


EMERSON™

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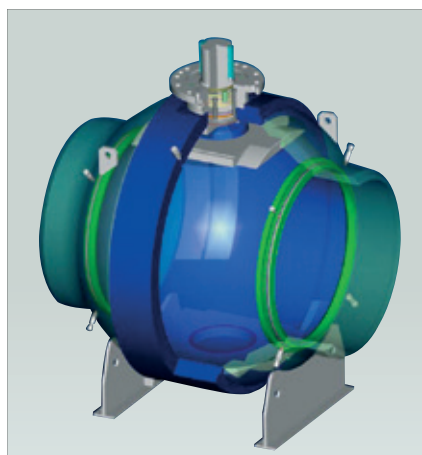
The ideal valve to minimise any risk of fugitive emissions from flanges in the natural gas and oil industry.

Features

- Ball valves, trunnion mounted, fully welded to significantly reduce or eliminate fugitive emissions.
- Design, manufacturing and materials comply with the Essential Safety Requirements of the 97/23 EC Directive (PED).
- Trunnion mounted fully welded ball valve Fig. 5600 are exclusively manufactured in forged materials, large size valves included.
- Bidirectional valves, double block and bleed, allowing the venting and the draining of the body cavity, in both open and closed position.
- Two seat designs available:
 - single piston effect (standard) providing self relieving of the body cavity overpressure
 - double piston effect providing double barrier (safety valve requested for cavity pressure relieving on liquid applications)
- Significant reduction of torque values necessary to operate the valve.
- Product certified in compliance with PED and ATEX requirements.
- The valves are Firesafe certified according to the API 6FA, ISO 10497 Ed.1992, API 607 Ed.3 and BS 6755 part II.
- Pressure parts components designed according to ASME VIII-2. Rating & class according to ASME B16.34.

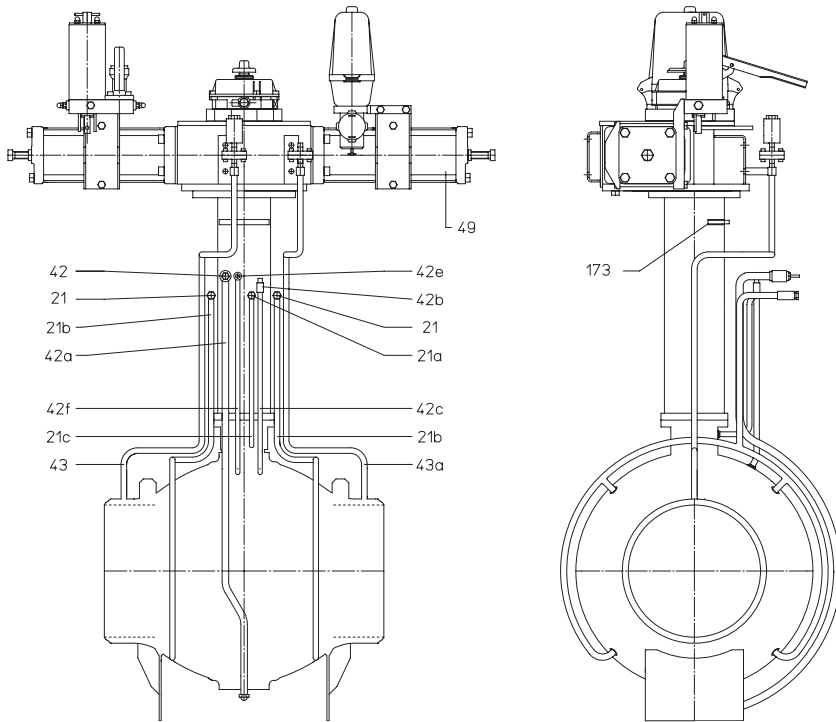
General application

The Fig. 5600 valves have been designed for gas transportation and gas distribution applications. Standard oil and gas applications are also recommended.


Technical data

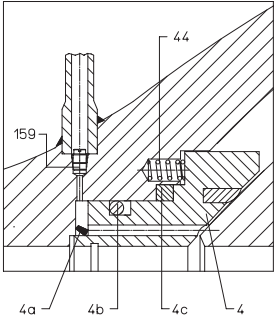
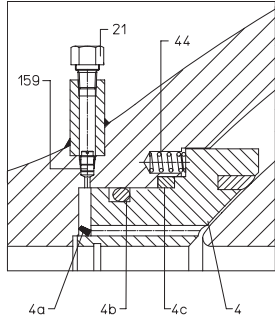
Sizes	: DN 50 to DN 1400, 2" to 56", FB and RB
Pressure rating	: ANSI Class 150 to Class 900
Body materials	: Carbon steel A350 LF2
Temperature range	: -60°C to +200°C
Connections	: Butt weld ends to ASME B16.25, B31.8 Flanged ends to ASME B16.5/B16.47/MSS-SP44 End to end dimensions ISO 14.313/API 6D
Options	: Stem extension for underground service. Pups available on request.

