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ADCAPure

Pharma, Cosmetic, Fine Chemical & Food

PRODUCT HANDBOOK

VALSTEAM ADCA
valsteam.com

BALANCED PRESSURE THERMOSTATIC STEAM TRAP TSS7

DESCRIPTION

The TSS7 all stainless steel thermostatic steam traps and air vents are specifically designed for use in reactors, sterilizers and distribution lines in clean and pure steam systems.
Their small size makes them ideal for use with a wide variety of equipment.

MAIN FEATURES

Modulating discharge.
Excellent air discharge.
Simple and compact design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Special designs on request.

USE: Saturated clean steam.

AVAILABLE MODELS: TSS7 – clean steam trap.

SIZES: 1/2" to 1".

CONNECTIONS: Clamp ferrules ASME BPE.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical installation.
See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" to 1"	SEP

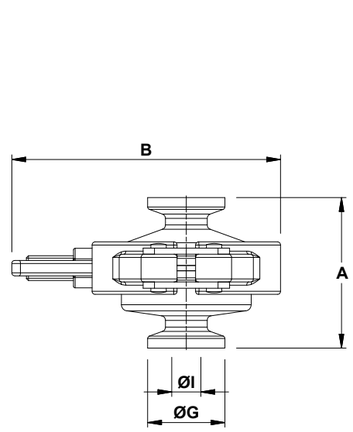
LIMITING CONDITIONS	
PMA – Maximum allowable pressure	10 bar
TMA – Maximum allowable temperature	177 ºC
PMO – Maximum operating pressure	6 bar
TMO – Maximum operating temperature	165 ºC

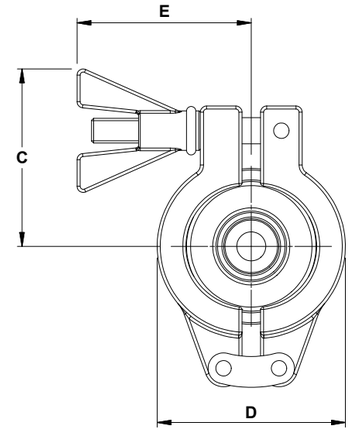
FLOW RATE CAPACITY (kg/h)										
MODEL	**SIZE**	**DIFFERENTIAL PRESSURE (bar)**								
		0,2	**0,3**	**0,5**	**1**	**1,5**	**2**	**3**	**4**	**6**
TSS7 (A)	**1/2" to 1"**	73	92	177	269	334	468	730	792	900
TSS7 (B)	**1/2" to 1"**	398	475	574	656	745	820	944	1190	1436

A – Condensate discharge at 5 ºC below saturation temperature; **B** – Cold water capacity around 20 ºC.

We reserve the right to change the design and material of this product without notice.

LRQA CERTIFIED ISO 9001
EHEDG Valsteam ADCA is an EHEDG Member

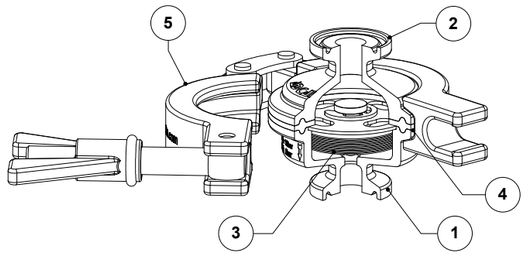




DIMENSIONS (mm) ASME BPE								
SIZE	**A**	**B**	**C**	**D**	**E**	**ØG**	**ØI**	**WEIGHT (kg)**
1/2"	49	87	57,5	61	56,5	25	9,4	0,6
3/4"	49	87	57,5	61	56,5	25	15,75	0,6
1"	53	87	57,5	61	56,5	50,5	22,1	0,7

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Thermostat	AISI 316L / 1.4404
4	* Gasket	PTFE / TFM® Envelope gasket
5	Safety clamp	AISI 316 / 1.4401

* Available spare parts.
Remark: FDA / USP Class VI seals certificate on request.



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IS 1.533 E 06.17

BALANCED PRESSURE THERMOSTATIC STEAM TRAP TSS6

DESCRIPTION

The TSS6 all stainless steel thermostatic steam traps and air vents are specifically designed for use in reactors, sterilizers and distribution lines in clean and pure steam systems.
Their small size makes them ideal for use with a wide variety of equipment.

MAIN FEATURES

Modulating discharge.
Excellent air discharge.
Simple and compact design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Special designs on request.

USE: Saturated clean steam.

AVAILABLE MODELS: TSS6 – clean steam trap.

SIZES: 1/2" to 11/2"; DN 08 to DN 25.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical installation.
See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" to 11/2" – DN 08 to 25	SEP

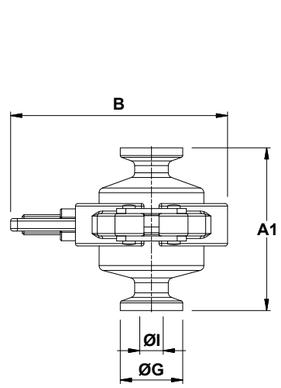
LIMITING CONDITIONS	
PMA – Maximum allowable pressure	10 bar
TMA – Maximum allowable temperature	177 ºC
PMO – Maximum operating pressure	6 bar
TMO – Maximum operating temperature	165 ºC

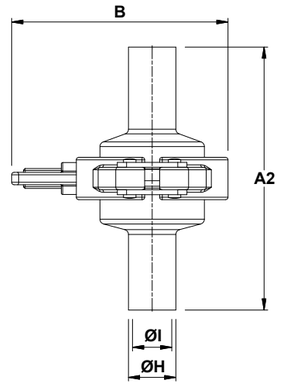
FLOW RATE CAPACITY (kg/h)

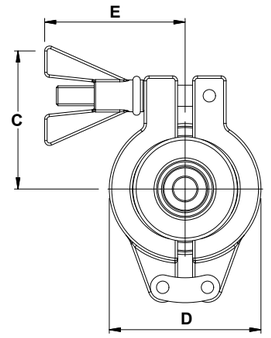
MODEL	SIZE	DIFFERENTIAL PRESSURE (bar)								
		0,2	0,3	0,5	1	1,5	2	3	4	6
TSS6 (A)	1/2" to 11/2" – DN 08 to 25	320	380	410	550	680	909	1081	1199	1403
TSS6 (B)	1/2" to 11/2" – DN 08 to 25	470	495	518	697	792	1026	1231	1436	1682

A – Condensate discharge at 5 ºC below saturation temperature; **B** – Cold water capacity around 20 ºC.

We reserve the right to change the design and material of this product without notice.







DIMENSIONS (mm) ASME BPE

SIZE	A1	A2	B	C	D	E	ØG	ØH	ØI	WEIGHT (kg)
1/2"	65	95	87	57,5	61	56,5	25	12,7	9,4	0,7
3/4"	65	95	87	57,5	61	56,5	25	19,05	15,75	0,7
1"	65	95	87	57,5	61	56,5	50,5	25,4	22,1	0,8
11/2"	65	NA	87	57,5	61	56,5	50,5	NA	34,8	0,8

DIMENSIONS (mm) DIN

SIZE	A1	A2	B	C	D	E	ØG	ØH	ØI	WEIGHT (kg)
DN 10	65	95	87	57,5	61	56,5	34	13	10	0,7
DN 15	65	95	87	57,5	61	56,5	34	19	16	0,7
DN 20	65	95	87	57,5	61	56,5	34	23	20	0,8
DN 25	65	95	87	57,5	61	56,5	50,5	29	26	0,8

Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO

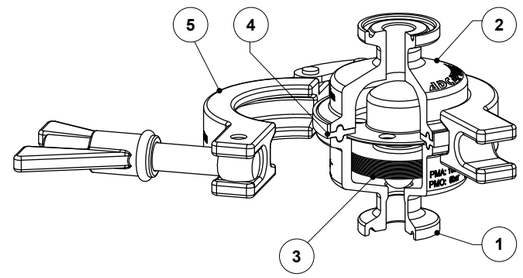
SIZE	A1	A2	B	C	D	E	ØG	ØH	ØI	WEIGHT (kg)
DN 08	65	95	87	57,5	61	56,5	25	13,5	10,3	0,7
DN 10	65	95	87	57,5	61	56,5	25	17,2	14	0,7
DN 15	65	95	87	57,5	61	56,5	50,5	21,3	18,1	0,8
DN 20	65	95	87	57,5	61	56,5	50,5	26,9	23,7	0,8
DN 25	65	95	87	57,5	61	56,5	50,5	33,7	29,7	0,7

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).

MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Thermostat	AISI 316L / 1.4404
4	* Gasket	PTFE / TFM® Envelope gasket
5	Safety clamp	AISI 316 / 1.4401

* Available spare parts.
Remark: FDA / USP Class VI seals certificate on request.



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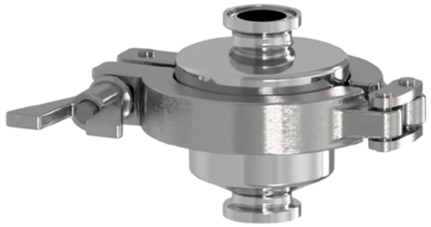
BALANCED PRESSURE THERMOSTATIC STEAM TRAP TSS6H

DESCRIPTION

The TSS6H all stainless steel thermostatic steam traps and air vents are specifically designed for use in reactors, sterilizers and distribution lines in clean and pure steam systems.
Their small size makes them ideal for use with a wide variety of equipment.
The thermostatic element is very sensitive and designed to open with a minimum sub-cooling of around 2 ºC related to the saturated steam temperature.



MAIN FEATURES

Modulating discharge.
Excellent air discharge.
Simple and compact design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Special designs on request.

USE: Saturated clean steam.

AVAILABLE MODELS: TSS6H – high capacity clean steam trap.

SIZES: 1/2" to 11/2".

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

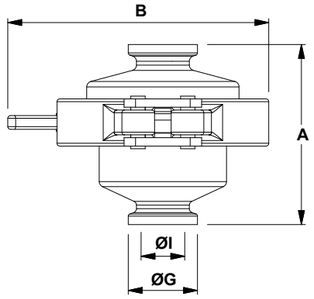
INSTALLATION: Vertical installation. See IMI – Installation and maintenance instructions.

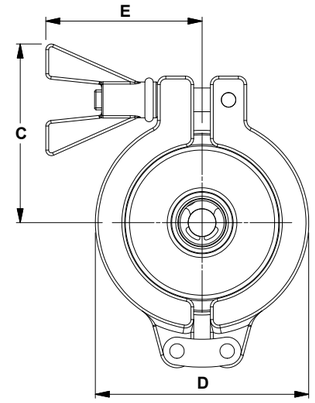
CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" to 11/2"	SEP

LIMITING CONDITIONS	
PMA – Maximum allowable pressure	10 bar
TMA – Maximum allowable temperature	177 ºC
PMO – Maximum operating pressure	6 bar
TMO – Maximum operating temperature	165 ºC

FLOW RATE CAPACITY (kg/h)											
MODEL	**SIZE**	**DIFFERENTIAL PRESSURE (bar)**									
		0,2	**0,3**	**0,5**	**1**	**1,5**	**2**	**3**	**4**	**5**	**6**
TSS6H (A)	**1/2"**	320	380	410	550	680	909	1081	1199	1372	1403
TSS6H (B)	**1/2"**	912	980	1079	1641	1964	2216	2831	3242	3611	3693
TSS6H (A)	**3/4"**	605	640	710	900	1096	1284	1801	2000	2330	2510
TSS6H (B)	**3/4"**	1186	1294	1354	1970	2372	2737	3312	3845	4227	4584
TSS6H (A)	**1" and 11/2"**	780	810	915	1188	1412	1840	2305	2970	3494	3962
TSS6H (B)	**1" and 11/2"**	1291	1378	1477	2052	2531	2873	3529	4104	4494	4966

A – Condensate discharge at 5 ºC below saturation temperature; **B** – Cold water capacity around 20 ºC.

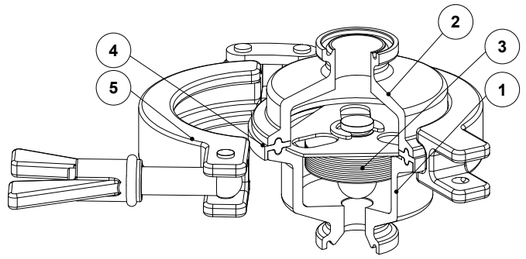




DIMENSIONS (mm) ASME BPE								
SIZE	**A**	**B**	**C**	**D**	**E**	**ØG**	**ØI**	**WEIGHT (kg)**
1/2"	65	94	64	76,5	56	25	9,4	0,7
3/4"	65	94	64	76,5	56	25	15,75	0,7
1"	65	94	64	76,5	56	50,5	22,1	0,8
11/2"	65	94	64	76,5	56	50,5	34,8	0,8

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Thermostat	AISI 316L / 1.4404
4	* Gasket	PTFE / TFM® Envelope gasket
5	Safety clamp	AISI 316 / 1.4401

* Available spare parts.
Remark: FDA / USP Class VI seals certificate on request.



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IS 1.536 E 06.17

LRQA CERTIFIED ISO 9001

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ADCA

ADCA Pure

BALANCED PRESSURE THERMOSTATIC STEAM TRAP TSS6A

DESCRIPTION

The TSS6A all stainless steel thermostatic steam traps and air vents are specifically designed for use in reactors, sterilizers and distribution lines in clean and pure steam systems.
Their small size makes them ideal for use with a wide variety of equipment.

MAIN FEATURES

Modulating discharge.
Excellent air discharge.
Simple and compact design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Special designs on request.

USE: Saturated clean steam.

AVAILABLE MODELS:
TSS6A – angle inlet and outlet.
TSS6AI – angle inlet, straight outlet.
TSS6AO – straight inlet, angle outlet.

SIZES: 1/2" and 3/4".

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical installation. See IMI.

TSS6A

TSS6AI

TSS6AO

LIMITING CONDITIONS	
PMA – Maximum allowable pressure	10 bar
TMA – Maximum allowable temperature	177 ºC
PMO – Maximum operating pressure	6 bar
TMO – Maximum operating temperature	165 ºC

CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" and 3/4"	SEP

FLOW RATE CAPACITY (kg/h)

MODEL	SIZE	DIFFERENTIAL PRESSURE (bar)								
		0,2	0,3	0,5	1	1,5	2	3	4	6
TSS6A (A) *	**1/2" and 3/4"**	320	380	410	550	680	909	1081	1199	1403
TSS6A (B) *	**1/2" and 3/4"**	470	495	518	697	792	1026	1231	1436	1682

A – Condensate discharge at 5 ºC below saturation temperature; **B** – Cold water capacity around 20 ºC; * Also valid for TSS6AI and TSS6AO.

VALSTEAM ADCA

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LRQA CERTIFIED ISO 9001

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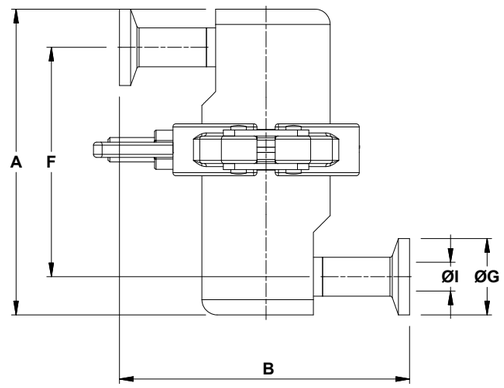
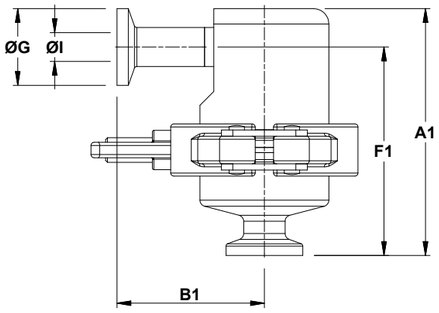
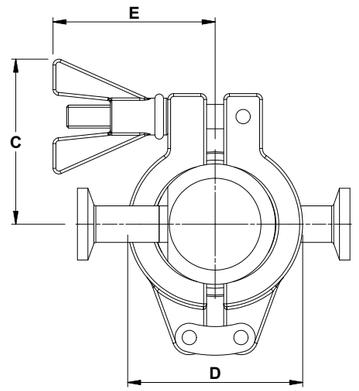
ADCA



TSS6A



TSS6AI



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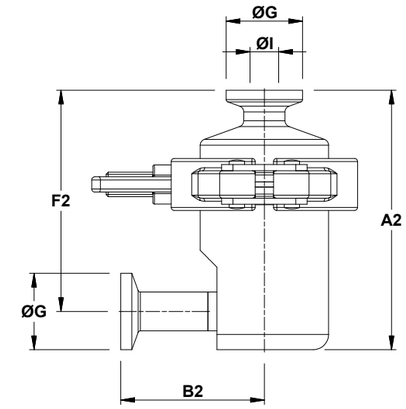
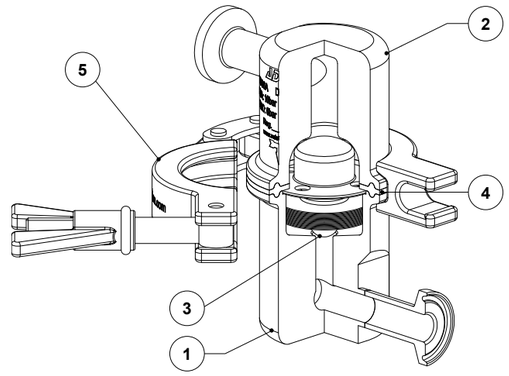


TSS6AO

DIMENSIONS (mm) ASME BPE															
SIZE	**A**	**A1**	**A2**	**B**	**B1**	**B2**	**C**	**D**	**E**	**F**	**F1**	**F2**	**ØG**	**ØI**	**WGT (kg)**
1/2"	100	80,5	85	95	48	47	57,5	61	56,5	75	68	72,5	25	9,4	1,2
3/4"	100	80,5	85	95	48	47	57,5	61	56,5	75	68	72,5	25	15,75	1,2

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Thermostat	AISI 316L / 1.4404
4	* Gasket	PTFE / TFM® Envelope gasket
5	Safety clamp	AISI 316 / 1.4401

* Available spare parts.
Remark: FDA / USP Class VI seals certificate on request.



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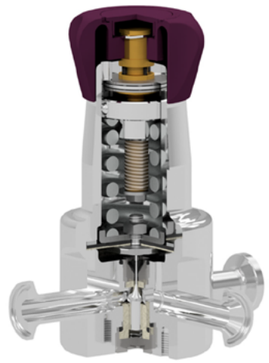
IS 1.535 E 06.17

SANITARY PRESSURE REDUCING VALVE
P130L

DESCRIPTION

The ADCAPure P130L is a series of low flow, direct acting, diaphragm sensing pressure reducing valves. These regulators, available with spring or dome-loading, are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design.
Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.



MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Self relieving.
Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Dome-loaded version.
Panel mounting (M45 thread).
Wall mounting.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

AVAILABLE MODELS: P130L.

SIZES: 1/2” to 3/4”; DN 08 to DN 20.

REGULATING RANGES: 0,2 to 1,5 bar; 0,3 to 3 bar; 2 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation is recommended. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P130L**
Body design conditions	PN 16
Maximum upstream pressure	16 bar
Maximum downstream pressure	8 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2” to 3/4” – DN 08 to 20	SEP

FLOW RATE COEFFICIENTS (m³/h)									
	ASME BPE			DIN			ISO		
SIZE	1/2" to 3/4"			DN 10 to DN 20			DN 08 to DN 15		
Kvs	0,06	0,19	0,25	0,06	0,19	0,25	0,06	0,19	0,25

DIMENSIONS (mm) ASME BPE										
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**E**	**F**	**H**	**WEIGHT (kg) ***
1/2”	115	23	120	64	25	15,75	65	25	9,4	2,13
3/4”	115	23	120	64	25	15,75	65	25	15,75	2,14

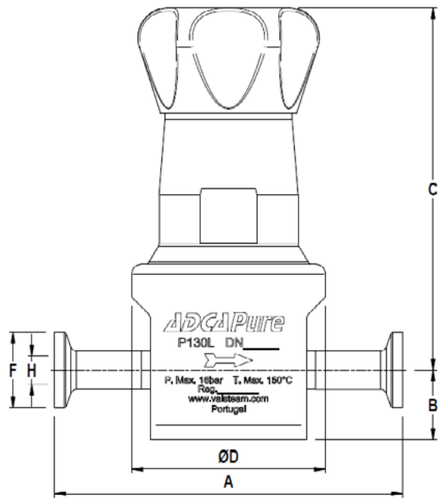
* Valves with nylon adjustment knob weigh 0,3 kg less.

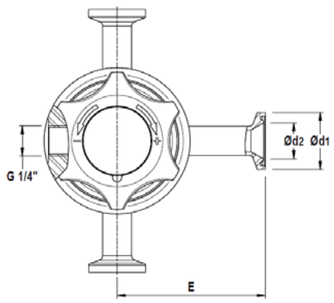
DIMENSIONS (mm) DIN										
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 10	115	23	120	64	25	15,75	65	34	10	2,11
DN 15	115	23	120	64	25	15,75	65	34	16	2,13
DN 20	115	23	120	64	25	15,75	65	34	20	2,15

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO										
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 08	115	23	120	64	25	15,75	65	25	10,3	2,11
DN 10	115	23	120	64	25	15,75	65	25	14	2,12
DN 15	115	23	120	64	25	15,75	65	50,5	18,1	2,13

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).



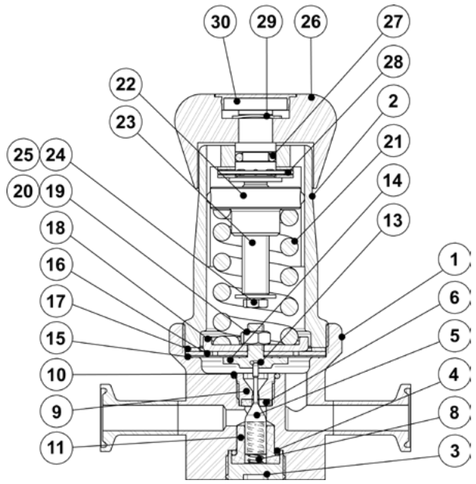


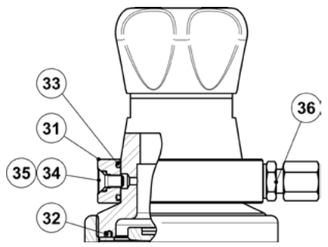
Optional pressure gauge connection

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS P130L.25 E 09.18

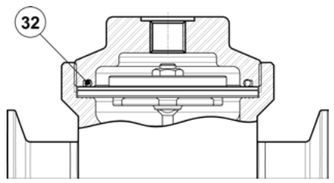
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Bottom cover	AISI 316L / 1.4404
4	* O-ring	Viton; EPDM
5	* Plug	AISI 316L / 1.4404
6	* Valve seat seal	** TFM 1600; EPDM
8	* Valve spring	AISI 316 / 1.4401 electropolished
9	* Valve seat	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Guide	TFM 1600
13	* O-ring **a)**	EPDM
14	Pusher disk	AISI 316L / 1.4404
15	* Lower diaphragm	PTFE (Gylon)
16	* Upper diaphragm	EPDM
17	Washer	AISI 304 / 1.4301
18	Plate	AISI 316 / 1.4401
19	Nut	Stainless steel A2-70
20	* Serrated washer	AISI 304 / 1.4301
21	* Adjustment spring	AISI 302 / 1.4300
22	Spring guide	AISI 316 / 1.4401
23	Adjustment screw	Brass
24	Washer	Stainless steel A2-70
25	Bolt	Stainless steel A2-70
26	Adjustment knob	AISI 316L / 1.4404 or Nylon
27	O-ring	NBR
28	Bearing	Corrosion resistant steel
29	Shaft ring	Stainless steel
30	Cover nut	Plastic
31	Leakage line ring	AISI 316L / 1.4404
32	* O-ring	EPDM
33	O-ring	NBR
34	Bolt	AISI 304 / 1.4301
35	O-ring	Viton
36	Compression fitting	AISI 304 / 1.4301

* Available spare parts. ** Others on request.
a) Only for versions with self-relieving option.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

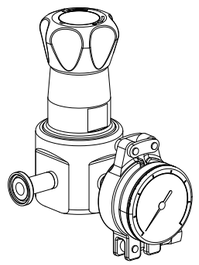




Optional leakage line connection (1/8")



Dome-loaded top



Optional pressure gauge connection

ORDERING CODES P130L													
Valve model	**P3L**	**1**	**3**	**T**	**T**	**X**	**I**	**X**	**X**	**X**	**D**	**08**	**E**
P130L – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P3L**												
Regulating range													
0,2 to 1,5 bar		**1**											
0,3 to 3 bar		**2**											
2 to 8 bar		**3**											
0,2 to 8 bar (dome-loaded) **a)**		**A**											
Flow rate coefficient													
Kvs 0,06			**3**										
Kvs 0,19			**6**										
Kvs 0,25			**7**										
Diaphragm													
PTFE (Gylon)				**T**									
EPDM (non-standard)				**E**									
Seat material													
TFM 1600					**T**								
EPDM					**E**								
Relieving and leakage line connection													
Non-relieving **b)**						**X**							
Non-relieving with leakage line connection						**N**							
Relieving (only for non-dangerous gases)						**R**							
Relieving with leakage line connection						**L**							
Adjustment knob and top cap													
Stainless steel adjustment knob							**I**						
Nylon adjustment knob							**P**						
Top cap (adjustment screw with cover)							**T**						
Dome-loaded top **b)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish c)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connection													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
DN 08												**08**	
DN 10												**10**	
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
Special valves / Extras													
Full description or additional codes have to be added in case of non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 1,2 bar above the required downstream pressure; **b)** These options must be chosen in case of dome-loaded version; **c)** Consult IS PV20.00 for further details and other surface finish options.

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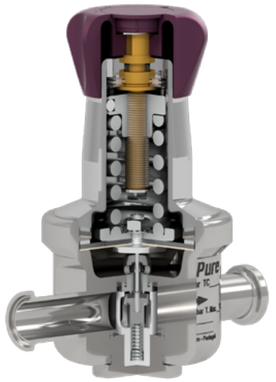
IS P130L.25 E 09.18

SANITARY PRESSURE REDUCING VALVE
P130K

DESCRIPTION

The ADCAPure P130K is a series of direct acting, diaphragm sensing pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design.
Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.



MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Self relieving.
Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

AVAILABLE MODELS: P130K.

SIZES: 1/2” to 3/4”; DN 08 to DN 20.

REGULATING RANGES: 0,2 to 1,5 bar; 0,3 to 3 bar; 2 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation is recommended. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P130K**
Body design conditions	PN 16
Maximum upstream pressure	16 bar
Maximum downstream pressure	8 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2” to 3/4” – DN 08 to 20	SEP

FLOW RATE COEFFICIENTS (m³/h)						
	ASME BPE		DIN		ISO	
SIZE	1/2” to 3/4”		DN 10 to DN 20		DN 08 to DN 15	
Kvs	0,7	1,3	0,7	1,3	0,7	1,3

DIMENSIONS (mm) ASME BPE											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
1/2”	130	28	125	80	25	15,75	1/4”	66,5	25	9,4	2,4
3/4”	130	28	125	80	25	15,75	1/4”	66,5	25	15,75	2,4

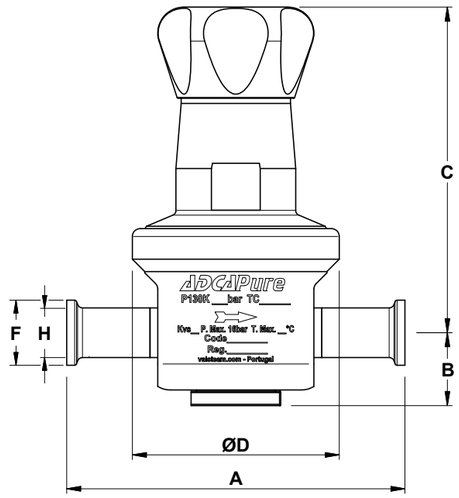
* Valves with nylon adjustment knob weigh 0,3 kg less.

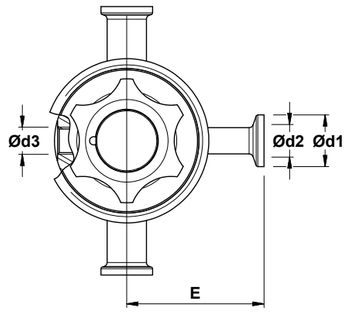
DIMENSIONS (mm) DIN											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 10	120	28	125	80	25	15,75	1/4”	66,5	34	10	2,5
DN 15	120	28	125	80	25	15,75	1/4”	66,5	34	16	2,4
DN 20	120	28	125	80	25	15,75	1/4”	66,5	34	20	2,6

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 08	120	28	125	80	25	15,75	1/4”	66,5	25	10,3	2,5
DN 10	120	28	125	80	25	15,75	1/4”	66,5	25	14	2,5
DN 15	120	28	125	80	25	15,75	1/4”	66,5	50,5	18,1	2,3

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).





