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Краснодар(861)203-40-90, Красноярск(391)204-63-61, Москва(495)268-04-70, Нижний Новгород(831)429-08-12,
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Санкт-Петербург(812)309-46-40, Саратов(845)249-38-78, Уфа(347)229-48-12,
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SWISS fluid

SIV Inline Sampling Valves plastomer-lined

1/2" – 6"

Inline Valves for safe and representative sampling of corrosive, aggressive or even toxic media from pipelines, pressurized or at vacuum conditions – without process interruptions.

Modular Design

SIV Sampling Valves are available as wafer-style or flanged valves. The valves are distinguished by its dead-space-free design as well as the extremely short outlet way for the representative sample.

The sturdy bodies are made of stainless steel casting 1.4408 (CF-8M) or optional with resistant linings and valve spindle encapsulations.



Main Features

- Bodies wafer-style or flanged, dead-space-free design, conforming to TA-Luft
- Safe and simple operation by standard handwheel, handwheel spring to close (top or lateral) or with spring return deadman lever (fail safe close)
- Installation in any given position
- Corrosion-resistant materials, linings and encapsulations made of PFA or PFA-AS (conductive)
- Precision sampling for small sample volumes by valve spindle stroke adjustment
- Maintenance-free stuffing box or bellows seal
- Replaceable spindle gasket
- Flange connections acc. to ANSI 150lbs (DIN opt.)
- Variety by modular design

 **Conformity acc. to European Pressure Equipment Directive 97/23/EC (PED)**

Actuator Versions



Options / Accessories

- Bodies with heating jacket
- Needle adapter for lab bottle with septum
- Bottle support, adjustable
- Safety cabinet with inspection windows
- Flange versions: groove, ANSI 300lbs, PN16/40, clamp or with buttwelding ends
- Vertical adapter, sealing plug, activ. carbon filter
- Metal safety basket, with spring loaded plate
- Sampling collector, piston injector (syringe)
- Pneum. linear stroke actuator, single-acting FC

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Operating Conditions

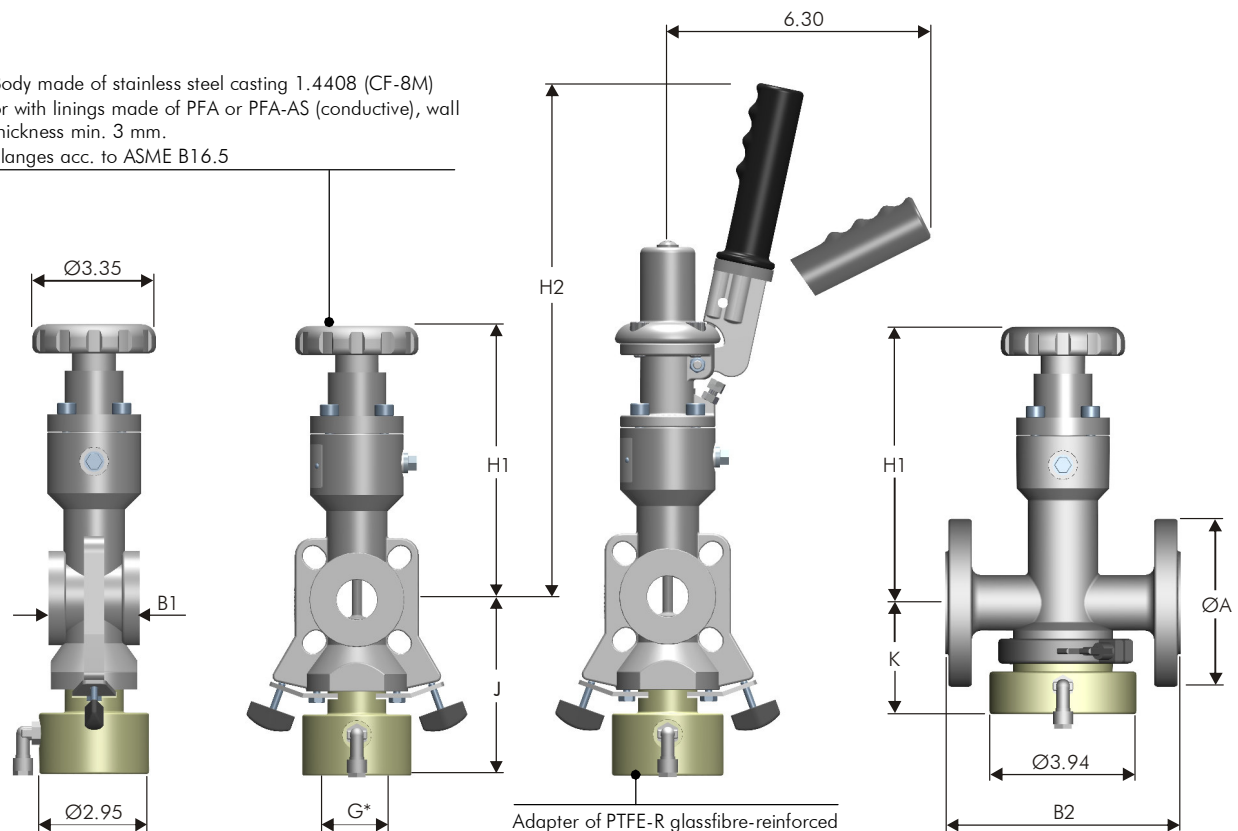
- Temperature range from -40°F up to +400°F, depending on lining material
- Pressure range from 0.01 psia up to 580 psi, depending on size/pressure/temperature

