

Tank Valve

The 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 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 our product range of customized solutions.

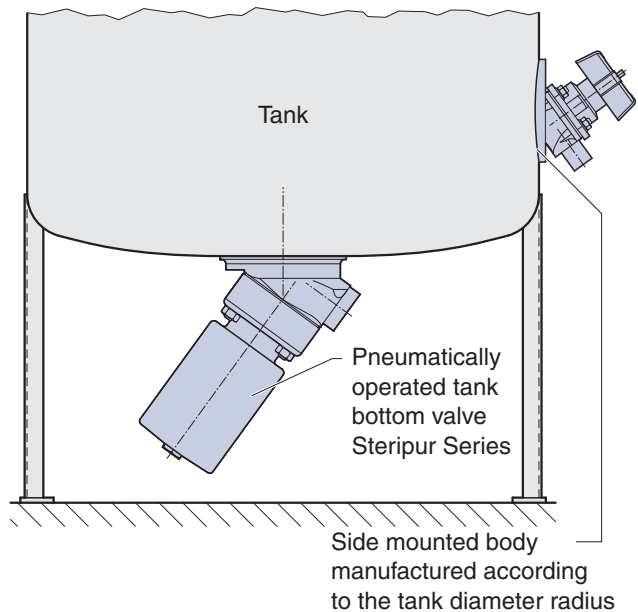
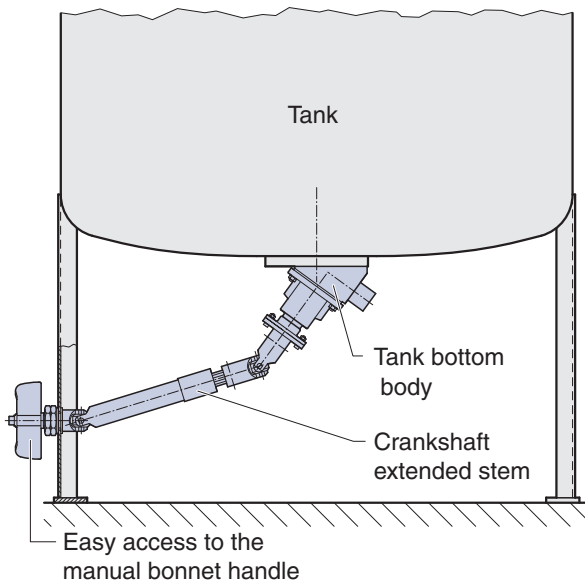
It is preferred to weld in the tank valve directly in the vessel. Mounting the valve directly to the tank minimizes the hold up volume, the most important criteria for this application. If removal of the tank valve from the tank is required, versions are offered with flange or clamp connections. Please contact us 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 13), aseptic clamp, screw connection (see page 14 and 15) 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 Steripur Series and KMA Series Actuation
- Optional manual operation via an extended crankshaft stem



Steripur Series
Manual



KMA Series
Manual



Steripur Series
Pneumatically
Operated

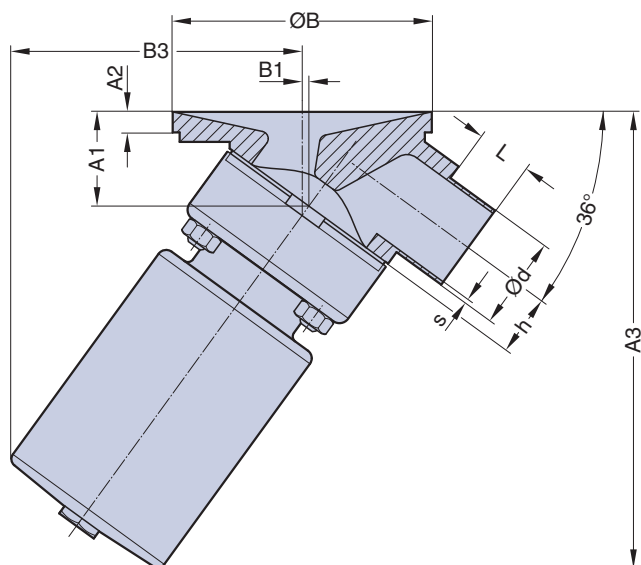


KMA Series
Pneumatically
Operated

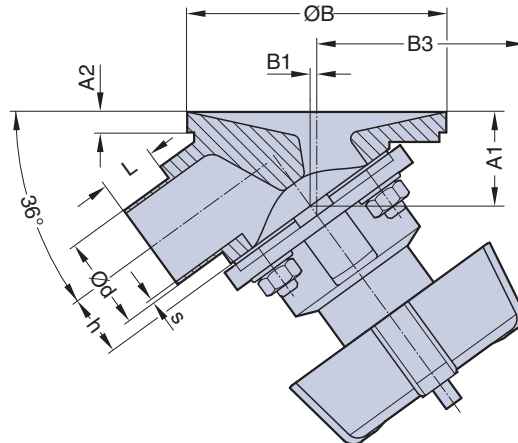


Tank Valve

Example:
Drawing Steripur Series pneumatically operated



Example:
Drawing KMA Series manually operated



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

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

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

Description

Select a tank valve or see page 53 to sketch and specify your solution

P&ID

⇒ Flow direction
→ Drain direction
✕ Valve

Image

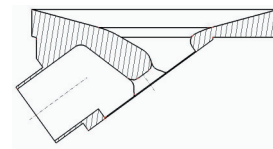
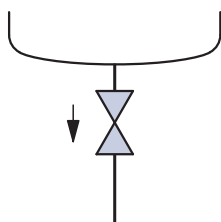
Actuators and other options are included in some of the illustrations