Optional pressure gauge connection

VALSTEAM ADCA
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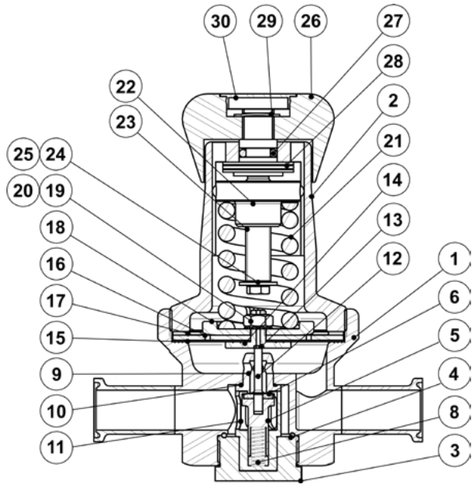
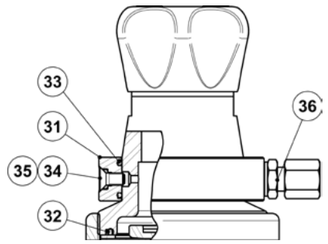
IS P130K.10 E 04.20

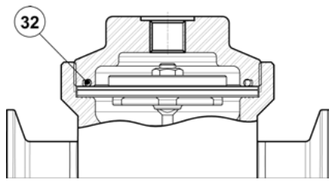
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Bottom cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	* Piston	AISI 316L / 1.4404
6	* Valve head	** EPDM; PTFE; FPM
8	* Valve spring	Spring steel
9	* Seat	AISI 316L / 1.4404
10	* O-ring	EPDM
11	* Guide	PEEK
12	* Stem	AISI 316L / 1.4404
13	* O-ring **a)**	EPDM
14	Pusher disk	AISI 316L / 1.4404
15	* Lower diaphragm	PTFE (Gylon)
16	* Upper diaphragm	EPDM
17	Washer	AISI 304 / 1.4301
18	Plate	AISI 316 / 1.4401
19	Nut	AISI 304 / 1.4301
20	* Serrated washer	AISI 304 / 1.4301
21	* Adjustment spring	AISI 302 / 1.4300
22	Spring guide	AISI 316 / 1.4401
23	Adjustment screw	Brass
24	Washer	Stainless steel A2-70
25	Bolt	Stainless steel A2-70
26	Adjustment knob	AISI 316L / 1.4404 or Nylon
27	O-ring	NBR
28	Bearing	Corrosion resistant steel
29	Shaft ring	Stainless steel
30	Cover nut	Plastic
31	Leakage line ring	AISI 316 / 1.4401
32	* O-ring	EPDM
33	O-ring	NBR
34	Bolt	AISI 304 / 1.4301
35	O-ring	Viton
36	Compression fitting	AISI 304 / 1.4301

* Available spare parts. ** Others on request.
a) Only for versions with self-relieving option.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

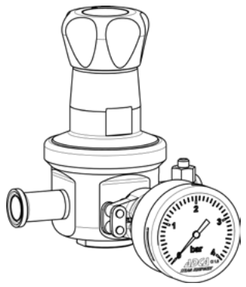




Optional leakage line connection (1/8")



Dome-loaded top



Optional pressure gauge connection

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ORDERING CODES P130K												
Valve model	**P3K**	**1**	**2**	**T**	**M**	**X**	**I**	**X**	**X**	**X**	**DI**	**08**
P130K – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P3K**											
Regulating range												
0,2 to 1,5 bar		**1**										
0,3 to 3 bar		**2**										
2 to 8 bar		**3**										
0,2 to 8 bar (dome-loaded) **a)**		**A**										
Flow rate coefficient												
Kvs 0,7			**3**									
Kvs 1,3			**5**									
Diaphragm												
PTFE (Gylon)				**T**								
EPDM (non-standard)				**E**								
Seat material												
Metal to metal (non-standard)					**M**							
EPDM					**E**							
PTFE					**T**							
FPM / Viton (FDA approval only)					**V**							
Relieving and leakage line connection												
Non-relieving **b)**						**X**						
Non-relieving with leakage line connection						**N**						
Relieving (only for non-dangerous gases)						**R**						
Relieving with leakage line connection						**L**						
Adjustment knob and top cap												
Stainless steel adjustment knob							**I**					
Nylon adjustment knob							**P**					
Top cap (adjustment screw with cover)							**T**					
Dome-loaded top **b)**							**X**					
Gauge port options												
Without gauge ports								**X**				
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**				
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**				
Tri-clamp gauge port on both sides – downstream pressure								**5**				
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**				
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**				
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**				
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**				
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**				
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**				
Surface finish c)												
Standard surface finish									**X**			
Mirror mechanical polished external surfaces (SF1)									**P**			
Electropolished internal wetted parts (SF5)									**E**			
Special features												
None										**X**		
Degreased for oxygen										**O**		
Pipe connection												
Clamp ferrule ASME BPE											**D**	
Clamp ferrule DIN (DIN 32676-A)											**F**	
Clamp ferrule ISO (DIN 32676-B)											**E**	
Tube weld (ETO) according to ASME BPE											**DI**	
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**	
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**	
Size												
DN 08												**08**
DN 10												**10**
1/2" or DN 15												**15**
3/4" or DN 20												**20**
Special valves / Extras												
Full description or additional codes have to be added in case of non-standard combination												**E**

a) The loading control pressure can be up to a maximum of 1,2 bar above the required downstream pressure; **b)** These options must be chosen in case of dome-loaded version; **c)** Consult IS PV20.00 for further details and other surface finish options.

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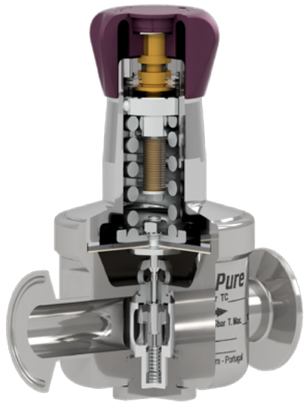
IS P130K.10 E 04.20

SANITARY PRESSURE REDUCING VALVE
P130J

DESCRIPTION

The ADCAPure P130J is a series of direct acting, diaphragm sensing, balanced plug pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design.
Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.



MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Self relieving.
Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

AVAILABLE MODELS: P130J.

SIZES: 1/2” to 1”; DN 08 to DN 25.

REGULATING RANGES: 0,2 to 1,5 bar; 0,3 to 3 bar; 2 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation is recommended. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P130J**
Body design conditions	PN 16
Maximum upstream pressure	16 bar
Maximum downstream pressure	8 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2” to 1” – DN 08 to 25	SEP

FLOW RATE COEFFICIENTS (m³/h)									
	ASME BPE			DIN			ISO		
SIZE	**1/2”**	**3/4” to 1”**		**DN 10**	**DN 15 to DN 25**		**DN 08**	**DN 10 to DN 20**	
Kvs	1,7	1,7	2,4	1,7	1,7	2,4	1,7	1,7	2,4

DIMENSIONS (mm) ASME BPE											
SIZE	**A**	**B**	**C**	D	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
1/2”	130	32	129	90	25	15,75	1/4”	73,5	25	9,4	3,4
3/4”	130	32	129	90	25	15,75	1/4”	73,5	25	15,75	3,4
1”	130	32	129	90	25	15,75	1/4”	73,5	50,5	22,1	3,4

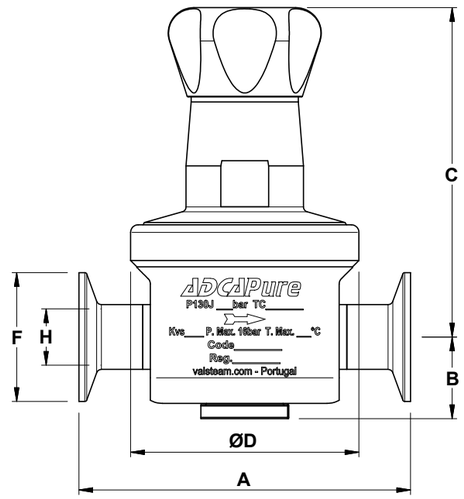
* Valves with nylon adjustment knob weigh 0,3 kg less.

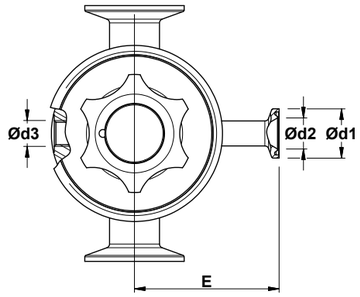
DIMENSIONS (mm) DIN											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 10	120	32	129	90	25	15,75	1/4”	73,5	34	10	3,4
DN 15	120	32	129	90	25	15,75	1/4”	73,5	34	16	3,3
DN 20	120	32	129	90	25	15,75	1/4”	73,5	34	20	3,3
DN 25	120	32	129	90	25	15,75	1/4”	73,5	50,5	26	3,3

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 08	120	32	129	90	25	15,75	1/4”	73,5	25	10,3	3,4
DN 10	120	32	129	90	25	15,75	1/4”	73,5	25	14	3,4
DN 15	120	32	129	90	25	15,75	1/4”	73,5	50,5	18,1	3,4
DN 20	120	32	129	90	25	15,75	1/4”	73,5	50,5	27,7	3,3

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).



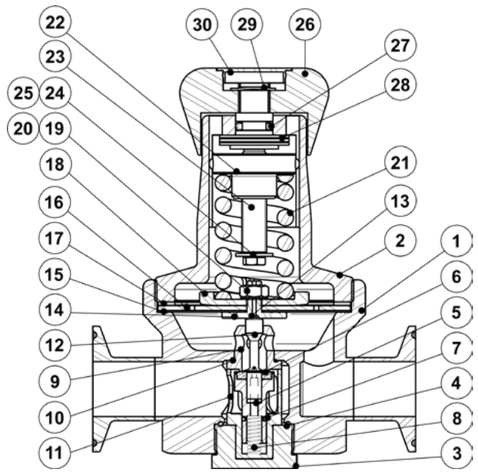


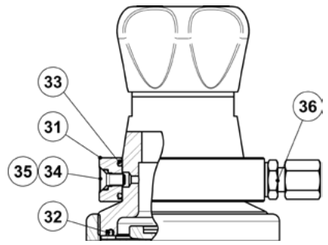
Optional pressure gauge connection

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS P130J.10 E 03.20

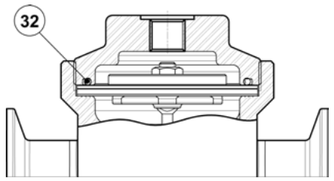
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Bottom cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	* Piston	AISI 316L / 1.4404
6	* Valve head	** EPDM; PTFE; FPM
7	* O-ring	EPDM
8	* Valve spring	Spring steel
9	* Seat	AISI 316L / 1.4404
10	* O-ring	EPDM
11	* Guide	AISI 316L / 1.4404
12	* Stem	AISI 316L / 1.4404
13	* O-ring **a)**	EPDM
14	Pusher disk	AISI 316L / 1.4404
15	* Lower diaphragm	PTFE (Gylon)
16	* Upper diaphragm	EPDM
17	Washer	AISI 304 / 1.4301
18	Plate	AISI 316 / 1.4401
19	Nut	AISI 304 / 1.4301
20	Serrated washer	AISI 304 / 1.4301
21	* Adjustment spring	AISI 302 / 1.4300
22	Spring guide	AISI 316 / 1.4401
23	Adjustment screw	Brass
24	Washer	Stainless steel A2-70
25	Bolt	Stainless steel A2-70
26	Adjustment knob	AISI 316L / 1.4404 or Nylon
27	O-ring	NBR
28	Bearing	Corrosion resistant steel
29	Shaft ring	Stainless steel
30	Cover nut	Plastic
31	Leakage line ring	AISI 316 / 1.4401
32	* O-ring	EPDM
33	O-ring	NBR
34	Bolt	AISI 304 / 1.4301
35	O-ring	Viton
36	Compression fitting	AISI 304 / 1.4301

* Available spare parts. ** Others on request.
a) Only for versions with self-relieving option.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

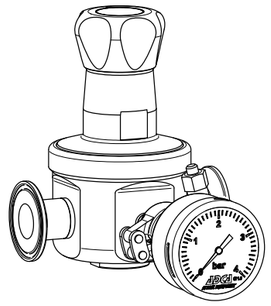




Optional leakage line connection (1/8")



Dome-loaded top



Optional pressure gauge connection

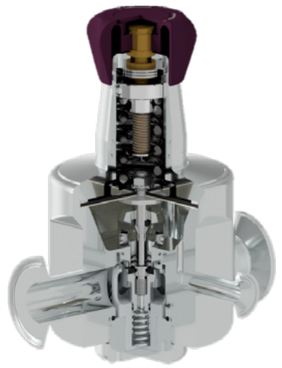
ORDERING CODES P130J													
Valve model	**P3J**	**1**	**2**	**T**	**M**	**X**	**I**	**X**	**X**	**X**	**DI**	**25**	
P130J – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P3J**												
Regulating range													
0,2 to 1,5 bar		**1**											
0,3 to 3 bar		**2**											
2 to 8 bar		**3**											
0,2 to 8 bar (dome-loaded) **a)**		**A**											
Flow rate coefficient													
Kvs 1,7			**3**										
Kvs 2,4 (not applicable to sizes 1/2" ASME BPE, DIN DN 10 and ISO DN 08)			**5**										
Diaphragm													
PTFE (Gylon)				**T**									
EPDM (non-standard)				**E**									
Seat material													
Metal to metal (non-standard)					**M**								
EPDM					**E**								
PTFE					**T**								
FPM / Viton (FDA approval only)					**V**								
Relieving and leakage line connection													
Non-relieving **b)**						**X**							
Non-relieving with leakage line connection						**N**							
Relieving (only for non-dangerous gases)						**R**							
Relieving with leakage line connection						**L**							
Adjustment knob and top cap													
Stainless steel adjustment knob							**I**						
Nylon adjustment knob							**P**						
Top cap (adjustment screw with cover)							**T**						
Dome-loaded top **b)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish c)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connection													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
DN 08												**08**	
DN 10												**10**	
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
Special valves / Extras													
Full description or additional codes have to be added in case of non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 1,2 bar above the required downstream pressure; **b)** These options must be chosen in case of dome-loaded version; **c)** Consult IS PV20.00 for further details and other surface finish options.

SANITARY PRESSURE REDUCING VALVE
P130H

DESCRIPTION

The ADCAPure P130H is a series of direct acting, diaphragm sensing, balanced plug pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design.
Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.



MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

AVAILABLE MODELS: P130H.

SIZES: 1”; DN 25.

REGULATING RANGES: 0,2 to 1,5 bar; 0,3 to 3 bar; 2 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation is recommended.
See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P130H**
Body design conditions	PN 16
Maximum upstream pressure	16 bar
Maximum downstream pressure	8 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1” – DN 25	SEP

We reserve the right to change the design and material of this product without notice.

FLOW RATE COEFFICIENTS (m³/h)						
	ASME BPE		DIN		ISO	
SIZE	1”		DN 25		DN 25	
Kvs	3,2	4,2	3,2	4,2	3,2	4,2

DIMENSIONS (mm) ASME BPE											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
1”	148	42	146	100	25	15,75	1/4”	78,5	50,5	22,1	5,14

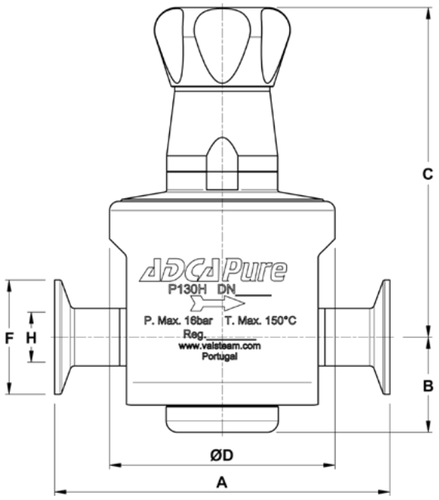
* Valves with nylon adjustment knob weigh 0,3 kg less.

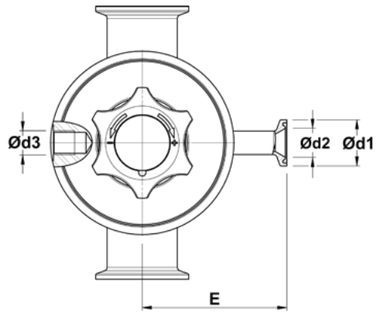
DIMENSIONS (mm) DIN											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 25	135	42	146	100	25	15,75	1/4”	78,5	50,5	26	5,17

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 25	135	46	142	100	25	15,75	1/4”	78,5	50,5	29,7	5,16

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).



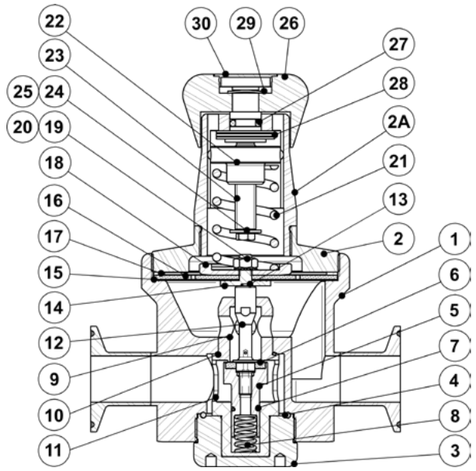


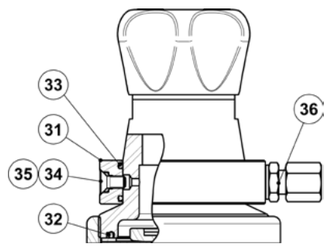
Optional pressure gauge connection

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS P130H.20 E 10.18

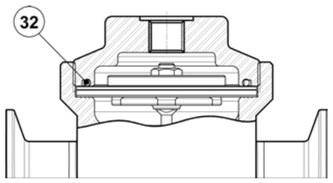
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2A	Spring cover	AISI 316L / 1.4404
3	Bottom cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	* Piston	AISI 316L / 1.4404
6	* Valve head	** EPDM; PTFE; FPM
7	* O-ring	EPDM
8	* Valve spring	AISI 316 / 1.4401 electropolished
9	* Seat	AISI 316L / 1.4404
10	* O-ring	EPDM
11	* Guide	AISI 316L / 1.4404
12	* Stem	AISI 316L / 1.4404
13	* O-ring **a)**	EPDM
14	Pusher disk	AISI 316L / 1.4404
15	* Lower diaphragm	PTFE (Gylon)
16	* Upper diaphragm	EPDM
17	Washer	AISI 304 / 1.4301
18	Plate	AISI 304 / 1.4301
19	Nut	Stainless steel A2-70
20	Serrated washer	AISI 304 / 1.4301
21	* Adjustment spring	AISI 302 / 1.4300
22	Spring guide	AISI 316 / 1.4401
23	Adjustment screw	Brass
24	Washer	Stainless steel A2-70
25	Bolt	Stainless steel A2-70
26	Adjustment knob	AISI 316L / 1.4404 or Nylon
27	O-ring	NBR
28	Bearing	Corrosion resistant steel
29	Shaft ring	Stainless steel
30	Cover nut	Plastic
31	Leakage line ring	AISI 316 / 1.4401
32	* O-ring	EPDM
33	O-ring	NBR
34	Bolt	AISI 304 / 1.4301
35	O-ring	Viton
36	Compression fitting	AISI 304 / 1.4301

* Available spare parts. ** Others on request.
a) Only for versions with self-relieving option.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

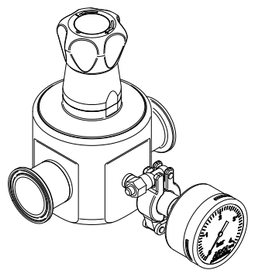




Optional leakage line connection (1/8")



Dome-loaded top



Optional pressure gauge connection

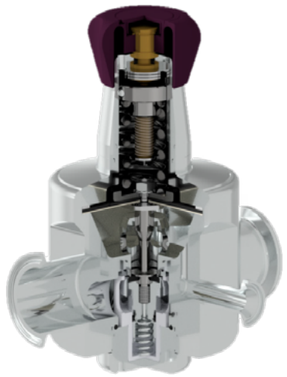
ORDERING CODES P130H													
Valve model	**P3H**	**1**	**2**	**T**	**M**	**X**	**I**	**X**	**X**	**X**	**DI**	**25**	
P130H – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P3H**												
Regulating range													
0,2 to 1,5 bar		**1**											
0,3 to 3 bar		**2**											
2 to 8 bar		**3**											
0,2 to 8 bar (dome-loaded) **a)**		**A**											
Flow rate coefficient													
Kvs 3,2			**1**										
Kvs 4,2			**2**										
Diaphragm													
PTFE (Gylon)				**T**									
EPDM (non-standard)				**E**									
Seat material													
Metal to metal (non-standard)					**M**								
EPDM					**E**								
PTFE					**T**								
FPM / Viton (FDA approval only)					**V**								
Leakage line connection													
Without leakage line connection						**X**							
With leakage line connection						**N**							
Adjustment knob and top cap													
Stainless steel adjustment knob							**I**						
Nylon adjustment knob							**P**						
Top cap (adjustment screw with cover)							**T**						
Dome-loaded top **b)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish c)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connection													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
1" or DN 25												**25**	
Special valves / Extras													
Full description or additional codes have to be added in case of non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 1,2 bar above the required downstream pressure; **b)** These options must be chosen in case of dome-loaded version; **c)** Consult IS PV20.00 for further details and other surface finish options.

SANITARY PRESSURE REDUCING VALVE
P130G

DESCRIPTION

The ADCAPure P130G is a series of direct acting, diaphragm sensing, balanced plug pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design.
Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.



MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

AVAILABLE MODELS: P130G.

SIZES: 11/2”; DN 32 to DN 40.

REGULATING RANGES: 0,2 to 1,5 bar; 0,3 to 3 bar; 2 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation is recommended.
See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P130G**
Body design conditions	PN 16
Maximum upstream pressure	16 bar
Maximum downstream pressure	8 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
11/2" – DN 32 to 40	SEP

FLOW RATE COEFFICIENTS (m³/h)									
	ASME BPE			DIN			ISO		
SIZE	11/2”			DN 32 and DN 40			DN 32		
Kvs	4,2	4,8	6,3	4,2	4,8	6,3	4,2	4,8	6,3

DIMENSIONS (mm) ASME BPE										
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**E**	**F**	**H**	**WEIGHT (kg) ***
11/2”	148	48	140	100	25	15,75	78,5	50,5	34,8	4,99

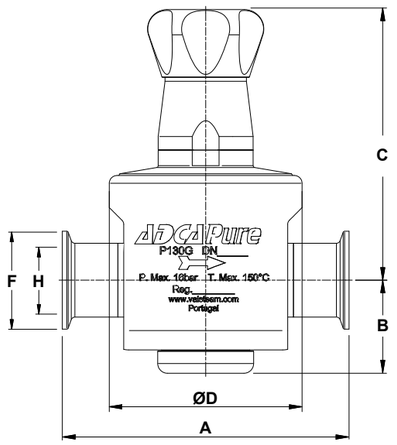
* Valves with nylon adjustment knob weigh 0,3 kg less.

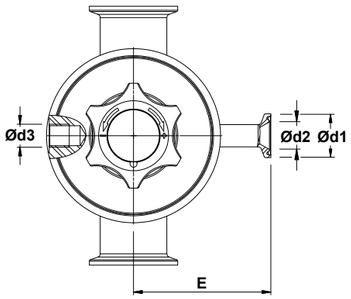
DIMENSIONS (mm) DIN										
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 32	133	48	140	100	25	15,75	78,5	50,5	32	4,98
DN 40	133	48	140	100	25	15,75	78,5	50,5	38	4,94

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO										
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**E**	**F**	**H**	**WEIGHT (kg) ***
DN 32	133	48	140	100	25	15,75	78,5	64	42,4	5,1

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).



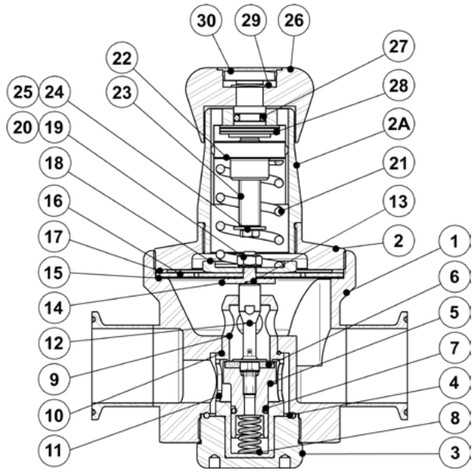


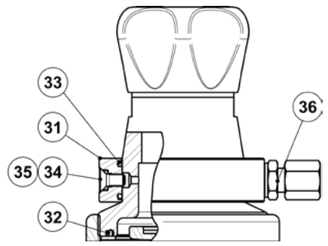
Optional pressure gauge connection

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS P130G.20 E 08.18

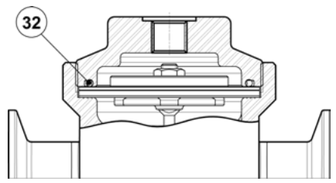
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2A	Spring cover	AISI 316L / 1.4404
3	Bottom cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	* Piston	AISI 316L / 1.4404
6	* Valve head	** EPDM; PTFE; FPM
7	* O-ring	EPDM
8	* Valve spring	AISI 316 / 1.4401 electropolished
9	* Seat	AISI 316L / 1.4404
10	* O-ring	EPDM
11	* Guide	AISI 316L / 1.4404
12	* Stem	AISI 316L / 1.4404
13	* O-ring **a)**	EPDM
14	Pusher disk	AISI 316L / 1.4404
15	* Lower diaphragm	PTFE (Gylon)
16	* Upper diaphragm	EPDM
17	Washer	AISI 304 / 1.4301
18	Plate	AISI 304 / 1.4301
19	Nut	Stainless steel A2-70
20	* Serrated washer	AISI 304 / 1.4301
21	* Adjustment spring	AISI 302 / 1.4300
22	Spring guide	AISI 316 / 1.4401
23	Adjustment screw	Brass
24	Washer	Stainless steel A2-70
25	Bolt	Stainless steel A2-70
26	Adjustment knob	AISI 316L / 1.4404 or Nylon
27	O-ring	NBR
28	Bearing	Corrosion resistant steel
29	Shaft ring	Stainless steel
30	Cover nut	Plastic
31	Leakage line ring	AISI 316 / 1.4401
32	* O-ring	EPDM
33	O-ring	NBR
34	Bolt	AISI 304 / 1.4301
35	O-ring	Viton
36	Compression fitting	AISI 304 / 1.4301

* Available spare parts. ** Others on request.
a) Only for versions with self-relieving option.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

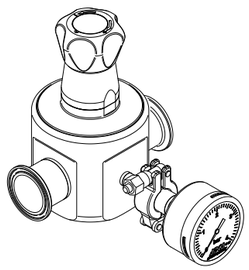




Optional leakage line connection (1/8")



Dome-loaded top



Optional pressure gauge connection

LRQA CERTIFIED ISO 9001
EHEDG Valsteam ADCA is an EHEDG Member
ADCA

ORDERING CODES P130G													
Valve model	**P3G**	**1**	**2**	**T**	**M**	**X**	**I**	**X**	**X**	**X**	**DI**	**32**	**E**
P130G – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P3G**												
Regulating range													
0,2 to 1,5 bar		**1**											
0,3 to 3 bar		**2**											
2 to 8 bar		**3**											
0,2 to 8 bar (dome-loaded) **a)**		**A**											
Flow rate coefficient													
Kvs 4,2			**2**										
Kvs 4,8			**3**										
Kvs 6,3			**5**										
Diaphragm													
PTFE (Gylon)				**T**									
EPDM (non-standard)				**E**									
Seat material													
Metal to metal (non-standard)					**M**								
EPDM					**E**								
PTFE					**T**								
FPM / Viton (FDA approval only)					**V**								
Leakage line connection													
Without leakage line connection						**X**							
With leakage line connection						**N**							
Adjustment knob and top cap													
Stainless steel adjustment knob							**I**						
Nylon adjustment knob							**P**						
Top cap (adjustment screw with cover)							**T**						
Dome-loaded top **b)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish c)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connection													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
DN 32												**32**	
11/2" or DN 40												**40**	
Special valves / Extras													
Full description or additional codes have to be added in case of non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 1,2 bar above the required downstream pressure; **b)** These options must be chosen in case of dome-loaded version; **c)** Consult IS PV20.00 for further details and other surface finish options.

VALSTEAM ADCA
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IS P130G.20 E 08.18

SANITARY PILOT OPERATED PRESSURE REDUCING VALVE P147

DESCRIPTION

The ADCAPure P147 is a series of pilot operated, diaphragm sensing pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases compatible with the construction materials and valve design. Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.

MAIN FEATURES

Precise control of downstream pressure from 0,2 to 8 bar.
FDA / USP Class VI compliant seals.
Guided piston and valve stem.
Non-rising adjustment knob.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases compatible with the construction.
Clean steam (under special request).

AVAILABLE MODELS: P147.

SIZES: 21/2” to 3”; DN 65 to DN 80.

REGULATING RANGES: 0,2 – 1,5 bar; 0,3 – 3 bar; 2 – 8 bar.

CONNECTIONS: ASME BPE and DIN clamp ferrules. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation.
See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P147**
Body design conditions	PN 16
Maximum upstream pressure	16 bar
Maximum downstream pressure	8 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
21/2” to 3” – DN 65 to 80	1 (CE marked)

We reserve the right to change the design and material of this product without notice.

