



Range NPS: 1/4" ~ 20"



Range Class: 150 ~ 2500



PED 97/23/EC
PED 2014/68/EU



TR TS 10/11,
12/11, 32/11



CERTIFICATE
EN 12 569



CERTIFICATE
API 607, 6FA

Operating temperature: -196 °C ~ 550 °C

Connection into piping: Flanged, welded ends, threaded ends, combined execution



DESCRIPTION

K83 (floating ball) valves are controlled shut-off valves. They are designed to stop or allow the flow of the medium by external operation, either manually or via the installed drive. The ball valves allow the medium to flow in both directions. Their construction is designed to prevent the build-up of sediment in the flow channel which would otherwise hinder the valve operation. These ball valves are designed and manufactured to ensure maximum service life and reliability.

MATERIAL SPECIFICATION

K83 Ball valves are made from carbon, alloy and stainless steels. The material type can be adjusted according to the customer's request to optimally suit the operating conditions.

APPLICATION

K83 ball valves are suitable for various liquids, gases and steam.

BASIC STANDARDS FOR DESIGN

Basic design

API 608, API 6D

Pressure-temperature rating

ASME B16.34

Testing

API 598

Face-to-face dimensions

ANSI B16.10

Dimensions of the welded ends

ANSI B16.25

Top Flange dimensions

EN ISO 5211

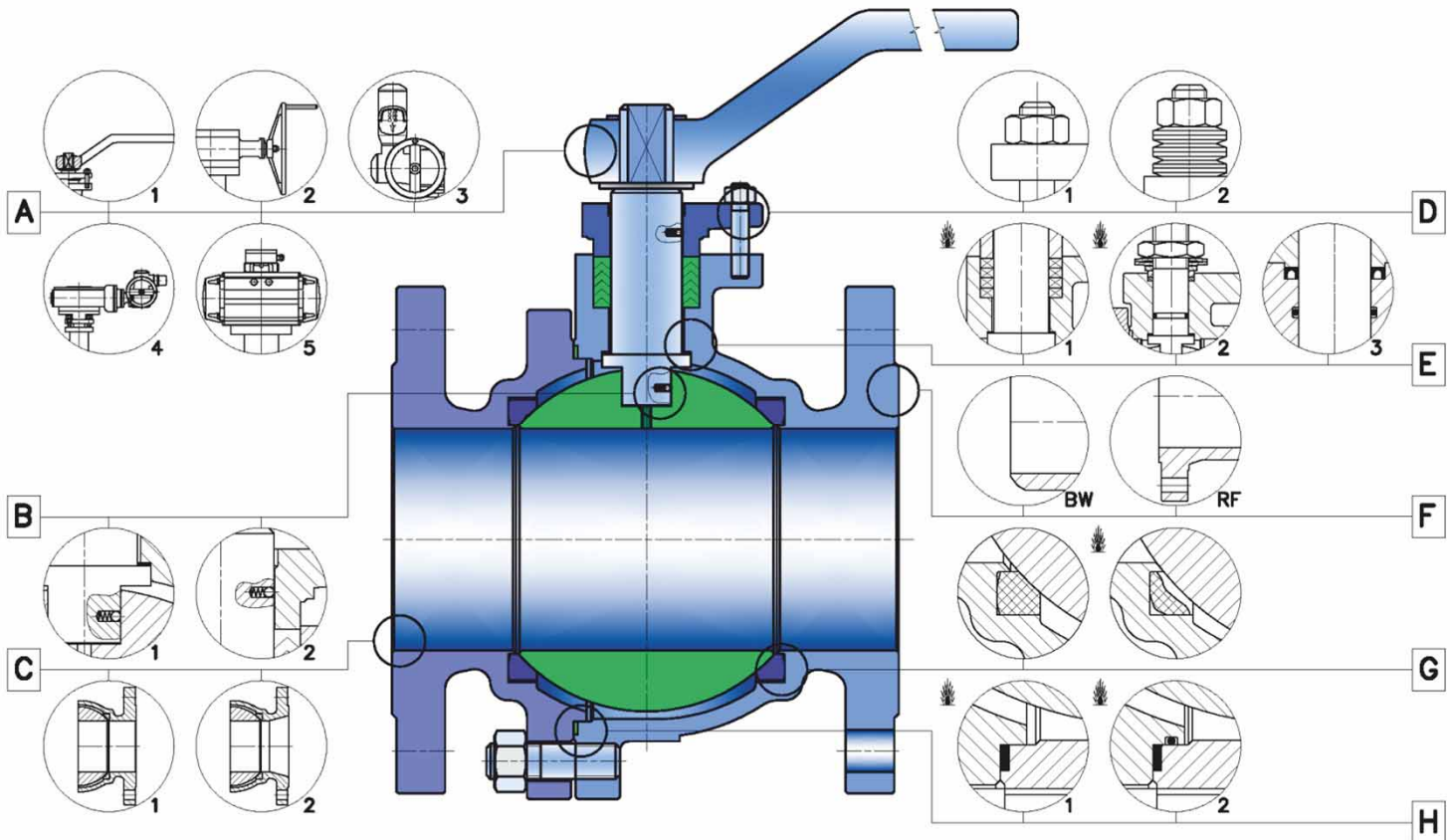
