

Tank Valves

The SED Tank Bottom Valve is designed for applications in the aseptic process industry offering a pocket-free interior surface, minimized sump, eliminating entrapment areas and minimizing flow resistance thus reducing the potential for process contamination. The SED tank bottom valve incorporates the same features and performance of a standard diaphragm valve utilizing the same valve components for a flush mounted tank bottom valve or side mounted tank and sample valve.

The tank valve body is machined as standard from solid bar stock material 1.4435/316L ASME BPE and other alloy materials are available according to the specification. The standard design offers one valve port outlet. There are a number of different options available for sampling, sterilization and multi-outlet configurations that are standard in the SED product range of customized solutions.

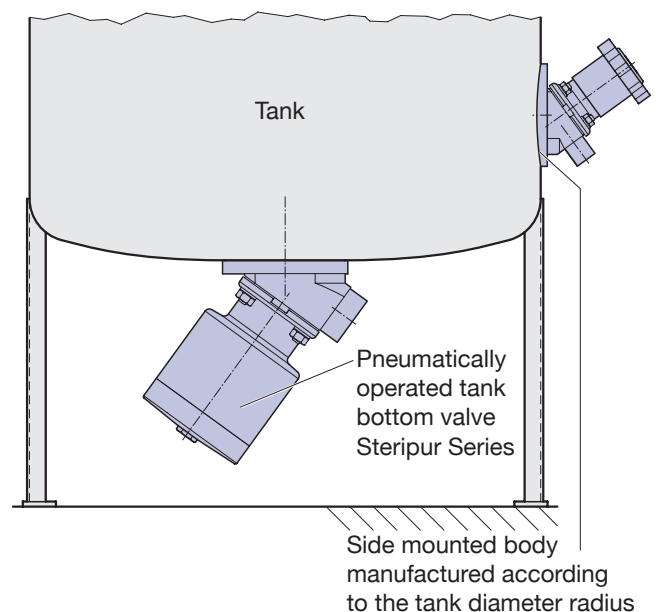
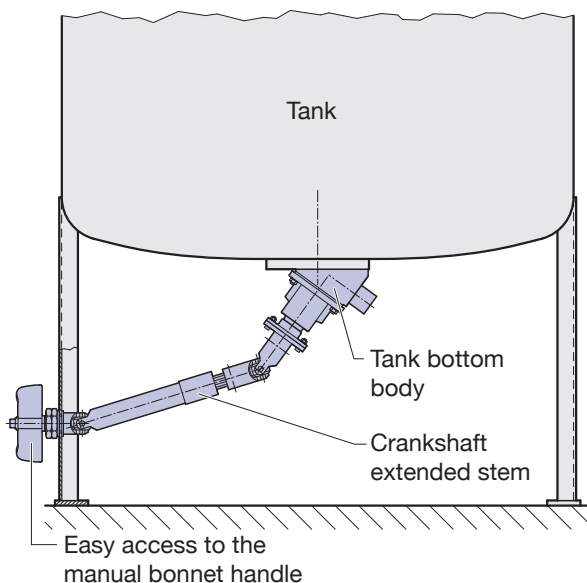
It is preferred to weld in the tank valve directly in the vessel. Mounting the valve directly to the tank minimizes the hold up volume, the most important criteria for this application. If removal of the tank valve from the tank is required, versions are offered with flange or clamp connections. Please consult an SED technical representative for these options.

Tank bottom valves are typically used for tank discharge, draining, sampling, cleaning and/or sterilizing, rinsing and isolation of down stream processing.

The outlet port of the tank valve is available with all butt weld tube end standards (see fold-out page 21), aseptic clamp, screw connection (see page 22 and 23) or other special ends. The size range available is the same as the two-way valve.