Testing / Marking

- Pressure- and tightness testing acc. to EN 12266-1, leakage rate A, resp. API 598.
- Marking of valves on body and name plate acc. to EN 19.
- Material- resp. test certificates acc. to EN 10204-3.1/2.2/2.1

Construction of Valve

Body made of stainless steel casting 1.4408 (CF-8M)
or with linings made of PFA or PFA-AS (conductive), wall
thickness min. 3 mm.
Flanges acc. to ASME B16.5



Technical Data Dimensions in inch

Weights lbs

Size nom.	ØA	B1	B2	H1	H2	J	K	Wafer Handwheel	Wafer Lever (spring)	Flanged Handwheel	Flanged Lever (spring)
1/2"	3.74	2.44	6.30	7.64	13.90	4.76	2.76	9.02	11.00	10.78	12.76
3/4"	3.86	2.44	6.30	7.64	13.90	4.76	2.76	9.02	11.00	10.78	12.76
1"	4.25	2.44	6.50	7.40	13.66	4.76	2.99	9.02	11.00	13.38	15.36
1 1/2"	5.00	2.44	6.50	7.72	13.98	5.04	3.27	10.34	12.32	16.92	18.90
2"	6.00	2.44	7.00	7.95	14.21	5.28	3.50	11.88	13.86	19.48	21.46
3"	7.50	2.44	8.00	9.02	15.28	5.83	4.06	12.98	14.96	29.92	31.90
4"	9.00	2.44	9.00	9.69	15.94	6.30	4.53	31.24	33.22	37.28	39.26
6"	11.00	2.44	10.50	10.39	16.89	7.28	5.43	45.10	47.08	54.70	56.68

Face to face B acc. to ASME B16.10 **G***: Standard threads for bottle GL45 or GL32 acc. to DIN 168-1
Weights = appr. values

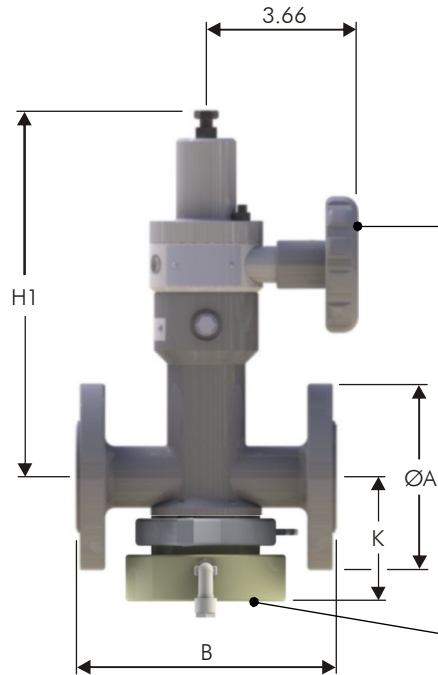
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Actuator option

