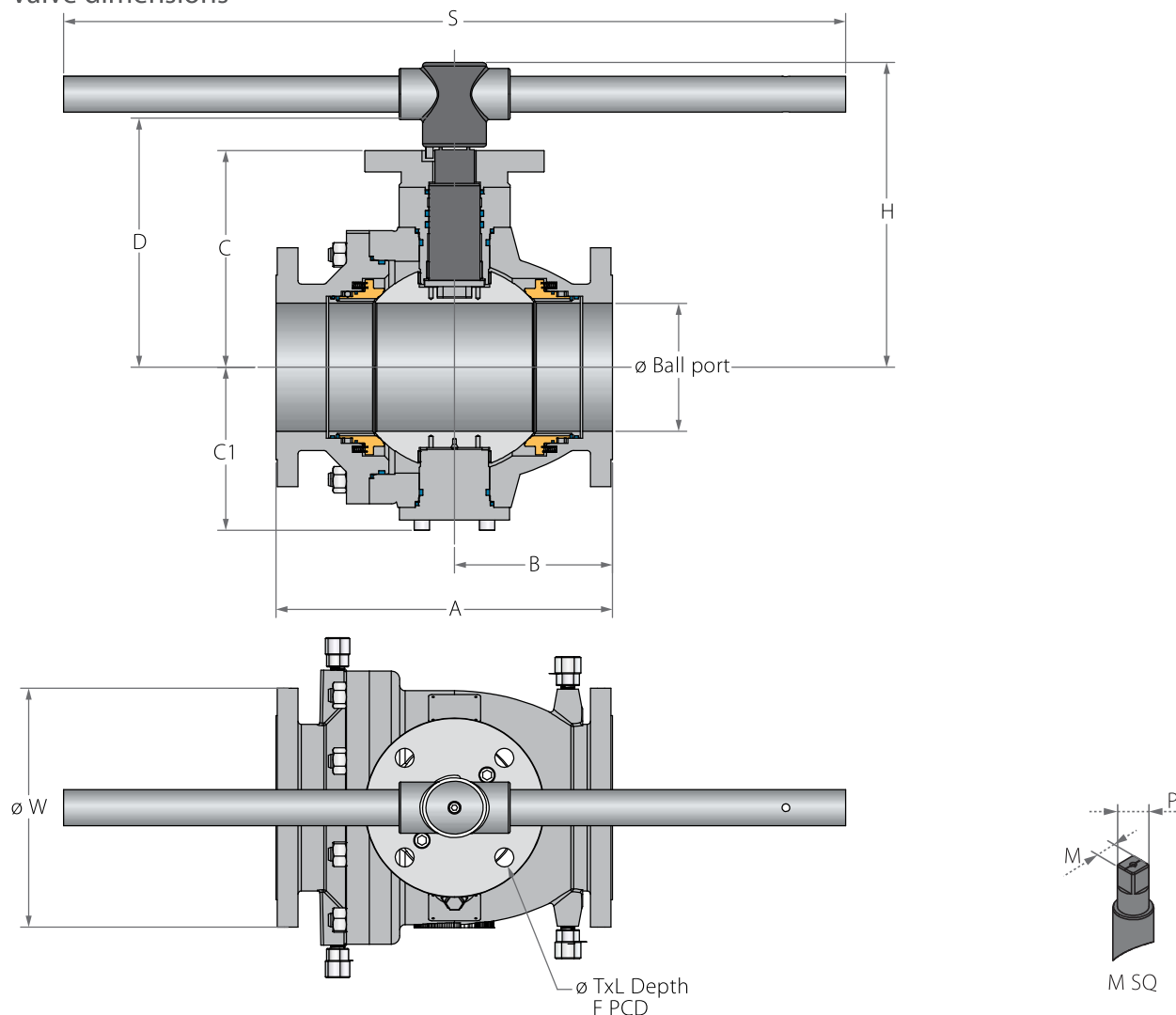


Z81P**Z82P**

2"-6" | DN50-DN150 | CLASS 150/300

High Temperature Trunnion Ball 2 Piece Up to 327°C (620°F)

