

CUSTOM BLOCK BODY VALVES, CLUSTERS

Manual or Pneumatically Actuated Custom Barstock Valves and Valve Clusters

Block valves evolved in this industry for a good reason. They transformed what used to be large multiple valve and tubing assemblies into a smaller, compact block valve that reduced process contact surface area, dead legs and hold up volume. Steriflow will custom design valves specifically for your process requirements using our rapid prototype process.

SPECIFICATIONS AND FEATURES*

Available Sizes:

- » Standard Valve: 1/2" - 3" (DN15 - DN80)

Connection Type:

- » Tri-clamp, Extended Tube End, Custom including Hose Barb

Materials:

- » Standard: Barstock, ASME SA479 316L (UNS 31603) or EN 10272:2000 GR 1.4435
- » Optional: AL-6XN®, Hastelloy® C-22 and others readily available

Surface Finish:

- » Wetted Interior:
 - Standard:
 - ASME BPE SF1, 20 Ra μm (0,5 Ra μm)
 - ASME BPE SF5, 20 Ra μm (0,5 Ra μm) Electropolish
 - Optional:
 - ASME BPE SF4, 15 Ra μm (0,4 Ra μm) Electropolish. Better finish upon request.
- » Exterior:
 - Standard: 40 Ra μm (1,0 Ra μm) and better upon request

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



APPLICATIONS

Multiple Wier Manual on/off or Air Actuated block valves or block valve clusters for diversion of Drug Process, Media Buffers, Clean Utilities for a variety of upstream and downstream requirements

- » Upstream:
 - Bioreactor/Fermenter: For diversion of WFI, growth media, intermediate drug product, clean dry air and gas, clean steam and clean utility fluids
 - Perfusion: Permeate diversion
- » Downstream:
 - For diversion of WFI, buffers, solvent, intermediate and finished drug product and clean utility fluids in the following production area:
 - Separation
 - Filtration
 - buffer exchange
 - Chromatography
 - column input buffer distribution
 - column outlet distribution
 - Fill Finish: low hold-up drug product distribution
- » Buffer and Media Prep:
 - Blocks for diversion control of WFI, buffers and growth media

BONNET / ACTUATOR SPECIFICATIONS

Manual Bonnet Assembly:

