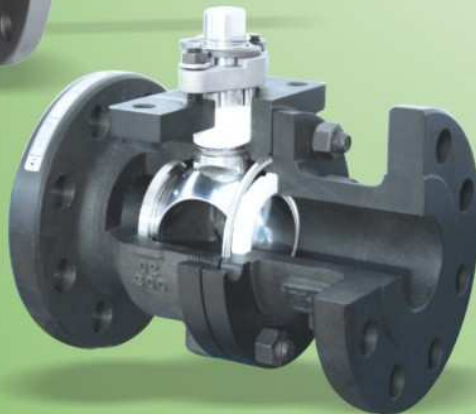


KEY VALVES UK LTD

Quality First Service Foremost
www.keyvalvesuk.com

**FLOATING
BALL
VALVE
SERIES**





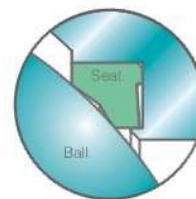
Floating ball valve

● Application

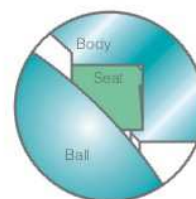
Floating ball valves are suitable for use on various kinds of pipelines of Class 150 to Class 1500, PN16 to PN100, and JIS 10K to JIS 20K to turn on or off the pipeline medium, of which the operation types include manual, worm gear and pneumatic or electrical actuators.

● Reliable seat seal

The structure design of elastic sealing ring has been adopted for floating ball valves. This seat design features a bigger sealing pressure ratio between the ring surface and the ball when medium pressure gets lower, where the contacting area is smaller. Thus, the reliable seal is ensured. When the medium pressure gets higher, the contacting area between seat ring and ball becomes bigger as the sealing ring transforms elastically to undertake the bigger force pushed by the medium without any damage.



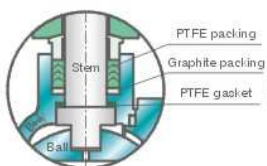
At lower medium pressure



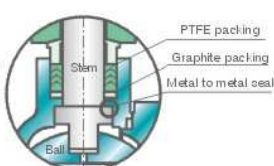
At higher medium pressure

● Fire safe design

With the valve heated in a fire application, the non-metal material parts such as seat sealing ring of PTFE, stem backseat gasket, gland packing, and the sealing gasket between body and bonnet might disintegrate or be damaged due to high temperature. Lianggong specially designed structure of auxiliary metal to metal seal is provided to effectively prevent both internal and external leakage of the valve. As required by Customers, Lianggong floating ball valves with design can meet the requirement of API 607, API 6FA, BS 6755 and JB/T 6899.

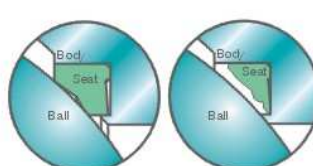


Before fire

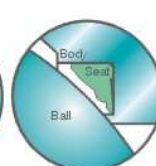


After fire

Fire safe design of stem

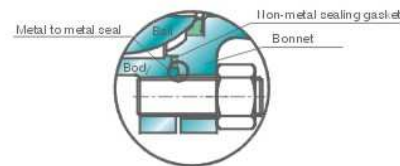


Before fire



After fire

Fire safe design of seat



Fire safe design of valve body and bonnet flanges

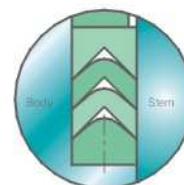
● Reliable stem seal

The blow-out proof design has been adopted for the stem to ensure that even if the pressure in the body cavity is risen accidentally and the packing flange becomes invalid, the stem may not be blown out by medium. The stem features the design with a backseat, being assembled from underneath. The sealing force against the backseat gets higher as the medium pressure becomes higher. So the reliable seal of the stem can be assured under variable medium pressure.

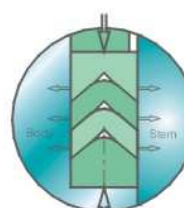
The traditional packing flange design has been improved to be of two piece structure, i.e., being as a gland flange and gland, the latter contacts the gland flange with spherical surface. Thus, the gland remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.

V type packing structure has been employed to effectively transform the pushing force of the gland flange and the medium pressure into the sealing force against the stem.

Based on customers' requirement, a packing tightening design may be employed to obtain more reliable stem packing seal, which is loaded by bevelled spring.



Packing before pressed



Packing after pressed

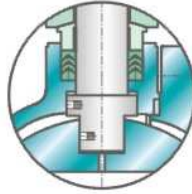
Floating ball valve



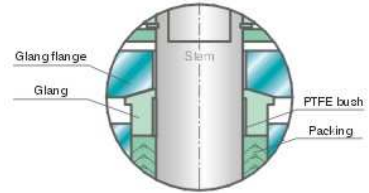
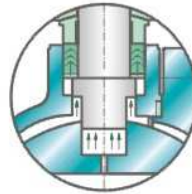
● Reliable stem seal



Stem assembled from underneath may not be blown out by medium



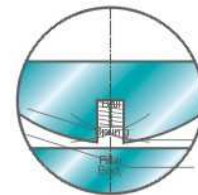
Stem assembled downward may be blown out



防止阀杆使用中的磨损
Stem galling prevented in application

● Anti-static feature

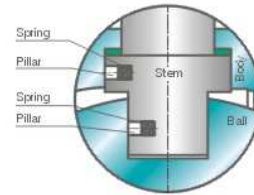
The traditional packing flange design has been improved to be of two piece structure, i.e., being as a packing flange plate and a follower, the latter contacts the flange plate with spherical surface. Thus, the follower remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.