Flange dimensions

ANSI B 16.5, ANSI B16.47A

Special

NACE MR-0175

STRUCTURAL DESIGN



A - Control

- by hand lever
- gear box+hand wheel
- electric actuator
- electric actuator+gear box
- pneumatic actuator

B – Antistatic execution

- is solved by using springs and small balls. The ball is electrically connected with the control stem. The control stem is electrically connected with the body

C – Flow direction

- straight,full bore
- straight,reduced bore

D - Gland compression

- in case of valve operation with cyclic changes in pressure or at high pressures and temperatures, the gland compression by means of Belleville springs, which secure a constant pre-stress in packing, is preferred

E – Stem packing

- by graphite packing in compliance with Fire safe design
- by PTFE packing
- by O – ring and graphite ring, according to Fire safe design
- by O – ring and PTFE V-shaped ring packing

F – Connection into piping

- flanged
- welded
- socket welding
- threaded
- welded-ends according to customer's requirements

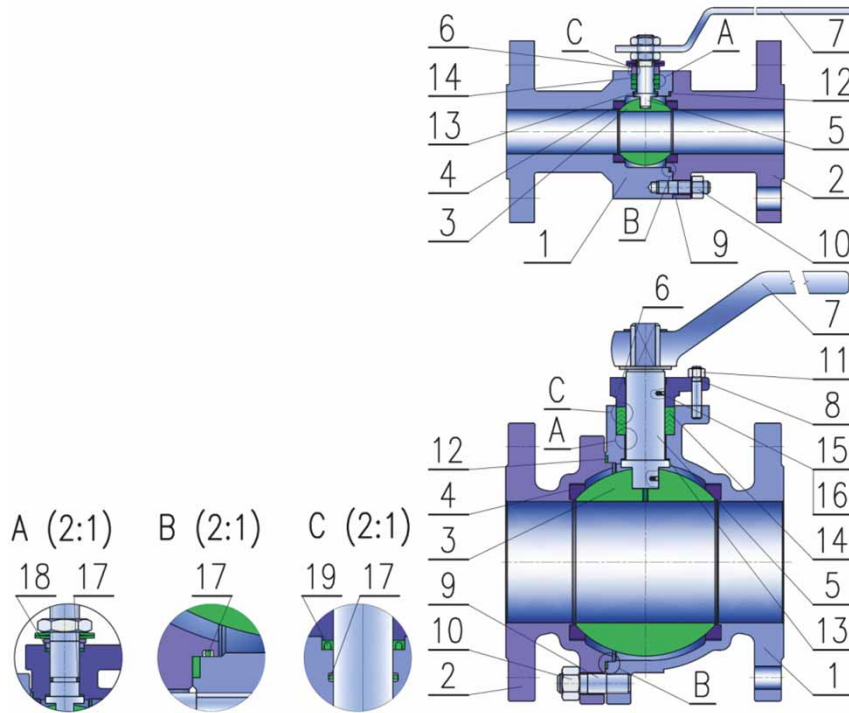
G- Execution of the seats

- execution of the seats meets the requirements of Fire safe design, i.e. in case of burnout seat ring, the tightness of the closure is secured by sealing of the ball against metal seat – there is metal to metal connection.