Valve dimensions



Full port	Unit	Ball port	A		B		C	C1	D	W		M SQ	P SQ	H	S	F		TxL	Weight kg/ib		Kv/Cv					
			150	300	150	300				150	300								150	300	150	300	150	300	150	300
DN50	mm	49.00	178.00	216.00	89.00	108.00	127.00	91.50	144.50	150.00	165.00	17.00	22.00	196.00	401.00	(F10)	102.00	11X15	19	23	400	363				
2"	inch	1.93	7.01	8.50	3.50	4.25	5.00	3.60	5.69	5.91	6.50	0.67	0.87	7.72	15.79		4.02	(4 holes)	42	51	463	420				
DN80	mm	74.00	203.00	283.00	101.50	128.00	148.00	117.00	172.00	190.00	210.00	22.00	32.00	223.00	610.00	(F12)	125.00	13X15	33	44	1125	952				
3"	inch	2.91	7.99	11.14	4.00	5.04	5.83	4.61	6.77	7.48	8.27	0.87	1.26	8.78	24.02		4.92	(4 holes)	73	97	1300	1100				
DN100	mm	100.00	229.00	305.00	114.50	140.50	171.00	139.00	198.50	230.00	255.00	27.00	35.00	247.50	610.00	(F14)	140.00	18X15	49	69	2154	1860				
4"	inch	3.94	9.02	12.00	4.51	5.53	6.73	5.47	7.81	9.06	10.04	1.06	1.38	9.74	24.02		5.51	(4 holes)	108	152	2490	2150				
DN150	mm	150.00	394.00	403.00	185.00	230.40	254.00	191.00	290.50	280.00	320.00	36.00	46.20	356.50	916.00	(F16)	165.00	22X25	133	166	4723	4628				
6"	inch	5.91	15.51	15.87	7.28	9.07	10.00	7.52	11.44	11.02	12.60	1.42	1.82	14.04	36.06		6.50	(4 holes)	293	366	5460	5350				

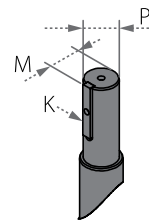
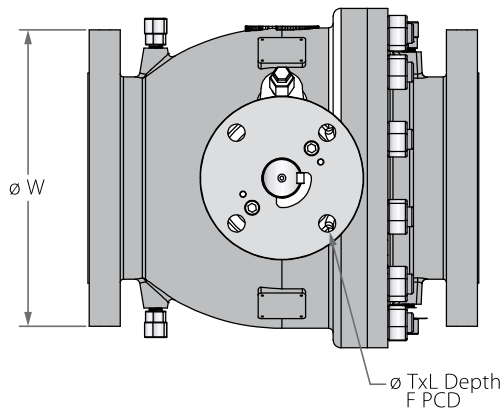
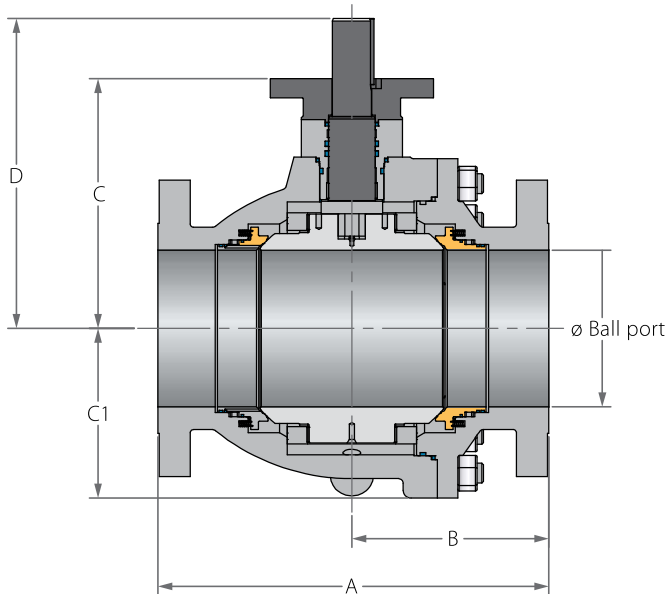
Z81P**Z82P**

