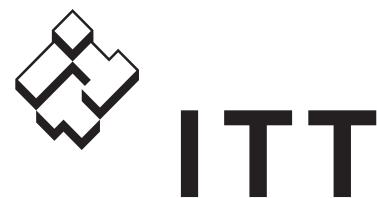




# EnviZion® & BioviZion®

Ordering Guide



# Ordering Guide

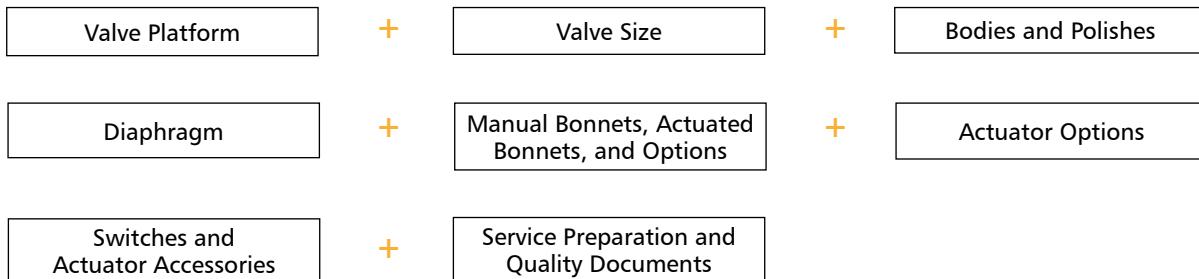
This brochure contains a comprehensive list of the figure number codes and description for each valve product option available for the standard EnviZion and BioviZion products. To assist in the ordering process, we have included instructions on how to construct a standard valve figure number in proper sequence. ITT's channel partners can also find our e-Prism tool available at [www.engvalves.com/Members/e-Prism/](http://www.engvalves.com/Members/e-Prism/). This tool is a simple means of identifying valve product configuration and nomenclature. This tool will assist in selecting compatible features and proper designation structure.

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EnviZion block body valve drawings are available. Go to our website (<https://www.engvalves.com/tools-and-resources/drawings/hygienic-diaphragm-drawings/envizion-drawings>) for more information. Others available upon request.

# How to Construct an EnviZion Valve Figure Number



## Constructing Figure Numbers

Below are examples for constructing a manual and actuated valve figure number. The actuated valve example will be used to build a figure number on the following pages.

### Figure Number Example - Manual Valve

**Figure Number:** ENV-1-F-419-SF1-0-0-TMZ-ZH

#### Detailed description:

1: 1 inch size (DN25)  
F: Forged 316L SS  
419: Triclamp Tube  
SF1: Interior Finish: Ra 20 Microinch Max  
0: Exterior Finish: No Mechanical Polish  
0: No Electropolish  
TMZ: Modified PTFE Diaphragm (FDA)/ Grade B1 B.C.  
ZH: EnviZion manual handwheel

### Figure Number Example - Actuated Valve

**Figure Number:** ENV-1-F-428L-SF1-0-0-TMZ-ZA2-ISP-3W-HZ

#### Detailed description:

1: 1 inch size (DN25)  
F: Forged 316L SS  
428L: 16 Gauge Extended Tangent Butt weld  
SF1: Interior Finish: Ra 20 Microinch Max  
0: Exterior Finish: No Mechanical Polish  
0: No Electropolish  
TMZ: Modified PTFE Diaphragm (FDA)/ Grade B1 B.C.  
ZA2: EnviZion SS actuator - fail closed  
ISP: 3W - 3 Wire Output  
ISP: NSV - No Solenoid  
ISP: ST - Standard Cover  
ISP: NBT - No Diagnostics  
ISP: HZ - Hazardous Location Class I, II, III; DIV 2

# Valve Platform, Size, Body & Polishes, Diaphragm

## Valve Platform

### Platform

Code	Description
ENV	EnviZion valve

## Valve Size

### Size

Code	Description
.50	.50 Inch (DN15)
.75R	.75 Inch (DN20) with 0.5" topworks
.75	.75 Inch (DN20) with 1" topwork
1	1 Inch (DN25)
1.5	1.5 inch (DN40)
2	2.0 inch (DN50)

## Bodies and Polishes

### Body Type

Code	Description
BV	BioVizion Stainless Steel
F	Forged 316L Stainless Steel
N	Body Not Supplied
TBV	Tank Bottom Valve
W	Wrought 316L Stainless Steel
Spec	Special Material Body

### Body Ends

Code	Description
<b>Clamp</b>	
409	Swagelok TS Fitting
410	Tri-Clamp Sch. 5 Pipe
418	ISO 1.6mm Wall Tri-Clamp End
419	Tri-Clamp Tube
419S	Tri-Clamp Tube 18 Gauge
419S1	Tri-Clamp Tube 20 Gauge
<b>Buttweld</b>	
422	Sch. 5 Pipe (ISO Body)
423	18 Gauge
423L	18 Gauge Ext. Tangent
424	20 Gauge
424L	20 Gauge Ext. Tangent
425	Sch. 5 Pipe (ANSI Body)
426	Sch. 10 Pipe
428	16 Gauge (for block bodies)
428L	16 Gauge Ext. Tangent BW (for forgings)
481	DIN Series 1
482	DIN Series 2
483	DIN Series 3
484	SMS
485	TBV, 45 Degree 14 GA BW
486	TBV, 45 Degree 16 GA BW
487	TBV, 45 Degree 18 GA BW
488	TBV, 45 Degree Tri-Clamp
493	ISO 2.9mm wall
494	ISO 1.2mm wall
495	ISO 1.0mm wall
496	ISO 1.6mm wall
497	ISO 2.0mm wall
498	ISO 2.3mm wall
499	ISO 2.6mm wall
Spec	Special End

### Second End Code (Optional)

Code	Description
<b>Clamp</b>	
X07	By Male Thread w/ Gasket
	Seat
X09	Swagelok TS Fitting
X10	By Tri-Clamp Sch. 5 Pipe
X19	By Tri-Clamp Tube
X19S	By Tri-Clamp Tube 18 Gauge
X19S1	By Tri-Clamp Tube 20 Gauge
<b>Buttweld</b>	
X22	By Sch. 5 Pipe (ISO Body)
X23	By 18 Gauge
X23L	18 Gauge Ext. Tangent
X24	By 20 Gauge
X24L	20 Gauge Ext. Tangent
X25	By Sch. 5 Pipe (ANSI Body)
X26	By Sch. 10 Pipe
X27	By Sch. 40 Pipe
X28	By 16 Gauge
X28L	By 16 Gauge Ext. Tangent BW
X81	By DIN Series 1
X82	By DIN Series 2
X83	By DIN Series 3
X84	By SMS
X85	By ISO
X93	By ISO 2.9mm Wall
X94	By ISO 1.2mm Wall
X95	By ISO 1.0mm Wall
X96	By ISO 1.6mm Wall
X97	By ISO 2.0mm Wall
X98	By ISO 2.3mm Wall
X99	By ISO 2.6mm Wall
Spec	Special End

### Mechanical Polish - Interior

Code	Description
6	25 $\mu$ in Ra (.6 $\mu$ m) max
7	15 $\mu$ in Ra (.38 $\mu$ m) max
8	20 $\mu$ in Ra (.5 $\mu$ m) max
10	10 $\mu$ in Ra (.25 $\mu$ m) max
SF1	BPE SF1 Ra 20 Max
SF2	BPE SF2 Ra 25 Max
SF4	BPE SF4 Ra 15 Max, EP
SF5	BPE SF5 Ra 20 Max, EP
SF6	BPE SF6 Ra 25 Max, EP

### Mechanical Polish - Exterior

Code	Description
0	No Mechanical Polish
1	Scotch Brite
2	25 $\mu$ in Ra (.6 $\mu$ m) max, Welds Scotch Brite
3	35 $\mu$ in Ra (.8 $\mu$ m) max, Welds Scotch Brite
4	25 $\mu$ in Ra (.6 $\mu$ m) max, Welds Removed
6	35 $\mu$ in Ra (.8 $\mu$ m) max, Welds Removed
7	Special Polish Requirement
8	No Ext Body Polish, Weld Beads Removed

### Electropolish

Code	Description
0	No Electropolish
2	Exterior Only
3	Interior and Exterior
4	Interior Only

### Body Only

Code	Description
Y	Body Only Supplied

## Diaphragms

### Diaphragms

Code	Description
TMZ	PTFE (FDA) with EPDM Backing Cushion

# Topwork Options and Switches

## Manual Bonnets

### Manual Bonnets

Code	Description
ZH	EnviZion Manual
ZHS	EnviZion Manual sealed

## Actuated Bonnets and Options

### Actuated Bonnets

Code	Description
ZA1	EnviZion SS Actuator - FO
ZA2	EnviZion SS Actuator - FC (90#)
ZA3	EnviZion SS Actuator - DA
ZA1S	EnviZion SS Actuator - FO sealed
ZA2S	EnviZion SS Actuator - FC (90#) sealed
ZA3S	EnviZion SS Actuator - DA sealed
ZB1	EnviZion Advantage Actuator - FO
ZB2	EnviZion Advantage Actuator - FC (90#)
ZB26	EnviZion Advantage Actuator - FC (60#)
ZB3	EnviZion Advantage Actuator - DA
ZB1S	EnviZion Advantage Actuator - FO sealed
ZB2S	EnviZion Advantage Actuator - FC (90#) sealed
ZB26S	EnviZion Advantage Actuator - FC (60#) sealed
ZB3S	EnviZion Advantage Actuator - DA sealed

## Switches

### Integrated Switch Package

Code	Description
ISP-3W-HZ	3 Wire Discrete, without solenoid, without diagnostics
ISP-3W-BL-HZ	3 Wire Discrete, without solenoid, with diagnostics
ISP-3W-LS-HZ	3 Wire Discrete, without solenoid, without diagnostics
ISP-3W-LS-BL-HZ	3 Wire Discrete, without solenoid, with diagnostics
ISP-3W-SV-HZ	3 Wire Discrete, with internal solenoid, without diagnostics
ISP-3W-SV-BL-HZ	3 Wire Discrete, with internal solenoid, with diagnostics
ISP-3W-SV-BT-HZ	3 Wire Discrete, with internal solenoid, with diagnostics and control
ISP-3W-SV-LS-HZ	3 Wire Discrete, with internal solenoid, without diagnostics
ISP-3W-SV-LS-BL-HZ	3 Wire Discrete, with internal solenoid, with diagnostics
ISP-3W-SV-LS-BT-HZ	3 Wire Discrete, with internal solenoid, with diagnostics and control
ISP-AI-HZ	ASI, without solenoid, without diagnostics
ISP-AI-BL-HZ	ASI, without solenoid, with diagnostics
ISP-AI-LS-HZ	ASI, without solenoid, without diagnostics
ISP-AI-LS-BL-HZ	ASI, without solenoid, with diagnostics
ISP-AI-SV-HZ	ASI, with internal solenoid, without diagnostics
ISP-AI-SV-BL-HZ	ASI, with internal solenoid, with diagnostics
ISP-AI-SV-BT-HZ	ASI, with internal solenoid, with diagnostics and control
ISP-AI-SV-LS-HZ	ASI, with internal solenoid, without diagnostics
ISP-AI-SV-LS-BL-HZ	ASI, with internal solenoid, with diagnostics
ISP-AI-SV-LS-BT-HZ	ASI, with internal solenoid, with diagnostics and control
ISP-2W	2 Wire, without solenoid, without diagnostics
ISP-2W-LS	2 Wire, without solenoid, without diagnostics
ISP-2W-SV	2 Wire, with internal solenoid, without diagnostics
ISP-2W-SV-LS	2 Wire, with internal solenoid, without diagnostics
ISP-DN-HZ	DeviceNet, without solenoid, without diagnostics
ISP-DN-BL-HZ	DeviceNet, without solenoid, with diagnostics
ISP-DN-LS-HZ	DeviceNet, without solenoid, without diagnostics
ISP-DN-LS-BL-HZ	DeviceNet, without solenoid, with diagnostics
ISP-DN-SV-HZ	DeviceNet, with internal solenoid, without diagnostics
ISP-DN-SV-BL-HZ	DeviceNet, with internal solenoid, with diagnostics
ISP-DN-SV-BT-HZ	DeviceNet, with internal solenoid, with diagnostics and control
ISP-DN-SV-LS-HZ	DeviceNet, with internal solenoid, without diagnostics
ISP-DN-SV-LS-BL-HZ	DeviceNet, with internal solenoid, with diagnostics
ISP-DN-SV-LS-BT-HZ	DeviceNet, with internal solenoid, with diagnostics and control

### Value Switch Package

Code	Description
VSPG30	Gold Contacts 30V
VSPN	NAMUR Proximity
VSPP	3-Wire PNP Proximity
VSPS48	Silver Contacts 48V
VSPZ	2-Wire Proximity
VSP+G	Gold Contacts 24V
VSP+S	Silver Contacts 24V
VSP+N	NAMUR Proximity 24V
VSP+Z	2-Wire Proximity 24V

### Topwork Options

Code	Description
EBG	EnviZion Bonnet Guard (Tamper Resistant/Submersible)

### Electropolish Topworks

Code	Description
1	Topworks

### Limit Switches

Code	Description
LS16	Westlock 98810002BI
LS17	Westlock 98810002BI with Eliminator Fitting
LS41	Efector IN0117
LS42	Efector IN5331
LS128	Westlock 99P21A00000
LS129	Westlock 99P21AD550
LS140	Westlock 99P22G00000
LSSpec	Special

\* Additional LS codes are available

# Actuator Accessories

## Actuator Accessories

### Transducer

Code	Description
TR1630	Conoflow GT6108ED
TRCA	Controlair 550X
TRIPH	Moore IPH2/4-20MA/3-15PSIG/20PSI/FR1/WDNS
TRSpec	Special

### Positioners

Code	Description
PR1	Conoflow Model 31
PR2	Conoflow Model 33
PR15	Burkert 8694 Style
PR16	YTC TMP-3000
PR18	Sitomatic Positioner DIPR 9001
PR19	StoneL Prism PI80/81
PRSpec	Special

### Mechanical Accessories

Code	Description
AO	Adjustable Opening Stop

### Actuator Hardware Options

Code	Description
HW3	SS Tubing and Fittings
HW9	PTFE Tubing and Stainless Steel Fittings
HW10	Breather Vent Filter Stainless Steel
HW11	Breather Vent Filter BRS
HW15	1/4" 3-way valve & Schrader connection

### Solenoid Valve

Code	Description
SV1	Asco 8320G184
SV2	Asco EF8320G184
SV3	Asco 8345G1
SV4	Asco EF8345G1
SV7	Asco 8302G202
SV8	Asco EF8320G202
SV14	Burkert Series 6012
SV15	Burkert Series 6014

### Solenoid Voltage

Code	Description
V1	120V / 60HZ
V2	24VDC
V3	240V / 60HZ
VSpec	Special

### Speed Controllers

Code	Description
SC	Schrader 337-1001
SC3	Whitey needle valve SS-1RM2
SCSpec	Special

### Filter Regulators

Code	Description
FR1	Conoflow FR95ASKEX1G
FR2	Fisher 67FR
FRSpec	Special

# Service Preparation & Quality Documents

## Service Preparation and Quality Documents

<b>Special Service Preparation</b>	
<b>Code</b>	<b>Description</b>
BAG	Cleaned and Bagged
EU_SERVICE	European Union Service
OXY	Oxygen
SIFREE	Silicone Free Preparation
SPEC	Customer Special
VAC	Vacuum

<b>Special Quality Documents</b>	
<b>Code</b>	<b>Description</b>
SQD2	C of C (seat & shell pressures)
SQD3	C of C Profilometer Tape for each body
SQD5	C of C Body/Stud/Nut CMTR and C of C to ASME Section VIII
SQD6	C of C Tube CMTR, Tank Bottom Valve
SQD7	C of C Weld Rod CMTR, Tank Bottom Valve

# 2-Way Valve

## 2-Way Valve with Manual Topwork

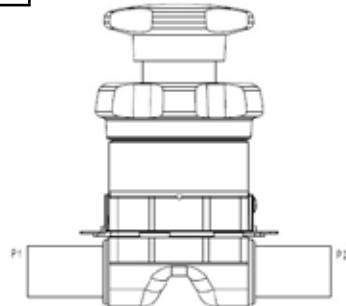
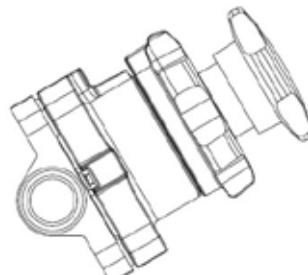
1" valve, forged body with buttweld ends, 20 Ra interior finish, TMZ PTFE diaphragm with B1 backing cushion, manual topwork with tamper resistant bonnet guard.