Valves with Handwheel spring to close

HS-S

Handwheel lateral, spring to close



Body made of stainless steel casting 1.4408 (CF-8M) or with linings/encapsulations made of PFA or PFA-AS (conductive), with spring housing made of SS316L (1.4404) and handwheel of 1.4408.
Flanges acc. to ASME B16.5

Adapter made of PTFE glassfibre-reinforced, with vent connection, PVDF elbow

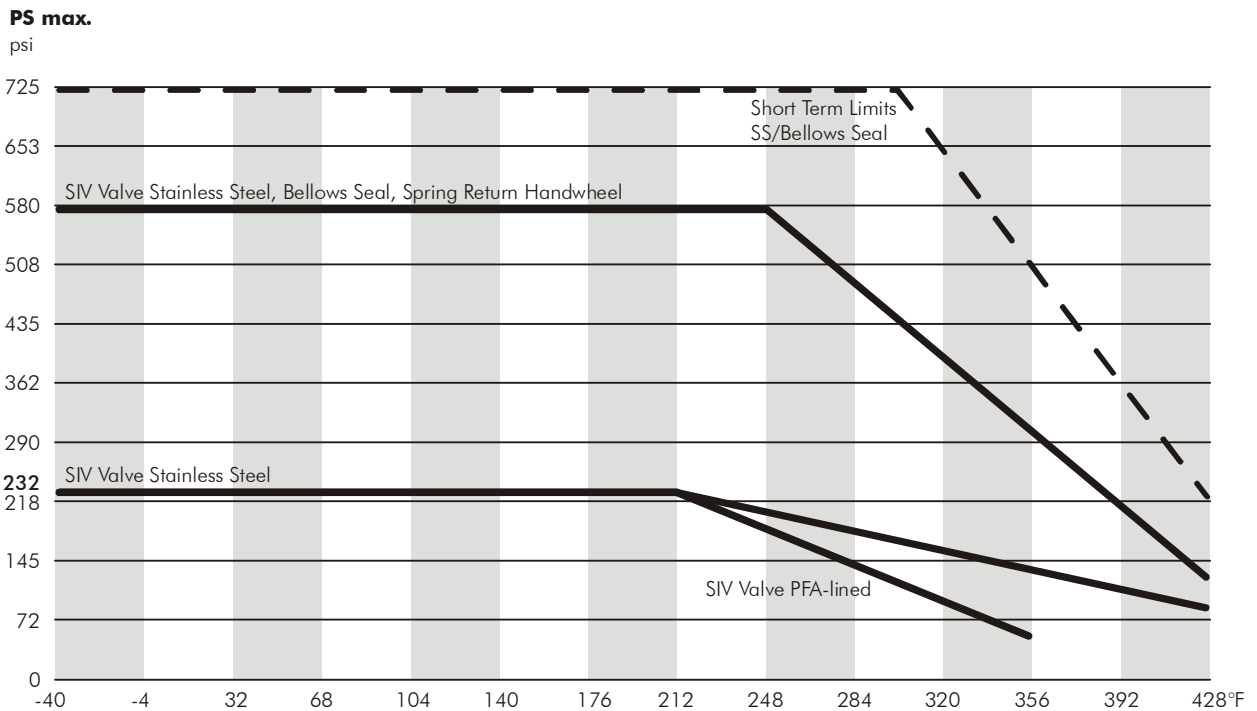
Technical Data Dimensions in inch **Weights** lbs

Size nom.	ØA	B	H1	K	Flanged	Wafer
1/2"	3.74	6.30	9.69	2.76	14.96	11.44
3/4"	3.86	6.30	9.69	2.76	15.18	11.44
1"	4.25	6.50	9.45	2.99	17.38	11.44
1 1/2"	5.00	6.50	9.72	3.27	22.22	12.76
2"	6.00	7.00	10.00	3.50	23.32	14.30
3"	7.50	8.00	10.55	4.06	38.06	15.40
4"	9.00	9.00	11.02	4.57	46.42	33.66
6"	11.00	10.50	11.93	5.28	55.88	47.52

