

CAST BODY, 2-WAY DIAPHRAGM VALVE

Manual or Pneumatically Actuated Cast Body 2-way Valves

Steriflow cast body 2-way valves offer an economical alternative to forged body valves when customer process requirements or specifications allow. Steriflow's manufacturing, assembling, documentation and valve traceability practices remain the same whether the valve is made from 316L cast or forged material.

SPECIFICATIONS AND FEATURES*

Available Sizes:

- » Standard Valve: 1-1/2", 2", 3", 4"

Connection Type:

- » Standard Valve: Tri-clamp, Extended Tube End

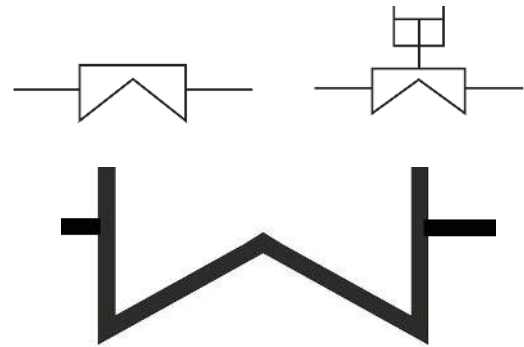
Materials:

- » Standard: Cast 316L, ASTM A351 CF3M

Surface Finish:

- » Wetted Interior:
 - 32 Ra μin (0,81 Ra μm)
 - 32 Ra μin (0,81 Ra μm) Electropolish
 - ASME BPE SF1 20 Ra μin (0,5 Ra μm)
 - ASME BPE SF5 20 Ra μin (0,5 Ra μm) Electropolish
- » Exterior:
 - Standard: As cast, Electropolished

* See page 3&4 for GENERAL FEATURES and GENERAL SPECIFICATIONS regarding features and specifications that apply to all diaphragm valves



APPLICATIONS

Single Valve Manual on/off or Air Actuated Flow Control of Drug Process Additives, Drug Products and Clean Utilities

- » Upstream:
 - Bioreactor/Fermenter: For control of WFI, growth media, intermediate drug product, clean dry air and gas, clean steam and clean utility fluids
 - Perfused Bioreactors: Retentate or permeate fluid control
- » Downstream:
 - For control of WFI, buffers, solvent, intermediate and finished drug product, clean dry air and gas, clean steam, and clean utility fluids in the following production area
 - Separation
 - Filtration
 - Chromatography
 - Formulation
 - Fill Finish
- » Buffer and Media Prep:
 - For control of WFI, buffers, growth media, clean steam and clean utility fluids

ORDERING SCHEMATIC (CAST BODY, 2-WAY DIAPHRAGM VALVE)

| MODEL | TYPE | SIZE | CONNECTION | FINISH | ACTUATION | DIAPHRAGM | ACCESSORIES |
|-------|------|------|------------|--------|-----------|-----------|-------------|
| SFB | | | | | | | |

| 1 | TYPE |
|---|-----------------|
| 1 | Cast Body 2-way |

| 2 | SIZE |
|---|--------|
| 7 | 1-1/2" |
| 8 | 2" |
| A | 3" |
| B | 4" |

| 3 | CONNECTION |
|---|-----------------|
| 1 | OD Tube |
| 2 | Clamp |
| 3 | OD Tube x clamp |
| Z | Non-standard |

| 4 | INTERNAL SURFACE FINISH |
|---|-------------------------------|
| 1 | 20Ra µin (0,5 Ra µm) |
| 2 | 20Ra µin (0,5 Ra µm) EP |
| 3 | 32Ra µin (0,81 Ra µm) |
| 4 | 32Ra µin (0,81 Ra µm) EP |
| Z | Non-standard, consult factory |

| 5 | ACTUATION |
|---|---|
| 1 | Manual |
| 2 | Manual Vented |
| 3 | Spring to Close |
| 4 | Spring to Open |
| 5 | Double Acting |
| 6 | Eclipse, Spring to Close (1/2" - 2" standard) |
| 7 | Eclipse, Spring to Open (1/2" - 2" standard) |

| 6 | DIAPHRAGM |
|---|--------------|
| 1 | EPDM |
| 2 | TFM/EPDM |
| Z | Non-standard |

| 7 | ACCESSORIES |
|---|-------------------------------|
| 1 | Switch 2 Position |
| 2 | Positioner 4-20 mA |
| Z | Non-standard, consult factory |

Please Contact Factory regarding dimensional drawings. All queries are welcome.

SANITARY DIAPHRAGM VALVES

Manual or Air Actuated Forged 2-way or Cast 2-way, Ported and Tandem valves. Barstock Zero Static T-Block, Point of Use T-Block, Divert Tank Bottom and Custom Block Body valves

FEATURES

- » Body & Trim Material: traceable ASME and DIN grade of 316L and Super-Austenitic Stainless Steel and Super Alloys readily available
- » Size Range: 1/4" - 4" (DN8 - DN100)
- » Manual or Air Actuated
- » Surface Finish:
 - Wetted Interior: ASME BBE SF5 20 Ra μ m (0.5 Ra μ m). Electropolish standard, SF4 and better finish available
 - Exterior: See individual model specifications
- » Diaphragm: All FDA, FDA/USP <88>, <87> Class VI, ADI-TSE Free
 - TFM/EPDM Backer
 - EPDM - Peroxide Cured