Features:

- Tank body machined from a solid bar stock material
- Material 1.4435/316L ASME BPE
- Other alloy options available as specified
- Minimized dead leg and internal sump
- Suitable for mounting with SED Steripur Series and KMA Series Actuation
- Optional manual operation via an extended crankshaft stem



Steripur Series Manual



KMA Series Manual



Steripur Series Pneumatically Operated

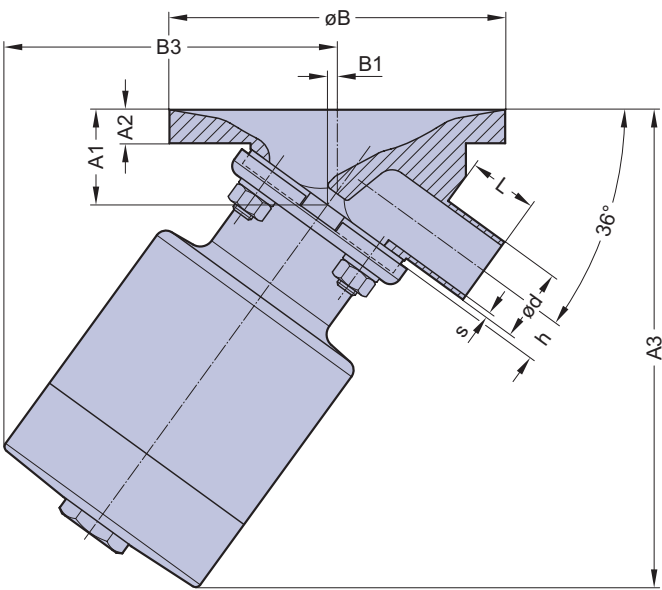


KMA Series Pneumatically Operated

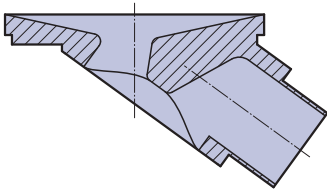


Tank Valves

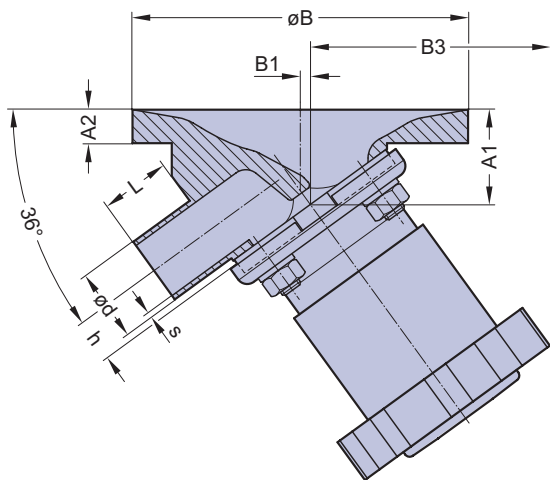
Example:
Drawing Steripur Series pneumatically operated



Common design



Example:
Drawing KMA Series manually operated



Advantages of the SED design:

- minimized hold up volume
- better mixability of media

On request, all dimensional data sheets or 2D and 3D - CAD drawings are available.

These include options for sampling, sterilization, and multi-outlet configurations.

The following two pages show a table of some examples of standard and customized designs of tank diaphragm valves.

Description

Select a tank valve or see page 83 to sketch and specify your solution

P&ID

- Flow direction
- Drain direction
- Valve

Image

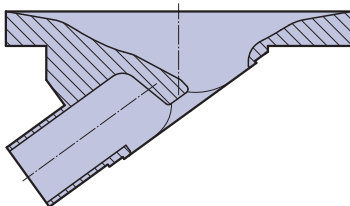
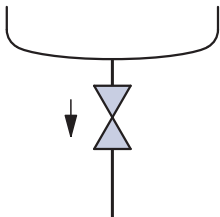
Actuators and other options are included in some of the illustrations

1)

BT

1x Valve port

Standard tank bottom body



Tank Valves

Description

Select a tank valve or see page 81 to sketch and specify your solution

P&ID

→ Flow direction
 → Drain direction
 Valve

Image

Actuators and other options are included in some of the illustrations

2)

1x Valve machined from bar stock

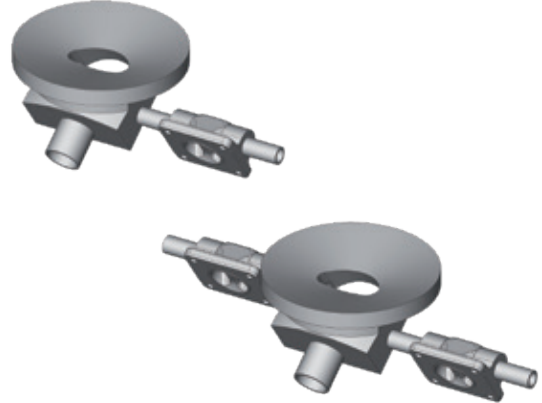
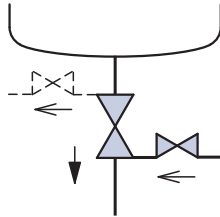
BZL 3/1 with one welded valve tank side left

