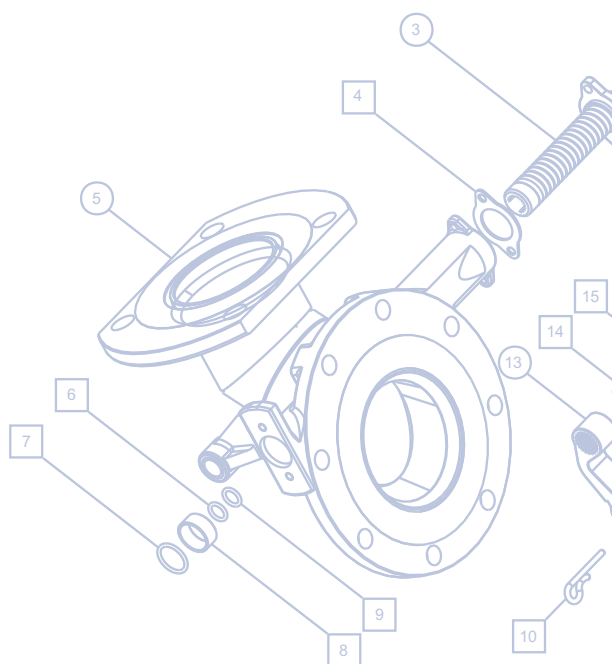
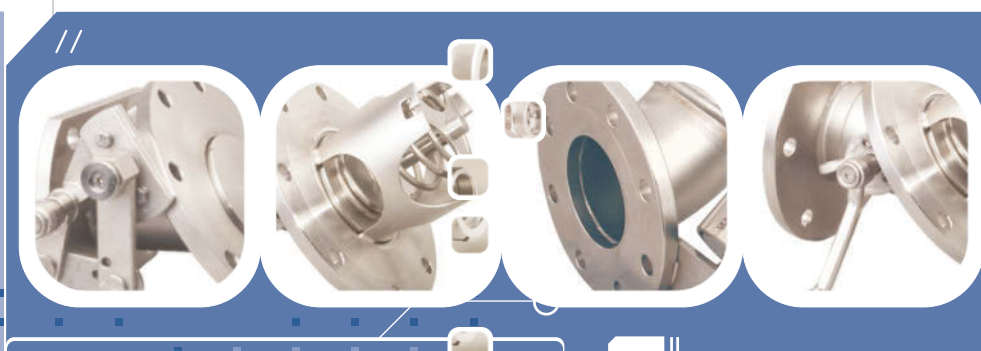
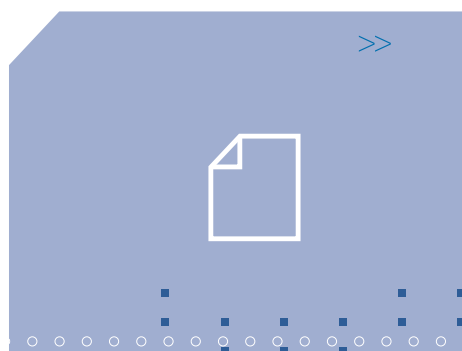




FOOTVALVE CATALOGUE

//



The Fort Vale
Range of
Footvalves

CLEANFLOW FOOTVALVES //

- » 3" 30° CLEANFLOW FOOTVALVE
- » 3" 45° CLEANFLOW FOOTVALVE
- » 3" 90° CLEANFLOW FOOTVALVE
- » 4" 90° PNEUMATIC CLEANFLOW FOOTVALVE

HIGHLIFT FOOTVALVES //

- » 3" 30° HIGHLIFT FOOTVALVE
- » 3" 45° HIGHLIFT FOOTVALVE
- » 3" 90° HIGHLIFT FOOTVALVE
- » 3" 90° TANKSTREAM ROAD TANKER FOOTVALVE

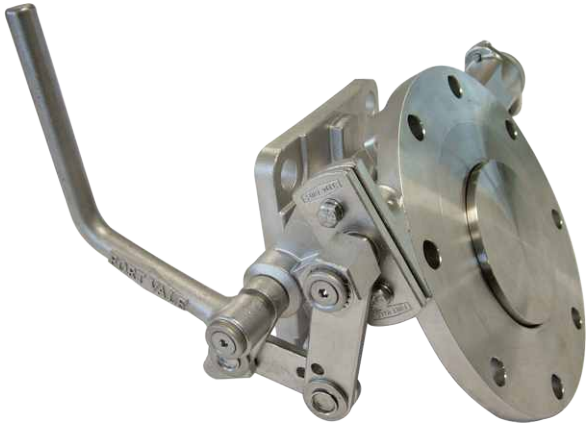
COMPOSITE FOOTVALVE / BUTTERFLY VALVE ASSEMBLIES //

- » 3" 45° COMPOSITE CLEANFLOW / BUTTERFLY VALVE ASSEMBLY
- » 3" 45° COMPOSITE HIGHLIFT / BUTTERFLY VALVE ASSEMBLY
- » 3" UNIFLOW
- » 3" UNIVALVE

ANCILLARIES //

- » REPLACEABLE SEAT - 3" CLEANFLOW FOOTVALVE
- » REPLACEABLE SEAT - 3" HIGHLIFT FOOTVALVE
- » FOOTVALVE AND RELIEF VALVE SEAT REPAIR KIT





3" 30° Cleanflow Footvalve - inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD; square outlet flange drilled 4 x 17mm holes on a 160mm PCD. Contact parts manufactured in 316 stainless steel with Fortyt O ring to main poppet as standard.

Options - Other poppet seal materials available. Footvalve may be manufactured in other metals. A range of outlet flange configurations available. Conical poppet available for solidifying cargoes. Steam heated option. Available with replaceable seat area. Full range of 45°, 90° and 180° Cleanflow footvalves. A range of bolting kits and outlet gaskets is available.

Specification

Weight	8.3 Kg *See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature Range	-20°C to 200°C (-4°F to 392°F)

* **NB** Data varies according to valve specification.

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank.

Comparison tests between the Cleanflow and the Highlift footvalves conclude that there is a 38% increase in flow and a 27% reduction in discharge time.

Design approval by Lloyds Register of Shipping.

Approved to BS EN14433.

i Operating Instructions available - OPIN28 & OPIN47.

Range

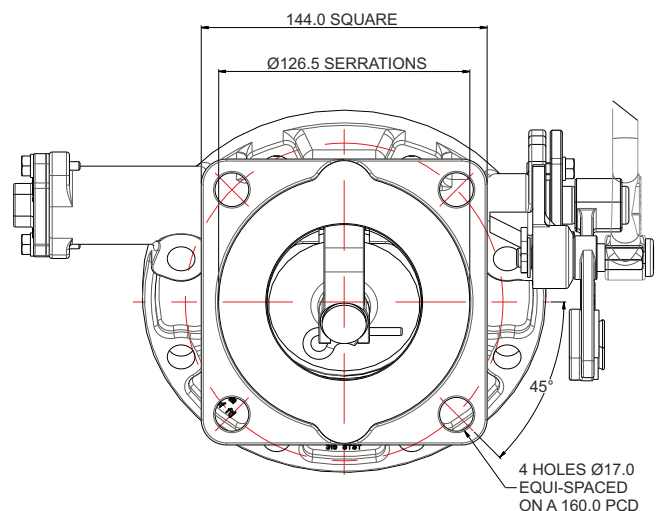
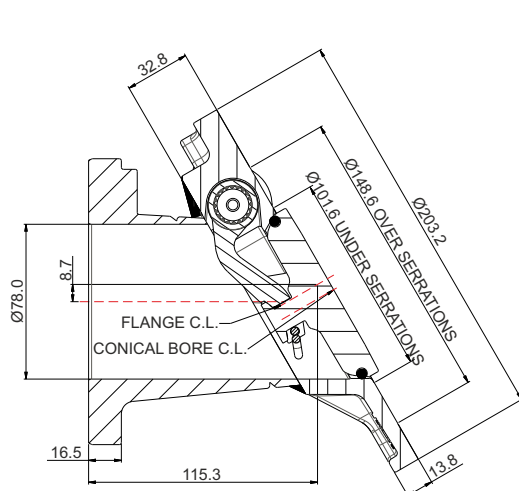
Part No.	Outlet flange drilling
848/1000A	4 hole to suit clamped butterfly valve
848/0000A	6 hole to suit flanged butterfly valve or ball valve

Associated Parts

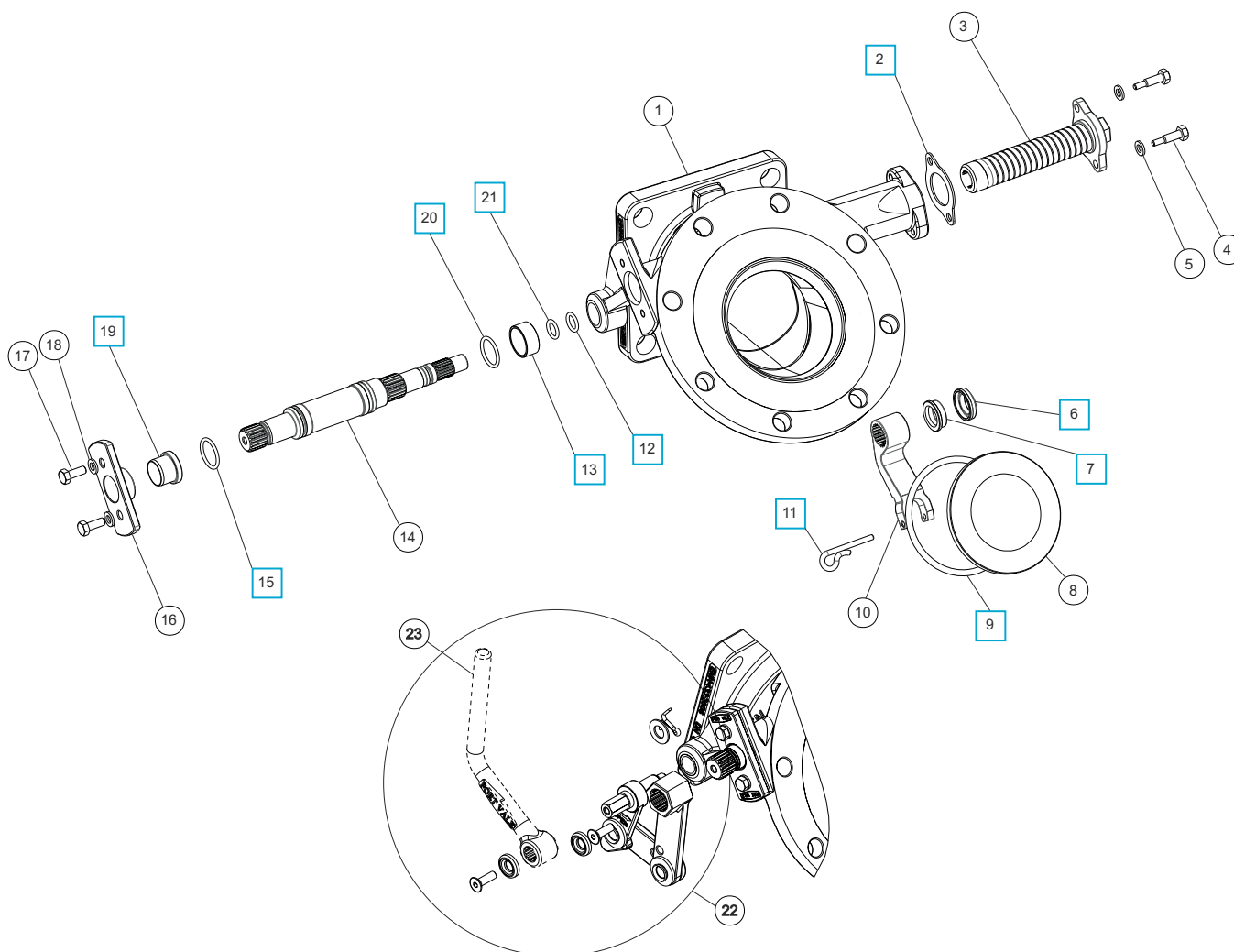
Associated Parts	Part No.
Tank pad	324/9030
Stud kit	845/2040
Bolting kit – 4 hole outlet	311/3500
Bolting kit – 6 hole outlet	360/0300
Inlet gasket – 8 hole	5005-015
Outlet gasket	5005-049
Outlet gasket – 6 hole	5005-169

Fitting Details

Part No. 848/1000A



Parts drawing



SEAL KIT

Part number **845/00SK** contains all parts marked □

Item	Description	Part No.
1	Body	848/1100
2	Spring boss gasket	5005-845 ○ □
3	Spring assembly	845/0050
4	Clamp screw (2)	845/0017
5	Spring washer (2)	5113-008
6	Bush seal	845/0064 ○ □
7	Seal energizer	845/0063 ○ □
8	Poppet	845/0040 ○
9	Fortyt O ring	5005-104 ○ □
10	Lifting fork	845/0010 ○
11	Retaining pin	845/0015 ○ □
12	Perfluoroelastomer O ring	10133PHT ○ □

REPAIR KIT

Part number **845/00RK** contains all part marked ○

Item	Description	Part No.
13	Spindle bearing	845/0062 ○ □
14	Spindle	845/0200 ○
15	Viton O ring	5005-336 ○ □
16	Stuffing clamp	845/0016
17	Clamp bolt (2)	5111-022
18	Spring washer (2)	5113-008
19	Stuffing seal	845/0061 ○ □
20	Perlast O ring	5005-384 ○ □
21	PTFE O ring	5005-008 ○ □
22	Handle linkage assembly	324/8910
23	Handle	T.B.A. *See note



SELF ADHESIVE DECAL

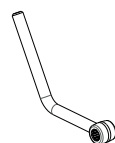
Part No. 845/0320

Text in English, German & French

Please see separate data sheet for details on remote closure kits

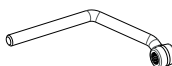
A detailed step-by-step repair manual is now available for our Cleanflow range of footvalves. Please contact our Sales team for further information.

N.B. Please specify the style of handle required at the time of order.



STANDARD CLEANFLOW HANDLE

Part No. 324/8670



STANDARD HIGHLIFT HANDLE

Part No. 330/5010



3" 45° Cleanflow Footvalve - inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD; outlet flange drilling as shown below. Contact parts manufactured in 316 stainless steel with Fortyt O ring to main poppet as standard.

Options - Other poppet seal materials available. Footvalve may be manufactured in other metals. A range of outlet flange configurations available. Conical poppet available for solidifying cargoes. Steam heated option. Available with integral Alloy C276 seat area for corrosive cargoes. Full range of 30°, 90° and 180° Cleanflow footvalves. A range of bolting kits and outlet gaskets is available.

Specification

Weight	9.4 Kg *See Note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-40°C to 200°C (-40°F to 392°F)

***Note** Weight and dimensions vary according to valve specification.

Comparison tests between the Cleanflow and the Highlift footvalves conclude that there is a 38% increase in flow and a 27% reduction in discharge time.

Design approval by Lloyds Register of Shipping.

Approved to BS EN14433.