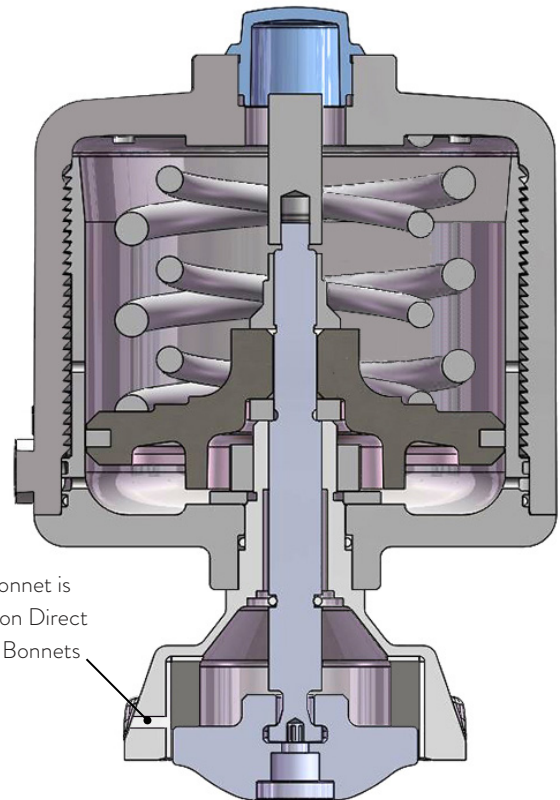
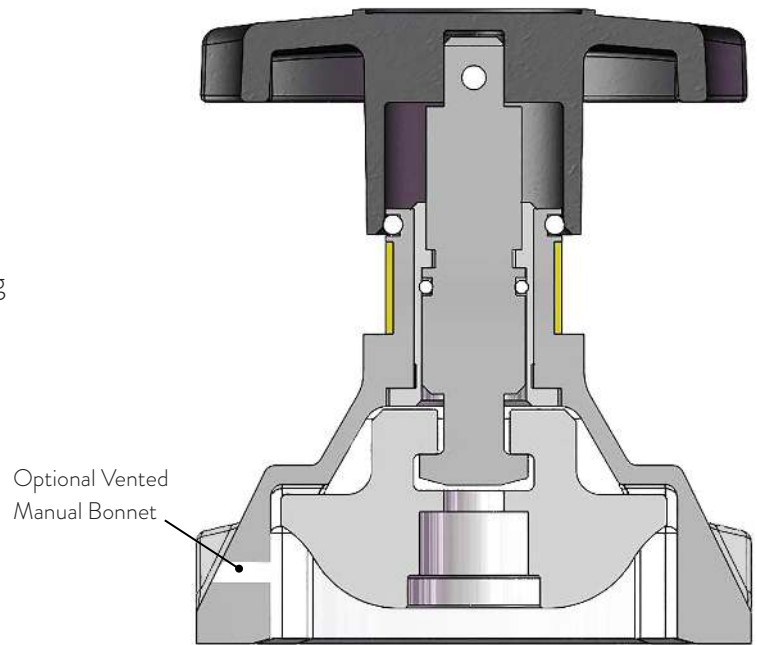
- » Available for sizes: 1/2" - 4" (DN15 - DN100)
- » Closing Stop: adjustable
- » Bright visual position indicator
- » Options: contact factory for proximity switches, locking devices and stroke limiter

Bonnet Materials

- » Bonnet: electropolished Stainless Steel
- » Compressor: Stainless Steel
- » Insert: brass
- » Thrust Washer: PTFE
- » Compressor Pin: Stainless Steel
- » Indicator: Polyolefin
- » Stem: Stainless Steel
- » Handwheel: PPS (1/4" - 2") (DN8 - DN50); Stainless Steel (2-1/2" - 4") (DN65 - DN100)

Air Actuated Bonnets:

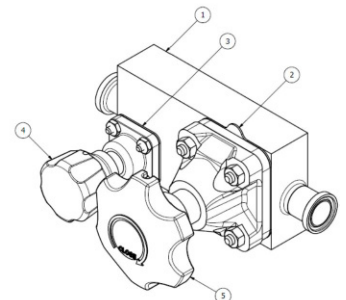
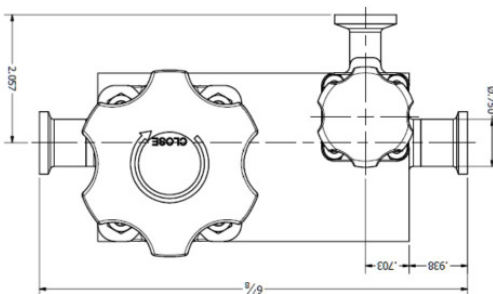
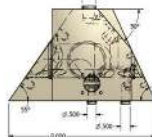
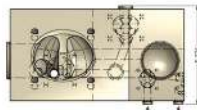
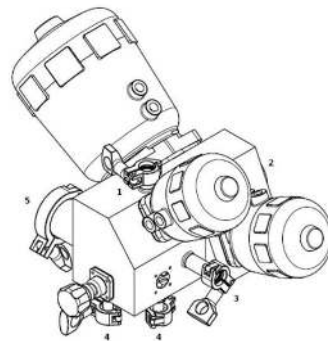
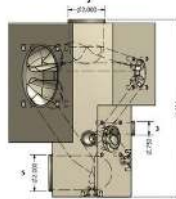
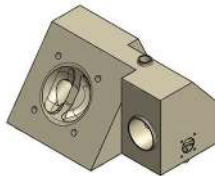
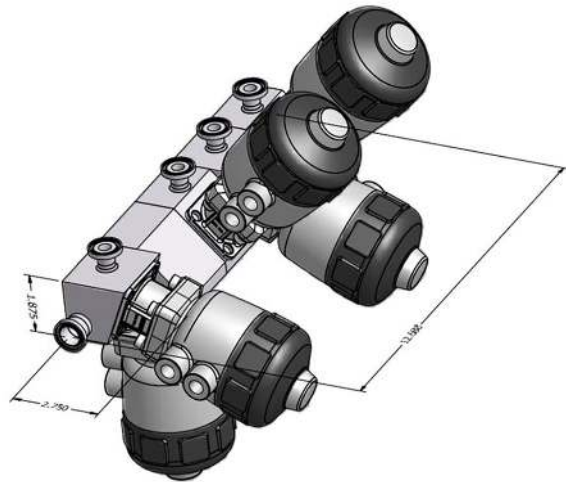
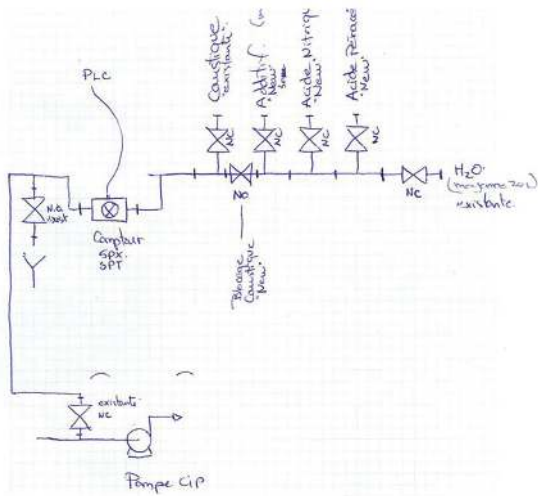
- » Available for sizes: 1/2" - 2" (DN15 - DN50) standard; 3" & 4" (DN80 & DN100) optional
- » Air Actuator Materials: Polyamide, Stainless Steel, Stainless Steel base standard for all configurations
- » Actuator Seal: Actuator springs and seals can be replaced without exposing process
- » Orientation: 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



RPP SYSTEM (CUSTOM BLOCK BODY VALVES, CLUSTER)

Steriflow Valve will custom design valves specifically for your process requirements using our RPP System (Rapid Prototype Process).

Our program will take your 'pen to paper' design and translate it into a SOLIDWORKS® design. Our software will rapidly transform your tweaks into a solid model for your evaluation and approval. Depending upon complexity, we can usually render a design and SOLID model and send it to you in your desired file format in as quickly as one to two weeks. Contact us at RPP@richardsind.com.



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 μm (0.5 Ra μm). 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




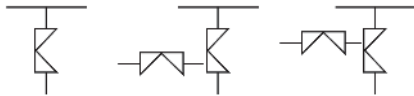
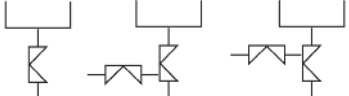
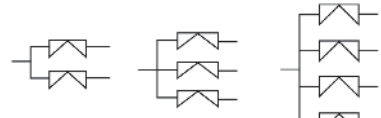

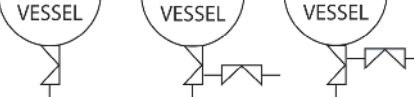
- » Steriflow Unicert; Certificate of Compliance for:
 - Material, including MTR's
 - Surface Finish
 - FDA/USP <88>, <87> Class VI
 - ADI/TSE Free cert available upon request
- » Each Unicert document lists the order's individual valve Serial/Suffix numbers and wetted component Heat numbers. MTR's for 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*

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- » Available for valve sizes: 1/2" - 4" (DN15 - DN100)
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Bonnet Materials

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- » 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")

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* 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.