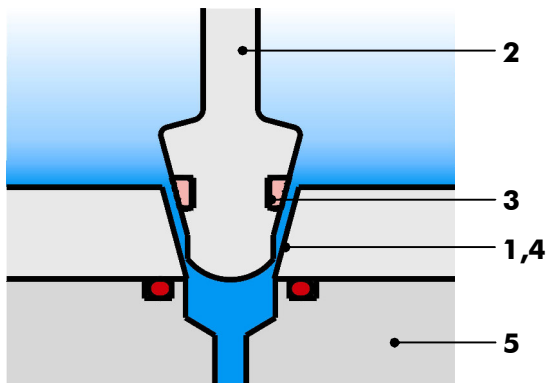
Face to face B acc. to ASME B16.10
Standard threads for lab bottles GL45 or GL32 acc. to DIN 168-1

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Pressure/Temperature Diagram



Operating Principle SIV Series (Sampling under pressure, with bottle)



Manual Operation with handwheel or deadman lever

The valve is installed into pipeline either horizontally or vertically.

Media flows through the valve body (1) around the valve spindle (2), equipped with a resistant gasket (3).

By operating handwheel counter-clockwise (or lifting/pulling deadman lever), the valve spindle is lifted out of the tapered valve seat (4) and a representative sample will flow into the attached lab bottle. Trapped air inside the bottle escapes through the vent connection of the adapter (5), sealed by a FEP-encapsulated O-ring.

When the bottle contains the required sample volume, the handwheel is now operated clockwise, which in turn pushes the valve spindle back into the valve seat.

The valve is 100% dead-space-free again.

Valves with Collector (SC) or Piston Injector (PI)

For critical and heavy duty applications, a sampling collector or a piston injector is used in place of the standard adapter with lab bottle.

Available with outlet nozzle/safety cap and lab holder.

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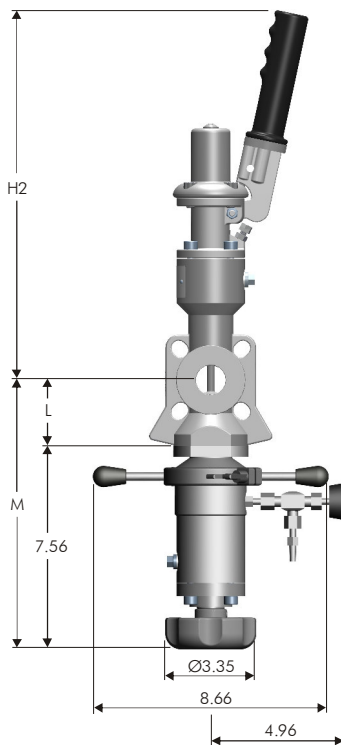
Sampling option

Valves with Collector

Operating Conditions

- Temperature range from -40°F up to +400°F
- Pressure range from 0.01 psia up to 232 psi

Wafer-style Valve with Collector



Description

- Wafer-style valve compl. made of stainless steel 1.4408/1.4404, with deadman lever, for horizontal or vertical installation between flanges acc. to ANSI 150lbs
- Collector compl. made of stainless steel SS316L, handwheel 1.4408, incl. SS needle valve and safety plug made of PP or PTFE-R (option), sampling volume standard approx. 100 ml (3.4 oz.)

Technical Data		Dimensions in inch			Weight
Size	H2	L	M	lbs	
nom.				compl.	
1"	13.66	2.48	10.04	16.72	
1½"	13.98	2.80	10.35	18.04	
2"	14.21	3.03	10.59	19.58	
3"	15.28	3.58	11.14	21.12	
4"	15.94	4.06	11.61	39.16	
6"	16.89	5.00	12.56	52.80	