 Operating Instructions available - OPIN28 & OPIN47

Range

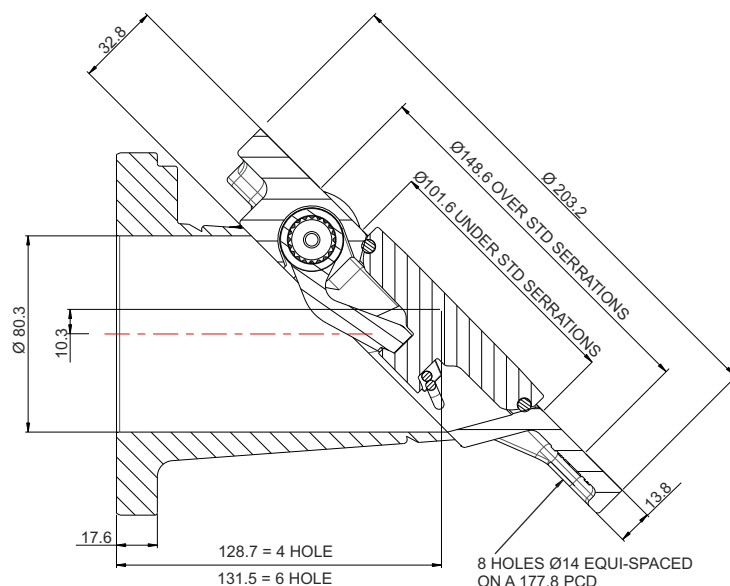
Part No.	Outlet flange drilling
845/1200A	4 hole to suit clamped butterfly valve
845/1200AHS	4 hole – integral Alloy C276 seat area to inlet
845/0000A	6 hole to suit flanged butterfly valve/ball valve
845/0000AHS	6 hole – integral Alloy C276 seat area to inlet

Associated Parts

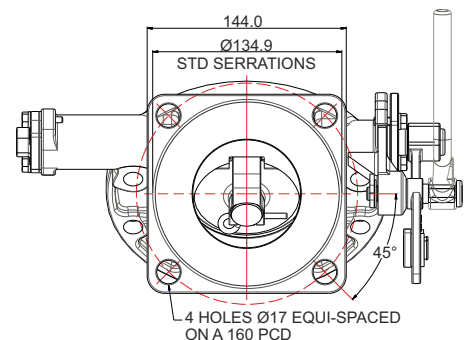
Associated Parts	Part No.
Tank pad	324/9000
Stud kit	845/2040
Bolting kit – 4 hole outlet	311/3500
Bolting kit – 6 hole outlet	360/0300
Inlet gasket – 8 hole	5005-015
Outlet gasket	5005-049
Outlet gasket – 6 hole	5005-169

Fitting Details

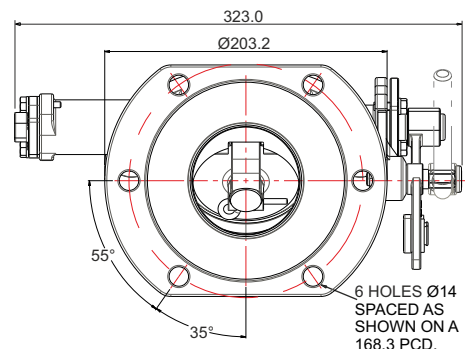
Standard 3" 45° Cleanflow - Part No. 845/1200A



Part No. 845/1200A



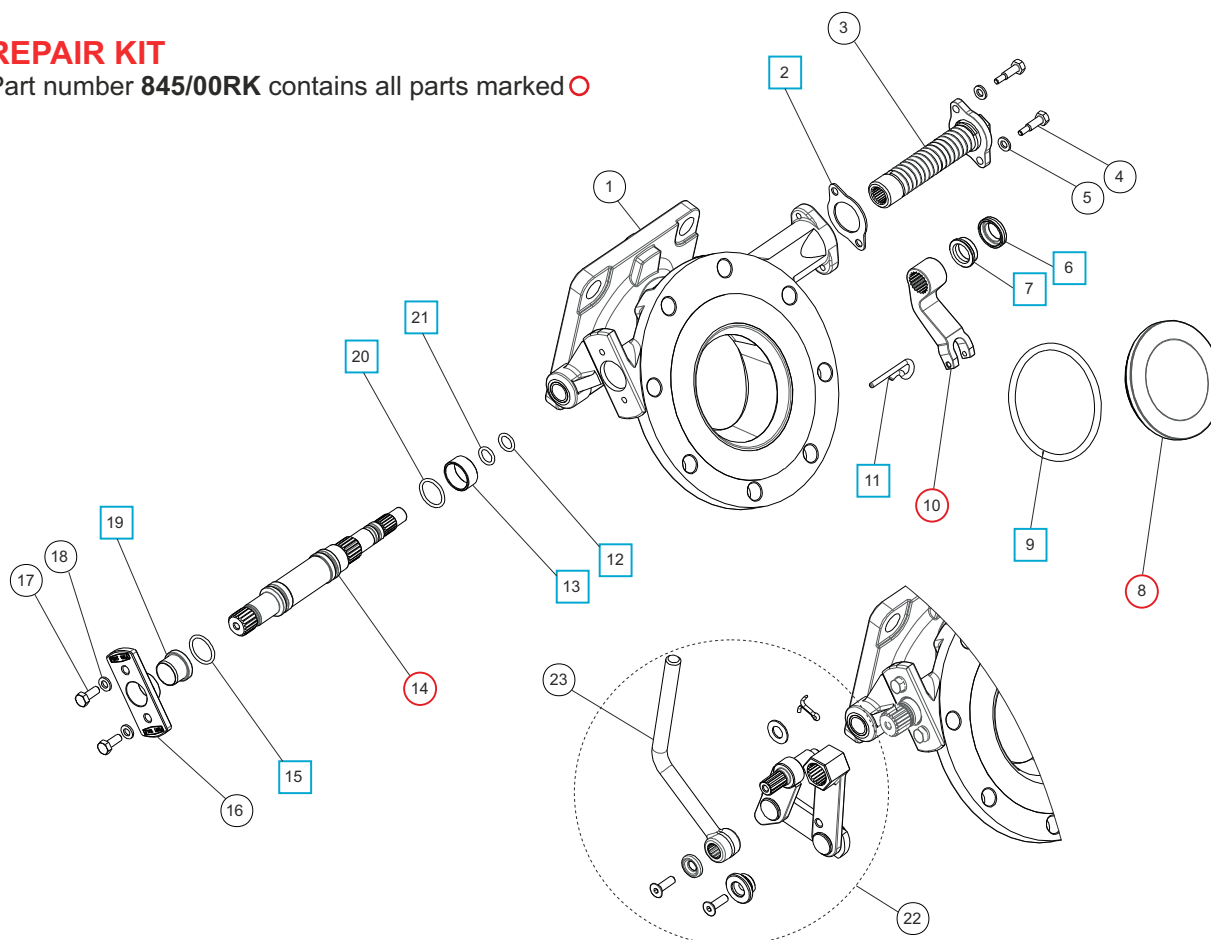
Part No. 845/0000A



Parts drawing

REPAIR KIT

Part number **845/00RK** contains all parts marked ○



SEAL KIT

Part number **845/00SK** contains all parts marked □

Item	Description	Part No.
1	Body	845/1100
2	Spring boss gasket	5005-845 ○ □
3	Spring assembly	845/0050
4	Clamp screw (2)	845/0017
5	Spring washer (2)	5113-008
6	Bush seal	845/0064 ○ □
7	Seal energizer	845/0063 ○ □
8	Poppet	845/0040 ○
9	Lifting O ring	5005-104 ○ □
10	Flifting fork	845/0010 ○
11	Retaining pin	845/0015 ○ □
12	Perfluoroelastomer O ring	10133PHT ○ □

Item	Description	Part No.
13	Spindle bearing	845/0062 ○ □
14	Spindle	845/0200 ○
15	Viton O ring	5005-336 ○ □
16	Stuffing clamp	845/0016
17	Clamp bolt (2)	5111-022
18	Spring washer (2)	5113-008
19	Stuffing seal	845/0061 ○ □
20	Perlast O ring	5005-384 ○ □
21	PTFE O ring	5005-008 ○ □
22	Handle linkage assembly	324/8910
23	Handle	*See note below



SELF ADHESIVE DECAL

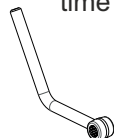
Part No. 845/0320

Text in English, German & French

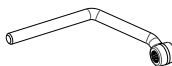
Please see separate data sheet for details on remote closure kits

A detailed step-by-step repair manual is now available for our Cleanflow range of footvalves. Please contact our Sales team for further information.

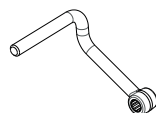
N.B. Please specify the style of handle required at the time of order.



STANDARD CLEANFLOW HANDLE
Part No. 324/8670



STANDARD HIGHLIFT HANDLES
Part No. 330/5010



Part No. 324/8671



3" 90° Cleanflow Footvalve - inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD; outlet flange drilled 4 x 17mm holes equi-spaced on a 160mm PCD with flats milled top and bottom. Contact parts manufactured in 316 stainless steel with Fortyt O ring to main poppet as standard.

Options - different outlet flange configurations available. Alternative seal materials for poppet O ring may be fitted. Conical poppet available for solidifying cargoes. Range of valves with extended body available. Steam heated option. Pneumatically and hydraulically actuated versions. Full range of 30°, 45° and 180° Cleanflow footvalves. Replaceable Seat version available.

Specification

Weight	14 Kg *See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-20°C to 200°C (-4°F to 392°F)

* **NB** Weight and dimensions vary according to valve specification.

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank.

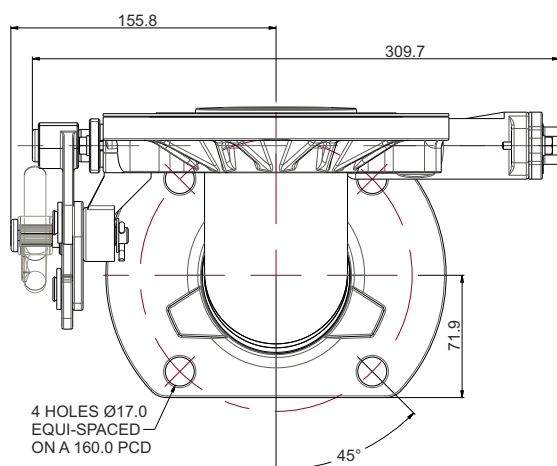
Comparison tests between the Cleanflow and the Highlift footvalves conclude that there is a 38% increase in flow and a 27% reduction in discharge time.

Design approval by Lloyds Register of Shipping.
Approved to BS EN14433.

 Operating Instructions available - OPIN28 & OPIN47

Fitting Details

Part Number : 844/3000A



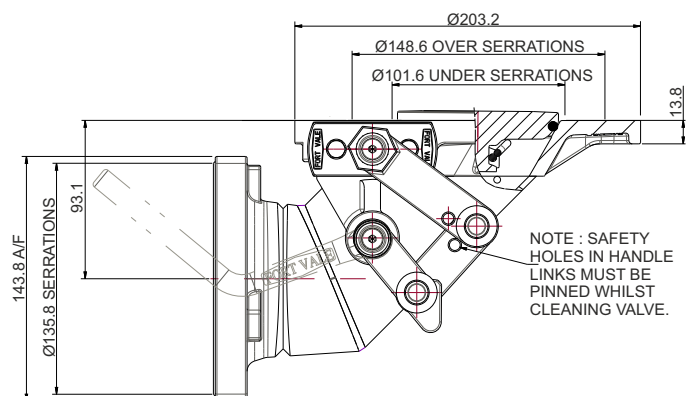
Range

Part No.	Specification
844/3000A	Std. body, manually operated
844/7400A	Extended body, manually operated
844/3080ASS	Std. body, pneumatically operated
844/7700ASS	Extended body, pneumatically operated, slotted outlet

Associated Parts

Associated Parts	Part No.
Tank pad	324/9000
Stud kit	845/2040
Bolting kit – 4 hole outlet	311/3000
Inlet gasket – 8 hole	5005-015
Outlet gasket	5005-049

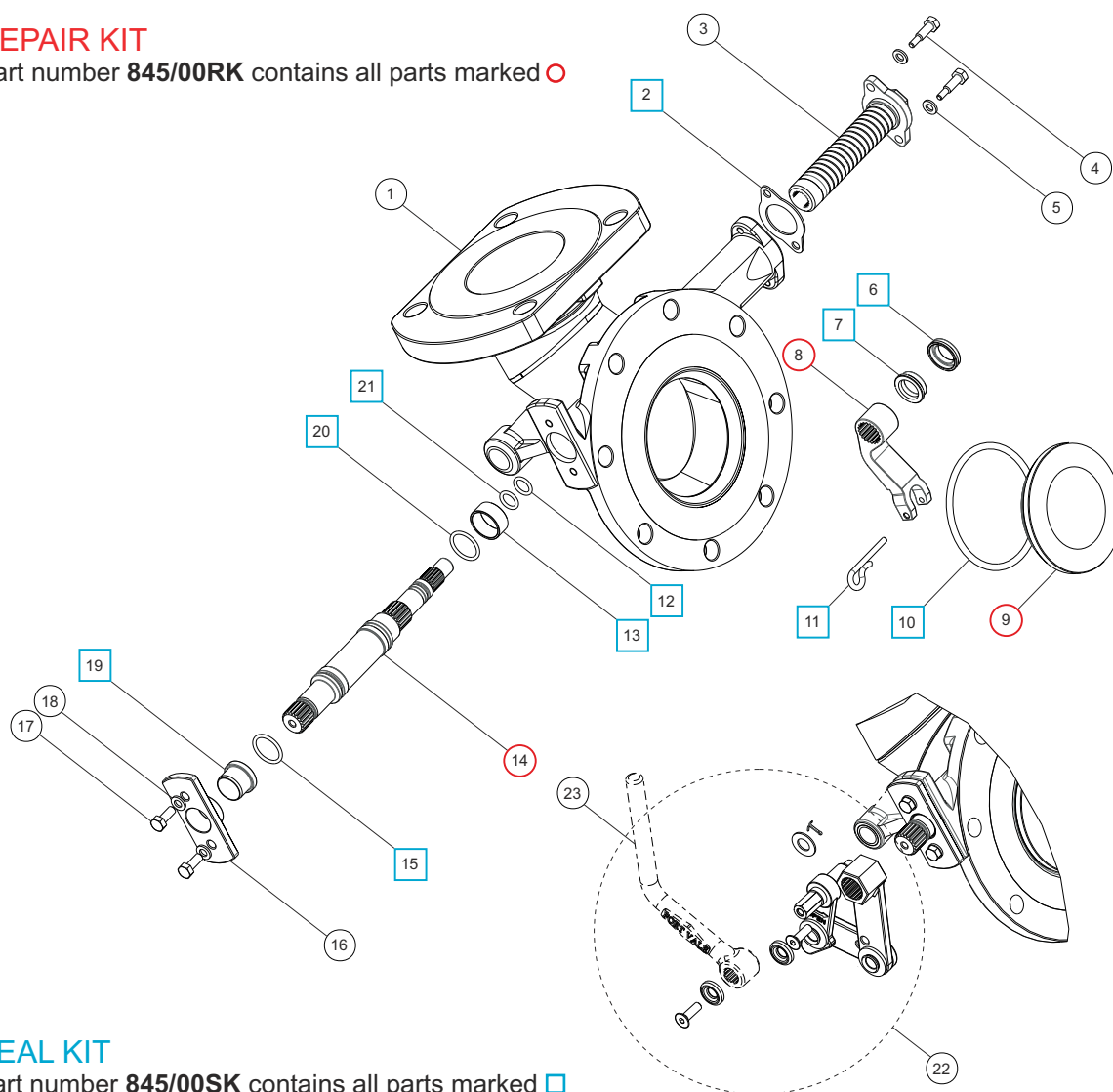
Worldwide Patents Pending



Parts drawing

REPAIR KIT

Part number **845/00RK** contains all parts marked ○



SEAL KIT

Part number **845/00SK** contains all parts marked □

Item	Description	Part No.
1	Body	844/2075A
2	Spring boss gasket	5005-845 ○ □
3	Spring assembly	845/0050
4	Clamp screw (2)	845/0017
5	Spring washer (2)	5113-008
6	Bush seal	845/0064 ○ □
7	Seal energizer	845/0063 ○ □
8	Lifting fork	845/0010 ○
9	Poppet	845/0040 ○
10	Fortyt O ring	5005-104 ○ □
11	Retaining pin	845/0015 ○ □
12	Perfluoroelastomer O ring	10133PHT ○ □

Item	Description	Part No.
13	Spindle bearing	845/0062 ○ □
14	Spindle	845/0200 ○
15	Viton O ring	5005-336 ○ □
16	Stuffing clamp	845/0016
17	Clamp bolt (2)	5111-022
18	Spring washer (2)	5113-008
19	Stuffing seal	845/0061 ○ □
20	Perlast O ring	5005-384 ○ □
21	PTFE O ring	5005-008 ○ □
22	Handle linkage assembly	324/8910
23	Handle	T.B.A. *See note



SELF ADHESIVE DECAL

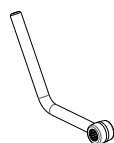
Part No. 845/0320

Text in English, German & French

Please see separate data sheet for details on remote closure kits

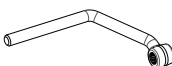
A detailed step-by-step repair manual is now available for our Cleanflow range of footvalves. Please contact our Sales team for further information.