Trunnion mounted fully welded ball valve Fig. 5600



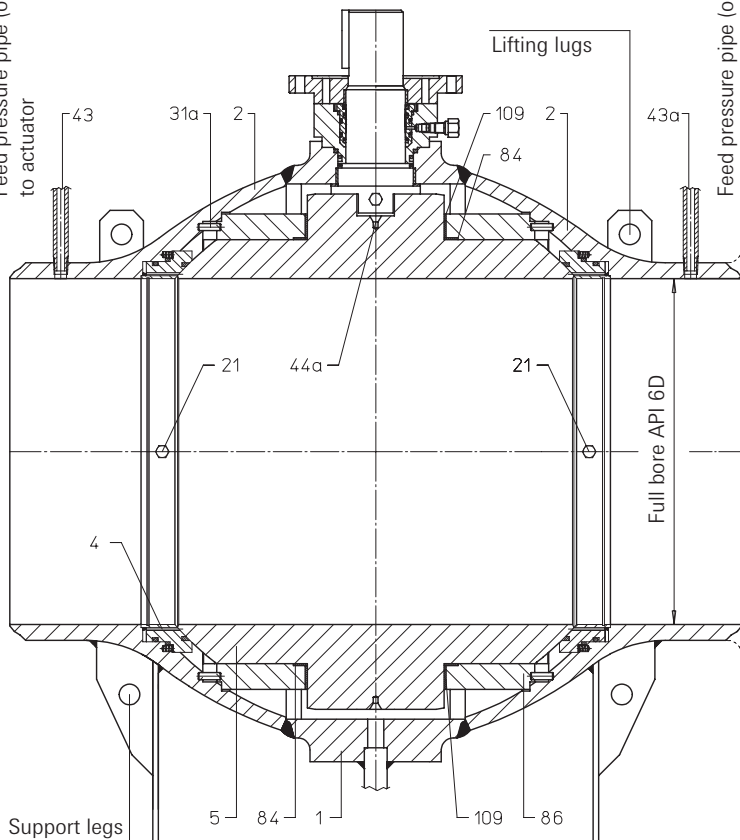
Aboveground configuration

Underground configuration



Feed pressure pipe (optional)
to actuator

Feed pressure pipe (optional)
to actuator



Flanged ends available according to API 6D end-to-end and ASME B16.5/16.47 - A dimensions

Typical Bill of Material

for cl. 150, 300, 400, 600, 900

Pos.	Item	Material	Notes
1	Body	A350 LF2	
2	Closure	A350 LF2	
3b	Firesafe Gasket	Graphite	
4	Seat Ring	A350 LF2	1,2
4a	Garter Ring	Viton A	
4b	O-ring	Viton A	
4c	Firesafe Gasket	Graphite	
5	Ball	A350 LF2	1
6	Stem	AISI 4140	1
11	Flange	A350 LF2	
11a	O-ring	Viton A	
12	Bonnet	A350 LF2	
13	Stem O-rings	Viton A	
13a	Firesafe Gasket	Graphite	
13b	Lip Seal	PTFE	
14	Studs	A193 B7, B7M	3,4,5
14a	Studs Nuts	A194 2H, 2HM	5
21	Seat Injector	AISI 316	
21a	Stem Injector	AISI 316	
21b	Seat Injector Pipe	A106	
21c	Stem Injector Pipe	A106	
31	Pin	EN 20898	
31a	Pin	EN 20898	
42	Drain Valve	AISI 316	
42a	Drain Valve Pipe	A106	
42b	Safety Valve	AISI 316	6
42c	Safety Valve Pipe	A106	6
42d	Plug	A182 F316	
42e	Vent Valve	AISI 316	
42f	Vent Valve Pipe	A106	
43	Actuator Pressure Supply Pipe	A106	
43a	Actuator Pressure Supply Pipe	A106	
44	Spring	Inconel X750	
44a	Antistatic Device	Inconel X750	
48	Lantern Ring	A182 F316	
49	Electric or Pneumatic Actuator	---	
58	Gasket	Graphite	
84	Bearings	Carbon Steel, Stainless Steel, PTFE Coated	
84a	Bearings	Carbon Steel, Stainless Steel, PTFE Coated	
86	Ball Trunnion Plate	A516 Gr. 60	
109	Thrust Bearings Trunnion Plate	Stainless Steel PTFE Coated	
115	Key	C40	
121	Thrust Bearings Stem	Carbon Steel, Stainless Steel, PTFE Coated	
121a	Thrust Bearings Stem	Carbon Steel, Stainless Steel, PTFE Coated	
159	Check Valve	AISI 316	
173	Position Indicator	A106	