special versions upon request

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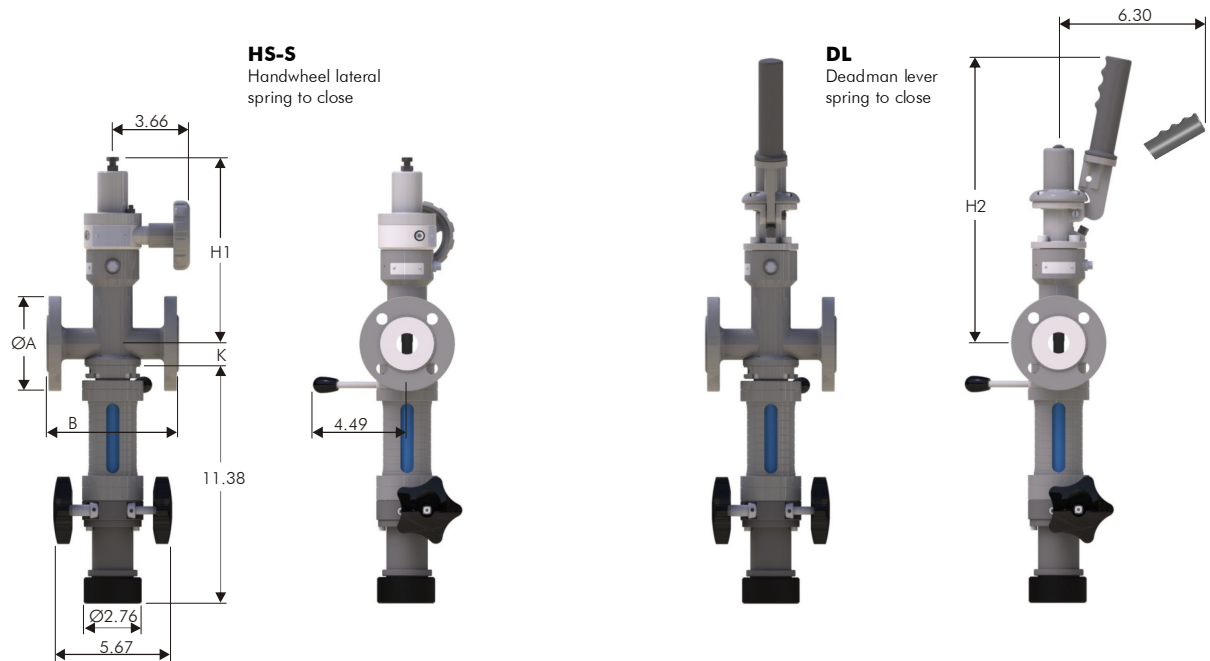
Sampling option

Valves with Piston Injector

Operating Conditions

- Temperature range from -40°F up to +400°F
- Pressure range from 0.01 psia up to 145 psi

Flanged Valve with Piston Injector



Description

- Flanged valve unit made of stainless steel 1.4408(CF-8M)/1.4404 or PFA-lined, with spring return handwheel lateral (optional with deadman lever), for horizontal or vertical installation between flanges acc. to ANSI 150lbs.
- Syringe unit made of stainless steel, PFA-lined, with Borosilicate glass cylinder. Standard sampling volume 100 ml (3.4 oz.)

