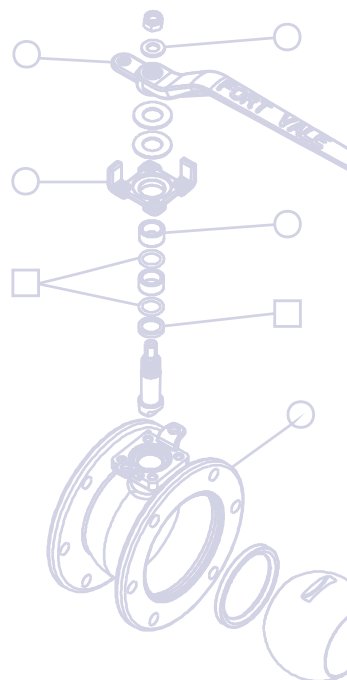




BALL
VALVE
CATALOGUE
//



The Fort Vale
Range of
Ball Valves



AIRLINE BALL VALVES //

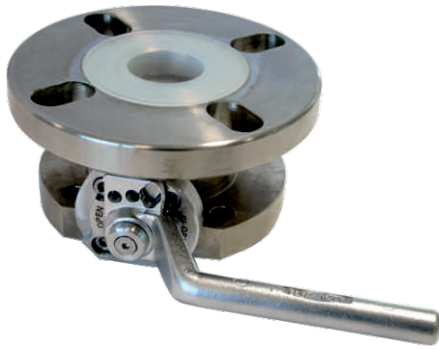
» 25mm PFA Lined Flanged Blacko Airline Ball Valve	1
» 1½" BSP Blacko Airline Ball Valve	2
» 1½" Dual Fitting Blacko Airline Ball Valve	3
» 1½" Flanged Blacko Airline Ball Valve	4
» 2" Blacko Ball Valve - Slotted Outlet (This valve may also be used as a discharge valve)	5
» 2" Pneumatically Actuated Blacko Airline Ball Valve	6/7
» Airline Valve Weld-in Flanges	8
» Airline Valve Installation & Conversion Kits	9

DISCHARGE BALL VALVES //

» 50mm PFA Lined Flanged Ball Valve	10
» 2" Blacko Ball Valve - Slotted Outlet (See Airline Section)	5
» 2" Ball Valve - H2O2 Specification	11
» 2" Blacko Ball Valve - Offshore Specification	12
» 2" Full Bore Ball Valve - Gas Specification	14/15
» 80mm PFA Lined Flanged Ball Valve	16/17
» 3" Blacko Ball Valve - 3" BSP Outlet	18/19
» 3" Blacko Ball Valve - Slotted Outlet	20/21
» 4" Ball Valve - Rail Specification	22/23
» Socket / In-Line Ball Valves	24

FIRESAFE & LETHAL SERVICE BALL VALVES //

» 1" Firesafe / Lethal Service Ball Valve	26/27
» 2" Firesafe / Lethal Service Ball Valve	28/29
» 2" Firesafe Only Ball Valve	30/31
» 3" Firesafe / Lethal Service Ball Valve	32/33

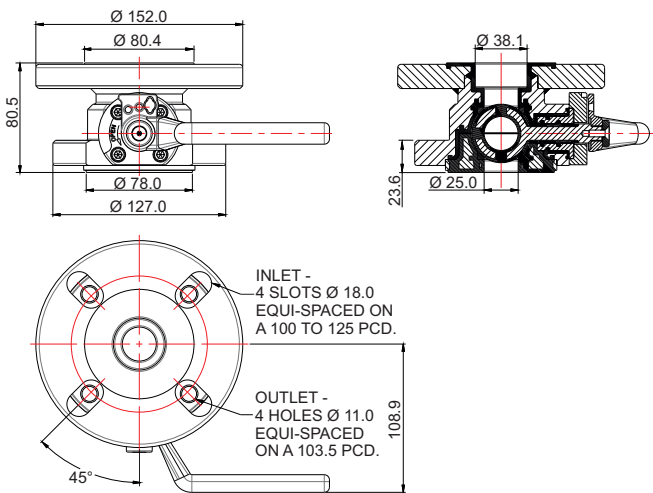


PFA Lined 25mm Reduced Bore Flanged Airline Ball Valve - inlet flange drilled 4 x 18mm slots on a 100mm to 125mm PCD; outlet flange (tank connection) drilled 4 x 11mm holes on a 103.5mm PCD. Valve manufactured in stainless steel with PTFE main seal. All parts in contact with the cargo lined with PFA.

Options - range of PFA lined ball valves (See RANGE)

Fitting Details

Part number : 530/P100



Specification

Weight	5.3 Kg
Design Pressure (MAWP)	6.9 Bar (100 PSI)
Test Pressure	10.3 Bar (150 PSI)
Design Temperature Range	-40°C to +200°C -40°F to +392°F

Valve complies with EN14432:2006 and RID norms.

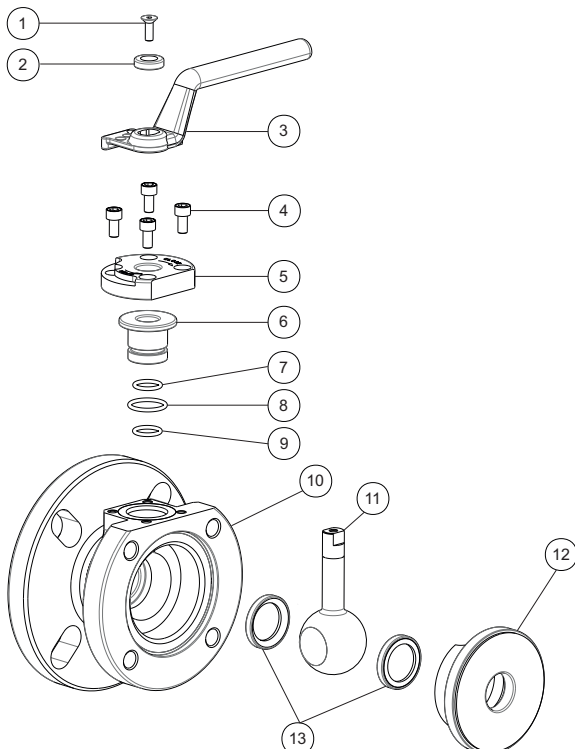
Range

Part No.	Description
530/P100	25mm PFA lined reduced bore ball valve
370/P100	50mm PFA lined full bore ball valve
360/P030X	80mm PFA lined full bore ball valve

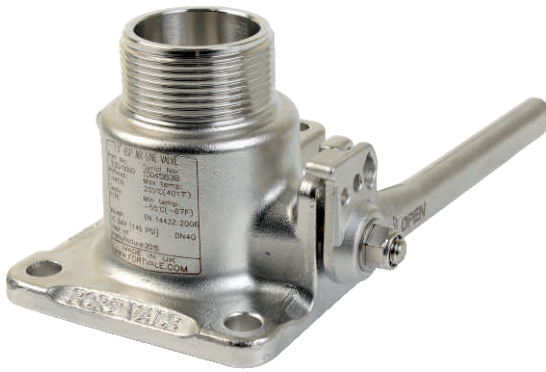
Associated Parts

Part No.	Associated Parts
350/0024	Tank weld-in pad
355/1250	Stud kit
530/8053CM	Blind flange
5005-348	Solid PTFE outlet gasket
311/3510	Bolting kit

Parts drawing



Item	Description	Part No.
1	M5 socket screw	5111-111
2	Retaining washer	20370/5
3	Handle	530/0020/1
4	M6 button screw (4)	5121-013
5	Stuffing clamp	530/1014
6	Seal carrier for lining	530/1013
7	Perfluoroelastomer O ring	5005-586
8	Perfluoroelastomer O ring	5005-384
9	Fortyt O ring	5005-601
10	PFA lined body	530/P110
11	PFA lined ball & stem	530/1010L
12	PFA lined clamp plate	530/1011P
13	PTFE front & rear seal (2)	530/0024



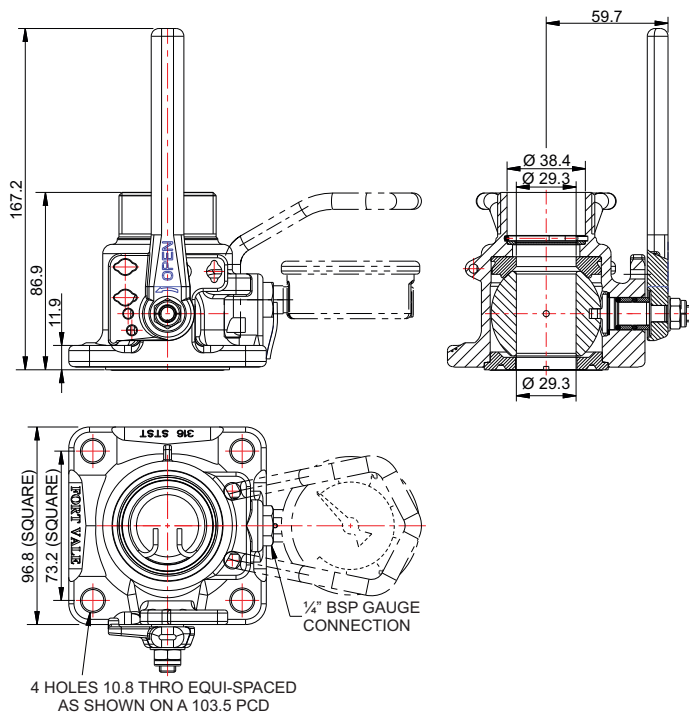
1½" Airline Ball Valve - 1½" BSP male inlet.

Complete with pressure gauge connection and TIR facility to handle. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - gauge guard and/or gauze filter, ¼" BSP plug with TIR wire.

Fitting Details

Part Number : 530/0000



Specification

Weight	2.9 Kg
Design Pressure	MAWP 10 Bar (145 PSIG)
Test Pressure	21.4 Bar (310 PSIG)
Design Temperature	-55°C to 205°C (-67°F to 401°F)

Approved to BS EN14432.

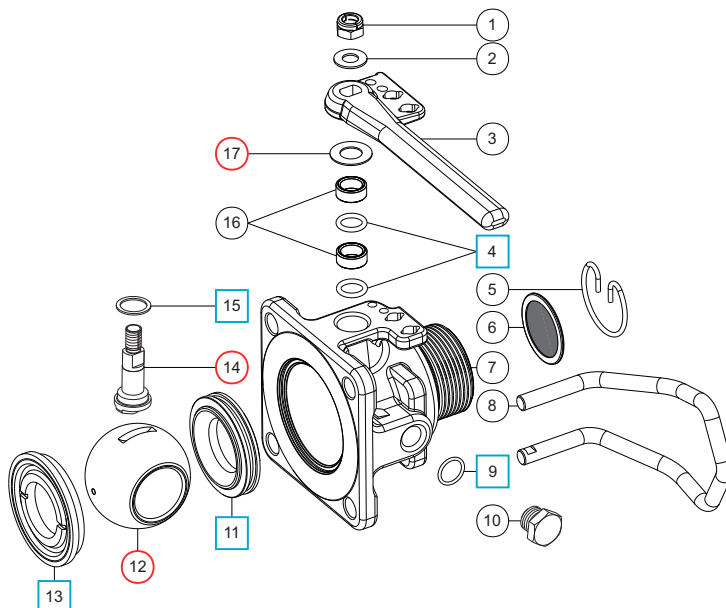
Range

Part No.	Description
530/0000	1½" BSP inlet standard valve.
530/0000F	1½" BSP inlet valve with gauze.
530/0000G	1½" BSP inlet valve with gauge guard.
530/0000FG	1½" BSP inlet valve with gauze and gauge guard.
530/0000W	1½" BSP inlet valve with ¼" BSP plug and TIR wire.

Associated Parts

Associated Parts	Part No.
Gauge	920/07BBSP
Gauge Adaptor	352/4004
1½" BSP Dust Cap	10300PS
Stud Kit	350/1300
Tank Pad	350/0025

Parts drawing



Item	Description	Part No.
1	Self-locking nut	5112-031
2	M8 washer	5113-005
3	Handle	531/0025
4	PTFE O ring (2)	5005-008 <input type="checkbox"/> <input type="radio"/>
5	Snap ring (optional suffix 'F')	5120-017
6	Gauze filter (optional suffix 'F')	353/0010
7	Valve body	530/0100
8	Gauge guard (optional suffix 'G')	530/0040
9	PTFE O ring	5005-048 <input type="checkbox"/> <input type="radio"/>
10	¼" BSP plug	5128-005
11	Front ball seal	5005-006 <input type="checkbox"/> <input type="radio"/>
12	Ball	350/0002 <input type="radio"/>
13	Rear ball seal	5005-007 <input type="checkbox"/> <input type="radio"/>
14	Spindle	530/0001 <input type="radio"/>
15	PTFE washer	5003-002 <input type="checkbox"/> <input type="radio"/>
16	Stuffing boss (2)	530/0003
17	Disc spring	5113-036 <input type="radio"/>

Repair Kits: Items marked are included in Repair Kit 530/00RK
Seal Kits: Items marked are included in Seal Kit 530/00SK

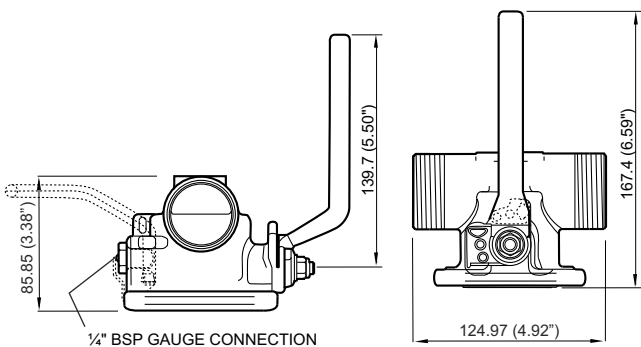
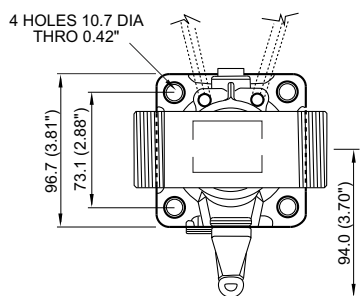


1½" Dual Inlet Airline Ball Valve - 1½" BSP and 1½" NPT male inlet connections. Complete with pressure gauge connection and TIR facility to handle. Contact parts manufactured in 316 stainless steel with PTFE seals.

Optional extras - gauge guard and/or gauze filter.

Fitting Details

Part Number : 530/0300



Specification

Weight 5.25 Kg
 Design Pressure MAWP 10 Bar (145 PSIG)
 Test Pressure 21.4 Bar (310 PSIG)
 Design Temperature -55°C to 205°C (-67°F to 401°F)

Approved to BS EN14432.

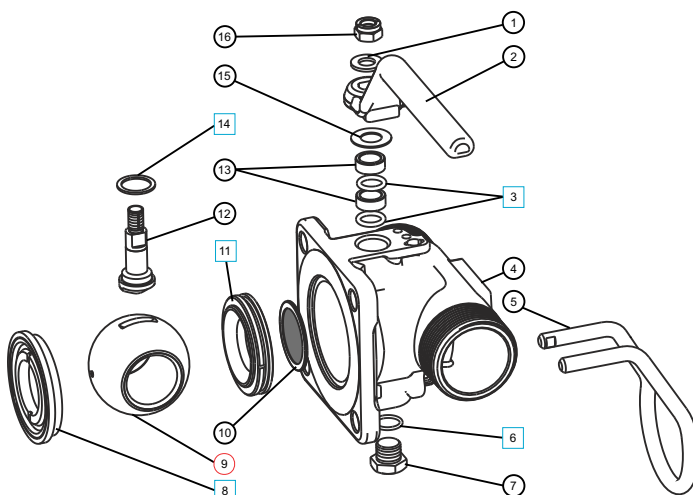
Range

Type	Gauze	Gauge Guard	Part No.
1½" BSP-1½" NPT	Without	Without	530/0300
1½" BSP-1½" NPT	With	Without	530/0300F
1½" BSP-1½" NPT	With	With	530/0300FG
1½" BSP-1½" NPT	Without	With	530/0300G

Associated Parts

Associated Parts	Part No.
Gauge	920/07BBSP
Gauge Adaptor	352/4004
BSP Cap	10300PS
NPT Cap	10300PNT
Stud Kit	350/1300
Tank Pad	350/0025

Parts drawing



Item	Description	Part No.
1	M8 washer	5113-005
2	Handle	530/0020
3	PTFE O ring (2)	5005-008 <input type="checkbox"/> <input type="radio"/>
4	Valve body	530/0301
5	Gauge guard (optional suffix 'G')	530/0040
6	PTFE O ring	5005-048 <input type="checkbox"/> <input type="radio"/>
7	¼" BSP plug	5128-005
8	Rear ball seal	5005-007 <input type="checkbox"/> <input type="radio"/>
9	Ball	350/0002 <input type="radio"/>
10	Gauze filter (optional suffix 'F')	353/0010
11	Front ball seal	5005-006 <input type="checkbox"/> <input type="radio"/>
12	Spindle	530/0001
13	Stuffing boss (2)	530/0003
14	PTFE washer	5003-002 <input type="checkbox"/> <input type="radio"/>
15	Disc spring	5113-036
16	Self-locking nut	5112-031

Repair Kits: Items marked included in Repair Kit - 530/00RK
Seal Kits: Items marked included in Seal Kit - 530/00SK

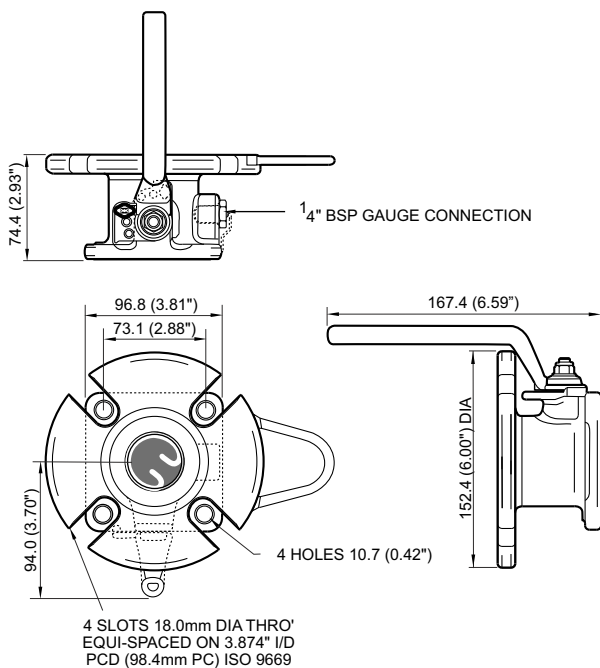


1½" Flanged Airline Ball Valve - inlet flange slotted to 1½" BSTD/1½" ASA 150. Complete with pressure gauge connection, gauge guard and TIR facility to handle. Contact parts manufactured in 316 stainless steel with PTFE seals.

