

# SV5: ZERO STATIC POINT OF USE VALVE

Standard, Compact, Manual or Pneumatically Actuated Point of Use (POU) Valve

## SPECIFICATIONS AND FEATURES\*

### Available Sizes:

- » Run Connection: 1/2" - 4" (DN15 - DN100)
- » Drop Connection: 1/2" - 4" (DN15 - DN100); drop connection must be  $\leq$  the run connection

### Connection Type:

- » Tri-clamp, Extended Tube End standard. Other drop connection types upon request
- » Additional ports or tandem access configurations available for purge, drain or sample use as special options

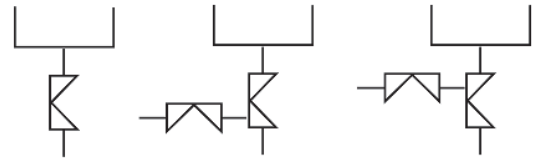
### Materials:

- » 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  $\mu\text{in}$  (0,5 Ra  $\mu\text{m}$ )
    - ASME BPE SF5, 20 Ra  $\mu\text{in}$  (0,5 Ra  $\mu\text{m}$ ) Electropolish
  - Optional:
    - ASME BPE SF4, 15 Ra  $\mu\text{in}$  (0,4 Ra  $\mu\text{m}$ ) Electropolish. Better finish upon request
- » Exterior:
  - Standard: 63 Ra  $\mu\text{in}$  (1,6 Ra  $\mu\text{m}$ )
  - Optional: 40 Ra  $\mu\text{in}$  (1,0 Ra  $\mu\text{m}$ ) and better upon request

\* See page 5 & 6 for GENERAL FEATURES and GENERAL SPECIFICATIONS regarding features and specifications that apply to all valves



## APPLICATIONS

Single Wier Zero Static Point of Use Valve for Manual on/off or Air Actuated Dispersion of WFI or USP Purified Water from Distribution Loop

- » Upstream:
  - Bioreactor/Fermenter: For dispersion control of WFI or USP purified water
- » Downstream:
  - For dispersion flow control of WFI or USP purified water in the following production areas:
    - Separation
    - Filtration
    - Chromatography
    - Formulation
    - Fill Finish
- » Buffer and Media Prep:
  - For dispersion control of WFI or USP purified water

## BONNET / ACTUATOR SPECIFICATIONS

### Manual Bonnet Assembly:

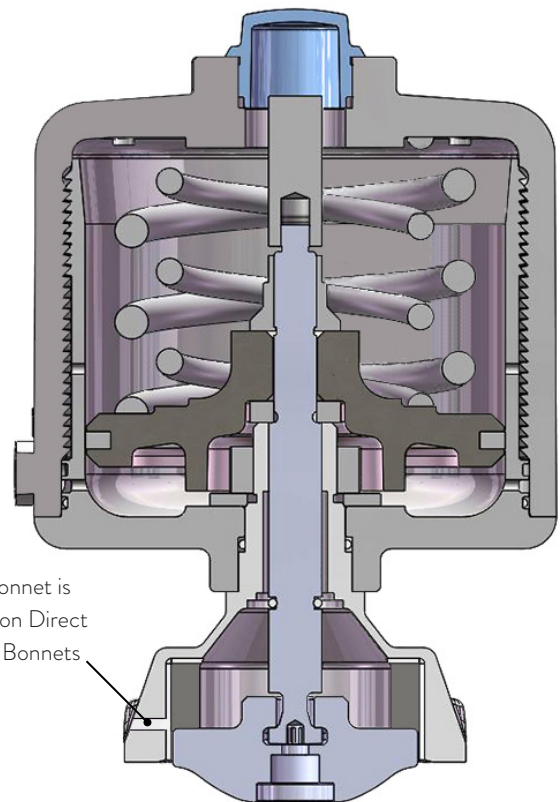
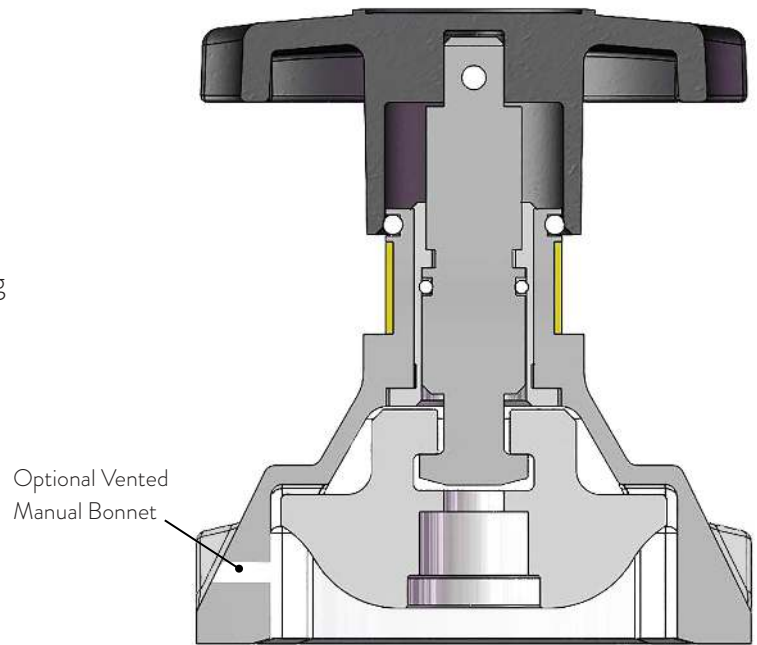
- » Available for sizes: 1/2" - 4" (DN15 - DN100)
- » Closing Stop: adjustable
- » Bright visual position indicator
- » Options: contact factory for proximity switches, locking devices and stroke limiter