Figure Number: ENV-1-F-428L-SF1-0-0-TMZ-ZH-EBG

Valve Assembly	Configuration Example	ENV	1	F	428L	SF1-0-0	TMZ	ZH	EBG		
Valve Platform	Valve Platform	ENV									
Valve Size	Valve Size		1								
Body Type	Body Type			F							
Valve End Connection (P1, P2 or P1)	Valve End Connection (P1, P2 or P1)				428L						
Valve Second End Connection (P2) <sup>1</sup>	Valve Second End Connection (P2) <sup>1</sup>										
Polish Selections	Polish Selections					SF1-0-0					
Diaphragm Selection	Diaphragm Selection						TMZ				
Topwork	Topwork							ZH			
Topwork Options	Topwork Options								EBG		
Switches & Actuator Accessories	Switches & Actuator Accessories										
Service Preparation & Quality Doc.	Service Preparation & Quality Doc.										



<sup>1</sup> Second end connection can be provided if end connections are different.



VALVE IN DRAIN POSITION  
INSTALLATION ORIENTATION

## 2-Way Valve with Actuated Topwork

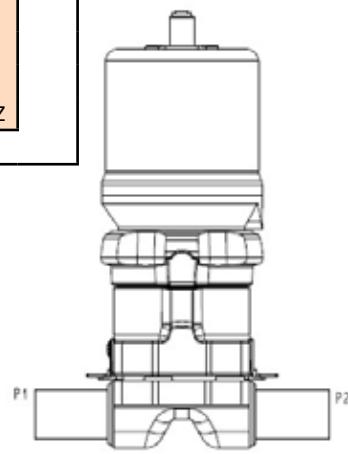
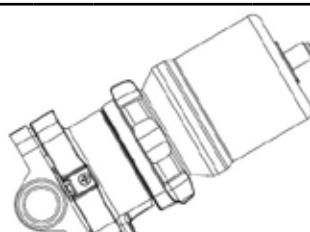
1" valve, forged body with buttweld ends, 20 Ra interior finish, TMZ PTFE diaphragm with B1 backing cushion, stainless steel fail-closed actuator with ISP limit switch.

Figure Number: ENV-1-F-428L-SF1-0-0-TMZ-ZA2-ISP-3W-HZ

Valve Assembly	Configuration Example	ENV	1	F	428L	SF1-0-0	TMZ	ZA2	EBG	ISP-3W-HZ	
Valve Platform	Valve Platform	ENV									
Valve Size	Valve Size		1								
Body Type	Body Type			F							
Valve End Connection (P1, P2 or P1)	Valve End Connection (P1, P2 or P1)				428L						
Valve Second End Connection (P2) <sup>1</sup>	Valve Second End Connection (P2) <sup>1</sup>										
Polish Selections	Polish Selections					SF1-0-0					
Diaphragm Selection	Diaphragm Selection						TMZ				
Topwork	Topwork							ZA2			
Topwork Options	Topwork Options								EBG		
Switches & Actuator Accessories	Switches & Actuator Accessories									ISP-3W-HZ	
Service Preparation & Quality Doc.	Service Preparation & Quality Doc.										



<sup>1</sup> Second end connection can be provided if end connections are different.



VALVE IN DRAIN POSITION  
INSTALLATION ORIENTATION

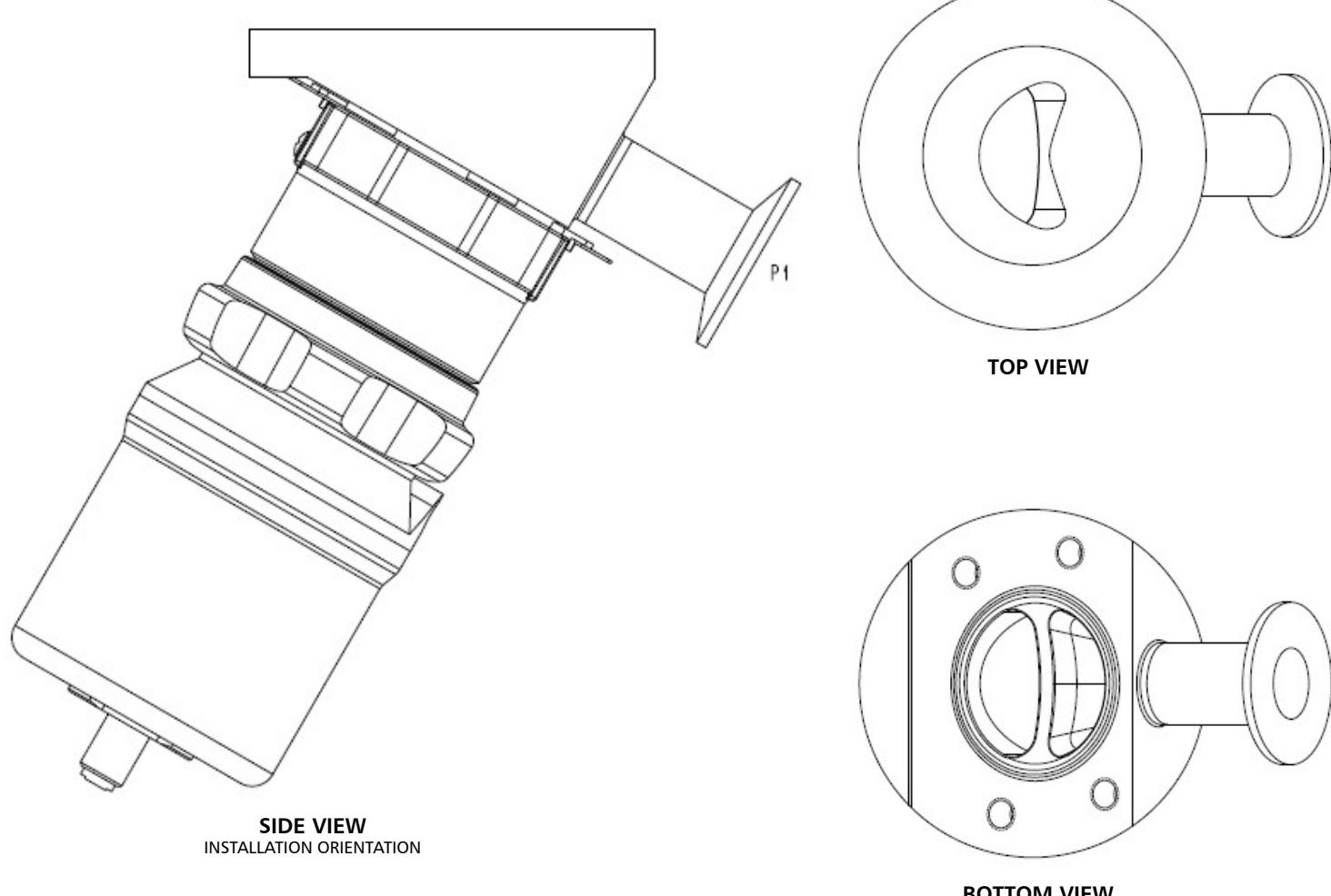
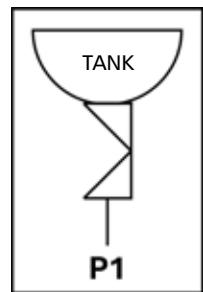
# Tank Bottom Valve

## Tank Bottom Valve

1" Tank Bottom Valve, Tri-clamp end, 20 Ra interior finish, PTFE diaphragm, stainless steel fail-closed actuator with ISP limit switch.

Figure Number: ENV-1-TBV-419-SF1-1-0-TMZ-ZA2-ISP-3W-HZ

Valve Assembly	Configuration Example	ENV	1	TBV	419	SF1-0-0	TMZ	ZA2	ISP-3W-HZ	
Valve Platform	Valve Platform	ENV								
Valve Size	Valve Size		1							
Body Type	Body Type			TBV						
Valve End Connection	Valve End Connection				419					
Polish Selections	Polish Selections					SF1-0-0				
Diaphragm Selection	Diaphragm Selection						TMZ			
Topwork	Topwork							ZA2		
Topwork Options	Topwork Options									
Switches & Actuator Accessories	Switches & Actuator Accessories								ISP-3W-HZ	
Service Preparation & Quality Doc.	Service Preparation & Quality Doc.									



# Sterile Access & GMP Fabrications

## Fabrication Type

Code	Description
GMP	GMP
HSA	Horizontal Sterile Access
SA	Sterile Access
SPEC	Special

## Purge Location

Code	Description
P1	Purge located closest to main valve end 1
P2	Purge located closest to main valve end 2
PB	Purge located at both valve ends (P1 and P2)

## Purge Valve Orientation

Code	Description
B	Back
F	Front
L	Left
LL	Left Special
LR	Left/Right Special
R	Right
RL	Right/Left Special
RR	Right Special

## Valve Number for Fabrication

Code	Description
M	Main Valve
2	Second Valve
3	Third Valve
4	Fourth Valve
5	Fifth Valve
6	Sixth Valve
7	Seventh Valve
8	Eighth Valve
9	Ninth Valve
10	Tenth Valve

EnviZion SA Two valve fabrication with a 1" wrought body main valve and a 1/2" forged body secondary valve closest to the second end P2 and facing to the front. The main valve has buttweld end connection, 20 Ra max polished interior, a fail-closed EnviZion stainless steel actuator with ISP limit switch pack, and PTFE diaphragm. The secondary valve has Tri-clamp end, 20 Ra max polished interior, a manually operated bonnet, and PTFE diaphragm.

**Complete Figure Number:**

ENV-SA-2-1-.5

ENV-SA-M-1-W-428L-P2-F-SF1-1-0-TMZ-ZA2-ISP-3W-HZ

ENV-SA-2-.5-F-419-F-SF1-0-0-TMZ-ZH

**Fabrication Figure Number:** ENV-SA-2-1-.5

Fabrication	Configuration Example	ENV	SA	2	1	.5
Valve Platform	ENV					
Fabrication Type		SA				
Two Valve Fabrication			2			
Main Valve Size				1		
Second Valve Size					.5	

**Main Valve Figure Number:** ENV-SA-M-1-W-428L-P2-F-SF1-1-0-TMZ-ZA2-ISP-3W-HZ

Main Valve	Configuration Example	ENV	SA	M	1	W	428L	P2	F	SF1-1-0	TMZ	ZA2	ISP-3W-HZ	
Valve Platform	ENV													
Fabrication Type		SA												
Valve Number			SA	M										
Main Valve Size					1									
Main Valve Body Type <sup>1</sup>						W								
Main Valve Body End Code (P1, P2 or P1)							428L							
Main Valve Second End Code (P2) <sup>2</sup>								P2						
Purge Location									F					
Purge Valve Orientation										SF1-1-0				
Polish Selections											TMZ			
Diaphragm Selection												ZA2		
Topwork														
Topwork Options														
Switches & Actuator Accessories														
Service Preparation & Quality Doc.														ISP-3W-HZ

**Second Valve Figure Number:** ENV-SA-2-.5-F-419-F-SF1-0-0-TMZ-ZH

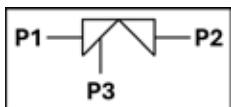
Second Valve	Configuration Example	ENV	SA	2	.5	F	419	F	SF1-1-0	TMZ	ZH			
Valve Platform	ENV													
Fabrication Type		SA												
Valve Number				2										
Valve Size					.5			F						
Body Type							419							
Body End Code (P3)								F						
Purge Valve Orientation									SF1-1-0					
Polish Selections										TMZ				
Diaphragm Selection											ZH			
Topwork														
Topwork Options														
Switches & Actuator Accessories														
Service Preparation & Quality Doc.														

<sup>1</sup> Main valve is always a wrought body

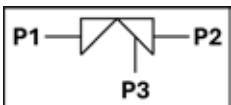
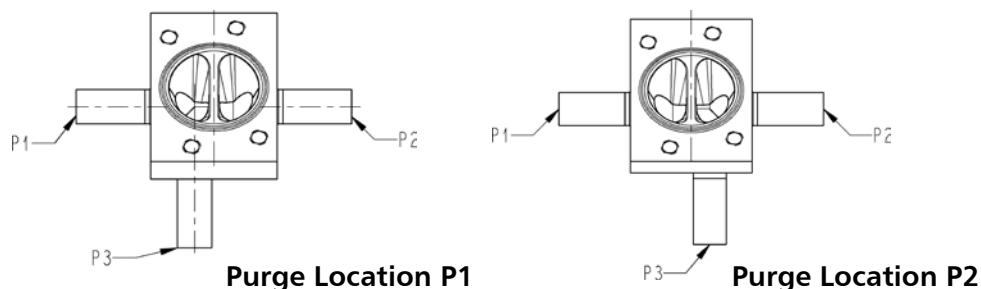
<sup>2</sup> Second end connection can be provided if end connections are different.