Optional extra - gauze filter.

Fitting Details

Part Number : 530/1000



Specification

Weight	3.7 Kg
Design Pressure (MAWP)	7 Bar (101 PSIG)
Test Pressure	15 Bar (217 PSIG)
Design Temperature	-55°C to 205°C (-67°F to 401°F)

Approved to BS EN14432.

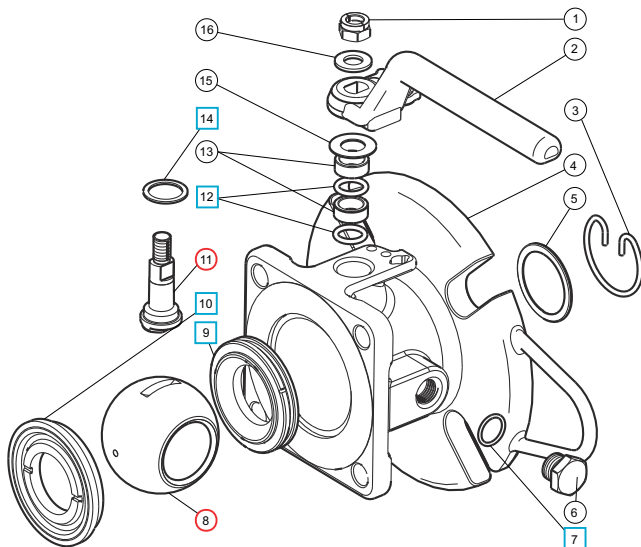
Range

Inlet Flange	Gauze	TIR	Gauge Guard	Part No.
1½"BSTD/ASA	Without	Standard	Standard	530/1000
1½"BSTD/ASA	With	Standard	Standard	530/1000F

Associated Parts

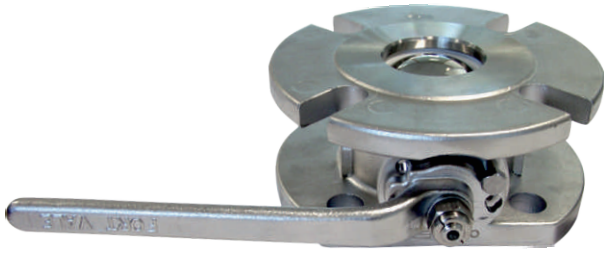
Associated Parts	Part No.
Blind Flange	530/8053CM
Bolting Kit	311/3500
Gasket	5005-348
Stud Kit	350/1300
Tank Pad	350/0025

Parts drawing



Item	Description	Part No.
1	Self locking nut	5112-031
2	Handle	530/0020
3	Snap ring (optional suffix 'F')	5120-017
4	Valve body	530/1100
5	Gauge filter (optional suffix 'F')	353/0010
6	¼" BSP plug	5128-005
7	PTFE O ring	5005-048 <input type="checkbox"/> <input type="radio"/>
8	Ball	350/0002 <input type="radio"/>
9	Front ball seal	5005-006 <input type="checkbox"/> <input type="radio"/>
10	Rear ball seal	5005-007 <input type="checkbox"/> <input type="radio"/>
11	Spindle	530/0001 <input type="radio"/>
12	PTFE O ring (2)	5005-008 <input type="checkbox"/> <input type="radio"/>
13	Stuffing boss (2)	530/0003
14	PTFE washer	5003-002 <input type="checkbox"/> <input type="radio"/>
15	Disc spring	5113-036
16	M8 washer	5113-005

Repair Kits: Items marked included in Repair Kit - 530/00RK (item 6 x2)
Seal Kits: Items marked included in Seal Kit - 530/00SK

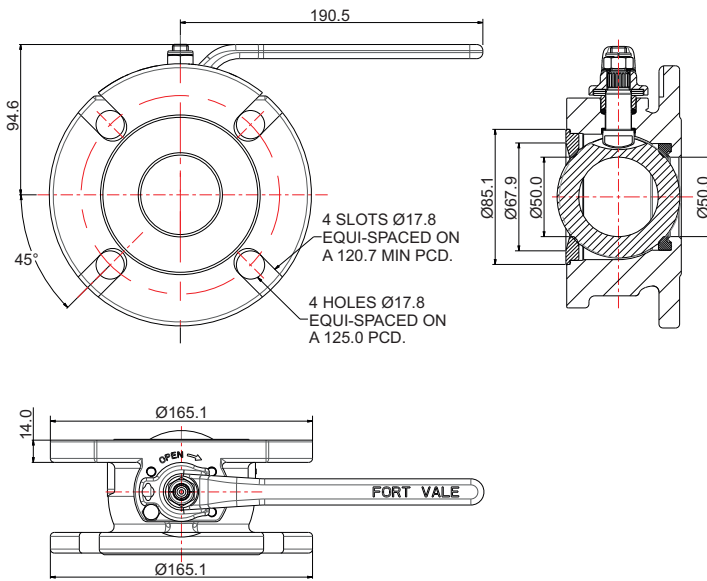


2" Full Bore Blacko Ball Valve - inlet flange drilled 4 x 18mm holes on a 125mm PCD (DIN50 PN16); outlet flange with 4 x 18mm open slots on a 120.7mm minimum diameter to suit 2" ASA150 and DIN50 PN40. Left hand operated with TIR facility to handle. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - A full range of air inlet and discharge ball valves is available, both manually and mechanically actuated. Steam-heated version.

Fitting Details

Part number : 370/0100



Recommended bolt torque 81 Nm (60 Lb/ft)

Specification

Weight	5.5 Kg
Design Pressure (MAWP)	7.5 Bar (108.8 PSI)
Hydraulic Test Pressure	15 Bar (217.5 PSI)
Design Temperature Range	-40°C to 205°C (-40° F to 400°F)

Design Approval by Lloyds Register of Shipping
Approved to BS EN14432

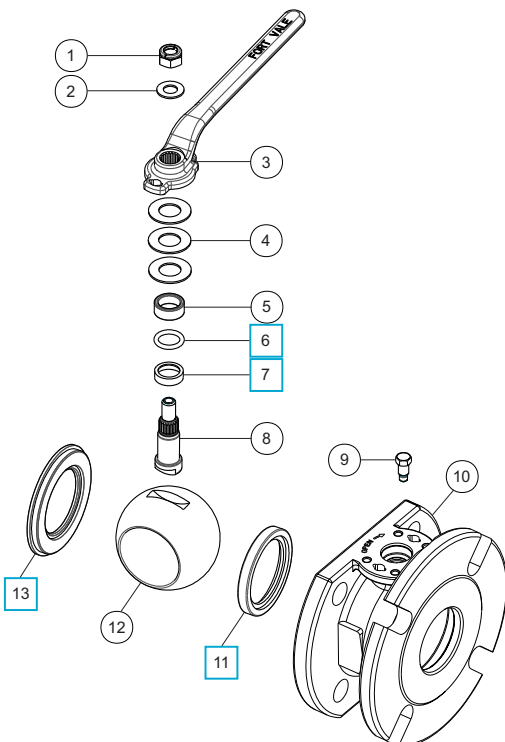
Range

Part No.	Description
370/0100SH	c/w steam heating provision
370/0140	c/w DN80 inlet adaptor & outlet blind flange
370/0150	c/w 2" BSP outlet spigot flange
370/0180	c/w outlet blind flange

Associated Parts

Associated Parts	Part No.
Tank weld-in pad	355/3100
Stud kit	311/3700
Outlet gasket	5005-361
Blind flange	370/4239CM
Bolting kit	311/3500

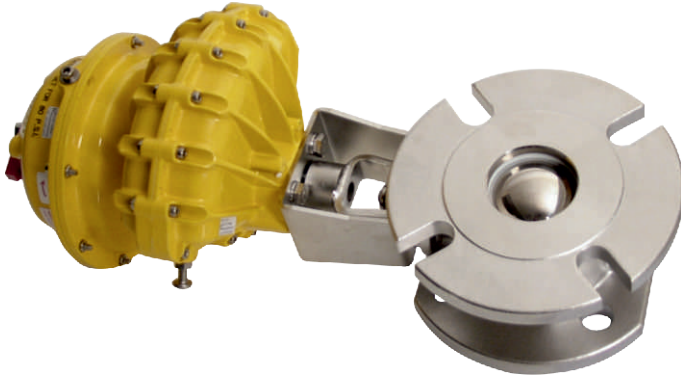
Parts drawing



Item	Description	Part No.
1	M10 self lock nut	5112-008
2	M10 plain washer	5113-009
3	Handle	370/0125
4	16mm Belleville washer (3)	5113-038
5	Stuffing collar	370/0103
6	PTFE O ring	5005-688 <input type="checkbox"/>
7	Bottom bearing	370/0104 <input type="checkbox"/>
8	Spindle	370/0120
9	Stop bolt	370/0107
10	2" ballvalve body	370/0110
11	PTFE seal	370/0102 <input type="checkbox"/>
12	50mm ball	370/3301
13	PTFE seal	370/0105 <input type="checkbox"/>

SEAL KIT

Part number 370/01SK contains all parts marked



2" Pneumatically Operated Air Inlet Ball Valve - inlet flange drilled 4 x 18mm holes on a 125mm PCD; outlet flange 4 x 18mm open slots on a 120.7mm minimum PCD to suit 2" ASA 150/DIN50 PN40. Valve manufactured in 316 stainless steel with PTFE seals. Fitted with Kinetrol pneumatic actuator with spring return and 1/4" BSP air inlet.

Options - Full range of manually operated air inlet valves available.

Specification

Weight	5.88 Kg
Design Pressure (MAWP)	7.5 Bar (108.8 PSI)
Test Pressure	15 Bar (217.5 PSI)
Design Temperature: Valve	-40°C to 205°C (-40°F to 400°F)
Kinetrol Actuator	-20°C to 80°C (-4°F to 176°F)

Ball valve approved to BS EN 14432.

Range

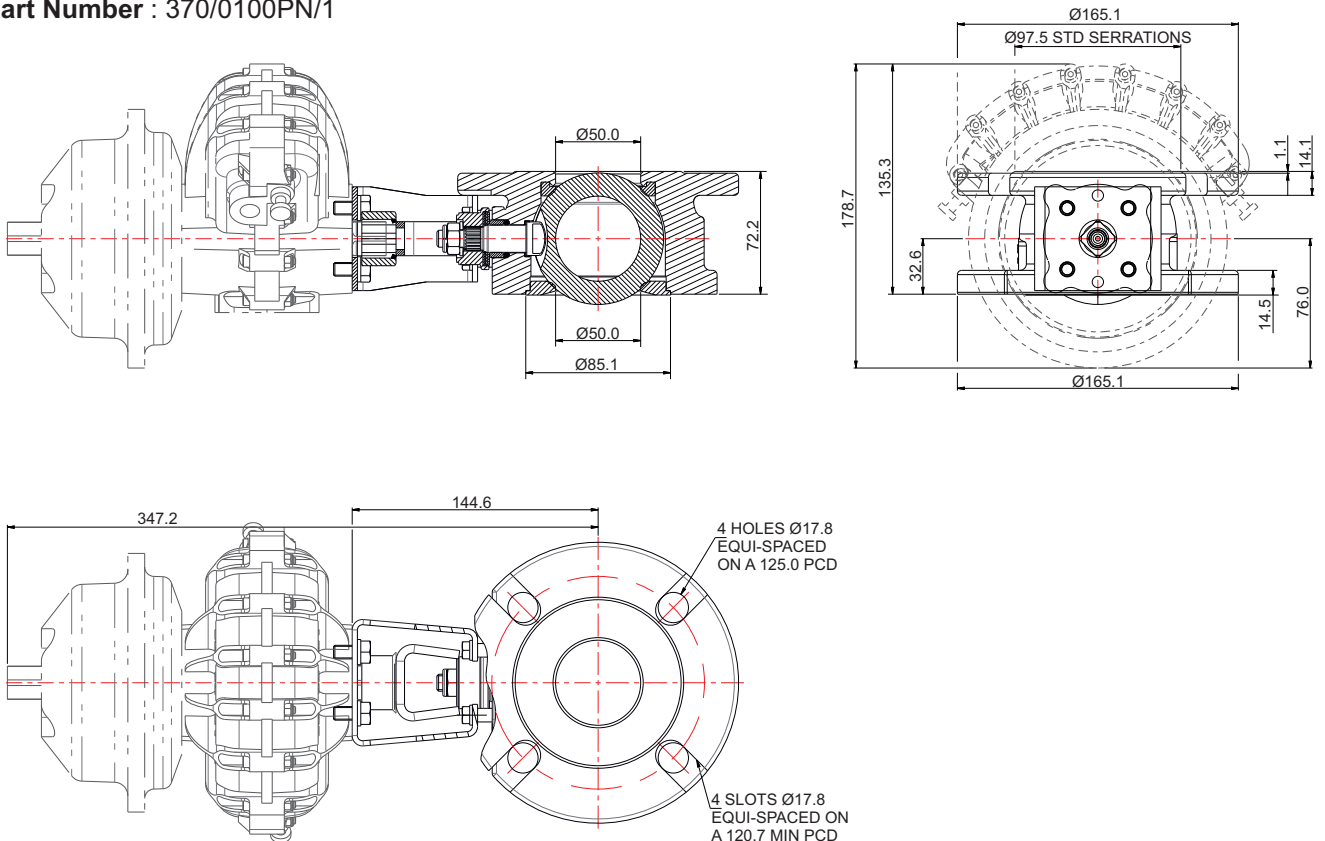
Part No.	Description
370/0100PN/1	2" pneumatic Blacko ball valve
370/0100	2" manually operated Blacko ball valve

Associated Parts

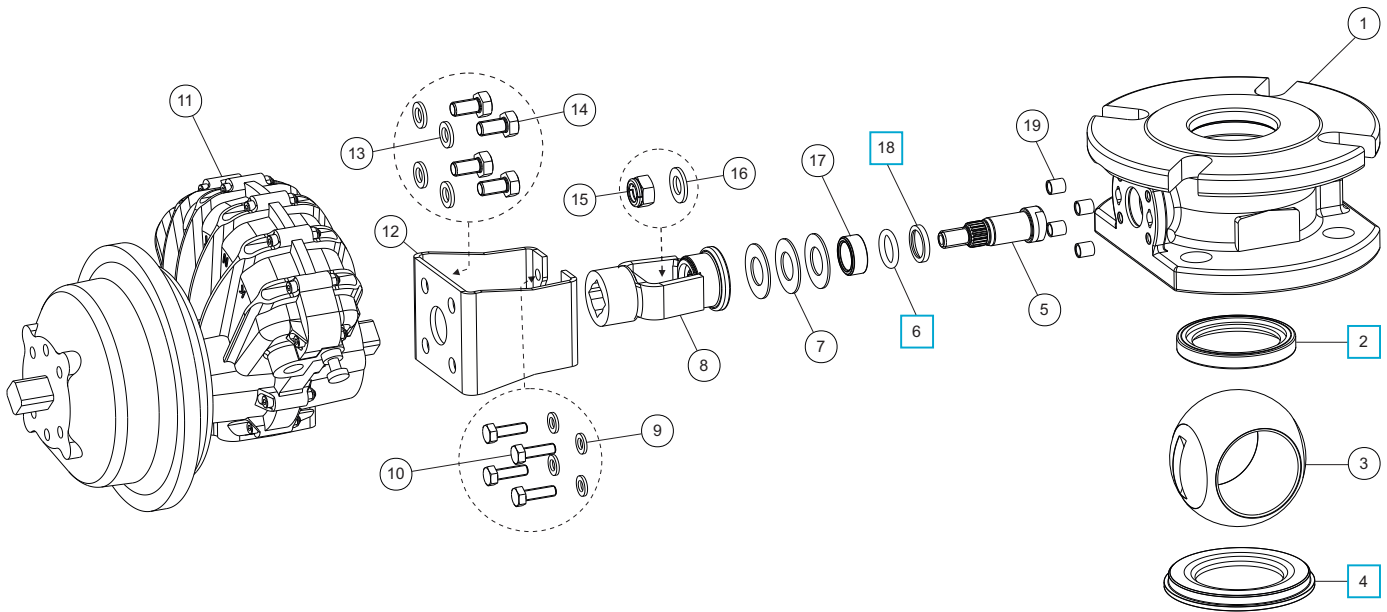
Associated Parts	Part No.
Mating flange	294/0082
Tank weld-in pad	355/3100
Stud kit	311/3700
Outlet gasket	5005-361
Blind flange	370/4239CM
Bolting kit	311/3000

Fitting Details

Part Number : 370/0100PN/1



Parts drawing



Item	Description	Part No.
1	Body	370/0110
2	PTFE front seal	370/0102 <input type="checkbox"/>
3	Ø50mm ball	370/3301
4	PTFE rear seal	370/0105 <input type="checkbox"/>
5	Spindle	370/0120
6	PTFE O ring	5005-688 <input type="checkbox"/>
7	Belleville washer (3)	5113-038
8	Spline adaptor assembly	370/0209
9	M6 spring washer (4)	5113-008
10	M6 hex bolt (4)	5111-076
11	Kinetrol pneumatic actuator	5127-078
12	Mounting bracket	370/0208
13	M8 spring washer (4)	5113-003
14	M8 hex bolt (4)	5111-822
15	M10 self lock nut	5112-008
16	M10 plain washer	5113-009
17	Stuffing collar	370/0103
18	Bottom bearing bush	370/0104 <input type="checkbox"/>
19	Spacer boss (4)	370/0163

SEAL KIT

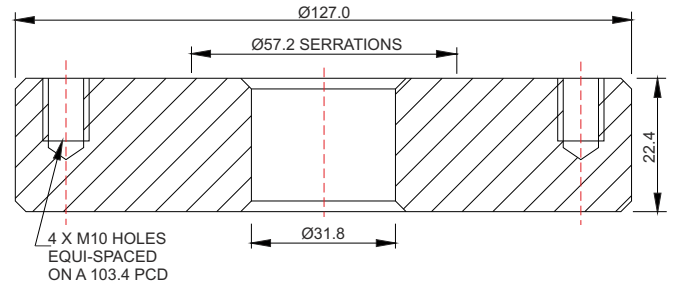
Part number **370/01SK** contains all parts marked

Part Number : 350/0025

Tank weld-in flange to suit 1½" Blacko airline ball valve.
Manufactured in 316 stainless steel.