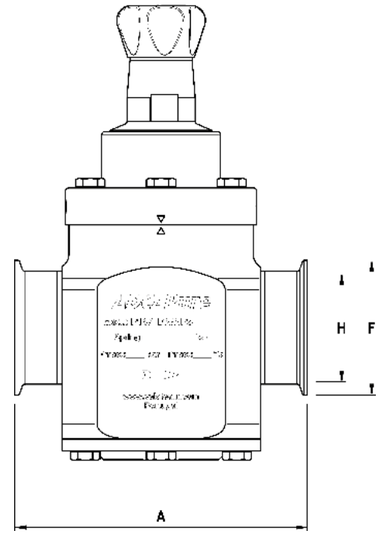
FLOW RATE COEFFICIENTS (m³/h)				
	BPE		DIN	
SIZE	**21/2”**	**3”**	**DN 65**	**DN 80**
Kvs	41	46	41	46

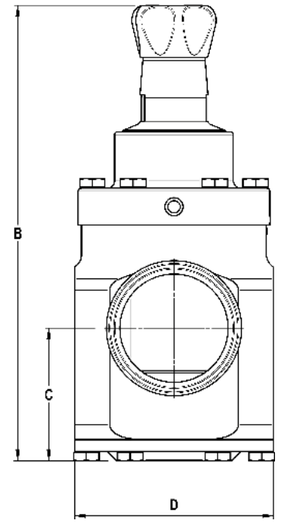
DIMENSIONS (mm) ASME BPE							
SIZE	**A**	**B**	**C**	**D**	**F**	**H**	**WEIGHT (kg) ***
21/2”	197	307	89	134	91	66	17,1
3”	197	307	89	134	106	81	16,8

* Valves with nylon adjustment knob weigh 0,3 kg less.

DIMENSIONS (mm) DIN							
SIZE	**A**	**B**	**C**	**D**	**F**	**H**	**WEIGHT (kg) ***
DN 65	196	307	89	134	91	66	17,1
DN 80	196	307	89	134	106	81	17,4

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remark: Clamp ferrules according to DIN 32676-A.





VALSTEAM ADCA
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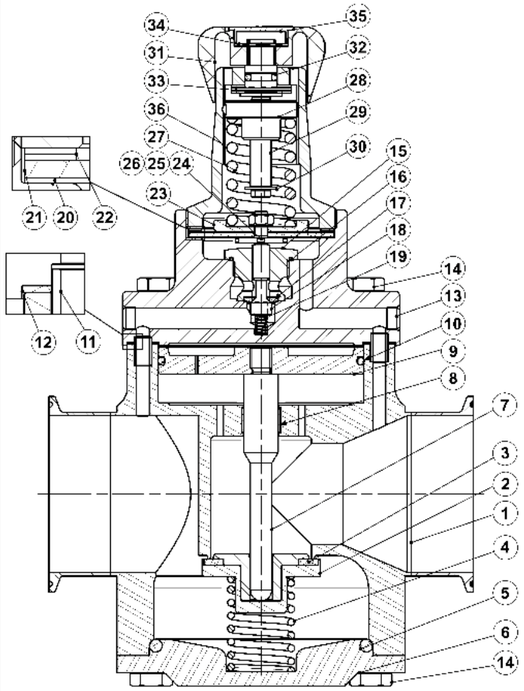
IS P147.10 E 05.18

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	* Plug	AISI 316L / 1.4404
3	* Plug seal	EPDM; TFM 1600 **
4	* Main valve spring	AISI 316 / 1.4401
5	* O-ring	EPDM
6	Bottom cover	AISI 316L / 1.4404
7	* Stem	AISI 316L / 1.4404
8	* Plain bearing	PTFE
9	Piston	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Positioning pipe	AISI 316L / 1.4404
12	Gasket	PTFE
13	Pilot valve body	AISI 316L / 1.4404
14	Bolts	AISI 304 / 1.4301
15	Seat	AISI 316L / 1.4404
16	* O-ring	EPDM
17	* Pilot valve seat	EPDM
18	* Pilot valve plug	AISI 316L / 1.4404
19	* Valve spring	AISI 316 / 1.4401 electropolished
20	* Lower diaphragm	PTFE (Gylon)
21	* Upper diaphragm	EPDM
22	* Washer	AISI 304 / 1.4301
23	Spring plate	AISI 316 / 1.4401
24	Pusher disc	AISI 316L / 1.4404
25	Washer	AISI 304 / 1.4301
26	Nut	AISI 304 / 1.4301
27	Adjustment spring	AISI 302 / 1.4310
28	Spring plate	AISI 316 / 1.4401
29	Adjustment screw	Brass
30	Retaining washer	AISI 304 / 1.4301
31	Adjustment knob	AISI 316L / 1.4404 or Nylon
32	O-ring	NBR
33	Bearing	Corrosion resistant steel
34	Shaft ring	Stainless steel
35	Cover nut	Plastic
36	Spring cover	AISI 316L / 1.4404



* Available spare parts ; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

ORDERING CODES P147											
Valve model	**P47**	**1**	**6**	**E**	**M**	**I**	**X**	**X**	**X**	**DI**	**65**	**E**
P147 – AISI 316L / 1.4404 pilot operated pressure reducing valve	**P47**											
Regulating range												
0,2 to 8 bar (dome loaded)		**A**										
0,2 to 1,5 bar		**1**										
0,3 to 3 bar		**2**										
2 to 8 bar		**3**										
Flow rate coefficient												
Kvs 41			**6**									
Kvs 46			**7**									
Diaphragm												
PTFE (Gylon)				**T**								
EPDM (non-standard)				**E**								
Seat material												
Metal to metal (non-standard)					**M**							
EPDM					**E**							
TFM 1600					**T**							
Adjustment knob, top cap and leakage line connection												
Stainless steel adjustment knob						**I**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						**L**						
Nylon adjustment knob						**P**						
Nylon adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						**N**						
Top cap (adjustment screw with cover)						**T**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure						**U**						
Gauge port options												
Without gauge ports							**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure – 1 connection							**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure – 1 connection							**6**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. **a)**							**9**					
Tri-clamp gauge port on the right side (rel. to the flow direct.) – upstream and downstream press. – 2 conn. **a)**							**8**					
Tri-clamp gauge port on both sides – downstream pressure – 2 connections							**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**3**					
Threaded gauge port on left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. – ISO 7 Rp 1/4”							**1**					
Threaded gauge port on right side (rel. to the flow direction) – upstream/downstream pressure – 2 conn. – ISO 7 Rp 1/4”							**0**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4”							**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**Y**					
Threaded gauge port on left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. – 1/4” NPT							**U**					
Threaded gauge port on right side (rel. to the flow direction) – upstream and downstream pressure – 2 conn. – 1/4” NPT							**V**					
Threaded gauge port on both sides – downstream pressure – 1/4” NPT							**Z**					
Surface finish b)												
Standard surface finish								**X**				
Mirror mechanical polished external surfaces (SF1)								**P**				
Electropolished internal wetted parts (SF5)								**E**				
Special features												
None									**X**			
Degreased for oxygen									**O**			
Bottom cover with drain connection									**D**			
Pipe connection												
Clamp ferrule ASME BPE										**D**		
Clamp ferrule DIN (DIN 32676-A)										**F**		
Tube weld (ETO) according to ASME BPE										**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)										**FI**		
Size												
21/2” or DN 65											**65**	
3” or DN 80											**80**	
Special valves / Extras												
Full description or additional codes have to be added in case of non-standard combination												**E**

a) Under special request and after approval of technical solution; **b)** Consult IS PV20.00 for further details and other surface finish options.

VALSTEAM ADCA
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IS P147.10 E 05.18

SANITARY PRESSURE REDUCING VALVE
P160G

DESCRIPTION

The ADCAPure P160G is a series of angle design direct acting diaphragm sensing pressure reducing valves.
These regulators are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Leakage line connection (1/4”).
Different soft sealings for liquids and gases.
Lock system, allows inline clean-in-place (CIP) and sterilization-in-place (SIP) operations.
Gauge connection on body.
Lifting lugs to ease installation.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: P160G.

SIZES: 21/2” and 3”.

REGULATING RANGES: 1 to 1,7 bar; 1,5 to 4 bar.

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation. Vertical inlet and horizontal outlet angle connection.
See IMI – Installation and maintenance instructions.

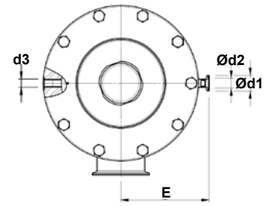
LIMITING CONDITIONS	
Valve model	**P160G**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Maximum downstream pressure	4 bar
Minimum downstream pressure *	1 bar
Maximum operating temperature **	180 ºC

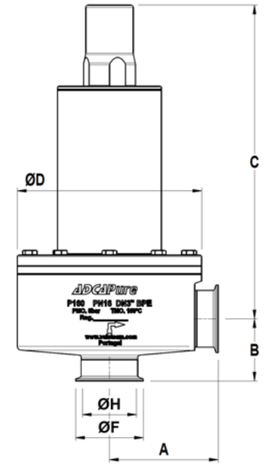
* For tight shut off, with adjustment spring relaxed, ensure a minimum downstream pressure of 0,2 bar.
** With PTFE diaphragm and seals. Consult the manufacturer in case of other materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
21/2” to 3”	1 (CE Marked)

DIMENSIONS (mm) ASME BPE											
SIZE	**A**	**B**	**C**	**D**	**d1**	**d2**	**d3**	**E**	**F**	**H**	**WGT. (kg)**
21/2”	144	78	410	245	25	15,75	1/4”	141	77,4	60,2	34,6
3”	144	84	417	245	25	15,75	1/4”	141	90.9	72,9	36,2

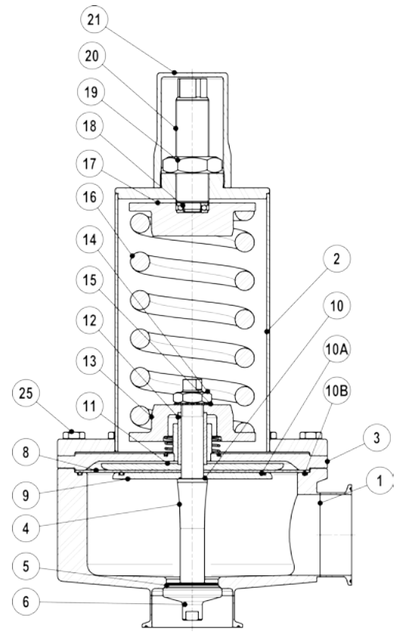
FLOW RATE COEFFICIENTS (m³/h)		
SIZE	**21/2”**	**3”**
Kvs	19,8	

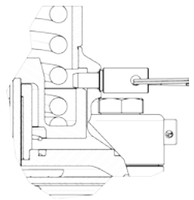
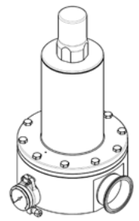
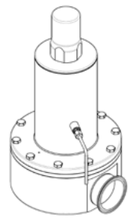




MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Centering plate	AISI 316L / 1.4404
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
8	* Diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	* O-ring	EPDM
12	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316 / 1.4401
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	* Adjustment spring	Zinc plated spring steel
17	Top spring plate	AISI 316 / 1.4401
18	Bearing	Corrosion resistant steel
19	Nut	Stainless steel A2-70
20	Adjustment screw	AISI 304 / 1.4301
21	Top cap	AISI 316L / 1.4404
25	Bolts	Stainless steel A2-70

* Available spare parts ; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



OPTIONS		
LOCK SYSTEM	**PRESSURE GAUGE CONNECTION**	**LEAKAGE LINE CONNECTION (1/8”)**
		

VALSTEAM ADCA
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IS P160.30 E 15.16

ORDERING CODES P160G												
Valve model	**P16G**	**8**	**9**	**T**	**M**	**T**	**X**	**X**	**X**	**DI**	**65**	**E**
P160G – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P16G**											
Regulating range												
1 to 1,7 bar		**8**										
1,5 to 4 bar		**9**										
Flow rate coefficient												
Kvs 19,8			**9**									
Diaphragm												
PTFE (Gylon)				**T**								
EPDM (non-standard)				**E**								
Valve head												
Metal to metal (non-standard)					**M**							
EPDM					**E**							
PTFE					**T**							
FPM / Viton (FDA approval only)					**V**							
Top cap and leakage line connection												
Top cap (adjustment screw with cover)						**T**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure						**U**						
Gauge port options												
Without gauge ports							**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure							**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure							**6**					
Tri-clamp gauge port on both sides – downstream pressure							**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4”							**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**Y**					
Threaded gauge port on both sides – Downstream pressure – 1/4” NPT							**Z**					
Surface finish a)												
Standard surface finish								**X**				
Mirror mechanical polished external surfaces (SF1)								**P**				
Electropolished internal wetted parts (SF5)								**E**				
Special features												
None									**X**			
Degreased for oxygen									**O**			
CIP / SIP lock system									**C**			
Pipe connections												
Clamp ferrule ASME BPE										**D**		
Tube weld (ETO) according to ASME BPE										**DI**		
Size												
21/2”											**65**	
3”											**80**	
Special valves / Extras												
Full description or additional codes have to be added in case of a non-standard combination												**E**

a) Consult IS PV20.00 – Technical information – for further details and other surface finish options.

SANITARY PRESSURE REDUCING VALVE P161

DESCRIPTION

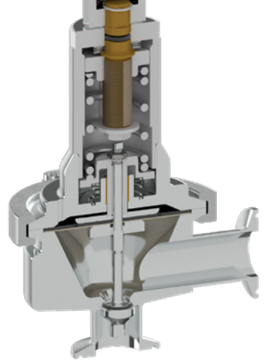
The ADCAPure P161 is a series of angle design direct acting diaphragm sensing pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Spring or dome-loaded.
Non-rising adjustment knob.
Compact design with clamped body.
Available with low pressure diaphragm.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection (1/4”).
Different soft sealings for liquids and gases.
Lock system, allows inline clean-in-place (CIP) and sterilization-in-place (SIP) operations.
Gauge connection on body.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: P161.

SIZES: 1/2” to 2”; DN 15 to 50.

REGULATING RANGES: 0,3 to 1,1 bar; 0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 5 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

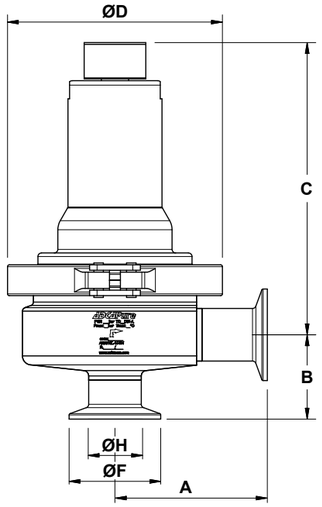
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

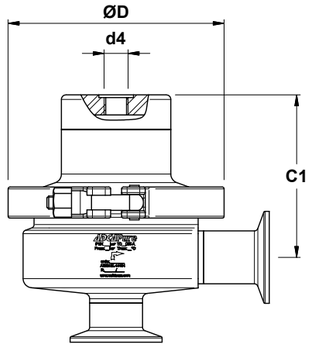
INSTALLATION: Horizontal installation. Vertical inlet and horizontal outlet. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P161**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Maximum downstream pressure	5 bar
Minimum downstream pressure *	0,3 bar
Maximum operating temperature **	180 ºC

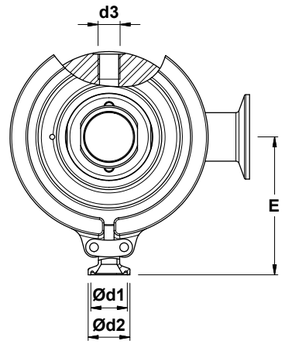
* For tight shut off, with adjustment spring relaxed, ensure a minimum downstream pressure of 0,2 bar.
** With PTFE diaphragm and seals. Consult the manufacturer in case of other materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2” to 2” – DN 15 to 50	SEP





Optional dome-loaded version



Optional pressure gauge connections

DIMENSIONS (mm) ASME BPE

REGULATING RANGES 0,8 to 1,5 bar, 1 to 3 bar and 1,5 to 5 bar														REGULATING RANGE 0,3 to 1,1 bar			
SIZE	A	B	C	C1	D	d1	d2	d3 *	d4 *	E	F	H	WGT. (kg)	A	D	E	WGT. (kg)
1/2”	77	53	156	84	119	15,75	25	1/4”	1/4”	83	25	9,4	4,1	85	134	91	4,9
3/4”	77	56	160	88	119	15,75	25	1/4”	1/4”	83	25	15,75	4,4	85	134	91	5,1
1”	77	52	163	91	119	15,75	25	1/4”	1/4”	83	50,5	22,1	4,6	85	134	91	5,4
11/2”	85	61	204	124	134	15,75	25	1/4”	1/4”	96	50,5	34,8	8	101	170	109	11,1
2”	85	67	207	127	134	15,75	25	1/4”	1/4”	96	64	47,5	8,6	101	170	109	12

DIMENSIONS (mm) DIN

REGULATING RANGES 0,8 to 1,5 bar, 1 to 3 bar and 1,5 to 5 bar														REGULATING RANGE 0,3 to 1,1 bar			
SIZE	A	B	C	C1	D	d1	d2	d3 *	d4 *	E	F	H	WGT. (kg)	A	D	E	WGT. (kg)
DN 15	77	45	160	88	119	15,75	25	1/4”	1/4”	83	34	16	4,4	85	134	91	5,1
DN 20	77	40	158	86	119	15,75	25	1/4”	1/4”	83	34	20	4,3	85	134	91	4,9
DN 25	84	47	161	89	119	15,75	25	1/4”	1/4”	83	50,5	26	4,6	92	134	91	5,3
DN 32	84	50	163	91	119	15,75	25	1/4”	1/4”	83	50,5	32	4,8	84	134	83	5,5
DN 40	93	69	202	122	134	15,75	25	1/4”	1/4”	96	50,5	38	8	109	170	109	11
DN 50	93	75	206	126	134	15,75	25	1/4”	1/4”	96	64	50	8,6	109	170	109	12

Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO

REGULATING RANGES 0,8 to 1,5 bar, 1 to 3 bar and 1,5 to 5 bar														REGULATING RANGE 0,3 to 1,1 bar			
SIZE	A	B	C	C1	D	d1	d2	d3 *	d4 *	E	F	H	WGT. (kg)	A	D	E	WGT. (kg)
DN 15	84	43	159	87	119	15,75	25	1/4”	1/4”	83	50,5	18,1	4,4	92	134	91	5,1
DN 20	84	46	162	90	119	15,75	25	1/4”	1/4”	83	50,5	23,7	4,6	92	134	91	5,4
DN 25	84	49	164	92	119	15,75	25	1/4”	1/4”	83	50,5	29,7	4,8	92	134	91	5,6
DN 32	93	70	202	122	134	15,75	25	1/4”	1/4”	96	64	38,4	8,2	109	170	109	11,3
DN 40	93	75	206	126	134	15,75	25	1/4”	1/4”	96	64	44,3	8,8	109	170	109	12,1

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).
* As standard, connections d3 and d4 are female threaded ISO 7 Rp.

We reserve the right to change the design and material of this product without notice.

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ADCA

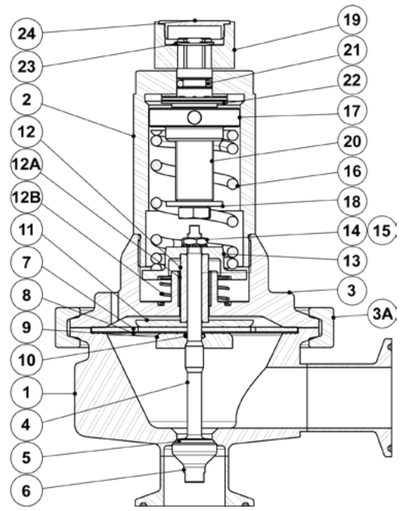
FLOW RATE COEFFICIENTS (m³/h)

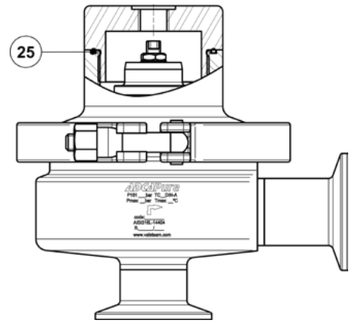
	ASME BPE						DIN							ISO				
SIZE	1/2”	3/4”	1”	11/2”	2”		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50		DN 15	DN 20	DN 25	DN 32	DN 40
Kvs	1,3	3	4,2	7	7	13	2,1	3	4,2	4,2	7	7	13	2,1	4,2	4,2	7	7

MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Intermediate flange	AISI 316L / 1.4404
3A	Clamp	AISI 316 / 1.4401
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316L / 1.4404
12A	Plain bearing	Bronze
12B	Spring	AISI 302 / 1.4300
13	Spring plate	AISI 316L / 1.4404
14	Nut	AISI 304 / 1.4301
15	Washer	AISI 304 / 1.4301
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316L / 1.4404
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	* O-ring	EPDM

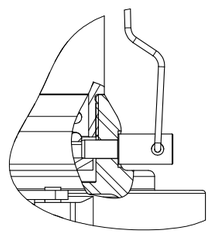
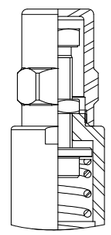
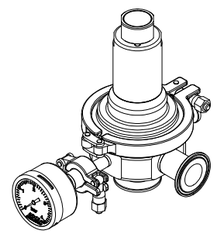
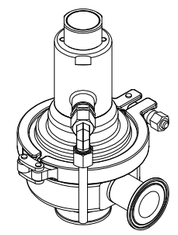
* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





Optional dome-loaded version (1/4”)

OPTIONS

LOCK SYSTEM	ADJUSTMENT SCREW WITH TOP CAP	PRESSURE GAUGE CONNECTION	LEAKAGE LINE CONNECTION
			

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IS P161.015 E 05.21

ORDERING CODES P161														
Valve model	**P16**	**1**	**3**	**1**	**T**	**M**	**I**	**X**	**X**	**X**	**DI**	**15**	**E**
P161 – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	**P16**												
Valve series													
Series 1		**1**											
Regulating range													
0,3 to 1,1 bar			**3**										
0,8 to 1,5 bar			**4**										
1 to 3 bar			**5**										
1,5 to 5 bar			**6**										
0,8 to 5 bar (dome-loaded) **a)**			**A**										
0,3 to 1,1 bar (dome-loaded) **a)**			**B**										
Flow rate coefficient													
Kvs 1,3 (only applicable to ASME BPE 1/2" size)				**1**									
Kvs 2,1 (applicable to sizes DIN DN 15 and ISO DN 15)				**2**									
Kvs 3 (applicable to sizes ASME BPE 3/4" and DIN DN 20)				**3**									
Kvs 4,2 (applicable to sizes ASME BPE 1", DIN DN 25 to DN 32 and ISO DN 20 to DN 25)				**4**									
Kvs 7 (applicable to sizes ASME BPE 11/2" to 2", DIN DN 40 to DN 50 and ISO DN 32 to DN 40)				**6**									
Kvs 13 (applicable to sizes ASME BPE 2" and DIN DN 50)				**8**									
Diaphragm													
PTFE (Gylon)					**T**								
EPDM (non-standard)					**E**								
Seat material b)													
Metal to metal (non-standard, except in ASME BPE 1/2" size)						**M**							
EPDM						**E**							
PTFE						**T**							
FPM / Viton (FDA approval only)						**V**							
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob							**I**						
Top cap (adjustment screw with cover)							**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure							**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure							**U**						
Dome-loaded top **c)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish d)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
CIP / SIP lock system										**C**			
Pipe connections													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
DN 32												**32**	
11/2" or DN 40												**40**	
2" or DN 50												**50**	
Special valves / Extras													
Full description or additional codes have to be added in case of a non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 0,2 bar above the required downstream pressure; **b)** ASME BPE 1/2" size is only available with metal to metal sealing; **c)** Must be chosen in case of dome-loaded version; **d)** Consult IS PV20.00 – Technical information – for further details and other surface finish options.

SANITARY PRESSURE REDUCING VALVE
P163

DESCRIPTION

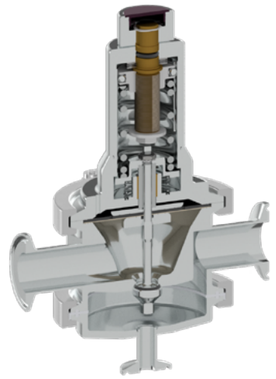
The ADCAPure P163 is a series of inline direct acting, diaphragm sensing pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Spring or dome-loaded.
Non-rising adjustment knob.
Compact inline design with clamped body.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection (1/4").
Different soft sealings for liquids and gases.
Lock system, allows inline clean-in-place (CIP) and sterilization-in-place (SIP) operations.
Gauge connection on body.
Top cap (adjustment screw with cover).
Bottom cover with drain connection.
Dome-loaded version.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: P163.

SIZES: 1/2" to 2"; DN 15 to 50.

REGULATING RANGES: 0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 5 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

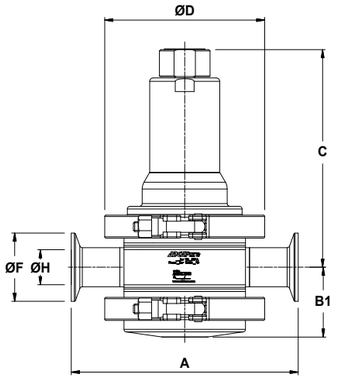
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

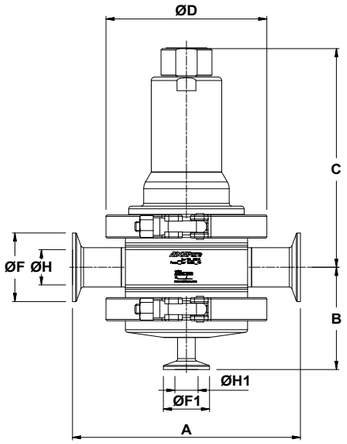
INSTALLATION: Horizontal installation. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P163**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Maximum downstream pressure	5 bar
Minimum downstream pressure *	0,8 bar
Maximum operating temperature **	180 °C

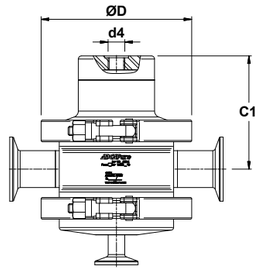
* For tight shut off, with adjustment spring relaxed, ensure a minimum downstream pressure of 0,2 bar.
** With PTFE diaphragm and seals. Consult the manufacturer in case of other elastomer materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2" to 2" – DN 15 to 50	SEP

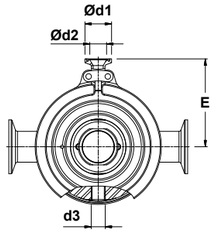




Optional bottom cover with drain connection



Optional dome-loaded version



Optional pressure gauge connections

DIMENSIONS (mm) ASME BPE

SIZE	A	B	B1	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	ØF1	ØH1	WGT. (kg)
1/2"	153	70	47	156	84	119	25	15,75	1/4"	1/4"	83	25	9,4	25	9,4	5
3/4"	153	74	51	160	88	119	25	15,75	1/4"	1/4"	83	25	15,75	25	9,4	5,6
1"	153	77	54	163	91	119	25	15,75	1/4"	1/4"	83	50,5	22,1	25	9,4	5,7
11/2"	170	95	71	204	124	134	25	15,75	1/4"	1/4"	96	50,5	34,8	25	9,4	9,8
2"	170	99	74	207	127	134	25	15,75	1/4"	1/4"	96	64	47,5	25	9,4	9,8

DIMENSIONS (mm) DIN

SIZE	A	B	B1	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	ØF1	ØH1	WGT. (kg)
DN 15	153	74	51	160	88	119	25	15,75	1/4"	1/4"	83	34	16	34	10	5,6
DN 20	153	72	49	158	86	119	25	15,75	1/4"	1/4"	83	34	20	34	10	5,3
DN 25	168	75	52	161	89	119	25	15,75	1/4"	1/4"	83	50,5	26	34	10	5,6
DN 32	168	77	54	163	91	119	25	15,75	1/4"	1/4"	83	50,5	32	34	10	5,8
DN 40	185	94	70	202	122	134	25	15,75	1/4"	1/4"	96	50,5	38	34	10	9,5
DN 50	185	98	74	206	126	134	25	15,75	1/4"	1/4"	96	64	50	34	10	9,8

Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO

SIZE	A	B	B1	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	ØF1	ØH1	WGT. (kg)
DN 15	168	73	50	159	87	119	25	15,75	1/4"	1/4"	83	50,5	18,1	25	10,3	5,4
DN 20	168	76	53	162	90	119	25	15,75	1/4"	1/4"	83	50,5	23,7	25	10,3	5,6
DN 25	168	78	55	164	92	119	25	15,75	1/4"	1/4"	83	50,5	29,7	25	10,3	6
DN 32	185	93	69	202	122	134	25	15,75	1/4"	1/4"	96	64	38,4	25	10,3	9,6
DN 40	185	100	76	206	126	134	25	15,75	1/4"	1/4"	96	64	44,3	25	10,3	10

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).
* As standard, optional connections d3 and d4 are female threaded ISO 7 Rp.

