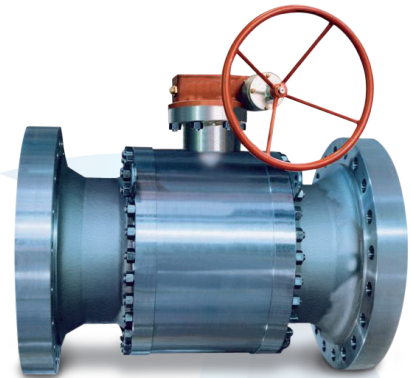


SFEROVA

TM3/TM3-L SERIES FORGED SIDE ENTRY BALL VALVE

DESIGN FEATURES

- Manufactured and tested to API6D
- 3 piece Side Entry type
- Full Bore - Full through conduit - Piggable
- Manual operation - Gear (Rotork)
- Trunnion mounted
- Stem separate from the ball, anti-blow-out design
- No side load on the stem. Bearing blocks absorb the pressure load on the ball
- Triple barrier stem seals
- Anti blow-out stem configuration
- Metal seat retainer complete with soft insert
- O-ring for static (body joints) and dynamic (seat rings and stem) seals. 1500 Class and above c/w PEEK or Nylon or PTFE backing rings behind o-ring.
- All o-rings are supplied by MCM SRL (confirmed on material certificate)
- Self-relieving seat design feature
- Anti-static to API6D & ISO 17292
- Sealant injection
- Fire safe certified in accordance with ISO 10497 & API607
- Fugitive emission certified ISO - EN 15848-1
- Cavity relief vent & drain



API 6D
API Q1



ATEX 94/9/EC



ISO 9001



97/23/EC/PED

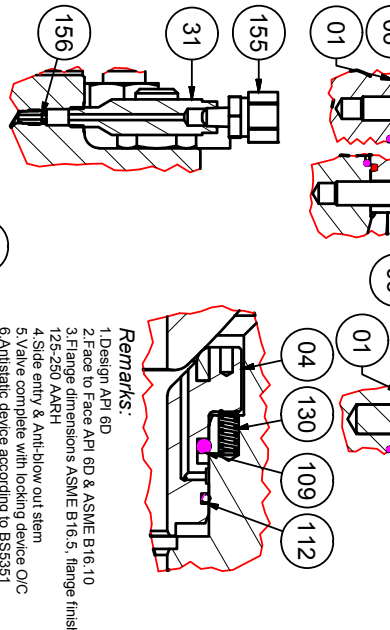
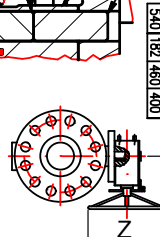
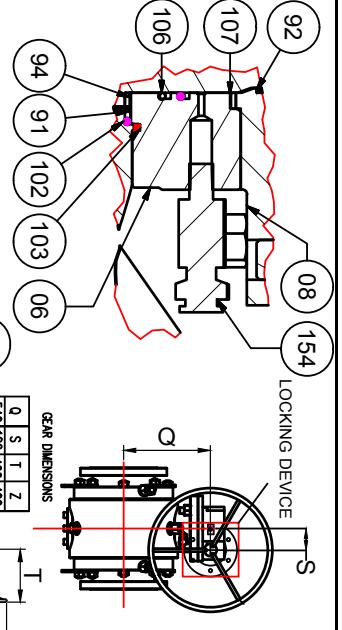
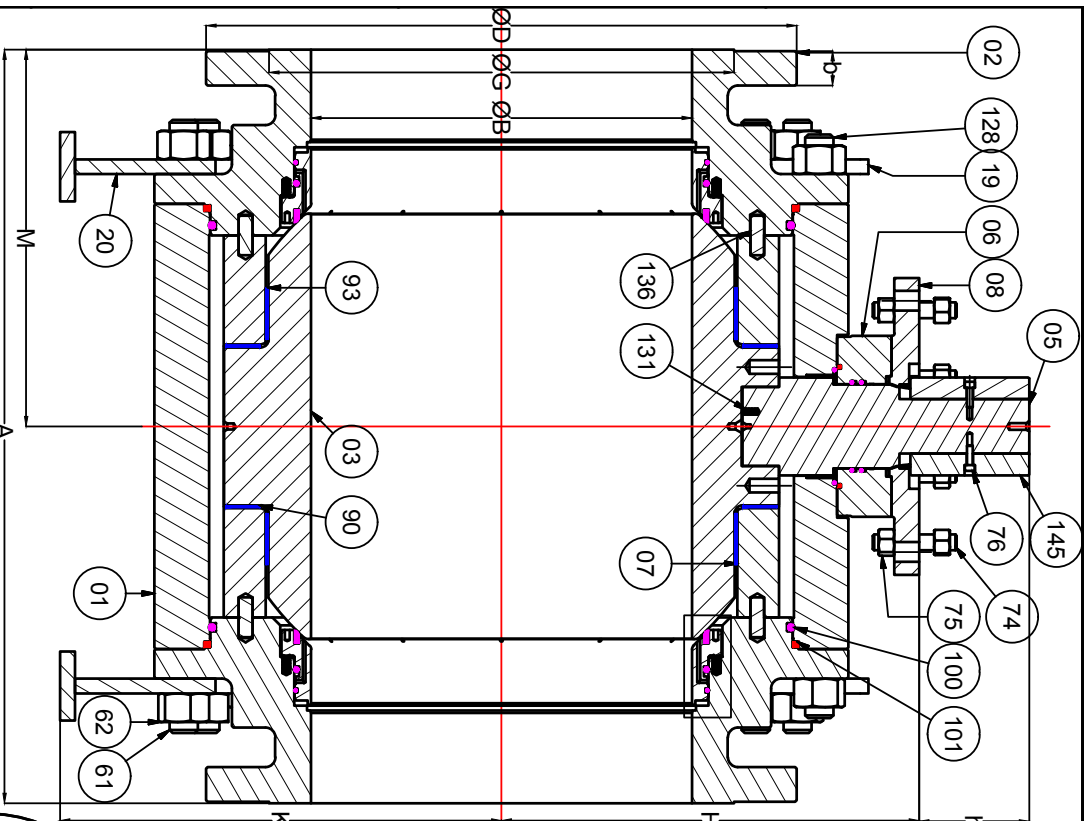