Fitting Details

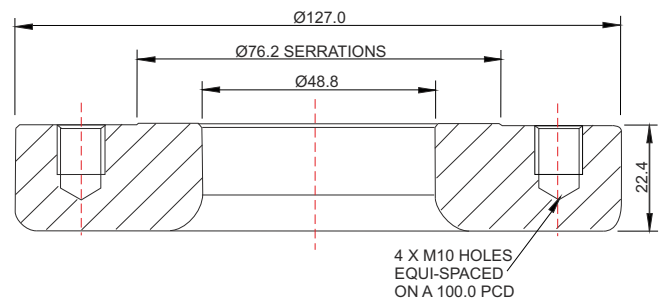


Part Number : 355/1000

Tank weld-in flange to suit 2" BSP airline butterfly valve.
Manufactured in 316 stainless steel.

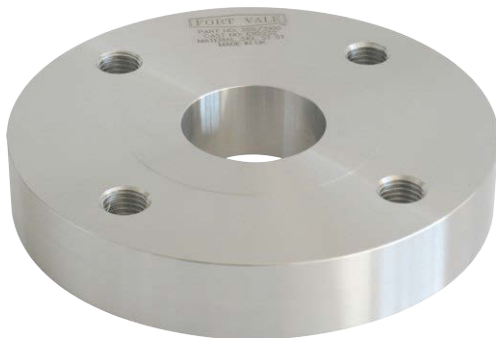


Fitting Details

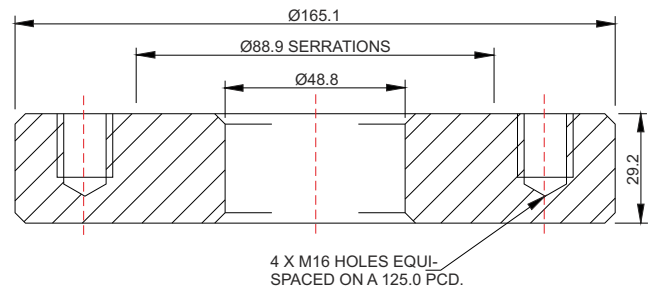


Part Number : 355/3100

Tank weld-in flange to suit 2" flanged airline butterfly valve.
Manufactured in 316 stainless steel.



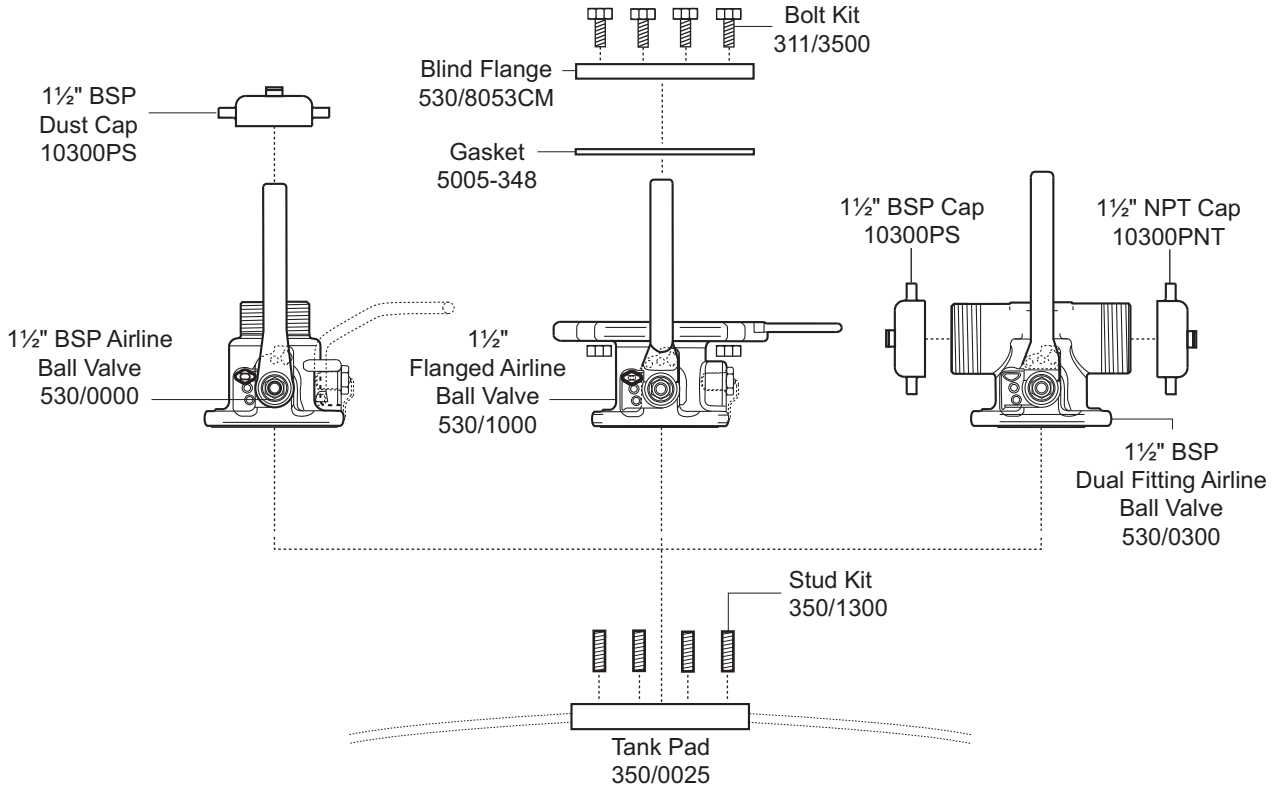
Fitting Details



Airline Valve Installation



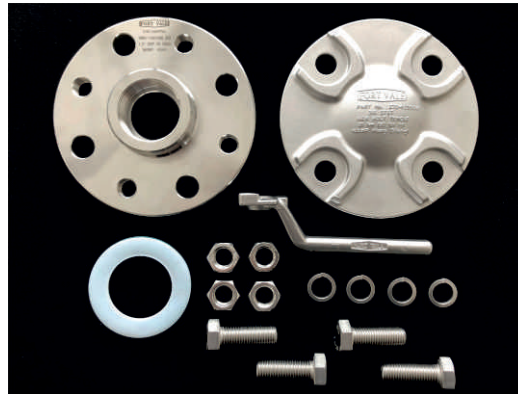
1 1/2" Airline Ball Valves



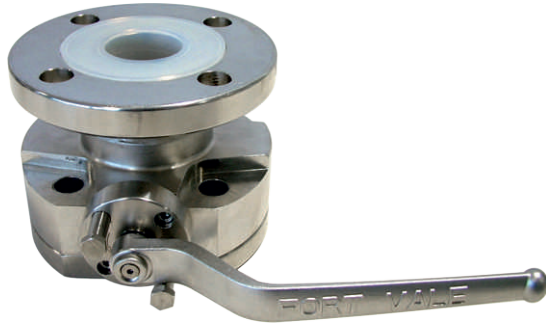
1 1/2" BSP to DIN Adaptor Flange Conversion Kits



To convert a 1 1/2" BSP Blacko airline ball valve to a DIN40 or a DIN50 flanged connection. Kit includes BSP to DIN adaptor flange, bent handle, envelope gasket, blind flange and bolting kit. Adaptor flange available separately.
Note : Airline ball valve not included.



Description	Part No.
1 1/2" BSP to DIN 40 conversion kit	530/ADAP40KIT
1 1/2" BSP to DIN 40 adaptor flange only	530/ADAP40
1 1/2" BSP to DIN 50 conversion kit	530/ADAP50KIT
1 1/2" BSP to DIN 50 adaptor flange only	530/ADAP50

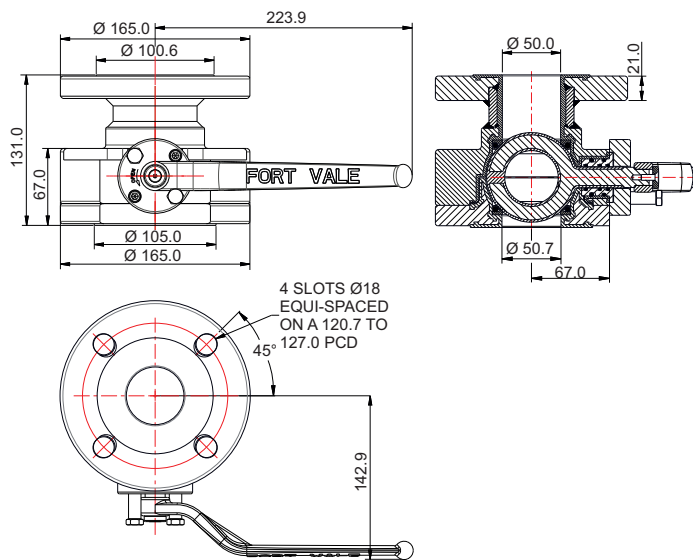


PFA Lined 50mm Full Bore Flanged Ball Valve - inlet flange drilled 4 x 18mm holes on a 126mm PCD; outlet flange drilled 4 x 18mm slots on a 120.7mm to 127mm PCD. Valve manufactured in stainless steel with PTFE main seal. All parts in contact with the cargo lined with PFA.

Options - range of PFA lined ball valves (See RANGE)

Fitting Details

Part number : 370/P100



Specification

Weight	12.15 Kg
Design Pressure (MAWP)	6.9 Bar (100 PSI)
Test Pressure	10.3 Bar (150 PSI)
Design Temperature Range	-40°C to 200°C (-40°F to 392°F)

Valve complies with EN14432 and RID norms.

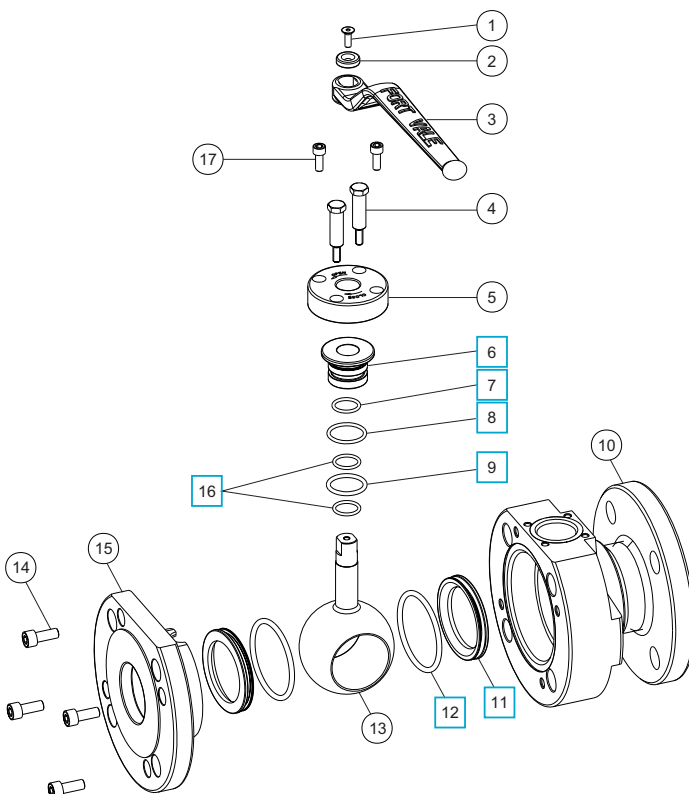
Range

Part No.	Description
530/P100	25mm PFA lined reduced bore ball valve
370/P100	50mm PFA lined full bore ball valve
360/P030X	80mm PFA lined full bore ball valve

Associated Parts

Part No.	Associated Parts
311/3790	Stud kit
311/3590	Bolting kit
370/4239PFA	PFA lined blind flange

Fitting Details



Item	Description	Part No.
1	M5 screw	5111-113
2	Retaining washer	20370/5
3	Handle	370/3306/1
4	Stop pin (2)	370/P107
5	Stuffing plate	370/P114
6	Seal carrier	370/P113 <input type="checkbox"/>
7	Viton O ring	ORB115VL <input type="checkbox"/>
8	Viton O ring	ORB121VL <input type="checkbox"/>
9	Perfluoroelastomer O ring	5005-214PER <input type="checkbox"/>
10	PFA lined body	370/P110
11	PTFE ball seal (2)	370/P115 <input type="checkbox"/>
12	Fortyt O ring (2)	ORM0580400F0 <input type="checkbox"/>
13	PFA lined obturator	370/P101
14	M8 cap screw (4)	5111-010
15	PFA lined clamp plate	370/P111
16	Perfluoroelastomer O ring (2)	5005-370P <input type="checkbox"/>
17	M6 cap screw (2)	5111-015

SEAL KIT

Part number 370/P100SK contains all parts marked

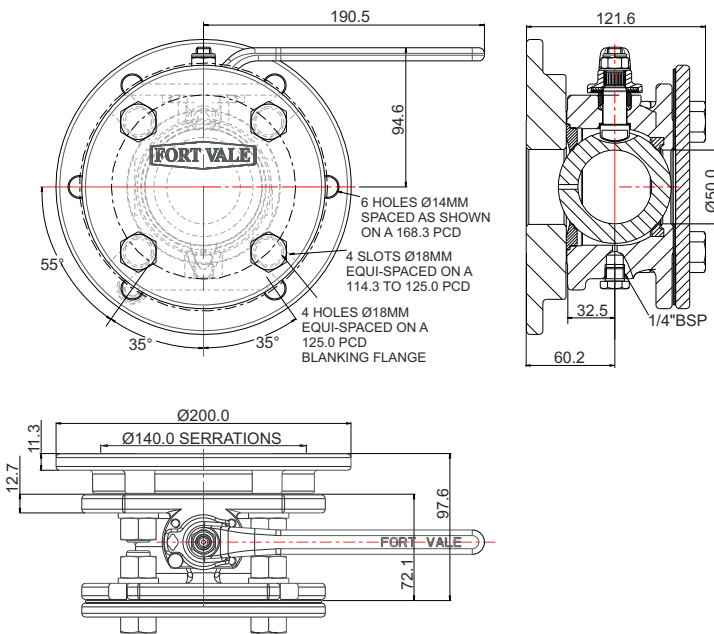


2" Full Bore Ball Valve - for Hydrogen Peroxide tank specification. Inlet drilled 6 x 14mm holes on a 168mm PCD. Outlet drilled 4 x 18mm slots to suit 2" ASA 150, 2" BSTD and DIN 50 PN 10. The inlet flange is specially designed to fit a standard 3" top discharge pad to ensure interchangeability with the Fort Vale 3" flanged butterfly valve. The ball valve body has a 1/4" BSP connection to accept a pressure gauge and the ball incorporates a bleed hole to facilitate monitoring the tank pressure at all times. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - other inlet flanges available.

Fitting Details

Example shown : 370/0140



Specification

Weight	13.9 Kg
Design Pressure	7 Bar (101.5 PSI)
Hydraulic Test Pressure	15 Bar (217.5 PSI)
Design Temperature	-40°C to 205°C (-40°F to 400°F)

Approved to BS EN14432

Range

Different inlet flange configurations are available upon request.