8"-12" | DN200-DN300 | CLASS 150/300



High Temperature Trunnion Ball 2 Piece Up to 327°C (620°F)

Valve dimensions



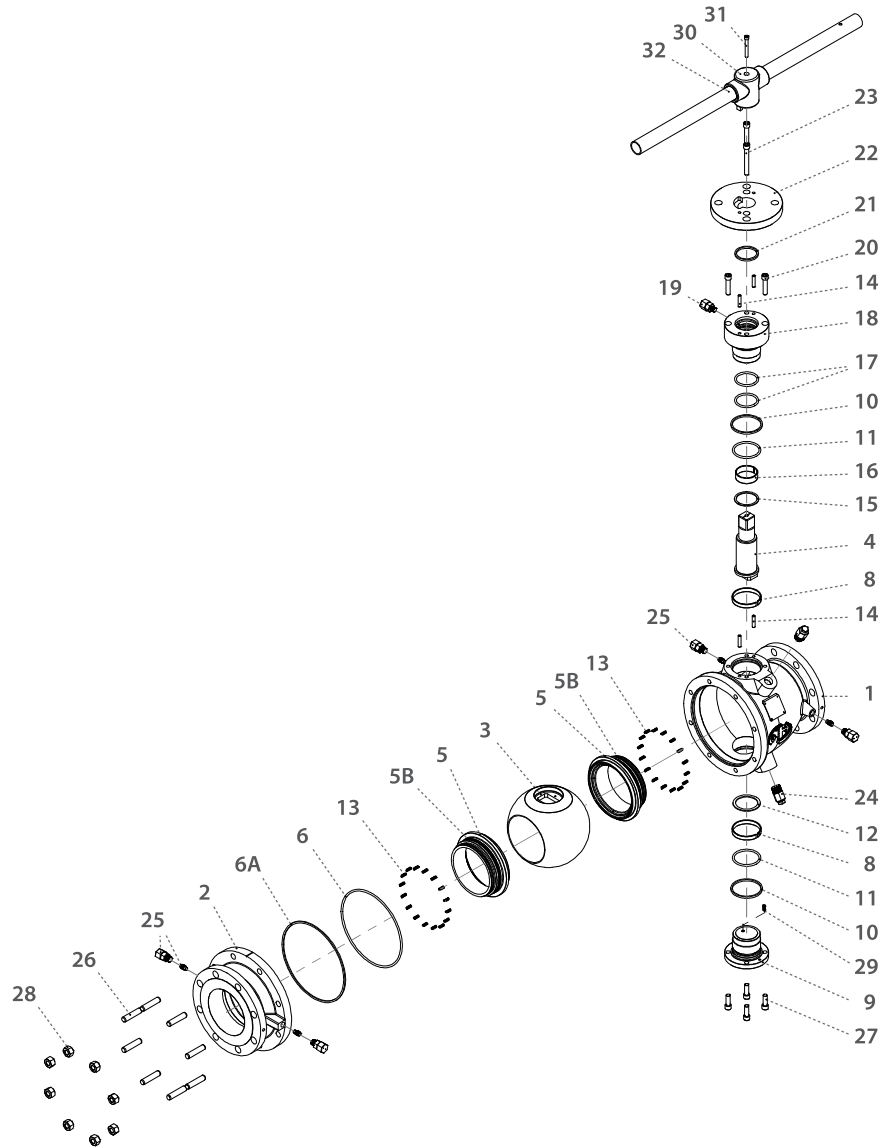
Full port	Unit	Ball port	A		B		C	C1	D	W		P	M	K	F	TxL	Weight kg/ib		Kv/Cv	
			150	300	150	300				150	300						150	300	150	300
DN200	mm	201.00	457.00	502.00	228.50	253.00	325.00	247.00	405.50	345.00	380.00	50.00	54.00	14.00	(F16) 165.00	22x25	222	262	9273	8737
8"	inch	7.91	17.99	19.76	9.00	9.96	12.80	9.72	15.96	13.58	14.96	1.97	2.13	0.55	6.50	(4 holes)	489	578	10720	10100
DN250	mm	252.00	533.00	568.00	270.00	287.50	353.00	297.00	430.00	405.00	445.00	50.00	54.00	14.00	(F25) 254.00	18x25	358	424	15224	14792
10"	inch	9.92	20.98	22.36	10.63	11.32	13.90	11.69	16.93	15.94	17.52	1.97	2.13	0.55	10.00	(8 holes)	789	935	17600	17100
DN300	mm	303.00	610.00	648.00	298.00	313.00	388.00	324.00	468.50	485.00	520.00	60.00	63.50	18.00	(F25) 254.00	18x25	527	613	23096	22404
12"	inch	11.93	24.02	25.51	11.73	12.32	15.28	12.76	18.44	19.09	20.47	2.36	2.50	0.71	10.00	(8 holes)	1162	1351	26700	25900