Anti-Static design for ball valve ≤25mm

● Wrong operation prevention

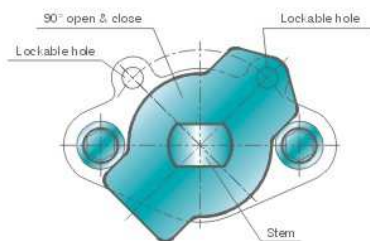
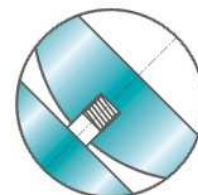
To prevent the ball valve from wrong operation, the keylock with 90° of open and close positioning pad has been provided, which can be lock able as required. At the stem head, where the lever fixes, a flat is so designed that the valve opens with the lever in parallel to piping, and with the lever right-angled to the piping, the valve is closed. So, it is ensured that the valve indicator of open and close can never make mistake.



Anti-Static design for ball valve ≥32mm

● Mounting pad provided

Lianggong company has provided for floating ball valve with a mounting pad, through which it is easy to fix the actuators, such as worm gear, pneumatic and electric actuators.





Cast steel ball valve

Materials of parts

NO	Part name	ASTM Material		
		Carbon steel	18Cr-9Ni-2Mo	Carbon steel
1	Body	A216-WCB	A351-CF8M	A352-LCB
2	Bonnet	A216-WCB	A351-CF8M	A352-LCB
3	Ball	A182-F304"	A182-F316	A182-F304"
4	Stem	A276-304	A276-316	A276-304
5	Seat ring	R.PTFE		
6	Bonnet gasket	Graphite+304"	PTFE	Graphite+304"
7	Bonnet stud	A193-B7	A193-B8	A320-L7

NO	Part name	ASTM Material		
		Carbon steel	18Cr-9Ni-2Mo	Carbon steel
8	Bonnet stud nut	A194-2H	A194-8	A194-4
9	Packing	PTFE		
10	Gland flange	A216-WCB	A351-CF8M	A352-LCB
11	Gland bolt	A193-B7	A193-B8	A193-B7
12	Stop plate	Carbon steel	Carbon steel+Zn	Carbon steel
13	Handle	Carbon steel		

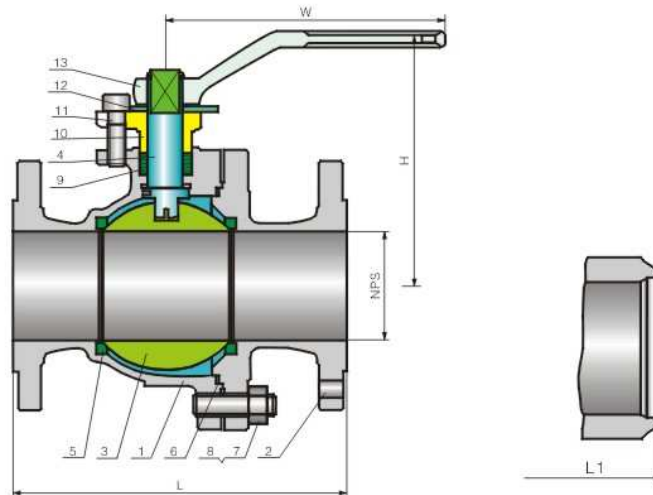
Note: 1) . A 105+ENP optional ; 2) . Spiral wound construction.

Applicable standards:

Steel ball valves: API 608/API 6D
 Steel ball valves: ISO 14313
 Fire durable: API 607
 Anti static: API 608
 Steel valves: ASME B16.34
 Face to face: ASME B16.10
 End flanges: ASME B16.25
 Inspection and test: API 598/API 6D

Design description:

Full port design
 BB, Bolted bonnet, split body
 Floating ball type
 Blow-out proof stem
 Fire durable construction
 Anti static device
 Stopper device
 ISO 5211 Mounting pad
 Flanged or butt welding ends
 Available with wg operator



Dimensions data

150Lb

Size	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
	mm	15	20	25	40	50	65	80	100	150	200	250	300
L (RF)	in	4.25	4.62	5.00	6.50	7.00	7.50	8.00	9.00	15.50	18.00	21.00	24.00
	mm	108	117	127	165	178	190	203	229	394	457	533	610
L1 (BW)	in	5.50	6.00	6.50	7.50	8.50	9.50	11.12	12.00	18.00	20.50	22.00	25.00
	mm	140	152	165	190	216	241	283	305	457	521	559	635
H	in	2.12	2.12	2.75	3.50	4.12	6.12	7.25	8.00	10.00	11.00	13.50	16.50
	mm	55	55	70	90	105	155	185	205	255	280	345	420
W	in	5	5	6	8	14	16	20	20	24	32	32	32
	mm	130	130	160	200	350	400	500	500	600	800	800	800
WT (Kg)	RF	2.3	3	4.5	7	9.5	15	19	33	93	160	200	280
	BW	1.8	2.8	3.7	6.2	8.5	14	21	35	98	170	225	295