1)

BT

1x Valve port

Standard tank bottom body
Tank body for the tank bottom



2)

1x Valve machined from bar stock

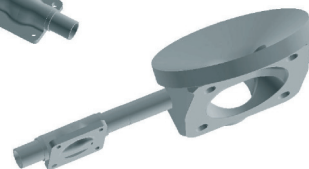
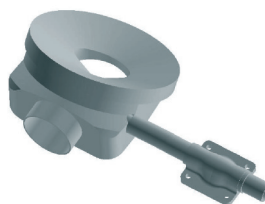
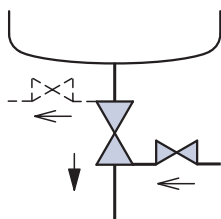
BZL 3/1 with one welded valve tank side left

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

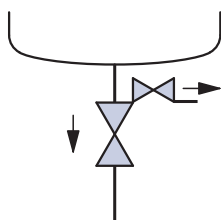
3)

BZR 3/2

1x Main Valve

1x Sample valve tank side right

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



Tank Valve

Description

Select a tank valve or see page 53 to sketch and specify your solution

P&ID

→ Flow direction
 → Drain direction
 Valve

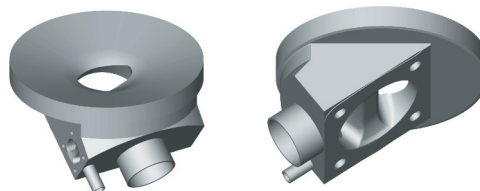
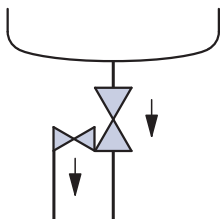
Image

Actuators and other options are included in some of the illustrations

4)

BOXL 3/2

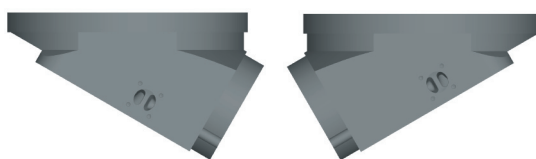
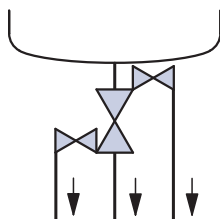
1x Main Valve
 1x Sample valve outlet left
 Like position 2 but includes an integral outlet valve. Right side and left side options are available and are fully drainable.



5)

BW 4/3

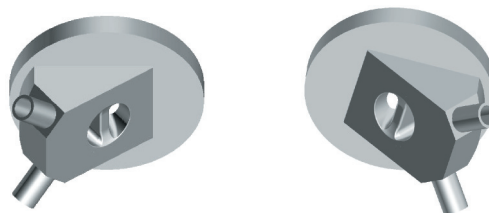
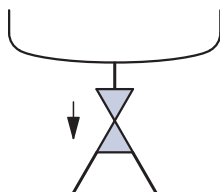
1x Main Valve
 1x Sample valve tank side right
 1x CIP/ SIP cleaning outlet valve left
 Like position 2 but includes integral valves that are fully drainable.



6)

BT 3/1

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

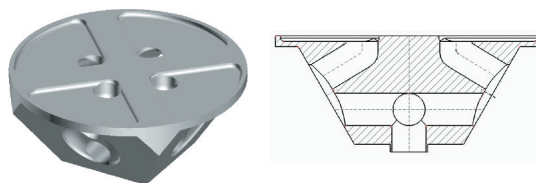
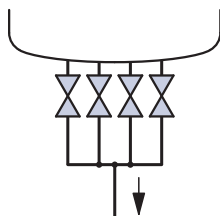


7)

BT 5/4

4x Main valves
 1x Port

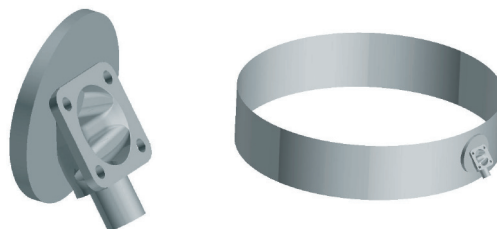
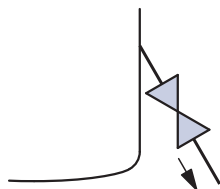
Application with 4 internal tank partitions.



8)

BU

1x Tank 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.



9)

BF

Customized for aseptic modular retainer mounted in aseptic piping installations.