N.B. Please specify the style of handle required at the time of order.



STANDARD CLEANFLOW HANDLE

Part No. 324/8670



STANDARD HIGHLIFT HANDLE

Part No. 330/5010



4" 90° Pneumatic Cleanflow Footvalve - inlet flange drilled 8 x 18mm holes equi-spaced on a 210mm PCD (DIN125 PN16); outlet flange drilled 8 x 18mm holes equi-spaced on a 180mm PCD (DIN100 PN16). Contact parts manufactured in 316 stainless steel with Fortyt O ring to main poppet as standard.

Options - replaceable seat version. Different outlet flange configurations available. Alternative seal materials for poppet O ring - e.g. high temperature seal (250°C). Conical poppet available for solidifying cargoes. Steam heated option. Manually operated version. A full range of 30°, 45° and 180° Cleanflow footvalves is available.

Specification

Weight	31.7 Kg *See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-40°C to 200°C (-40°F to 392°F)

* **NB** Weight and dimensions vary according to valve specification.

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank.

Approved to BS EN14433.

Range

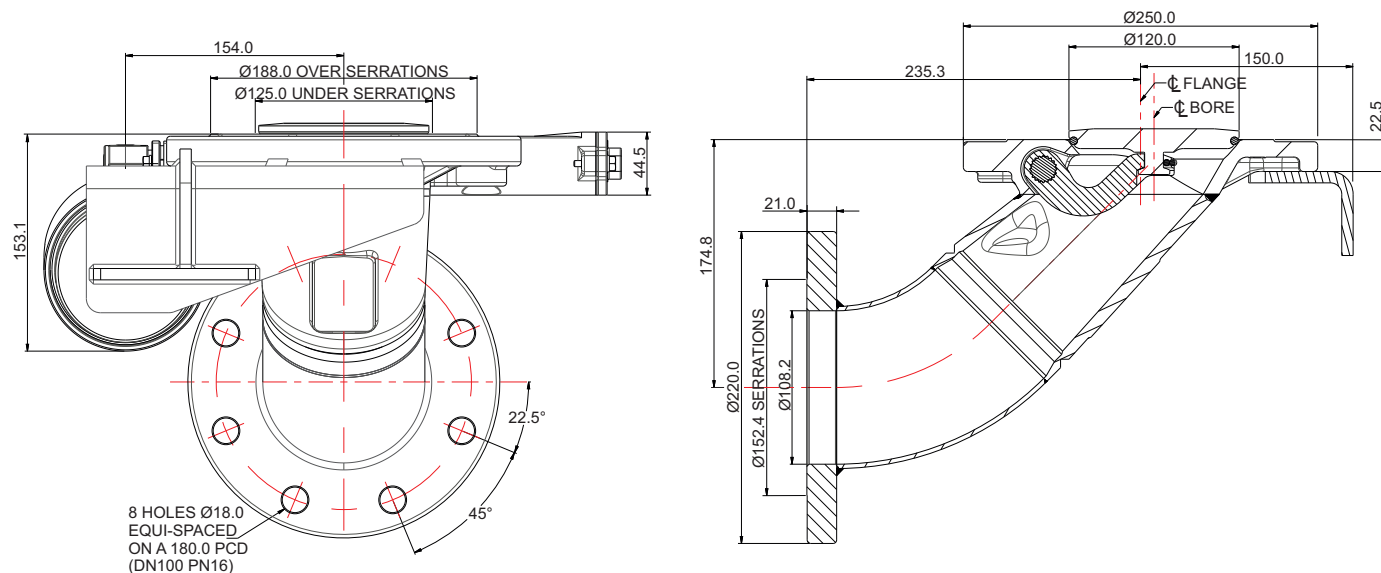
Part No.	Specification
875/4800SS	Std. valve with std. poppet
875/4800SSRX	Std. poppet; replaceable seat
875/4800SSHRX	Conical poppet; replaceable seat; steam heated.

Associated Parts

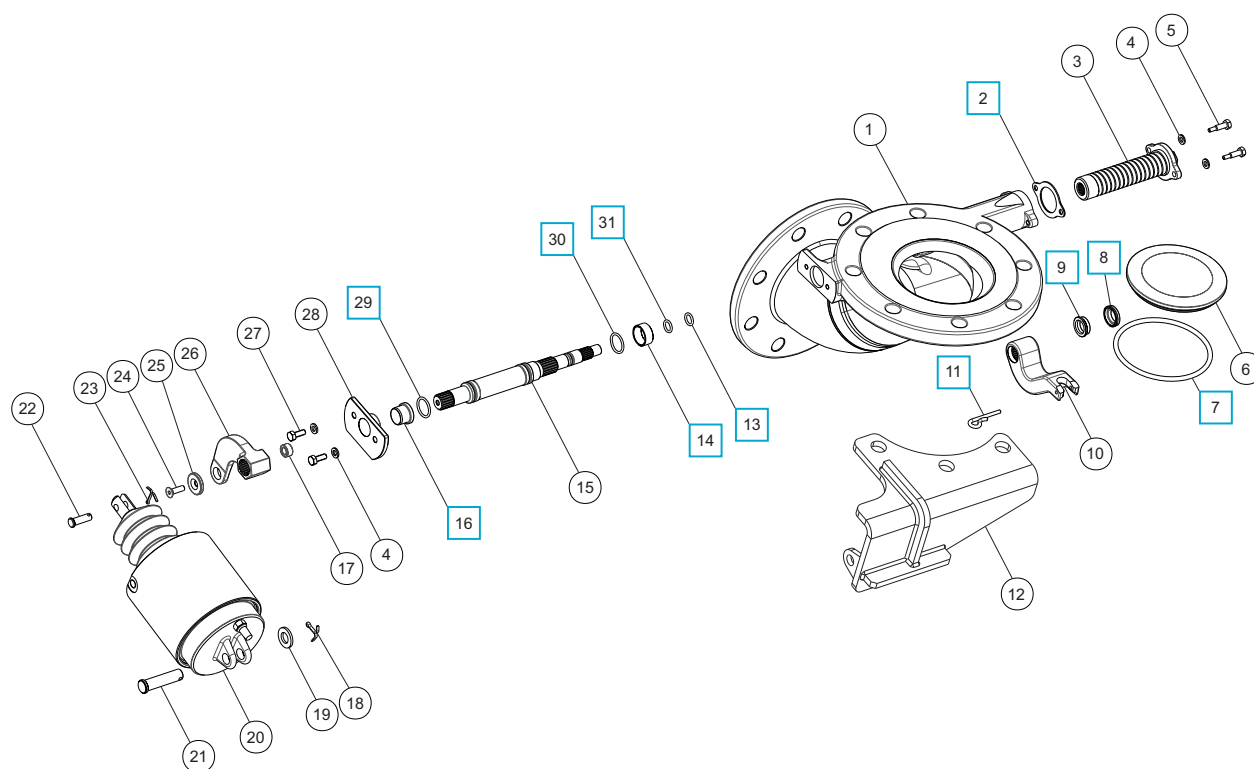
Description	Part No.
Tank pad	854/9000
Stud kit (875/4800SS only)	875/2044
CNAF/PTFE inlet gasket	5005-467
CNAF/PTFE outlet gasket	5005-468
Mating flange – DN100 PN16	875/4150
Bolting kit for mating flange (875/4150)	875/4160

Fitting Details

Part No. 875/4800SS



Parts drawing



Item	Description	Part No.
1	Body	875/4110
2	Spring boss gasket	5005-846 <input type="checkbox"/>
3	Spring assembly	875/0050
4	Spring washer (4)	5113-008
5	Clamp screw (2)	845/0017
6	Poppet	875/0040
7	Fortyt O ring	5005-349 <input type="checkbox"/>
8	PTFE bottom bush seal	845/0064 <input type="checkbox"/>
9	Bottom seal energizer	845/0063 <input type="checkbox"/>
10	Lifting fork	875/0010
11	Retaining pin	845/0015 <input type="checkbox"/>
12	Pneumatic cylinder bracket	845/8064
13	Perfluoroelastomer O ring	10133PHT <input type="checkbox"/>
14	PTFE spindle bearing	845/0062 <input type="checkbox"/>
15	Main spindle	875/0200
16	PTFE spindle stuffing seal	845/0061 <input type="checkbox"/>

Item	Description	Part No.
17	Bronze bush	844/2011
18	Split pin	5220-008
19	Plain washer	5113-006
20	Pneumatic cylinder	875/2125
21	Clevis pin	875/2122
22	Clevis pin	844/2121
23	Split pin	5118-016
24	Countersunk bolt	5111-019
25	Retaining washer	20370/2
26	Crank arm	844/2049
27	Hex bolt (2)	5111-022
28	Stuffing clamp flange	845/0066
29	Viton O ring	5005-336 <input type="checkbox"/>
30	Perfluoroelastomer O ring	5005-384 <input type="checkbox"/>
31	PTFE O ring	5005-008 <input type="checkbox"/>

**SELF ADHESIVE DECAL**

Part No. 845/0320

Text in English, German & French

SEAL KITPart number **875/00SK** contains all parts marked ☐

A detailed step-by-step repair manual is now available for our Cleanflow range of footvalves. Please contact our Sales team for further information.



3" 30° MKIII Highlift Footvalve - inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD; outlet flange drilled 4 x 17mm holes equi-spaced on a 160mm PCD. Contact parts manufactured in 316 stainless steel with Fortyt O ring to main poppet as standard.

Options - different outlet flange configurations available. Alternative seal materials for poppet O ring may be fitted. Full range of 45°, 90° and 180° Highlift footvalves. Steam heated option. Available with integral Alloy C276 seat area.

Specification

Weight	8.7 Kgs *See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Hydraulic Test Pressure	6 Bar (87 PSI)
Design Temperature Range	-40°C to 200°C (-40°F to 392°F)

* **NB** Weight and dimensions vary according to valve specification.

Approved to BS EN14433.

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Range

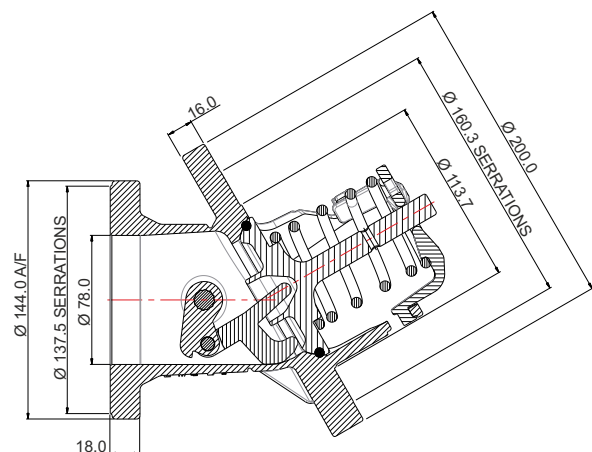
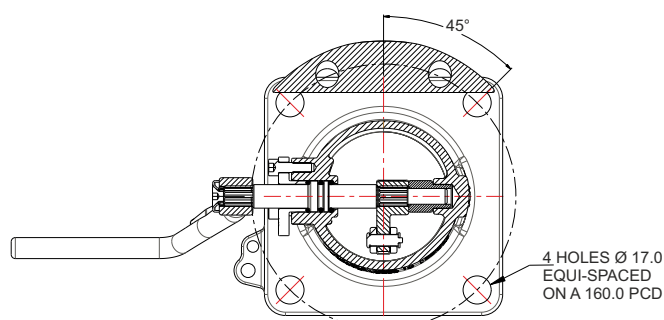
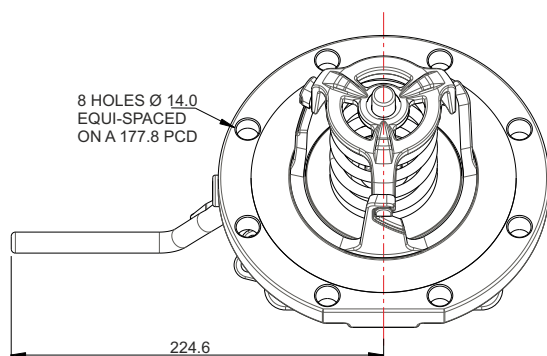
Part No.	Description
830/3000A	3" 30° standard Highlift footvalve
830/3000ASH	3" 30° steam heated Highlift footvalve

Associated Parts

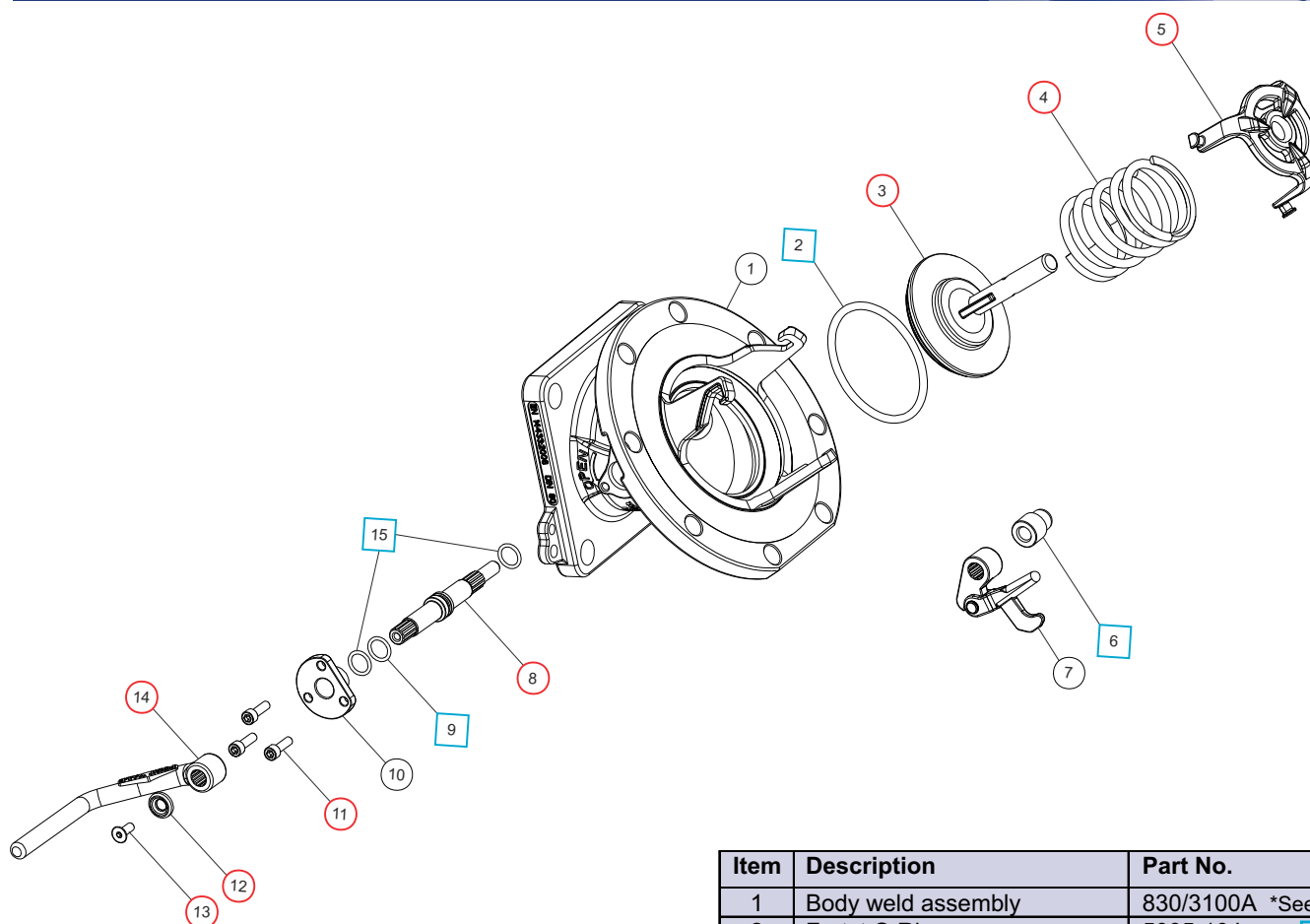
Associated Parts	Part No.
Tank pad	324/9000
Stud kit	324/2070
Inlet gasket – 8 hole	5005-015
Outlet gasket – 4 hole	5005-049
Outlet bolting kit	368/1100