TECHNICAL OVERVIEW SHEET

PROJECT	Stock Order
PURCHASER	Global Supply Line
END USER	Australia

LINE		SPECIFICATIONS	
1	VALVE DESCRIPTION	3-Piece Ball Side Entry Trunnion Bolted Bonnet	
2	VALVE MODEL NO.	TM3/TM3-L Series Ball Valve Side Entry	
3			
4			
5			
6	PRESSURE CLASS	Refer to drawing	
7	BORE (FULL/REDUCED)	Refer to drawing	
8	END CONNECTIONS	Refer to drawing	
9	OPERATION (MANUAL/ACTUATED)	Refer to drawing	
10	GEARBOX (WHERE APPLICABLE)	Rotork	
11	SEAT CONFIGURATION	Self-Relieving	
12	ANTI BLOWOUT STEM DESIGN (YES/NO)	Yes	
13	ANTI STATIC DEVICE (YES/NO)	Yes	
14	VENT/DRAIN FITTING	NPT Plug and Bleed Valve - as per API 6D	
15	FIRE SAFE DESIGN & TESTING (YES/NO - SPEC)	Yes - API 607-6th/ISO 10497	
16			
17	VALVE MATERIALS OF CONSTRUCTION		
18	BODY	Refer to drawing	
19	CLOSURE	Refer to drawing	
20	STEM	Refer to drawing	
21	BALL	Refer to drawing	
22	SEATS	Refer to drawing	
23	SEAT INSERT	Refer to drawing	
24	SEAT SPRINGS	INCONEL X750	
25	OTHER SEALS	Graphite/Elastomer* (refer to Drawing)	
26	BOLTING	Refer to drawing	
27	STEM GREASE FITTING	Yes	
28	SEAT SEALANT INJECTION FITTING	Yes	
29			
30			
31	VALVE DESIGN LIMITS		
32	TEMPERATURE	Refer to drawing	
33	PRESSURE	Refer to drawing	
34	DIFFERENTIAL PRESSURE (MAX.)	Refer to Drawing	
35			
36	TESTING		
37	REFERENCED SPECIFICATION	API6D (ISO 5208 Rate A)	
38	OTHER TEST/INSPECTION CONDUCTED	PMI/CT/MPI as required	
39			
40	CERTIFICATION		
41	PRESSURE RETAINING PARTS		
42	- BODY, BONNET, CLOSURE	EN 10204 3.1	
43	- STEM	EN 10204 3.1	
44	- BOLTING [†]	EN 10204 3.1	
45	PRESSURE CONTROLLING PARTS		
46	- SEATS	EN 10204 3.1	
47	- BALL	EN 10204 3.1	
48			
49	* MCM SRL Equivelant to FR58/90:- AED/T57/VED (Norsok M710 certified) or Viton GLT AED		
50			
51			
52	†ALL B7, B7M, L7, L7M BOLTING IS GALVANISED.		
53	CLARIFICATIONS/QUALIFICATIONS:		
54			
55	1) All valves are provided with locking devices on their individual operators.		
56	2) Valves are designed with capability for double block and bleed operation/function.		
57	3) Vent and drain connections include bleed valve.		
58	4) Valve body cavity pressure can be released during open and close position.		
59	5) Gear box's cover screw shall be accessible from the top.		
60	6) All external fixtures, i.e. seal injection, drain & bleed plug are full 316SS.		
	PREPARED BY	CHECKED BY	REV. NO.
	BT	AS	04

