



**DELTA PACIFIC MFG. LTD.**

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INSTALLATION, OPERATION & MAINTENANCE MANUAL  
**FOR**  
FLOATING BALL VALVES  
TWO & THREE PIECE – SCREWED & SOCKET WELD ENDS

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**Carbon or Stainless Steel Material**  
**Bolted Body – two or three Piece**  
**Floating ball design**  
**Screwed or socket weld ends**

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Reg. No. 3837135

VAT No. 740 7697 10



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### A - BALL VALVE TRIM (3 Piece Floating Ball)

#### A.1 Seats

Owing to the nature of soft seat inserts repair is by replacement.

1. Remove body bolting and end covers, (unscrew ends on screwed construction valves).
2. Remove seats from end covers.
3. Fit new seats into end covers.
4. Replace all body seals.
5. Reassemble and tighten bolts as in 5.1
- 5.1 We do not recommend replacement of body/bonnet bolting whilst valve is under pressure. Where it is necessary to replace body/bonnet bolting in order that the sealing gasket is not disturbed, change one bolt at a time utilising a cross pattern. Torque values should be established from the bolt supplier or the manufacturers recommendations.

#### A.2 Ball

1. Remove body bolting and end covers. (unscrew ends on screwed construction valves).
2. Rotate ball into closed position.
3. Remove ball.
4. Inspect ball for damage, replace as necessary.
5. Replace all body seals.
6. Reassemble and tighten bolts as in 5.1

#### A.3 Stem

1. Remove body bolting and end covers. (unscrew ends on screwed construction valves).
2. Rotate ball into closed position.
3. Remove ball.
4. Remove handle, stop plate, gland nut and gland follower.
5. Carefully remove stem, damage to gland packing may occur.
6. Inspect stem for damage and replace as necessary.
7. Fit new stem seals
8. Remove old gland packing.
9. Refit stem into valve body.
10. Fit new gland packing.
11. Reassemble handle, stop plate, gland nut and gland follower.
12. Turn handle to closed position and refit ball.
13. Replace all body seals.
14. Reassemble and tighten bolts as in 5.1



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### B - BALL VALVE TRIM (2 piece bolted construction floating ball)

#### B.1 Seats

Owing to the nature of soft seat inserts repair is by replacement.

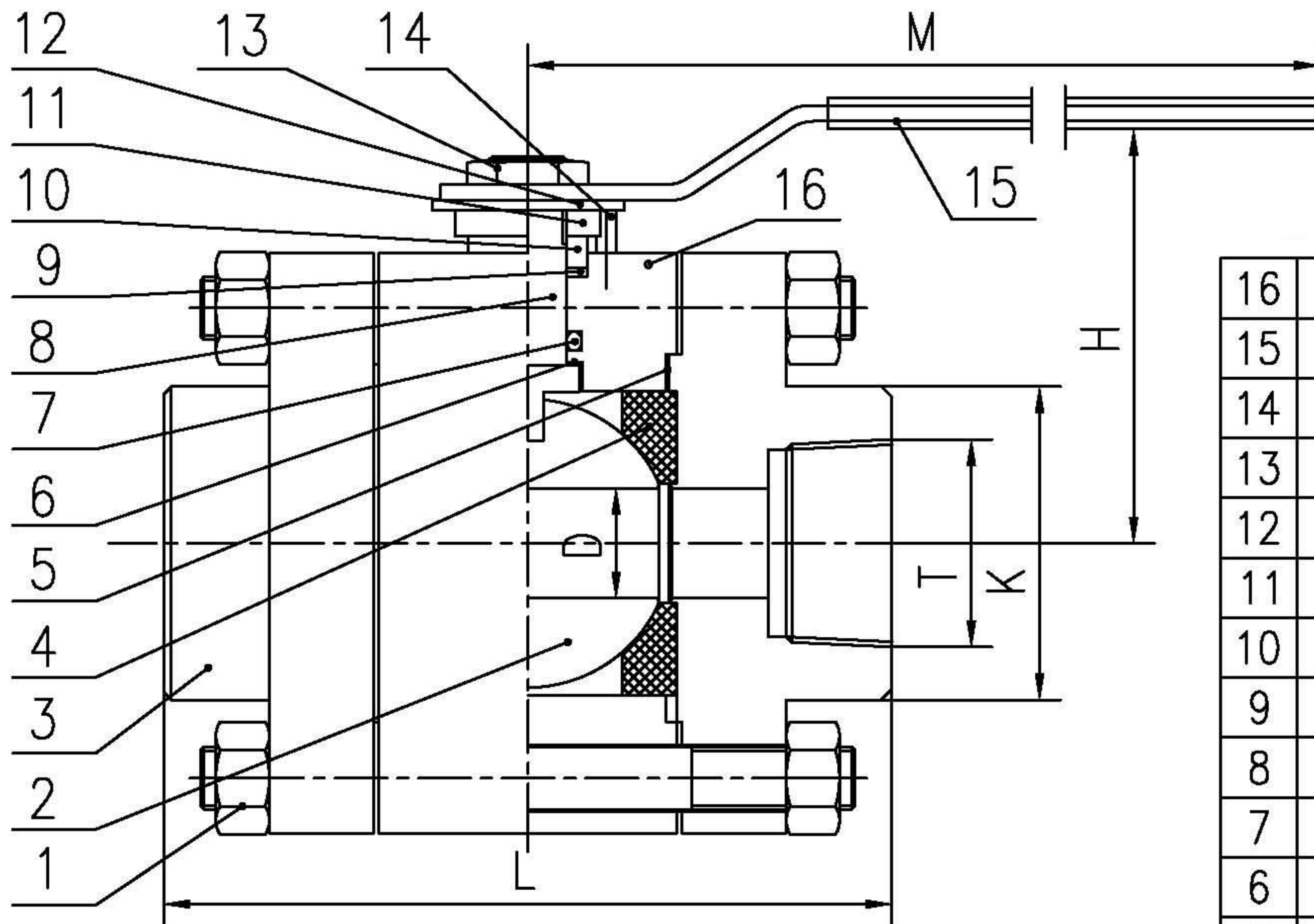
1. Remove body bolting and end cover, (unscrew end on screwed construction valves).
2. Remove seats from end cover.
3. Rotate ball into closed position.
4. Remove ball.
5. Remove seats from body.
6. Fit new seats.
7. Replace all body seals.
8. Reassemble and tighten bolts as in 5.1