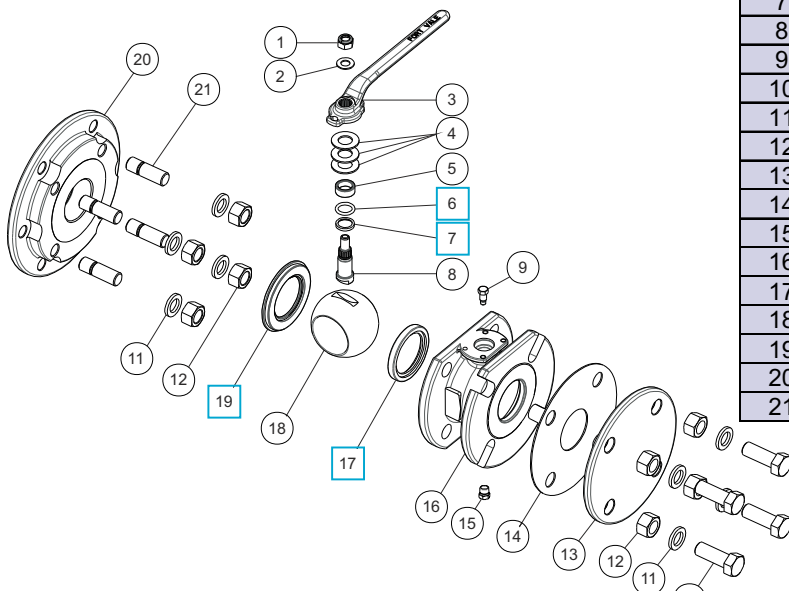
Associated Parts

Part No.	Associated Parts
368/0800	Tank weld-in pad
5005-222P	Solid PTFE gasket
368/0810	Syphon tube stub pipe assembly
5005-169	CNAF/PTFE envelope gasket
312/1000	Stud kit

Parts drawing

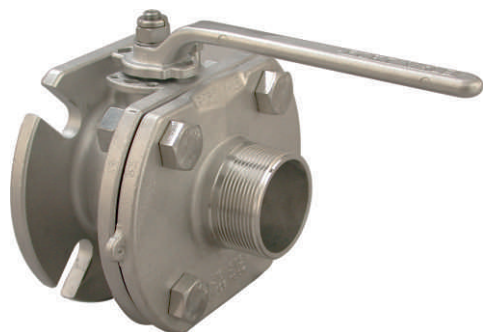
Item	Description	Part No.
1	M10 self locking nut	5112-008
2	M10 washer	5113-009
3	Handle	370/0125

Item	Description	Part No.
4	Belleville washer (3)	5113-038
5	Stuffing collar	370/0103
6	PTFE O ring	5005-688 <input type="checkbox"/>
7	Bottom bearing	370/0104 <input type="checkbox"/>
8	2" ball valve spindle	370/0120
9	Stop screw	370/0107
10	M16 hex bolt (4)	5111-031
11	M16 spring washer (8)	5113-012
12	M16 full nut (8)	5112-003
13	Blanking flange	370/4239
14	PTFE gasket	5005-724P
15	1/4" BSP hex head plug	5128-005
16	2" ball valve body	370/0115
17	Rear PTFE ball seal	370/0105 <input type="checkbox"/>
18	2" ball	370/3309
19	Front PTFE ball seal	370/0102 <input type="checkbox"/>
20	Adaptor flange	370/0145
21	M16 stud (4)	S0600/3



SEAL KIT

Part no. 370/01SK contains all parts marked

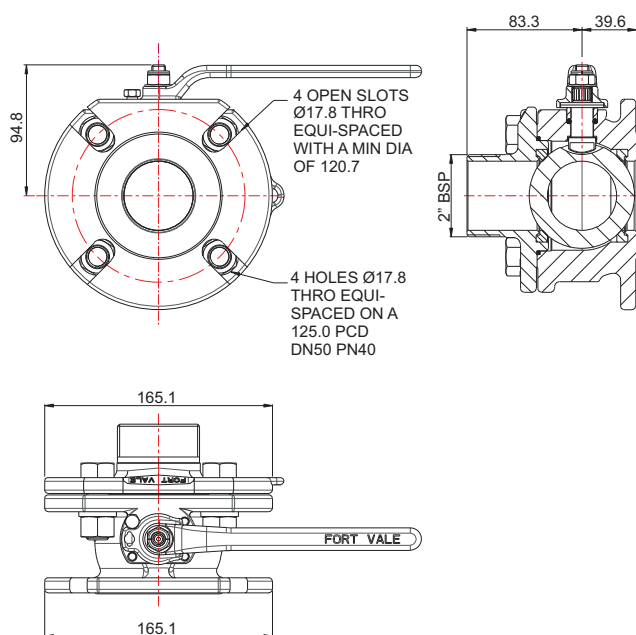


2" Full Bore Blacko Ball Valve - inlet flange with 4 open slots to suit 2" BSTD / 2" ASA 150 and DIN50 PN40. Outlet flange with 2" BSP spigot. Left hand operated with TIR facility to handle. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - NPT outlet and cap available.

Fitting Details

Part number : 370/0150



Specification

Weight	8 Kg
Design Pressure (MAWP)	7 Bar (101.5 PSI)
Hydraulic Test Pressure	10.5 Bar (152.25 PSI)
Design Temperature	-40°C to 205°C (-40°F to 400°F)

Approved to BS EN 14432
Design approval by Lloyds Register of Shipping.

Range

Part No.	Outlet
370/0150	2" BSP outlet spigot flange
370/0150NPT	2" NPT outlet and NPT cap

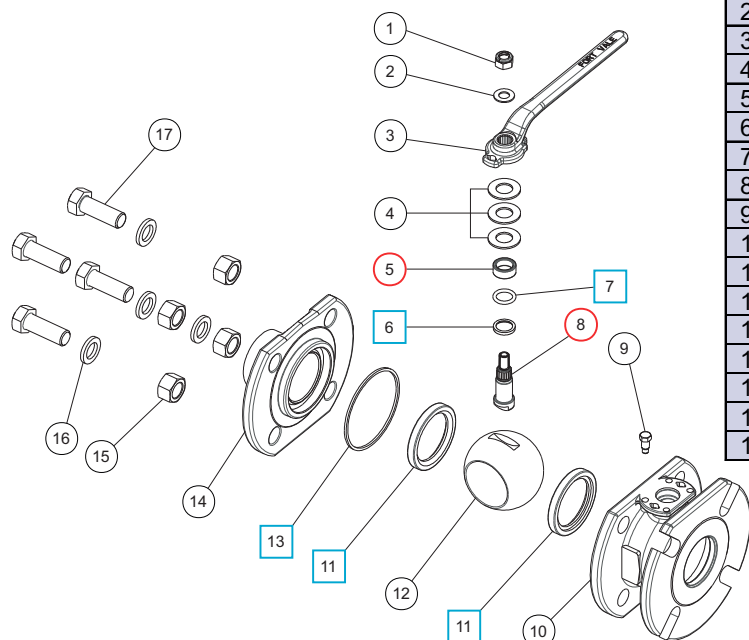
Associated Parts

Part No.	Description
355/3100	Tank weld-in flange
311/3700	Stud kit
10301PS	2" BSP blank cap with chain & PTFE seal
10301NPTP	2" NPTP blank cap with captivation wire & PTFE seal

Parts drawing

SEAL KIT

Part number 370/015SK contains all parts marked □



Item	Description	Part No.
1	M10 self lock nut	5112-008
2	M10 plain washer	5113-009
3	Handle	370/0125
4	16mm Belleville washer (3)	5113-038
5	Stuffing collar	370/0103 ○
6	Bottom bearing bush	370/0104 □ ○
7	PTFE O ring	5005-688 □ ○
8	Spindle	370/0120 ○
9	Stop bolt	370/0107
10	2" ballvalve body	370/0110
11	PTFE seal (2)	370/0102 □ ○
12	50mm ball	370/3301
13	Body seal	370/0106 □ ○
14	Outlet flange	370/0130
15	M16 full nut (4)	5112-003
16	M16 spring washer (4)	5113-012
17	M16 hexhead setscrew (4)	5111-036

REPAIR KIT

Part number 370/015RK contains all parts marked ○



2" Full Bore Gas Ball Valve - DN 50 PN 40 high pressure valve. Flange drilling: 4 x 18mm holes on a 127mm PCD (2" ASA150) and 8 x 18mm holes on a 127mm PCD (2" ASA 300). Right hand operation. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - outlet flange supplied with 1/8" NPT connection to fit bleed valve. Other flange drillings available. Left hand operation.

Specification

Weight	9 Kgs
Design Pressure (MAWP)	34.5 Bar (500 PSI)
Service Test Pressure	70 Bar (1015 PSI)
Design Temperature Range	-50°C to 80°C (-58°F to 176°F)

Design approval by Lloyds Register of Shipping and Russian Maritime Register of Shipping.

All valves may be manufactured to TPED.

Range

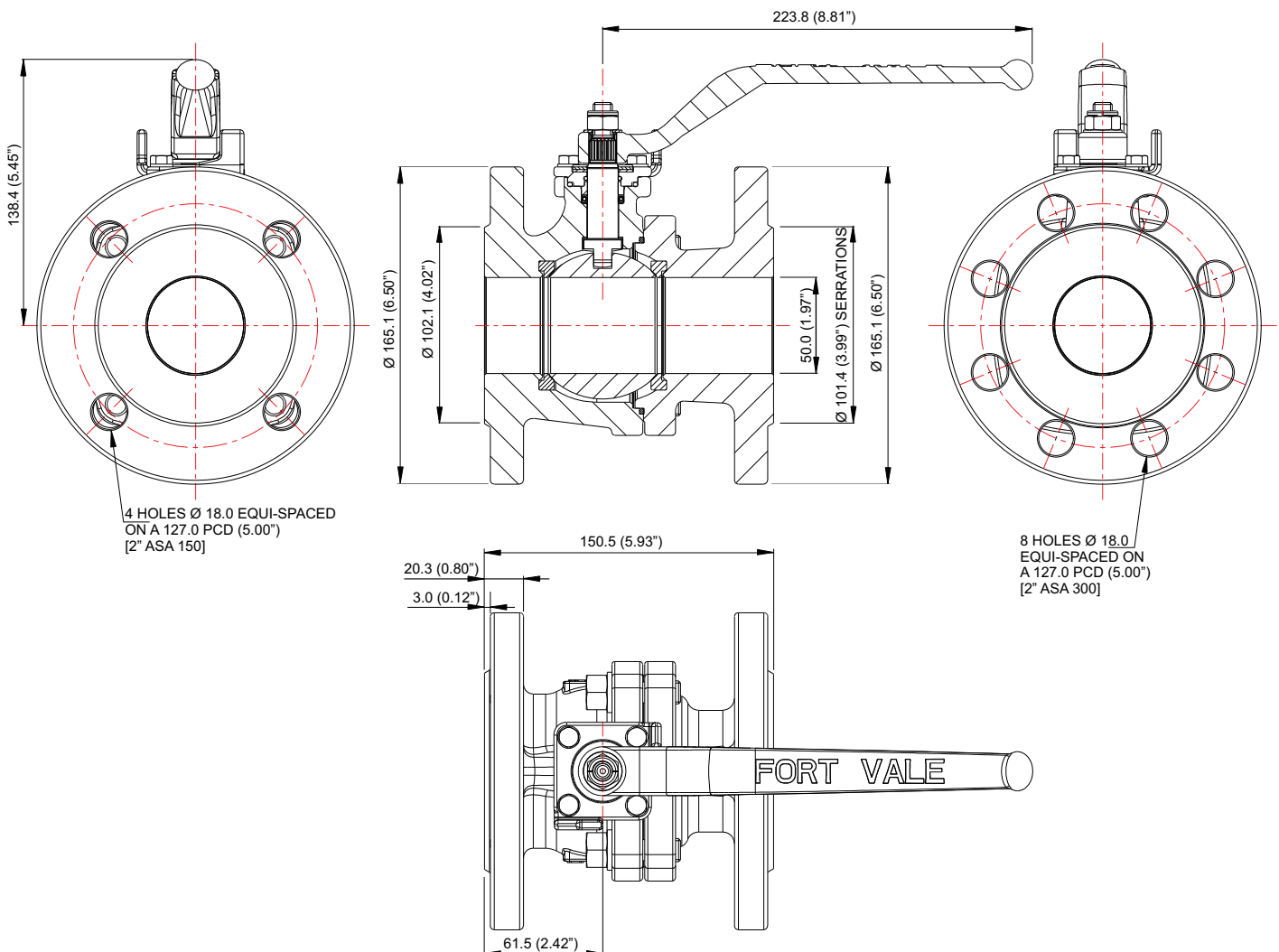
Part No.	Description
370/3335B	2" ASA 300lb right hand valve
370/3300B	DN 50 PN 40 right hand valve
370/3400B	DN 50 PN 40 left hand valve

Associated Parts

Part No.	Associated Parts
252/2095	Blind flange (2" ASA 300 lbs)

Fitting Details

Example shown : 370/3335B

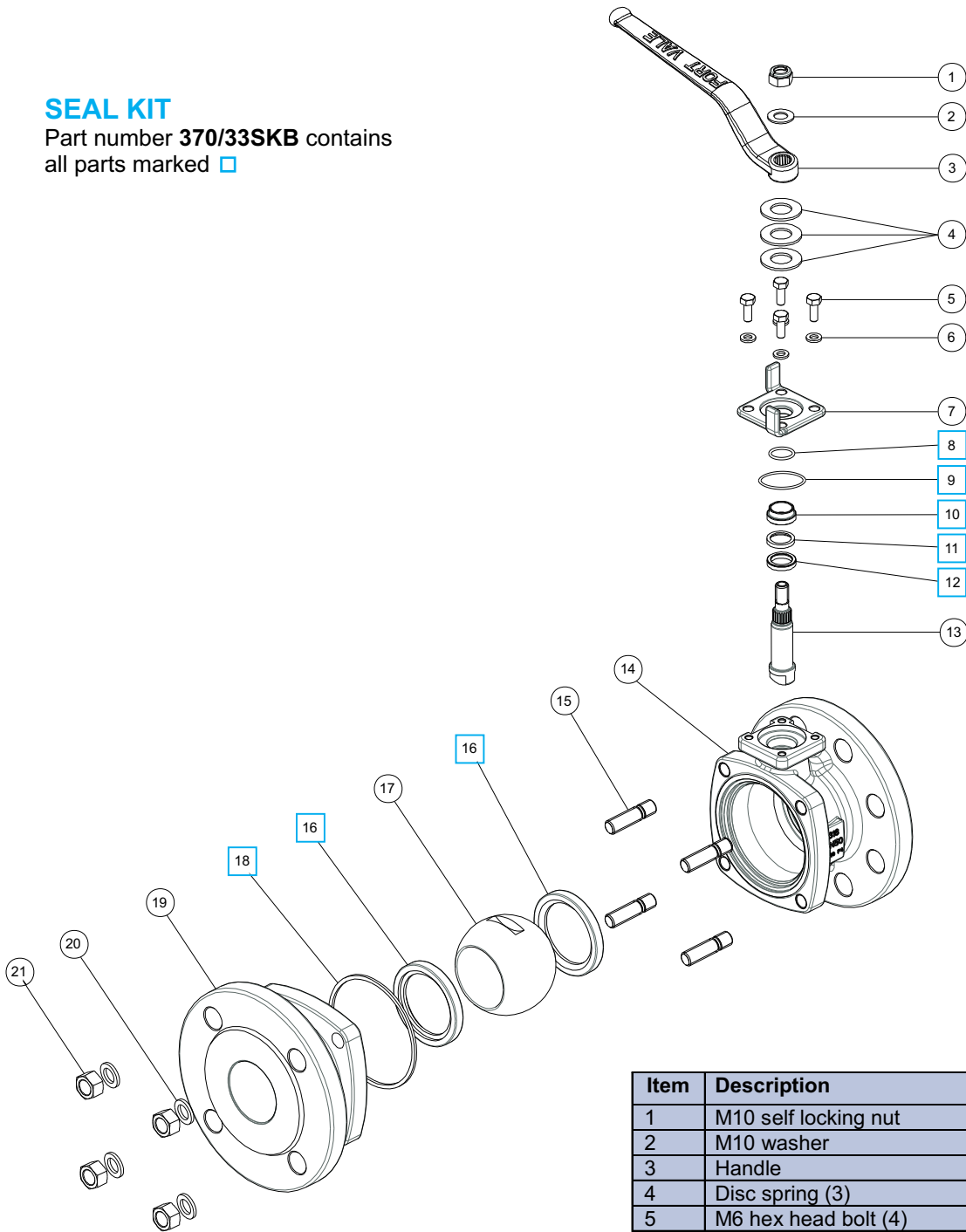


Parts drawing

FORT VALE

SEAL KIT

Part number **370/33SKB** contains all parts marked



A detailed step-by-step maintenance manual is available for our gas ball valve in both printed and CD formats. Please contact our Sales team for further information.

Item	Description	Part No.
1	M10 self locking nut	5112-008
2	M10 washer	5113-009
3	Handle	370/3306
4	Disc spring (3)	5113-038
5	M6 hex head bolt (4)	5111-022
6	M6 spring washer (4)	5113-008
7	Clamp plate	370/3305B
8	Neoprene washer	5005-216 <input type="checkbox"/>
9	Neoprene washer	5005-866N <input type="checkbox"/>
10	Spindle bush	370/3307B <input type="checkbox"/>
11	Bottom seal	359/2007 <input type="checkbox"/>
12	Bottom bush	370/3321 <input type="checkbox"/>
13	Spindle	370/3320
14	Ball valve body	370/3365
15	M12 stud (4)	370/3314
16	RTFE ball seal (2)	370/3302 <input type="checkbox"/>
17	50mm ball	370/3301
18	Body seal	370/3303 <input type="checkbox"/>
19	Ball valve body half	370/3316
20	M12 spring washer (4)	5113-010
21	M12 full nut (4)	5112-006



PFA Lined 80mm Full Bore Ball Valve - inlet flange drilled 4 x 18mm holes on a 160mm PCD; outlet flange drilled 4 x 18mm slots equi-spaced on a 146 to 160mm PCD. (3" BSTD to DIN80) Left hand operated with TIR to handle. Valve manufactured in stainless steel with PTFE main seal. All parts in contact with the cargo lined with PFA.

Options - right hand operated version. Range of PFA lined ball valves (See RANGE)

Specification

Weight	12.9 Kg
Design Pressure (MAWP)	6.9 Bar (100 PSI)
Test Pressure	10.34 Bar (150 PSI)
Design Temperature Range	-40°C to 130°C -40°F to 266°F

Valve complies with EN14432:2006 and RID norms.