Notes

1. E.N.P. (Electroless Nickel Plated) 0.075 mm minimum thickness.
2. Anti explosive decompression (AED) on request.
3. BOM on request.
4. Galvanised.
5. Or hexagon socket head cap screws.
6. For double piston effect design.

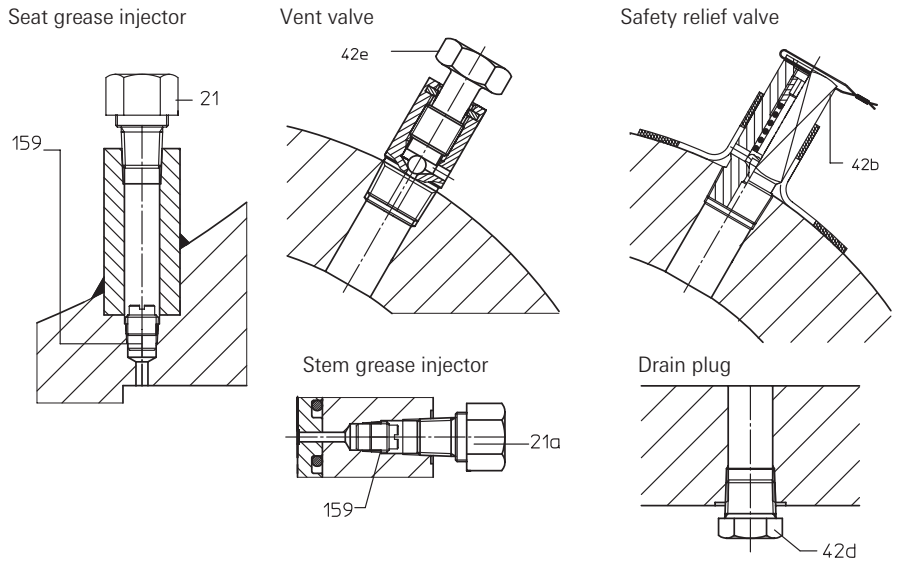
General Note

AISI 316: Forged/Bar

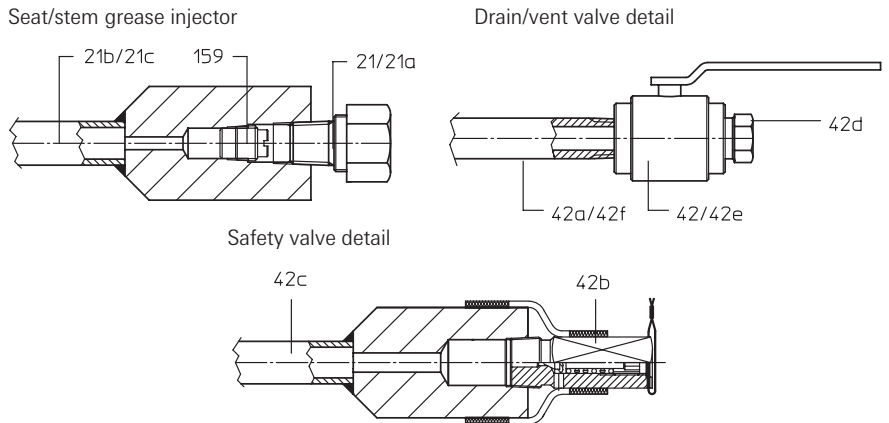
General notes

- Butt-weld ends according to ASME B16.25, B31.8 or customer requirements.
- Face-to-face according to API 6D and customer requirement including manufacturers standard.
- Closure available also in high strength materials (A350LF6 Cl.2), depending on pipe material.
- Hydraulic and pneumatic tests according to API 6D, ASME B16.34 and API 598.
- Double Block and Bleed design.
- True blow-out proof stem.
- Bi-directional
- Fire tested design to API 6FA, API 607, ISO 10497.
- Antistatic design.
- Removable lantern ring facilitates replacement of upper stem seals.