#### B.2 Ball

1. Remove body bolting and end cover, (unscrew end on screwed construction valves).
2. Rotate ball into closed position.
3. Remove ball.
4. Inspect ball for damage, replace as necessary.
5. Replace all body seals.
6. Reassemble and tighten bolts as in 5.1

#### B.3 Stem

1. Remove body bolting and end cover. (unscrew end on screwed construction valves).
2. Rotate ball into closed position.
3. Remove ball.
4. Remove handle, stop plate, gland nut and gland follower.
5. Carefully remove stem, damage to gland packing may occur.
6. Inspect stem for damage and replace as necessary.
7. Fit new stem seals
8. Remove old gland packing.
9. Refit stem into valve body.
10. Fit new gland packing.
11. Reassemble handle, stop plate, gland nut and gland follower.
12. Turn handle to closed position and refit ball.
13. Replace all body seals.
14. Reassemble and tighten bolts as in 5.1



Design Standard : API 608  
 Firesafe design : API 607

NO	NAME OF PART	MATERIAL	QTY	REMARK
16	BODY	A105	1	
15	HANDLE	CS	1	
14	RETAINING PIN	13CR	1	
13	NUT	A194-2H	1	
12	PIECE	CS		
11	GLAND NUT	A194-2H	1	
10	GLAND	SS316	1	
9	GASKET	RPTFE	1	
8	STEM	SS316	1	
7	O RING	RUBBER	1	
6	GASKET	RPTFE	1	
5	GASKET	RPTFE	2	
4	SEAT	RPTFE	2	
3	BONNET	A105	2	
2	BALL	F316	1	
1	BOLT NUT	A193-B7/2H	4 SET	
NO	NAME OF PART	MATERIAL	QTY	REMARK

NPS	1/4	1/2	3/4	1	1 1/4	1 1/2	2
L	73	73	96	127	140	152	178
T	1/4NPT	1/2NPT	3/4NPT	1NPT	1 1/4NPT	1 1/2NPT	2NPT
D	6	14	20	23	32	35	50
K	39	39	46	51	60	68	82
H	55	55	70	90	92	98	110
M	135	135	160	160	195	195	250

Rev.	A				
Checked	Morris	Date	2008/11/27	Type	VS-306(FB)
Designer	Kevin	Scale	Scaled to Fit	Describe	BALL VALVE
Drawn	Ray	Dwg_No.	Delta Pacific Valves Limited		