# SA,HSA (Drawings)

## Single Valve Fabrication

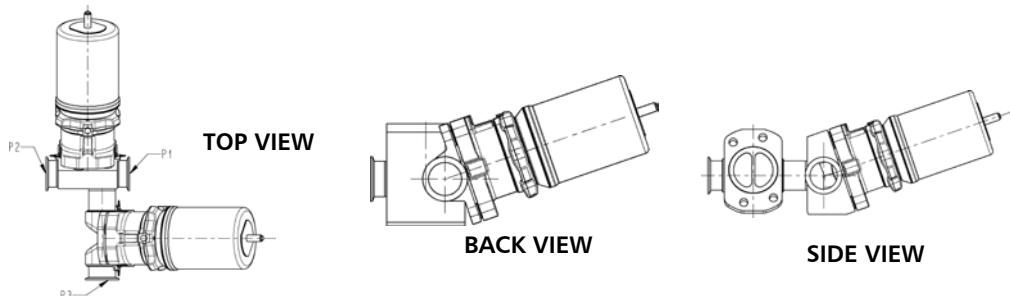


Purge Location P1

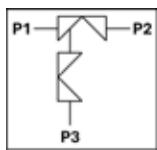


Purge Location P2

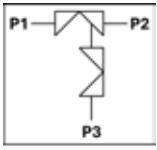
## Two Valve Fabrication



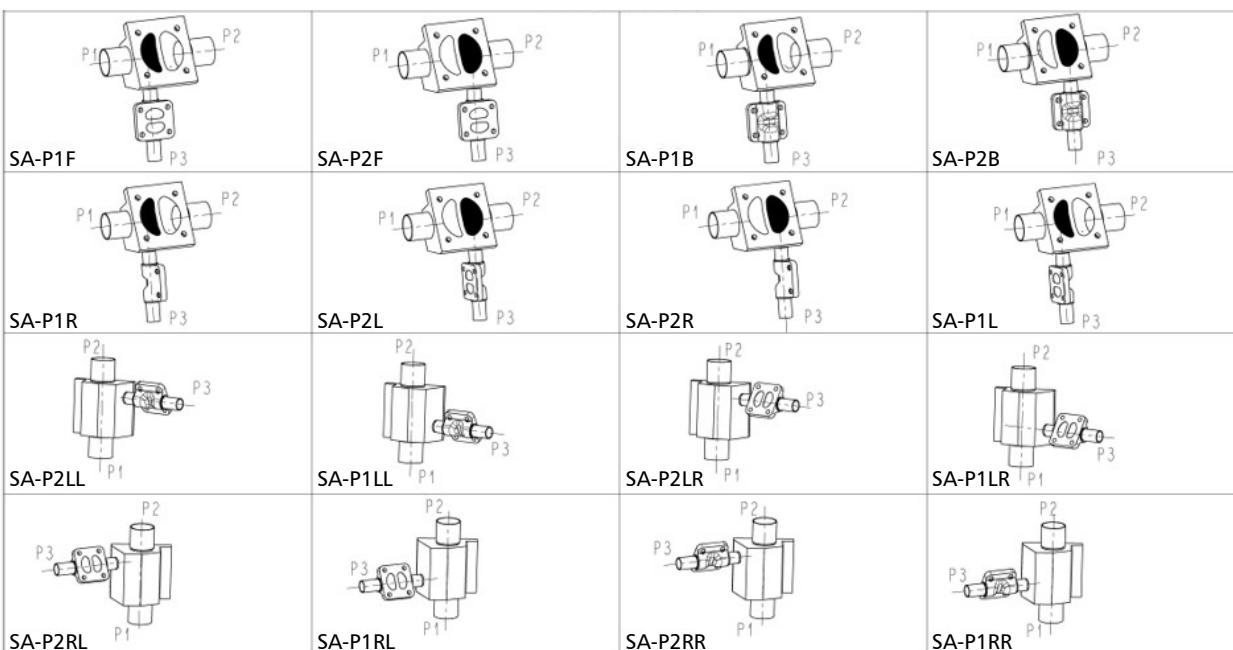
## STERILE ACCESS (SA) Purge Valve Orientations



Purge Location P1



Purge Location P2



## HORIZONTAL STERILE ACCESS (HSA) Purge Valve Orientations



Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

EnviZion GMP 2-valve fabrication with a 1" wrought body main valve and a 1/2" forged body secondary valve closest to the second end P2 and facing to the right. The main valve has Tri-Clamp ends, 20 Ra max polished interior, a reverse acting EnviZion stainless steel actuator with ISP limit switch pack, and PTFE diaphragm. The secondary valve has Tri-clamp end, 20 Ra max polished interior, a manually operated bonnet, and PTFE diaphragm.

**Fabrication Figure Number:** ENV-GMP-2-1-.5

Fabrication	Configuration Example	ENV	GMP	2	1	.5
	Valve Platform	ENV				
	Fabrication Type		GMP			
	Two Valve Fabrication			2		
	Main Valve Size				1	
	Second Valve Size					.5

**Main Valve Figure Number:** ENV-GMP-M-1-W-419-P2-R-SF1-1-0-TMZ-ZA2-ISP-3W-HZ

Main Valve	Configuration Example	ENV	GMP	M	1	W	419		P2	R	SF1-1-0	TMZ	ZA2		ISP-3W-HZ
	Valve Platform	ENV													
	Fabrication Type		GMP												
	Valve Number			M											
	Main Valve Size				1										
	Main Valve Body Type <sup>1</sup>					W									
	Main Valve Body End Code (P1, P2 or P1)						419								
	Main Valve Second End Code (P2) <sup>2</sup>														
	Purge Location							P2							
	Purge Valve Orientation								R						
	Polish Selections									SF1-1-0					
	Diaphragm Selection										TMZ				
	Topwork											ZA2			
	Topwork Options														
	Switches & Actuator Accessories														ISP-3W-HZ
	Service Preparation & Quality Doc.														

**Second Valve Figure Number:** ENV-GMP-2-.5-F-419-R-SF1-0-0-TMZ-ZH

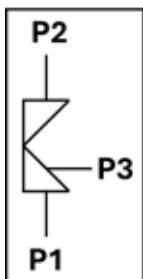
Second Valve	Configuration Example	ENV	GMP	2	.5	F	419	R	SF1-1-0	TMZ	ZH			
	Valve Platform	ENV												
	Fabrication Type		GMP											
	Valve Number			2										
	Valve Size				.5			F						
	Body Type						419							
	Body End Code (P3)							R						
	Purge Valve Orientation								SF1-1-0					
	Polish Selections									TMZ				
	Diaphragm Selection										ZH			
	Topwork													
	Topwork Options													
	Switches & Actuator Accessories													
	Service Preparation & Quality Doc.													

<sup>1</sup> Main valve is always a wrought body

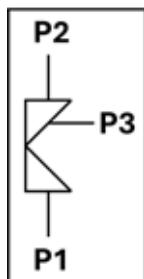
<sup>2</sup> Second end connection can be provided if end connections are different.

# GMP (Drawings)

## Single Valve Fabrication

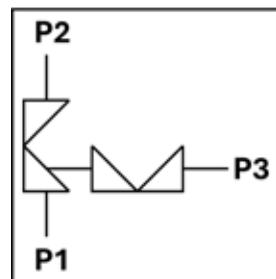


Purge Location P1

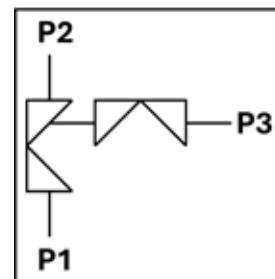


Purge Location P2

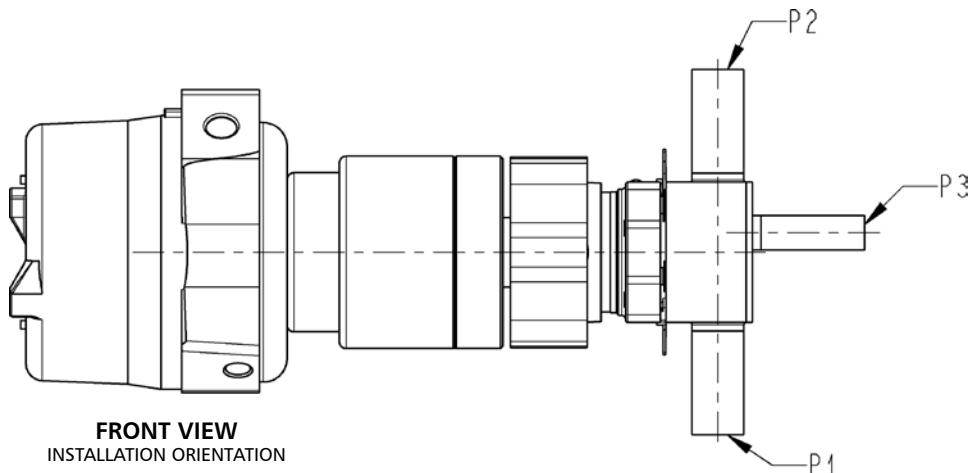
## Two Valve Fabrication



Purge Location P1



Purge Location P2



SIDE VIEW

## GMP Purge Valve Orientations

 GMP-P1F	 GMP-P2F	 GMP-P1B	 GMP-P2B
 GMP-P1RR	 GMP-P2LL	 GMP-P2RR	 GMP-P1LL
 GMP-P2L	 GMP-P1L	 GMP-P2R	 GMP-P1R

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Configurations

## Single Valve Fabrication Types

Code	Description
ZSBT	Zero Static Block Body
ZSBT-BO	Zero Static Block Body with Back Outlet Option
ZSBV	Zero Static Block Body with Vertical Run
EZSBHV	Zero Static E-Series U-Bend - Horizontal Tube - Vertical Valve
EZSBVV	Zero Static E-Series U-Bend - Vertical Tube - Vertical Valve

## Multi Valve Fabrication Types

Code	Description
ZSBBS	Zero Static Back to Back Sample
ZDPT	Zero Static Downstream Purge - Top
ZDPB	Zero Static Downstream Purge - Bottom
ZDI	Zero Static Dual Inline
ZID	Zero Static Inverted with Drain
ZUD	Zero Static with Upstream Sample and Downstream Purge

<sup>1</sup> Centered by default (no selection reqd) in ZSBBS

<sup>2</sup> 419R: standard for .5 sample valve to improve drainability in ZSBBS

## Body Type

Code	Description
EZ	Main Valve EnviZion
SVBV	Second Valve BioviZion
SVEZ	Second Valve EnviZion
TVBV	Third Valve BioviZion
TVEZ	Third Valve EnviZion

## Second Valve Orientation

Code	Description
R <sup>1</sup>	Ported on Right Side of Valve (Standard)
L <sup>1</sup>	Ported on Left Side of Valve

## U Bend Tube Orientation

### (Optional)

Code	Description
EHV	E-Series Horizontal U-Bend, Vertical Valve
EVV	E-Series Vertical U-Bend, Vertical Valve
USPEC	Special U-Bend Orientation

## Second Valve Connection

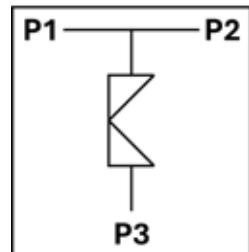
Code	Description
419R <sup>2</sup>	.75" Tri-Clamp
428	16 Gauge
419	Tri-Clamp Tube

# Zero Static Block Body (ZSBT)

Zero Static Block Body, wrought or forged stainless steel, 1" main valve with Tri-Clamp end connection, 2" tube with buttweld ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

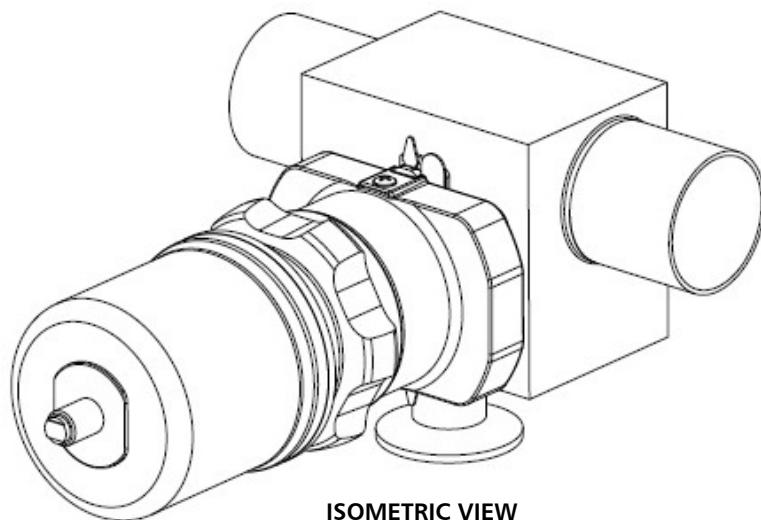
Figure Number: ENV-ZSBT-1-W-419-2-X28-SF1-1-0

Valve Body	Configuration Example	ENV	ZSBT	1	W	419	2	X28	SF1-1-0
Valve Platform	ENV								
Block Type			ZSBT						
Valve Size				1					
Body Type					W				
Body End Connection (P3)						419			
Zerostatic Tube Size							2		
Zerostatic Tube End Connections (P1, P2 or P1)								X28	
Zerostatic Tube Second End Connection (P2) <sup>1</sup>									
Polish Selections									SF1-1-0

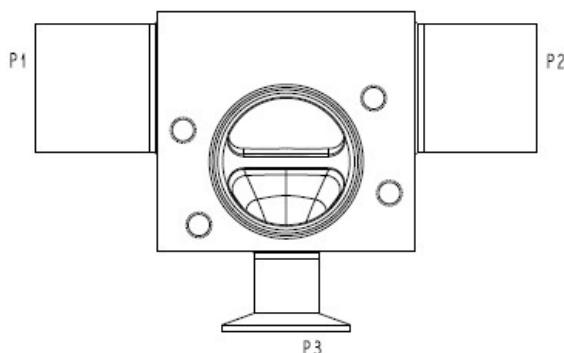


<sup>1</sup>Second end connection can be provided if end connections are different.

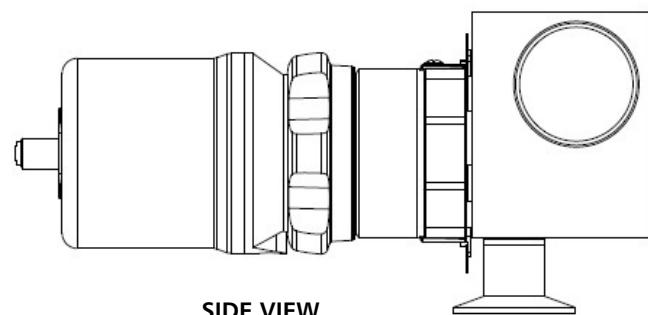
To add topwork(s) see page 39.  
For topwork options, switches  
and accessories see page 5.



ISOMETRIC VIEW



FRONT VIEW  
INSTALLATION ORIENTATION



SIDE VIEW

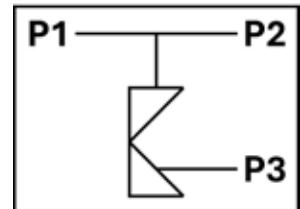
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Block Body with Back Outlet Option (ZSBT-BO)

Zero Static Block Body with Back Outlet, wrought stainless steel, 1" main valve with Tri-Clamp end connection, 2" cross tube (run) with buttweld ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

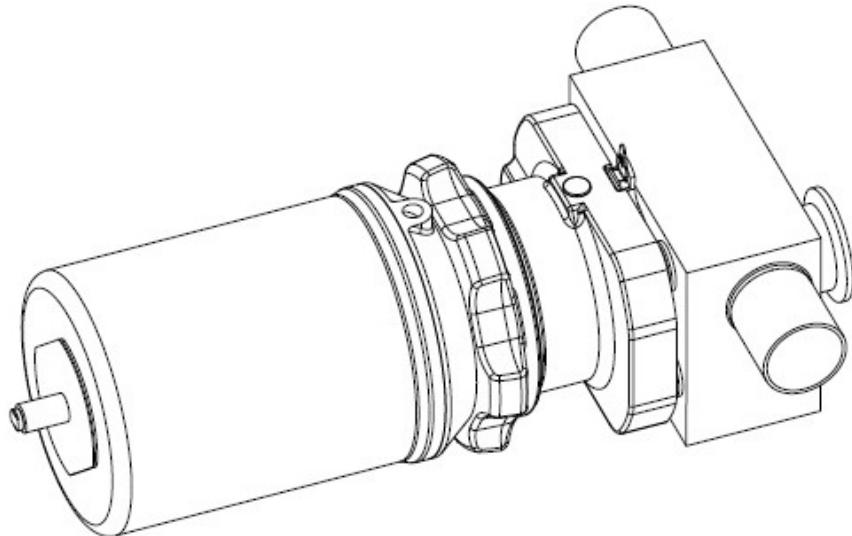
Figure Number: ENV-ZSBT-BO-1-W-419-2-X28-SF1-1-0

Valve Body	Configuration Example	ENV	ZSBT-BO	1	W	419	2	X28	SF1-1-0
Valve Platform	ENV								
Block Type		ZSBT-BO							
Valve Size			1						
Body Type				W					
Body End Connection (P3)					419				
Zerostatic Tube Size						2			
Zerostatic Tube End Connections (P1, P2 or P1)							X28		
Zerostatic Tube Second End Connection (P2) <sup>1</sup>									
Polish Selections									SF1-1-0

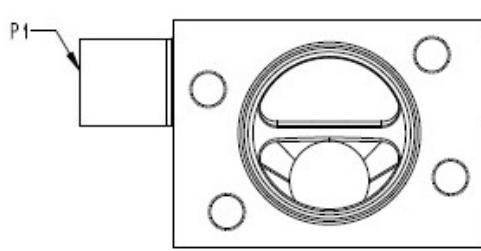


<sup>1</sup>Second end connection can be provided if end connections are different.