DOCUMENTATION



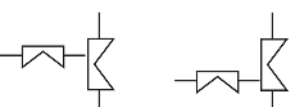
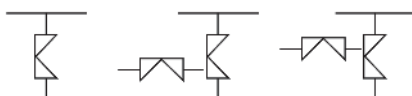
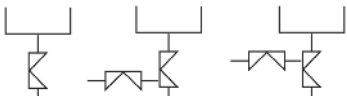
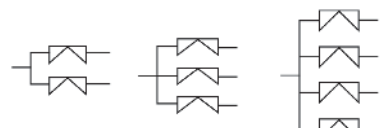

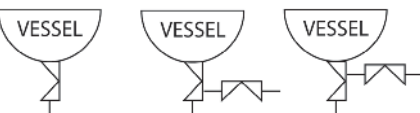
- » Steriflow Unicert; Certificate of Compliance for:
 - Material, including MTR's
 - Surface Finish
 - FDA/USP <88>, <87> Class VI
 - ADI/TSE Free cert available upon request
- » Each Unicert document lists the order's individual valve Serial/Suffix numbers and wetted component Heat numbers. MTR's for each Heat number follow on attached pages. The Serial numbers and Heat numbers are directly traceable to each individual valve
- » Valve Sizing information with quotation
- » Signed valve Leak Test report upon request

CERTIFICATION

- » CRN No.: 0C22893.5



VALVE TYPE BY APPLICATION

- » 2 - Ways 
- » Ported 
- » Tandem Access 
- » Zero Static T-Block 
- » Zero Static POU 
- » Divert Block 
- » Custom Blocks 
- » Tank Bottom 

GENERAL VALVE SPECIFICATIONS*

Line Size: 1/4" - 4" (DN8 - DN100)

End Connections: ASME BPE, DIN, ISO, Contact Factory

- » Tri-Clamp
- » Tube Weld End

Body Materials

- » Forgings: EN 10272:2000 GR 1.4435 316L standard
- » Bar Stock: ASME SA479 316L (UNS 31603) standard; EN 10272:2000 GR 1.4435, AL-6XN®, Hastelloy® C-22 and others readily available options

Diaphragm Material/Max Temperature: all diaphragms are FDA, USP <88> Class VI and <87> compliant and ADI-free

- » TFM/EPDM Backer / -14°F to 266°F (-26°C to 130°C) ≤300°F (150°C) at 50 psig (3,45 barg) max during SIP
- » EPDM Peroxide Cured / -14°F to 266°F (-26°C to 130°C) ≤300°F (150°C) at 50 psig (3,45 barg) max during SIP

Surface Finish: see individual valve specifications

Pressure at Maximum Temperature: 50 psig @ 300°F (3,45 barg @ 150°C)

Maximum Operating Pressure:

- » 1/4" - 1": 200 psi @ 100°F (13,8 bar @ 38°C)
- » 1-1/2" - 2": 175 psi @ 100°F (12,1 bar @ 38°C)
- » 2-1/2" - 4": 150 psi @ 100°F (10,3 bar @ 38°C)

Seat Leakage: ANSI FCI Class VI

FLOW COEFFICIENT CV (KV)

| CONNECTION SIZE | VALVE DESCRIPTION | FLOW COEFFICIENT CV (KV) |
|-----------------|---|--------------------------|
| 1/4" - 1/2" | Compact valve/weir | 1.16 (1,0) |
| 1/2" | Any standard forged, barstock or cast body valve with catalog standard weir | 5.2 (4,5) |
| 3/4" | | 8.7 (7,52) |
| 1" | | 13.9 (12,02) |
| 1-1/2" | | 34.8 (30,1) |
| 2" | | 59.7 (51,6) |
| 3" | | 185 (160) |
| 4" | | 272 (235) |

BONNET/ACTUATOR SPECIFICATIONS*

Manual Bonnet Assembly:

- » Available for valve sizes: 1/2" - 4" (DN15 - DN100)
- » Closing Stop: Adjustable
- » Bright visual position indicator
- » Options: Contact factory for proximity switches, locking devices and stroke limiter

Bonnet Materials

- » Bonnet: Electropolished Stainless Steel
- » Compressor: Stainless Steel
- » Insert: Brass
- » Thrust Washer: PTFE
- » Compressor Pin: Stainless Steel
- » Indicator: Polyolefin
- » Bushing: Brass
- » Stem: Stainless Steel
- » Handwheel: PPS (1/4" - 2"); Stainless Steel (2-1/2" - 4")

Air Actuated Bonnets:

- » Available for sizes: 1/2" - 2" (DN15 - DN50) standard; 3" & 4" (DN80 & DN100) optional
- » Air Actuator Materials: Polyamide, Stainless Steel, Stainless Steel base standard for all configurations
- » Actuator Seal: Actuator springs and seals can be replaced without exposing process
- » Orientation: Swivel feature allows 360° orientation of air inlet
- » Air Connections: NPT Stainless Steel base standard for all configurations
- » Function: Change from Normally Open or Normally Closed by inverting the actuator housing
- » Control System Interface: Available with optional switch packages for on/off control or with positioners for flow control and modulation

* Most valves meet all of these general features and specifications. However, sizes may vary depending upon product selected. See individual product page for specific details about each model.