Fitting Details

Part Number : 830/3000A



Parts drawing

**SEAL KIT**Part number **826/00SK**Contains all parts marked □**REPAIR KIT**Part number **826/00RKA**Contains all parts marked ○

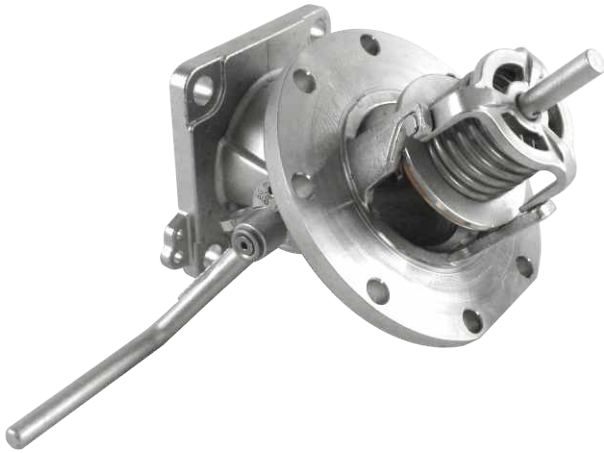
Item	Description	Part No.
1	Body weld assembly	830/3100A *See note
2	Fortyt O Ring	5005-104 □ ○
3	Solid poppet	324/2020 ○
4	Spring	5104-971 ○
5	Spring top plate	290/6104 ○
6	PTFE crankshaft end bush	20362 □ ○
7	Crank block assembly (30°)	821/0300
8	Spindle	821/0010 ○
9	Viton O ring	20361 □ ○
10	Stuffing clamp	324/1005
11	M6 x 20mm capscrew (3)	5111-017 ○
12	Handle retaining washer	20370 ○
13	Handle retaining screw	5111-030 ○
14	Handle	330/5010 ○
15	PTFE O ring (2)	20363 □ ○

* **NB** Part number varies according to valve specification**SPINDLE & CRANK BLOCK ASSEMBLY - PART NO. 821/0200**Includes spindle, crank block assembly, O rings and end bush
(Item nos. 6 7 8 9 & 15)**SELF ADHESIVE DECAL - PART NO. 326/0300**

Text in English, German and French

Please see separate data sheet for details on remote closure kits

A detailed step-by-step repair manual is now available for our Highlift range of footvalves. Please contact our Sales team for further information.



3" 45° MKIII Highlift Footvalve - inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD; outlet flange drilled 4 x 17mm holes on a 160mm PCD. Contact parts manufactured in 316 stainless steel with Fortyt main seal as standard.

Options - Other poppet seal materials available. Footvalve may be manufactured in other metals. Full range of 30°, 90° and 180° Highlift footvalves. Steam heated option. Available with integral Alloy C276 seat area. A range of bolting kits and outlet gaskets are available.

Specification

Weight	8.9 Kgs *See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Hydraulic Test Pressure	6 Bar (87 PSI)
Design Temperature Range	-40°C to 200°C -40°F to 392°F

* **NB** Weight and dimensions vary according to valve specification

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Design approval by Lloyds Register of Shipping
Approved to EN14433:2006

Range

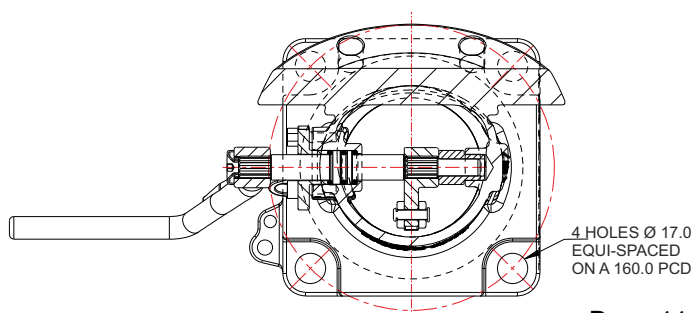
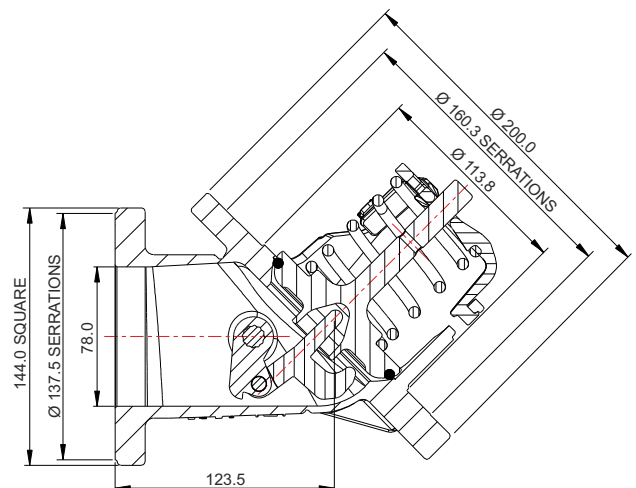
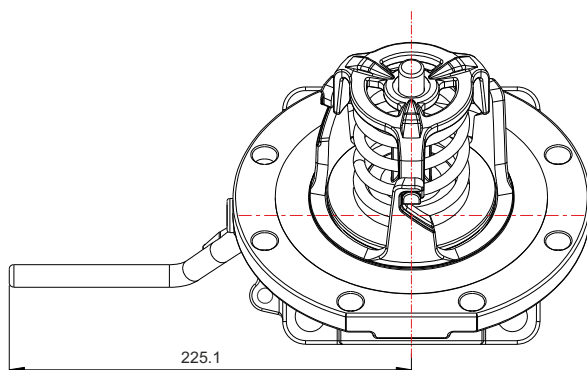
Part No.	Flange drilling
826/1200A	4 hole outlet to suit clamped butterfly valve
826/1200AHS	4 hole – integral Alloy C276 seat area to inlet

Associated Parts

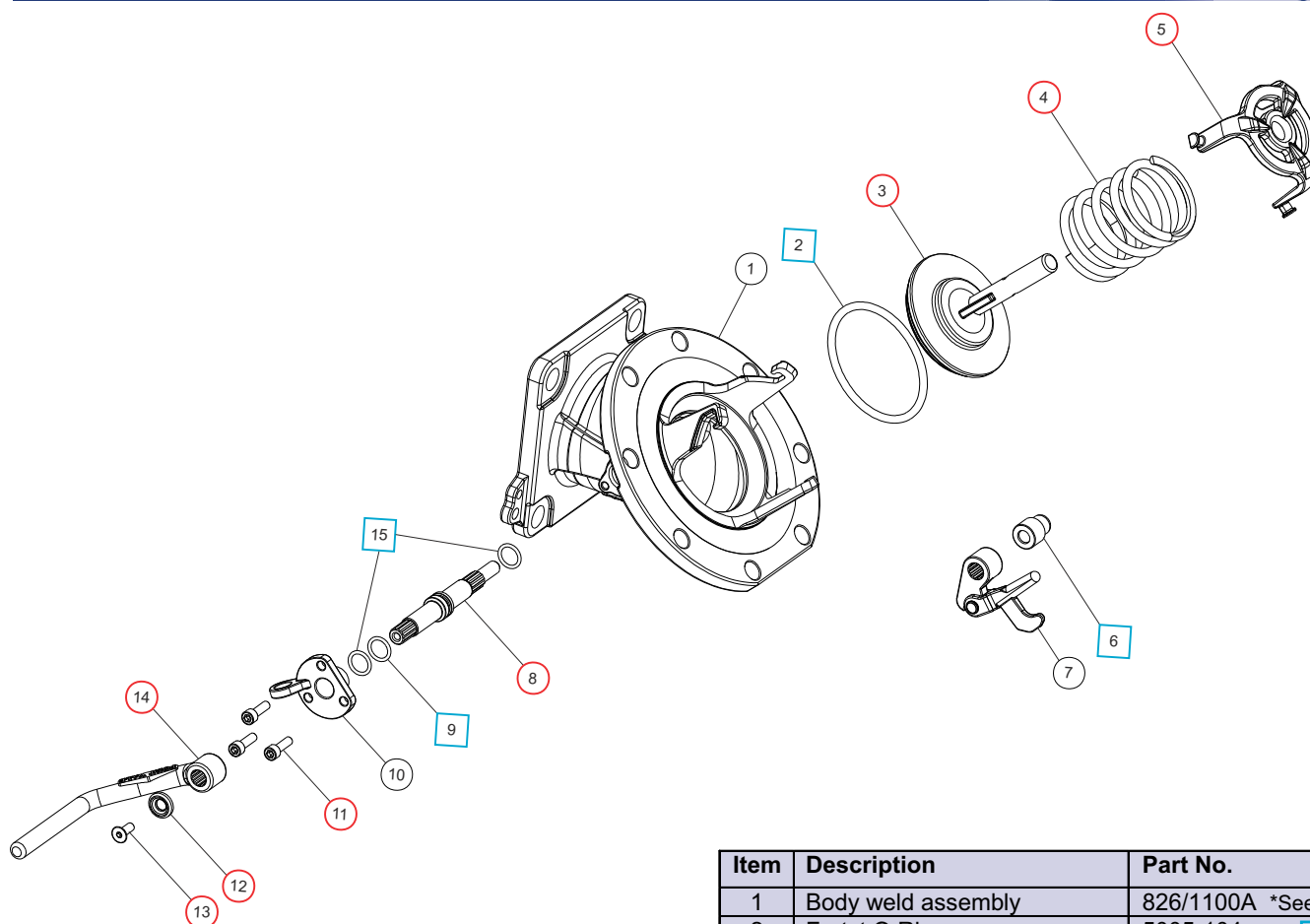
Associated Parts	Part No.
Tank pad	324/9000
Stud kit	324/2070
Standard bolting kit – 4 hole outlet	311/3500
8 hole inlet gasket – CNAF/PTFE	5005-015
Standard outlet gasket – CNAF/PTFE	5005-049

Fitting Details

Part Number : 826/1200A

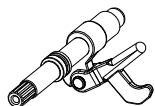


Parts drawing

**SEAL KIT**Part number **826/00SK**Contains all parts marked ■**REPAIR KIT**Part number **826/00RKA**Contains all parts marked ○

Item	Description	Part No.
1	Body weld assembly	826/1100A *See note
2	Fortyt O Ring	5005-104 ■ ○
3	Solid poppet	324/2020 ○
4	Spring	5104-971 ○
5	Spring top plate	290/6104 ○
6	PTFE crankshaft end bush	20362 ■ ○
7	Crank block assembly	821/0300
8	Spindle	821/0010 ○
9	Viton O ring	20361 ■ ○
10	Stuffing clamp	324/1001
11	M6 capscrew (3)	5111-017 ○
12	Handle retaining washer	20370 ○
13	Handle retaining screw	5111-030 ○
14	Handle	330/5010 ○
15	PTFE O ring (2)	20363 ■ ○

*NB Part number varies according to valve specification

**SPINDLE & CRANK BLOCK ASSEMBLY - PART NO. 821/0200**Includes spindle, crank block assembly, O rings and end bush
(Item nos. 6 7 8 9 & 15)**SELF ADHESIVE DECAL - PART NO. 326/0300**

Text in English, German and French

Please see separate data sheet for details on remote closure kits

A detailed step-by-step repair manual is available for our Highlift range of footvalves. Please contact our Sales team for further information.



3" 90° Highlift Footvalve - inlet flange drilled 4 x 18mm holes on a 160mm PCD; outlet flange drilled 4 x 17mm holes on a 160mm PCD with flat milled at 72mm to horizontal centre line. Contact parts manufactured in 316 stainless steel with Fortyt O ring to main poppet as standard.

Options - alternative seal materials and different outlet flange configurations available. Pneumatically actuated version. Steam heated option. Full range of 30°, 45° and 180° Highlift footvalves. Replaceable Seat version available.

Specification

Weight	7.9 Kgs *See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-40°C to 200°C -40°F to 392°F

***NB** Weight and dimensions vary according to valve specification

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Range

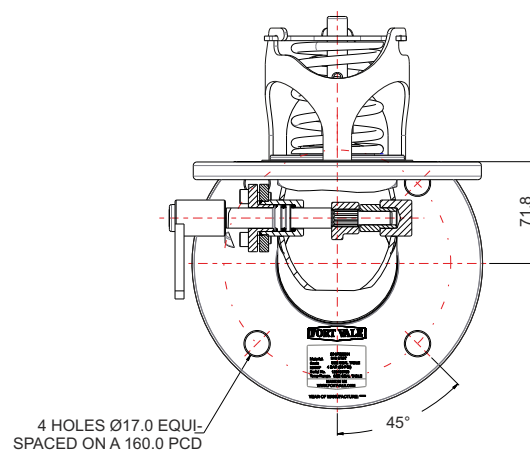
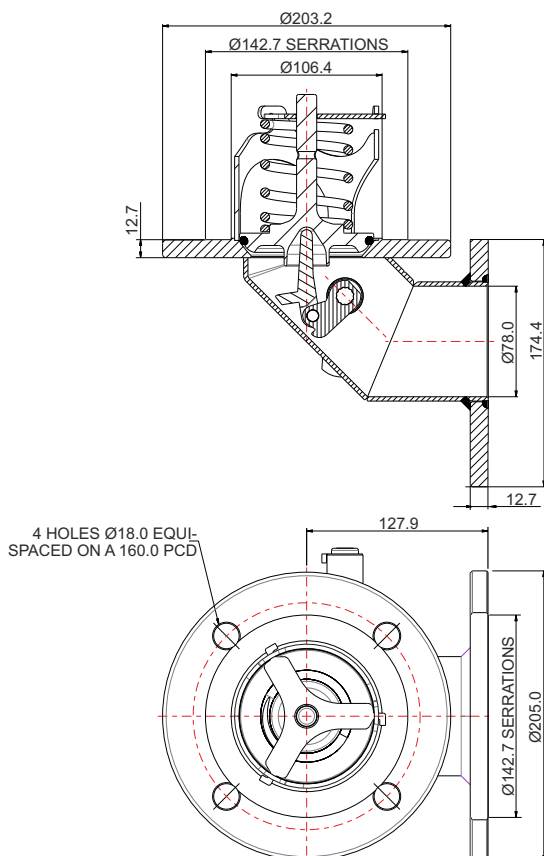
Part No.	Outlet flange drilling
294/7200XX	4 hole outlet, manually operated valve
294/7500	4 hole inlet/6 hole outlet, pneumatically operated

