



DETAIL E

NOTES:  
 1. BASIC DESIGN PER ASME B16.34 AND API6D;  
 2. END FLANGE PER ASME B16.5;  
 3. FACE TO FACE DIMENSIONS PER ASME B16.10;  
 4. PRESSURE TESTS PER API598;  
 5. FIRE SAFE DESIGN PER API607.

ITEM	PART NAME	STANDARD (NACE)	LOW TEMP (NACE)	STAINLESS STEEL (NACE)
1	Body	ASTM A105	A350 LF2	A182 F316
2	End Adapters	ASTM A105	A350 LF2	A182 F316
3	QS Ball	A182 F316+HC		
4	Stem	A182 F316		
5a	Seat Ring	A182 F316		
5b	Seat Insert	R-PTFE		
5c	O-Ring	VITON A		
5d	Seat Fire Safe Seal	Graphite		
6	Gland	ASTM A105	A350 LF2	A182 F316
7	Post Trunnion	ASTM A105	A350 LF2	A182 F316
8	Gland Plate	ASTM A105	A350 LF2	A182 F316
9	Locking Plate	Carbon Steel + Zn		Stainless Steel
10	Handle guide	ASTM A216 GR.WCB + Painting		
11	Spring	Inconel X750		
12	Key	AISI 1045		Stainless Steel
13	Stem Fire Safe Seal	Graphite		
14	Body Gasket	SPW,316+Graphite		
15	Gland Gasket	SPW,316+Graphite		
16	Trunnion Gasket	SPW,316+Graphite		
17	Stem O-Ring	VITON A		
18	Gland O-Ring	VITON A		
19	Trunnion O-Ring	VITON A		
20	Body O-Ring	VITON A		
21	DU Bearing	1045+PTFE		316SS+PTFE
22	DU Bearing	1045+PTFE		316SS+PTFE
23	Thrust Washer	RPTFE		
24	Body Studs	ASTM A193-B7M	ASTM A320-L7M	ASTM A193-B8M
25	Body Nuts	ASTM A194-2HM	ASTM A194-7M	ASTM A194-8M
26	Gland Bolt	ASTM A193-B7M	ASTM A320-L7M	ASTM A193-B8M
27	Trunnion Bolt	ASTM A193-B7M	ASTM A320-L7M	ASTM A193-B8M
28	Parallel Pins	ASTM A276 Gr.316		
29	Parallel Pins	AISI 1045		ASTM A276 Gr.316
30	Spring Pin	AISI 1566		
31	Vent Valve	AISI 316 S/S		
32	Drain Plug	AISI 316 S/S		
33	Sealant Injection Fitting	ASTM A105N+Zn	A350 LF2 + Zn	ASTM A276 Gr.316
34	Anti-static Ball	AISI 316 S/S	A350 LF2 + Zn	ASTM A276 Gr.316
35	Anti-Static Spring	AISI 316 S/S		
36	Pipe	Carbon Steel + Zn		
37	Screw	Carbon Steel + Zn		

**Standard materials of construction listed**

VALVE SIZE		DIMENSIONS							150#			WEIGHT unit:lb (Kg)
NPS	UNIT	ØA	B	ØC	ØE	n-ØF	f	ØD	L	H (Ref.)	w	
4"	INCH	9.0	0.94	6.19	7.50	8-Ø0.75	0.06	3.94	9.0	7.0	17.7	115
	MM	229	24	157	190.5	8-Ø19.0	1.5	100	229	178	450	( 52.2)
3"	INCH	7.5	0.75	5.0	6.0	4-Ø0.75	0.06	2.91	8.0	8.1	15.7	76
	MM	190	19	127	152.4	4-Ø19.0	1.5	74	203	207	400	( 34.5)
2"	INCH	6.0	0.63	3.62	4.75	4-Ø0.75	0.06	1.93	7.0	6.5	13.8	56
	MM	152	16	92	120.6	4-Ø19.0	1.5	49	178	166	350	( 25.4)

<b>Quadrosphere®</b>	<b>NPS 2"~4" CLASS 150# Full Bore</b>	REVISED : <b>B2</b>
	<b>CLASS 150 TRUNNION MOUNTED BALL VALVE</b>	DATE : <b>09-26-14</b>
<b>VATMATIC</b> VALVE AND MANUFACTURING CORP.		DRAWING NUMBER <b>VMC-4702A1L</b>