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FLOW RATE COEFFICIENTS (m³/h)

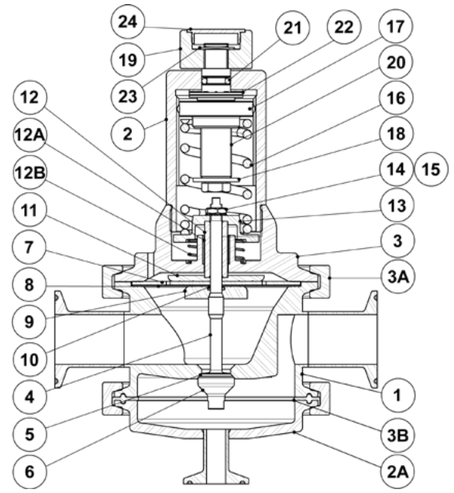
	ASME BPE					DIN						ISO				
SIZE	1/2"	3/4"	1"	11/2"	2"	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 15	DN 20	DN 25	DN 32	DN 40
Kvs	1,3	3	4,2	7	13	2,1	3	4,2	4,2	7	13	2,1	4,2	4,2	7	7

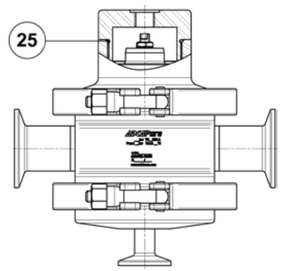
For conversion Kvs = Cv (US) x 0,865.

MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2A	Bottom cover	AISI 316L / 1.4404
3	Intermediate flange	AISI 316L / 1.4404
3A	Clamp	AISI 316 / 1.4401
3B	Gasket	FKM / PTFE
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316L / 1.4404
12A	Plain bearing	Bronze
12B	Spring	AISI 302 / 1.4300
13	Spring plate	AISI 316L / 1.4404
14	Nut	AISI 304 / 1.4301
15	Washer	AISI 304 / 1.4301
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316L / 1.4404
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	* O-ring	EPDM

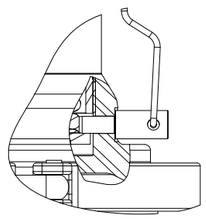
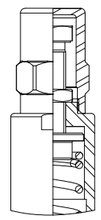
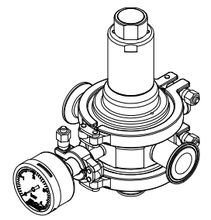
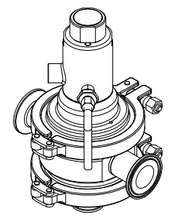
* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





Optional dome-loaded version (1/4")

OPTIONS

LOCK SYSTEM	ADJUSTMENT SCREW WITH TOP CAP	PRESSURE GAUGE CONNECTION	LEAKAGE LINE CONNECTION
			

ORDERING CODES P163													
Valve model	**P63**	**1**	**4**	**1**	**T**	**M**	**I**	**X**	**X**	**X**	**DI**	**15**	**E**
P163 – AISI 316L / 1.4404 diaphragm sensing press. reducing valve without drain	**P63**												
P163 – AISI 316L / 1.4404 diaphragm sensing press. reducing valve with drain	**P63D**												
Valve series													
Series 1		**1**											
Regulating range													
0,8 to 1,5 bar			**4**										
1 to 3 bar			**5**										
1,5 to 5 bar			**6**										
0,8 to 5 bar (dome-loaded) **a)**			**A**										
Flow rate coefficient													
Kvs 1,3 (only applicable to ASME BPE 1/2" size)				**1**									
Kvs 2,1 (applicable to sizes DIN DN 15 and ISO DN 15)				**2**									
Kvs 3 (applicable to sizes ASME BPE 3/4" and DIN DN 20)				**3**									
Kvs 4,2 (applicable to sizes ASME BPE 1", DIN DN 25 to DN 32 and ISO DN 20 to DN 25)				**4**									
Kvs 7 (applicable to sizes ASME BPE 11/2", DIN DN 40 and ISO DN 32 to DN 40)				**6**									
Kvs 13 (applicable to sizes ASME BPE 2" and DIN DN 50)				**8**									
Diaphragm													
PTFE (Gylon)					**T**								
EPDM (non-standard)					**E**								
Seat material b)													
Metal to metal (non-standard, except in ASME BPE 1/2" size)						**M**							
EPDM						**E**							
PTFE						**T**							
FPM / Viton (FDA approval only)						**V**							
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob							**I**						
Top cap (adjustment screw with cover)							**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure							**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure							**U**						
Dome-loaded top **c)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish d)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
CIP / SIP lock system										**C**			
Pipe connections													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
DN 32												**32**	
11/2" or DN 40												**40**	
2" or DN 50												**50**	
Special valves / Extras													
Full description or additional codes have to be added in case of a non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 0,2 bar above the required downstream pressure; **b)** ASME BPE 1/2" size is only available with metal to metal sealing; **c)** Must be chosen in case of dome-loaded version; **d)** Consult IS PV20.00 – Technical information – for further details and other surface finish options.

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ADCAPure

SANITARY PRESSURE REDUCING VALVE P173

DESCRIPTION

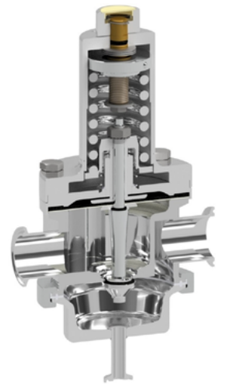
The ADCAPure P173 is a series of inline direct acting, diaphragm sensing pressure reducing valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Compact inline design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used on the standard version.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection (1/8”).
Different soft sealings for liquids and gases.
Lock system, allows inline clean-in-place (CIP) and sterilization-in-place (SIP) operations.
Gauge connection on body.
Top cap (adjustment screw with cover).
Bottom cover with drain connection.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: P173.

SIZES: 11/2” to 2” ; DN 32 to DN 50.

REGULATING RANGES: 0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 5 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation.
See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**P173**
Body design conditions	PN 16
Maximum upstream pressure	8 bar or 4 bar *
Maximum downstream pressure	5 bar
Minimum downstream pressure **	0,8 bar
Maximum operating temperature ***	180 °C

* See “Flow rates coefficients” table.
** For tight shut off, with the adjustment spring relaxed, ensure a minimum 0,2 bar downstream pressure.
*** With PTFE diaphragm and seals. Consult the manufacturer in case of other elastomer materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
11/2” to 2” – DN 32 to 50	SEP

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FLOW RATES COEFFICIENTS (m³/h)									
	BPE			DIN			ISO		
SIZE	11/2"	2"	2" *	DN 40	DN 50	DN 50 *	DN 32	DN 40	DN 50
Kvs	5,5	5,5	8,5 *	5,5	5,5	8,5 *	5,5	5,5	NA

* Limited to a maximum of 4 bar inlet pressure.

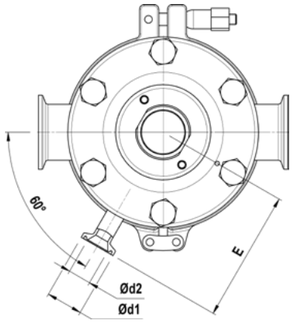
DIMENSIONS (mm) ASME BPE													
SIZE	A	B	B1	C	D	d1	d2	E	F	H	NPS 1/2"		WGT. (kg)
											F1	H1	
11/2"	170	94	70	199	130	25	15,75	90	50,5	34,8	25	9,4	8,6
2"	170	99	76	205	130	25	15,75	90	64	47,5	25	9,4	8,9

DIMENSIONS (mm) DIN													
SIZE	A	B	B1	C	D	d1	d2	E	F	H	DN 10		WGT. (kg)
											F1	H1	
DN 40	170	94	70	199	130	25	15,75	90	50,5	38	34	10	8,6
DN 50	170	99	76	205	130	25	15,75	90	64	50	34	10	8,9

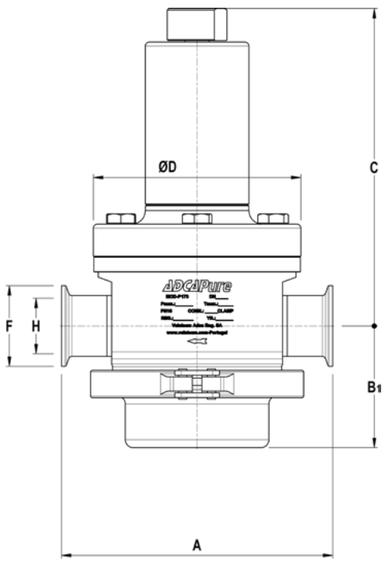
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

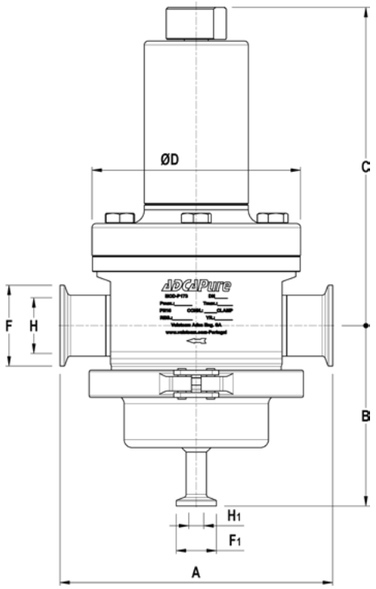
DIMENSIONS (mm) ISO													
SIZE	A	B	B1	C	D	d1	d2	E	F	H	DN 08		WGT. (kg)
											F1	H1	
DN 32	170	93	70	199	130	25	15,75	90	64	38,4	25	10,3	8,6
DN 40	170	99	76	205	130	25	15,75	90	64	44,3	25	10,3	9,2

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).



Optional pressure gauge connections





Optional bottom cover with drain connection

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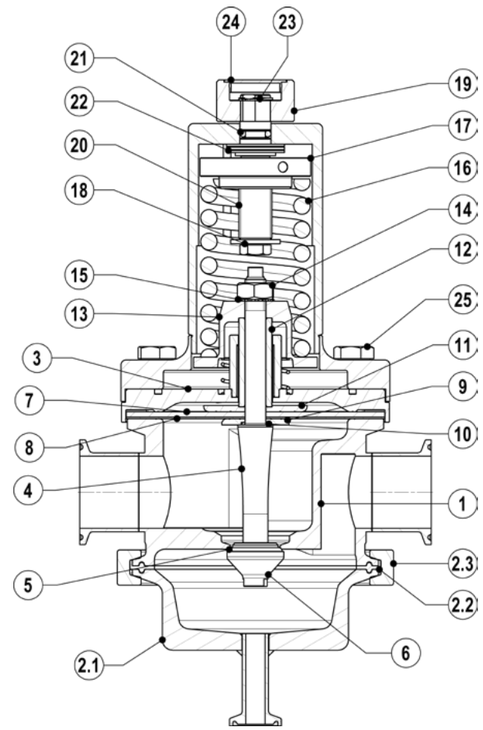
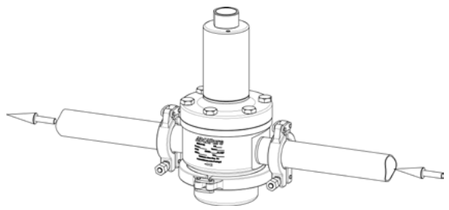
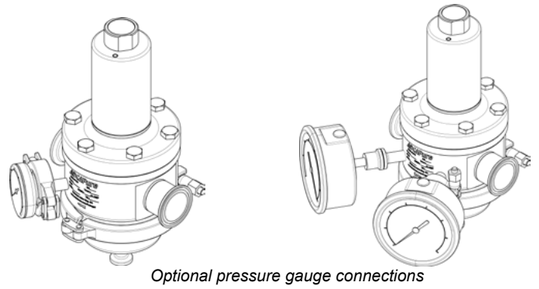
MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2.1	Bottom cover	AISI 316L / 1.4404
2.2	Gasket	PTFE / TFM® envelope gasket
2.3	Safety clamp	AISI 316 / 1.4401
3	Centering plate	AISI 316L / 1.4404
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316 / 1.4401
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316 / 1.4401
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	Bolts	Stainless steel A2-70



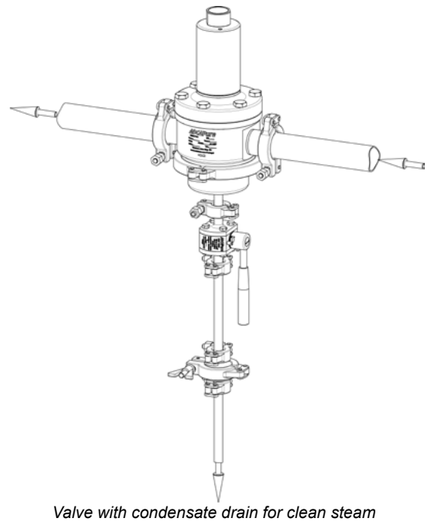
* Available spare parts; ** Others on request.
FDA / USP Class VI seals certificate on request.
For viton diaphragm the only approval available is the FDA (pos. 7).



Valve without bottom drain connection, for clean gases



Optional pressure gauge connections



Valve with condensate drain for clean steam

VALSTEAM ADCA
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IS P173.20 E 12.16

ORDERING CODES P173													
Valve model	**P17D**	**4**	**4**	**T**	**M**	**I**	**X**	**X**	**X**	**DI**	**32**	**E**
P173 – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve with drain	**P17D**											
P173 – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve without drain	**P17**											
Regulating range												
0,8 to 1,5 bar		**4**										
1 to 3 bar		**5**										
1,5 to 5 bar		**6**										
Flow rate coefficient												
Kvs 5,5			**4**									
Kvs 8,5 (only applicable to sizes ASME BPE 2” and DIN DN 50. Limited to a max. 4 bar inlet pressure)			**6**									
Diaphragm												
PTFE (Gylon)				**T**								
EPDM (non-standard)				**E**								
Seat material												
Metal to metal (non-standard)					**M**							
EPDM					**E**							
PTFE					**T**							
FPM / Viton (FDA approval only)					**V**							
Adjustment knob, top cap and leakage line connection												
Stainless steel adjustment knob						**I**						
Top cap (adjustment screw with cover)						**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure						**U**						
Gauge port options												
Without gauge ports							**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure – 1 connection							**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure – 1 connection							**6**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. **a)**							**9**					
Tri-clamp gauge port on the right side (rel. to the flow direct.) – upstream and downstream press. – 2 conn. **a)**							**8**					
Tri-clamp gauge port on both sides – downstream pressure – 2 connections							**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**3**					
Threaded gauge port on left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. – ISO 7 Rp 1/4”							**1**					
Threaded gauge port on right side (rel. to the flow direction) – upstream/downstream pressure – 2 conn. – ISO 7 Rp 1/4”							**0**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4”							**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**Y**					
Threaded gauge port on left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. – 1/4” NPT							**U**					
Threaded gauge port on right side (rel. to the flow direction) – upstream and downstream pressure – 2 conn. – 1/4” NPT							**V**					
Threaded gauge port on both sides – downstream pressure – 1/4” NPT							**Z**					
Surface finish b)												
Standard surface finish								**X**				
Mirror mechanical polished external surfaces (SF1)								**P**				
Electropolished internal wetted parts (SF5)								**E**				
Special features												
None									**X**			
Degreased for oxygen									**O**			
CIP / SIP lock system									**C**			
Pipe connection												
Clamp ferrule ASME BPE										**D**		
Clamp ferrule DIN (DIN 32676-A)										**F**		
Clamp ferrule ISO (DIN 32676-B)										**E**		
Tube weld (ETO) according to ASME BPE										**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)										**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)										**EI**		
Size												
DN 32 (available with ISO connections only)											**32**	
11/2” or DN 40											**40**	
2” or DN 50 (not available with ISO connections)											**50**	
Special valves / Extras												
Full description or additional codes have to be added in case of non-standard combination												**E**

a) Under special request and after approval of technical solution; **b)** Consult IS PV20.00 for further details and other surface finish options.

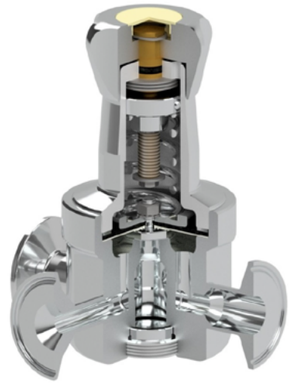
SANITARY PRESSURE SUSTAINING VALVE
PS130

DESCRIPTION

The ADCAPure PS130 is a series of direct acting, diaphragm sensing pressure sustaining valves.
These spring-loaded regulators are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design.
Specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.

MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.



STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Leakage line connection (1/8”).
Gauge connection on body.
Different soft sealings for liquids and gases.
Top cap (adjustment screw with cover).
Panel mounting (M45 thread).
Wall mounting.

USE: Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

AVAILABLE MODELS: PS130.

SIZES: 1/2” to 1”; DN 08 to DN 25.

REGULATING RANGES: 0,2 – 1,5 bar; 0,3 – 3 bar; 2 – 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation is recommended.
See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**PS130**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Minimum upstream pressure	0,2 bar
Maximum design temperature *	150 ºC

* Others on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2” to 1” – DN 08 to DN 25	SEP

FLOW RATE COEFFICIENTS (m³/h) *						
	ASME BPE		DIN		ISO	
SIZE	1/2”	3/4” to 1”	DN 10	DN 15 to DN 25	DN 08	DN 10 to DN 20
Kvs	1,7	3	1,7	3	1,7	3

* Reduced Kvs on request.

DIMENSIONS (mm) ASME BPE										
SIZE	A	B	C	D	d1	d2	E	F	H	WEIGHT (kg)
1/2”	130	30	127	80	25	15,75	65	25	9,4	2,9
3/4”	130	30	127	80	25	15,75	67,5	25	15,75	2,9
1”	130	30	127	80	25	15,75	72,5	50,5	22,1	3,4

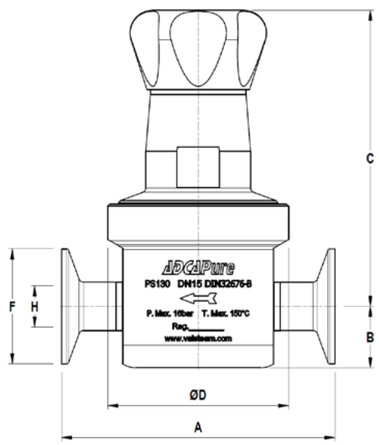
* Valves with nylon adjustment knob weigh 0,3 kg less.

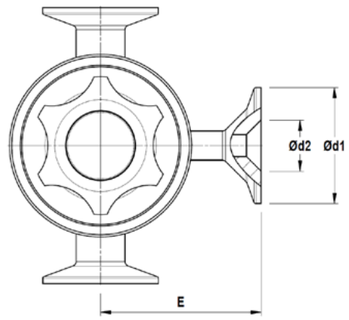
DIMENSIONS (mm) DIN										
SIZE	A	B	C	D	d1	d2	E	F	H	WEIGHT (kg)
DN 10	120	30	127	80	25	15,75	65	34	10	2,9
DN 15	120	30	127	80	25	15,75	67,5	34	16	3
DN 20	120	30	127	80	25	15,75	67,5	34	20	3,1
DN 25	120	32	125	80	25	15,75	72,5	50,5	26	3,4

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO										
SIZE	A	B	C	D	d1	d2	E	F	H	WEIGHT (kg)
DN 08	120	30	127	80	25	15,75	65	25	10,3	2,9
DN 10	120	30	127	80	25	15,75	67,5	25	14	3
DN 15	120	30	127	80	25	15,75	67,5	50,5	18,1	3,2
DN 20	120	32	125	80	25	15,75	72,5	50,5	23,7	3,4

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).

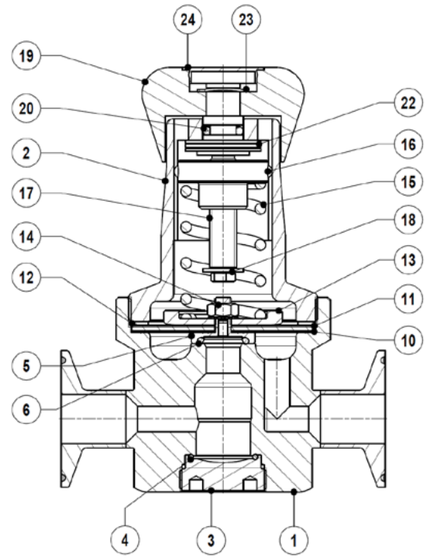


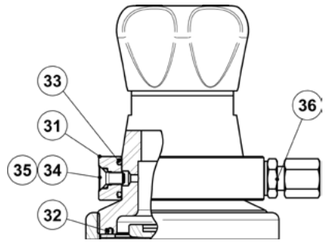


Optional pressure gauge connection

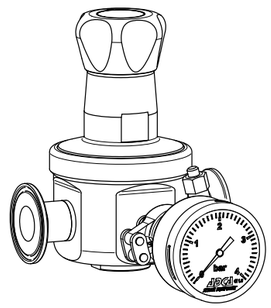
MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Seat cover	AISI 316L / 1.4404
4	* O-ring	Viton; EPDM
5	* Plug	AISI 316L / 1.4404
6	* Valve head	** EPDM; PTFE; FPM
10	* Lower diaphragm	PTFE (Gylon)
11	* Upper diaphragm	EPDM
12	Washer	AISI 304 / 1.4301
13	Plate	AISI 304 / 1.4301
14	Nut	Stainless steel A2-70
15	* Adjustment spring	AISI 302 / 1.4300
16	Spring plate	AISI 316 / 1.4401
17	Adjustment screw	Brass
18	Retaining washer	Stainless steel A2-70
19	Adjustment knob	AISI 316L / 1.4404 or Nylon
20	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
31	Leakage line ring	AISI 316L / 1.4404
32	* O-ring	EPDM
33	O-ring	NBR
34	Bolt	AISI 304 / 1.4301
35	O-ring	Viton
36	Compression fitting	AISI 304 / 1.4301

* Available spare parts ; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





Optional leakage line connection (1/8”)



Optional pressure gauge connection

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS PS130.20 E 11.18

ORDERING CODES PS130													
Valve model	**PS13**	**1**	**3**	**T**	**M**	**X**	**I**	**X**	**X**	**X**	**DI**	**15**	**E**
PS130 – AISI 316L / 1.4404 diaphragm sensing pressure sustaining valve	**PS13**												
Regulating range													
0,2 to 1,5 bar		**1**											
0,3 to 3 bar		**2**											
2 to 8 bar		**3**											
Flow rate coefficient													
Kvs 1,7			**3**										
Kvs 3 (not applicable to sizes 1/2" ASME BPE, DIN DN 10 and ISO DN 08)			**6**										
Diaphragm													
PTFE (Gylon)				**T**									
EPDM (non-standard)				**E**									
Seat material													
Metal to metal (non-standard)					**M**								
EPDM					**E**								
PTFE					**T**								
FPM / Viton (FDA approval only)					**V**								
Leakage line connection													
Without leakage line connection						**X**							
With leakage line connection						**N**							
Adjustment knob and top cap													
Stainless steel adjustment knob							**I**						
Nylon adjustment knob							**P**						
Top cap (adjustment screw with cover)							**T**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – upstream pressure								**6**					
Tri-clamp gauge port on both sides – upstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – upstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – upstream pressure – 1/4" NPT								**Z**					
Surface finish a)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connection													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
DN 08												**08**	
DN 10												**10**	
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
Special valves / Extras													
Full description or additional codes have to be added in case of non-standard combination													**E**

a) Consult IS PV20.00 for further details and other surface finish options.

SANITARY PRESSURE SUSTAINING VALVE
PS161

DESCRIPTION

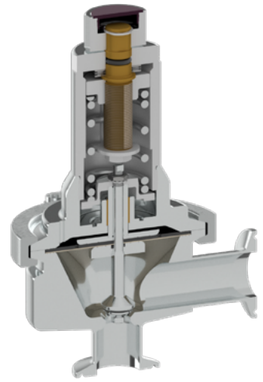
The ADCAPure PS161 is a series of angle design direct acting diaphragm sensing pressure sustaining valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Spring or dome-loaded.
Non-rising adjustment knob.
Compact design with clamped body.
Available with low pressure diaphragm.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection (1/4").
Different soft sealings for liquids and gases.
Gauge connection on body.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PS161.

SIZES: 1/2" to 2"; DN 15 to 50.

REGULATING RANGES: 0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends.
Others on request.

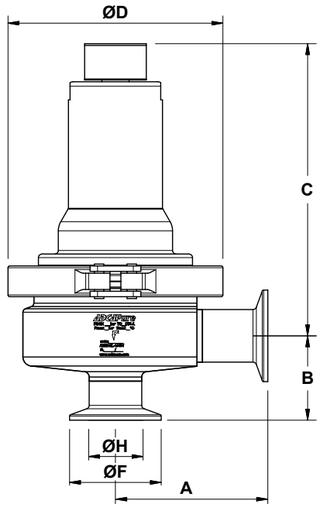
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

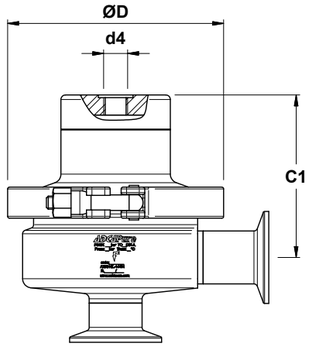
INSTALLATION: Horizontal installation. Horizontal inlet and vertical outlet. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**PS161**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Minimum upstream pressure	0,8 bar
Maximum operating temperature *	180 °C

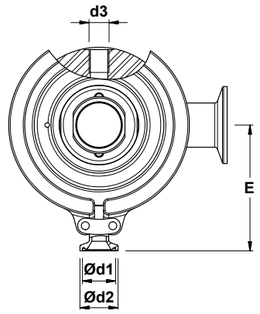
* With PTFE diaphragm and seals. Consult the manufacturer in case of other elastomer materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2" to 2" – DN 15 to 50	SEP





Optional dome-loaded version



Optional pressure gauge connections

DIMENSIONS (mm) ASME BPE

SIZE	A	B	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	WGT. (kg)
1/2"	77	53	156	84	119	25	15,75	1/4"	1/4"	83	25	9,4	4,1
3/4"	77	56	160	88	119	25	15,75	1/4"	1/4"	83	25	15,75	4,4
1"	77	52	163	91	119	25	15,75	1/4"	1/4"	83	50,5	22,1	4,6
11/2"	85	61	204	124	134	25	15,75	1/4"	1/4"	96	50,5	34,8	8
2"	85	67	207	127	134	25	15,75	1/4"	1/4"	96	64	47,5	8,6

DIMENSIONS (mm) DIN

SIZE	A	B	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	WGT. (kg)
DN 15	77	45	160	88	119	25	15,75	1/4"	1/4"	83	34	16	4,4
DN 20	77	40	158	86	119	25	15,75	1/4"	1/4"	83	34	20	4,3
DN 25	84	47	161	89	119	25	15,75	1/4"	1/4"	83	50,5	26	4,6
DN 32	84	50	163	91	119	25	15,75	1/4"	1/4"	83	50,5	32	4,8
DN 40	93	69	202	122	134	25	15,75	1/4"	1/4"	96	50,5	38	8
DN 50	93	75	206	126	134	25	15,75	1/4"	1/4"	96	64	50	8,6

Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO

SIZE	A	B	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	WGT. (kg)
DN 15	84	43	159	87	119	25	15,75	1/4"	1/4"	83	50,5	18,1	4,4
DN 20	84	46	162	90	119	25	15,75	1/4"	1/4"	83	50,5	23,7	4,6
DN 25	84	49	164	92	119	25	15,75	1/4"	1/4"	83	50,5	29,7	4,8
DN 32	93	70	202	122	134	25	15,75	1/4"	1/4"	96	64	38,4	8,2
DN 40	93	75	206	126	134	25	15,75	1/4"	1/4"	96	64	44,3	8,8

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).
* As standard, connections d3 and d4 are female threaded ISO 7 Rp.

We reserve the right to change the design and material of this product without notice.

FLOW RATE COEFFICIENTS (m³/h)

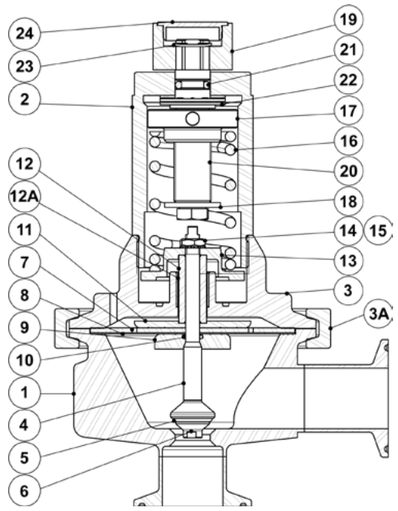
	ASME BPE					DIN						ISO				
SIZE	**1/2"**	**3/4"**	**1"**	**11/2"**	**2"**	**DN 15**	**DN 20**	**DN 25**	**DN 32**	**DN 40**	**DN 50**	**DN 15**	**DN 20**	**DN 25**	**DN 32**	**DN 40**
Kvs	1,3	3	4,2	7	13	2,1	3	4,2	4,2	7	13	2,1	4,2	4,2	7	7

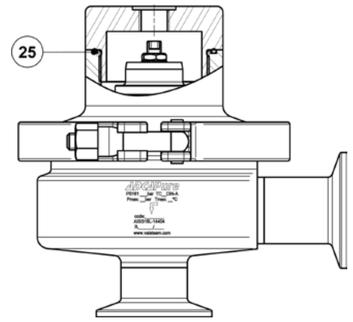
For conversion Kvs = Cv (US) x 0,865.

MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Intermediate flange	AISI 316L / 1.4404
3A	Clamp	AISI 316 / 1.4401
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316L / 1.4404
12A	Plain bearing	Bronze
13	Spring plate	AISI 316L / 1.4404
14	Nut	AISI 304 / 1.4301
15	Washer	AISI 304 / 1.4301
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316L / 1.4404
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	* O-ring	NBR

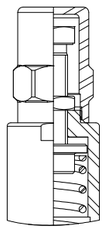
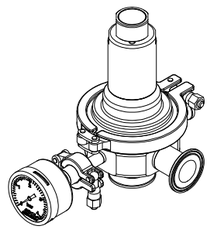
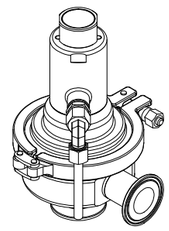
* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





Optional dome-loaded version (1/4")

OPTIONS

ADJUSTMENT SCREW WITH TOP CAP	PRESSURE GAUGE CONNECTION	LEAKAGE LINE CONNECTION
		

VALSTEAM ADCA
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IS PS161.015 E 05.21

ORDERING CODES PS161														
Valve model	**PS16**	**1**	**4**	**1**	**T**	**M**	**I**	**X**	**X**	**X**	**DI**	**15**	**E**
PS161 – AISI 316L / 1.4404 diaphragm sensing pressure sustaining valve	**PS16**												
Valve series													
Series 1		**1**											
Regulating range													
0,8 to 1,5 bar			**4**										
1 to 3 bar			**5**										
1,5 to 8 bar			**6**										
0,8 to 8 bar (dome-loaded) **a)**			**A**										
Flow rate coefficient													
Kvs 1,3 (only applicable to ASME BPE 1/2" size)				**1**									
Kvs 2,1 (applicable to sizes DIN DN 15 and ISO DN 15)				**2**									
Kvs 3 (applicable to sizes ASME BPE 3/4" and DIN DN 20)				**3**									
Kvs 4,2 (applicable to sizes ASME BPE 1", DIN DN 25 to DN 32 and ISO DN 20 to DN 25)				**4**									
Kvs 7 (applicable to sizes ASME BPE 11/2", DIN DN 40 and ISO DN 32 to DN 40)				**6**									
Kvs 13 (applicable to sizes ASME BPE 2" and DIN DN 50)				**8**									
Diaphragm													
PTFE (Gylon)					**T**								
EPDM (non-standard)					**E**								
Seat material b)													
Metal to metal (non-standard, except in ASME BPE 1/2" size)						**M**							
EPDM						**E**							
PTFE						**T**							
FPM / Viton (FDA approval only)						**V**							
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob							**I**						
Top cap (adjustment screw with cover)							**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure							**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure							**U**						
Dome-loaded top **c)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – upstream pressure								**6**					
Tri-clamp gauge port on both sides – upstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – upstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – upstream pressure – 1/4" NPT								**Z**					
Surface finish d)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connections													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
DN 32												**32**	
11/2" or DN 40												**40**	
2" or DN 50												**50**	
Special valves / Extras													
Full description or additional codes have to be added in case of a non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 0,2 bar above the required upstream pressure; **b)** ASME BPE 1/2" size is only available with metal to metal sealing; **c)** Must be chosen in case of dome-loaded version; **d)** Consult IS PV20.00 – Technical information – for further details and other surface finish options.

SANITARY PRESSURE SUSTAINING VALVE
PS163

DESCRIPTION

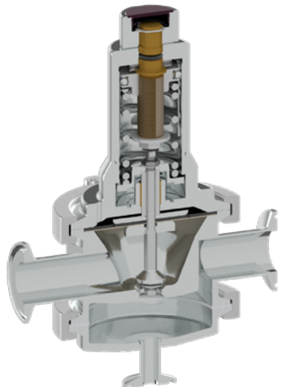
The ADCAPure PS163 is a series of inline direct acting diaphragm sensing pressure sustaining valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Spring or dome-loaded.
Non-rising adjustment knob.
Compact inline design with clamped body.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection (1/4").
Different soft sealings for liquids and gases.
Gauge connection on body.
Top cap (adjustment screw with cover).
Dome-loaded version.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PS163.

SIZES: 1/2" to 2"; DN 15 to 50.

REGULATING RANGES: 0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends.
Others on request.

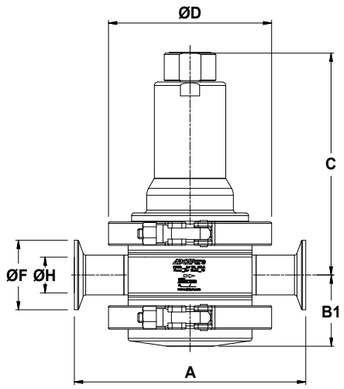
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

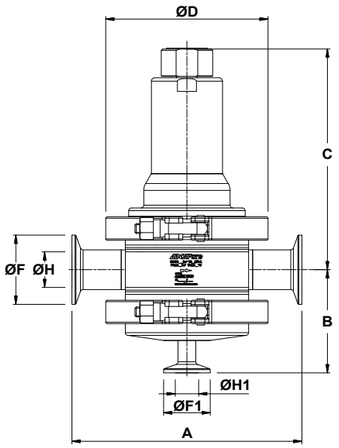
INSTALLATION: Horizontal installation. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**PS163**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Minimum upstream pressure	0,8 bar
Maximum operating temperature *	180 °C

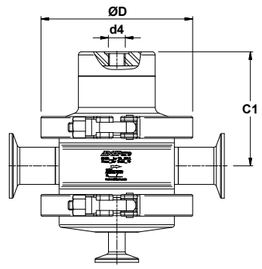
* With PTFE diaphragm and seals. Consult the manufacturer in case of other elastomer materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2" to 2" – DN 15 to 50	SEP

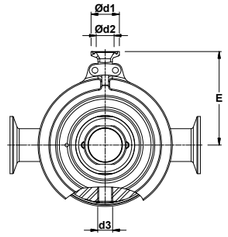




Optional bottom cover with drain connection



Optional dome-loaded version



Optional pressure gauge connections

DIMENSIONS (mm) ASME BPE

SIZE	A	B	B1	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	ØF1	ØH1	WGT. (kg)
1/2"	153	70	47	156	84	119	25	15,75	1/4"	1/4"	83	25	9,4	25	9,4	5
3/4"	153	74	51	160	88	119	25	15,75	1/4"	1/4"	83	25	15,75	25	9,4	5,6
1"	153	77	54	163	91	119	25	15,75	1/4"	1/4"	83	50,5	22,1	25	9,4	5,7
11/2"	170	95	71	204	124	134	25	15,75	1/4"	1/4"	96	50,5	34,8	25	9,4	9,8
2"	170	99	74	207	127	134	25	15,75	1/4"	1/4"	96	64	47,5	25	9,4	9,8

DIMENSIONS (mm) DIN

SIZE	A	B	B1	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	ØF1	ØH1	WGT. (kg)
DN 15	153	74	51	160	88	119	25	15,75	1/4"	1/4"	83	34	16	34	10	5,6
DN 20	153	72	49	158	86	119	25	15,75	1/4"	1/4"	83	34	20	34	10	5,3
DN 25	168	75	52	161	89	119	25	15,75	1/4"	1/4"	83	50,5	26	34	10	5,6
DN 32	168	77	54	163	91	119	25	15,75	1/4"	1/4"	83	50,5	32	34	10	5,8
DN 40	185	94	70	202	122	134	25	15,75	1/4"	1/4"	96	50,5	38	34	10	9,5
DN 50	185	98	74	206	126	134	25	15,75	1/4"	1/4"	96	64	50	34	10	9,8

Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO

SIZE	A	B	B1	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	ØF1	ØH1	WGT. (kg)
DN 15	168	73	50	159	87	119	25	15,75	1/4"	1/4"	83	50,5	18,1	25	10,3	5,4
DN 20	168	76	53	162	90	119	25	15,75	1/4"	1/4"	83	50,5	23,7	25	10,3	5,6
DN 25	168	78	55	164	92	119	25	15,75	1/4"	1/4"	83	50,5	29,7	25	10,3	6
DN 32	185	93	69	202	122	134	25	15,75	1/4"	1/4"	96	64	38,4	25	10,3	9,6
DN 40	185	100	76	206	126	134	25	15,75	1/4"	1/4"	96	64	44,3	25	10,3	10

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).
* As standard, optional connections d3 and d4 are female threaded ISO 7 Rp.

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FLOW RATE COEFFICIENTS (m³/h)

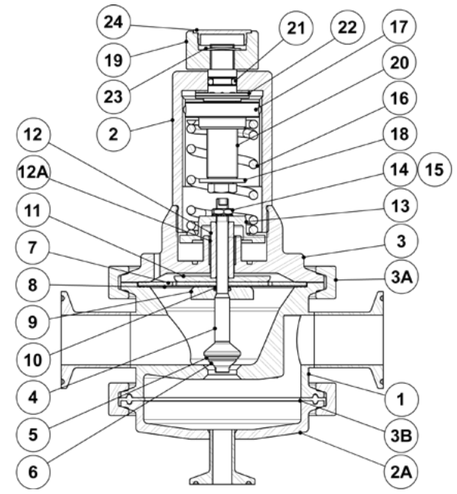
	ASME BPE					DIN						ISO				
SIZE	**1/2"**	**3/4"**	**1"**	**11/2"**	**2"**	**DN 15**	**DN 20**	**DN 25**	**DN 32**	**DN 40**	**DN 50**	**DN 15**	**DN 20**	**DN 25**	**DN 32**	**DN 40**
Kvs	1,3	3	4,2	7	13	2,1	3	4,2	4,2	7	13	2,1	4,2	4,2	7	7

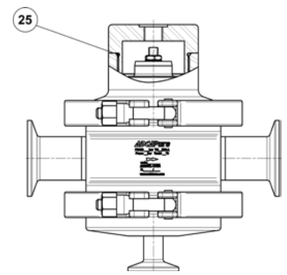
For conversion Kvs = Cv (US) x 0,865.

MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Intermediate flange	AISI 316L / 1.4404
3A	Clamp	AISI 316 / 1.4401
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316L / 1.4404
12A	Plain bearing	Bronze
13	Spring plate	AISI 316L / 1.4404
14	Nut	AISI 304 / 1.4301
15	Washer	AISI 304 / 1.4301
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316L / 1.4404
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	* O-ring	NBR

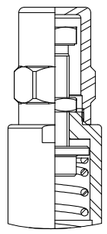
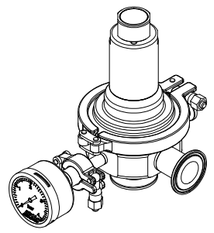
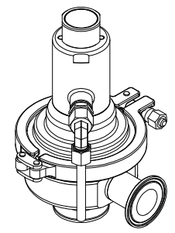
* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





Optional dome-loaded version (1/4")

OPTIONS

ADJUSTMENT SCREW WITH TOP CAP	PRESSURE GAUGE CONNECTION	LEAKAGE LINE CONNECTION
		

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IS PS163.015 E 03.21

ORDERING CODES PS163														
Valve model	**PS63**	**1**	**4**	**1**	**T**	**M**	**I**	**X**	**X**	**X**	**DI**	**15**	**E**
PS163 – AISI 316L / 1.4404 diaphragm sensing press. sustaining valve without drain	**PS63**												
PS163 – AISI 316L / 1.4404 diaphragm sensing press. sustaining valve with drain	**PS6D**												
Valve series													
Series 1		**1**											
Regulating range													
0,8 to 1,5 bar			**4**										
1 to 3 bar			**5**										
1,5 to 8 bar			**6**										
0,8 to 8 bar (dome-loaded) **a)**			**A**										
Flow rate coefficient													
Kvs 1,3 (only applicable to ASME BPE 1/2" size)				**1**									
Kvs 2,1 (applicable to sizes DIN DN 15 and ISO DN 15)				**2**									
Kvs 3 (applicable to sizes ASME BPE 3/4" and DIN DN 20)				**3**									
Kvs 4,2 (applicable to sizes ASME BPE 1", DIN DN 25 to DN 32 and ISO DN 20 to DN 25)				**4**									
Kvs 7 (applicable to sizes ASME BPE 11/2", DIN DN 40 and ISO DN 32 to DN 40)				**6**									
Kvs 13 (applicable to sizes ASME BPE 2" and DIN DN 50)				**8**									
Diaphragm													
PTFE (Gylon)					**T**								
EPDM (non-standard)					**E**								
Seat material b)													
Metal to metal (non-standard, except in ASME BPE 1/2" size)						**M**							
EPDM						**E**							
PTFE						**T**							
FPM / Viton (FDA approval only)						**V**							
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob							**I**						
Top cap (adjustment screw with cover)							**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure							**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure							**U**						
Dome-loaded top **c)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure								**6**					
Tri-clamp gauge port on both sides – downstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – downstream pressure – 1/4" NPT								**Z**					
Surface finish d)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connections													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
DN 32												**32**	
11/2" or DN 40												**40**	
2" or DN 50												**50**	
Special valves / Extras													
Full description or additional codes have to be added in case of a non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 0,2 bar above the required upstream pressure; **b)** ASME BPE 1/2" size is only available with metal to metal sealing; **c)** Must be chosen in case of dome-loaded version; **d)** Consult IS PV20.00 – Technical information – for further details and other surface finish options.

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ADCA ADCAPure

SANITARY PRESSURE SUSTAINING VALVE PS173

DESCRIPTION

The ADCAPure PS173 is a series of inline direct acting, diaphragm sensing pressure sustaining valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Compact inline design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used on the standard version.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Leakage line connection (1/8”).
Different soft sealings for liquids and gases.
Gauge connection on body.
Top cap (adjustment screw with cover).
Bottom cover with drain connection.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PS173 – inline design.

SIZES: 11/2” to 2” ; DN 32 to DN 50.

REGULATING RANGES: 0,8 – 1,5 bar; 1 – 3 bar; 1,5 – 8 bar.

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation.
See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**PS173**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Minimum upstream pressure	0,8 bar
Maximum operating temperature *	180 °C

* With PTFE diaphragm and seals. Consult the manufacturer in case of other elastomer materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
11/2” to 2” – DN 32 to DN 50	SEP

FLOW RATES COEFFICIENTS (m³/h)						
	ASME BPE		DIN		ISO	
SIZE	11/2”	2”	DN 40	DN 50	DN 32	DN 40
Kvs	5,5	8,5	5,5	8,5	5,5	8,5

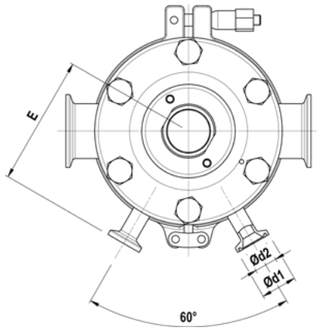
DIMENSIONS (mm) ASME BPE													
SIZE	A	B	B1	C	D	d1	d2	E	F	H	NPS 1/2”		WGT. (kg)
											F1	H1	
11/2”	170	94	70	199	130	25	15,75	90	50,5	34,8	25	9,4	8,6
2”	170	99	76	205	130	25	15,75	90	64	47,5	25	9,4	8,9

DIMENSIONS (mm) DIN													
SIZE	A	B	B1	C	D	d1	d2	E	F	H	DN 15		WGT. (kg)
											F1	H1	
DN 40	170	94	70	199	130	25	15,75	90	50,5	38	34	10	8,6
DN 50	170	99	76	205	130	25	15,75	90	64	50	34	10	8,9

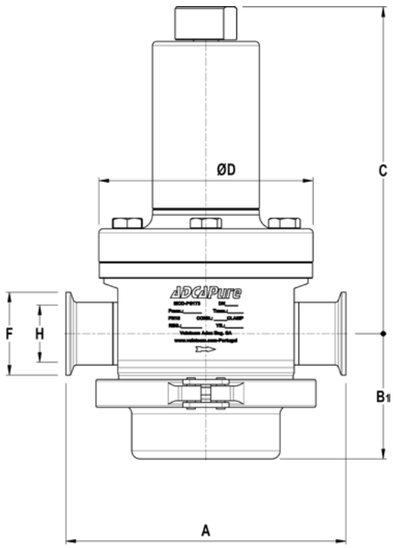
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

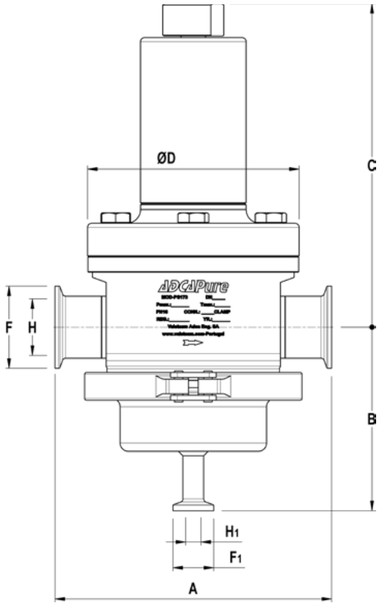
DIMENSIONS (mm) ISO													
SIZE	A	B	B1	C	D	d1	d2	E	F	H	DN 15		WGT. (kg)
											F1	H1	
DN 32	170	93	70	199	130	25	15,75	90	64	38,4	25	10,3	8,6
DN 40	170	99	76	205	130	25	15,75	90	64	44,3	25	10,3	9,2

Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).



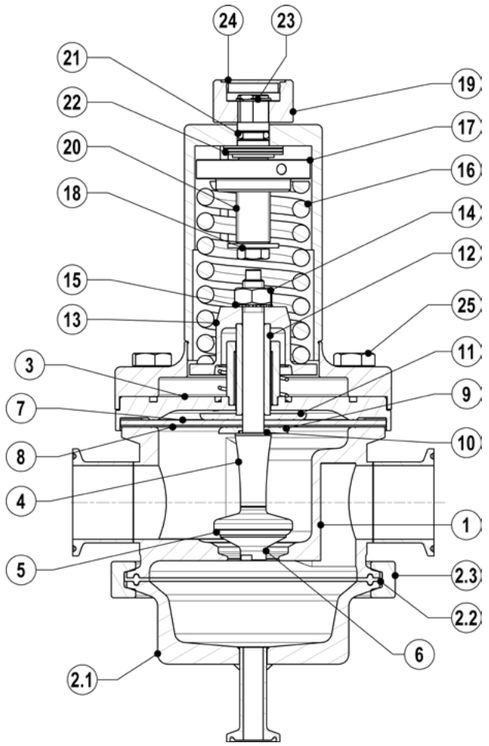
Optional pressure gauge connections



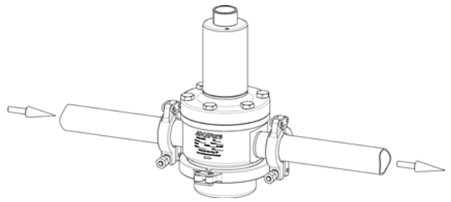


Optional bottom cover with drain connection

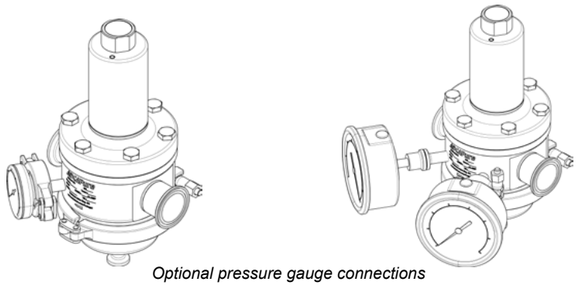
MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2.1	Bottom cover	AISI 316L / 1.4404
2.2	Gasket	PTFE / TFM® Envelope gasket
2.3	Safety clamp	AISI 316 / 1.4401
3	Centering plate	AISI 316L / 1.4404
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316 / 1.4401
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316 / 1.4401
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	Bolts	Stainless steel A2-70



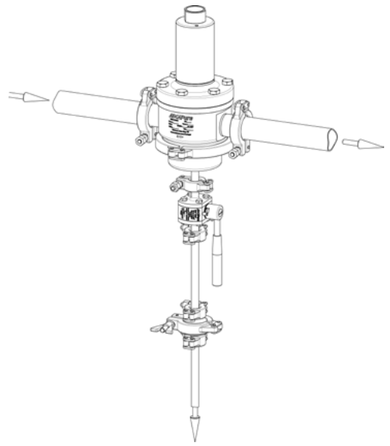
* Available spare parts; ** Others on request.
FDA / USP Class VI seals certificate on request.
For viton diaphragm the only approval available is the FDA (pos. 7).



Valve without bottom drain connection, for clean gases



Optional pressure gauge connections



Valve with condensate drain for clean steam

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IS PS173.20 E 11.16

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ORDERING CODES PS173

Valve model	PS17D	4	4	T	M	I	X	X	X	DI	32	
PS173 – AISI 316L / 1.4404 diaphragm sensing pressure sustaining valve with drain	**PS17D**											
PS173 – AISI 316L / 1.4404 diaphragm sensing pressure sustaining valve without drain	**PS17**											
Regulating range												
0,8 to 1,5 bar		**4**										
1 to 3 bar		**5**										
1,5 to 8 bar		**7**										
Flow rate coefficient												
Kvs 5,5			**4**									
Kvs 8,5			**6**									
Diaphragm												
PTFE (Gylon)				**T**								
EPDM (non-standard)				**E**								
Seat material												
Metal to metal (non-standard)					**M**							
EPDM					**E**							
PTFE					**T**							
FPM / Viton (FDA approval only)					**V**							
Adjustment knob, top cap and leakage line connection												
Stainless steel adjustment knob						**I**						
Top cap (adjustment screw with cover)						**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure						**U**						
Gauge port options												
Without gauge ports							**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream pressure – 1 connection							**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – upstream pressure – 1 connection							**6**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. **a)**							**9**					
Tri-clamp gauge port on the right side (rel. to the flow direct.) – upstream and downstream press. – 2 conn. **a)**							**8**					
Tri-clamp gauge port on both sides – upstream pressure – 2 connections							**5**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4”							**4**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4”							**3**					
Threaded gauge port on left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. – ISO 7 Rp 1/4”							**1**					
Threaded gauge port on right side (rel. to the flow direction) – upstream/downstream pressure – 2 conn. – ISO 7 Rp 1/4”							**0**					
Threaded gauge port on both sides – upstream pressure – ISO 7 Rp 1/4”							**2**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – 1/4” NPT							**W**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – 1/4” NPT							**Y**					
Threaded gauge port on left side (rel. to the flow direction) – upstream and downstream press. – 2 conn. – 1/4” NPT							**U**					
Threaded gauge port on right side (rel. to the flow direction) – upstream and downstream pressure – 2 conn. – 1/4” NPT							**V**					
Threaded gauge port on both sides – upstream pressure – 1/4” NPT							**Z**					
Surface finish b)												
Standard surface finish								**X**				
Mirror mechanical polished external surfaces (SF1)								**P**				
Electropolished internal wetted parts (SF5)								**E**				
Special features												
None									**X**			
Degreased for oxygen									**O**			
Pipe connection												
Clamp ferrule ASME BPE										**D**		
Clamp ferrule DIN (DIN 32676-A)										**F**		
Clamp ferrule ISO (DIN 32676-B)										**E**		
Tube weld (ETO) according to ASME BPE										**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)										**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)										**EI**		
Size												
DN 32 (available with ISO connections only)											**32**	
11/2” or DN 40											**40**	
2” or DN 50 (not available with ISO connections)											**50**	
Special valves / Extras												
Full description or additional codes have to be added in case of non-standard combination												**E**

a) Under special request and after approval of technical solution; **b)** Consult IS PV20.00 for further details and other surface finish options.

VALSTEAM ADCA

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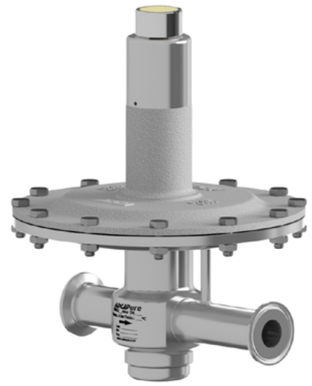
LRQA CERTIFIED ISO 9001 — EHEDG Valsteam ADCA is an EHEDG Member — ADCA — ADCA Pure

SANITARY TANK BLANKETING REGULATORS BKR2

DESCRIPTION

Tank blanketing valves are commonly used in tank storage systems to prevent and protect against explosions (avoiding flammable liquids being vented from the vessel), to control product contamination against external air that may fill the vapour space, to reduce evaporation losses (consequently, production losses), to reduce internal corrosion (caused by air and moisture) and to prevent vacuum condition.
The blanketing process consists in covering the stored medium, usually a liquid, with a gas (normally N2).

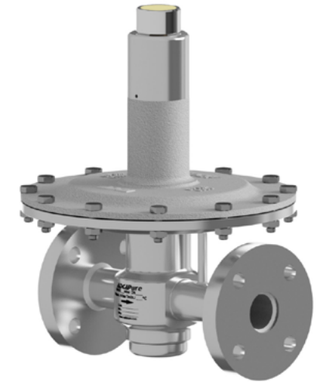


MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.

STANDARD SURFACE FINISH

Body and internal wetted parts: ≤ 0,51 micron Ra – SF1.
Body external: ≤ 0,76 micron Ra – SF3.
Cover: internal machined; external as casted.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection 1/4”.
Gauge connection on body.
External pulse line (recommended for low set pressures < 10 mbar or high flow).
Dome-loaded version.
Blanketing with vacuum.
Top cap (adjustment screw with cover).
Hastelloy wetted parts.
ATEX (Ex) version.

USE: Compressed air, nitrogen and other gases compatible with the construction.

AVAILABLE MODELS: BKR2 – low pressure regulator.

SIZES: 1”; DN 25.

REGULATING RANGES: 5 to 10 mbar; 10 to 50 mbar; 20 to 200 mbar; 50 to 500 mbar; 5 to 4000 mbar (dome-loaded).

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules.
Flanged EN 1092-1 PN 16. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical installation recommended, to allow drainage, or horizontal as close to the process as possible in order to prevent long pipe sections and flow restrictions. See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1” – DN 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)	
PN 16	**Category**
1” – DN 25	Ex h IIB T6...T3 Gb

VALSTEAM ADCA

We reserve the right to change the design and material of this product without notice.

AIR CAPACITIES (Nm³/h) Maximum inlet pressure 6 bar – Seat Ø 8 mm										
SIZE	OUTLET PRESS. (mbar)	INLET PRESSURE (barg)								
		0,1	0,5	0,8	1	2	3	4	5	6
1” – DN 25	5 to 10	4	20	32	40	63	85	102	125	140
	10 to 50	4	20	32	40	63	85	102	125	140
	20 to 200	–	20	32	40	63	85	102	125	140
	50 to 500	–	–	–	40	63	85	102	125	140

Outlet pressure should not be more than 50% of the inlet, in order to reach the mentioned flow rates.

AIR CAPACITIES (Nm³/h) Maximum inlet pressure 12 bar – Seat Ø 5 mm						
SIZE	OUTLET PRESS. (mbar)	INLET PRESSURE (barg)				
		2	4	6	8	12
1” – DN 25	5 to 10	21	35	49	62	90
	10 to 50	21	35	49	62	90
	20 to 200	21	35	49	62	90
	50 to 500	21	35	49	62	90

Outlet pressure should not be more than 50% of the inlet, in order to reach the mentioned flow rates.

DIMENSIONS (mm) ASME BPE									
SIZE	A	B	C	D	F	H	d1	d2	WEIGHT (kg)
1”	210	49	244	230	50,5	22,1	25	15,75	8,5

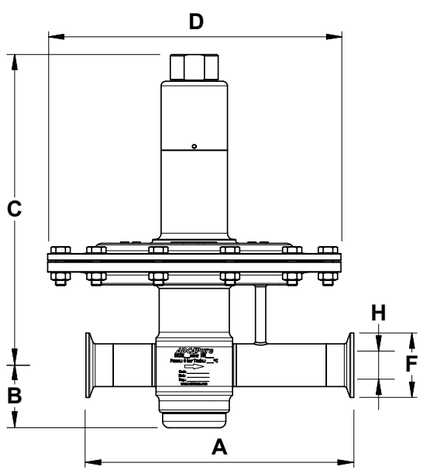
DIMENSIONS (mm) DIN									
SIZE	A	B	C	D	F	H	d1	d2	WEIGHT (kg)
DN 25	210	49	244	230	50,5	26	25	15,75	8,5

Remark: Clamp ferrules according to DIN 32676-A.

DIMENSIONS (mm) ISO									
SIZE	A	B	C	D	F	H	d1	d2	WEIGHT (kg)
DN 25	210	49	244	230	50,5	29,7	25	15,75	8,5

Remark: Clamp ferrules according to DIN 32676-B.

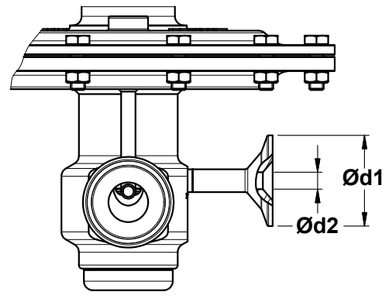
DIMENSIONS (mm) FLANGED							
SIZE	A	B	C	D	d1	d2	WEIGHT (kg)
DN 25	210	49	244	230	25	15,75	10,6



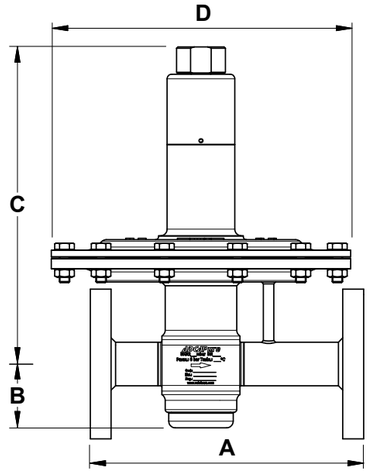
LIMITING CONDITIONS		
Valve model		BKR2
Body design conditions		PN 16
Max. upstream pressure	Seat Ø 5 mm	12 bar
	Seat Ø 8 mm	6 bar
Maximum downstream pressure *		500 mbar
Minimum downstream pressure		5 mbar
Maximum design temperature **		130 °C

* 4000 mbar with dome load;
** Others on request.