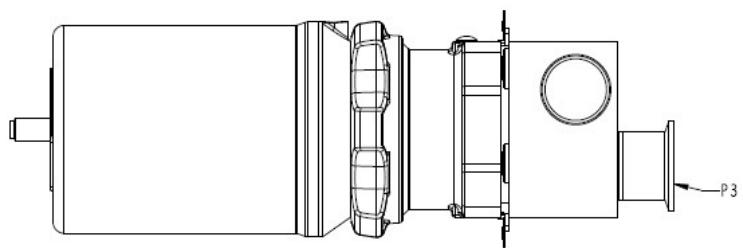
To add topwork(s) see page 39.  
For topwork options, switches  
and accessories see page 5.



ISOMETRIC VIEW



FRONT VIEW  
INSTALLATION ORIENTATION



SIDE VIEW

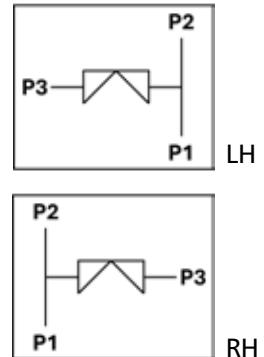
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Block Body with Vertical Run (ZSBV)

Zero Static Block Body with Vertical Run, wrought stainless steel, 1" main valve with Tri-Clamp end connection, 2" tube with buttweld ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

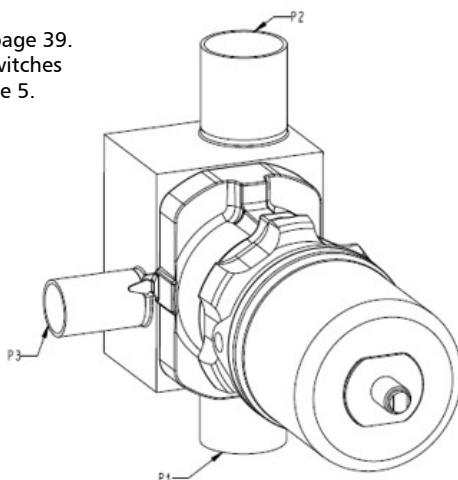
Figure Number: ENV-ZSBV-R-1-W-419-2-X28-SF1-1-0

Valve Body	Configuration Example	ENV	ZSBV	R	1	419	2	X28	SF1-1-0
Valve Platform	ENV								
Block Type			ZSBV						
Left or Right Orientation				R					
Valve Size					1				
Body End Connection (P3)						419			
Zerostatic Tube Size							2		
Zerostatic Tube End Connections (P1, P2 or P3)								X28	
Zerostatic Tube Second End Connection (P2) <sup>1</sup>									SF1-1-0
Polish Selections									

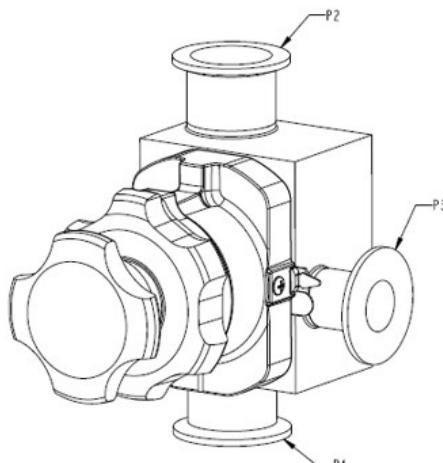


<sup>1</sup>Second end connection can be provided if end connections are different.

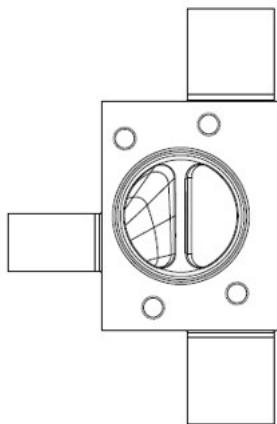
To add topwork(s) see page 39.  
For topwork options, switches and accessories see page 5.



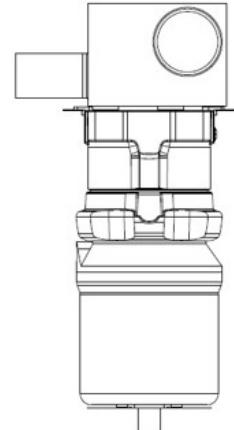
ISOMETRIC VIEW LH



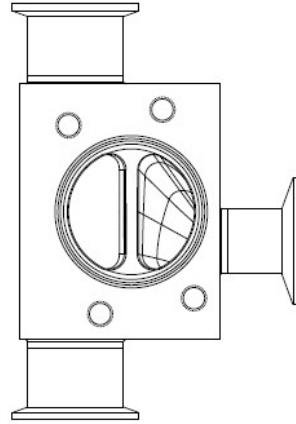
ISOMETRIC VIEW RH



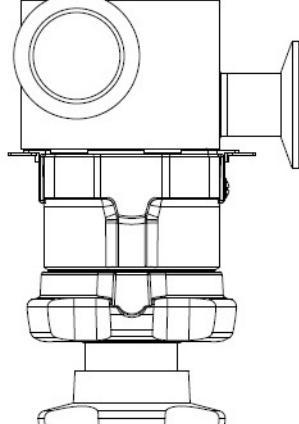
FRONT VIEW LH  
INSTALLATION ORIENTATION



TOP VIEW LH



FRONT VIEW RH  
INSTALLATION ORIENTATION



TOP VIEW RH

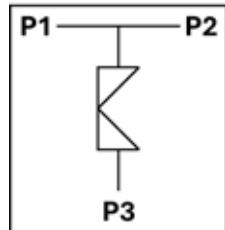
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Block Body U-bend (EZSBVV, EZSBHV)

Zero Static Block Body, 1" wrought or forged stainless steel main valve with Tri-Clamp outlet, 2" U-bend vertical tube with buttweld ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-EZSBVV-1-W-419-2-X28-SF1-1-0-TMZ-ZA2-ISP-3W-HZ

Valve Body	Configuration Example	ENV	EZSBVV	1	W	419	2	X28		SF1-1-0
Valve Platform	ENV									
Block Type <sup>1</sup>			EZSBVV							
Valve Size				1						
Body Type					W					
Valve End Connection (P3)						419				
Zerostatic Tube Size							2			
Zerostatic Tube End Connection (P1, P2 or P1)								X28		
Zerostatic Tube Second End Connection (P2) <sup>2</sup>										
Polish Selections										SF1-1-0



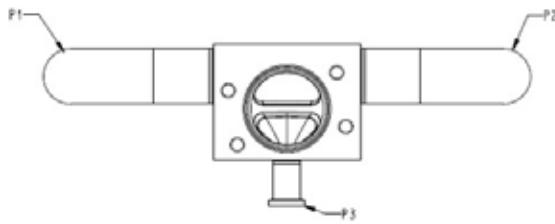
<sup>1</sup> EZSBVV for vertical tube, vertical valve. EZSBHV for horizontal tube, vertical valve. See drawings below for vertical tube and horizontal tube examples.

<sup>2</sup> Second end connection can be provided if end connections are different.

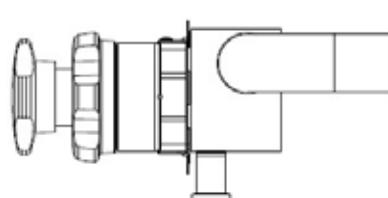
To add topwork(s) see page 39.

For topwork options, switches  
and accessories see page 5.

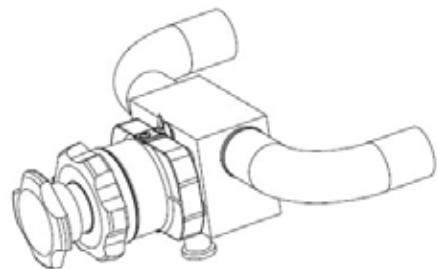
## EZSBHV



FRONT VIEW RH  
INSTALLATION ORIENTATION

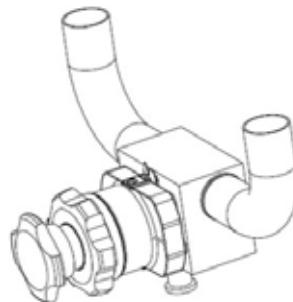
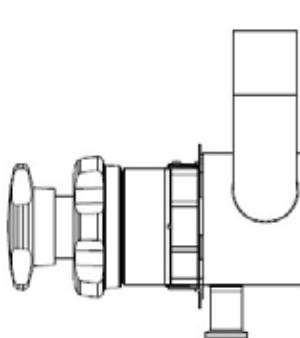
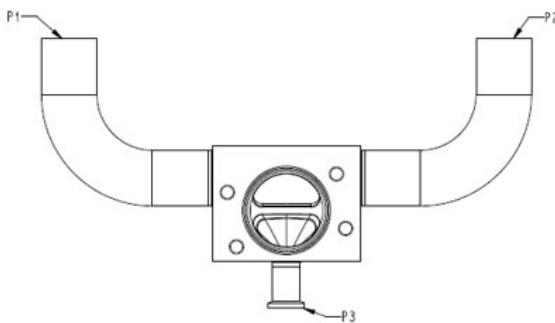


SIDE VIEW



ISOMETRIC VIEW

## EZSBVV



Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Back to Back Sample (ZSBBS)

Zero Static Block Body, 1.5" wrought stainless steel main valve with Tri-Clamp outlet, 2" tube with buttweld ends, .5" Biovizon sample with Tri-Clamp outlet, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-ZSBBS-1.5-EZ-419-2-428-.5-SVBV-419R-W-SF1-1-0

Configuration Example	ENV	ZSBBS	1.5	EZ	419	2	428	.5	SVBV	419R	W	SF1-1-0
Valve Platform	ENV											
Block Type		ZSBBS										
Main Valve Size			1.5									
Main Valve Type				EZ								
Main Valve End Connection (P3)					419							
Zerostatic Tube Size						2						
U-Bend Tube Orientation <sup>1</sup>							428					
Zerostatic Tube End Connection (P1, P2)								.5				
Second Valve Size									SVBV			
Second Valve Type										419R		
Second Valve End Connection (P4) <sup>2</sup>											W	
Second Valve Orientation <sup>3</sup>												SF1-1-0
Body Material												
Polish Selections												

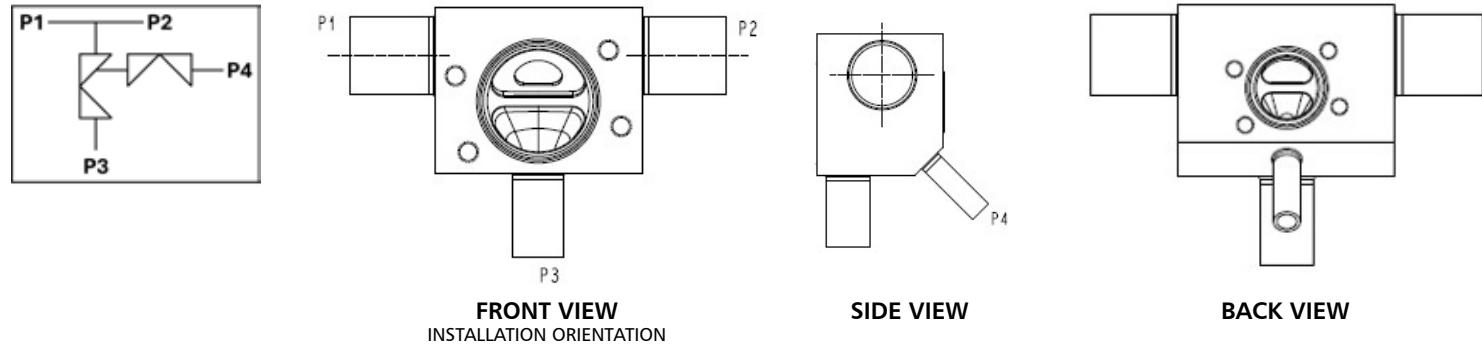
<sup>1</sup> Second end connection can be provided if end connections are different.

<sup>2</sup> 419R is standard for .5 sample valve to improve drainability.

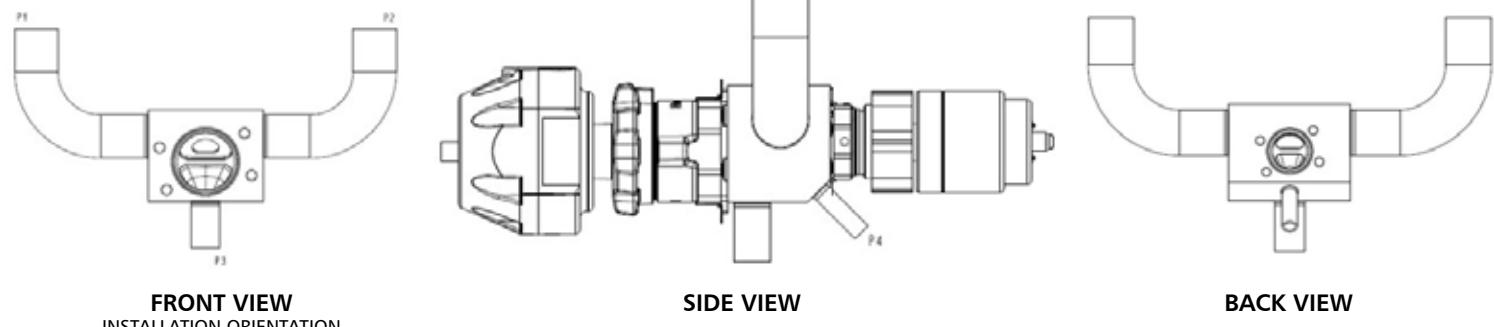
<sup>3</sup> Second valve is centered as standard and does not appear in the figure number. Right (R) and Left (L) options are available.

To add topwork(s) see page 39.

For topwork options, switches and accessories see page 5.



## U-Bend Tube Orientation: EVV



Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Downstream Purge - Top (ZDPT)

Zero Static Block Body, wrought stainless steel, 1" main valve with Tri-Clamp outlet, 2" tube with buttweld ends, .5" BioviZion purge with Tri-Clamp outlet on the right side of the valve, 20 Ra interior finish, standard exterior finish (Scotch Brite). Please note the ZDPT secondary valve outlet position is above the secondary valve weir.

Figure Number: ENV-ZDPT-1-EZ-419-2-428-.5-SVBV-419-R-W-SF1-1-0

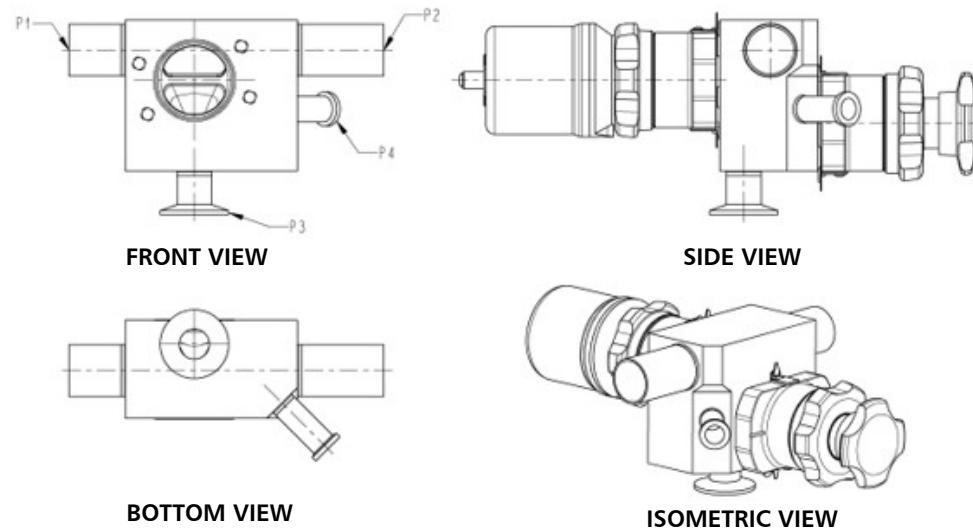
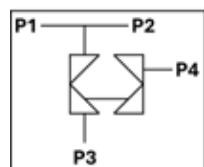
Configuration Example	ENV	ZDPT	1	EZ	419	2	428	.5	SVBV	419	R	W	SF1-1-0
Valve Platform	ENV												
Block Type		ZDPT											
Main Valve Size			1										
Main Valve Type				EZ									
Main Valve End Connection (P3)					419								
Zerostatic Tube Size						2							
U-Bend Tube Orientation <sup>1</sup>													
Zerostatic Tube End Connection (P1, P2)							428						
Second Valve Size								.5					
Second Valve Type									SVBV				
Second Valve End Connection (P4)										419			
Second Valve Outlet Orientation											R		
Body Material												W	
Polish Selections													SF1-1-0

<sup>1</sup> For a U-Bend vertical tube and vertical valve, enter EVV. For horizontal tube and vertical valve, enter EHV.