Z81P**Z82P**

2"-6"

High Temperature Trunnion Ball 2 Piece Up to 327°C (620°F)

Components & materials



Item	Description	Material Spec. ASTM	Qty.
1	Body	Acc. Ordering code	1
2	Ends	Acc. Ordering code	1
3	Ball	Acc. Ordering code	1
4	Stem	Acc. Ordering code	1
5*	Seat	Acc. Ordering code	2
5B*	Seat seal	Viton / HNBR	2-4
6*	Body inner seal	Viton / HNBR	1
6A*	Body outer seal	Graphite	1
8*	Ball Bearing	S.steel 316 + PTFE	2
9	External Trunnion	S.steel / C.steel	1
10*	Gland Plate & External trunnion Fire Safe Seal	Graphite	2
11*	Gland Plate & External trunnion Seal	Viton / HNBR	2
12*	Lower thrust washer	S.steel 316 + PTFE	1
13	Seat Spring	Inconel X750	28-40
14	Gland pin	S.steel / C.steel	4
15*	Stem Thrust Washer	S.steel 316 + PTFE	1
16*	Gland plate bearing	S.steel 316 + PTFE	1

Item	Description	Material Spec. ASTM	Qty.
17*	Stem seal	Viton / HNBR	2
18	Gland Plate	S.steel / C.steel	1
19	Stem grease fitting	S.steel	1
20	Lower gland bolts	A193-B8M / A320 L7	4
21*	Stem fire safe seal	Graphite	1
22	Iso plate	S.steel / C.steel	1
23	Upper gland bolts	A193-B8M / A320 L7	4
24	Plug valve	S.steel	2
25**	Seat grease fitting + check valve	S.steel	4
26	Body studs	A193-B8M / A320 L7	8-12
27	External trunnion bolts	A193-B8M / A320 L7	4
28	Body nuts	A194-8M / A194 L7	8-12
29	Antistatic spring	Inconel X750	1
30	Wrench head	S.steel / C.steel	1
31	Wrench bolt	S.steel / C.steel	1
32	Pipe handle	S.steel / C.steel Zink plate	1