SAMPLE DRAWING



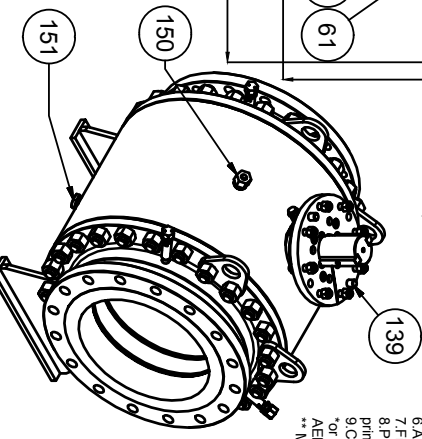
Remarks:

1. Design API 6D
2. Face to Face API 6D & ASME B16.10
3. Flange dimensions ASME B16.5, flange finish 12.5-250 AARRH
4. Side entry & Anti-blow out stem
5. Valve complete with locking device O/C
6. Antistatic device according to BS55351
7. Fine Safe API 607, API 6FA
8. Painting: std SFEROVA SA250+inorganic zinc prime RAL 5015, blue top coat
9. Conform to name Mfr-01-75 or Gasstas International SRL equivalent AED/13/VE/D
- ** Minimum hardness 67RC (900VHN)

SFEROVA S.p.A.
 Ball Valves
 100% ITALY MADE - 100% ITALY DESIGNED
 100% ITALY MADE - 100% ITALY DESIGNED

DESIGN & TEST LIMIT TABLE

CLASS	ANSI 50
Welded pressure	51.7 Bar
Hydrotest body test pressure	76.7 Bar
Hydrotest seat test pressure	50.2 Bar
Hydrotest seal test pressure	6 Bar
Temperature scope	-29°C ~ +143°C
Pressure scope (max)	51 MPa (8347)



ITEM	CODE	SIZE	A (RF)	B	M	D	b	G	K	H	h	W (kg)
234	BV876	16"	762	385	381	597	34.9	470	446	422	111	1282

POS.	DESCRIPTION	MATERIAL	NOTE
01	BODY	ASTM A105N	
02	CLOSURE	ASTM A105N	
03	BALL	ASTM A105N+ENH(75um)**	Δ
04	SEAT	ASTM A105N+ENH(75um)+ENH(POM)	
05	STEM	ASTM A105N+ENH(75um)+ENH(POM)	
06	GLAND PLATE	ASTM A105N+ENH(75um)+ENH(POM)	
07	SUPPORT PLATE	ASTM A105N+ENH(75um)+ENH(POM)	
08	ADA PTER FLANGE	ASTM A105N	
19	LIFTING LUG	CARBON STEEL	
20	SUPPORT FEET	CARBON STEEL	
31	EXTENSION	316SS	
61	BODY STUD	ASTM A193 B7M+ZINC	
62	BODY NUTS	ASTM A194 2HM+ZINC	
63	CAP SCREW	ASTM A193 B7M+ZINC	
64	CAP SCREW	ASTM A193 B7M+ZINC	
74	STUD (GEAR)	ASTM A193 B7M+ZINC	
75	NUT (GEAR)	ASTM A193 B7M+ZINC	
76	CAP SCREW	A470	
90	BEARING	DU-DRY	
91	BEARING	DU-DRY	
92	BEARING	DU-DRY	
93	WASHER	DU-DRY	
94	WASHER	DU-DRY	
100	O RING	VITON AED/FR58/90*	
101	O RING	VITON AED/FR58/90*	
102	O RING	VITON AED/FR58/90*	
103	O RING	GRAPHITE	
106	O RING	VITON AED/FR58/90*	
107	GASKET	GRAPHITE	
109	O RING	VITON AED/FR58/90*	
112	O RING	VITON AED/FR58/90*	
130	SPRING	INCONEL X750	
131	SPRING	INCONEL X750	
136	PIN	COMMERCIAL	
139	PIN	COMMERCIAL	
145	STEM KEY	316SS	
150	DRAIN PLUG	316SS	
151	VENT BLEEDER	316SS	
154	STEM GREASE INJECTION	316SS	
155	SEAT GREASE INJECTION	316SS	
156	CHECK VALVE	COMMERCIAL	
137/138	STOP PIN	COMMERCIAL	
128	BODY STUD	ASTM A193 B7M+ZINC	

3	UPDATE DRAWING AFTER COMMENTS	REV./	DATE	SCALE	MODIFIER	PASSER	DATE
4	25/11/15	VI	25/11/15	NTS			5/1/20

ASSEMBLY DRAWING

GLOBAL SUPPLY LINE

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SFEROVA

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