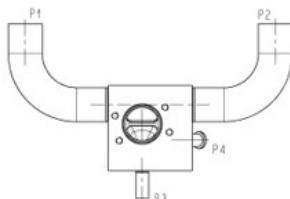
See drawings below for vertical tube and horizontal tube examples.

To add topwork(s) see page 39.

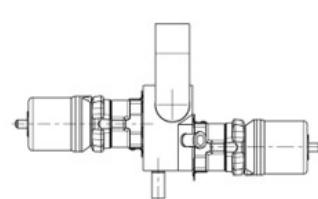
For topwork options, switches and accessories see page 5.



U-Bend Tube Orientation: EVV

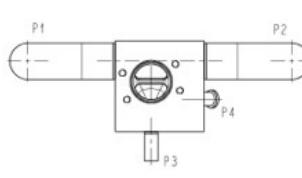


FRONT VIEW

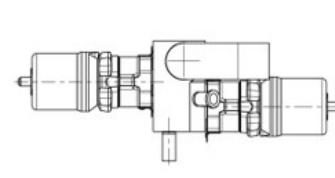


SIDE VIEW

U-Bend Tube Orientation: EHV



FRONT VIEW



SIDE VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Downstream Purge - Bottom (ZDPB)

Zero Static Block Body, wrought stainless steel, 1" main valve with Tri-Clamp outlet, 2" tube with buttweld ends, .5" BioviZion purge with Tri-Clamp outlet on the right side of the valve, 20 Ra interior finish, standard exterior finish (Scotch Brite). Please note the ZDPB secondary valve outlet position is below the secondary valve weir.

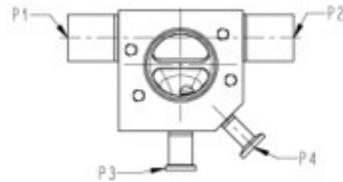
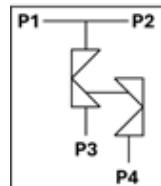
Figure Number: ENV-ZDPB-1-EZ-419-2-428-.5-SVBV-419-R-W-SF1-1-0

Configuration Example	ENV	ZDPB	1	EZ	419	2	428	.5	SVBV	419	R	W	SF1-1-0
Valve Platform	ENV												
Block Type		ZDPB											
Main Valve Size			1										
Main Valve Type				EZ									
Main Valve End Connection (P3)					419								
Zerostatic Tube Size						2							
U-Bend Tube Orientation <sup>1</sup>							428						
Zerostatic Tube End Connection (P1, P2)								.5					
Second Valve Size									SVBV				
Second Valve Type										419			
Second Valve End Connection (P4)											R		
Second Valve Orientation												W	
Body Material													SF1-1-0
Polish Selections													

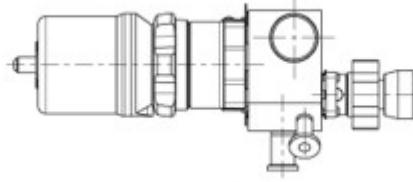
<sup>1</sup> For a U-Bend vertical tube and vertical valve, enter EVV. For horizontal tube and vertical valve, enter EHV. See drawings below for vertical tube and horizontal tube examples.

To add topwork(s) see page 39.

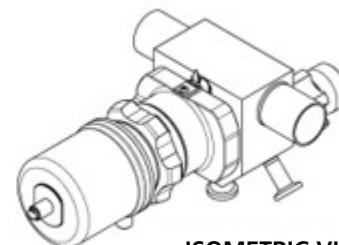
For topwork options, switches and accessories see page 5.



FRONT VIEW

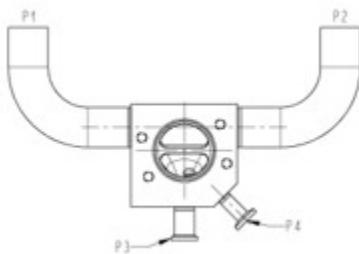


SIDE VIEW



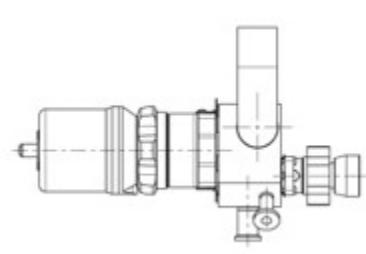
ISOMETRIC VIEW

U-Bend Tube Orientation: EVV



FRONT VIEW

U-Bend Tube Orientation: EHV



SIDE VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Dual Inline (ZDI)

Zero Static Dual Inline, 1" wrought stainless steel main valve with Tri-Clamp outlet, 2" tube with buttweld ends, 1" EnviZion second valve, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-ZDI-1-EZ-419-2-428-1-SVEZ-W-SF1-1-0

Configuration Example	ENV	ZDI	1	EZ	419	2		428	1	SVEZ	W	SF1-1-0
Valve Platform	ENV											
Block Type		ZDI										
Main Valve Size			1									
Main Valve Type				EZ								
Main Valve End Connection (P3)					419							
Zerostatic Tube Size						2						
U-Bend Tube Orientation <sup>1</sup>								428				
Zerostatic Tube End Connection (P1, P2)									1			
Second Valve Size										SVEZ		
Second Valve Type											W	
Body Material												
Polish Selections												SF1-1-0

<sup>1</sup> For a U-Bend vertical tube and vertical valve, enter EVV. For horizontal tube and vertical valve, enter EHV.

To add topwork(s) see page 39.

For topwork options, switches  
and accessories see page 5.

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static Inverted with Drain (ZID)

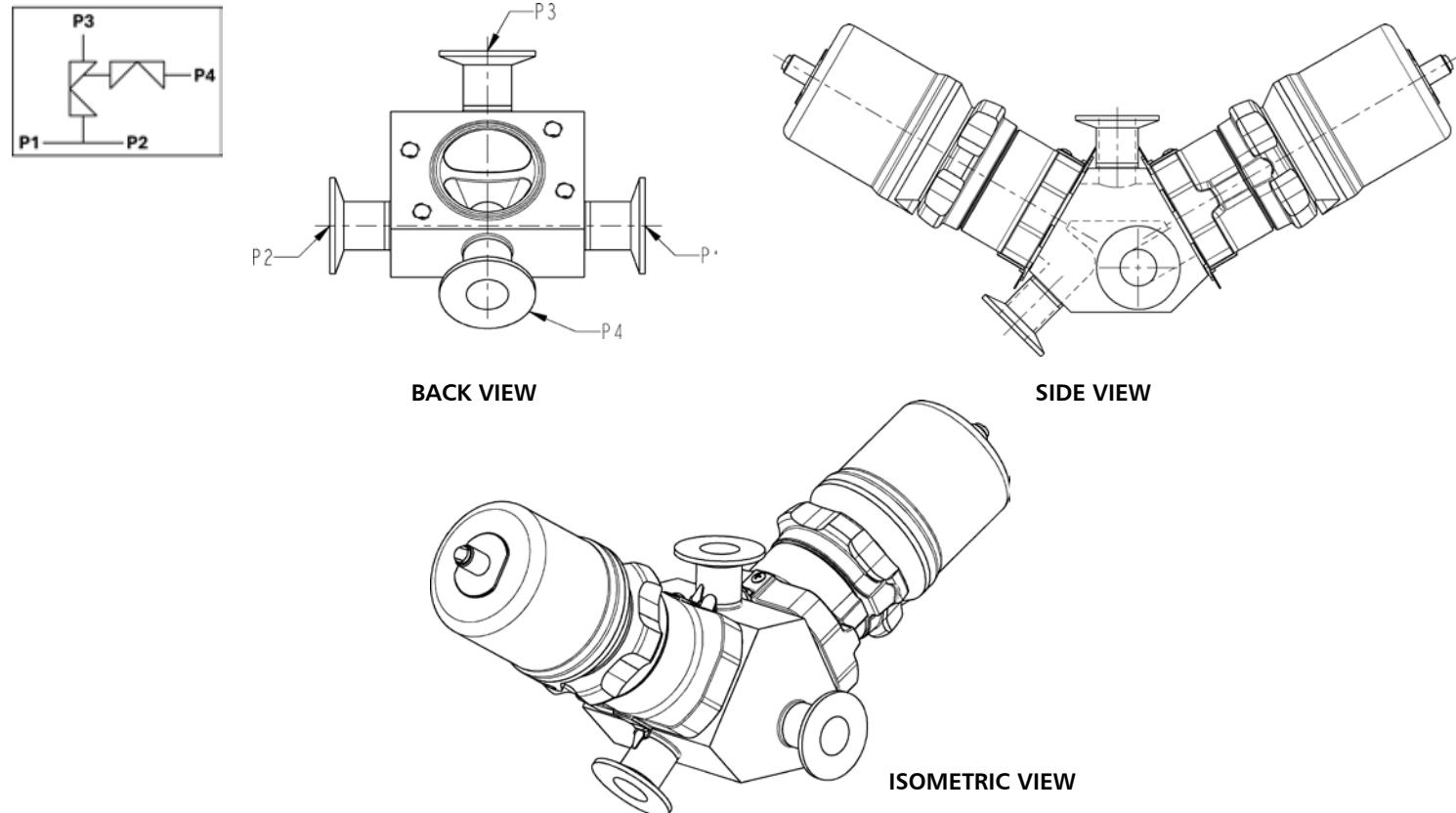
Inverted Zero Static with Drain, wrought stainless steel, 1" main valve with Tri-Clamp outlet, 2" tube with buttweld ends, .5" BioviZion second valve Tri-Clamp outlet, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-ZID-1-EZ-419-2-428-.5-SV р-419-W-SF1-1-0

	Configuration Example	ENV	ZID	1	EZ	419	2	428	.5	SVBV	419		W	SF1-1-0
Valve Platform	ENV													
Block Type			ZID											
Main Valve Size				1										
Main Valve Type					EZ									
Main Valve End Connection (P3)						419								
Zerostatic Tube Size							2							
Zerostatic Tube End Connection (P1, P2)														
Second Valve Size								.5						
Second Valve Type									SVBV					
Second Valve End Connection (P4)										419				
Second Valve Outlet Orientation (optional)														
Body Material												W		
Polish Selections													SF1-1-0	

To add topwork(s) see page 39.

For topwork options, switches and accessories see page 5.



Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Zero Static with Upstream Sample and Downstream Purge (ZUD)

ZUD, wrought stainless steel body, 1" main valve with Tri-Clamp outlet, 0.5" BioviZion Upstream Sample (right side) and 0.5" BioviZion Downstream Purge. 2" Zero Static tube size with buttweld ends. (Sample valve with 0.75" reducing ferrule and purge valve with 0.5" Tri-Clamp end connection.) 20 Ra interior finish, standard exterior finish (Scotch Brite).

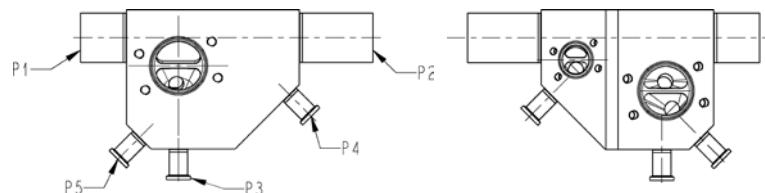
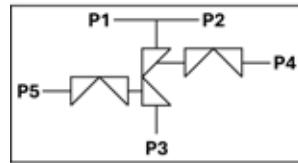
Figure Number: ENV-ZUD-1-EZ-419-2-428-.5-SVBV-419R-R-.5-TVBV-419-W-SF1-1-0

	Configuration Example	ENV	ZUD	1	EZ	419	2		428	.5	SVBV	419R	R	0.5	TVBV	419	W	SF1-1-0
Valve Body	Valve Platform	ENV																
	Block Type		ZUD															
	Main Valve Size			1														
	Main Valve Type				EZ													
	Main Valve End Connection (P3)					419												
	Zerostatic Tube Size						2											
	U-Bend Tube Orientation <sup>1</sup>																	
	Zerostatic Tube End Connection (P1, P2)							428										
	Second/Sample Valve Size								.5									
	Second Valve Type									SVBV								
	Second Valve End Connection (P4)										419R							
	Second Valve Outlet Orientation											R						
	Third/Purge Valve Size											0.5						
	Third Valve Type											TVBV						
	Third Valve End Connection (P5)												419					
	Body Material																	
	Polish Selections																	SF1-1-0

<sup>1</sup> For a U-Bend vertical tube and vertical valve, enter EVV. For horizontal tube and vertical valve, enter EHV. See drawings below for vertical tube and horizontal tube examples.

To add topwork(s) see page 39.

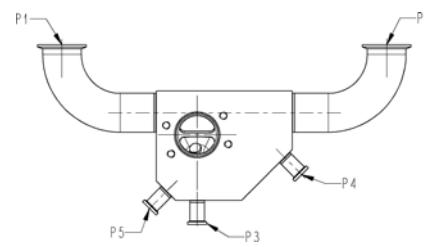
For topwork options, switches and accessories see page 5.