BZR 3/1 with one welded valve tank side right

BXL 3/1 with one welded valve outlet left

BXR 3/1 with one welded valve outlet right

BW 4/1 with one welded valve tank side left and one welded valve outlet right



For all options the welded valve is rotated into the self draining position and extended to eliminate interference with the tank bottom

3)

BZR 3/2 (Illustration)

1x Main Valve

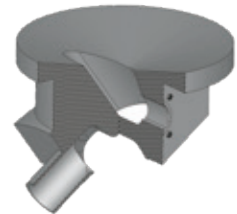
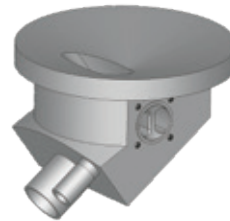
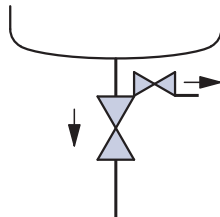
1x Sample valve tank side right

BZL 3/2

1x Main Valve

1x Sample valve tank side left

Like position 2 but includes an integral sample valve tank side. Right side and left side options are available and are fully drainable.



4)

BXL 3/2 (Illustration)

1x Main Valve

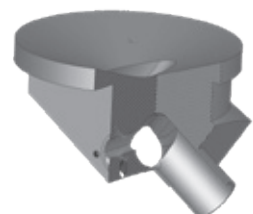
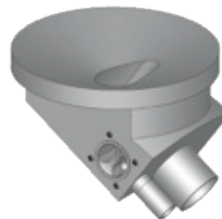
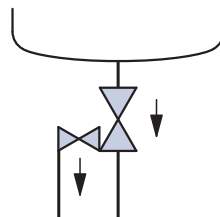
1x Sample valve outlet left

BXR 3/2

1x Main Valve

1x Sample valve outlet right

Like position 2 but includes an integral outlet valve. Right side and left side options are available and are fully drainable.



Description

Select a tank valve or see page 81 to sketch and specify your solution

P&ID

→ Flow direction
 → Drain direction
 Valve

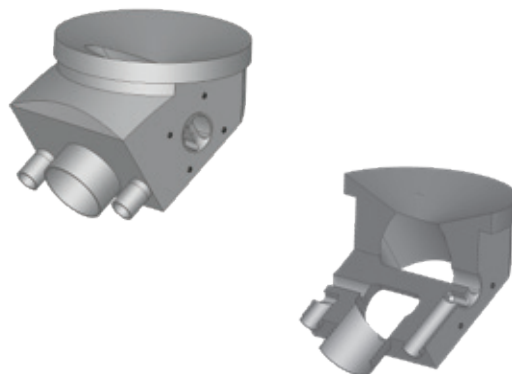
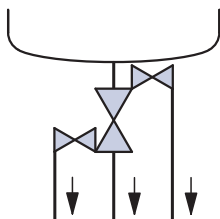
Image

Actuators and other options are included in some of the illustrations

5)

BW 4/3

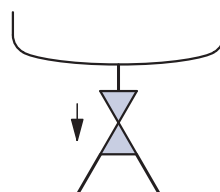
1x Main Valve
 1x Sample valve tank side right
 1x CIP/ SIP cleaning outlet valve left
 Like position 2 but includes integral valves that are fully drainable.



6)

BT 3/1

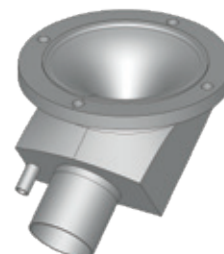
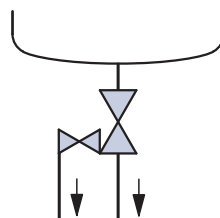
1x Main valve
 2x Outlet port for loop installation or as two access ports



6.5)

BFL

Like position 4, but with flange for dismantling possibility



8)

BU

1x Tank wall side sample valve
 All previous position options are available with the tank side sample valve.
 Machined welding pad to match the radius of the tank diameter.