Associated Parts

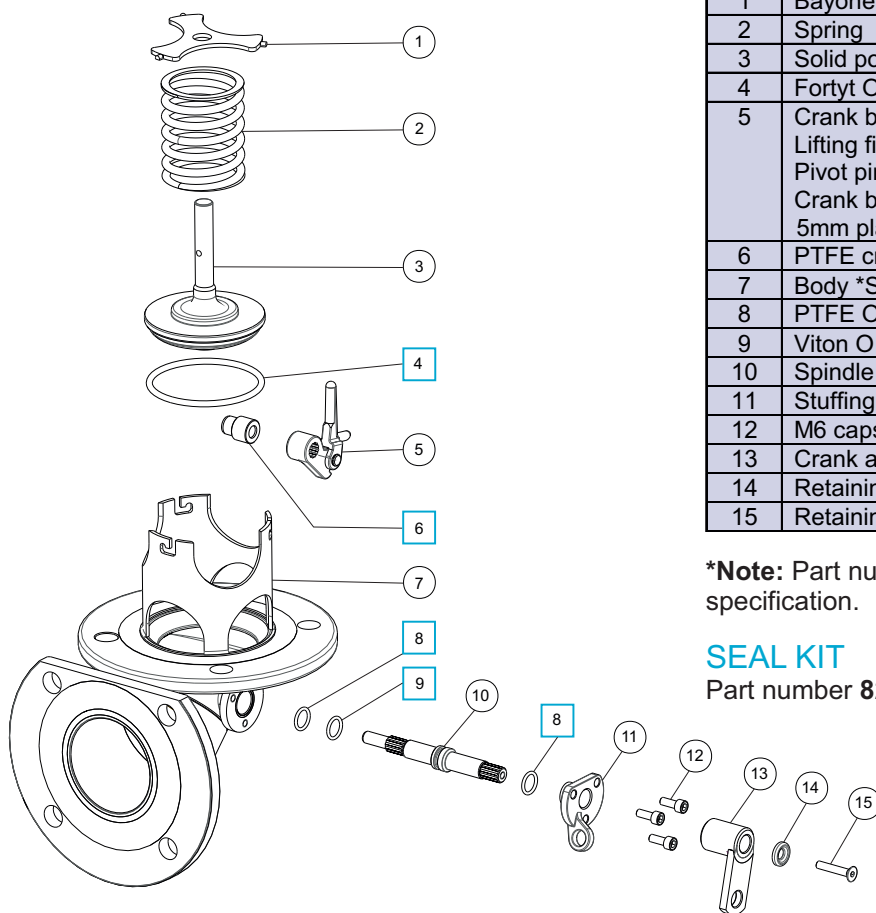
Associated Parts	Part No.
Tank pad	312/0013
Inlet gasket	5005-093
Stud kit	311/3050
Pipework mating flange (4 hole)	294/0080
Bolting kit	311/3500
Outlet gasket	5005-052

Fitting Details

Standard 3" 90° Highlift - Part No. 294/7200XX



Parts drawing



Item	Description	Part No.
1	Bayonet cap	20334/A
2	Spring	5104-971
3	Solid poppet	324/2020
4	Fortyt O ring	5005-104 <input type="checkbox"/>
5	Crank block assembly, compr. Lifting finger Pivot pin Crank block 5mm plain washer	821/0052 821/0034 821/0025 5113-015
6	PTFE crankshaft end bush	20362 <input type="checkbox"/>
7	Body *See Note	294/7010
8	PTFE O ring (2)	20363 <input type="checkbox"/>
9	Viton O ring	20361 <input type="checkbox"/>
10	Spindle	821/0010
11	Stuffing clamp	324/1001
12	M6 capscrew (3)	5111-017
13	Crank arm	324/7633
14	Retaining washer	20370
15	Retaining screw	5111-028

***Note:** Part number varies according to valve specification.

SEAL KIT

Part number **826/00SK** contains all parts marked ☐



3" 90° Tankstream Footvalve - 3" to 3" 90° footvalve assembly. Inlet flange drilled 12 x 14mm holes on a 6.25" PCD. 6 inlet holes are plugged with a plastic plug. Outlet flange drilled 8 x 10.5mm holes on a 124mm PCD. Contact parts manufactured in 316 stainless steel with Fortyt or Viton O ring.

Options - 3" to 2" footvalve assembly version.

Specification

Weight	7.5 Kg
Design Pressue (MAWP)	4 Bar (58 PSI)
Service Test Pressure	6 Bar (87 PSI)
Design Temperature Range	-20°C to +200°C -4°F to +392°F

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Range

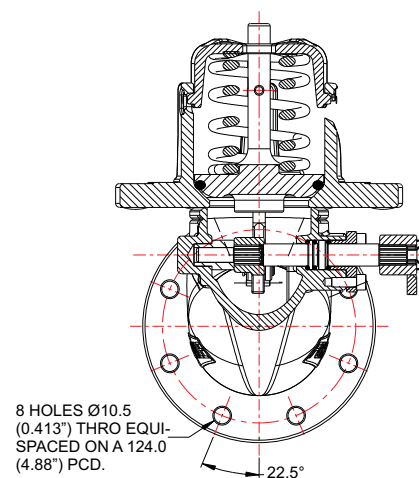
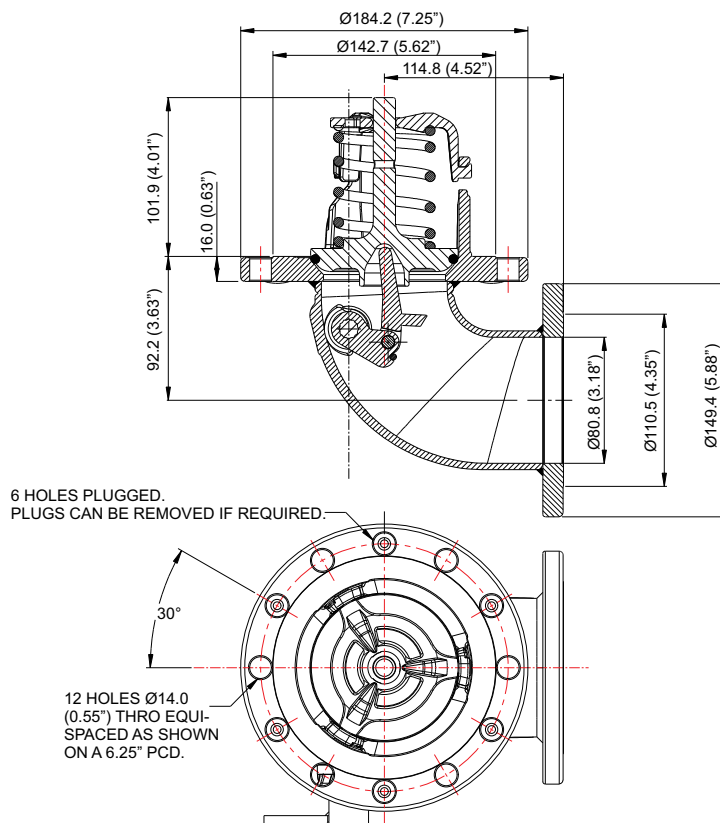
Part No.	Description
28F/0000F	3" to 3" footvalve with Fortyt seal
28F/0000V	3" to 3" footvalve with Viton seal

Associated Parts

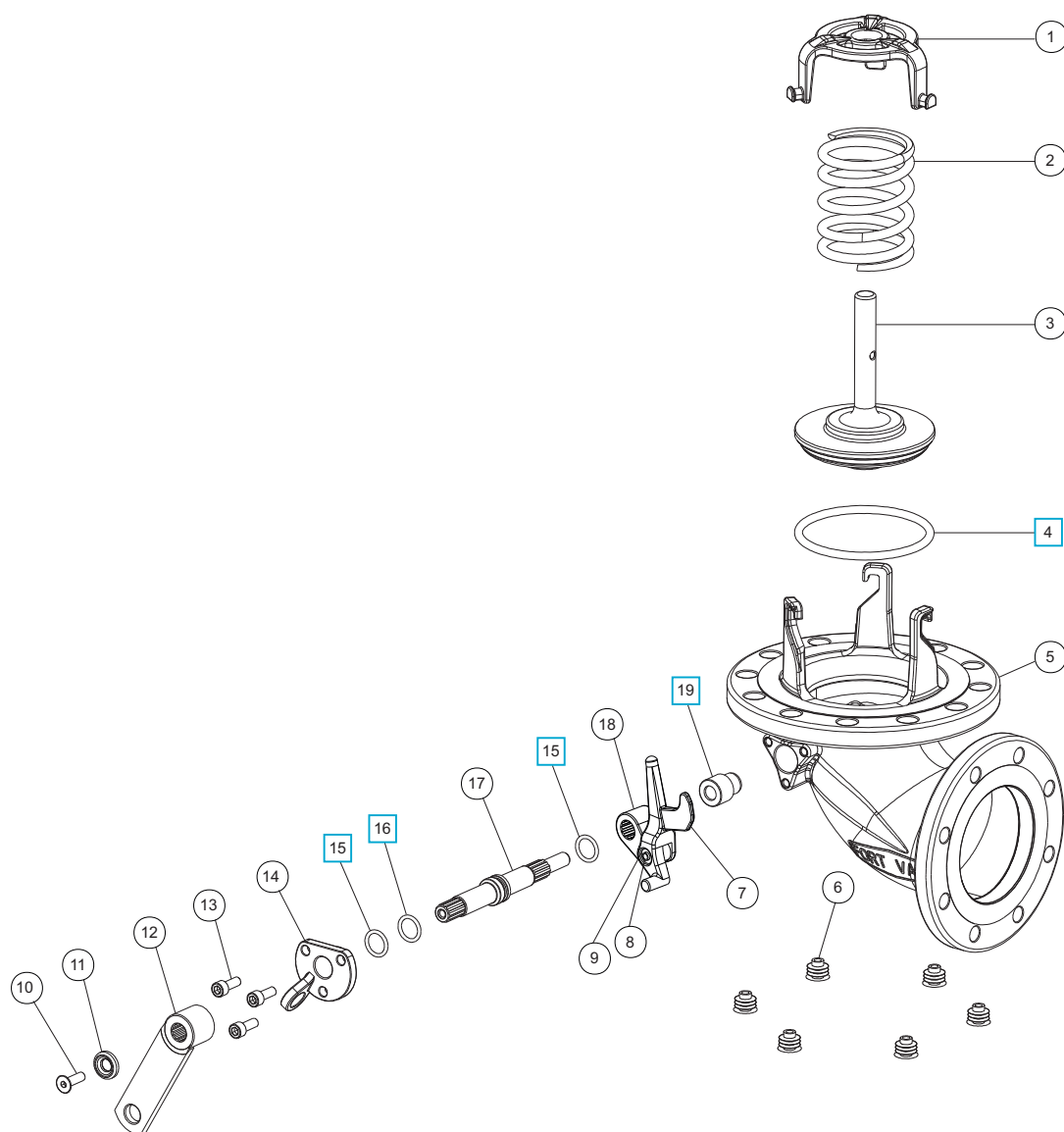
Part Number	Description
11954/S	Tank weld in flange
290/1300	M12 stud kit
5005-016	Tank to footvalve PTFE gasket
299/7116	3" TTMA mating flange
5005-445	Outlet gasket

Fitting Details

Part Number : 28F/0000X



Parts drawing



Item	Description	Part No.
1	Spring top plate	290/6104
2	Closure spring	5104-971
3	Solid poppet	324/2020
4	Fortyt O ring *See Note	5005-104 <input type="checkbox"/>
5	3" to 3" footvalve body assembly	28F/0003
6	Plastic plug (6)	5028-227
7	Lifting finger	821/0056
8	Pivot pin	821/0034
9	Plain washer	5113-015
10	Countersunk bolt	5111-019

Item	Description	Part No.
11	Retaining washer	20370
12	Crank arm	20607
13	Capscrew (3)	5111-017
14	Stuffing clamp	324/1001
15	PTFE O ring (2)	20363 <input type="checkbox"/>
16	Viton O ring	20361 <input type="checkbox"/>
17	Spindle	821/0010
18	Crank block	821/0025
19	Crankshaft end bush	20362 <input type="checkbox"/>

***Note:** Part number varies according to specification.

SEAL KIT

Part number **826/00SK** contains all parts marked ☐



3" 45° Composite Bottom Outlet Assembly - comprising of 3" Cleanflow Footvalve bolted through the 3" Clamped Butterfly valve terminated with a 3" BSP outlet flange. Butterfly valve is left hand operation. Contact parts manufactured in 316 stainless steel with Fortyt main seal to footvalve and PTFE main seal to butterfly valve.

Options - steam heated option. 30° valve available. Replaceable seat option. Fusible kits in line with CFR49 are available upon request.

Specification

Weight	13 Kg
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-20°C to 200°C (-4°F to 392°F)

Design approval by Lloyds Register of Shipping.

To ensure that the tank remains sealed in the event of an accident, the Cleanflow footvalve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Range

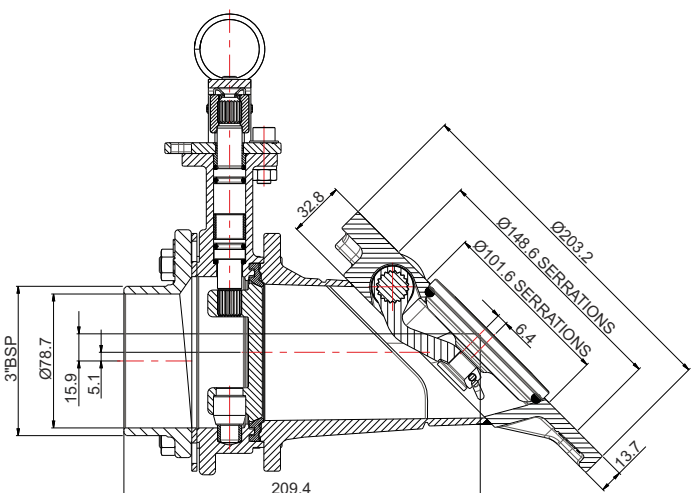
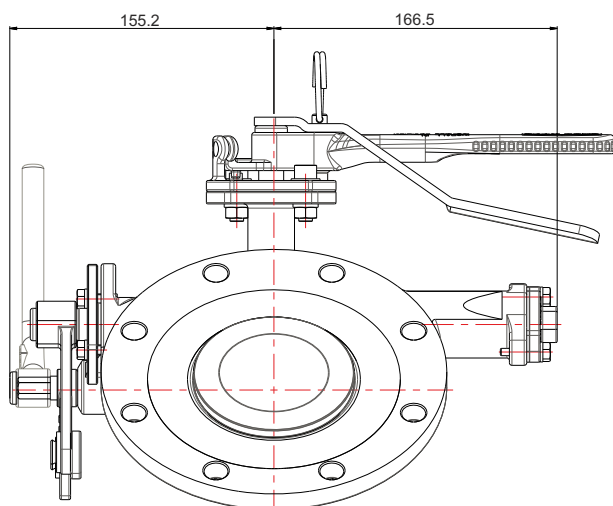
Part No.	Description
845/5000B	45° Cleanflow/butterfly assembly
848/5000B	30° Cleanflow/butterfly assembly
845/5600B	45° Steam heated Cleanflow/butterfly assy
848/5600B	30° Steam heated Cleanflow/butterfly assy

Associated Parts

Part No.	Associated Parts
324/9000	45° tank weld-in pad
324/9030	30° tank weld-in pad
5005-015	CNAF/PTFE gasket
845/2040	Inlet stud kit
10303PS	3" BSP blank cap with PTFE seal
845/0320	Instructional Cleanflow/Butterfly Valve decal