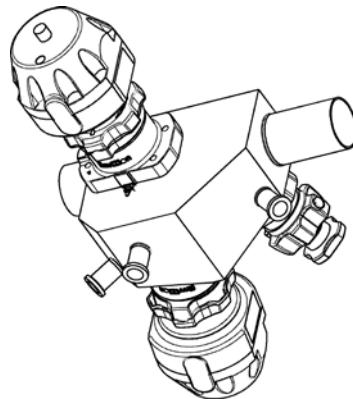
FRONT VIEW

BACK VIEW

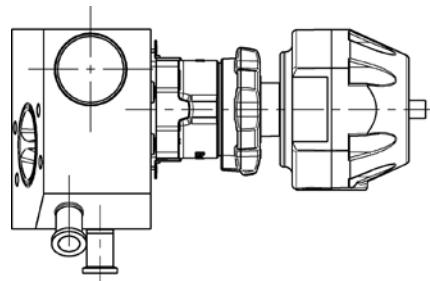
U-Bend Tube Orientation: EVV



FRONT VIEW

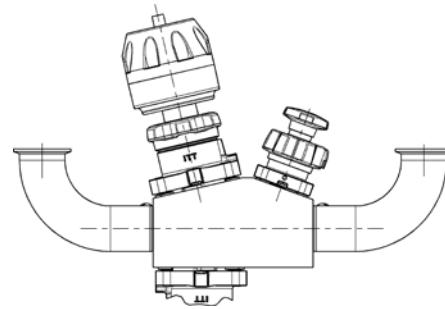


ISOMETRIC VIEW



SIDE VIEW

U-Bend Tube Orientation: EHV



TOP VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Multiport Valves

## Type of Valve

Code	Description
BBD	Block and Bleed Drain
BBV	Block and Bleed Vent
BYP	EnviZion Valve with Bypass Option
CHRO	Chromatography
CHN	Chromatography without Bypass
CRO	Cross over
CROD	Cross over with Drain Angle
DF	Dual Flow
DV2E	E-Series Divert Valve 2-way
DV2WS	Sterile Tank Vent Filter Shunt
DV3W	Divert Valve 3-way
DV4W	Divert Valve 4-way
DV5W	Divert Valve 5-way
DV6W	Divert Valve 6-way
HDV3W	Horizontal Divert Valve 3-way
IDSA	Integral Dual Sterile Access
IHSA	Integral Horizontal Sterile Access
INV_ISG	Inverted ISG
ISG	Integral Sterile Access GMP
SB1	Integral Sterile Barrier
VSPEC	Special Valve Type

## Type

Code	Description
EZ	Main Valve EnviZion
SVBV	Second Valve BioviZion
SVEZ	Second Valve EnviZion
TVBV	Third Valve BioviZion
TVEZ	Third Valve EnviZion

## Outlet Option

Code	Description
1	Outlet Configuration 1
2	Outlet Configuration 2
3	Outlet Configuration 3
4	Outlet Configuration 4
5	Outlet Configuration 5
6	Outlet Configuration 6
7	Outlet Configuration 7
8	Outlet Configuration 8
OSPEC	Special Outlet Configuration

Note: Refer to the drawing that corresponds to the type chosen

## Material

Code	Description
W	Wrought 316L
WA	Wrought AL6XN
WC2	Wrought C-22
WC6	Wrought C-276
WT	Wrought Titanium
BSPEC	Special Material

## Flow Through (Optional)

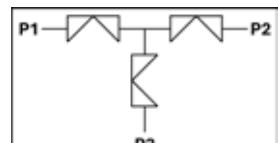
Code	Description
DVFT	Divert Flow-Through

# Block and Bleed Valve (BBD, BBV)

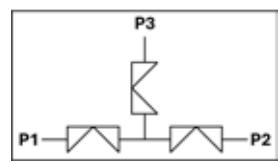
Block and Bleed, wrought stainless steel, 1.5" main valve with buttweld end, 1.5" second valve with buttweld end, 1" third valve with Tri-Clamp ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-BBD-1.5-EZ-428-1.5-SVEZ-428-1-TVEZ-419-W-SF1-1-0

Valve Body	Configuration Example	ENV	BBD	1.5	EZ	428	1.5	SVEZ	428	1	TVEZ	419	W	SF1-1-0
Valve Platform	ENV													
Block Type			BBD											
Main Valve Size				1.5										
Main Valve Type					EZ									
Main Valve End Connection (P3)						428								
Second Valve Size							1.5							
Second Valve Type								SVEZ						
Second Valve End Connection									428					
Third Valve Size										1				
Third Valve Type											TVEZ			
Third Valve End Connection												419		
Zerostatic Tube Size													W	
U-Bend Tube Orientation <sup>1</sup>														SF1-1-0



BBD



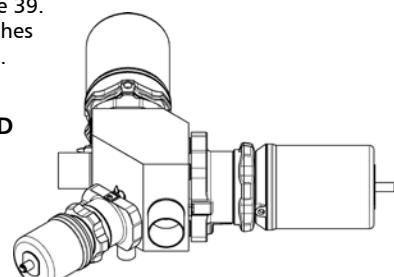
BBV

<sup>1</sup> Contact the factory for additional options for discrete end connection selections.

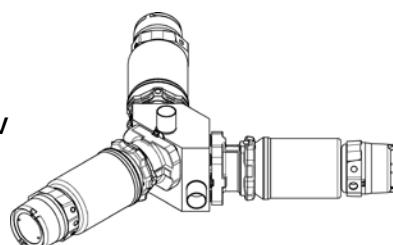
To add topwork(s) see page 39.

For topwork options, switches and accessories see page 5.

BBD

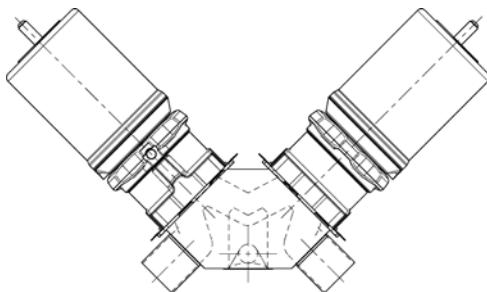


BBV

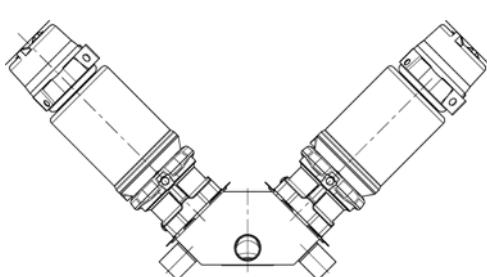


ISOMETRIC VIEW

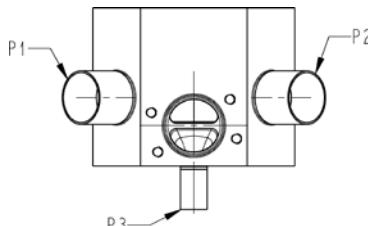
ISOMETRIC VIEW



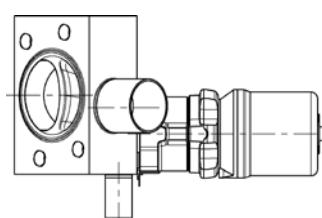
TOP VIEW



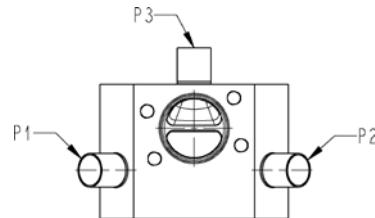
TOP VIEW



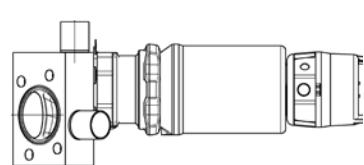
FRONT VIEW



SIDE VIEW



FRONT VIEW



SIDE VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Bypass Valve (BP)

1" wrought stainless steel valve with BioviZion bypass, Tri-Clamp ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

**Figure Number:** ENV-BP-1-EZ-419-.25-SV рV-W-SF1-1-0

Valve Body	Configuration Example	ENV	BP	1	EZ	419	.25	SV рV	W	SF1-1-0
Valve Platform	ENV									
Block Type		BP								
Valve Size			1							
Valve Type				EZ						
Body End Connections (P1, P2)					419					
Second Valve Size <sup>1</sup>						.25				
Second Valve Type							SV рV			
Body Material								W		
Polish Selections									SF1-1-0	

<sup>1</sup> 1/4" standard bypass valve size (internal passage diameter .18"). Consult the factory for additional bypass valve sizes.

To add topwork(s) see page 39.  
For topwork options, switches  
and accessories see page 5.

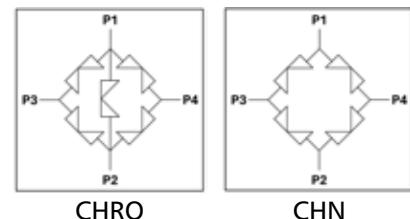
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Chromatography Valve (CHRO, CHN)

1" Chromatography Valve with Bypass, wrought stainless steel body, Tri-Clamp ends, standard mounting holes, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-CHRO-1-EZ-419-W-SF1-1-0

Valve Body	Configuration Example	ENV	CHRO	1	EZ	419	W		SF1-1-0
Valve Platform	Valve Platform	ENV							
Block Type <sup>1</sup>	Block Type		CHRO						
Valve Size	Valve Size			1					
Valve Type	Valve Type				EZ				
End Connections (P1, P2, P3, P4)	End Connections (P1, P2, P3, P4)					419			
Body Material	Body Material						W		
Standard Mounting <sup>2</sup>	Standard Mounting								
Polish Selections	Polish Selections							SF1-1-0	



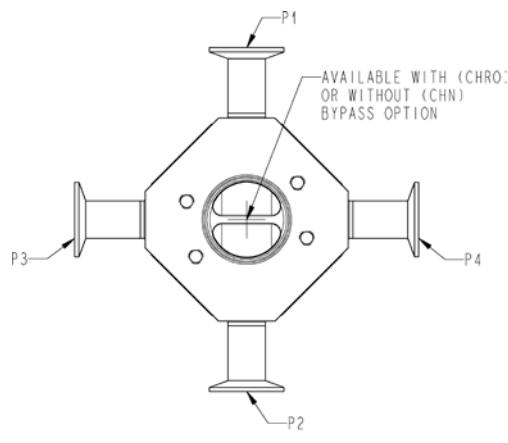
<sup>1</sup> Chromatography block includes bypass valve as a standard (CHRO). Use Block Type CHN for Chromatography block with no bypass valve.

<sup>2</sup> Standard mounting for Chromatography blocks consists of drilled and tapped holes on the bottom of the block. Contact factory for specific sizes and locations. Body can be mounted horizontally (as shown below) or vertically with port P1 at the top.

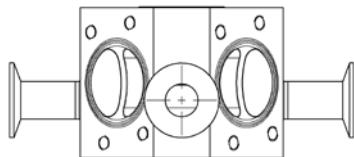
To add topwork(s) see page 39.

For topwork options, switches and accessories see page 5.

CHN

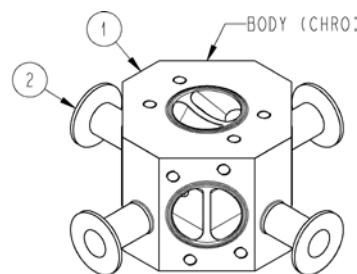


TOP VIEW

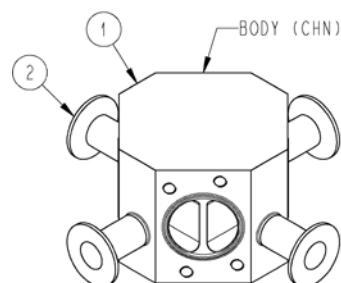


FRONT VIEW

CHRO



ISOMETRIC TCE  
WITH BYPASS



ISOMETRIC TCE  
WITHOUT BYPASS

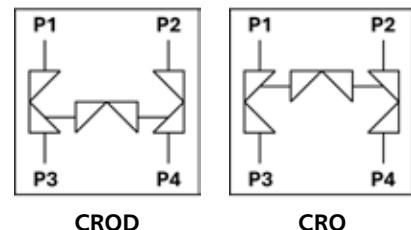
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Crossover Valve (CROD, CRO)

1" Crossover with Drain Angle, wrought stainless steel body, Tri-Clamp ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

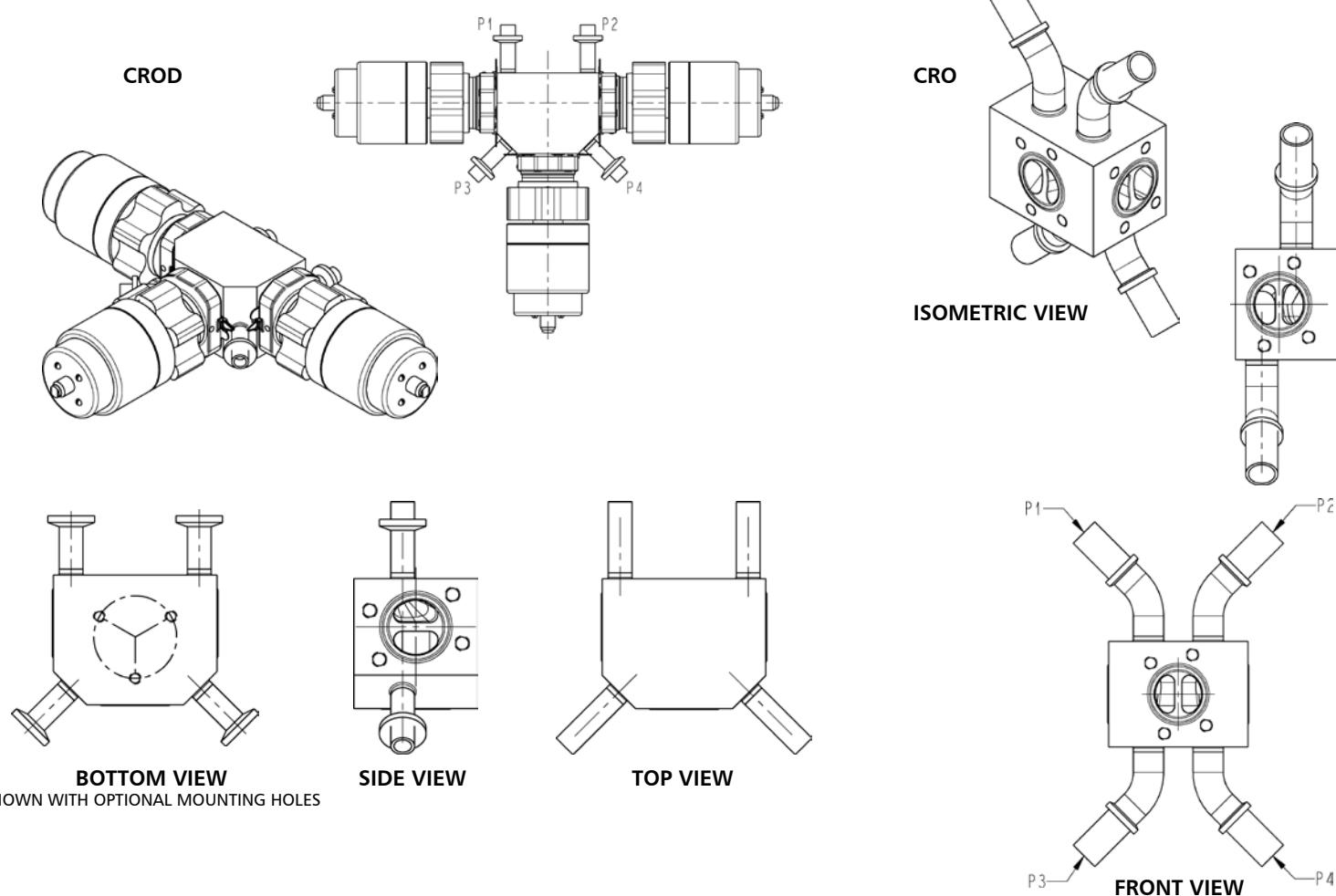
Figure Number: ENV-CROD-1-EZ-419-W-SF1-1-0

Valve Body	Configuration Example	ENV	CROD	1	EZ	419	W	SF1-1-0
Valve Platform	ENV							
Block Type			CROD					
Valve Size				1				
Valve Type					EZ			
End Connections (P1, P2, P3, P4)						419		
Body Material							W	
Polish Selections								SF1-1-0



To add topwork(s) see page 39.

For topwork options, switches  
and accessories see page 5.



Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Multiport Divert Valves

## (DV2E, DV3W, DV4W, DV5W, DV6W)

### 2-Way

2-Way Divert Valve with a 1" wrought stainless steel body, inlet and outlets have Tri-Clamp ends, outlet is Option 4, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-DV2E-1-EZ-4-419-W-SF1-1-0

Valve Body	Configuration Example	ENV	DV2E	1	EZ	4		419			W		SF1-1-0
	Valve Platform	ENV											
	Block Type		DV2E										
	Valve Size			1									
	Valve Type				EZ								
	Outlet Option					4							
	Common Port Size <sup>1</sup>												
	End Connections (P1, P2, P3, P4 or P2, P3, P4) <sup>2</sup>							419					
	Common Port End Connections (P1) <sup>3</sup>												
	Body Material										W		
Mounting Holes <sup>4</sup>													SF1-1-0
Polish Selections													

### 3-Way Through 6-Way

3-Way Divert Valve with a 1.5" wrought stainless steel body, inlet and outlets have Tri-Clamp ends, outlet is Option 4, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-DV3W-1.5-EZ-4-419-W-SF1-1-0

Valve Body	Configuration Example	ENV	DV3W	1.5	EZ	4		419		W		SF1-1-0	
	Valve Platform	ENV											
	Block Type <sup>5</sup>		DV3W										
	Valve Size			1.5									
	Valve Type				EZ								
	Outlet Option					4							
	Common Port Size <sup>1</sup>												
	Divert Valve Flow Through <sup>6</sup>												
	End Connections <sup>2</sup>							419					
	Common Port End Connections (P1) <sup>3</sup>												
Body Material													
Mounting Holes <sup>4</sup>													SF1-1-0
Polish Selections													

<sup>1</sup> Common Port Size provides the option of a larger common port (P1) size than the valve size to increase flow when more than one valve is open.

<sup>2</sup> Contact the factory for discrete end connection selections.

<sup>3</sup> Common Port End Connection - provides the option of a different end connection for the Common Port (P1).

<sup>4</sup> Contact factory for mounting options.

<sup>5</sup> Figure numbers for Block Type: 3-Way - DV3W, 4-Way - DV4W, 5-Way - DV5W, 6-Way - DV6W.

Note: Combinations with more than six diverted ports are possible but are typically not recommended due to the internal deadleg.

<sup>6</sup> Divert Valve Flow Through (3 through 6-Way only) - provides an additional common port from the opposite side of the block.

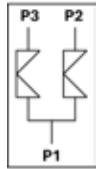
To add topwork(s) see page 39.

For topwork options, switches and accessories see page 5.

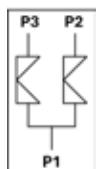
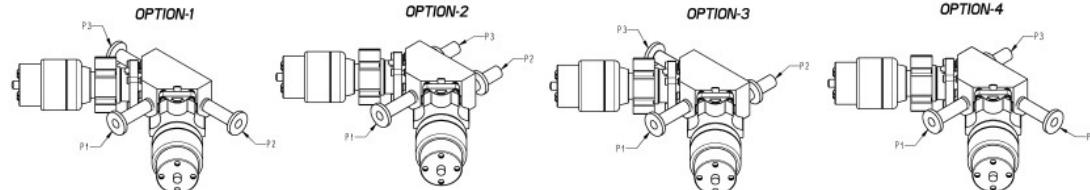
# Multiport Divert Valves

## (DV2E, DV3W, DV4W, DV5W, DV6W)

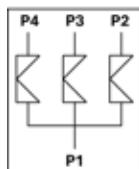
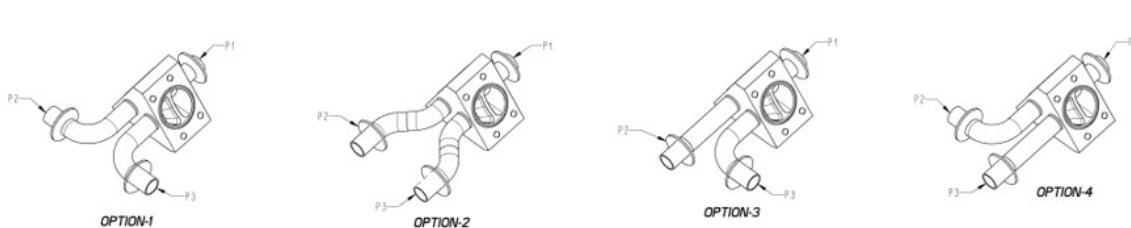
### Drawings



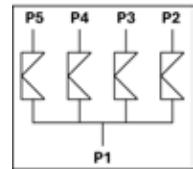
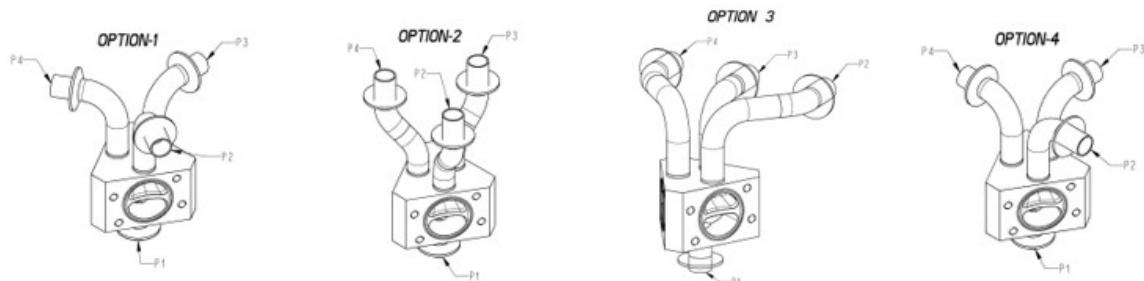
2DV BIOVIZION



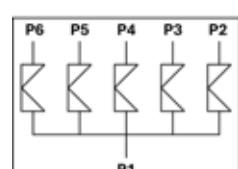
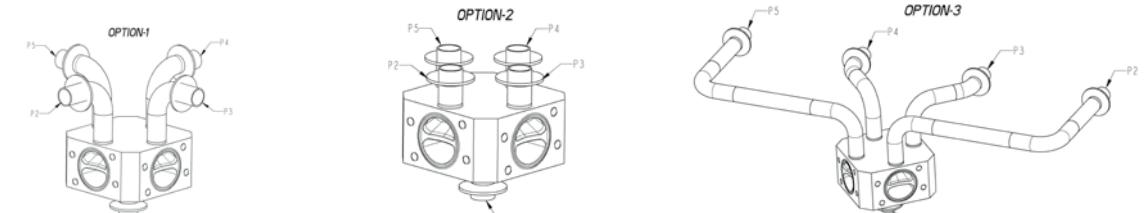
2DV ENVIZION



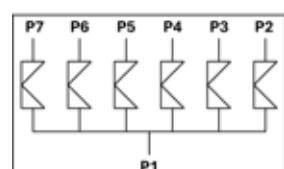
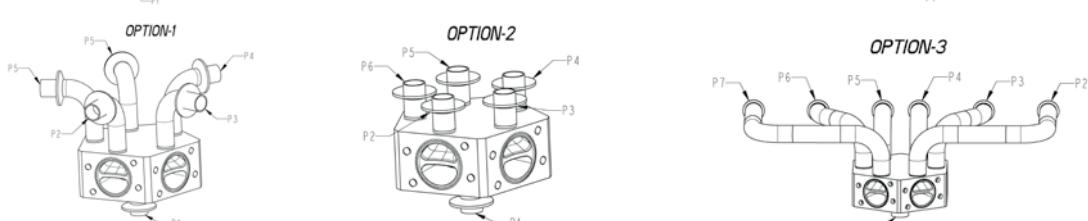
3DV ENVIZION



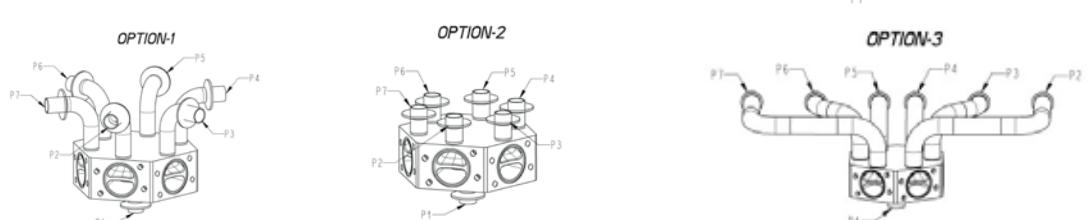
4DV



5DV



6DV



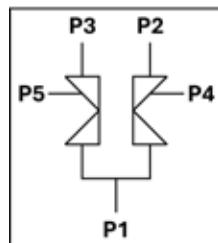
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Sterile Tank Vent Filter Shunt (DV2WS)

Sterile Tank Vent Filter Shunt with a 1.5" wrought stainless steel body, inlet and outlets have Tri-Clamp ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-DV2WS-1.5-EZ-419-W-SF1-1-0

Valve Body	Configuration Example	ENV	DV2WS	1.5	EZ		419	W	SF1-1-0
Valve Platform	ENV								
Block Type		DV2WS							
Valve Size <sup>1</sup>				1.5					
Valve Type					EZ				
Common Port Size (P1) <sup>2</sup>							419		
End Connections (P1, P2, P3, P4)								W	
Body Material									
Polish Selections									SF1-1-0



<sup>1</sup> Standard sizes: 1.5" and 2"

<sup>2</sup> Common Port Size option provides increased clamp size to connect directly to an available tank port.

Valve Size: 1.5" and 2"

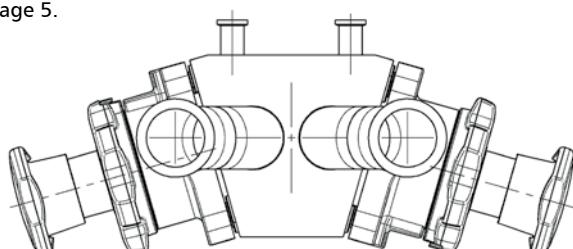
Optional Common Port Size for 1.5: 2", 2.5", 3", 4"

Optional Common Port Size for 2: 2.5", 3", 4"

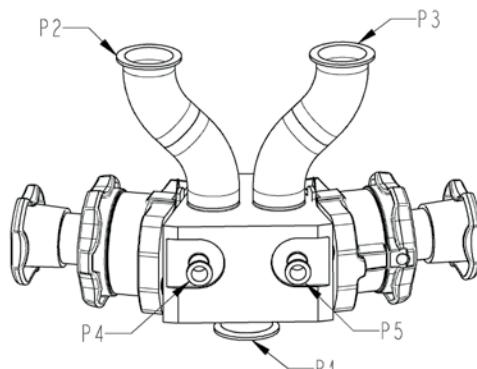
Consult the factory for non-jacketed versions available for use with steam.

To add topwork(s) see page 39.

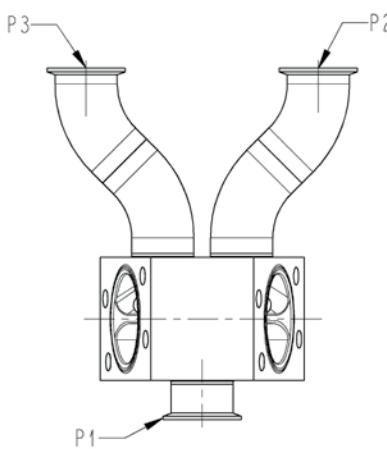
For topwork options, switches and accessories see page 5.



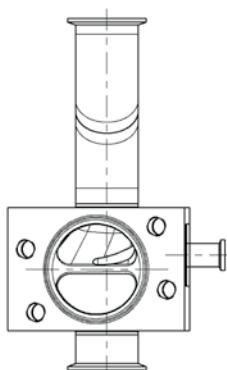
TOP VIEW



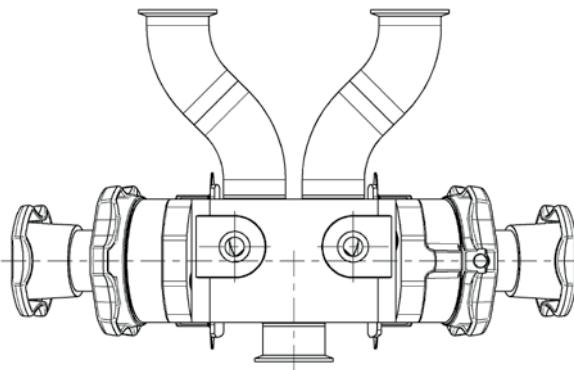
ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW



BACK VIEW

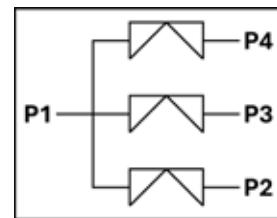
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Horizontal Divert Valve 3-Way (HDV3W)

2" Horizontal Divert Valve 3-Way, wrought stainless steel body, butt weld ends, common port (P1) on the right (when facing the weir of the third valve), 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-HDV3W-2-EZ-428-R-W-SF1-1-0

	Configuration Example	ENV	HDV3W	2	EZ	428	R	W	SF1-1-0
Valve Body	Valve Platform	ENV							
	Block Type		HDV3W						
	Valve Size			2					
	Valve Type				EZ				
	Valve Connections (P1, P2, P3, P4) <sup>1</sup>					428			
	Valve Orientation <sup>2</sup>						R		
	Body Material							W	
	Polish Selections								SF1-1-0

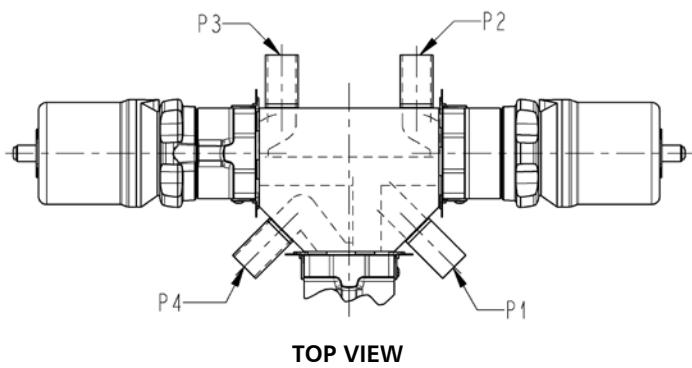


<sup>1</sup> Contact the factory for discrete end connection options.

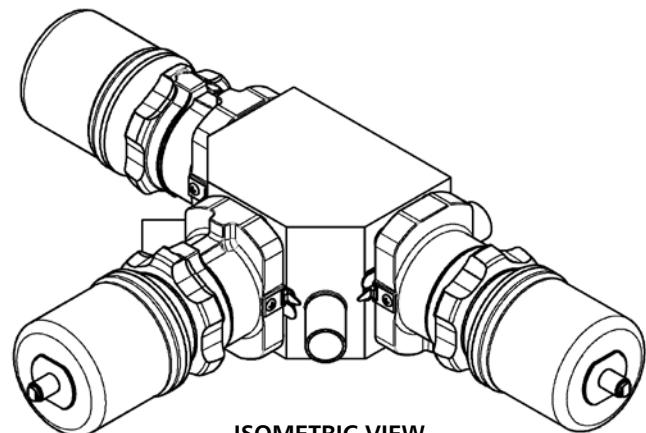
<sup>2</sup> This determines which side (right or left) the Common Port (P1) is on when viewing from the top (See Top View below, Right orientation shown).

To add topwork(s) see page 39.

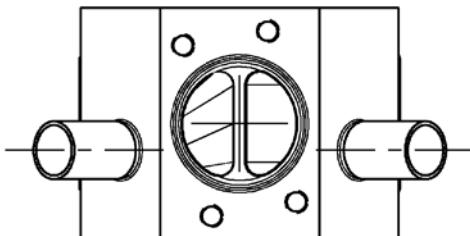
For topwork options, switches and accessories see page 5.