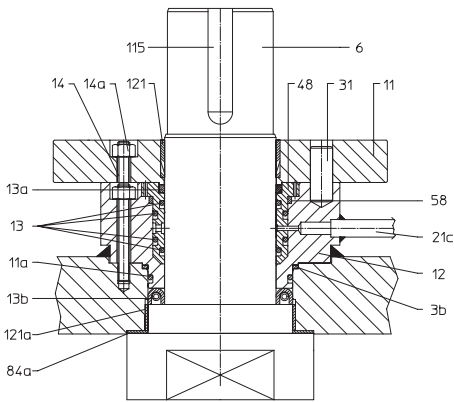
Aboveground configuration



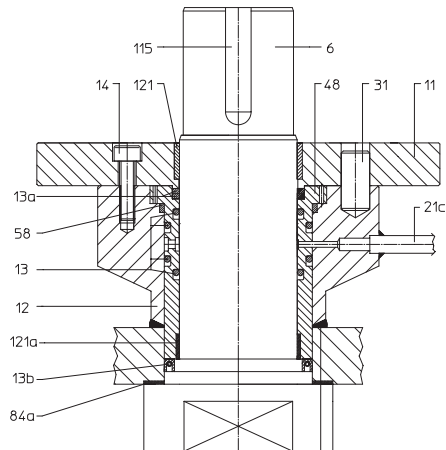
Underground configuration



Standard bolted bonnet



Optional welded bonnet (special execution)



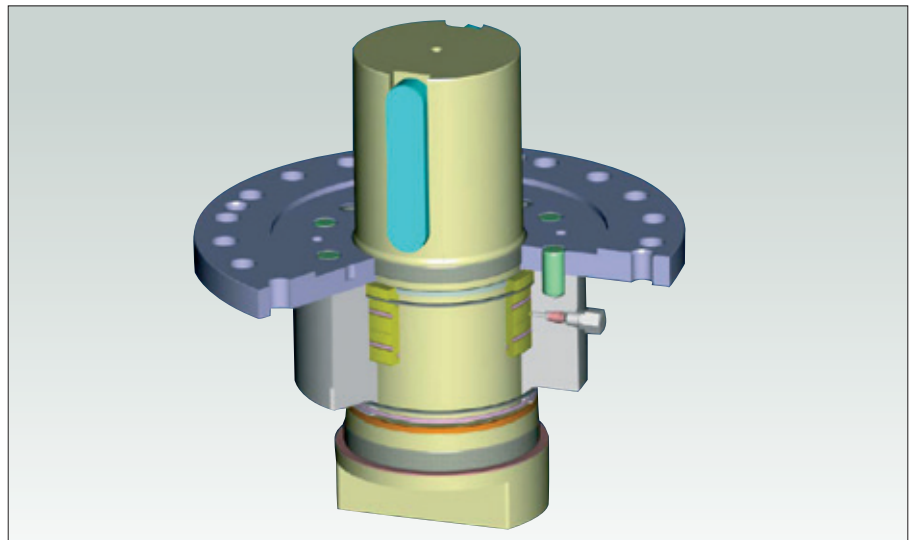
Welded according to ASME VIII (full penetration) and FEM calculation

Three Level Safety procedure during disassembly of upper stem seals

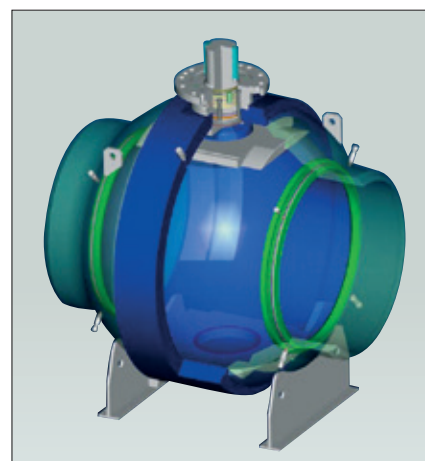
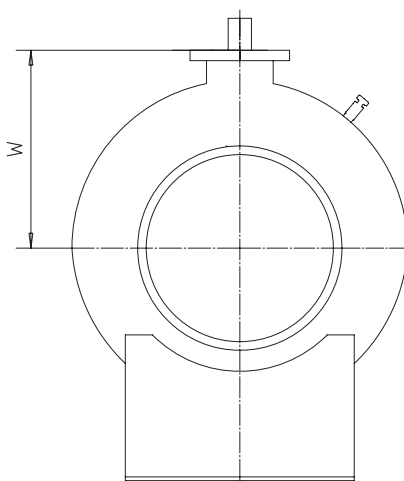
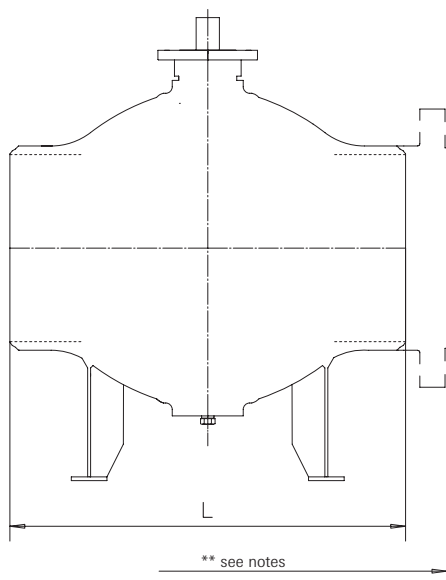
(Standard design)