Warning: Blanketing valves are not substitute for safety valves or vacuum relief valves.



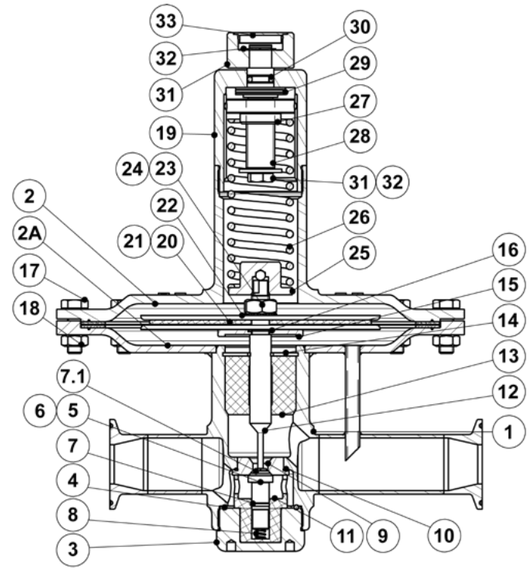
Optional pressure gauge connections

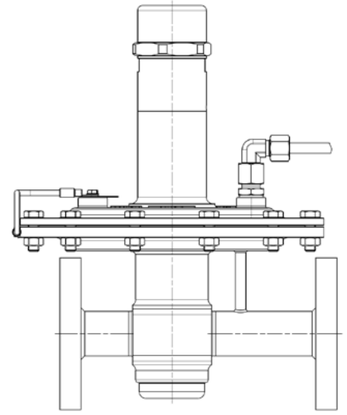


We reserve the right to change the design and material of this product without notice.

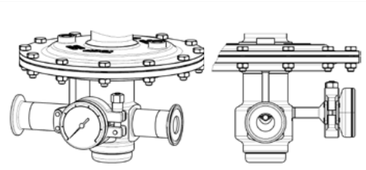
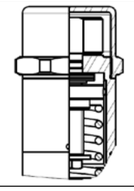
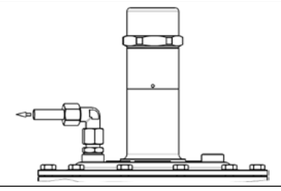
MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
2	Diaphragm top cover	A351 CF3M / 1.4409
2A	Diaphragm bottom cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
3	Seat cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
4	* O-ring	EPDM
5	* Piston	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
6	* Valve head	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
7	* O-ring	EPDM; FPM
7.1	* O-ring	EPDM; FPM
8	* Valve spring	AISI 302 / 1.4300 (polished)
		Hastelloy C22 / 2.4602
9	Seat	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
10	* O-ring	EPDM
11	Guide	PTFE
12	Stem	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
13	Stem guide	PTFE
14	Retaining ring	Stainless steel A2
		Hastelloy C22 / 2.4602
15	Diaphragm plate	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
16	* O-ring	EPDM
17	Bolts	Stainless steel A2-70
18	Nuts	Stainless steel A2-70
19	Spring cover	AISI 316L / 1.4404
20	* Lower diaphragm	PTFE (Gylon)
21	* Upper diaphragm	EPDM
22	Diaphragm plate	AISI 316L / 1.4404
23	Nut	Stainless steel A2-70
24	Washer	AISI 316 / 1.4401
25	Lower spring guide	AISI 316L / 1.4404
26	* Adjustment spring	AISI 302 / 1.4300
27	Top spring plate	AISI 316L / 1.4404
28	Adjustment screw	Brass
29	Bearing	Corrosion resistant steel
30	* O-ring	NBR
31	Adjustment nut	AISI 316L / 1.4404
32	Shaft ring	Stainless steel
33	Cover nut	Plastic

* Available spare parts;
FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.





ATEX compliant version

OPTIONS		
PRESSURE GAUGE CONNECTION	ADJUSTMENT SCREW WITH COVER	LEAKAGE LINE CONNECTION (1/4”)
		

VALSTEAM ADCA

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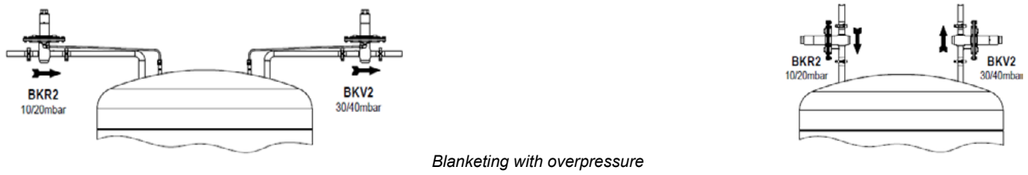
IS BKR2.20 E 09.17

TYPICAL INSTALLATION



Blanketing with overpressure

ORDERING CODES BKR2

Valve model	BR	A	5	T	E	I	X	X	X	0	D	25	E
BKR2 – AISI 316L / 1.4404 blanketing low pressure regulator	**BR**												
BKR2 – Hastelloy C22 / 2.4602 blanketing low pressure regulator	**BRH**												
Regulating range													
5 to 10 mbar		**0**											
10 to 50 mbar		**1**											
20 to 200 mbar		**2**											
50 to 500 mbar		**3**											
5 to 4000 mbar (dome-loaded)		**A**											
Valve seat orifice													
Seat diameter 5 mm			**5**										
Seat diameter 8 mm			**8**										
Diaphragm													
PTFE (Gylon)				**T**									
EPDM (non-standard)				**E**									
Valve head													
EPDM					**E**								
FPM / Viton (FDA approval only)					**V**								
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob						**I**							
Top cap (adjustment screw with cover)						**T**							
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						**L**							
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure **a)**						**U**							
Dome-loaded top **b)**						**X**							
Gauge port options													
Without gauge ports							**X**						
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure							**7**						
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure							**6**						
Tri-clamp gauge port on both sides – downstream pressure							**5**						
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**4**						
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							**3**						
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4”							**2**						
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**W**						
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT							**Y**						
Threaded gauge port on both sides – downstream pressure – 1/4” NPT							**Z**						
Surface finish c)													
Standard surface finish								**X**					
Mirror mechanical polished external surfaces (SF1)								**P**					
Electropolished internal wetted parts (SF5)								**E**					
Special features													
None									**X**				
External pulse line													
Internal pulse orifice (standard)										**0**			
External pulse line connection 1/4"										**1**			
Pipe connection													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Flanged EN 1092-1 PN 16											**L**		
Size													
1” or DN 25												**25**	
Special valves / Extras													
ATEX compliant version													**EX**
Full description or additional codes have to be added in case of non-standard combination													**E**

a) This option must be chosen in case of ATEX compliant version; **b)** This option must be chosen in case of dome-loaded version**; c)** Consult IS PV20.00 for further details and other surface finish options.

We reserve the right to change the design and material of this product without notice.

TANK BLANKETING REGULATORS BKRI2

DESCRIPTION

Tank blanketing valves are commonly used in tank storage systems to prevent and protect against explosions (avoiding flammable liquids being vented from the vessel), to control product contamination against external air that may fill the vapour space, to reduce evaporation losses (consequently, production losses), to reduce internal corrosion (caused by air and moisture) and to prevent vacuum condition.
The blanketing process consists in covering the stored medium, usually a liquid, with a gas (normally N2).

MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.

STANDARD SURFACE FINISH

Internal movable parts and machined surfaces:
≤ 0,76 micron Ra – SF3.
Other surfaces: as casted.
Ultrasonic cleaning.

OPTIONS: Leakage line connection 1/4”.
Gauge connection on body.
External pulse line (recommended for low set pressures < 10 mbar or high flow).
Dome-loaded version.
Blanketing with vacuum.
Top cap (adjustment screw with cover).
ATEX Ex version.

USE: Compressed air, nitrogen and other gases compatible with the construction.

AVAILABLE MODELS: BKRI2 – low pressure regulator.

SIZES: DN 15 and DN 25.

REGULATING RANGES: 5 to 10 mbar; 10 to 50 mbar; 20 to 200 mbar; 50 to 500 mbar; 5 to 4000 mbar (dome-loaded).

CONNECTIONS: Flanged EN 1092-1 PN 16.

INSTALLATION: Vertical installation recommended, to allow drainage, or horizontal as close to the process as possible in order to prevent long pipe sections and flow restrictions.
See IMI – Installation and maintenance instrucions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
DN 15 to 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)	
PN 16	**Category**
DN 15 to 25	Ex h IIB T6...T3 Gb

We reserve the right to change the design and material of this product without notice.

AIR CAPACITIES (Nm³/h)
Maximum inlet pressure 6 bar – Seat Ø 8 mm

SIZE	OUTLET PRESS. (mbar)	INLET PRESSURE (barg)								
		0,1	0,5	0,8	1	2	3	4	5	6
DN 15	5 to 10	3,5	18	28	37	56	77	92	111	128
	10 to 50	3,5	18	28	37	56	77	92	111	128
	20 to 200	–	18	28	37	56	77	92	111	128
	50 to 500	–	–	–	37	56	77	92	111	128
DN 25	5 to 10	4	20	32	40	63	85	102	125	140
	10 to 50	4	20	32	40	63	85	102	125	140
	20 to 200	–	20	32	40	63	85	102	125	140
	50 to 500	–	–	–	40	63	85	102	125	140

Outlet pressure should not be more than 50% of the inlet, in order to reach the mentioned flow rates.

AIR CAPACITIES (Nm³/h)
Maximum inlet pressure 12 bar – Seat Ø 5 mm

SIZE	OUTLET PRESS. (mbar)	INLET PRESSURE (barg)				
		2	4	6	8	12
DN 15	5 to 10	18	32	43	54	81
	10 to 50	18	32	43	54	81
	20 to 200	18	32	43	54	81
	50 to 500	18	32	43	54	81
DN 25	5 to 10	21	35	49	62	90
	10 to 50	21	35	49	62	90
	20 to 200	21	35	49	62	90
	50 to 500	21	35	49	62	90

Outlet pressure should not be more than 50% of the inlet, in order to reach the mentioned flow rates.

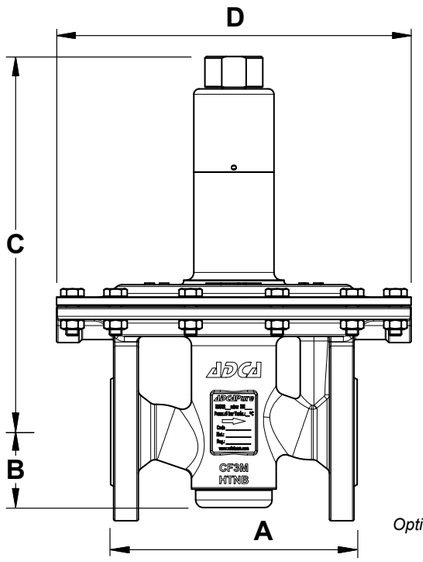
DIMENSIONS (mm)

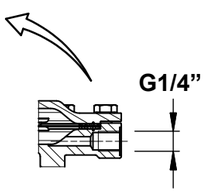
SIZE	A	B	C	D	d1	WEIGHT (kg)
DN 15	130	47,5	243,5	230	1/4"	9,7
DN 25	160	57,5	243,5	230	1/4”	10,8

LIMITING CONDITIONS

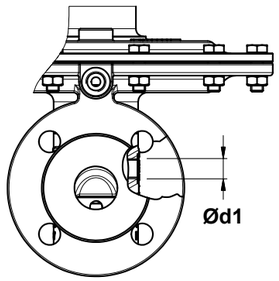
Valve model		BKRI2
Body design conditions		PN 16
Max. upstream pressure	Seat Ø 5 mm	12 bar
	Seat Ø 8 mm	6 bar
Maximum downstream pressure *		500 mbar
Minimum downstream pressure		5 mbar
Maximum design temperature **		130 ºC

* 4000 mbar with dome load;
** Others on request.
Warning: Blanketing valves are not substitute for safety valves or vacuum relief valves.





Optional external sensing pipe connection.



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EHEDG EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP
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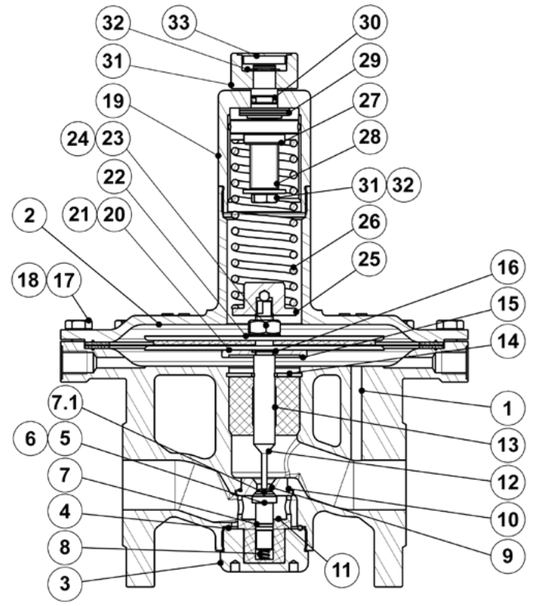
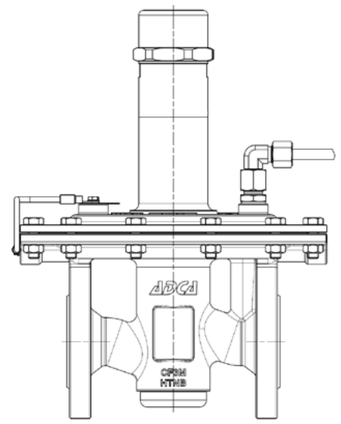
MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	A351 CF3M / 1.4409
2	Diaphragm top cover	A351 CF3M / 1.4409
3	Seat cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	* Piston	AISI 316L / 1.4404
6	* Valve head	AISI 316L / 1.4404
7	* O-ring	EPDM; FPM
7.1	* O-ring	EPDM; FPM
8	* Valve Spring	AISI 302 / 1.4300 (polished)
9	Seat	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Guide	PTFE
12	Stem	AISI 316L / 1.4404
13	Stem guide	PTFE
14	Retaining ring	Stainless steel A2
15	Diaphragm plate	AISI 316L / 1.4404
16	* O-ring	EPDM
17	Bolts	Stainless steel A2-70
18	Nuts	Stainless steel A2-70
19	Spring cover	AISI 316L / 1.4404
20	* Lower diaphragm	PTFE (Gylon)
21	* Upper diaphragm	EPDM
22	Diaphragm plate	AISI 316L / 1.4404
23	Nut	Stainless steel A2-70
24	Washer	AISI 316 / 1.4401
25	Lower spring guide	AISI 316L / 1.4404
26	* Adjustment spring	AISI 302 / 1.4300
27	Top spring plate	AISI 316L / 1.4404
28	Adjustment screw	Brass
29	Bearing	Corrosion resistant steel
30	* O-ring	NBR
31	Adjustment nut	AISI 316L / 1.4404
32	Ext. bowed shaft ring	Stainless steel
33	Cover nut	Plastic

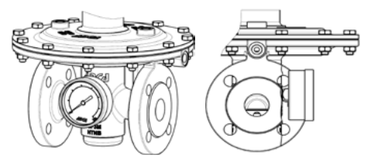
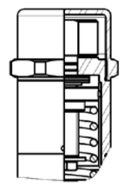
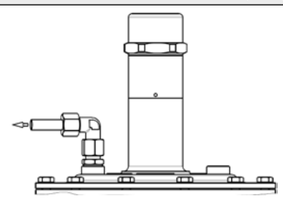
* Available spare parts;
FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.





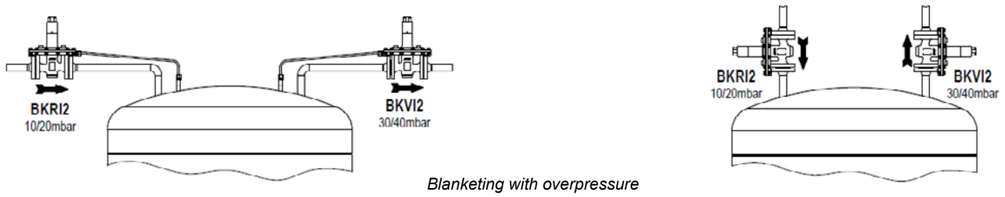
ATEX compliant version

OPTIONS

PRESSURE GAUGE CONNECTION	ADJUSTMENT SCREW WITH COVER	LEAKAGE LINE CONNECTION (1/4”)
		

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS BKRI2.10 E 09.17

TYPICAL INSTALLATION



Blanketing with overpressure

ORDERING CODES BKRI2

Valve model	BRI	A	5	T	E	I	X	X	X	0	L	15	E
BKRI2 – A351 CF3M / 1.4409 blanketing low pressure regulator	BRI												
Regulating range													
5 to 10 mbar		0											
10 to 50 mbar		1											
20 to 200 mbar		2											
50 to 500 mbar		3											
5 to 4000 mbar (dome-loaded)		A											
Valve seat orifice													
Seat diameter 5 mm			5										
Seat diameter 8 mm			8										
Diaphragm													
PTFE (Gylon)				T									
EPDM (non-standard)				E									
Valve head													
EPDM					E								
FPM / Viton (FDA approval only)					V								
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob						I							
Top cap (adjustment screw with cover)						T							
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						L							
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure **a)**						U							
Dome-loaded top **b)**						X							
Gauge port options													
Without gauge ports							X						
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							4						
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							3						
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4”							2						
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT							W						
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT							Y						
Threaded gauge port on both sides – downstream pressure – 1/4” NPT							Z						
Surface finish c)													
Standard surface finish								X					
Mirror mechanical polished external surfaces (SF1)								P					
Electropolished internal wetted parts (SF5)								E					
Special features													
None									X				
External pulse line													
Internal pulse orifice (standard)										0			
External pulse line connection 1/4"										1			
Pipe connection													
Flanged EN 1092-1 PN 16											L		
Size													
DN 15												15	
DN 25												25	
Special valves / Extras													
ATEX compliant version													EX
Full description or additional codes have to be added in case of non-standard combination													E

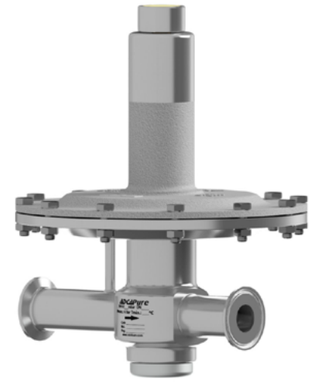
a) This option must be chosen in case of ATEX compliant version; **b)** This option must be chosen in case of dome-loaded version**; c)** Consult IS PV20.00 for further details and other surface finish options.

We reserve the right to change the design and material of this product without notice.

SANITARY
TANK BLANKETING REGULATORS
BKV2

DESCRIPTION

Tank blanketing valves are commonly used in tank storage systems to prevent and protect against explosions (avoiding flammable liquids being vented from the vessel), to control product contamination against external air that may fill the vapour space, to reduce evaporation losses (consequently, production losses), to reduce internal corrosion (caused by air and moisture) and to prevent vacuum condition.
The blanketing process consists in covering the stored medium, usually a liquid, with a gas (normally N2).

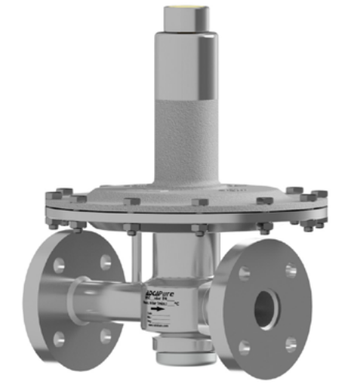


MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.

STANDARD SURFACE FINISH

Body and internal wetted parts: ≤ 0,51 micron Ra – SF1.
Body external: ≤ 0,76 micron Ra – SF3.
Cover: internal machined; external as casted.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Leakage line connection 1/4”.
Gauge connection on body.
External pulse line.
Dome-loaded version.
Blanketing with vacuum.
Top cap (adjustment screw with cover).
Hastelloy wetted parts.
ATEX (Ex) version.

USE: Compressed air, nitrogen and other gases compatible with the construction.

AVAILABLE MODELS: BKV2 – low pressure venting valve.

SIZES: 1”; DN 25.

REGULATING RANGES: 5 to 10 mbar; 10 to 50 mbar; 20 to 200 mbar; 50 to 500 mbar; 5 to 4000 mbar (dome-loaded).

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules.
Flanged EN 1092-1 PN 16. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical installation recommended, to allow drainage, or horizontal as close to the process as possible in order to prevent long pipe sections and flow restrictions. See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1” – DN 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)	
PN 16	**Category**
1” – DN 25	Ex h IIB T6...T3 Gb

We reserve the right to change the design and material of this product without notice.

AIR CAPACITIES (Nm3/h) Seat Ø 21 mm							
SIZE	SET PRESSURE	INLET PRESSURE (mbar)					
		10	20	40	100	200	500
1” – DN 25	25% Overpressure	5,3	11,8	18	31	52	105
	50% Overpressure	7,2	14,5	26	40	66	125
	75% Overpressure	8,3	17	30	47	82	136
	100% Overpressure	9,8	18	36	52	91	148

DIMENSIONS (mm) ASME BPE									
SIZE	A	B	C	D	F	H	d1	d2	WEIGHT (kg)
1”	210	49	244	230	50,5	22,1	25	15,75	8,5

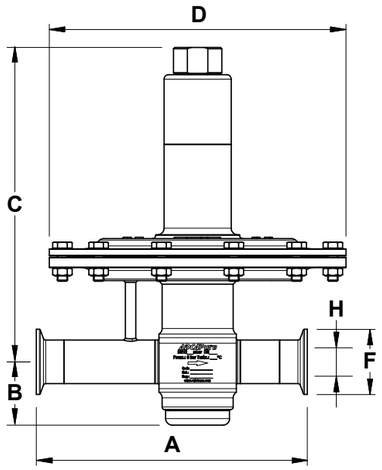
DIMENSIONS (mm) DIN									
SIZE	A	B	C	D	F	H	d1	d2	WEIGHT (kg)
DN 25	210	49	244	230	50,5	26	25	15,75	8,5

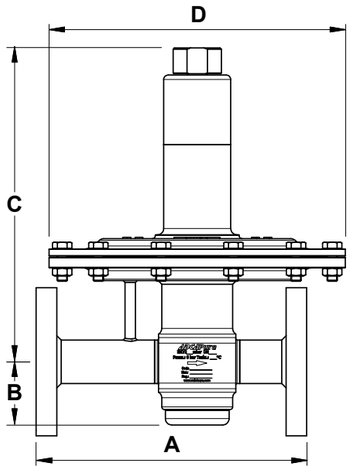
Remark: Clamp ferrules according to DIN 32676-A.

DIMENSIONS (mm) ISO									
SIZE	A	B	C	D	F	H	d1	d2	WEIGHT (kg)
DN 25	210	49	244	230	50,5	29,7	25	15,75	8,5

Remark: Clamp ferrules according to DIN 32676-B.

DIMENSIONS (mm) FLANGED							
SIZE	A	B	C	D	d1	d2	WEIGHT (kg)
DN 25	210	49	244	230	25	15,75	10,6

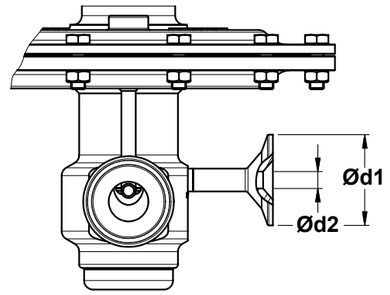




LIMITING CONDITIONS	
Valve model	BKV2
Body design conditions	PN 16
Maximum operating pressure	6 bar
Maximum upstream pressure *	500 mbar
Minimum upstream pressure	5 mbar
Maximum design temperature **	130 °C

* 4000 mbar with dome load;
** Others on request.

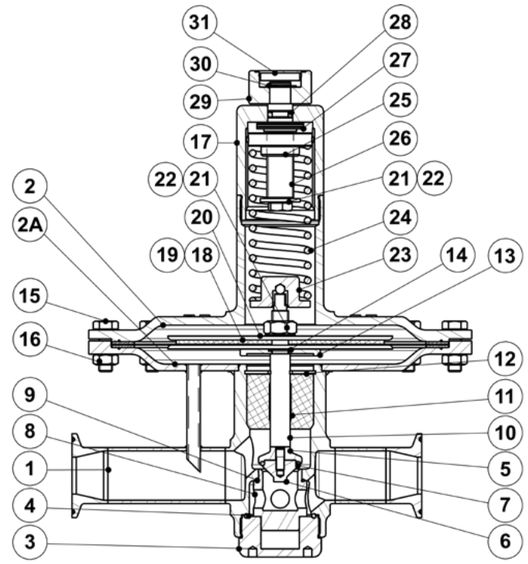
Warning: Blanketing valves are not substitute for safety valves or vacuum relief valves.

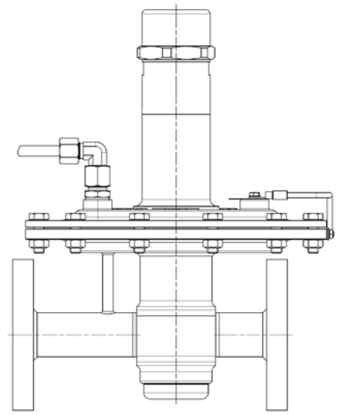


Optional pressure gauge connections

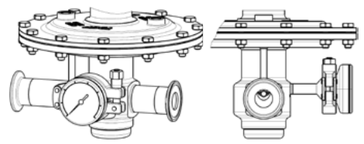
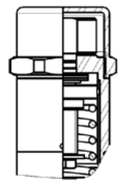
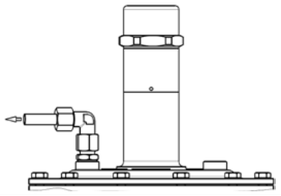
MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
2	Diaphragm top cover	A351 CF3M / 1.4409
2A	Diaphragm bottom cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
3	Seat cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
4	* O-ring	EPDM
5	Plug disc	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
6	* Valve head	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
7	* O-ring	EPDM; FPM
8	Seat	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
9	* O-ring	EPDM
10	Stem	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
11	Stem guide	PTFE
12	Retaining ring	Stainless steel A2-70
		Hastelloy C22 / 2.4602
13	Diaphragm plate	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
14	* O-ring	EPDM
15	Bolts	Stainless steel A2-70
16	Nuts	Stainless steel A2-70
17	Spring cover	AISI 316L / 1.4404
18	* Lower diaphragm	PTFE (Gylon)
19	* Upper diaphragm	EPDM
20	Diaphragm plate	AISI 316L / 1.4404
21	Nut	Stainless steel A2-70
22	Washer	AISI 316 / 1.4401
23	Lower spring guide	AISI 316L / 1.4404
24	* Adjustment spring	AISI 302 / 1.4300
25	Top spring plate	AISI 316L / 1.4404
26	Adjustment screw	Brass
27	Bearing	Corrosion resistant steel
28	* O-ring	NBR
29	Adjustment nut	AISI 316L / 1.4404
30	Ext. bowed shaft ring	Stainless steel
31	Cover nut	Plastic

* Available spare parts.
FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.

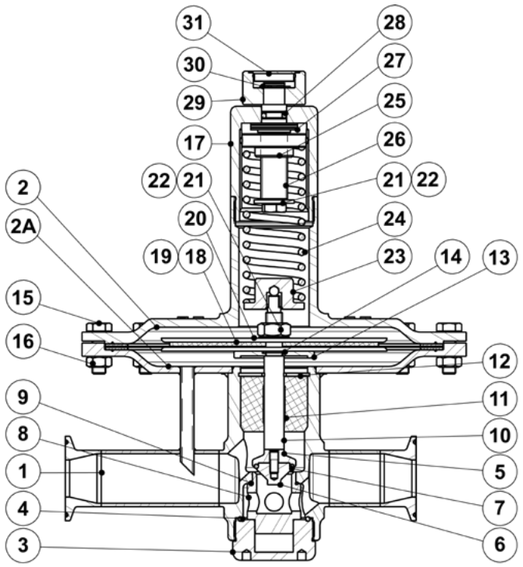


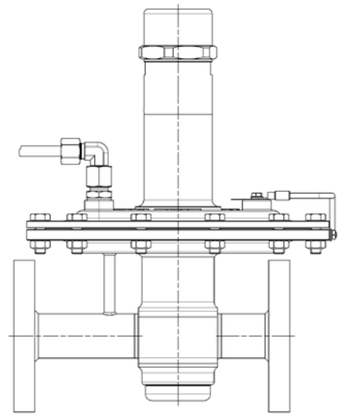


ATEX compliant version

OPTIONS		
PRESSURE GAUGE CONNECTION	ADJUSTMENT SCREW WITH COVER	LEAKAGE LINE CONNECTION (1/4”)
		

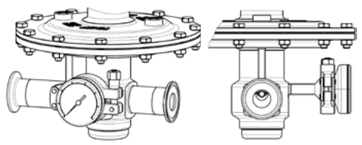
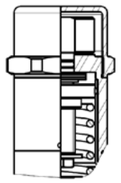
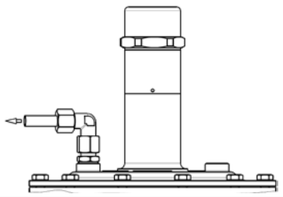
MATERIALS		
POS. N°	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
2	Diaphragm top cover	A351 CF3M / 1.4409
2A	Diaphragm bottom cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
3	Seat cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
4	* O-ring	EPDM
5	Plug disc	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
6	* Valve head	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
7	* O-ring	EPDM; FPM
8	Seat	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
9	* O-ring	EPDM
10	Stem	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
11	Stem guide	PTFE
12	Retaining ring	Stainless steel A2-70
		Hastelloy C22 / 2.4602
13	Diaphragm plate	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
14	* O-ring	EPDM
15	Bolts	Stainless steel A2-70
16	Nuts	Stainless steel A2-70
17	Spring cover	AISI 316L / 1.4404
18	* Lower diaphragm	PTFE (Gylon)
19	* Upper diaphragm	EPDM
20	Diaphragm plate	AISI 316L / 1.4404
21	Nut	Stainless steel A2-70
22	Washer	AISI 316 / 1.4401
23	Lower spring guide	AISI 316L / 1.4404
24	* Adjustment spring	AISI 302 / 1.4300
25	Top spring plate	AISI 316L / 1.4404
26	Adjustment screw	Brass
27	Bearing	Corrosion resistant steel
28	* O-ring	NBR
29	Adjustment nut	AISI 316L / 1.4404
30	Ext. bowed shaft ring	Stainless steel
31	Cover nut	Plastic





ATEX compliant version

* Available spare parts.
FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.