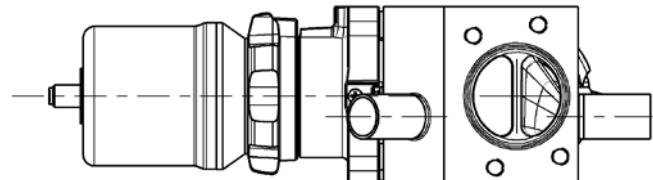
TOP VIEW



ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Integral Dual Sterile Access (IDSA)

2" Integral Dual Sterile Access, wrought stainless steel, Tri-Clamp ends, 1" Second valve (P1 side) is oriented down, 1" Third valve (P2 side) is oriented down, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-IDSA-2-EZ-419-1-SVEZ-D-1-TVEZ-D-W-SF1-1-0

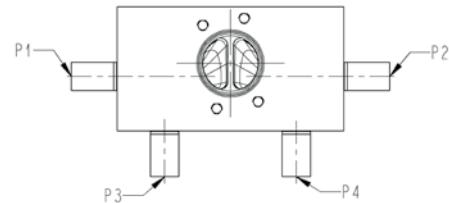
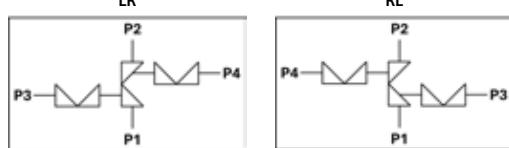
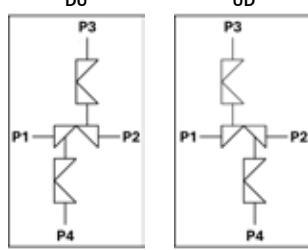
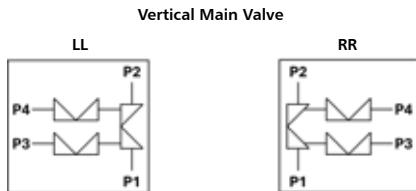
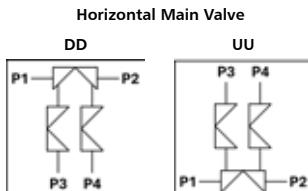
	Configuration Example	ENV	IDSA	2	EZ	419	1	SVEZ	D	1	TVEZ	D	W	SF1-1-0
Valve Body	Valve Platform	ENV	IDSA											
	Block Type													
	Main Valve Size			2										
	Main Valve Type				EZ									
	Main Valve End Connections (P1, P2)					419								
	Second Valve Size						1							
	Second Valve Type							SVEZ						
	Second Valve End Connection (P3) <sup>1</sup>													
	Second Valve Outlet Orientation <sup>2</sup>								D					
	Third Valve Size									1				
	Third Valve Type										TVEZ			
	Third Valve End Connection (P4) <sup>1</sup>											D		
	Third Valve Outlet Orientation <sup>2</sup>												W	
	Body Material													SF1-1-0
	Polish Selections													

<sup>1</sup> Specify second (P3) and third (P4) end connections if they differ from those for the main valve (P1, P2).

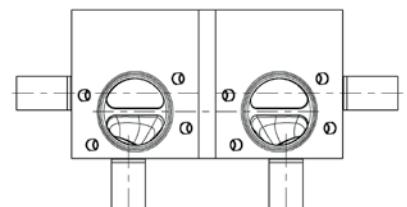
<sup>2</sup> See P&ID below for second and third valve orientation options

To add topwork(s) see page 39.

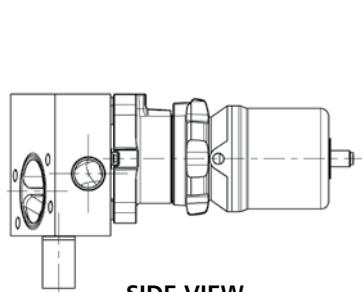
For topwork options, switches and accessories see page 5.



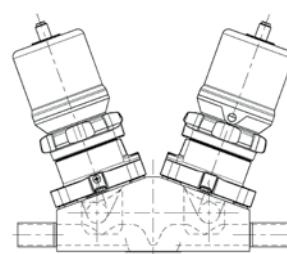
FRONT VIEW



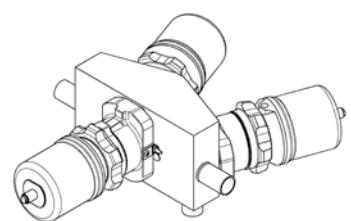
BACK VIEW



SIDE VIEW



TOP VIEW



ISOMETRIC VIEW

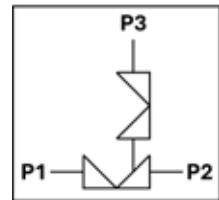
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Integral Horizontal Sterile Access (IHSA)

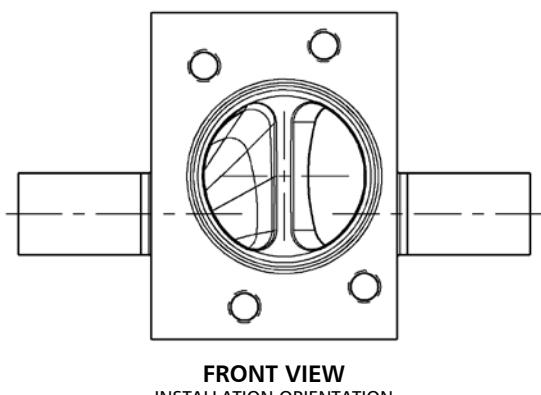
Integral Horizontal Sterile Access valve with a 1" wrought stainless steel body, 1" secondary valve ported on right hand side, all outlets have buttweld ends, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-IHSA-1-EZ-428-1-SVEZ-428-R-W-SF1-1-0

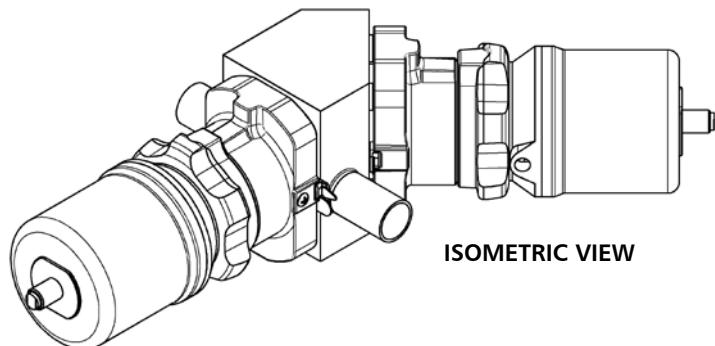
Valve Body	Configuration Example	ENV	IHSA	1	EZ	428	1	SVEZ	428	R	W	SF1-1-0
Valve Platform	ENV											
Block Type			IHSA									
Main Valve Size				1								
Main Valve Type					EZ							
Main Valve End Connections (P1, P2)						428						
Second Valve Size							1					
Second Valve Type								SVEZ				
Second Valve End Connection (P3)									428			
Second Valve Orientation										R		
Body Material											W	
Polish Selections												SF1-1-0



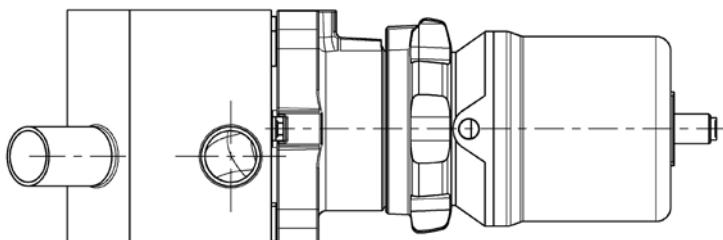
To add topwork(s) see page 39.  
For topwork options, switches  
and accessories see page 5.



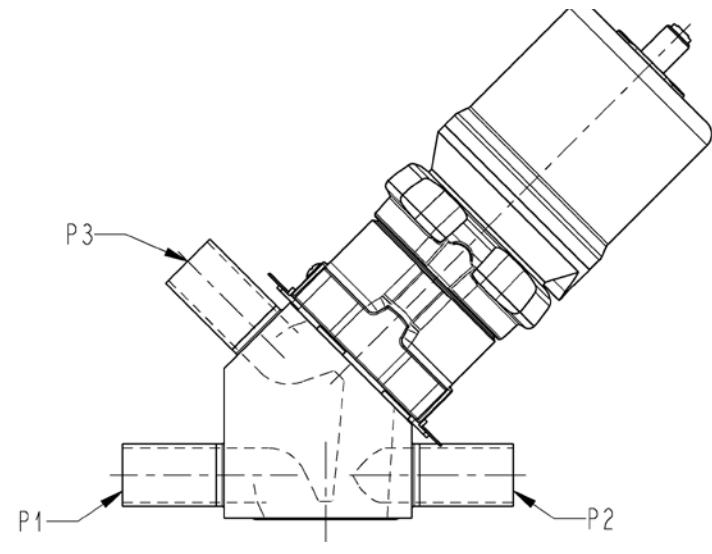
FRONT VIEW  
INSTALLATION ORIENTATION



ISOMETRIC VIEW



SIDE VIEW



TOP VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Integral Sterile Access and GMP (ISG, INV\_ISG)

Integral Sterile Access and GMP valve, wrought stainless steel body, option 2, 1.5" main valve with Tri-clamp ends, .5" BioviZion second valve with buttweld end, 20 Ra interior finish, standard exterior finish (Scotch Brite).

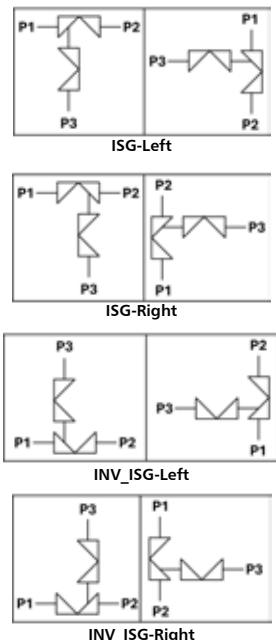
Figure Number: ENV-ISG-1.5-EZ-2-.5-SV р-W-SF1-1-0

Valve Body	Configuration Example	ENV	ISG	1.5	EZ	2	.5	SVBV	R	W	SF1-1-0
Valve Platform	ENV										
Block Type			ISG								
Main Valve Size				1.5							
Main Valve Type					EZ						
Outlet Option						2					
Second Valve Size							.5				
Second Valve Type								SVBV			
Valve Orientation <sup>1</sup>									R		
Body Material										W	
Polish Selections											SF1-1-0

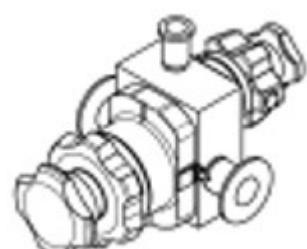
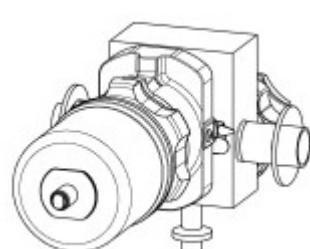
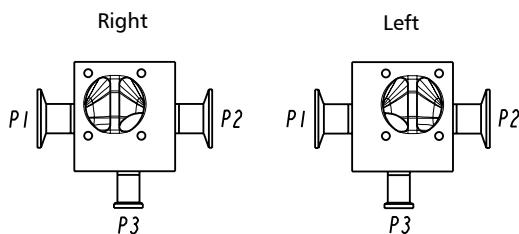
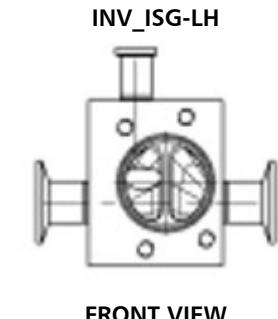
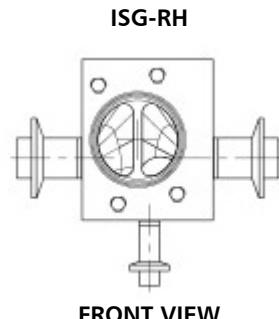
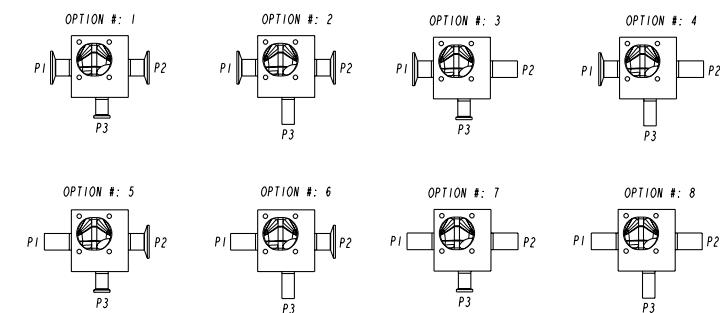
<sup>1</sup> Second valve ported on the left or right side of main valve weir.

To add topwork(s) see page 39.

For topwork options, switches and accessories see page 5.



## End Connection Options



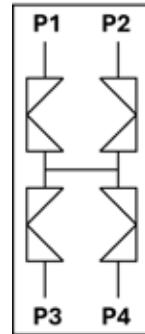
Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# Integral Sterile Barrier (SB1)

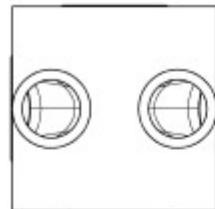
1" Integral Sterile Barrier, wrought stainless steel, Tri-Clamp end connections, 20 Ra interior finish, standard exterior finish (Scotch Brite).

Figure Number: ENV-SB1-1-EZ-419-W-SF1-1-0

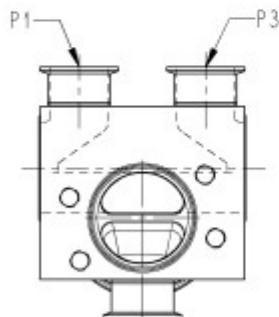
Valve Body	Configuration Example	ENV	SB1	1	EZ	419	W	SF1-1-0
Valve Platform	ENV							
Block Type		SB1						
Process Valve Size			1					
Main Valve Type				EZ				
Body End Connections (P1, P2, P3, P4)					419			
Body Material						W		
Polish Selections							SF1-1-0	



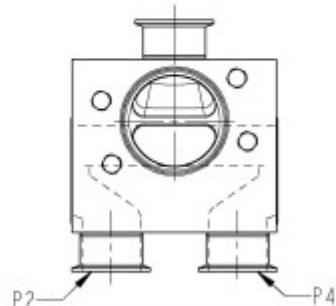
To add topwork(s) see page 39.  
For topwork options, switches  
and accessories see page 5.



TOP VIEW



FRONT VIEW



SIDE VIEW

Please contact the factory for the latest drawing and dimensional information. The above drawing should only be used as a general reference.

# How to Order Topworks for Block Body Valves

1" manual topwork with bonnet gaurd, TMZ PTFE diaphragm, no valve body.

Figure Number: ENV-1-N-TMZ-ZH-EBG

Manual Topwork and Accessories	Configuration Example	ENV	1	N	TMZ	ZH	EBG	
Valve Platform	ENV							
Valve Size		1						
Body (Not supplied)				N				
Diaphragm					TMZ			
Manual Topwork						ZH		
Topwork Options							EBG	
Electropolish Topworks								

<sup>1</sup> Multiple selections allowed

1.5" stainless steel fail-closed actuator with TMZ PTFE diaphragm, ISP limit switch, no valve body.

Figure Number: ENV-1.5-N-TMZ-ZA2-ISP-3W-HZ

Actuated Topwork and Accessories	Configuration Example	ENV	1.5	N	TMZ	ZA2			ISP-3W-HZ
Valve Platform	ENV								
Valve Size		1.5							
Body (Not supplied)				N					
Diaphragm					TMZ				
Actuated Bonnet						ZA2			
Electropolish Topworks									
Actuated Topwork									
Topwork Options									
Switch Options									ISP-3W-HZ

<sup>1</sup> Multiple selections allowed.

## Example of a complete figure number for block body valve and topworks:

ENV-ISG-1.5-EZ-1-.5-SVBV-R-W-SF1-1-0

1.5-N-TMZ-ZA2-ISP-3W-HZ

ENV-1-N-TMZ-ZH

EnviZion block body valve drawings are available.

Go to our website (<https://www.engvalves.com/tools-and-resources/drawings/hygienic-diaphragm-drawings/envizion-drawings>) for more information.  
Others available upon request.



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**EnviZion, Pure-Flo**