Technical Data Dimensions in inch

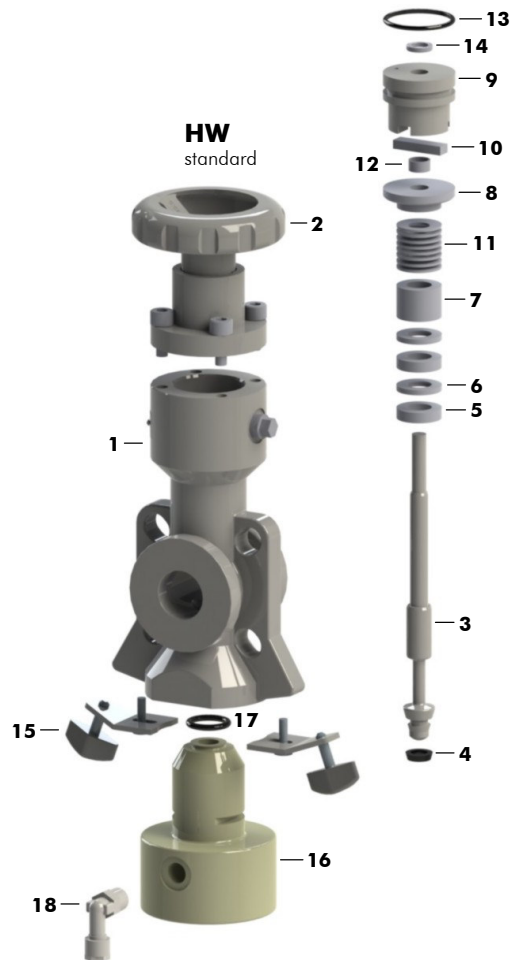
Weights

Size nom.	ØA	B	H1	H2	K	lbs compl.
1/2"	3.74	6.30	9.69	13.90	1.06	17.60
3/4"	4.13	6.30	9.69	13.90	1.06	17.60
1"	4.25	6.50	9.45	13.66	1.30	20.24
1 1/2"	5.00	6.50	9.72	13.98	1.57	23.10
2"	6.00	7.00	10.00	14.21	1.85	25.30
3"	7.50	8.00	10.55	15.28	2.40	33.00
4"	9.00	9.00	11.02	15.94	2.87	46.20
5"	11.00	10.50	11.93	16.89	3.78	59.40
6"	13.50	11.50	12.91	17.87	4.76	99.00

- Face to face B acc. to ASME B16.10
- other materials, sizes and volumes on request

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Parts List SS-Sb (Picture showing DN 25 PN16/1"-150lbs, Wafer stainless steel, stuffing box, with handwheel)

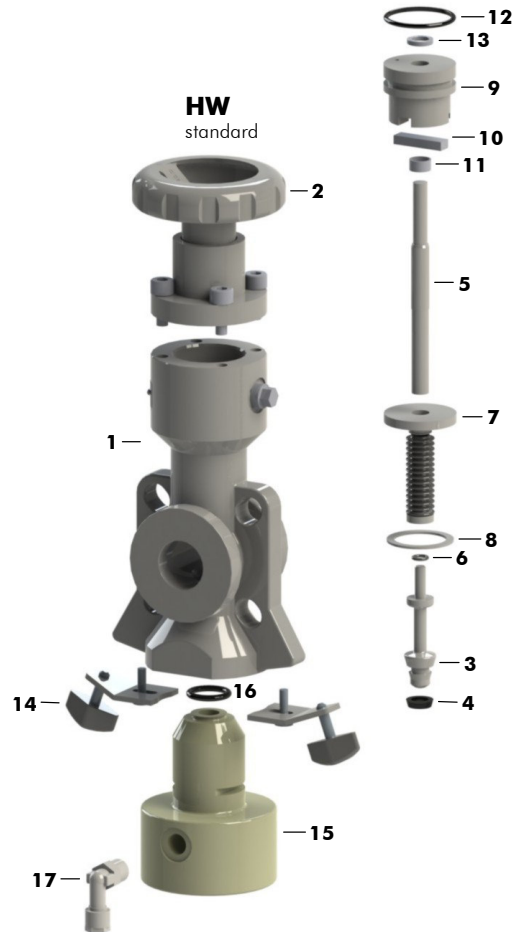


Main Components

Item	Qty.	Description	Materials	No.
1	1	Body Wafer (optional flanged body)	CF-8M	1.4408
2	1	Handwheel unit HW standard (optional type HS, spring to close)	CF-8M/SS316L	1.4408/1.4404
3	1	Valve Spindle	SS316L	1.4404
4	1	Spindle Seal, grooved	Valflon	
5	2	Spacer 6 mm	SS316L	1.4404
6	2	Seal Ring	PTFE-T	
7	1	Spacer 18 mm	SS316L	1.4404
8	1	Pressure Ring	SS316L	1.4404
9	1	Lantern	SS316L	1.4404
10	1	Rotating Stop	SS316L	1.4404
11	1	Belleville Spring	Spring Steel	1.8159
12	1	Bearing GSM	Polymer	
13	1	O-Ring	FPM	
14	1	X-Ring	FPM	
15	2	Wing Nut compl., with SS Clamp and Hex. Screws	PA-GF/SS304	
16	1	Bottle Adapter	PTFE-R	
17	1	O-Ring (bottle adapter)	FEP/FPM	
18	1	Elbow 90° (vent connection)	PVDF	