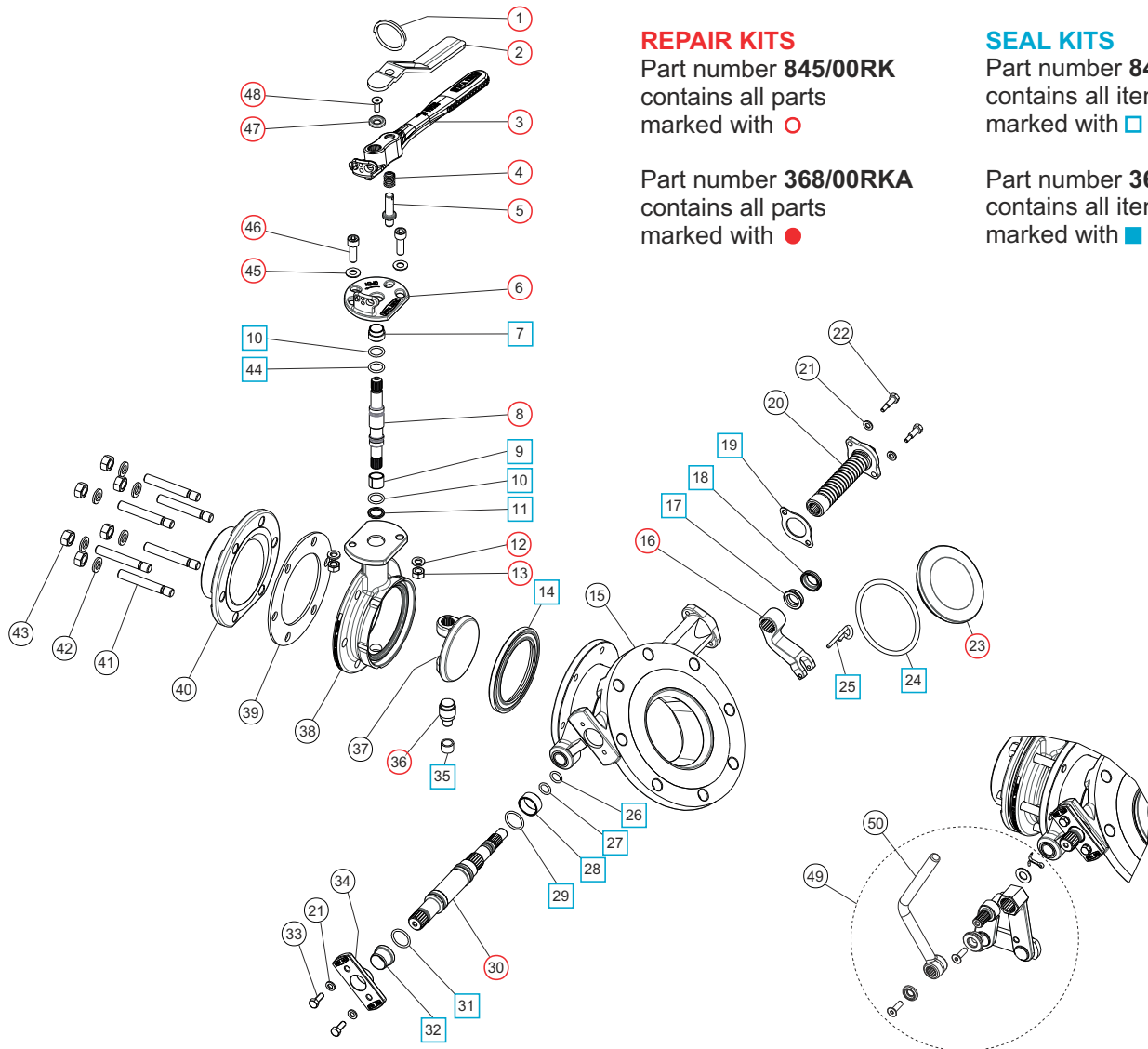
Fitting Details

Part Number : 845/5000B



Parts Drawing

FORT VALE®

**REPAIR KITS**

Part number **845/00RK**
contains all parts
marked with ○

Part number **368/00RKA**
contains all parts
marked with ●

SEAL KITS

Part number **845/00SK**
contains all items
marked with □

Part number **368/00SK**
contains all items
marked with ■

Item	Description	Part No.
1	Split ring	368/0011 ●
2	Handle operating lever	368/9837 ●
3	Handle assembly	368/0050 ●
4	Location pin spring	368/0012 ●
5	Handle location pin	368/0010 ●
6	Stuffing clamp	368/0040 ●
7	Stuffing clamp bush	368/0301 ■●
8	Spindle	368/0200 ●
9	Split bearing	252/0517 ■●
10	PTFE O ring (2)	20363 ■●
11	PTFE spindle seat	368/0009 ■●
12	M8 flat section spring washer (2)	5113-003 ●
13	M8 full nut (2)	5112-001 ●
14	Butterfly valve main seal	368/0002 ■●
15	Cleanflow footvalve body	845/5100
16	Lifting fork	845/0010 ○
17	Bottom seal energiser	845/0063 □○
18	Bottom bush seal	845/0064 □○
19	Spring boss gasket	5005-845 □○
20	Spring assembly	845/0050
21	M6 flat section spring washer (4)	5113-008
22	Clamp screw (2)	845/0017
23	Seal clamp poppet	845/0040 ○
24	Fortyt O ring	5005-104 □○
25	Retaining pin	845/0015 □○

Item	Description	Part No.
26	High temperature Perlast O ring	10133PHT □○
27	PTFE O ring	5005-008 □○
28	Spindle bearing	845/0062 □○
29	Perfluoroelastomer O ring	5005-384 □○
30	Main spindle	845/0200 ○
31	Viton O ring	5005-336 □○
32	Spindle stuffing seal	845/0061 □○
33	Clamp bolt (2)	5111-022
34	Stuffing clamp flange	845/0016
35	Bottom bush	368/0035 ■●
36	Bottom spindle	368/0036 ●
37	Closure plate	368/0400
38	Butterfly valve body	368/0160
39	PTFE outlet gasket	5005-345
40	Outlet flange assembly	368/5130
41	M10 stud (6)	368/5101
42	M10 flat sect. spring washer (6)	5113-002
43	M10 full nut (6)	5112-002
44	Viton O ring	20361 ■●
45	Washer (2)	5113-005 ●
46	M8 x 25mm socket capscrew (2)	5111-148 ●
47	Washer	20370 ●
48	M6 countersunk setscrew	5111-030 ●
49	Handle linkage assembly	324/8910
50	Cleanflow handle	324/8670



3" 45° Composite Bottom Outlet Assembly - comprising of 3" 45° Highlift Footvalve bolted through the 3" Clamped Widdop Butterfly Valve terminated with a 3" BSP eccentric outlet flange with stainless steel cap and PTFE washer. Butterfly Valve is left hand operation. Contact parts manufactured in 316 stainless steel with PTFE/Fortyt main seals.

Options - steam heated version. 30° valve available.

Specification

Weight	11 Kg
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	190°C (374°F)

Design approval by Lloyds Register of Shipping.

*** NB** Weight and dimensions vary according to valve specification.

To ensure that the tank remains sealed in the event of an accident, the Highlift footvalve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Range

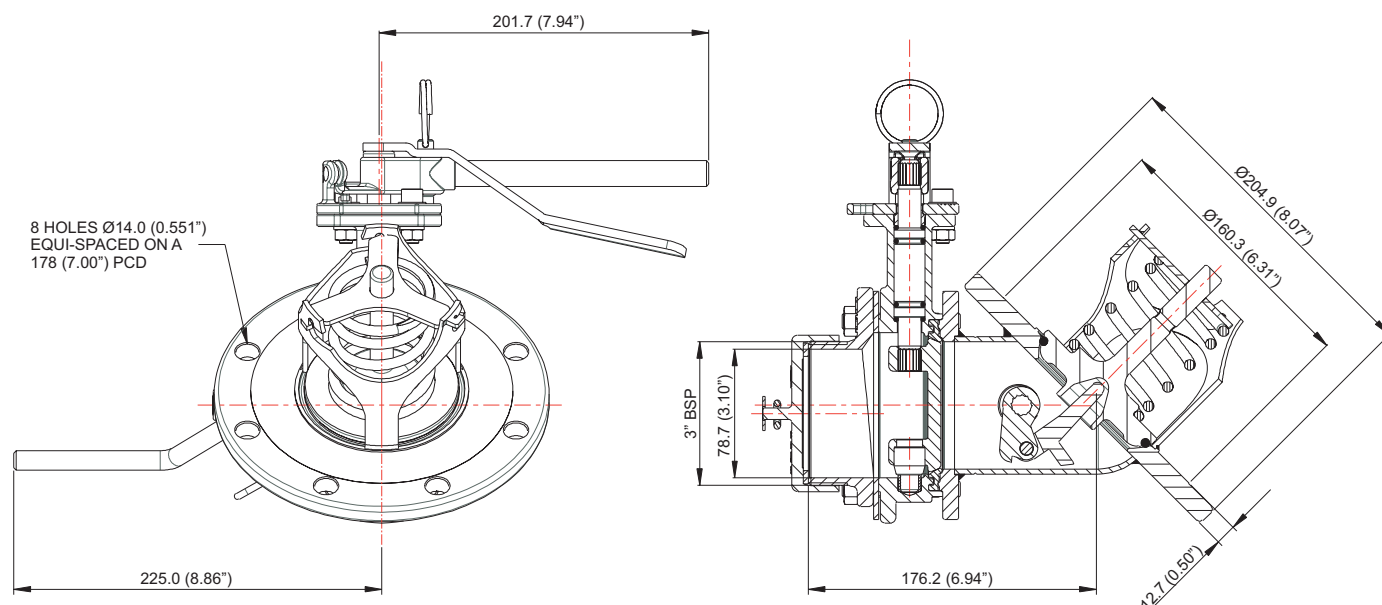
Part No.	Description
826/3680B	Standard 45° composite assembly
826/3680BSH	Steam heated 45° composite assembly
830/3680B	Standard 30° composite assembly
830/3680BSH	Steam heated 30° composite assembly

Associated Parts

Associated Parts	Part No.
Tank pad	324/9000
Stud kit	324/2050
Bolting kit	360/0300
Inlet gasket	5005-015
Outlet gasket	5005-049

Fitting Details

Part Number : 826/3680B

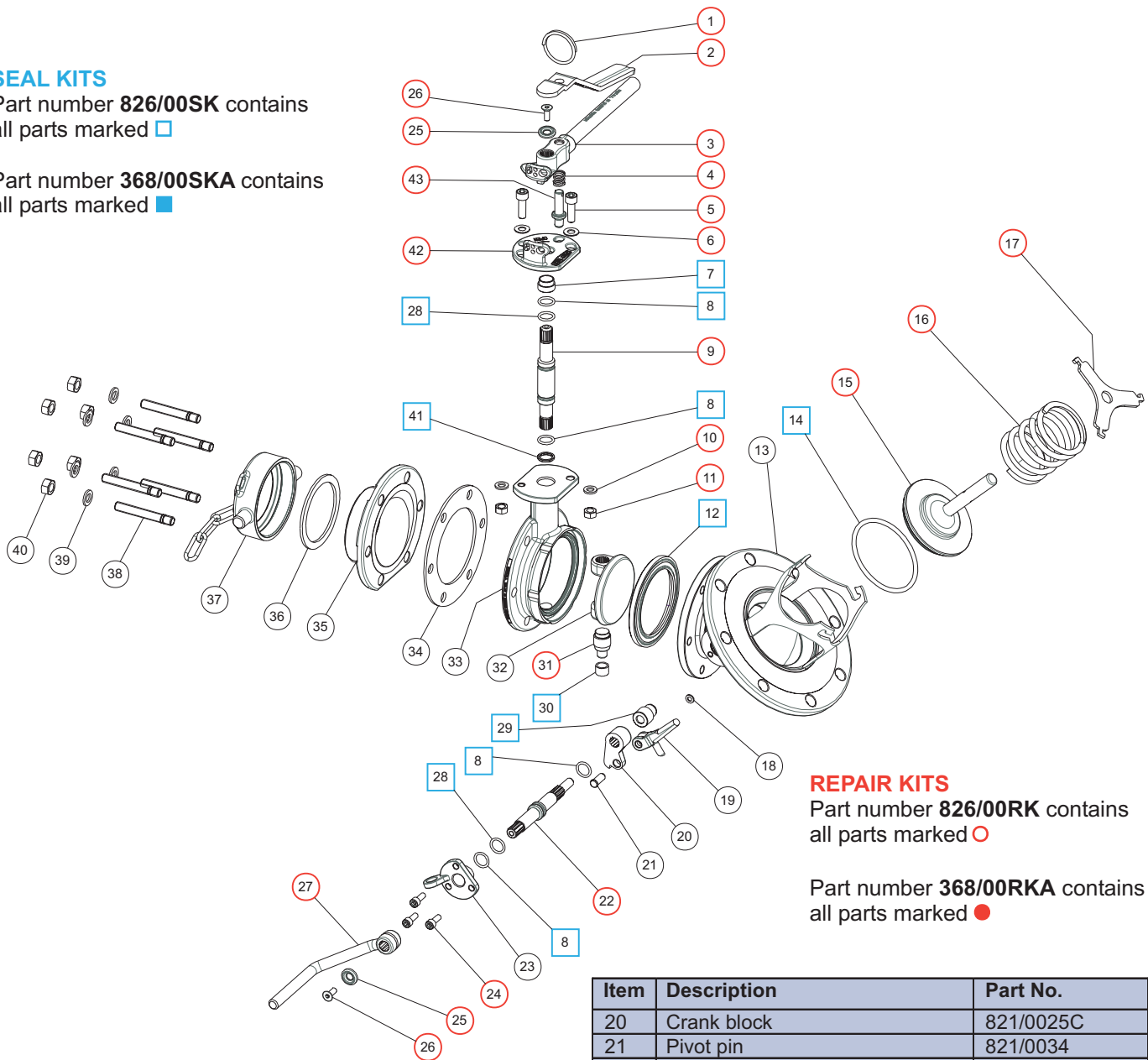


Parts Drawing

SEAL KITS

Part number **826/00SK** contains
all parts marked

Part number **368/00SKA** contains
all parts marked



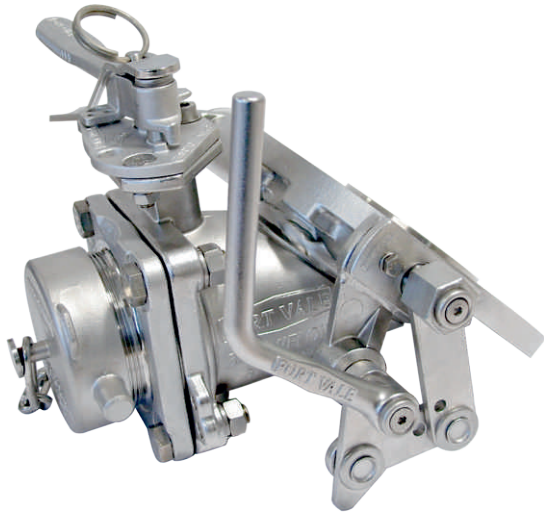
REPAIR KITS

Part number **826/00RK** contains
all parts marked ○

Part number **368/00RKA** contains
all parts marked ●

Item	Description	Part No.
1	Split ring	368/0011 ●
2	Handle operating lever	368/9837 ●
3	Handle assembly	368/0050 ●
4	Location pin spring	368/0012 ●
5	M8 socket capscREW (2)	5111-148 ●
6	M8 plain washer (2)	5113-005 ●
7	Stuffing clamp bush	368/0301 ●
8	PTFE O ring (4)	20363 ●
9	Spindle (butterfly valve)	368/0200 ●
10	M8 flat section spring washer (2)	5113-003 ●
11	M8 full nut (2)	5112-001 ●
12	Main seal (butterfly valve)	368/0002 ●
13	Footvalve body	826/9150
14	Fortyt O ring	5005-104 ○
15	Solid poppet	324/2020 ○
16	Spring	5104-971 ○
17	Bayonet cap	20334/A ○
18	5mm plain washer	5113-015
19	Conrod assembly	821/0033C

Item	Description	Part No.
20	Crank block	821/0025C
21	Pivot pin	821/0034
22	Crankshaft	821/0010 ○
23	Stuffing clamp	324/1001C
24	M6 socket capscREW (3)	5111-017 ○
25	Washer (2)	20370 ○ ●
26	M6 countersunk setscrew (2)	5111-030 ○ ●
27	Handle	330/5010 ○
28	Viton O ring (2)	20361 ○ ●
29	Crankshaft end bush	20362 ○
30	Bottom bush	368/0035 ●
31	Bottom spindle	368/0036 ●
32	Closure plate	368/0400
33	Butterfly body	368/0160
34	PTFE outlet gasket	5005-345
35	Outlet flange	368/5130
36	PTFE cap seal	10329P
37	3" BSP blank cap	10303SS
38	M10 stud (6)	368/5101
39	M10 flat section spring washer (6)	5113-002
40	M10 full nut (6)	5112-002
41	PTFE spindle seat	368/0009 ●
42	Stuffing clamp	368/0040 ●
43	Handle location pin	368/0010 ●



3" 45° Uniflow Bottom Discharge Assembly - comprising 3" 45° Cleanflow footvalve, inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD; footvalve body incorporates integral 3" butterfly valve terminating with 3" BSP spigot and stainless steel blank cap. Unique "CLEAN" position of butterfly valve closure plate allows for in-situ CIP without removal of the valve assembly from the tank. Manufactured in 316 stainless steel with Forty main seal to footvalve and PTFE main seal to butterfly valve and cap.