H – Bonnet sealing

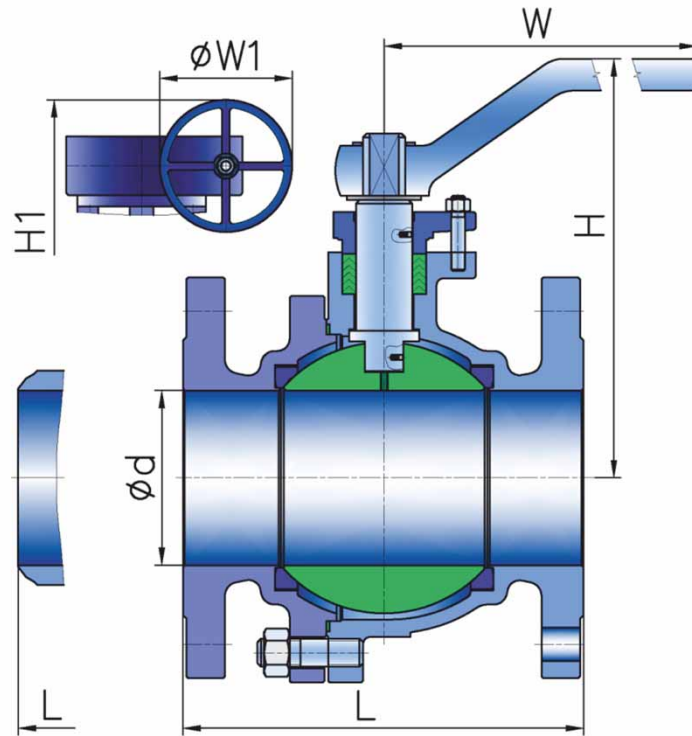
- executed by sealing ring or a combination of sealing and O-ring. To comply with Fire safe design is used graphite seal ring, moreover body and cover are sealed by metal to metal

MATERIAL SPECIFICATION



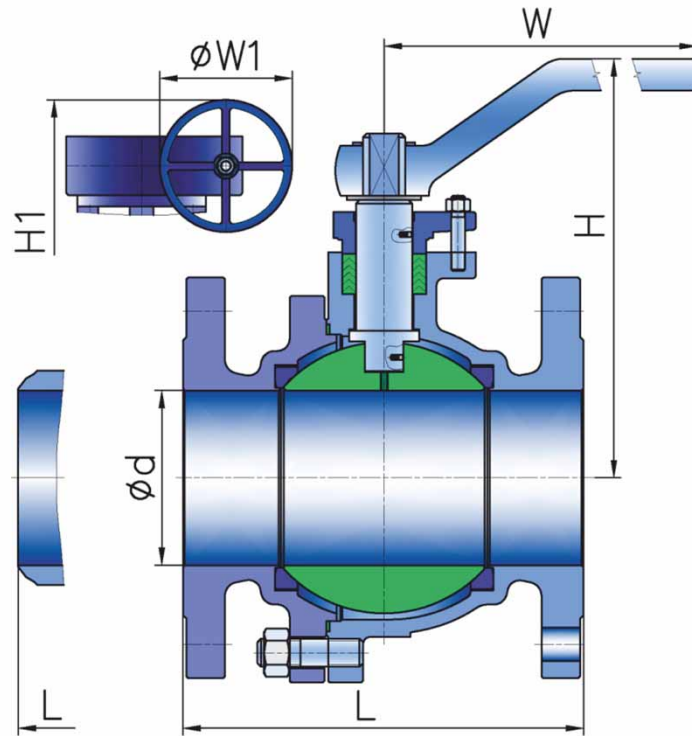
Pos.	Designation	FOUNDRY EXECUTION						FORGED EXECUTION					
		WCB	LCB/LCC	CF3	CF3M	CF8	CF8M	A350 LF2	A105	1.4551	F316L	F304	F316
1	Body	A216 WCB	A352 LCB, LCC	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M	A350 LF2	A105	1.4541	A182 F316L	A182 F304	A182 F316
2	Bonnet	A216 WCB	A352 LCB, LCC	A351 CF3	A351CF3M	A351 CF8	A351 CF8M	A350 LF2	A105	1.4541	A182 F316L	A182 F304	A182 F316
3	Ball	A105 + ENP (Cr), A350 LF2 + ENP (Cr), A182 F304, A182 F316	A352 LCB, LCC + ENP (Cr) A182 F304, A182 F316	A351 CF3, A182 F304L	A351 CF3M, A182 F316L	A351 CF8, A182 F304	A351 CF8M, A182 F316	A350 LF2 + ENP (Cr)	A105 + ENP (Cr)	1.4541	A351 CF3M, A182 F316L	A351 CF8, A182 F304	A351 CF8M, A182 F316
4	Seat	PTFE, PTFE+ glass, PTFE + graphite, PTFE + stainless steel, PEEK, A182 F304, A182 F304L, A182 F316, A182 F316L											
5	Pin	A182 F6a	A182 F6a	A182 F304L	A182 F316L	A182 F304	A182 F316	A182 F6a	A182 F6a	1.4541	A182 F316L	A182 F304	A182 F316
6	Gland Flange	A216 WCB	A352 LCB, LCC	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M	A350 LF2	A105	1.4541	A182 F304L	A182 F304	A182 F316
7	Lever	carbon steel											
8	Bolt	A193 B7	A320 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	25CrMo ₄	A193 B7	A2-70	A193 B8M	A193 B8	A193 B8M
9	Bolt	A193 B7	A320 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	25CrMo ₄	A193 B7	A2-70	A193 B8M	A193 B8	A193 B8M
10	Nut	A194 2H	A194 4	A194 8	A194 8M	A194 8	A194 8M	A2-70	A194 2H	A2-70	A194 8M	A194 8	A194 8M
11	Nut	A194 2H	A194 4	A194 8	A194 8M	A194 8	A194 8M	A2-70	A194 2H	A2-70	A194 8M	A194 8	A194 8M
12	Gasket	graphite, PTFE, PTFE+ glass, PTFE + graphite, PTFE + stainless steel											
13	Washer	PTFE, PTFE+ glass, PTFE + graphite, PTFE + stainless steel, bronze											
14	Gland Packing	graphite, PTFE, PTFE+ glass, PTFE + graphite, PTFE + stainless steel											
15	Spring	Stainless steel											
16	Small Ball	Stainless steel											
17	O - Ring	NBR, HNBR, EPDM, VITON, VITON GLT, SI											
18	Seal	graphite											
19	Sealing Ring	PTFE, with PTFE filler + spring from stainless steel											