* Repair kit components

** Available from 6" size only

Z81P

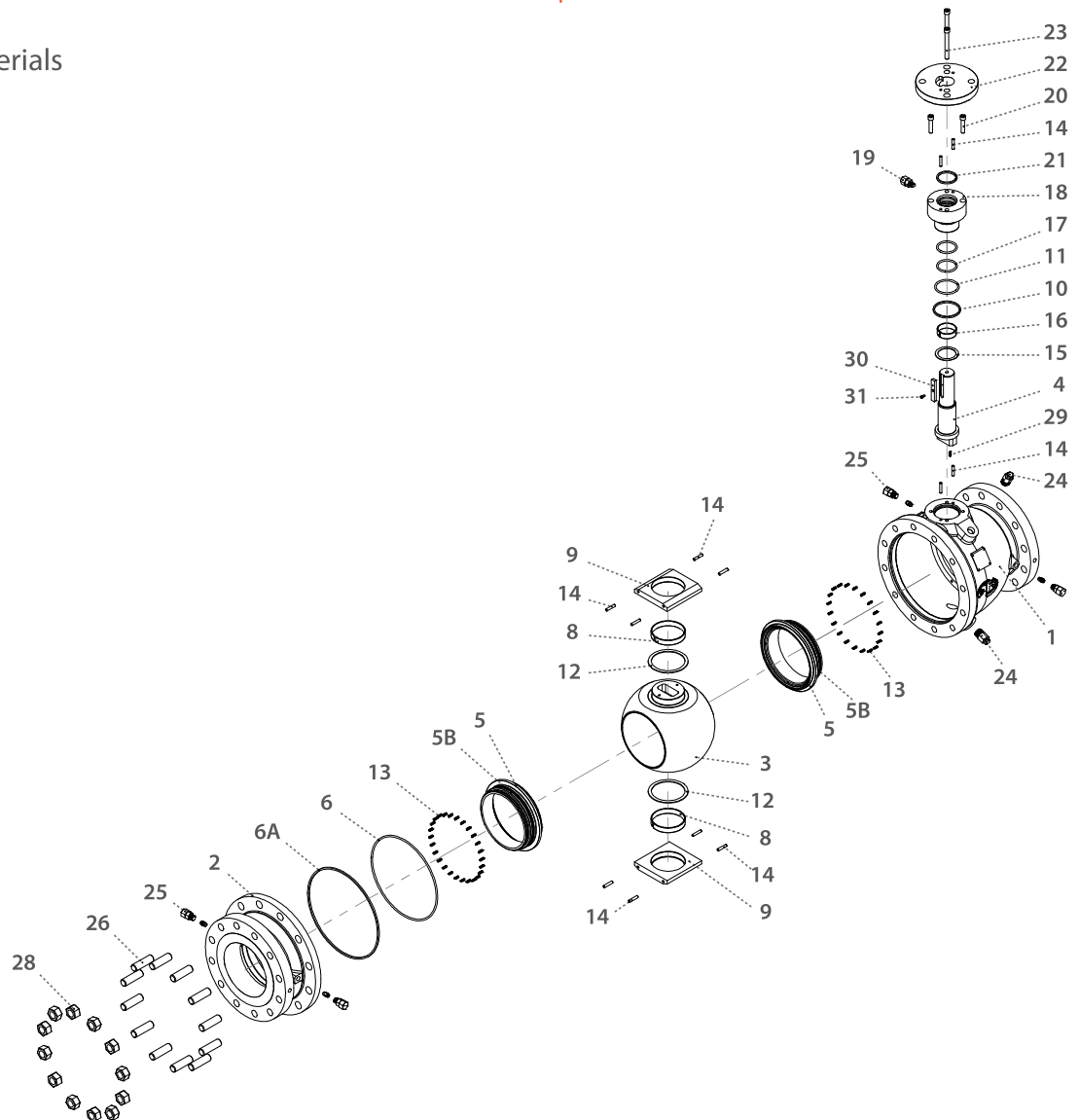
Z82P

8"-12"



High Temperature Trunnion Ball 2 Piece Up to 327°C (620°F)

Components & materials



Item	Description	Material Spec. ASTM	Qty.
1	Body	Acc. Ordering code	1
2	Ends	Acc. Ordering code	1
3	Ball	Acc. Ordering code	1
4	Stem	Acc. Ordering code	1
5*	Seat	Acc. Ordering code	2
5B*	Seat seal	Viton / HNBR	2
6*	Body inner seal	Viton / HNBR	2
6A*	Body outer seal	Graphite	2
8*	Ball bearing	S.steel 316 + PTFE	2
9	Trunnion plate	S.steel / C.steel	2
10*	Gland plate & External Trunnion Fire Safe Seal	Graphite	1
11*	Gland Plate & External Trunnion Seal	Viton / HNBR	1
12*	Ball thrust washer	S.steel 316 + PTFE	2
13	Seat Spring	Inconel X750	52-60
14	Gland pin	S.steel / C.steel	12
15*	Stem Thrust Washer	S.steel 316 + PTFE	1