### 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)

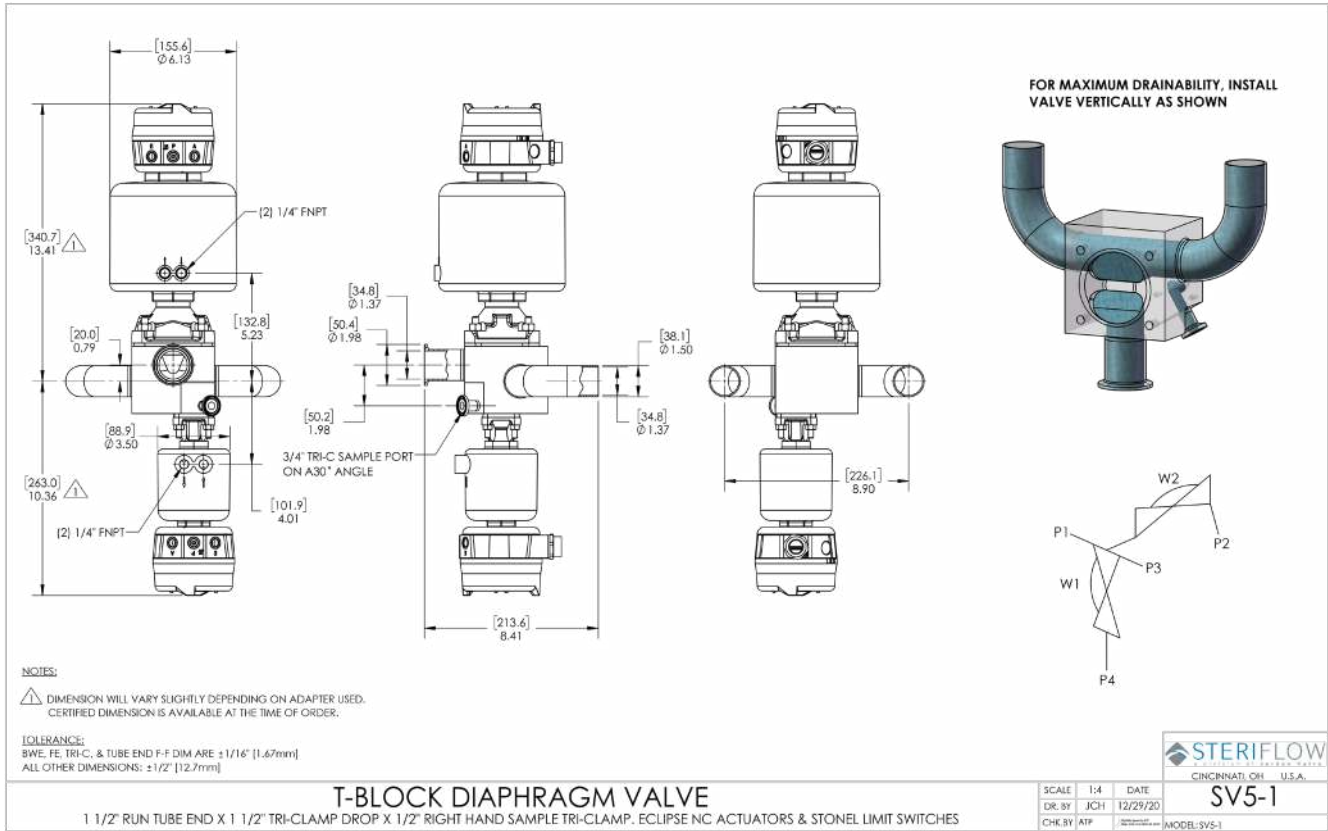
### Air Actuated Bonnets:

- » 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



# DIMENSIONS

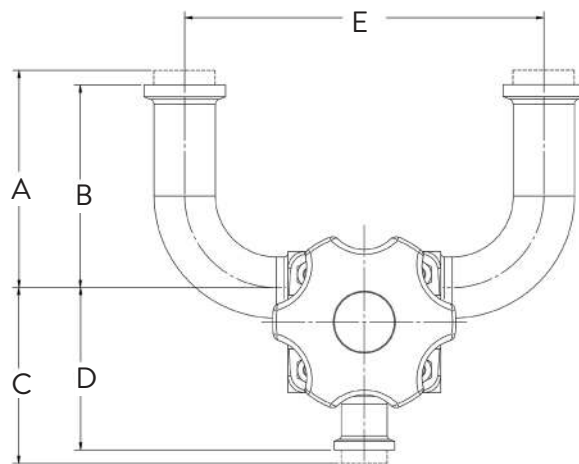
Example drawings of some available configurations



## DIMENSIONS (ZERO STATIC POINT OF USE (POU) VALVE)

INCHES						
RUN SIZE	DROP SIZE	TUBE A	TUBE B	TUBE C	CLAMP D	E
1"	1/2"	3.0	2.625	3.17	2.17	5.375
	3/4"	3.0	2.625	3.17	2.17	5.875
	1"	3.0	2.625	3.578	3.203	6.25
1-1/2"	1/2"	3.75	3.375	3.42	2.42	6.875
	3/4"	3.75	3.375	3.657	2.657	7.375
	1"	3.75	3.375	3.578	3.455	7.75
2"	1-1/2"	3.75	3.375	4.405	4.03	8.875
	1/2"	4.5	4.125	3.67	2.67	8.375
	3/4"	4.5	4.125	3.907	2.907	8.875
2-1/2"	1"	4.5	4.125	4.08	3.705	9.25
	1-1/2"	4.5	4.125	4.654	4.279	10.375
	2"	4.5	4.125	5.086	4.711	11.375
3"	1/2"	5.25	4.875	3.92	2.92	9.875
	3/4"	5.25	4.875	4.158	3.158	10.375
	1"	5.25	4.875	4.33	3.955	10.75
	1-1/2"	5.25	4.875	4.904	4.529	11.875
	2"	5.25	4.875	5.331	4.956	12.875
	2-1/2"	5.25	4.875	5.819	5.444	13.625
4"	1/2"	6.0	5.625	4.17	3.17	11.375
	3/4"	6.0	5.625	4.408	3.408	11.875
	1"	6.0	5.625	4.58	4.205	12.875
	1-1/2"	6.0	5.625	5.154	4.779	13.375
	2"	6.0	5.625	5.581	5.206	14.375
	2-1/2"	6.0	5.625	6.07	5.695	15.125
4"	3"	6.0	5.625	6.817	6.192	16.875
	1/2"	7.5	7.125	4.652	3.652	14.375
	3/4"	7.5	7.125	4.89	3.89	14.875
	1"	7.5	7.125	5.063	4.688	15.25
	1-1/2"	7.5	7.125	5.633	5.258	16.375
	2"	7.5	7.125	6.062	5.687	17.375
	2-1/2"	7.5	7.125	6.553	6.178	18.125
	3"	7.5	7.125	7.299	6.674	19.875
4"	7.5	7.125	8.987	8.112	21.375	

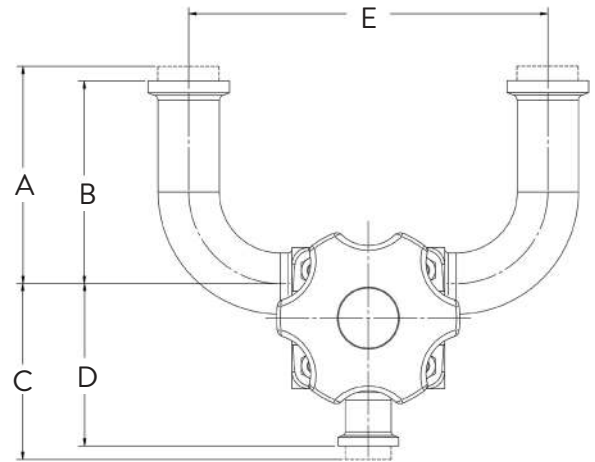
1/2" - 4"