SIV Inline Sampling Valves plastomer-lined

Parts List SS-Bs (Picture showing DN 25 PN16/1"-150lbs, Wafer stainless steel, bellows seal, with handwheel)

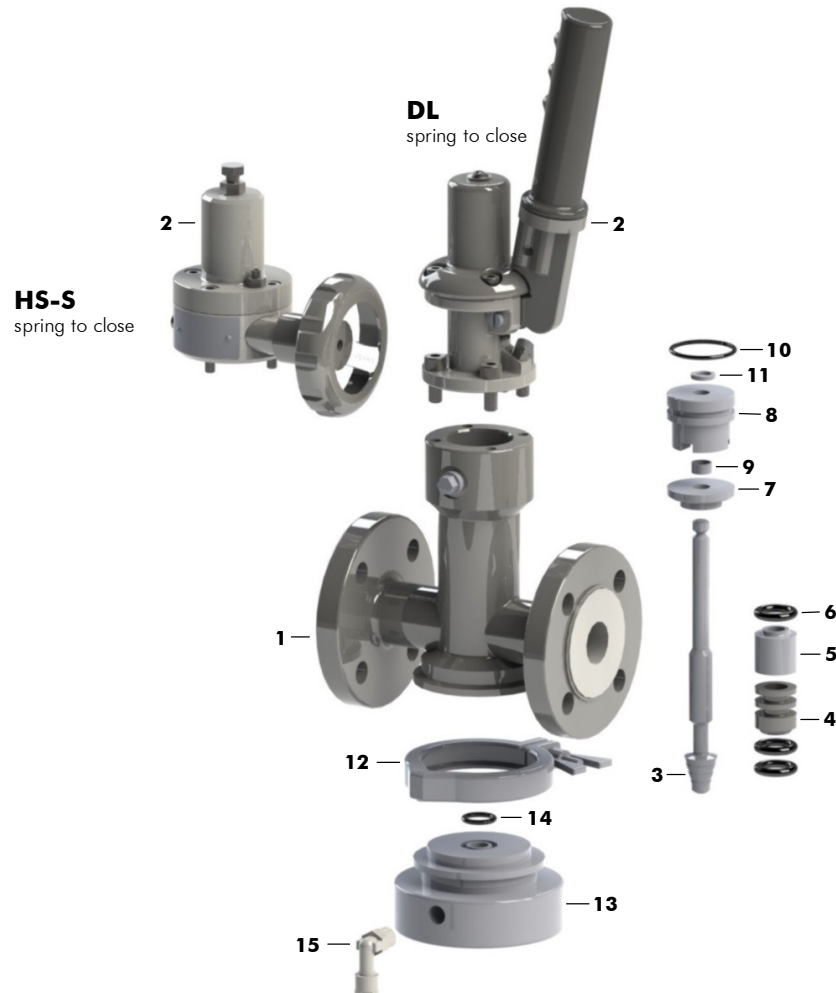


Main Components

Item	Qty.	Description	Materials	No.
1	1	Body Wafer (optional flanged body)	CF-8M	1.4408
2	1	Handwheel unit HW standard (optional type HS, spring to close)	CF-8M/SS316L	1.4408/1.4404
3	1	Valve Spindle Front HW	SS316L	1.4404
4	1	Spindle Seal, grooved	Valflon	
5	1	Spindle Shaft Bs HW	SS316L	1.4404
6	1	O-Ring	FFPM	
7	1	Bellow compl.	SS316Ti	1.4571
8	1	Gasket	Graphite	
9	1	Lantern	SS316L	1.4404
10	1	Rotating Stop	SS316L	1.4404
11	1	Bearing GSM	Polymer	
12	1	O-Ring	FPM	
13	1	X-Ring	FPM	
14	2	Wing Nut compl., with SS Clamp and Hex. Screws	PA-GF/SS304	
15	1	Bottle Adapter	PTFE-R	
16	1	O-Ring (bottle adapter)	FEP/FPM	
17	1	Elbow 90° (vent connection)	PVDF	