DIMENSIONS



NPS	DN	CLASS 150										CLASS 300											
		L			d	H	H1	W	W1	EN ISO 5211	(KG)		L			d	H	H1	W	W1	EN ISO 5211	(KG)	
		1/RF	1/RTJ	2							H.W.	G.O.	1/RF	1/RTJ	2							H.W.	G.O.
1/4	6	108	-	140	6	62	-	140	-	F03	3	-	140	-	140	6	62	-	140	-	F03	3	-
3/8	10	108	-	140	10	70	-	140	-	F03	3	-	140	-	140	10	70	-	140	-	F03	3	-
1/2	15	108	119	140	14	85	-	140	-	F03	3	-	140	151	140	14	85	-	140	-	F03	3	-
3/4	20	117	130	152	19	90	-	140	-	F03	4	-	152	165	152	19	90	-	140	-	F03	5	-
1	25	127	140	165	25	99	-	150	-	F03	5	-	165	178	165	25	99	-	150	-	F03	6	-
1 1/4	32	140	153	178	32	105	-	180	-	F04	7	-	178	191	178	32	105	-	180	-	F04	8	-
1 1/2	40	165	178	190	38	126	-	200	-	F04	8	-	190	203	190	38	126	-	200	-	F04	11	-
2	50	178	191	216	51	140	-	250	-	F05	12	-	216	232	216	51	140	-	250	-	F05	16	-
2 1/2	65	190	203	241	64	165	-	300	-	F05 / F07	18	-	241	257	241	64	165	-	300	-	F05 / F07	24	-
3	80	203	216	283	76	178	-	350	-	F07 / F10	24	-	283	299	283	76	178	330	350	305	F07 / F10	34	52
4	100	229	242	305	102	230	380	500	305	F10 / F12	38	53	305	321	305	102	230	380	500	305	F10 / F12	56	76
5	125	356	369	381	127	280	405	800	305	F12 / F14	60	79	381	397	381	127	280	420	800	305	F12 / F14	86	124
6	150	394	407	457	152	310	460	800	305	F12 / F14	82	102	403	419	457	152	310	480	800	305	F14 / F16	125	163
8	200	457	470	521	203	350	550	1000	305	F14 / F16	145	185	502	518	521	203	350	560	1000	305	F16 / F25	222	267
10	250	533	546	559	254	-	706	-	400	F25	-	280	568	584	559	254	-	720	-	400	F25	-	365
12	300	610	622	635	303	-	798	-	400	F30	-	460	648	664	635	303	-	800	-	400	F30	-	530
14	350	686	699	762	337	-	864	-	400	F30	-	510	762	778	762	337	-	864	-	400	F30	-	740
16	400	762	775	838	387	-	913	-	400	F40	-	750	838	854	838	387	-	913	-	400	F40	-	1030
18	150	864	876	914	438	-	967	-	400	F48	-	895	914	930	914	438	-	967	-	400	F48	-	1320
20	500	914	927	991	489	-	1010	-	600	F60	-	1190	991	1010	991	489	-	1020	-	600	F60	-	1540