Options - Available with high nickel alloy seating area to Footvalve. Steam heating option. 3" 30° Uniflow bottom discharge assembly available.

Specification

Weight	12.5 Kg * See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-40°C to +200°C (-40°F to +392°F)

* **NB** Weight and dimensions vary according to valve specification

Design approval by Lloyds Register of Shipping.
Approved to BS EN14433 & EN14432.

I Operating Instructions available - OPIN28.

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Range

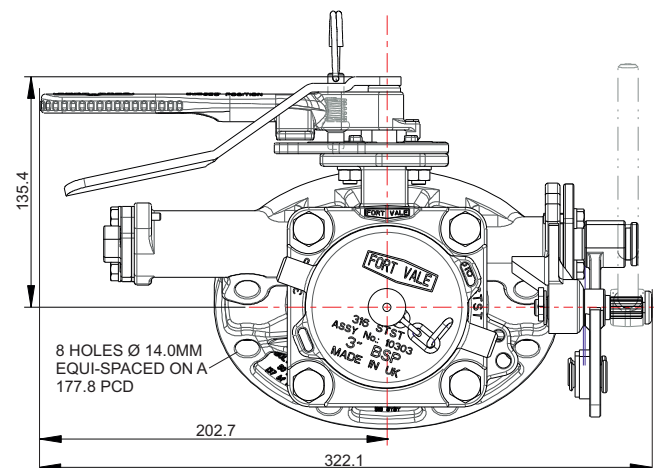
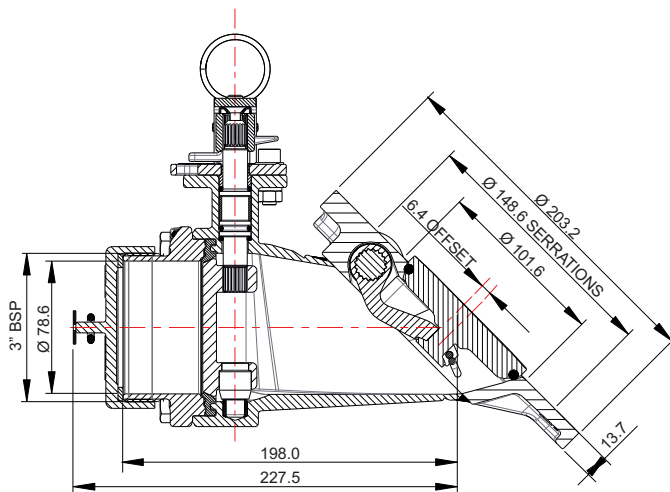
Part No.	Description
806/4000	3" 45° standard assembly with 3" BSP outlet
806/4000HS	As 806/4000 with high nickel alloy seating area to Footvalve
807/4000	3" 30° standard assembly with 3" BSP outlet

Associated Parts

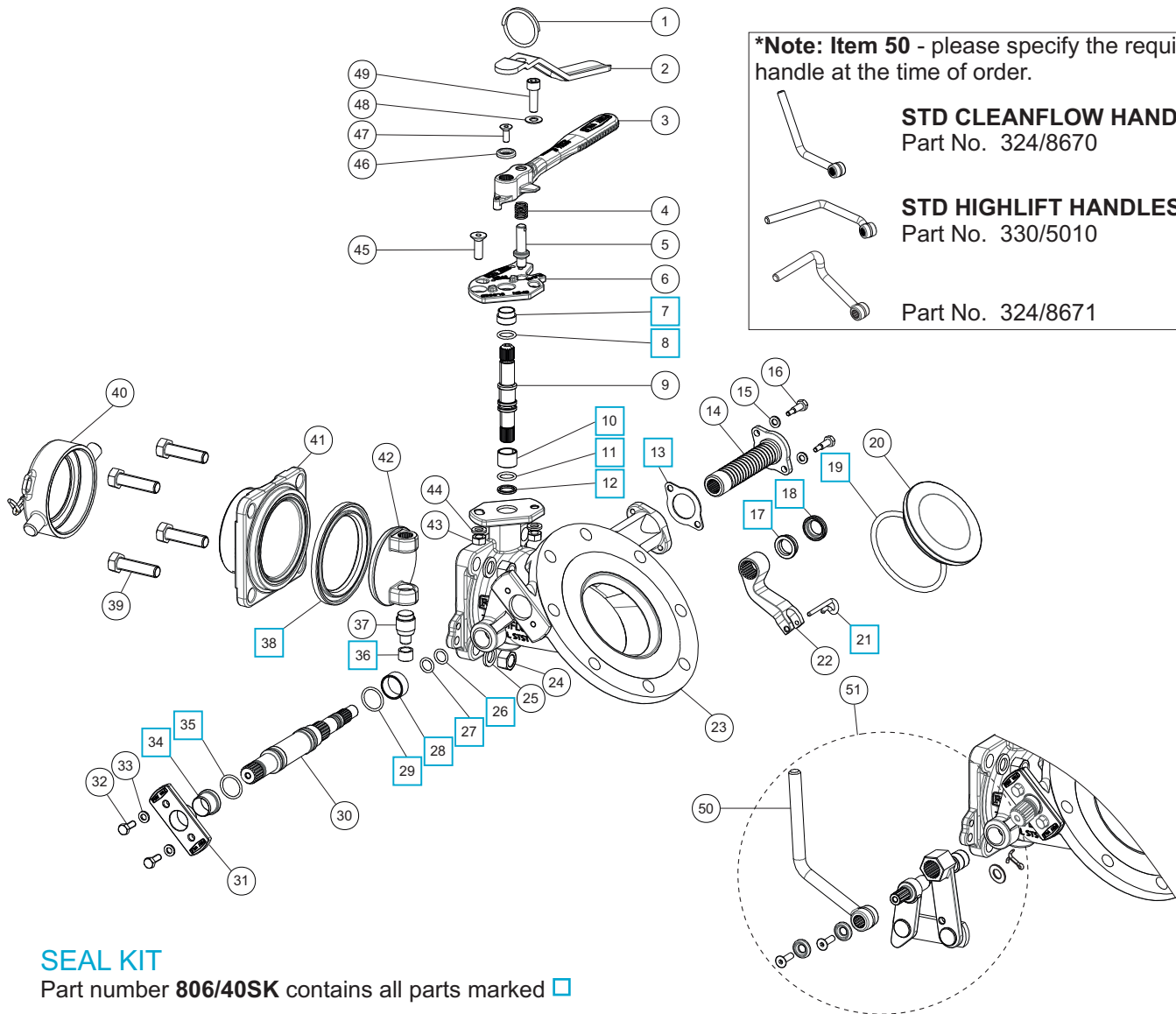
Associated Parts	Part No.
Tank pad	324/9000
Stud kit	845/2040
Inlet gasket – 8 hole	5005-015
3" BSP Blank cap with PTFE washer	10303PS1
Self-adhesive decal	326/0303

Fitting Details

Example Shown : 806/4000



Parts drawing

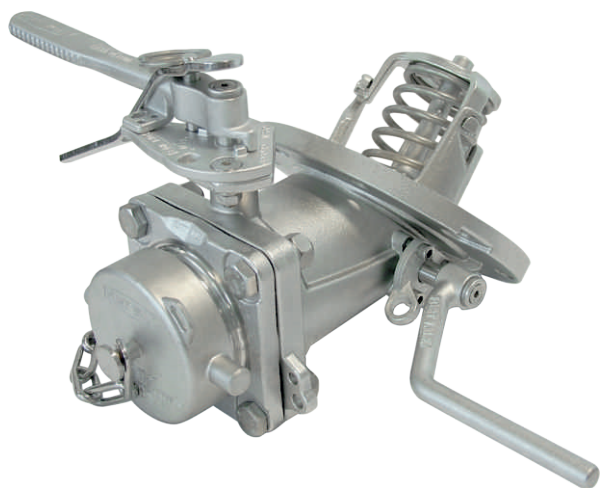


SEAL KIT

Part number **806/40SK** contains all parts marked ☐

Item	Description	Part No.
1	Split ring	368/0011
2	Handle lever	368/9837
3	Butterfly valve handle	368/0057
4	Handle location spring	368/0012
5	Handle locator pin	368/0010
6	Stuffing clamp	368/0047
7	Stuffing clamp bush	368/0301 <input type="checkbox"/>
8	PTFE O ring	20363 <input type="checkbox"/>
9	Spindle	368/0201
10	Split bearing	252/0517 <input type="checkbox"/>
11	Viton O ring	20361 <input type="checkbox"/>
12	PTFE spindle seat	368/0009 <input type="checkbox"/>
13	Spring boss gasket	5005-845 <input type="checkbox"/>
14	Spring assembly	845/0050
15	Spring washer (2)	5113-008
16	Clamp screw (2)	845/0017
17	Seal energizer	845/0063 <input type="checkbox"/>
18	Bush seal	845/0064 <input type="checkbox"/>
19	Fortyt O ring	5005-104 <input type="checkbox"/>
20	Poppet	845/0040
21	Retaining pin	845/0015 <input type="checkbox"/>
22	Lifting fork	845/0010
23	Body	845/1107
24	M12 full nut (4)	5112-006
25	M12 spring washer (4)	5113-010
26	Perfluoroelastomer O ring	10133PHT <input type="checkbox"/>

Item	Description	Part No.
27	PTFE O ring	5005-008 <input type="checkbox"/>
28	Spindle bearing	845/0062 <input type="checkbox"/>
29	Perlast O ring	5005-384 <input type="checkbox"/>
30	Spindle	845/0200
31	Stuffing clamp	845/0016
32	Clamp bolt (2)	5111-022
33	Spring washer (2)	5113-008
34	Stuffing seal	845/0061 <input type="checkbox"/>
35	Viton O ring	5005-336 <input type="checkbox"/>
36	PTFE bottom bush	368/0035 <input type="checkbox"/>
37	Bottom spindle	368/0036
38	PTFE butterfly valve main seal	368/0002 <input type="checkbox"/>
39	M12 hex bolt (4)	5111-023
40	3" BSP cap with chain & washer	10303PS1
41	Outlet flange	368/5129
42	Closure plate	368/0400
43	M8 full nut (2)	5112-001
44	M8 spring washer (2)	5113-003
45	M8 countersunk bolt	5111-085
46	Retaining washer	20370
47	M6 setscrew	5111-030
48	M8 plain washer	5113-005
49	M8 cap screw	5111-148
50	Handle – See illustrations above	*See Note
51	Handle linkage assembly	324/8910



3" Univalve Bottom Discharge Assembly - comprising of 3" 45° Highlift footvalve, inlet flange drilled 8 x 14mm holes equi-spaced on a 178mm PCD. Footvalve body incorporates integral 3" butterfly valve terminating with 3" BSP spigot and stainless steel blank cap. Unique "CLEAN" position of butterfly valve closure plate allows for in-situ CIP without removal of the valve assembly from the tank. Manufactured in 316 stainless steel with Forty main seal to footvalve and PTFE main seal to butterfly valve and cap.

Options - Available with high nickel alloy seating area to Footvalve. Flanged outlet version (drilled 3"BSTD/3"ASA 150/DIN80 PN40). 3" Camlock outlet version.

Specification

Weight	12.2 Kg * See note
Design Pressure (MAWP)	4 Bar (58 PSI)
Test Pressure	6 Bar (87 PSI)
Design Temperature	-55°C to +200°C (-67°F to +392°F)

* **NB** Weight and dimensions vary according to valve specification

To ensure that the tank remains sealed in the event of an accident, the valve body incorporates a shear groove, designed to fail in such a way as to leave the internal part of the valve closed and attached to the tank body.

Design approval by Lloyds Register of Shipping.
Approved to BS EN14433 & EN14432

Range

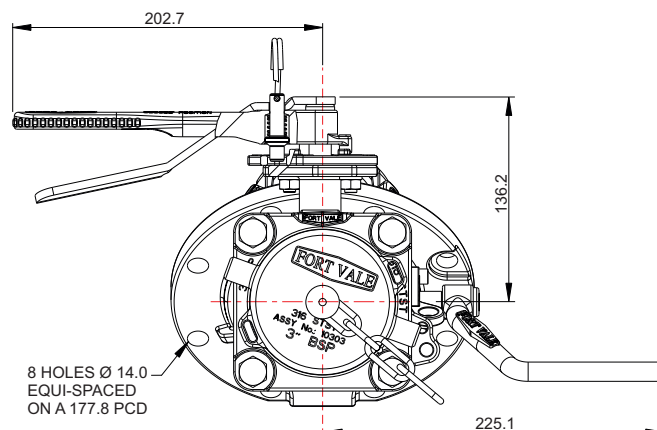
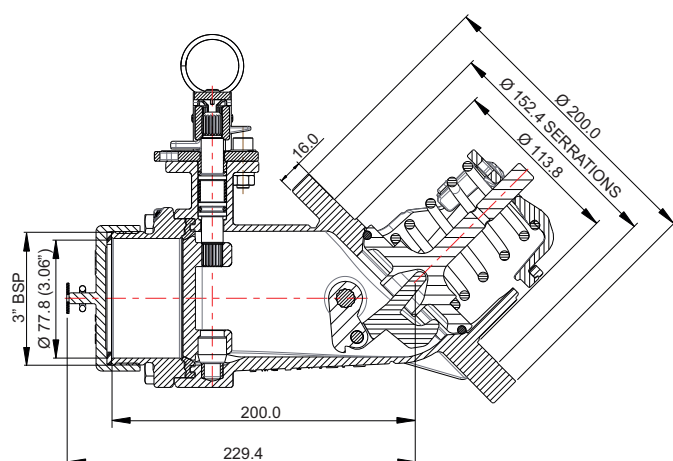
Part No.	Description
804/4000A	Standard assembly with 3" BSP outlet
804/4000AHS	As 804/4000A with high nickel alloy seating area to Footvalve
804/4010A	Flanged outlet – 3"BSTD/3"ASA150/DIN80 PN40
804/4020A	3" Camlock outlet with Camlock cap