Range

Part No.	Description
530/P100	25mm PFA lined reduced bore ball valve
370/P100	50mm PFA lined full bore ball valve
360/P030X	80mm PFA lined full bore ball valve

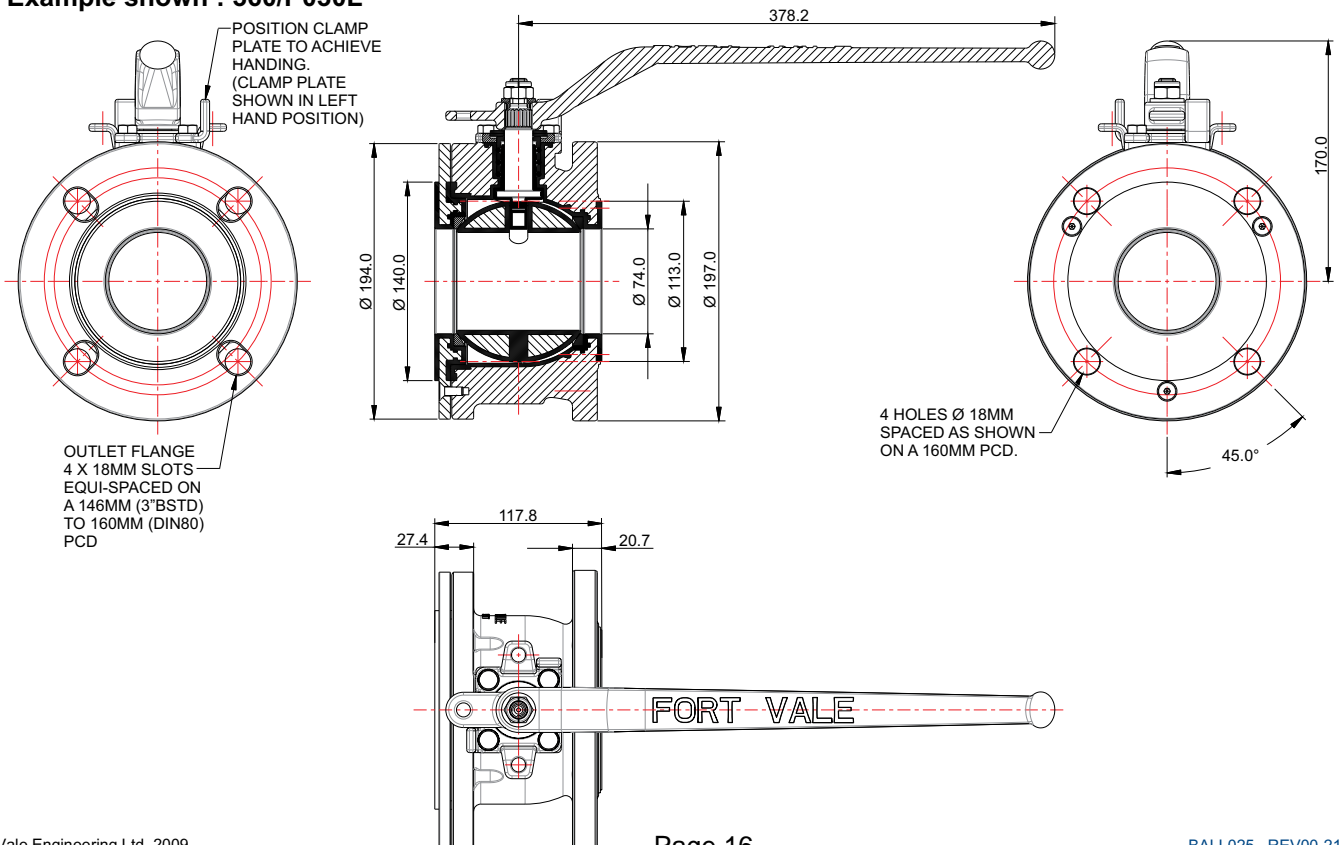
X in part number denotes whether left (L) or right (R) hand valve.

Associated Parts

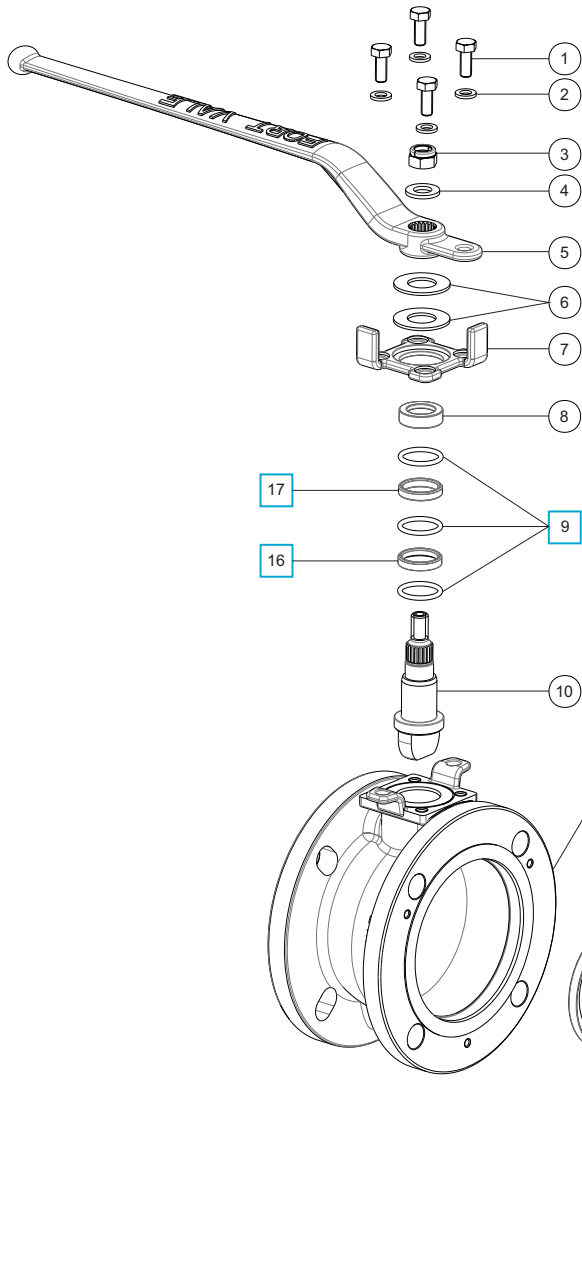
Part No.	Associated Parts
368/0500P	3" BSP PFA lined outlet flange
368/8047L	3" BSP Halar lined eccentric outlet flange
5005-417	Solid PTFE outlet gasket
360/8095P	PFA lined blind flange

Fitting Details

Example shown : 360/P030L



Parts drawing



Item	Description	Part No.
1	M8 hex bolt (4)	5111-046
2	M8 spring washer (4)	5113-003
3	M12 locking nut	5112-007
4	M12 washer	5123-003
5	Handle	360/3416
6	20mm washer (2)	5113-041
7	Clamp plate	360/3406/1
8	Stainless steel stuffing collar	360/3464
9	PTFE O ring (3)	5005-654
10	PFA lined spindle	360/3422PL
11	PFA lined body	360/P020
12	PTFE front & rear seal (2)	360/3402/5
13	PFA coated ball	360/3401PL
14	PFA lined clamp plate	360/3462PL
15	M6 countersunk bolt (3)	5111-030
16	Bottom stuffing collar	360/3413/1
17	Top stuffing collar	360/3412/1

SEAL KIT

Part number 360/P0SK contains all parts marked



3" Blacko Ball Valve - inlet flange drilled 6 x 14mm holes (see below) on a 168.3mm PCD; 3" BSP male outlet connection. Left hand operated with TIR facility to handle. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - Right hand operation. Steam heated version.

Specification

Weight	15.9 Kg
Design Pressure (MAWP)	7 Bar (101.5 PSI)
Hydraulic Test Pressure	10.5 Bar (152.3 PSI)
Design Temperature Range	-40°C to 200°C (-40°F to 392°F)

M12 bolts torque setting : 65 Nm (48 LBF FT)

Approved to BS EN14432 & BS EN14025

Range

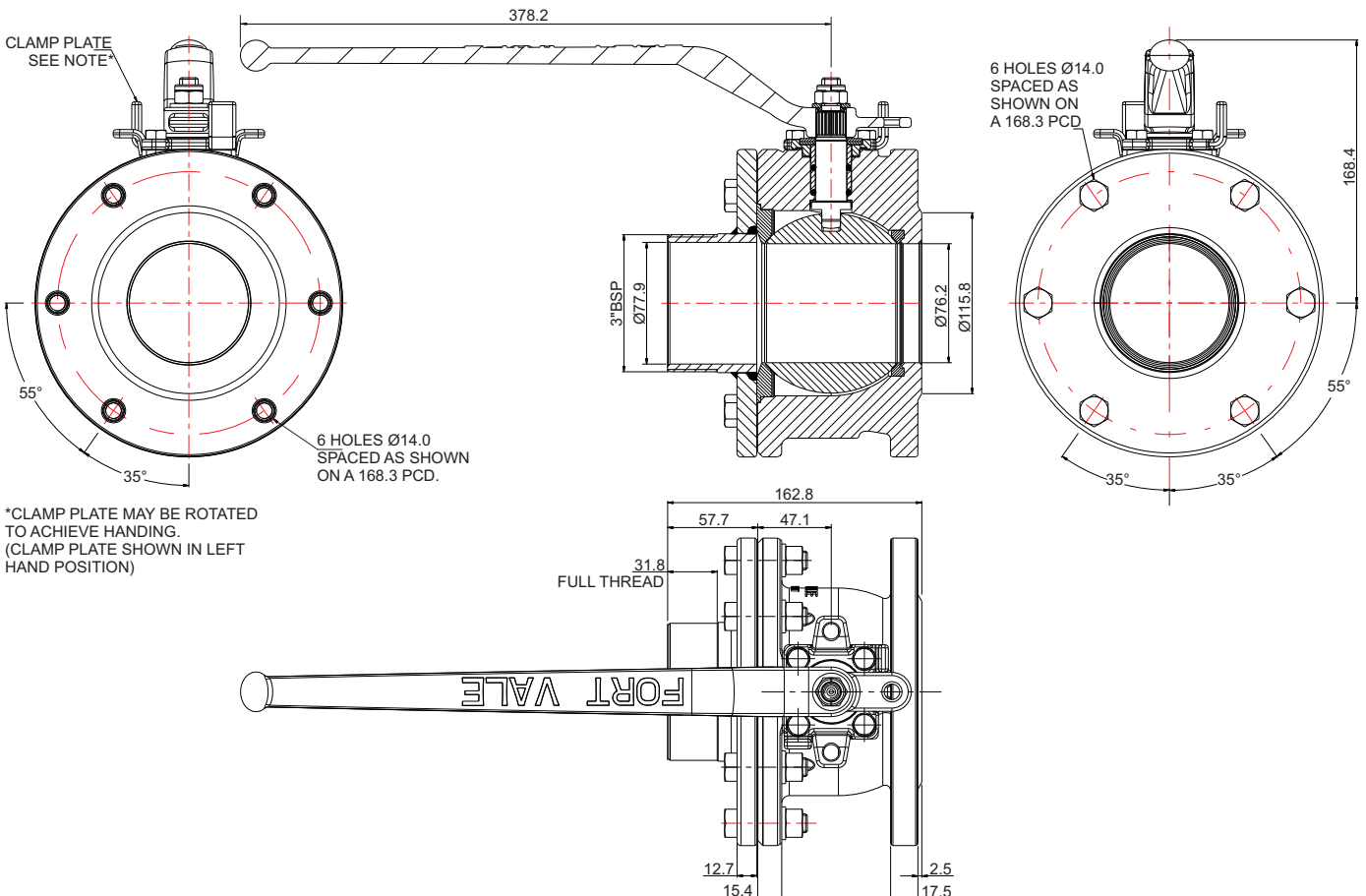
Part No.	Description
360/5000L	Left hand operated, TIR
360/5000R	Right hand operated, TIR
360/5000XSH	Steam heated, left or right hand operated

Associated Parts

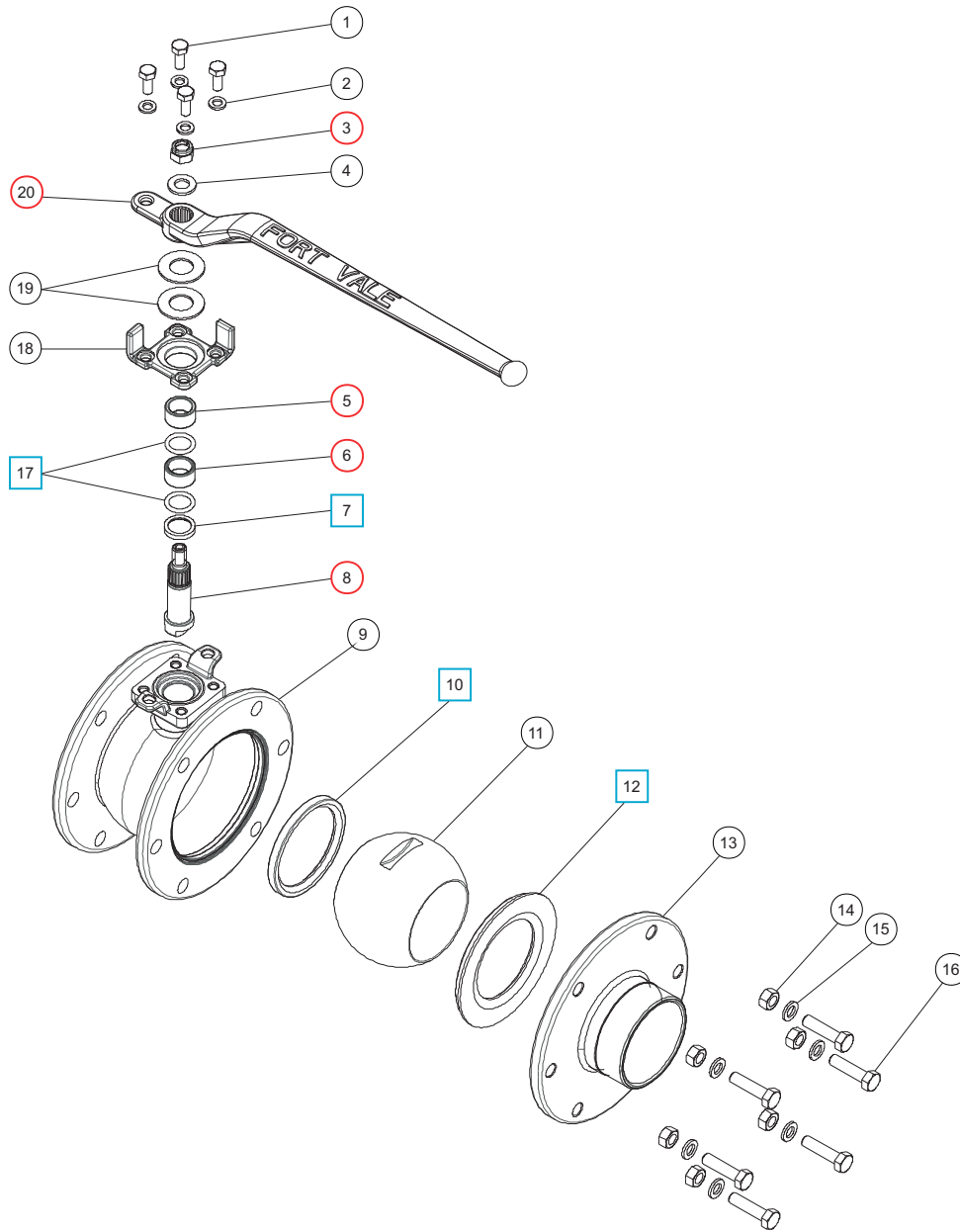
Part No.	Description
20378	Mating flange
360/0300	Inlet bolting kit
20406	Bobbin adaptor for 3" table D outlet
5005-036	Outlet gasket 3" Table D
360/8070	Blind flange
311/3000	Outlet bolting kit
10303PS	3" BSP dust cap with PTFE washer
10329P	3" dust cap washer

Fitting Details

Example shown : 360/5000L



Parts drawing



Item	Description	Part No.
1	M8 hex head bolt (4)	5111-822
2	M8 flat section spring washer (4)	5113-003
3	M12 self locking nut	5112-007 ○
4	M12 washer	5123-003
5	Top stuffing collar	360/3412 ○
6	Bottom stuffing collar	360/3413 ○
7	Bottom bearing	360/3421 □ ○
8	Spindle	360/3422 ○
9	3" flanged ball valve body	360/5014
10	Back seal	360/3402 □ ○

Item	Description	Part No.
11	Solid ball plug	360/3401
12	Front seal	360/3405 □ ○
13	3" BSP male outlet flange	20409/14
14	M12 full nut (6)	5112-006
15	M12 flat section spring washer (6)	5113-010
16	M12 hex head bolt (6)	5111-023
17	PTFE O ring (2)	5005-113 □ ○
18	Clamp plate	360/5005
19	20mm Belleville washer (2)	5113-041
20	Handle weld assembly	360/3416 ○

SEAL KIT part number **360/50SK** contains all parts marked □

REPAIR KIT part number **360/50RK** contains all parts marked ○



3" Blacko Ball Valve Assembly - inlet flange drilled 6 x 14mm holes on a 168mm PCD. Slotted 4 hole outlet flange. Left hand operated. Contact parts manufactured in 316 stainless steel with PTFE seals.

Options - right hand operation. Steam heated version. Available with high temperature seals. A version with 4 hole inlet is also available.