SIV Inline Sampling Valves plastomer-lined

Parts List PFA-Sb (Picture showing DN 25 PN16, Flanged, PFA-lined, stuffing box, with deadman lever, spring to close)



Main Components

Item	Qty.	Description	Materials	No.
1	1	Body, PFA-lined (optional wafer-style body)	CF-8M/PFA	1.4408
2	1	Deadman Lever unit DL standard (optional handwheel HS-S, spring to close)	CF-8M/SS316L	1.4408/1.4404
3	1	Valve Spindle DL, PFA-encapsulated	SS316L/PFA	1.4404
4	1	Packing	PTFE/Glass/MoS2	
5	1	Pressure Sleeve	PVDF	
6	3	O-Ring	FPM	
7	1	Pressure Ring	SS316L	1.4404
8	1	Lantern	SS316L	1.4404
9	1	Bearing GSM	Polymer	
10	1	O-Ring	FPM	
11	1	X-Ring	FPM	
12	1	Clamp	SS304	1.4301
13	1	Bottle Adapter	PTFE-R	
14	1	O-Ring (bottle adapter)	FEP/FPM	
15	1	Elbow 90° (vent connection)	PVDF	

SIV Inline Sampling Valves plastomer-lined

Specification

Project-/Customer Data

Inquiry/Date: _____

Ref. SF

Company:	Contact Person:	Phone:
Address:	Function:	Fax:
ZIP/Place:	Department:	E-mail:
Project:	Phone direct:	Cell:

Operating Conditions

Media / Chemical Composition:

<input type="checkbox"/> liquid	<input type="checkbox"/> powdery	<input type="checkbox"/> crystallizing	<input type="checkbox"/> sticky	<input type="checkbox"/> Spec. Grav. ____
<input type="checkbox"/> gaseous	<input type="checkbox"/> Solids ____ %	<input type="checkbox"/> viscous	<input type="checkbox"/> Flow Velocity ____ ft/sec	
<input type="checkbox"/> abrasive	<input type="checkbox"/> Particle ____ mm	<input type="checkbox"/> Visc. ____ cp	<input type="checkbox"/> Flow Rate ____ usg/min	

Pressure

max. ____ bar

min. ____ bar

Temperature

max. ____ °C

min. ____ °C

Installation / Environment

<input type="checkbox"/> horizontal	<input type="checkbox"/> Room dry
<input type="checkbox"/> vertical	<input type="checkbox"/> Room humid
<input type="checkbox"/> _____	<input type="checkbox"/> outdoor

Remarks: _____

SIV Product Code

Specification of a complete Inline Sampling Valve SIV Series

Product code	Nom. size	Flange conn.	Body	Lining body	Spindle	Spindle sealing	Actuation
SIVF	2"	150#	G15	A85	U85	Sb	HW
SIVF Flange*	1/2" - 6"	ANSI150#	G15 CF-8M	A85 PFA	U85 PFA	Sb Stuffing box	HW Handwheel
SIVW Wafer	DN15 - 150	ANSI300#	G34 SS316L	A86 PFA-AS	U86 PFA-AS	Bs Bellows seal	HS-S Handwheel spring lateral
*Rem.:		PN16			S34 SS316L		DL Deadman lever
Wafer bodies combined for DIN/ANSI		JIS 10K			S44 Hast.C		

Options / Accessories

Bottle adapter	Bottle thread
H95	45

<input type="checkbox"/> H95 PTFE-R hor.	<input type="checkbox"/> 45 GL45	<input type="checkbox"/> Body with heating jacket
<input type="checkbox"/> H97 PTFE-T-AS hor.	<input type="checkbox"/> 32 GL32	<input type="checkbox"/> Needle adapter
<input type="checkbox"/> H32 SS316L hor.		<input type="checkbox"/> Bottle support, adjustable
<input type="checkbox"/> V95 PTFE-R vert.		<input type="checkbox"/> Safety cabinet
<input type="checkbox"/> V97 PTFE-T-AS vert.		<input type="checkbox"/> Vertical adapter
<input type="checkbox"/> V32 SS316L vert.		

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