Associated Parts

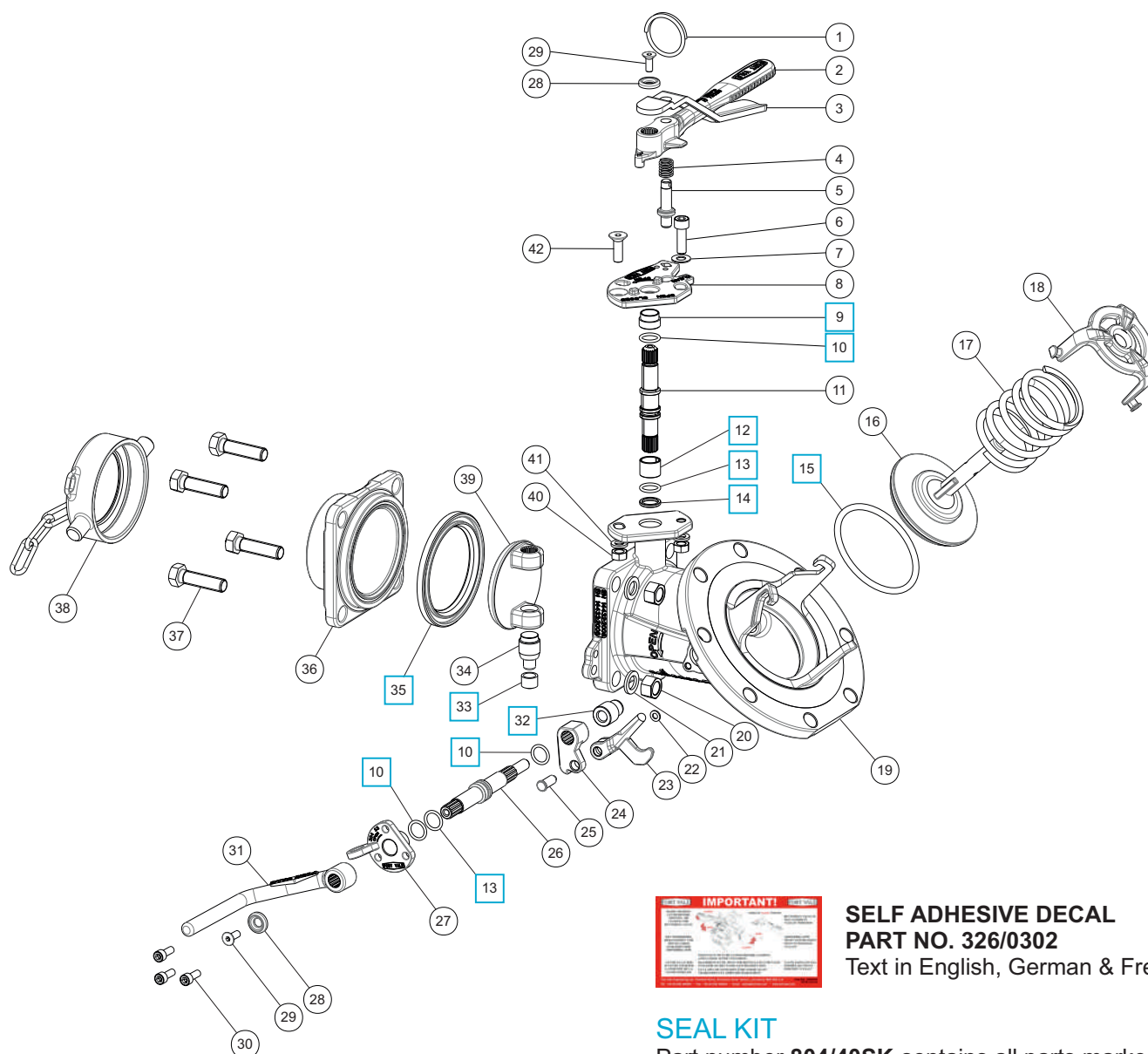
Associated Parts	Part No.
Tank pad	324/9000
Stud kit	324/2070
Inlet gasket – 8 hole	5005-015
3" BSP Blank cap with PTFE washer	10303PS

Fitting Details

Example Shown : 804/4000A



Parts drawing

**SELF ADHESIVE DECAL
PART NO. 326/0302**

Text in English, German & French

SEAL KITPart number **804/40SK** contains all parts marked

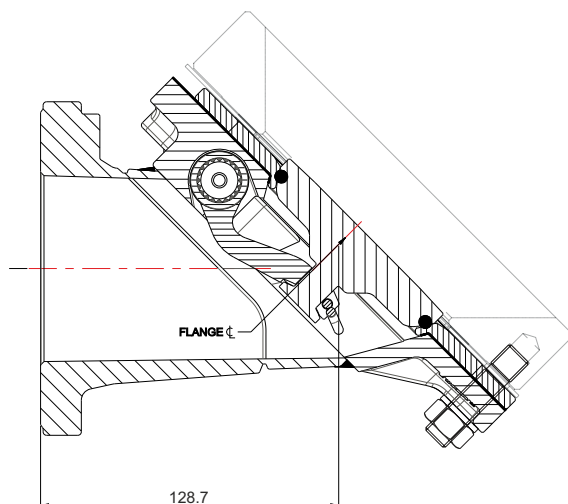
Item	Description	Part No.
1	Split ring	368/0011
2	Butterfly valve handle	368/0057
3	Handle lever	368/9837
4	Handle location spring	368/0012
5	Handle locator pin	368/0010
6	M8 cap screw	5111-148
7	M8 plain washer	5113-005
8	Stuffing clamp	368/0047
9	Stuffing clamp bush	368/0301
10	PTFE O ring (3)	20363
11	Spindle	368/0201
12	Split bearing	252/0517
13	Viton O ring (2)	20361
14	PTFE spindle seat	368/0009
15	Fortyt footvalve main O ring	5005-104
16	Poppet	324/2020
17	Closure spring	5104-971
18	Spring top plate	290/6104
19	Body assembly	826/1252A
20	M12 full nut (4)	5112-006
21	M12 spring washer (4)	5113-010

Item	Description	Part No.
22	5mm plain washer	5113-015
23	Lifting finger	821/0033
24	Crank block	821/0025
25	Pivot pin	821/0034
26	Spindle	821/0010
27	Stuffing clamp	324/1001
28	Retaining washer (2)	20370
29	M6 bolt (2)	5111-030
30	M6 cap screw (3)	5111-017
31	Footvalve handle	330/5010
32	PTFE crankshaft end bush	20362
33	PTFE bottom bush	368/0035
34	Bottom spindle	368/0036
35	PTFE Butterfly valve main seal	368/0002
36	Outlet flange	368/5129
37	M12 hex bolt (4)	5111-023
38	3" BSP cap with chain & washer	10303PS1
39	Closure plate	368/0400
40	M8 full nut (2)	5112-001
41	M8 spring washer (2)	5113-003
42	M8 countersunk bolt	5111-085



Parts Drawing

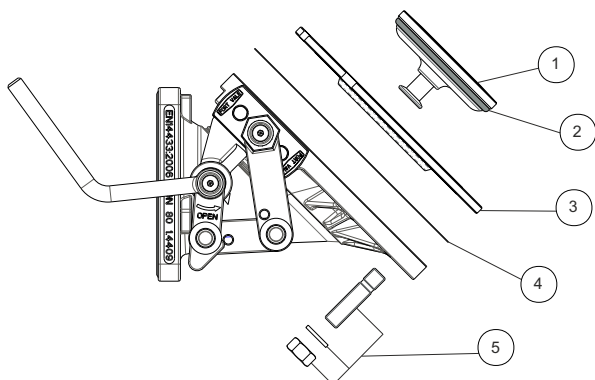
Part no. **845/16RXX**
 Replaceable Seat 3" 45° Cleanflow Footvalve
 (Part no. varies depending upon seating flange material)
 Approved to BS EN14433.



N.B. Above dimension is for a standard 45° valve and will vary according to valve specification

Fitting details









Conversion Kit part number **845/16CKX** comprises the following components :



A NEW SOLUTION TO AN OLD PROBLEM !

Fort Vale has developed a revolutionary version of its reliable and widely respected Cleanflow footvalve. We recognise the rigours of the transportable liquids industry and the importance of safety and reliability as well as cleanliness. Perhaps the most important area of any footvalve is the seating flange and this has been the focus of our developments. The cost consequences of footvalve seat corrosion or damage can be dramatically reduced by investing in the new **"Replaceable Seat Valve"**. Should corrosion or damage occur, or if a change in cargo demands it, just replace the seating flange assembly. It's that simple!

Features

-  Existing standard valves are upgradeable - simply fit valve conversion kit (detailed below)
-  Same conversion kit suitable for all Cleanflow models (i.e. 30°, 45°, 90°, 180°)
-  Seating flange may be manufactured in a range of specialist materials for use with corrosive cargoes e.g. alloy C276, titanium
-  Compatible with existing tank pad and gasket.
-  All internal components, except those listed below, are common to the standard Cleanflow footvalve for complete spares interchangeability.
-  Damaged replaceable seating flange may be more easily re-machined than a complete footvalve body.
-  Facilitates decontamination of heavily soiled valves
-  Both the cost of replacing the damaged part and the simplicity and speed of valve maintenance greatly reduces tank "down-time" and the associated costs and inconvenience.

All of the above, with the same performance, reliability and quality of the existing Cleanflow footvalve design.

Item	Description	Part No.
1	Extended poppet (316 stainless steel)	845/0042
2	Fortyt O ring	5005-104
3	Seating flange *See note	845/0090X
4	PTFE gasket	5005-829
5	Stud kit	845/2055

* **NB** Seating flange part number varies according to the material of manufacture

Please contact our Sales team for more detailed information

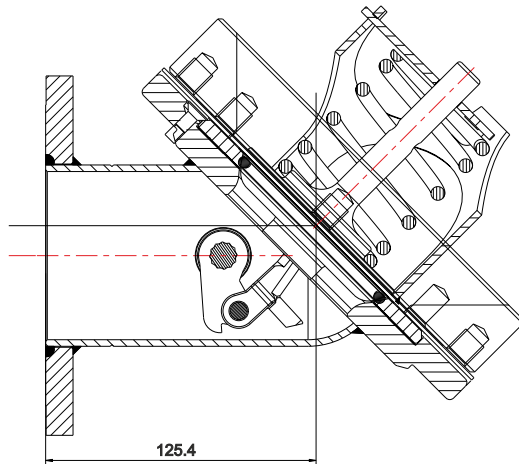
IMPORTANT NOTE : When fitted with the replaceable seat, the Footvalve will protrude an extra 4.8mm and the outlet centre line will be 4.8mm lower than that of a standard Footvalve.

A NEW SOLUTION TO AN OLD PROBLEM !



Parts Drawing

Example shown : Replaceable Seat 3" Highlift Footvalve
Part no. **826/0800X**
(Part no. varies depending upon seating flange material)



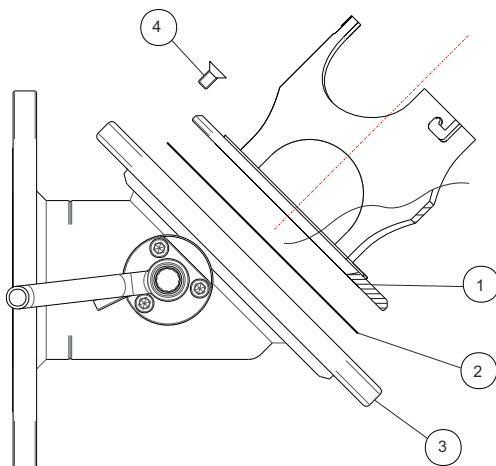
N.B. Above dimension is for a standard 45° valve
and will vary according to valve specification

Features

- FORT VALE** Same seating flange and cage may be fitted to any outlet configuration of replaceable-type Highlift footvalve body (i.e. 30°, 45°, 90°)
- FORT VALE** Seating flange may be manufactured in a range of specialist materials for use with corrosive cargoes e.g. Alloy C276, titanium
- FORT VALE** Compatible with existing tank pad, stud kit and gasket
- FORT VALE** All internal components are common to the standard Highlift footvalve for complete spares interchangeability
- FORT VALE** Damaged replaceable seating flange may be more easily re-machined than a complete footvalve body
- FORT VALE** Facilitates decontamination of heavily soiled valves
- FORT VALE** Both the cost of replacing the damaged part and the simplicity and speed of valve maintenance greatly reduces tank "down-time" and the associated costs and inconvenience.

All of the above, with the same performance, reliability and quality of the existing Highlift footvalve design.

Fitting details



NOTE : INTERNAL PARTS NOT SHOWN

Item	Description	Part No.
1	Seating flange	826/0815X
2	PTFE gasket	5005-828
3	Body assembly	Variable
4	Retaining screw (3)	5111-018

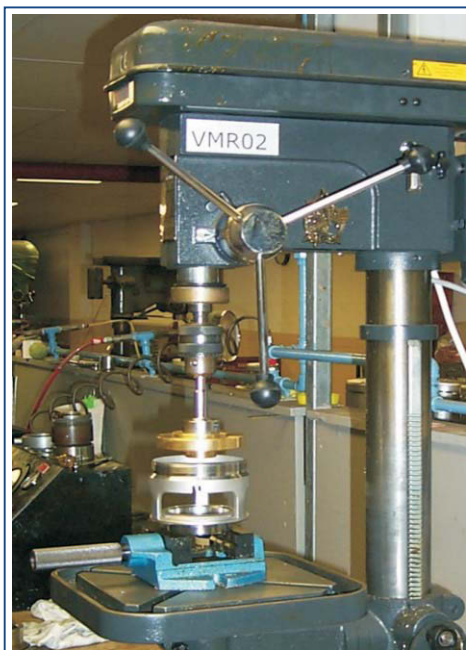
1. Seating flange part number varies according to the material of manufacture, eg 826/0815S indicates 316 stainless steel; 826/0815H indicates Alloy C276
2. The gasket between the seating flange and body assembly is energized as the valve is bolted to the tank flange
3. Body assembly is manufactured in 316 stainless steel
4. 3-off retaining screws secure the replaceable seating flange to the body assembly to simplify fitting to the tank weld-in flange

PLEASE CONTACT OUR SALES TEAM FOR MORE
DETAILED INFORMATION






Extend the life of your valves

The Fort Vale Footvalve & Relief Valve Seat Repair Kit is a quick and efficient way of re-surfacing the sealing faces of the 3" Cleanflow and Highlift footvalves and the 2½" BSP Super Maxi relief valve.

Valve sealing face damage caused by corrosion or ingress of foreign bodies has long been a concern for tank operators and repair depots. Leaking valves cause expensive tank down-time and lead to high re-machining costs - until now.



Part Number : 400/2600

-  Set of rotary seal face forming tools to refurbish the sealing face of the 3" Cleanflow and Highlift footvalves and the 2½" BSP Super Maxi relief valve
-  High performance abrasive grinding and polishing discs give an even finish quickly and efficiently
-  Engineered to fit power tools with ½" chuck
-  Reduction in machining and maintenance costs
-  Comprehensive instruction leaflet included

..... another Fort Vale solution








Spares

Footvalve & Relief Valve Seat Repair Kit, part number 400/2600 consists of the following components :

Part No.	Quantity	Description
400/260L	1	Instruction leaflet (English)
400/2610	1	Box of 100 x 60 grit grinding discs
400/2620	1	Box of 100 x 80 grit grinding discs
400/2630	1	Box of 100 x 180 grit polishing discs
400/2640	1	Box of 100 x 500 grit polishing discs
400/2650	1	Aluminium 'ever-ready' carrying case
400/2439	1	100mm stainless steel tommy bar
400/2441	1	Brass bottom spigot
400/2443	1	3" Highlift footvalve brass seal face forming tool
400/2444	1	90mm stainless steel tommy bar
400/2445	1	Stainless steel spindle body weld assembly
400/2447	1	3" Cleanflow footvalve brass seal face forming tool
400/2448	1	2.5" Super Maxi brass seal face forming tool
400/2449	1	2.5" BSP brass socket

Replacement parts and additional grinding discs are available from Fort Vale group companies or your local Fort Vale Authorised Distributor.

Helpful hints

-  Keep tool spindle at 90 degrees to the work piece during operation.
-  If discs are ripping, reduce speed and pressure.
-  Replace damaged or worn discs immediately.
-  If disc and tool jump out of seat, use 180 or 500 grit discs as backing material between the tool and the working abrasive disc.
-  Operators should find their own comfortable pressures and working speeds, ensuring an even finish is obtained before moving to next finest grit.
-  Use abrasive discs supplied only by Fort Vale. These have been selected specifically for their high performance on valve seat repairs. The use of other abrasive materials may result in damage to the valve or tools.
-  If the seat has been re-charged with a weld fillet, remove excess weld with a miniature die grinder prior to using the seat repair tool.

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