Specification

Weight	12.5 Kg
Design Pressure (MAWP)	7.5 Bar (108.8 PSI)
Hydraulic Test Pressure	11.25 Bar (163.2 PSI)
Design Temperature Range	-40°C to 200°C (-40°F to 392°F)

Approved to BS EN14432

Associated Parts

Associated Parts	Part No.
Outlet flange	368/0500
Outlet gasket	5005-417
Blind flange	360/8095
Bolting kit (outlet)	311/3500
Mating flange	20378
Inlet gasket to suit 20378 mating flange	5005-169
Bolting kit (inlet)	360/0300

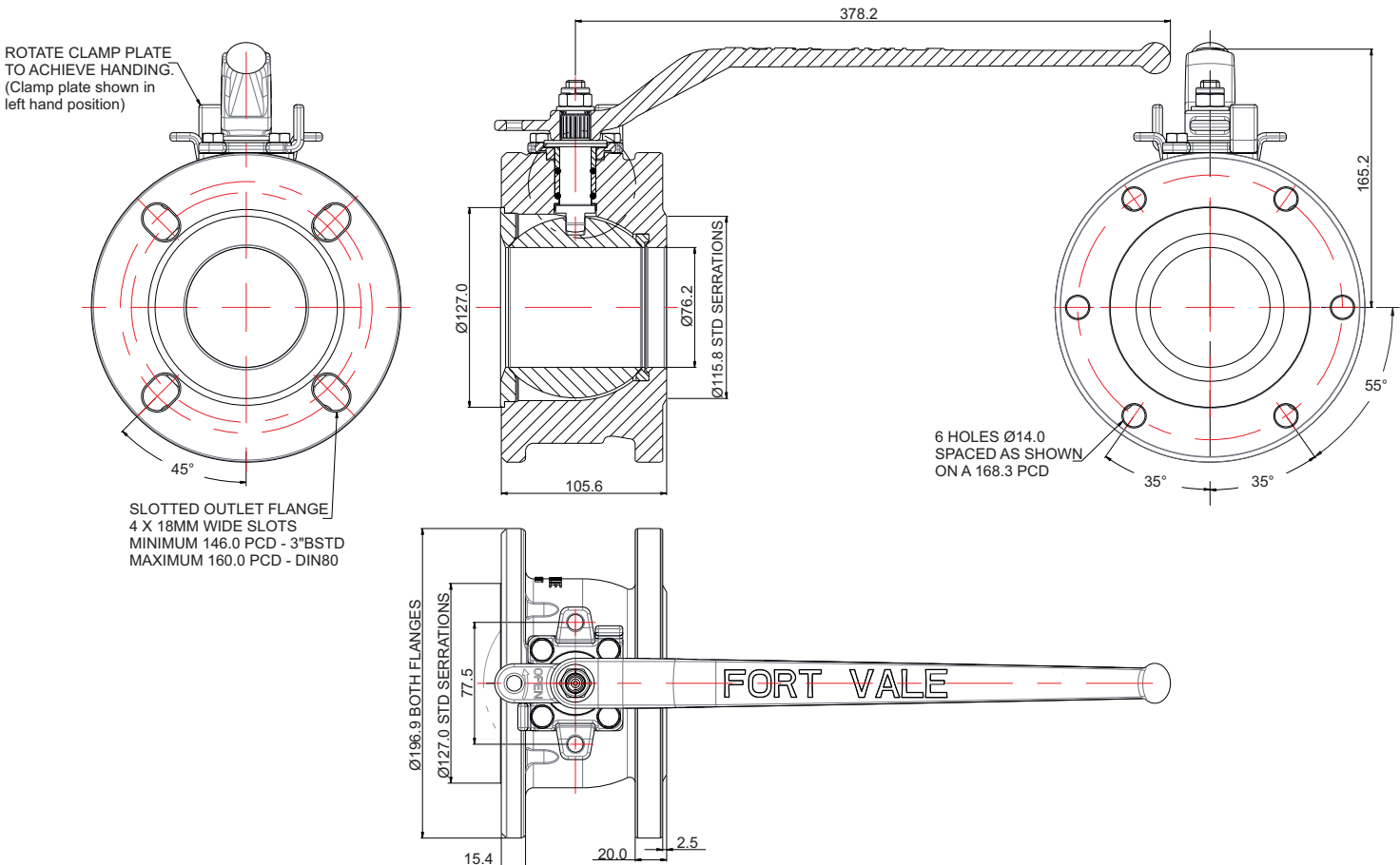
Range

Part No.	Description
360/5050X	3" standard ball valve, 6 hole inlet, 4 hole outlet
360/5050XHT	Fitted with high temperature seals
360/5050XSH	Steam heated valve
360/5030X	3" standard ball valve, 4 hole inlet, 4 hole outlet
360/5030XSH	Steam heated valve

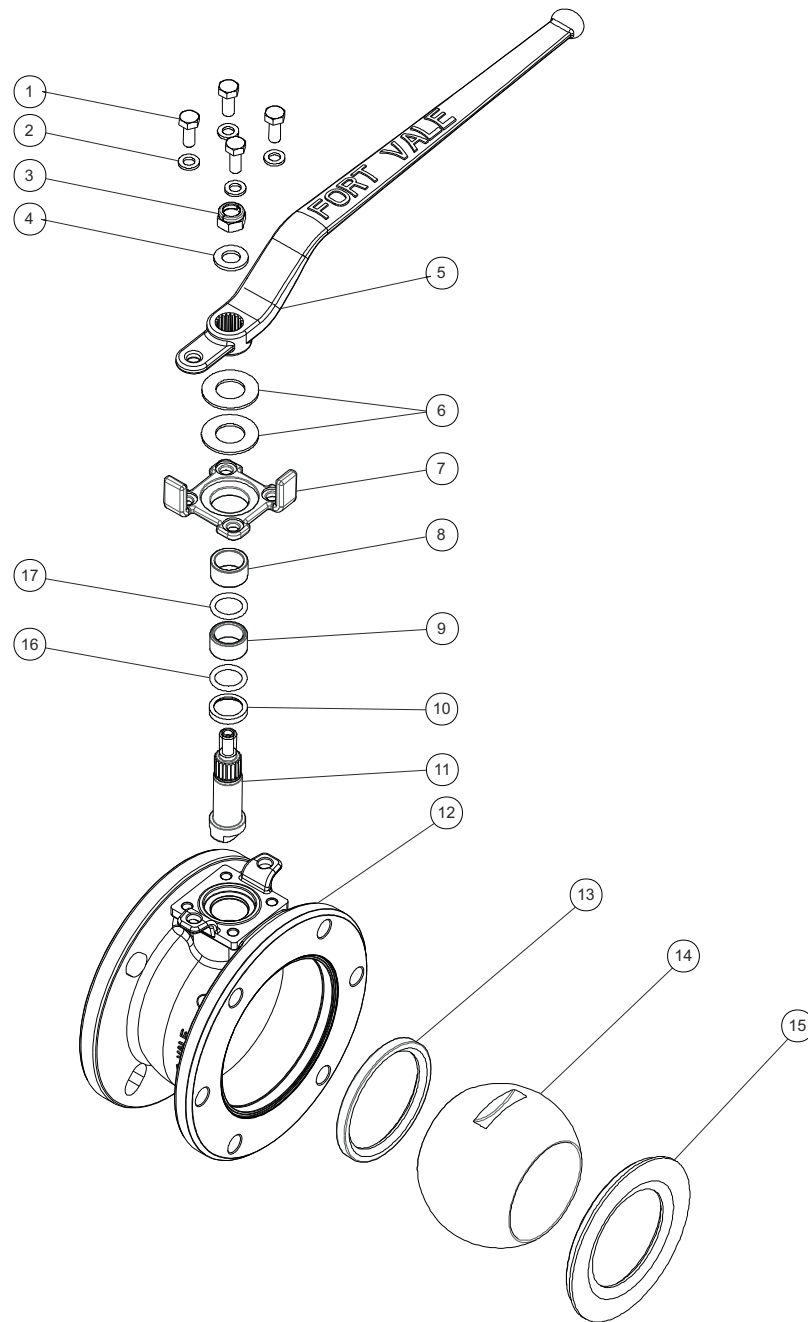
X in part number denotes whether left (L) or right (R) hand valve

Fitting Details

Example shown : 360/5050L



Parts drawing



Item	Description	Part No.
1	M8 hex head bolt (4)	5111-822
2	M8 spring washer (4)	5113-003
3	M12 self locking nut	5112-007 <input type="checkbox"/>
4	M12 washer	5123-003
5	Handle	360/3416 <input type="checkbox"/>
6	20mm Belleville washer (2)	5113-041
7	Clamp plate	360/5005
8	Top stuffing collar	360/3412 <input type="checkbox"/>

Item	Description	Part No.
9	Bottom stuffing collar	360/3413 <input type="checkbox"/>
10	Bottom bearing	360/3421 <input type="checkbox"/>
11	Spindle	360/3422 <input type="checkbox"/>
12	3" flanged ball valve body	360/5015
13	Back seal	360/3402 <input type="checkbox"/>
14	Solid ball plug	360/3401
15	Front seal	360/3405 <input type="checkbox"/>
16	PTFE O ring (2)	5005-113 <input type="checkbox"/>

SEAL KIT part number **360/50SK** contains all parts marked

REPAIR KIT part number **360/50RK** contains all parts marked



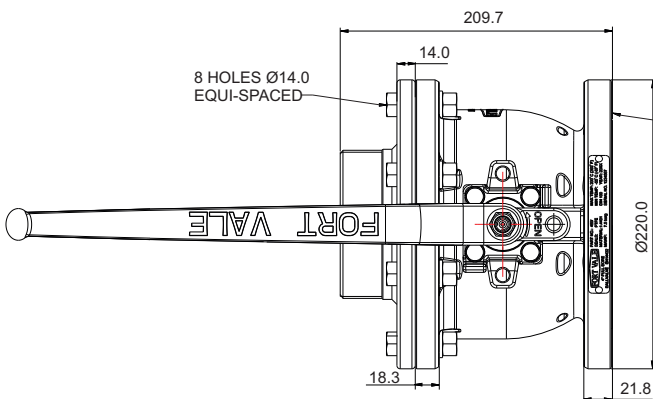
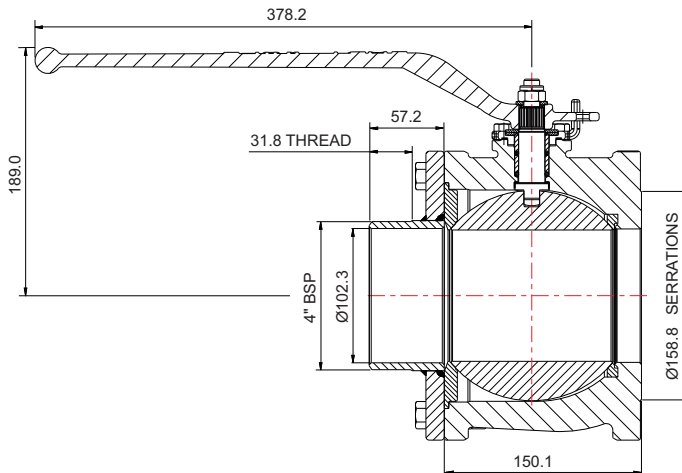
4" BSP Full Bore Ball Valve - inlet flange drilled 8 x 18mm holes equi-spaced on a 180mm PCD (DIN100 PN16); outlet flange 4" BSP. Available with left hand or right hand operation. Manufactured in 316 stainless steel fitted with PTFE seals.

Options - available in sizes from 2" to 5" in stainless steel or carbon steel. Steam-heated version. Alternative outlet connections.

Above photograph shows 460/5050X specification.

Fitting Details

Part Number : 460/5000X



Specification

Weight	26.1 Kg
Design Pressure (MAWP)	7.5 Bar (108.75 PSI)
Hydraulic Test Pressure	11.25 Bar (163.1 PSI)
Design Temperature Range	-55°C to 200°C -67°F to 392°F

Approved to BS EN14432.

i Operating Instructions available - OPIN25

Range

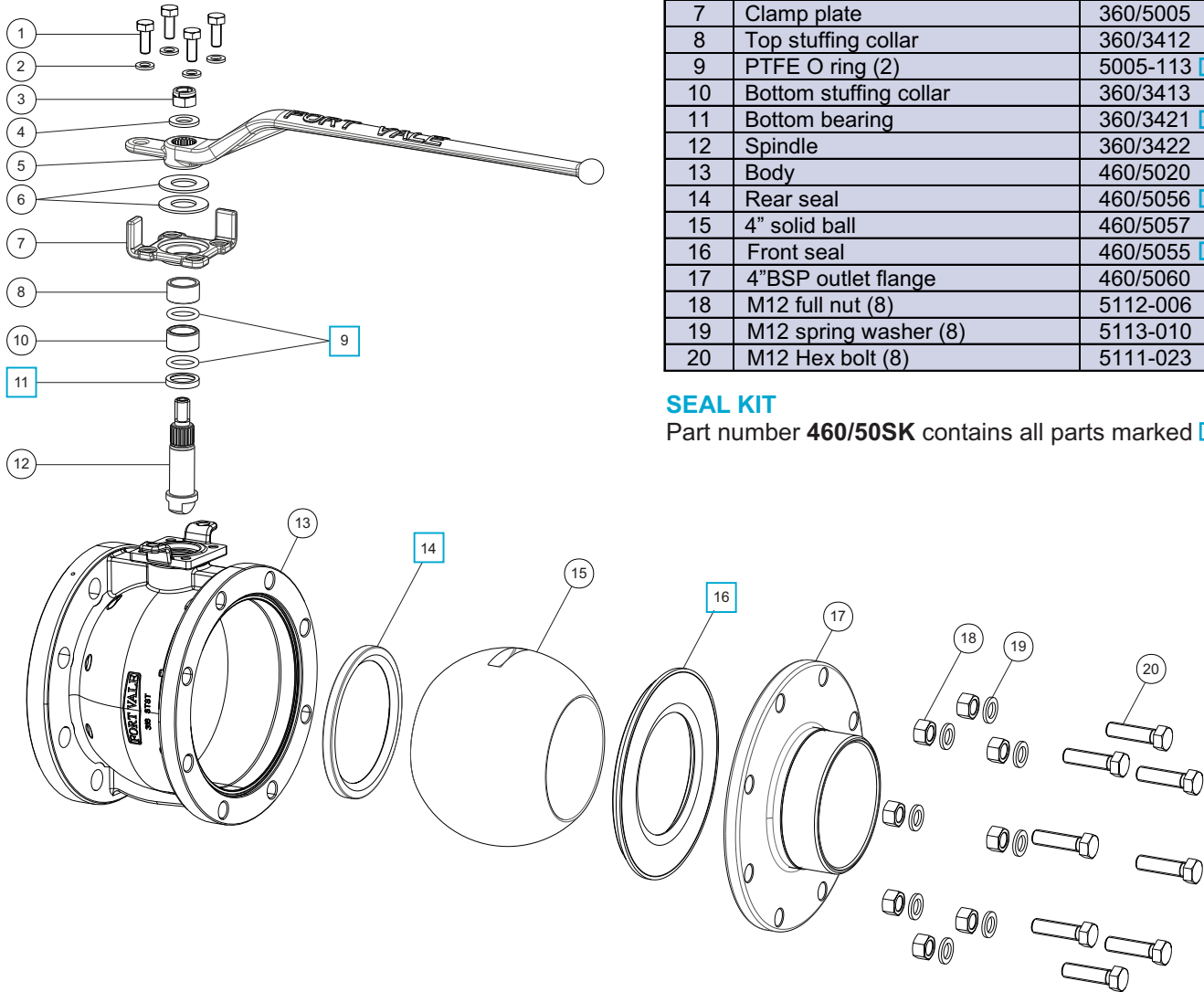
Part No.	Description
460/5000L	4" BSP ball valve with left hand operation
460/5000R	4" BSP ball valve with right hand operation
460/5000XSH	4" BSP ball valve with steam heating provision
460/5050X	4" ball valve with DIN100 PN16 outlet

Parts drawing



Part Number : 460/5000X

Item	Description	Part No.
1	M8 hex bolt (4)	5111-046
2	M8 spring washer (4)	5113-003
3	Self-locking nut	5112-007
4	M12 washer	5123-003
5	Handle	360/3416
6	Belleville washer (2)	5113-041
7	Clamp plate	360/5005
8	Top stuffing collar	360/3412
9	PTFE O ring (2)	5005-113 <input type="checkbox"/>
10	Bottom stuffing collar	360/3413
11	Bottom bearing	360/3421 <input type="checkbox"/>
12	Spindle	360/3422
13	Body	460/5020
14	Rear seal	460/5056 <input type="checkbox"/>
15	4" solid ball	460/5057
16	Front seal	460/5055 <input type="checkbox"/>
17	4"BSP outlet flange	460/5060
18	M12 full nut (8)	5112-006
19	M12 spring washer (8)	5113-010
20	M12 Hex bolt (8)	5111-023



SEAL KIT

Part number **460/50SK** contains all parts marked

Female Socket Ball Valves - Stainless Steel

One Piece Ball Valve

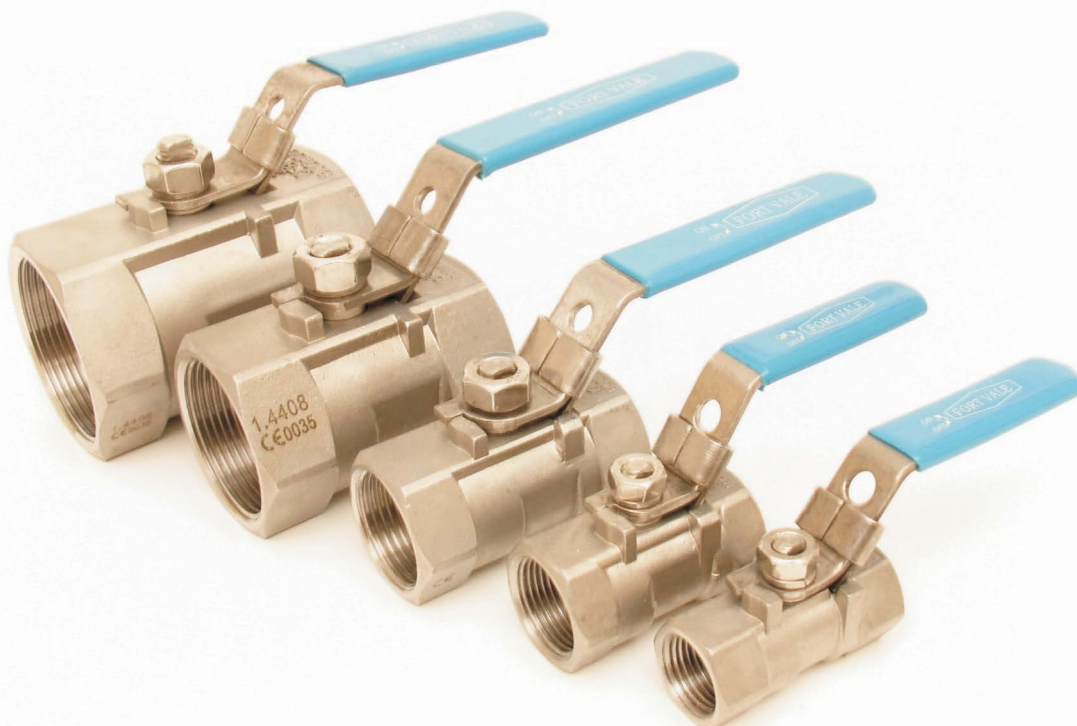
Description	Part No.
1/4" BSP one piece ball valve	410/104025
3/8" BSP one piece ball valve	410/104037
1/2" BSP one piece ball valve	410/104050
3/4" BSP one piece ball valve	410/104075
1" BSP one piece ball valve	410/104100
1 1/4" BSP one piece ball valve	410/104125
1 1/2" BSP one piece ball valve	410/104150
2" BSP one piece ball valve	410/104200