All disassembly functions can be carried out under safe conditions:

1. True Double Block and Bleed design. The body cavity is isolated from the line pressure (closed/open position).
2. Lip seal provided for each size and rating.
3. Vent valve provided for each valve size/rating. It must always be in open position during seal replacement as indicated in the Operating Safety Instructions (O.S.I) and in the Installation and Operation Maintenance Manual (I.O.M.).



Trunnion mounted fully welded ball valve Fig. 5600



ANSI Class 150 (Fig. 5605)

NPS	L [mm]	W [mm]	Weight [Kg]
2	216	108	25
3	283	128	58
4	305	185	125
6	457	275	180
8	521	314	200
10	559	320	310
12	635	391	471
14	762	441	610
16	838	456	850
18	914	501	1198
20	991	514	1480
22	1092	530	1910
24	1143	593	2371
28	1346	682	3700
30	1397	725	4340
32	1524	742	5020
34	1626	810	6150
36	1727	845	8690
40	1956*	940	10640
42	1880*	1010	12300
48	2220*	1095	16270
56	2080*	1343	26100

ANSI Class 300 (Fig. 5610)

NPS	L [mm]	W [mm]	Weight [Kg]
2	216	108	30
3	283	128	65
4	305	185	138
6	403	275	170
8	521	314	250
10	559	320	350
12	635	391	510
14	792	441	660
16	838	436	865
18	914	501	1250
20	991	514	1527
22	1092	530	1960
24	1143	593	2425
28	1346	682	3792
30	1397	725	4438
32	1524	742	5095
34	1626	810	6280
36	1727	845	8740
40	1956*	940	10695
42	1880*	1010	12345
48	2220*	1095	16320
56	2080*	1343	26155

ANSI Class 400 (Fig. 5615)

NPS	L [mm]	W [mm]	Weight [Kg]
2	292*	115	35
3	356*	140	70
4	406	185	156
6	495	275	210
8	597	314	280
10	673	320	372
12	762	391	520
14	826	441	720
16	902	436	870
18	978	488	1320
20	1054	514	1550
22	1143	530	2100
24	1232	593	2530
28	1397	682	3860
30	1524	725	4530
32	1651	742	5182
34	1778	810	6880
36	1880	845	8920
40	1956*	940	10670
42	1880*	1010	12390
48	2220*	1095	17120
56	2080*	1343	26320

ANSI Class 600 (Fig. 5620)

NPS	L [mm]	W [mm]	Weight [Kg]
2	292	115	35
3	356	140	70
4	432	195	172
6	559	280	234
8	660	330	315
10	787	369	385
12	838	406	540
14	889	453	752
16	991	452	890
18	1092	500	1392
20	1194	514	1600
22	1295	570	2155
24	1397	638	2666
28	1549	682	4250
30	1651	760	4650
32	1778	760	5500
34	1930	865	8045
36	2083	905	9400
40	1956*	970	10710
42	1880*	1010	12420
48	2220*	1135	19820
56	2080*	1343	26560

ANSI Class 900 (Fig. 5625)

NPS	L [mm]	W [mm]	Weight [Kg]
2	368	145	80
3	381	170	125
4	457	225	220
6	610	315	281
8	737	355	360
10	838	369	435
12	965	430	596
14	1029	482	795
16	1130	485	938
18	1219	536	1442
20	1321	541	1652
22	1295*	600	2258
24	1549	665	2716
28	1549*	712	4305
30	1651*	788	4695
32	1778*	792	5550
34	1930*	895	8100
36	2083*	930	9445
40	1956*	1010	10762
42	1880*	1045	12470
48	2220*	1160	19872
56	2080*	1376	26615

Notes

- Weight & "W" dimensions can be updated as product development.
- Weight (approx.) is without options (stem and tube extensions, actuator or bevel gear).

* Manufacturer Standard.

** Flanged end also available according to API 6D end-to-end and ASME B16.5/B16.47.