş

- API 6D (Spec. for Pipeline and Piping Valves)
- API 6A (Spec. for Wellhead and Tree Equipment)
- ISO 9001:2015 Certificate
- ISO 14001:2015 Certificate
- ISO 45001:2018 Certificate
- 2014/68/EU PED Certificate
- 2006/42/EC Machinery Directive Certificate
- ISO 15848-1 Fugitive Emission Certificate
- SIL 3 Certificate (Safety Integrity Level Certificate)
- Fire Safe Certificate - ISO 10497
- Fire Safe Certificate - API 6FA
- ATEX (Explosion Protection Certificate)
- EN ISO 14141 Vave Perf.Req. and Test Certificate
- TSE Certificate - TS EN ISO 17292 Certificate

NOTES

NOTES

KURVALF

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