Two Piece Ball Valve

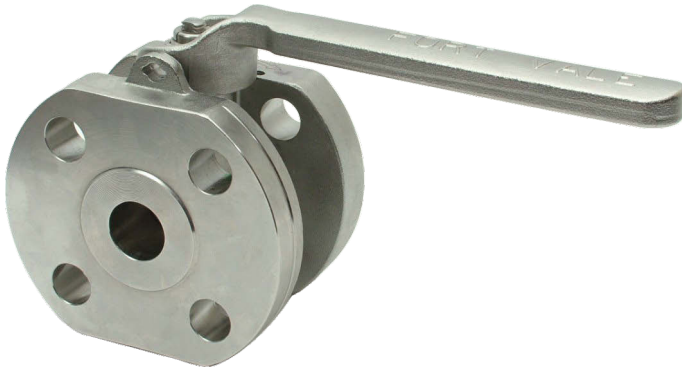
Description	Part No.
1/4" BSP two piece ball valve	410/204025
3/8" BSP two piece ball valve	410/204037
1/2" BSP two piece ball valve	410/204050
3/4" BSP two piece ball valve	410/204075
1" BSP two piece ball valve	410/204100
1 1/4" BSP two piece ball valve	410/204125
1 1/2" BSP two piece ball valve	410/204150
2" BSP two piece ball valve	410/204200
2 1/2" BSP two piece ball valve	410/204250
3" BSP two piece ball valve	410/204300

Three Piece Ball Valve

Description	Part No. BSP	Part No. WELD PREP
1/4" BSP three piece ball valve	410/304025B	410/304025W
3/8" BSP three piece ball valve	410/304037B	410/304037W
1/2" BSP three piece ball valve	410/304050B	410/304050W
3/4" BSP three piece ball valve	410/304075B	410/304075W
1" BSP three piece ball valve	410/304100B	410/304100W
1 1/4" BSP three piece ball valve	410/304125B	410/304125W
1 1/2" BSP three piece ball valve	410/304150B	410/304150W
2" BSP three piece ball valve	410/304200B	410/304200W
2 1/2" BSP three piece ball valve	410/304250B	410/304250W
3" BSP three piece ball valve	410/304300B	410/304300W
4" BSP three piece ball valve	410/304400B	410/304400W



CAUTION: Do not overtighten these ball valves.



1" Full Bore Firesafe / Lethal Service Ball Valve - inlet and outlet flange drilled 4 x 18mm holes equi-spaced on a 89mm PCD. Contact parts manufactured in 316 stainless steel fitted with TFM PTFE main seal.

NOTE : The Firesafe specification ball valve is **not** suitable for a Lethal Service application. The Lethal Service specification ball valve is suitable for both a Firesafe and a Lethal Service application.

Options - left hand or right hand operated. 1", 2" and 3" Firesafe/Lethal Service ball valves available.

Specification

Weight	4.77 Kgs
Design Pressure (MAWP)	16 Bar (232 PSI)
Test Pressure	24 Bar (348 PSI)
Min. Design Temperature	-40°C (-40°F)
Max. Design Temperature	205°C (401°F)

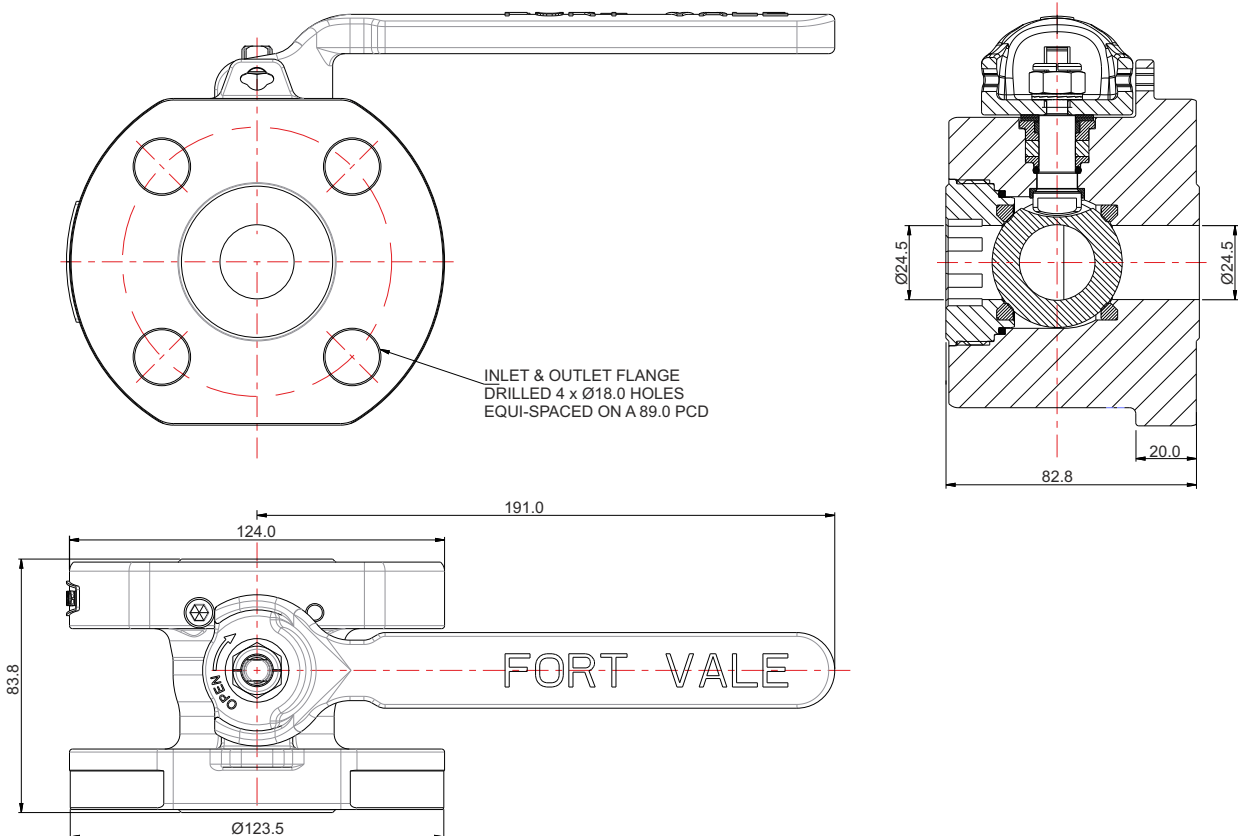
Approved to : BS EN14432, EN12516-2, EN10497, API 607.

Range

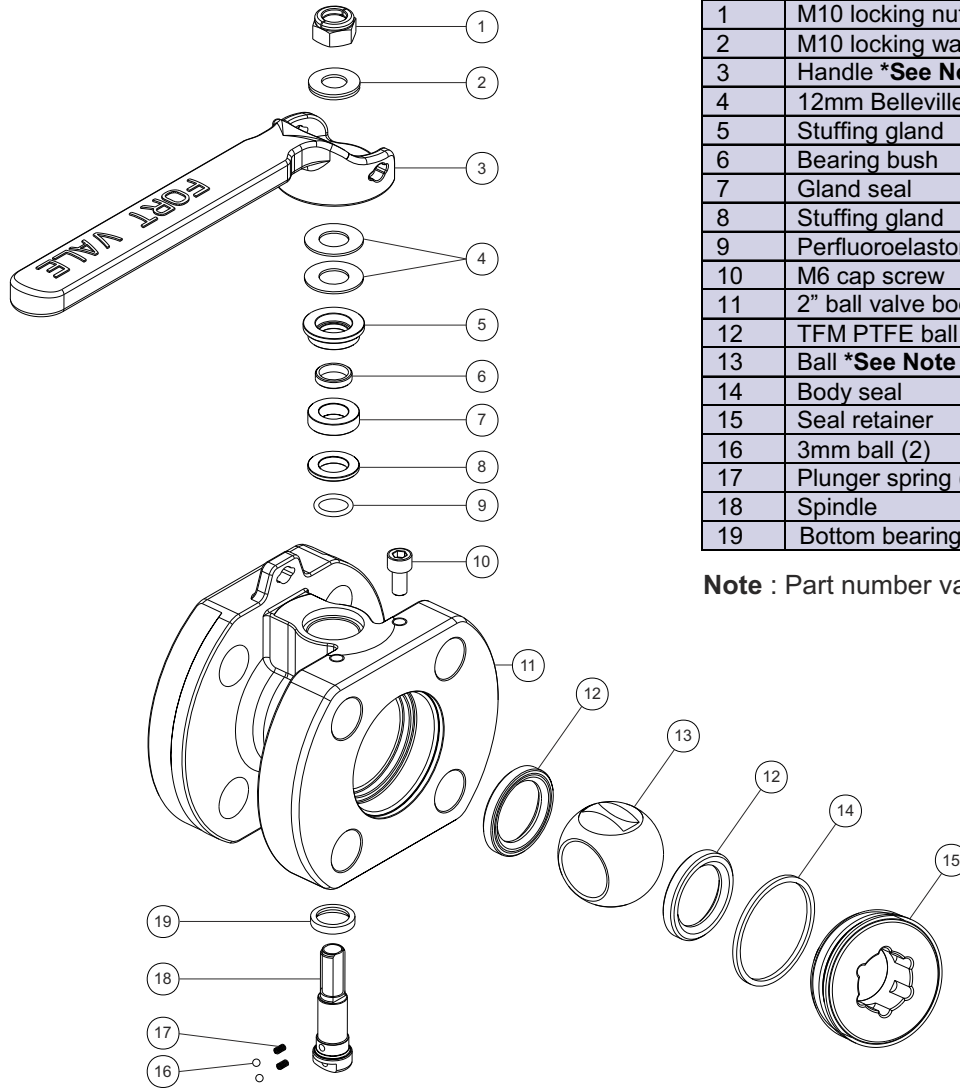
Part No.	Description
310/5000FSL	1" Firesafe Ball Valve – left hand
310/5000FSR	1" Firesafe Ball Valve – right hand
310/5000LSL	1" Lethal Service/Firesafe Ball Valve – left hand
310/5000LSR	1" Lethal Service/Firesafe Ball Valve – right hand

Fitting Details

Example shown : 310/5000XXR

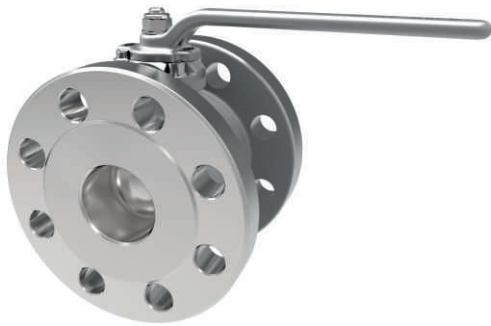


Parts drawing



Item	Description	Part No.
1	M10 locking nut *See Note	5112-008-XX
2	M10 locking washer (pair)	5113-191
3	Handle *See Note	310/0125XX
4	12mm Belleville washer (2)	5113-045
5	Stuffing gland	310/3458
6	Bearing bush	310/3443
7	Gland seal	310/0133
8	Stuffing gland	310/0130
9	Perfluoroelastomer o ring	5005-212PER
10	M6 cap screw	5111-034
11	2" ball valve body *See Note	310/5010XX
12	TFM PTFE ball seal (2)	310/0102FS
13	Ball *See Note	370/1002XX
14	Body seal	310/0106GR
15	Seal retainer	310/0176/2
16	3mm ball (2)	10154SS
17	Plunger spring (2)	370-3469
18	Spindle	310/0120FS
19	Bottom bearing	310/0104FS

Note : Part number varies according to specification.



2" Full Bore Firesafe / Lethal Service Ball Valve - inlet and outlet flange drilled 8 x 19mm holes equi-spaced on a 127mm PCD (2" ASA 300). Contact parts manufactured in 316 stainless steel fitted with TFM PTFE main seal.

The Lethal Service specification ball valve is suitable for both a Firesafe and a Lethal Service application.

Options - left hand or right hand operated. 1", 2" and 3" Firesafe/Lethal Service ball valves available.

Specification

Weight	10.3 Kgs
Design Pressure (MAWP)	16 Bar (232 PSI)
Test Pressure	24 Bar (348 PSI)
Min. Design Temperature	-40°C (-40°F)
Max. Design Temperature	205°C (401°F)

Approved to : BS EN14432, EN12516-2, EN10497, API 607.

Range

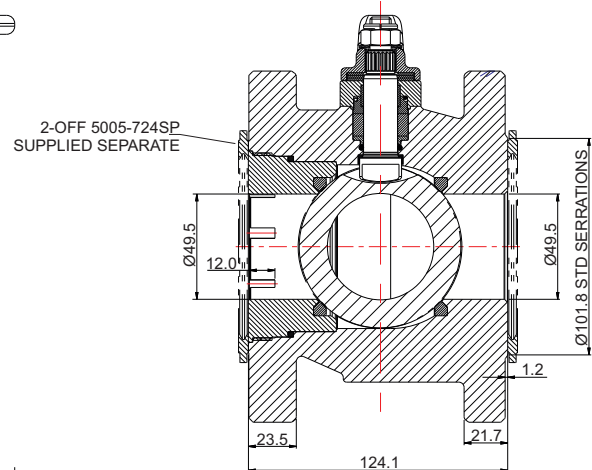
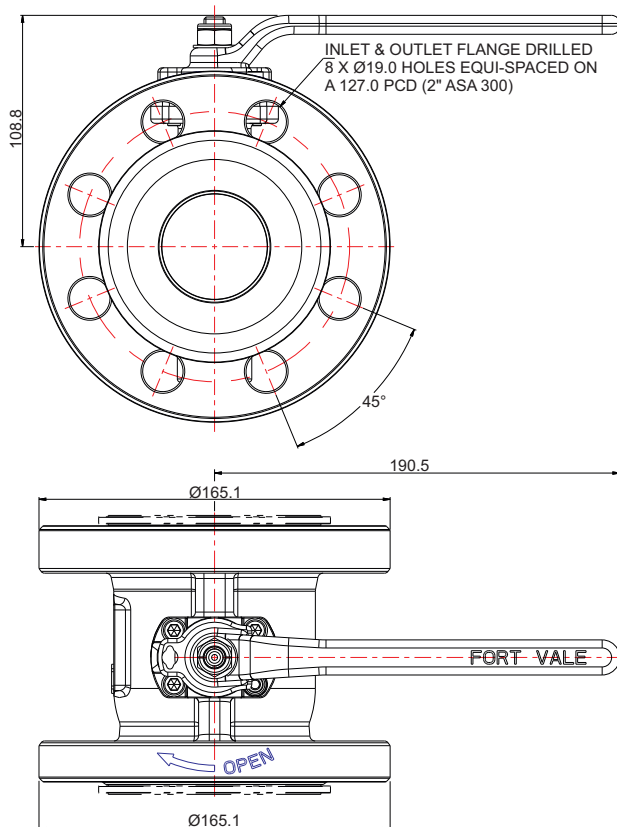
Part No.	Description
370/5000LSL	2" Lethal Service/Firesafe Ball Valve – left hand
370/5000LSR	2" Lethal Service/Firesafe Ball Valve – right hand

Associated Parts

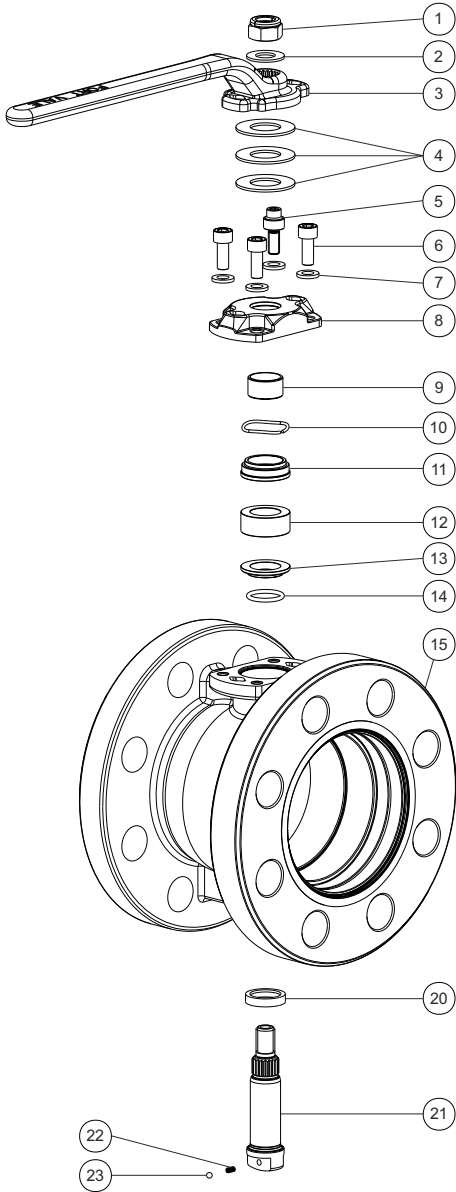
Part No.	Description
5005-724SP	Stainless steel/graphite spiral wound gasket – suits 2" ball valve inlet & outlet

Fitting Details

Example shown : 370/5000XXR

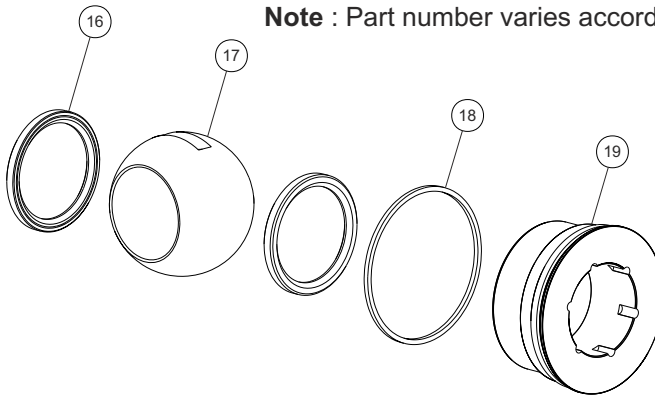


Parts drawing



Item	Description	Part No.
1	M10 locking nut *See Note	5112-008-XX
2	M10 plain washer	5113-009
3	Handle	370/0125
4	16mm Belleville washer (3)	5113-038
5	Stop pin *See Note	370/3442-XX
6	M6 cap screw (3) *See Note	5111-108-XX
7	M6 spring washer (4)	5113-008
8	Retaining gland *See Note	370/3449XX
9	Bearing bush	370/3443
10	Wave spring	370/3457
11	Stuffing gland	370/3458
12	Gland seal	370/3353
13	Stuffing gland	370/3459
14	Perfluoroelastomer o ring	5005-216PER
15	2" ball valve body *See Note	370/5001XX
16	TFM PTFE ball seal (2)	370/0102FS
17	Ball *See Note	370/3301XX
18	Body seal	370/0106GR
19	Seal retainer	370/5003
20	Bottom bearing	370/0104FS
21	Spindle	370/0120FS
22	Plunger spring	370-3469
23	3mm ball	10154SS

Note : Part number varies according to specification.