DIMENSIONS



		CLASS 600										CLASS 900											
		L			d	H	H1	W	W1	EN ISO 5211	(KG)		L			d	H	H1	W	W1	EN ISO 5211	t(KG)	
NPS	DN	1/RF	1/RTJ	2							H.W.	G.O.	1/RF	1/RTJ	2							H.W.	G.O.
1/4	6	165	-	165	6	62	-	140	-	F04	3	-	216	-	216	6	78	-	150	-	F07	4	-
3/1	10	165	-	165	10	70	-	140	-	F04	4	-	216	-	216	10	78	-	150	-	F07	5	-
1/2	15	165	163.5	165	14	79	-	140	-	F04	5	-	216	214	216	14	98	-	150	-	F07	9	-
3/4	20	190	190	190	19	83	-	140	-	F04	7	-	229	229	229	20	105	-	150	-	F07	13	-
1	25	216	216	216	25	114	-	200	-	F05	9	-	254	254	254	25	110	-	200	-	F10 / F12	16	-
1 1/4	32	229	229	229	32	120	-	200	-	F05	13	-	279	279	279	32	120	-	250	-	F12	24	-
1 1/2	40	241	241	241	38	125	-	250	-	F07	17	-	305	305	305	38	125	-	250	-	F12	31	-
2	50	292	295	292	51	156	-	300	-	F07	25	-	368	374	368	50	160	-	350	-	F12 / F14	45	-
2 1/2	65	330	333	330	64	172	-	350	-	F10 / F12	42	-	-	-	-	-	-	-	-	-	-	-	-
3	80	356	359	356	76	220	370	500	305	F12	56	76	-	-	-	-	-	-	-	-	-	-	-
4	100	432	435	432	102	250	400	650	305	F12 / F14	85	123	-	-	-	-	-	-	-	-	-	-	-

		CLASS 1500										
		L			d	H	H1	W	W1	EN ISO 5211	(KG)	
NPS	DN	1/RF	1/RTJ	2							H.W.	G.O.
1/4	6	216	-	216	10	98	-	182	-	F307	6	-
3/8	10	216	-	216	10	98	-	182	-	F07	8	-
1/2	15	216	214.3	216	14	98	-	182	-	F07	10	-
3/4	20	229	229	229	20	105	-	200	-	F07	14	-
1	25	254	254	254	25	110	-	250	-	F10 / F12	17	-
1 1/4	32	279	279	279	32	120	-	300	-	F12	25	-
1 1/2	40	305	305	305	38	130	-	350	-	F12	33	-
2	50	368	374	368	50	160	-	500	-	F12 / F14	48	-

CLASS 2500						
NPS	DN	L	d	W	H	EN ISO 5211
1/4"	6	264	6	165	120	F 07
3/8"	10	264	10	165	120	F 07
1/2"	15	264	15	165	120	F 07
3/4"	20	273	20	185	145	F 07
1"	25	308	25	200	165	F 10/F 12
1 1/2"	40	384	38	230	190	F 12
2"	50	451	49	315	255	F 12/F 14

TYPE DESIGNATION

K83 ABC DEF M Class/S

A FACE-TO- FACE DIMENSION

- 1 Short
- 2 Long

BODY DESIGN

- 2 Two pieces
- 3 Three pieces

F CONTROL

- 1 By hand lever
- 2 Hand wheel with gearbox
- 3 Electric actuator
- 4 Electric actuator with gearbox
- 5 Pneumatic actuator
- 6 Other actuator
- 9 Without control

S SPECIAL EXECUTION

- AS Antistatic design
- LT Low temperature design

D FLOW DIRECTION

- 1 Straight, full bore
- 2 Straight, reduced bore

M BODY MATERIAL

- 0 Stainless steel
- 2 Cast alloy steel
- 3 Forged alloy steel
- 4 Forged carbon steel
- 5 Cast carbon steel

C CONTROL STEM SEALING METHOD

- 1 2 x O- ring
- 2 O – ring + graphite (fire safe)
- 3 Graphite packing
- 4 PTFE packing
- 5 PTFE V-type ring packing

E CONNECTION INTO PIPE

- 0 Wafer
- 1 Flanged
- 2 Welded ends
- 4 Outside thread G
- 5 Outside thread NPT
- 6 Inside thread M
- 7 Inside thread G
- 8 Combined

B SEATS EXECUTION

- 1 PTFE
- 2 Metal
- 3 Metal+ fire safe
- 4 Graphite
- 5 PEEK