OPTIONS		
PRESSURE GAUGE CONNECTION	**ADJUSTMENT SCREW WITH COVER**	**LEAKAGE LINE CONNECTION (1/4")**
		

TANK BLANKETING REGULATORS
BKVI2

DESCRIPTION

Tank blanketing valves are commonly used in tank storage systems to prevent and protect against explosions (avoiding flammable liquids being vented from the vessel), to control product contamination against external air that may fill the vapour space, to reduce evaporation losses (consequently, production losses), to reduce internal corrosion (caused by air and moisture) and to prevent vacuum condition.
The blanketing process consists in covering the stored medium, usually a liquid, with a gas (normally N2).

MAIN FEATURES

Compact design.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.

STANDARD SURFACE FINISH

Internal movable parts and machined surfaces:
≤ 0,76 micron Ra – SF3.
Other surfaces: as casted.
Ultrasonic cleaning.

OPTIONS:
Leakage line connection 1/4".
Gauge connection on body.
External pulse line.
Dome-loaded version.
Blanketing with vacuum.
Top cap (adjustment screw with cover).
ATEX Ex version.

USE:
Compressed air, nitrogen and other gases compatible with the construction.

AVAILABLE MODELS:
BKVI2 – low pressure venting valve.

SIZES:
DN 15 and DN 25.

REGULATING RANGES:
5 to 10 mbar; 10 to 50 mbar; 20 to 200 mbar; 50 to 500 mbar; 5 to 4000 mbar (dome-loaded).

CONNECTIONS:
Flanged EN 1092-1 PN 16.

INSTALLATION:
Vertical installation recommended, to allow drainage, or horizontal as close to the process as possible in order to prevent long pipe sections and flow restrictions.
See IMI – Installation and maintenance instrucions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
DN 15 to 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)	
PN 16	**Category**
DN 15 to 25	Ex h IIB T6...T3 Gb

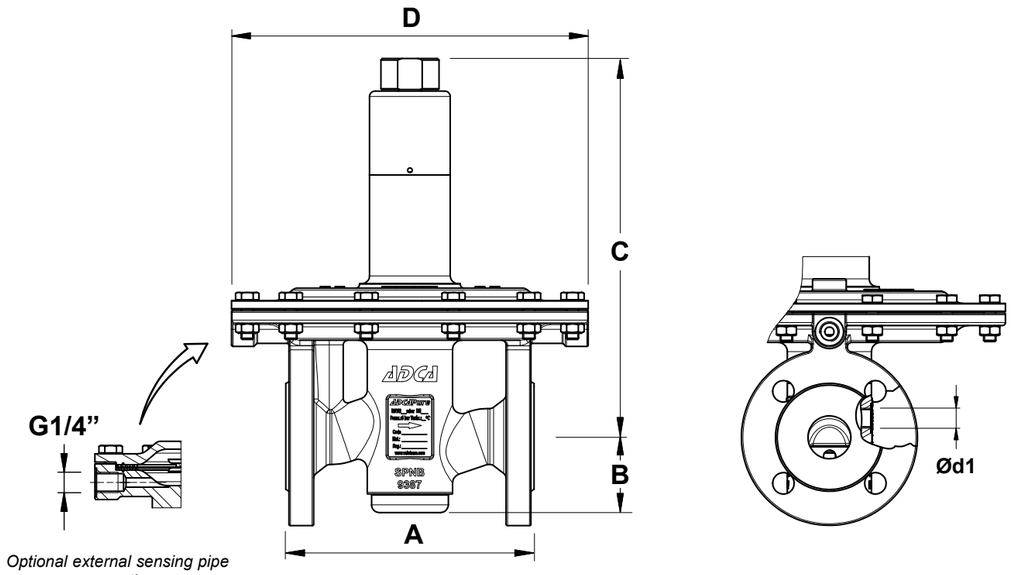
AIR CAPACITIES (Nm³/h) Seat Ø 21 mm							
SIZE	SET PRESSURE	INLET PRESSURE (mbar)					
		10	20	40	100	200	500
DN 15	25% Overpressure	4,5	10,5	16	27	45	95
	50% Overpressure	4,5	10,5	16	27	45	95
	75% Overpressure	4,5	10,5	16	27	45	95
	100% Overpressure	4,5	10,5	16	27	45	95
DN 25	25% Overpressure	5,3	11,8	18	31	52	105
	50% Overpressure	7,2	14,5	26	40	66	125
	75% Overpressure	8,3	17	30	47	82	136
	100% Overpressure	9,8	18	36	52	91	148

LIMITING CONDITIONS	
Valve model	BKVI2
Body design conditions	PN 16
Maximum operating pressure	6 bar
Maximum upstream pressure *	500 mbar
Minimum upstream pressure	5 mbar
Maximum design temperature **	130 °C

* 4000 mbar with dome load;
** Others on request.

Warning: Blanketing valves are not substitute for safety valves or vacuum relief valves.

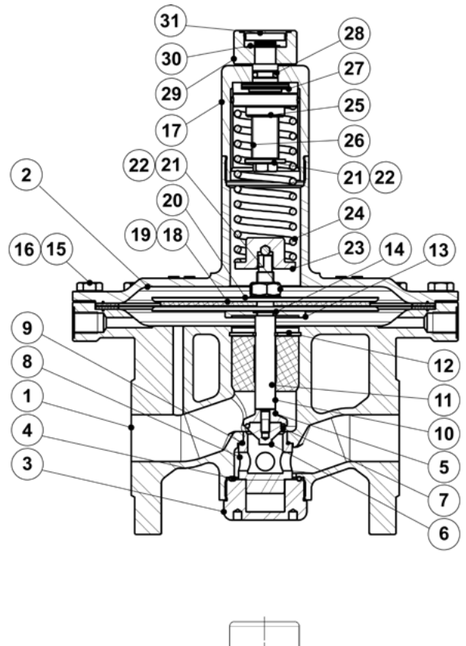
DIMENSIONS (mm)						
SIZE	A	B	C	D	d1	WEIGHT (kg)
DN 15	130	47,5	243,5	230	1/4"	9,7
DN 25	160	57,5	243,5	230	1/4"	10,8

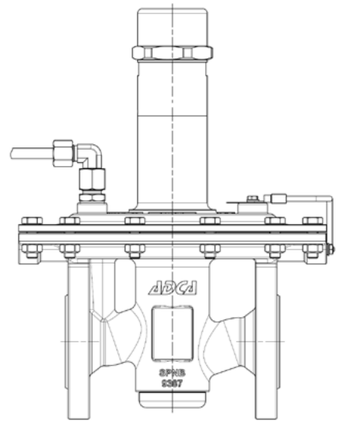


Optional external sensing pipe connection.

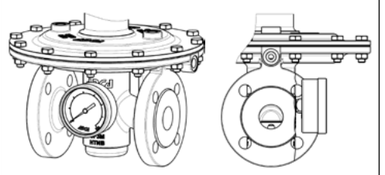
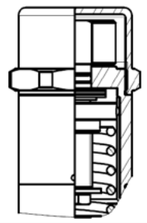
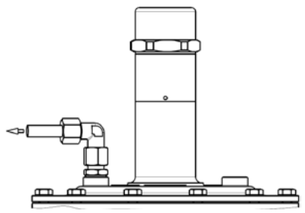
MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	A351 CF3M / 1.4409
2	Diaphragm top cover	A351 CF3M / 1.4409
3	Seat cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	Plug disc	AISI 316L / 1.4404
6	* Valve head	AISI 316L / 1.4404
7	* O-ring	EPDM; FPM
8	Seat	AISI 316L / 1.4404
9	* O-ring	EPDM
10	Stem	AISI 316L / 1.4404
11	Stem guide	PTFE
12	Retaining ring	Stainless steel A2-70
13	Diaphragm plate	AISI 316L / 1.4404
14	* O-ring	EPDM
15	Bolts	Stainless steel A2-70
16	Nuts	Stainless steel A2-70
17	Spring cover	AISI 316L / 1.4404
18	* Lower diaphragm	PTFE (Gylon)
19	* Upper diaphragm	EPDM
20	Diaphragm plate	AISI 316L / 1.4404
21	Nut	Stainless steel A2-70
22	Washer	AISI 316 / 1.4401
23	Lower spring guide	AISI 316L / 1.4404
24	* Adjustment spring	AISI 302 / 1.4300
25	Top spring plate	AISI 316L / 1.4404
26	Adjustment screw	Brass
27	Bearing	Corrosion resistant steel
28	* O-ring	NBR
29	Adjustment nut	AISI 316L / 1.4404
30	Ext. bowed shaft ring	Stainless steel
31	Cover nut	Plastic

* Available spare parts;
FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.



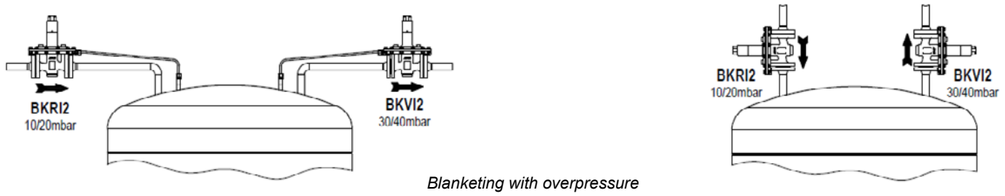


ATEX compliant version

OPTIONS		
PRESSURE GAUGE CONNECTION	ADJUSTMENT SCREW WITH COVER	LEAKAGE LINE CONNECTION (1/4")
		

We reserve the right to change the design and material of this product without notice.
IS BKV2.10 E 10.17

TYPICAL INSTALLATION



Blanketing with overpressure

ORDERING CODES BKVI2

Valve model	BVI	A	2	T	E	I	X	X	X	0	L	15	E
BKVI2 – A351 CF3M / 1.4409 blanketing low pressure vent valve	BVI												
Regulating range													
5 to 10 mbar		0											
10 to 50 mbar		1											
20 to 200 mbar		2											
50 to 500 mbar		3											
5 to 4000 mbar (dome-loaded)		A											
Valve seat orifice													
Seat diameter 21 mm			2										
Diaphragm													
PTFE (Gylon)				T									
EPDM (non-standard)				E									
Valve head													
EPDM					E								
FPM / Viton (FDA approval only)					V								
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob						I							
Top cap (adjustment screw with cover)						T							
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure						L							
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure **a)**						U							
Dome-loaded top **b)**						X							
Gauge port options													
Without gauge ports							X						
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							4						
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4”							3						
Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4”							2						
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT							W						
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT							Y						
Threaded gauge port on both sides – downstream pressure – 1/4” NPT							Z						
Surface finish c)													
Standard surface finish								X					
Mirror mechanical polished external surfaces (SF1)								P					
Electropolished internal wetted parts (SF5)								E					
Special features													
None									X				
External pulse line													
Internal pulse orifice (standard)										0			
External pulse line connection 1/4"										1			
Pipe connection													
Flanged EN 1092-1 PN 16											L		
Size													
DN 15												15	
DN 25												25	
Special valves / Extras													
ATEX compliant version													EX
Full description or additional codes have to be added in case of non-standard combination													E

a) This option must be chosen in case of ATEX compliant version; **b)** This option must be chosen in case of dome-loaded version; **c)** Consult IS PV20.00 for further details and other surface finish options.

We reserve the right to change the design and material of this product without notice.

TWO-WAY HYGIENIC CONTROL VALVES V926H

DESCRIPTION

The ADCAPure V926H is a series of single seated two-way hygienic control valves with angle connections.
These valves are designed to regulate and accurately control flow of liquids and gases and are suitable for hygienic applications found in the pharmaceutical, cosmetic, fine chemical and food & beverage industries.
The V926H can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

MAIN FEATURES

Completely manufactured from bar stock material.
Body and bonnet are connected by a clamp coonection, allowing fast and easy maintenance procedures.
Cavity-free with no air trap locations.
Metal to metal or soft sealing.
Self-drainable design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E - Technical information.
Ultrasonic cleaning.

OPTIONS: Soft valve sealing.
Reduced bore trims.
Steam barrier.
Inline connections.

USE: Saturated steam, hot and superheated water.
Process fluids, liquids, air and gases compatible with the construction.

AVAILABLE MODELS: V926H.

SIZES: 1/2” to 4”.

CONNECTIONS: ASME BPE clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation. Vertical inlet and horizontal outlet. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS *

Valve model	V926H
Body design conditions	PN 16
Maximum operating pressure	13 bar @ 38ºC
Maximum operating steam pressure	6 bar
Max. operating temp. (steam and water)	170 ºC
Maximum operating temperature (air)	150 ºC
Minimum operating temperature	- 10 ºC

* Higher and lower limits on request.

CE MARKING – GROUP 2 (PED – European Directive)

PN 16	Category
1/2” to 2”	SEP
21/2” to 4”	1 (CE marked)

We reserve the right to change the design and material of this product without notice.

PLUG DESIGN

PARABOLIC

Sealing:	Metal to metal
Characteristic:	Equal percentage (EQP) or linear (PL)
Flow direction:	From below
Rangeability:	50:1 (EQP) or 30:1 (PL)
Leakage:	Class IV, acc. to IEC 60534-4

PARABOLIC (SOFT SEALING)

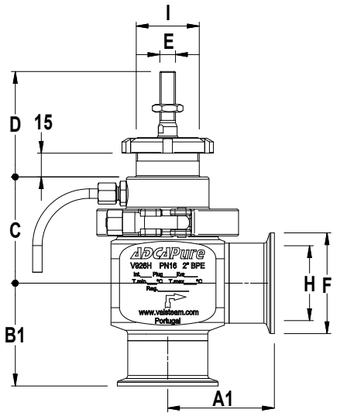
Sealing:	EPDM, PTFE or FPM
Characteristic:	Equal percentage (EQP) or linear (PL)
Flow direction:	From below
Rangeability:	50:1 (EQP) or 30:1 (PL)
Leakage:	Class VI, acc. to IEC 60534-4

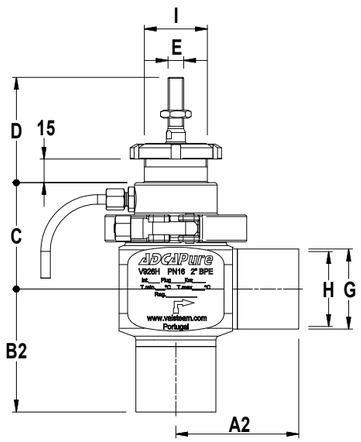
FLOW RATE COEFFICIENTS – PARABOLIC PL AND EQP PLUGS

SIZE	Kvs (m³/h)																
	0,1 *	0,25 *	0,5 *	1	1,5	2	2,3	2,9	4	6,3	10	16	25	40	63	100	160
1/2”	●	●	●	●	●	●											
3/4”							●	●	●								
1”								●	●	●							
11/2”									●	●	●	●					
2”											●	●	●	●			
21/2”												●	●	●			
3”													●	●	●		
4”														●	●	●	●
SEAT Ø (mm)	4			8			12		15	19,2	25	32	38	47/50	65	76	96
STROKE (mm)	15										20				30		

* Microflow only available with linear characteristic.
For conversion Kvs = Cv (US) x 0,865.

DIMENSIONS



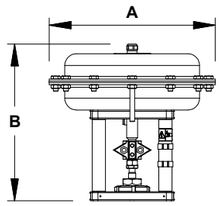


LRQA CERTIFIED ISO 9001
EHEDG EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP
Valsteam ADCA is an EHEDG Member
ADCA

DIMENSIONS (mm)

DIMENSION	SIZE							
	1/2”	3/4”	1”	11/2”	2”	21/2”	3”	4”
A1	52	52	54	68	68	72	92	98
A2	52	56	59	76	78	92	115	119
B1	41	45	51	62	65	78	86	**98**
B2	41	51	57	70	78	98	109	125
C	52	52	56	63	68	75	94	106
D	67					70		
E	M10 x 1,5							
F	25	25	50,5	50,5	64	77,5	91	119
G	12,7	19,1	25,4	38,1	50,8	63,5	76,2	101,6
H	9,4	15,8	22,1	34,8	47,5	60,2	72,9	97,4
I	M40 x 1,5						M45 x 1,5	
WEIGHT (kg)	1,5	1,5	1,7	2,9	3,5	4,2	9,6	14,6

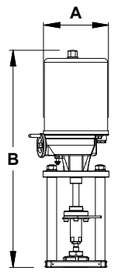
Remarks: Face to face dimensions are not standardized. Different dimensions available on request.



PA SERIES PNEUMATIC ACTUATORS

DIMENSIONS (mm)					
DIMENSION	PA10	PA206	PA281	PA341	PA436
A	170	209	275	336	430
B	251	236	243	323	291 / 311 *
WEIGHT (kg)	6,3	6,2	9,6	14,3	24,4 / 28 *

* For actuators with spring ranges 1 - 2 bar; 1,5 - 3 bar and 2 - 4 bar.
For more information, please consult IS 3.05 – PA Linear pneumatic actuators.



EL SERIES ELECTRIC ACTUATORS

DIMENSIONS (mm)			
DIMENSION	EL12	EL20 – EL45	EL80
A	129	148	188
B	333	485	587
WEIGHT (kg)	2,1	8	13

For more information, please consult IS 3.72 – EL Linear electric actuators.

VALSTEAM ADCA
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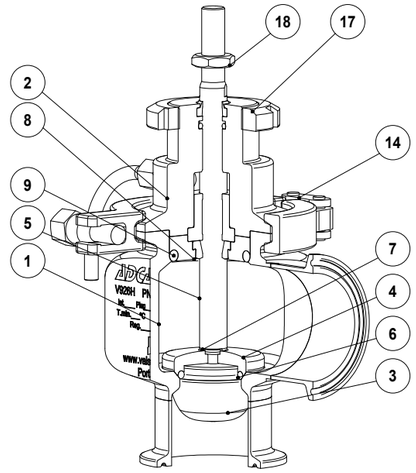
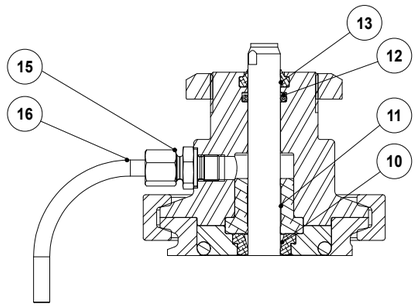
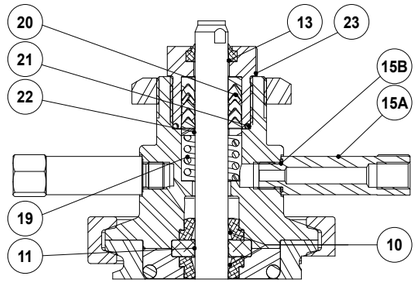
IS V926H.015 E 00.21

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	Bonnet	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	* Plug disc	AISI 316L / 1.4404
5	* Stem	AISI 316L / 1.4404
6	* Valve plug seal	** EPDM; PTFE; FPM
7	* O-ring	EPDM
8	Centering ring	AISI 316L / 1.4404
9	* O-ring	EPDM; PTFE; FPM
10	* Shaft seal	EPDM; PTFE; FPM
11	* Guide bushing	TFM 1600
12	* O-ring	EPDM
13	* Scraper ring	FPM; NBR
14	Clamp	AISI 316 / 1.4401
15	Compression fitting	AISI 304 / 1.4301
15A	Nipple	AISI 316L / 1.4404
15B	* O-ring	FPM
16	Discharge pipe	AISI 316 / 1.4401
17	Lock nut	CF8 / 1.4308
18	Lock nut	AISI 304 / 1.4301
19	* Spring	AISI 302 / 1.4310
20	* Chevron packing set	PTFE
21	* O-ring	EPDM
22	* Washer	AISI 304 / 1.4301
23	Gland nut	AISI 316L / 1.4404

* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.







Optional steam barrier

ORDERING CODES V926H a)												
Valve model	**V9H**	**1**	**S**	**U**	**E**	**M**	**E**	**FD**	**X**	**XD**	**015**	
V926H - AISI 316L / 1.4404 hygienic control valve, two-way, angle body	**V9H**											
Valve series												
Series 1		**1**										
Bonnet design												
Standard			**S**									
With steam barrier			**B**									
Flow direction												
Flow under the plug				**U**								
Stem and body sealing b)												
EPDM					**E**							
PTFE					**T**							
FPM / Viton					**V**							
Valve sealing												
Metal to metal (class IV)						**M**						
Soft sealed with EPDM (class VI)						**E**						
Soft sealed with PTFE (class VI)						**T**						
Soft sealed with FPM/Viton (class VI)						**V**						
Characteristic												
Equal percentage (EQP)							**E**					
Linear (PL)							**L**					
Flow rate coefficient												
Kvs 4								**FD**				
See table below for other Kvs value codes												
Surface finish c)												
Standard surface finish									**X**			
Mirror mechanical polished external surfaces (SF1)									**P**			
Electropolished internal wetted parts (SF5)									**E**			
Pipe connection												
Clamp ferrule ASME BPE										**DX**		
Tube weld (ETO) according to ASME BPE										**DI**		
Size												
1/2”											**015**	
3/4”											**020**	
...												
Special valves / Extras												
Full description or additional codes have to be added in case of a non-standard combination												**E**

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.
b) When the bonnet with heating chamber is selected the stem sealing is acheived through a PTFE V-Rings/chevron packing set. In which case this field only specifies the body sealing material.
c) Consult IS PV20.00 for further details and other surface finish options.

FLOW RATE COEFFICIENT CODES									
Kvs	**0,1**	**0,25**	**0,5**	**1**	**1,5**	**2**	**2,3**	**2,9**	**4**
Code	M4	M2	M1	R4	R3	R2	R1	R0	FD
Kvs	**6,3**	**10**	**16**	**25**	**40**	**63**	**100**	**160**	**-**
Code	FE	FF	FG	FH	FI	FJ	FL	FM	-

We reserve the right to change the design and material of this product without notice.
IS V926H.015 E 00.21

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ADCA

ADCAPure

TWO-WAY ASEPTIC CONTROL VALVES
V926A

DESCRIPTION

The ADCAPure V926A is a series of single seated two-way aseptic control valves with angle connections.
These valves are designed to regulate and accurately control flow of liquids and gases and are suitable for high purity applications found in the pharmaceutical, cosmetic, fine chemical and food & beverage industries.
The V926A can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

MAIN FEATURES

Completely manufactured from bar stock material.
Body and bonnet are connected by a clamp coonection, allowing fast and easy maintenance procedures.
High-performance EPDM diaphragm stem sealing.
Cavity-free with no air trap locations.
Metal to metal or soft sealing.
Self-drainable design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Soft valve sealing.
Reduced bore trims.
Heating chamber.
Inline connections.

USE: Saturated steam, hot and superheated water.
Process fluids, liquids, air and gases compatible with the construction.

AVAILABLE MODELS: V926A.

SIZES: 1/2” to 2”.

CONNECTIONS: ASME BPE clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation. Vertical inlet and horizontal outlet. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS *	
Valve model	**V926A**
Body design conditions	PN 16
Maximum operating pressure	13 bar @ 38ºC
Maximum operating steam pressure	6 bar
Max. operating temp. (steam and water)	170 ºC
Maximum operating temperature (air)	150 ºC
Minimum operating temperature	- 10 ºC

* Higher and lower limits on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2” to 2”	SEP

LRQA CERTIFIED ISO 9001

Valsteam ADCA is an EHEDG Member

ADCA

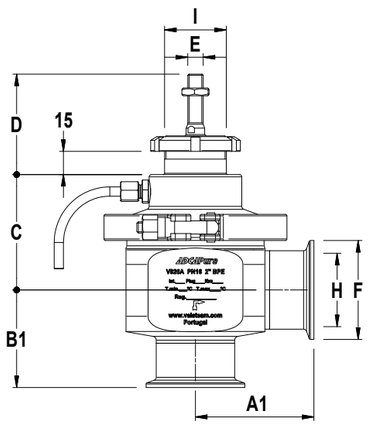
PLUG DESIGN			
PARABOLIC		**PARABOLIC (SOFT SEALING)**	
	**Sealing:** Metal to metal **Characteristic:** Equal percentage (EQP), linear (PL) or quick-opening (On/Off) **Flow direction:** From below **Rangeability:** 50:1 (EQP), 30:1 (PL) or 10:1 (On/Off) **Leakage:** Class IV, acc. to IEC 60534-4		**Sealing:** EPDM **Characteristic:** Equal percentage (EQP), linear (PL) or quick-opening (On/Off) **Flow direction:** From below **Rangeability:** 50:1 (EQP), 30:1 (PL) or 10:1 (On/Off) **Leakage:** Class VI, acc. to IEC 60534-4

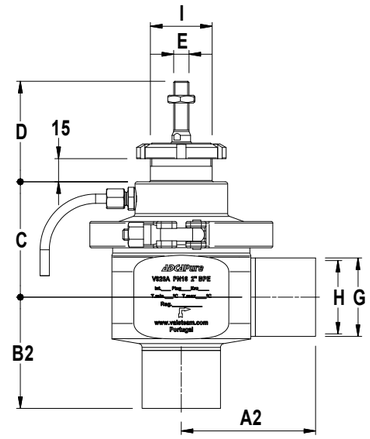
FLOW RATE COEFFICIENTS – PARABOLIC PL AND EQP PLUGS

SIZE	Kvs (m³/h)													
	0,1 *	0,25 *	0,5 *	1	1,5	2	2,3	2,9	4	6,3	10	16	25	40
1/2”	●	●	●	●	●	●								
3/4”							●	●	●					
1”							●	●	●	●				
11/2”									●	●	●	●		
2”											●	●	●	●
SEAT Ø (mm)	4			8			12		15	19.2	25	32	38	47
STROKE (mm)	7,5										15			

* Microflow only available with linear characteristic.
For conversion Kvs = Cv (US) x 0,865.

DIMENSIONS





VALSTEAM ADCA

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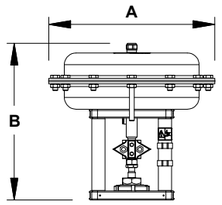
IS V926A.015 E 00.21

DIMENSIONS (mm)					
DIMENSION	SIZE				
	1/2”	3/4”	1”	11/2”	2”
A1	61	61	61	77	77
A2	66	66	66	85	87
B1	41	46	49	62	63
B2	41	46	49	70	72
C	54	56	58	68	75
D	65				
E	M10 x 1,5				
F	25	25	50,5	50,5	64
G	12,7	19,1	25,4	38,1	50,8
H	9,4	15,8	22,1	34,8	47,5
I	M40 x 1,5				
WEIGHT (kg)	2	2,1	2,3	3,8	4,3

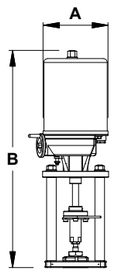
Remarks: Face to face dimensions are not standardized. Different dimensions available on request.



PA SERIES PNEUMATIC ACTUATORS

DIMENSIONS (mm)			
DIMENSION	PA10	PA206	PA281
A	170	209	275
B	251	236	243
WEIGHT (kg)	6,3	6,2	9,6

* For actuators with spring ranges 1 - 2 bar; 1,5 - 3 bar and 2 - 4 bar.
For more information, please consult IS 3.05 – PA Linear pneumatic actuators.