## DIMENSIONS (ZERO STATIC POINT OF USE (POU) VALVE)

METRIC						
RUN SIZE	DROP SIZE	TUBE A	TUBE B	TUBE C	CLAMP D	E
DN32	DN15	76,2	66,68	80,52	55,12	136,53
	DN20	76,2	66,68	80,52	55,12	149,23
	DN32	76,2	66,68	90,88	81,36	158,75
DN40	DN15	95,25	85,73	86,87	61,47	174,63
	DN20	95,25	85,73	92,89	67,49	187,33
	DN32	95,25	85,73	90,88	87,76	196,85
	DN40	95,25	85,73	111,89	102,36	225,4
DN50	DN15	114,3	104,78	93,22	67,82	212,7
	DN20	114,3	104,78	99,24	73,84	225,4
	DN32	114,3	104,78	103,63	94,11	235,0
	DN40	114,3	104,78	118,21	108,69	263,5
	DN50	114,3	104,78	129,18	119,66	288,9
DN65	DN15	133,35	123,83	99,67	74,17	250,8
	DN20	133,35	123,83	105,61	80,21	263,5
	DN32	133,35	123,83	109,98	100,46	273,1
	DN40	133,35	123,83	124,56	115,04	301,6
	DN50	133,35	123,83	135,41	125,90	327,0
	DN65	133,35	123,83	147,80	138,28	346,1
DN80	DN15	152,4	142,88	105,92	80,52	288,9
	DN20	152,4	142,88	111,96	86,56	301,6
	DN32	152,4	142,88	116,33	106,81	327,0
	DN40	152,4	142,88	130,91	121,39	339,7
	DN50	152,4	142,88	141,76	132,23	365,2
	DN65	152,4	142,88	154,18	144,65	384,2
	DN80	152,4	142,88	173,15	157,28	428,6
DN100	DN15	190,5	180,98	118,16	92,76	365,1
	DN20	190,5	180,98	124,21	98,81	377,8
	DN32	190,5	180,98	128,60	119,08	387,4
	DN40	190,5	180,98	143,08	133,55	415,9
	DN50	190,5	180,98	153,97	144,45	441,3
	DN65	190,5	180,98	166,45	156,92	460,4
	DN80	190,5	180,98	185,39	169,52	504,8
	DN100	190,5	180,98	228,27	206,04	542,9

### DN15 - DN100



## ORDERING SCHEMATIC (ZERO STATIC POINT OF USE (POU) VALVE)

MODEL	TYPE	RUN SIZE	CONNECTION	DROP SIZE	CONNECTION	FINISH	ACTUATION	DIAPH.	ACC'Y	COMP.
SV										

1	TYPE
5	POINT OF USE (POU) Valve

2	RUN SIZE
4	1/2"
5	3/4"
6	1"
7	1-1/2"
8	2"
9	2-1/2"
A	3"
B	4"

3	CONNECTION
1	OD Tube
2	Clamp
Z	Non-standard

4	DROP SIZE
4	1/2"
5	3/4"
6	1"
7	1-1/2"
8	2"
9	2-1/2"
A	3"
B	4"

NOTE: Drop Connection size must be <= Run Connection size

5	CONNECTION
1	OD Tube
2	Clamp
Z	Non-standard

6	INTERNAL SURFACE FINISH
1	SF1, 20Ra µin
2	SF4 15Ra µin (0,4 Ra µm) EP
3	SF5 20Ra µin (0,5 Ra µm) EP
Z	Non-standard

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

8	DIAPHRAGM
1	EPDM
2	TFM/EPDM
Z	Non-standard

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

10	CE/PED COMPLIANCE
OG	SEP (0.25" to 1")
OF	CE Category 1 (1-1/2" to 4")

# 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  $\mu\text{m}$  (0.5 Ra  $\mu\text{m}$ ). 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



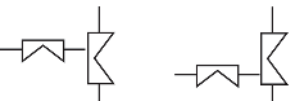
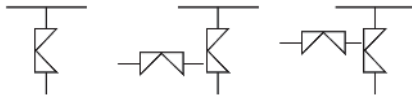
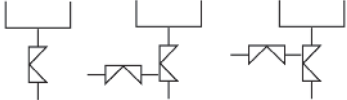
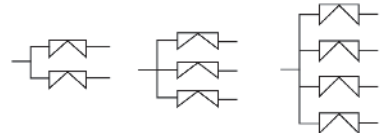
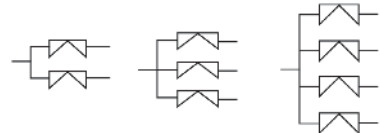
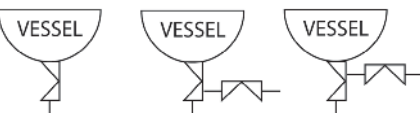
- » Steriflow Unicert; Certificate of Compliance for:
  - Material, including MTR's
  - Surface Finish
  - FDA/USP <88>, <87> Class VI
  - ADI/TSE Free cert available upon request
- » Each Unicert document lists the order's individual valve Serial/Suffix numbers and wetted component Heat numbers. MTR's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