16*	Stem Bearing	S.steel 316 + PTFE	1
17*	Stem seal	Viton / HNBR	2
18	Gland Plate	S.steel / C.steel	1
19	Stem grease fitting	S.steel	1
20	Lower gland bolts	A193-B8M / A320 L7	6
21*	Stem fire safe seal	Graphite	1
22	Iso plate	S.steel / C.steel	1
23	Upper gland bolts	A193-B8M / A320 L7	6
24	Plug valve	S.steel	2
25	Seat grease fitting + check valve"	S.steel	4
26	Body studs	A193-B8M / A320 L7	8-16
28	Body nuts	A194-8M / A194 L7	8-16
29	Antistatic spring	Inconel X750	1
30	Stem key	S.steel / C.steel	1
31	Stem key bolt	S.steel / C.steel	1

* Repair kit components

Z81

Z82

Z83



High Temperature Trunnion Ball 2 Piece - Ordering Code System

"Mandatory option" options are marked with **green background** | "Standard offer" options are marked with **light green background**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	.	.	30	
4	0			Z	B	8	1	P	-	6	M	6	D	I	V	G	/	1	5	0							
Size		Features				Series		Design		Body & ends material		Stem material	Ball material	Seat feature	Hardening	Inner Seal	Outer Seal		End Connection			Special features					

Size (1-2)		
Code	inch	mm
20	2"	50
30	3"	80
40	4"	100
60	6"	150
80	8"	200
A0	10"	250
A2	12"	300

Features (3-6)	
Z	Metal seats
B	Full port

Series - 2 Piece Cast (7-8)	
81	ASME B16.5 #150 Flanged RF
82	ASME B16.5 #300 Flanged RF
83	ASME B16.5 #600 Flanged RF

Design (9)	
W	-46°C to 200°C (-50°F to 400°F)
P	-46°C to 327°C (-40°F to 620°F)
T	-60°C to 538°C (-76°F to 1000°F)

Body & ends material (11)	
4*	C. Steel A216 WCB
6	S. Steel A351 CF8M

* Up to 425°C (800°F)

Stem (12)	
M	High Strength S. Steel
Z	Inconel 718

Ball material (13)	
6	S. Steel A182 316
N*	ASTM A182 F6A (S.Steel 410)

* For O hardening only

Seat feature (14)	
D	Double Piston Effect (DPE) (API 6D DIB-1)
S	Single Piston Effect (SPE) (API 6D DBB)
C	DPE & SPE combination (API 6D DIB-2)

Hardening (15)	
I	Cr3C2- Chromium Carbide with Nickel Chrome binder - HVOF technique
O*	WC-Co- Tungsten Carbide with Cobalt binder HVO technique

* Only with N ball material

Inner Seal (16)	
V	Viton (-20°C to 200°C [-4°F to 400°F])
H	HNBR (-46°C to 150°C [-50°F to 300°F])
K	Kalrez (-20°C to 327°C [-4°F to 620°F])
G	Graphite

Outer Seal (17)	
G	Graphite

End connections (19-22)	
Flanged	
150	ASME B16.5 #150
300	ASME B16.5 #300
600	ASME B16.5 #600

Special features (23-30)	
L*	Seat greasing point
D**	Drain & Vent
Blank	Drain & vent is capped
H**	Drain ball valve & vent
PT***	Basic paint system
P1	Offshore, Temp Ambient up to 93°C (200°F)
P2	Offshore, up to 537°C (998°F)

* for 6" up not for -T design

** for 6" up

*** colors RAL 1018 or 7036
(other colors upon request)