2" Full Bore Firesafe Ball Valve - inlet and outlet flange drilled 4 x 18mm holes equi-spaced on a 125mm PCD. Contact parts manufactured in 316 stainless steel fitted with TFM PTFE main seal.

NOTE : This Firesafe specification ball valve is **not** suitable for a Lethal Service application.

Options - left hand or right hand operated. 1", 2" and 3" Firesafe/Lethal Service ball valves available.

Specification

Weight	7.64 Kgs
Design Pressure (MAWP)	16 Bar (232 PSI)
Test Pressure	24 Bar (348 PSI)
Min. Design Temperature	-40°C (-40°F)
Max. Design Temperature	205°C (401°F)

Approved to : BS EN14432, EN12516-2, EN10497, API 607.

Range

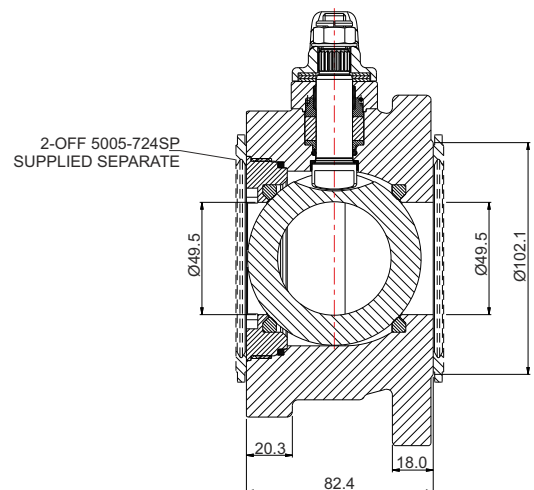
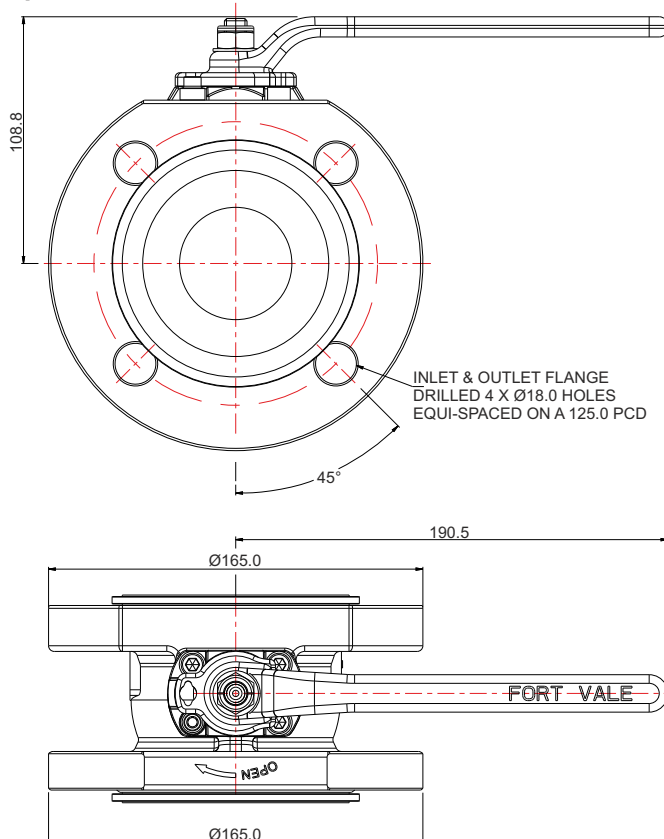
Part No.	Description
370/0100FSL	2" Firesafe Ball Valve – left hand
370/0100FSR	2" Firesafe Ball Valve – right hand

Associated Parts

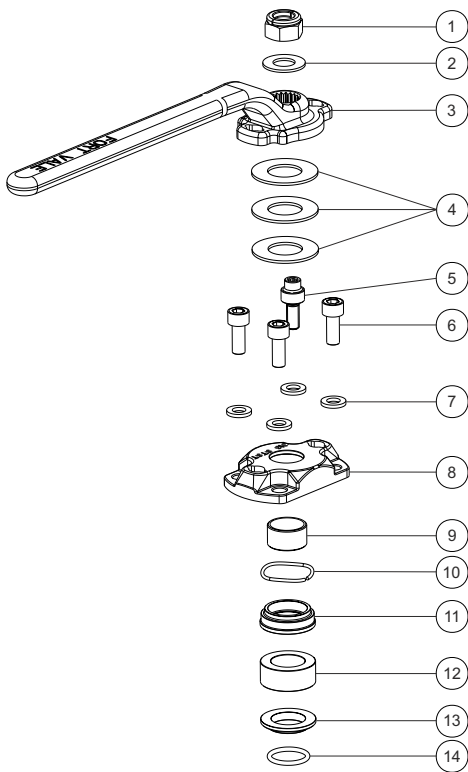
Part No.	Description
5005-724SP	Stainless steel/graphite spiral wound gasket – suits 2" ball valve inlet & outlet

Fitting Details

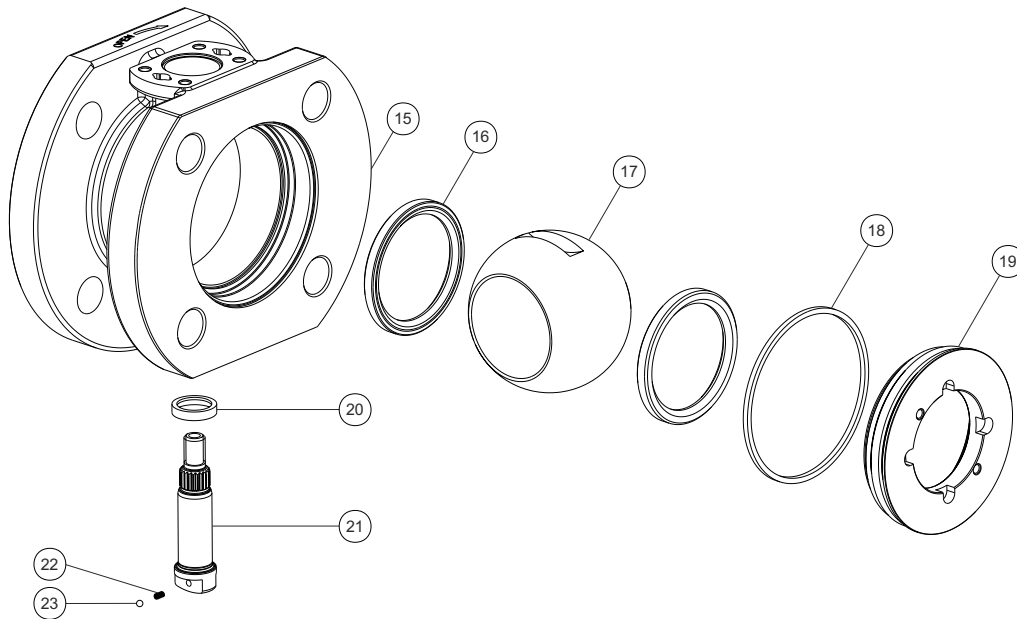
Example shown : 370/0100FSR



Parts drawing



Item	Description	Part No.
1	M10 locking nut	5112-008
2	M10 washer	5113-009
3	Handle	370/0125
4	16mm Belleville washer (3)	5113-038
5	Stop pin	370/3442
6	M6 cap screw (3)	5111-108
7	M6 spring washer (4)	5113-008
8	Retaining gland	370/3449
9	Bearing bush	370/3443
10	Wave spring	370/3457
11	Stuffing gland	370/3458
12	Gland seal	370/3353
13	Stuffing gland	370/3459
14	Perfluoroelastomer o ring	5005-216PER
15	2" ball valve body	370/0110FS
16	TFM PTFE ball seal (2)	370/0102FS
17	Ball	370/3301
18	Body seal	370/0106GR
19	Seal retainer	370/0176/2
20	Bottom bearing	370/0104FS
21	Spindle	370/0120FS
22	Plunger spring	370-3469
23	3mm ball	10154SS





3" Full Bore Firesafe / Lethal Service Ball Valve - inlet and outlet flange drilled 8 x 18mm holes equi-spaced on a 160mm PCD. Contact parts manufactured in 316 stainless steel fitted with TFM PTFE main seal.

NOTE : The Firesafe specification ball valve is **not** suitable for a Lethal Service application. The Lethal Service specification ball valve is suitable for both a Firesafe and a Lethal Service application.

Options - left hand or right hand operated. 1", 2" and 3" Firesafe/Lethal Service ball valves available.

Specification

Weight	17.0 Kgs
Design Pressure (MAWP)	16 Bar (232 PSI)
Test Pressure	24 Bar (348 PSI)
Min. Design Temperature	-40°C (-40°F)
Max. Design Temperature	205°C (401°F)

Approved to : BS EN14432, EN12516-2, EN10497, API 607.

Range

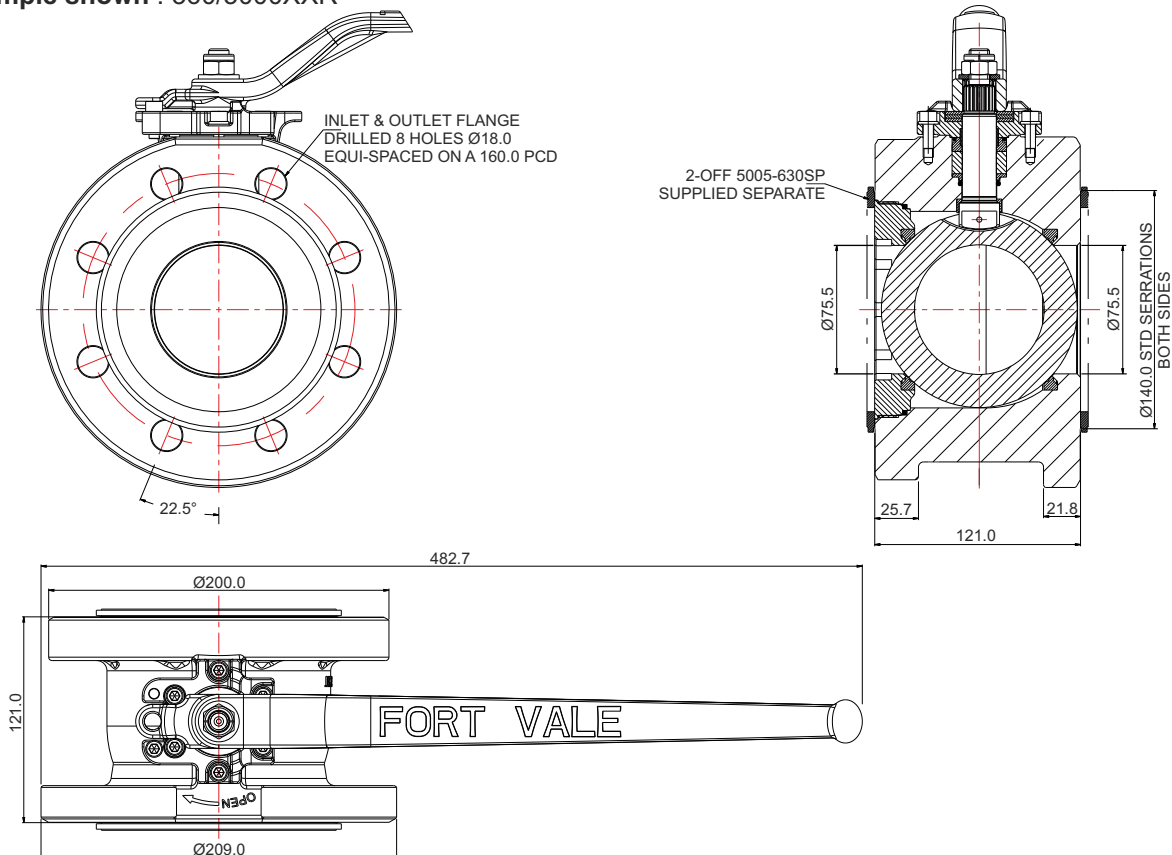
Part No.	Description
360/5000FSL	3" Firesafe Ball Valve – left hand
360/5000FSR	3" Firesafe Ball Valve – right hand
360/5000LSL	3" Lethal Service/Firesafe Ball Valve – left hand
360/5000LSR	3" Lethal Service/Firesafe Ball Valve – right hand

Associated Parts

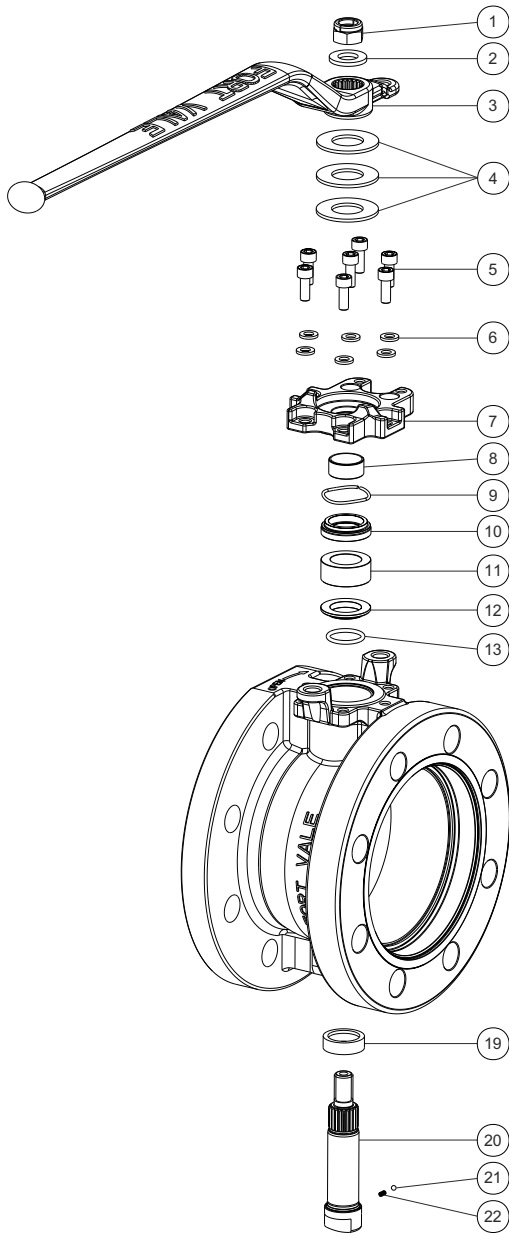
Part No.	Description
5005-630SP	Stainless steel/graphite spiral wound gasket – suits 3" ball valve inlet & outlet

Fitting Details

Example shown : 360/5000XXR



Parts drawing



Item	Description	Part No.
1	M12 locking nut *See Note	5112-007-XX
2	M12 washer	5123-003
3	Handle	360/3416FS
4	20mm Belleville washer (3)	5113-041
5	M6 cap screw (7) *See Note	5111-015-XX
6	M6 spring washer (6)	5113-008
7	Retaining gland *See Note	360/5005XX
8	Bearing bush	360/0182
9	Wave spring	360/3351
10	Stuffing gland	360/0180
11	Gland seal	360/3353
12	Stuffing gland	360/0181
13	Perfluoroelastomer o ring	5005-928HT
14	3" ball valve body *See Note	360/5014XX
15	TFM PTFE ball seal (2)	360/3402FS
16	Ball *See Note	360/3401XX
17	Body seal	360/0106GR
18	Seal retainer	360/0176/2
19	Bearing bush	360/3421FS
20	Spindle	360/3422FS
21	3mm ball	10154SS
22	Plunger spring	370-3469

Note : Part number varies according to specification.



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