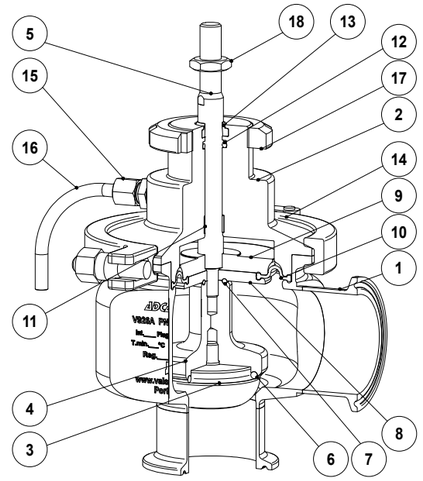
EL SERIES ELECTRIC ACTUATORS

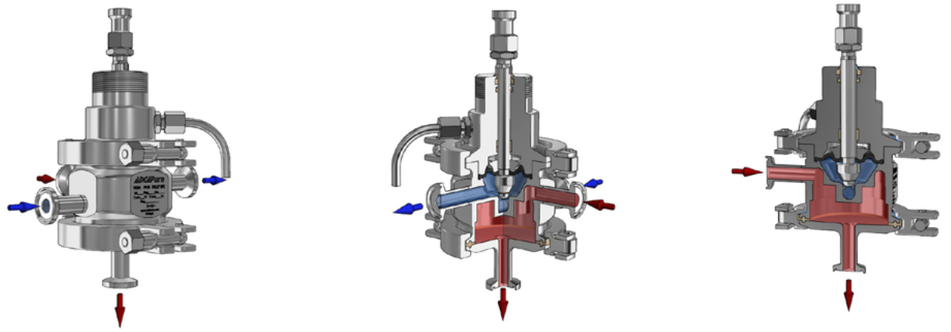
DIMENSIONS (mm)		
DIMENSION	EL12	EL20 – EL45
A	129	148
B	333	485
WEIGHT (kg)	2,1	8

For more information, please consult IS 3.72 – EL Linear electric actuators.

MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Bonnet	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	* Plug disc	AISI 316L / 1.4404
5	* Stem	AISI 316L / 1.4404
6	* Valve plug seal	** EPDM
7	* O-ring	*** EPDM
8	Lower diaphragm plate	*** AISI 316L / 1.4404
9	Upper diaphragm plate	AISI 316L / 1.4404
10	* Diaphragm	EPDM
11	* Guide bushing	PTFE
12	* O-ring	EPDM
13	* Scraper ring	FPM; NBR
14	Clamp	AISI 316 / 1.4401
15	Compression fitting	AISI 304 / 1.4301
16	Discharge pipe	AISI 316 / 1.4401
17	Lock nut	CF8 / 1.4308
18	Lock nut	AISI 304 / 1.4301

* Available spare parts; ** Others on request. *** Sizes 11/2” and 2” only.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





Optional heating chamber
(to maintain the required temperature of the fluid flowing through the valve)

VALSTEAM ADCA
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IS V926A.015 E 00.21

ORDERING CODES V926A a)												
Valve model	**V9A**	**1**	**S**	**U**	**E**	**M**	**E**	**FD**	**X**	**XD**	**015**	
V926A - AISI 316L / 1.4404 aseptic control valve, two-way, angle body	**V9A**											
Valve series												
Series 1		**1**										
Bonnet design												
Standard			**S**									
With heating chamber			**H**									
Flow direction												
Flow under the plug				**U**								
Stem and body sealing												
EPDM					**E**							
Valve sealing												
Metal to metal (class IV)						**M**						
Soft sealed with EPDM (class VI)						**E**						
Characteristic												
Equal percentage (EQP)							**E**					
Linear (PL)							**L**					
Quick-opening (On/Off)							**Q**					
Flow rate coefficient												
Kvs 4								**FD**				
See table below for other Kvs value codes												
Surface finish b)												
Standard surface finish									**X**			
Mirror mechanical polished external surfaces (SF1)									**P**			
Electropolished internal wetted parts (SF5)									**E**			
Pipe connection												
Clamp ferrule ASME BPE										**DX**		
Tube weld (ETO) according to ASME BPE										**DI**		
Size												
1/2”											**015**	
3/4”											**020**	
...												
Special valves / Extras												
Full description or additional codes have to be added in case of a non-standard combination												**E**

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.
b) Consult IS PV20.00 for further details and other surface finish options.

FLOW RATE COEFFICIENT CODES													
Kvs	**0,1**	**0,25**	**0,5**	**1**	**1,5**	**2**	**2,3**	**2,9**	**4**	**6,3**	**10**	**16**	**25**	**40**
Code	M4	M2	M1	R4	R3	R2	R1	R0	FD	FE	FF	FG	FH	FI

THREE-WAY HYGIENIC CONTROL VALVES
V928

DESCRIPTION

The ADCAPure V928 is a series of two or three-way hygienic control valves with angle or horizontal connections. These valves are designed to regulate and accurately control flow of liquids and gases and are suitable for hygienic applications found in the pharmaceutical, cosmetic, fine chemical and food & beverage industries.
The V928 can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

MAIN FEATURES

Completely manufactured from bar stock material.
Body and bonnet are connected by a clamp coonection, allowing fast and easy maintenance procedures.
Cavity-free with no air trap locations.
Metal to metal or soft sealing.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E - Technical information.
Ultrasonic cleaning.

OPTIONS: Soft valve sealing.
Reduced bore trims.
Steam barrier.

USE: Saturated steam, hot and superheated water.
Process fluids, liquids, air and gases compatible with the construction.

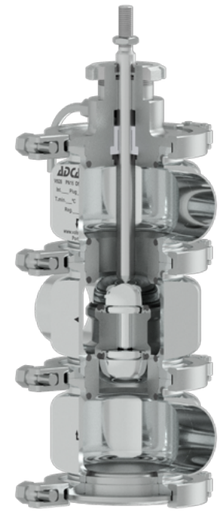
AVAILABLE MODELS: V928MV – three-way angle design.
V928MH – three-way horizontal design.
V928D – three-way diverting.

SIZES: DN 15 to DN 100.

CONNECTIONS: DIN threads, clamp ferrules or tube weld (ETO) ends. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal installation. See IMI - Installation and maintenance instructions.



CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
DN 15 to DN 50	SEP
DN 65 to DN 100	1 (CE Marked)

LIMITING CONDITIONS *	
Valve model	**V928**
Body design conditions	PN 16
Maximum operating pressure	13 bar @ 38ºC
Maximum operating steam pressure	6 bar
Max. operating temp. (steam and water)	170 ºC
Maximum operating temperature (air)	150 ºC
Minimum operating temperature	- 10 ºC

* Higher or lower limits on request.

PLUG DESIGN

MIXING

Sealing:	Metal to metal
Characteristic:	Linear (PL)
Rangeability:	30:1
Leakage:	Class IV, acc. to IEC 60534-4

MIXING (SOFT SEALING)

Sealing:	EPDM, PTFE or FPM
Characteristic:	Linear (PL)
Rangeability:	30:1
Leakage:	Class VI, acc. to IEC 60534-4

DIVERTING

Sealing:	Metal to metal
Characteristic:	Linear (PL)
Rangeability:	30:1
Leakage:	Class IV, acc. to IEC 60534-4

DIVERTING (SOFT SEALING)

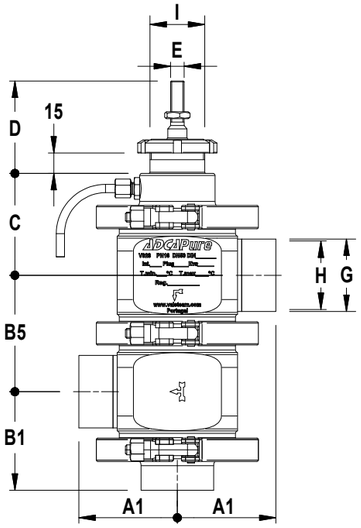
Sealing:	EPDM, PTFE or FPM
Characteristic:	Linear (PL)
Rangeability:	30:1
Leakage:	Class VI, acc. to IEC 60534-4

FLOW RATE COEFFICIENTS – MIXING AND DIVERTING PLUGS

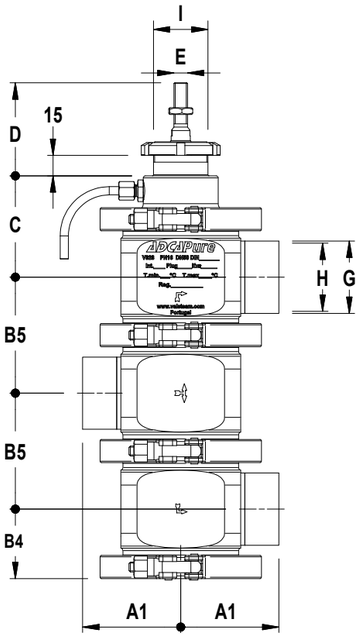
SIZE	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
Kvs (m³/h)	4	6,3	10	16	25	40	63	100	160
SEAT Ø *	15	19,2	25	32	38	50	65	76	96
STROKE (mm)	20						30		

For conversion, Kvs = Cv (US) x 0,865.

DIMENSIONS



V928MV



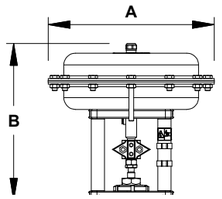
V928MH
V928D

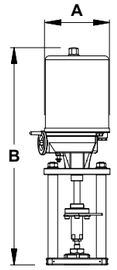
LRQA CERTIFIED ISO 9001
EHEDG EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP
Valsteam ADCA is an EHEDG Member
ADCA

DIMENSIONS (mm)

DIMENSION	SIZE								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
A1	49	49	55	64	64	72	84	92	119
A2	61	61	55	77	77	83	89	92	118
A3	54	57	63	73	74	82	101	137	124
B1	45	45	55	62	64	72	86	109	119
B2	63	65	66	72	74	80	92	105	125
B3	66	69	84	94	97	107	126	154	173
B4	34	36	36	43	45	51	64	71	84
B5	51	55	55	68	73	85	110	125	144
C	57	59	59	66	69	75	91	99	108
D	67						70		
E	M10 x 1,5								
F	34	34	50,5	50,5	50,5	64	91	106	119
G	19	23	29	35	41	53	70	85	104
H	16	20	26	32	38	50	66	81	100
I	M40 x 1,5						M45 x 1,5		
WEIGHT (kg) *	2,4	2,5	2,6	4,3	4,4	4,7	10,8	11,8	17,1

Remarks: Face to face dimensions are not standardized. Other dimensions and standards on request.
Configurations with overlapped connections are only possible for tube weld (ETO) versions.
A1 and B1 – Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).
A2, B2 and F – Clamp ferrules DIN (DIN 32676-A).
A3 and B3 – Hygienic male threads DIN (DIN 11851) for pipes according to DIN 11866-A (DIN 11850-2).
Alternative: Aseptic male threads DIN (DIN 11864 -1 Form A) for pipes according to DIN 11866-A (DIN 11850-2).
* Based on the standard valve V928L with tube weld (ETO) connections. For other versions, consult manufacturer.





PA SERIES PNEUMATIC ACTUATORS

DIMENSIONS (mm)					
DIMENSION	**PA10**	**PA206**	**PA281**	**PA341**	**PA436**
A	170	209	275	336	430
B	251	236	243	323	291 / 311 *
WEIGHT (kg)	6,3	6,2	9,6	14,3	24,4 / 28 *

* For actuators with spring ranges 1 - 2 bar; 1,5 - 3 bar and 2 - 4 bar.
For more information, please consult IS 3.05 – PA Linear pneumatic actuators.

EL SERIES ELECTRIC ACTUATORS

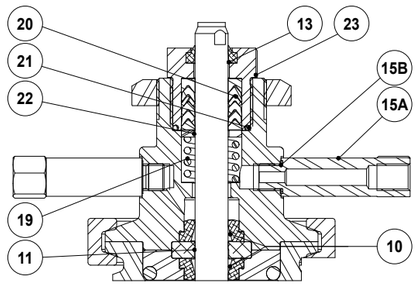
DIMENSIONS (mm)			
DIMENSION	**EL12**	**EL20 – EL45**	**EL80**
A	129	148	188
B	333	485	587
WEIGHT (kg)	2,1	8	13

For more information, please consult IS 3.72 – EL Linear electric actuators.

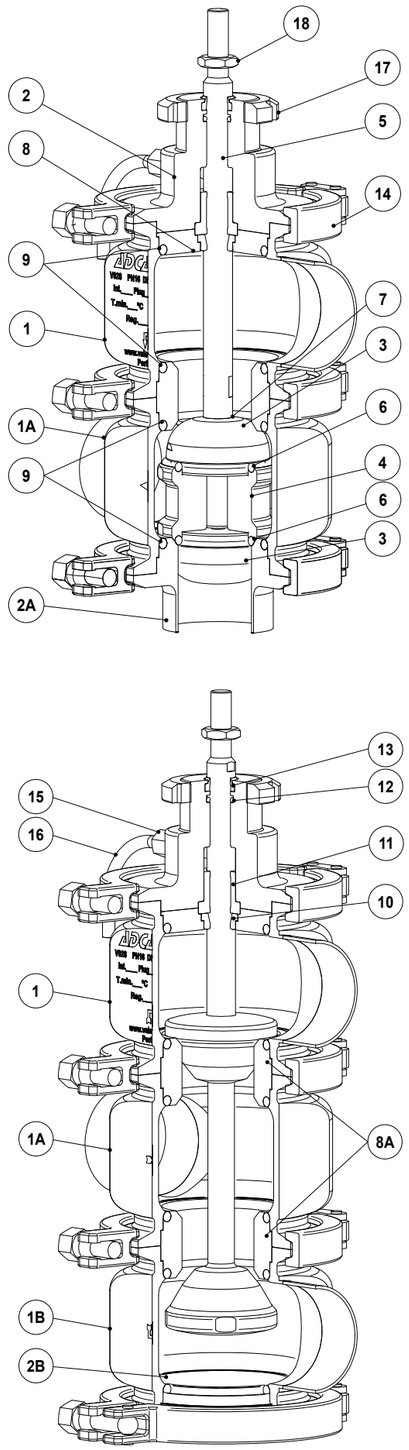
VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS V928M.015 E 00.21

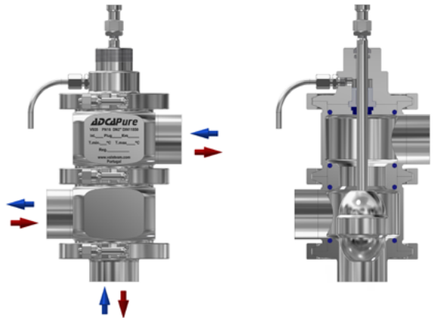
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Upper valve body	AISI 316L / 1.4404
1A	Intermediate valve body	AISI 316L / 1.4404
1B	Lower valve body	AISI 316L / 1.4404
2	Bonnet	AISI 316L / 1.4404
2A	Bottom connection	AISI 316L / 1.4404
2B	Bottom cover	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	* Plug disc	AISI 316L / 1.4404
5	* Stem	AISI 316L / 1.4404
6	* Valve plug seal	** EPDM; PTFE; FPM
7	* O-ring	EPDM
8	Centering ring	AISI 316L / 1.4404
9	* O-ring	EPDM; PTFE; FPM
10	* Shaft seal	EPDM; PTFE; FPM
11	* Guide bushing	TFM 1600
12	* O-ring	EPDM
13	* Scraper ring	FPM; NBR
14	Clamp	AISI 316 / 1.4401
15	Compression fitting	AISI 304 / 1.4301
15A	Nipple	AISI 316L / 1.4404
15B	* O-ring	FPM
16	Discharge pipe	AISI 316 / 1.4401
17	Lock nut	CF8 / 1.4308
18	Lock nut	AISI 304 / 1.4301
19	* Spring	AISI 302 / 1.4310
20	* Chevron packing set	PTFE
21	* O-ring	EPDM
22	* Washer	AISI 304 / 1.4301
23	Gland nut	AISI 316L / 1.4404

* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

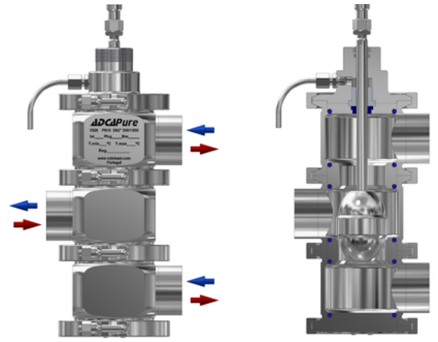


Optional steam barrier

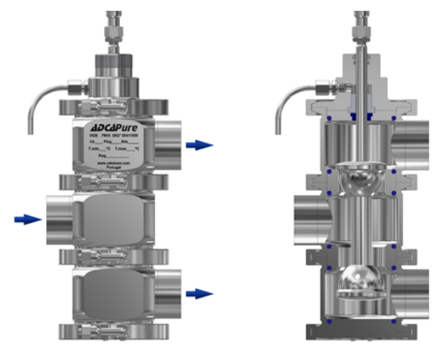




V928MV
Three-way design with two valve bodies (upper and lower) and a bottom vertical connection.
The valve can be used for mixing or diverting duty.
Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.



V928MH
Three-way design with three valve bodies (upper, intermediate and lower) and all the connections in the horizontal plain.
The valve can be used for mixing or diverting duty.
Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.



V928D
Three-way design with three valve bodies (upper, intermediate and lower) and all the connections in the horizontal plain.
The valve is exclusively meant for diverting duty.
Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS V928M.015 E 00.21

ORDERING CODES V928 a)												
Valve model	**V8V**	**1**	**S**	**U**	**E**	**M**	**L**	**FD**	**X**	**FX**	**015**	
V928MV - AISI 316L hygienic control valve, three-way, angle	**V8V**											
V928MH - AISI 316L hygienic control valve, three-way, horizontal	**V8M**											
V928D - AISI 316L hygienic control valve, three-way, horizontal, diverting	**V8D**											
Valve series												
Series 1		**1**										
Bonnet design												
Standard			**S**									
With steam barrier			**B**									
Flow direction												
Flow under the plug				**U**								
Stem and body sealing b)												
EPDM					**E**							
PTFE					**T**							
FPM / Viton					**V**							
Valve sealing												
Metal to metal (class IV)						**M**						
Soft sealed with EPDM (class VI)						**E**						
Soft sealed with PTFE (class VI)						**T**						
Soft sealed with FPM/Viton (class VI)						**V**						
Characteristic												
Linear (PL)							**L**					
Flow rate coefficient												
Kvs 4								**FD**				
See table below for other Kvs value codes												
Surface finish c)												
Standard surface finish									**X**			
Mirror mechanical polished external surfaces (SF1)									**P**			
Electropolished internal wetted parts (SF5)									**E**			
Pipe connection												
Clamp ferrule DIN (DIN 32676-A)										**FX**		
Hygienic male threads DIN (DIN 11851)										**G1**		
Aseptic male threads DIN (DIN 11864-1 Form A)										**G2**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)										**FI**		
Size												
DN 15											**015**	
DN 20											**020**	
...												
Special valves / Extras												
Full description or additional codes have to be added in case of a non-standard combination												**E**

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.

b) When the bonnet with heating chamber is selected the stem sealing is acheived through a PTFE V-Rings/chevron packing set. In which case this field only specifies the body sealing material.

c) Consult IS PV20.00 for further details and other surface finish options.

FLOW RATE COEFFICIENT CODES									
Kvs	**4**	**6,3**	**10**	**16**	**25**	**40**	**63**	**100**	**160**
Code	FD	FE	FF	FG	FH	FI	FJ	FL	FM

SAFETY RELIEF VALVES
SRV6

DESCRIPTION

The ADCA SRV6 series aseptic safety relief valves with angle type connections are designed for use with clean steam, air, water and other gases and liquids compatible with the construction materials.
Main applications are overpressure protection on steam equipment, pressure vessels and pipelines, particularly within the food, beverage and pharmaceutical industries.

MAIN FEATURES

Completely machined from solid bar stock material.
Metal to metal or soft sealing.
Elastomer bellows to isolate the product chamber from the spring housing.
Self draining design.
Reduced dead leg.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Pneumatic lifting device (for CIP/SIP).
Lift indicator.
Blocking system.
Gas tight assembly.

USE: Clean steam, air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: SRV6.

SIZES: 3/4" x 1", 1" x 11/2" and 11/2" x 2".
DN 20 x 25, DN 25 x 40, DN 32 x 40 and DN 40 x 50.

CONNECTIONS: ASME BPE and DIN clamp ferrules.
Others on request.

DESIGNS: DIN EN ISO 4126-1.
PED – Pressure Equipment Directive.

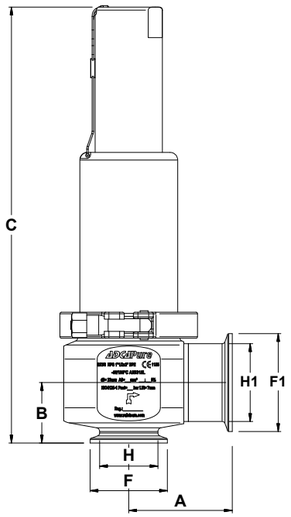
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

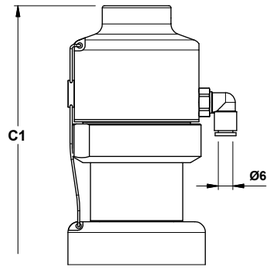
LIMITING CONDITIONS *	
Valve model	**SRV6**
Body design conditions	PN 16
Maximum operating pressure	16 bar
Maximum operating temperature	180 ºC
Minimum operating temperature	- 40 ºC

* Higher or lower limits on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
All sizes	4 (CE marked)

CE Marking: This product has been designed for use on steam, air and other gases which are in Group 2 and 1 (only oxygen, others on request) of the European PED - Pressure Equipment Directive in use and it complies with those requirements. The product carries the CE mark.





Optional pneumatic lifting device

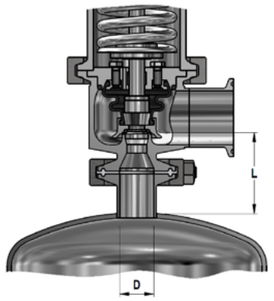
DIMENSIONS (mm) ASME BPE										
SIZE	**do**	**A**	**B**	**C**	**C1 ***	**F**	**H**	**F1**	**H1**	**WEIGHT (kg)**
3/4" x 1"	10	62,5	23,5	249	255	25	15,8	50,5	22,1	3,4
1" x 11/2"	13	62,5	34,5	258	264	50,5	22,1	50,5	34,8	3,6
11/2" x 2"	23	67,5	39,5	285	291	50,5	34,8	64	47,5	4,5

DIMENSIONS (mm) DIN										
SIZE	**do**	**A**	**B**	**C**	**C1 ***	**F**	**H**	**F1**	**H1**	**WEIGHT (kg)**
DN 20 x 25	10	55,5	25,5	249	255	34	20	50,5	26	3,4
DN 25 x 40	13	55,5	34	258	264	50,5	26	50,5	38	3,6
DN 32 x 40	17	55,5	34	259	265	50,5	32	50,5	38	3,6
DN 40 x 50	23	59	39,5	285	291	50,5	38	64	50	4,4

* Valve with pneumatic lifting device.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DEAD LEG

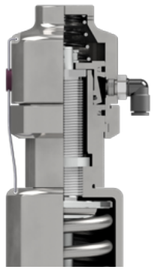
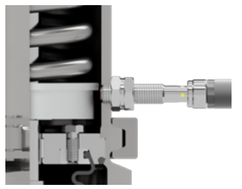
The SRV6 safety valve inlet port design offers improved cleanability, with an achievable dead leg ratio L/D < 2.



LRQA CERTIFIED ISO 9001
Valsteam ADCA is an EHEDG Member
ADCA

FLOW CAPACITIES (10% overpressure in accordance with ISO 4126-1)												
SIZE	**DN 20 x 25 3/4" x 1"**			**DN 25 x 40 1" x 11/2"**			**DN 32 x 40**			**DN 40 x 50 11/2" x 2"**		
do (mm)	**10**			**13**			**17**			**23**		
Flow area (mm^2)	**78,5**			**132,7**			**227**			**415,5**		
Set Pressure	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**
*** 0,5**	57,01	70,57	2,81	77,95	96,49	2,87	115,25	142,67	4,59	170,76	211,39	7,05
1	77,17	94,40	3,97	109,95	134,50	4,08	168,83	206,52	6,47	256,34	313,57	9,87
2	96,34	119,26	5,06	173,32	214,56	5,73	299,91	371,26	9,09	451,04	558,35	13,80
3	137,36	171,50	5,94	243,69	304,27	7,05	414,65	517,72	11,18	639,96	799,03	16,92
4	172,30	216,50	6,66	312,82	393,08	8,19	533,64	670,55	12,72	822,32	1033,30	19,66
5	210,34	265,70	7,38	380,01	480,04	9,19	631,97	798,31	14,35	1007,39	1272,54	22,17
6	251,79	319,40	7,87	445,63	565,30	10,00	738,53	936,85	15,67	1191,15	1511,01	24,39
7	287,18	365,63	8,46	508,27	647,13	10,96	842,33	1072,45	17,02	1358,56	1729,71	26,51
8	322,48	411,86	8,93	570,74	728,95	11,81	945,86	1208,05	18,13	1525,55	1948,41	28,45
9	357,74	458,09	9,52	633,15	810,77	12,39	1049,30	1343,65	19,20	1692,37	2167,11	30,36
10	393,02	504,32	9,98	695,60	892,59	13,21	1152,79	1479,24	20,25	1859,29	2385,81	31,95
11	428,16	550,55	10,46	757,80	974,41	13,85	1255,86	1614,84	21,23	2025,53	2604,51	33,51
12	463,16	596,78	10,93	819,73	1056,23	14,47	1358,50	1750,44	22,18	2191,07	2823,21	35,00
13	498,26	643,01	11,38	881,86	1138,05	15,06	1461,47	1886,04	23,08	2357,15	3041,91	36,43
14	533,26	689,24	11,81	943,81	1219,87	15,63	1564,13	2021,63	23,96	2522,72	3260,61	37,80
15	568,44	735,47	12,22	1006,07	1301,69	16,18	1667,32	2157,23	24,80	2689,16	3479,31	39,13
16	603,55	781,70	12,62	1068,21	1383,51	16,71	1770,30	2292,83	25,61	2855,25	3698,01	40,41

* Lower set pressures on request.

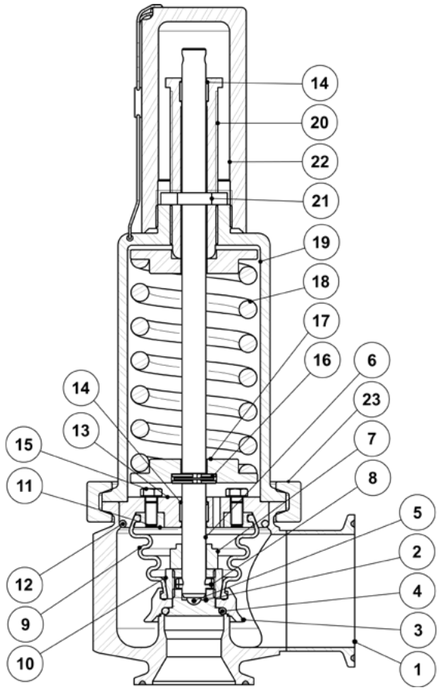
SRV OPTIONS		
PNEUMATIC LIFTING DEVICE *	**LIFT INDICATOR**	**BLOCKING SYSTEM**
		

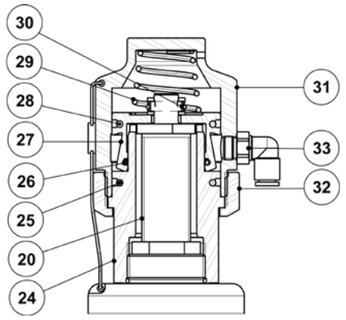
* For do = 23 mm and set pressures above 7 bar, a special high capacity pneumatic lifting device is required.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS SRV6.20 E 18.18

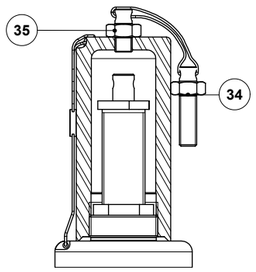
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	* Seat disc	AISI 316L / 1.4404
3	Lifting bell	AISI 316L / 1.4404
4	* O-ring	EPDM
5	Ball	AISI 316 / 1.4401
6	Spindle	AISI 316L / 1.4404
7	Lift stopper	AISI 316L / 1.4404
8	* Pin	AISI 301 / 1.4310
9	* Bellows	EPDM
10	Fixing nut	AISI 316L / 1.4404
11	Bellows fixing ring	AISI 316L / 1.4404
12	* O-ring	EPDM
13	Guide bushing	AISI 316L / 1.4404
14	Bushing	PTFE + 15% GF
15	Bolts	Stainless steel A2-70
16	Split ring	AISI 316L / 1.4404
17	Spring plate	AISI 316L / 1.4404
18	* Spring	Stainless steel
19	Bonnet	AISI 316L / 1.4404
20	Adjusting screw	AISI 316L / 1.4404
21	Lock nut	AISI 316L / 1.4404
22	Top cap	AISI 316L / 1.4404
23	Clamp	AISI 316 / 1.4401
24	Connector	AISI 316L / 1.4404
25	O-ring	EPDM
26	O-ring	EPDM
27	Piston	AISI 316L / 1.4404
28	O-ring	EPDM
29	Spring	AISI 302 / 1.4300
30	Pin	AISI 301 / 4.4310
31	Cover	AISI 316L / 1.4404
32	Lock nut	AISI 316L / 1.4404
33	Pneumatic fitting	Nickel plated brass
34	Test gag screw	AISI 316 / 1.4401
35	Gag lock nut	AISI 316 / 1.4401
36	Proximity sensor	Nickel plated brass
37	Lock nut	Stainless steel A4-70
38	O-ring	EPDM
39	O-ring	EPDM

* Available spare parts.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

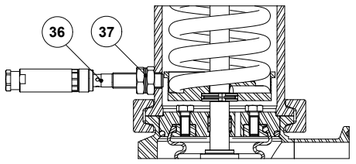




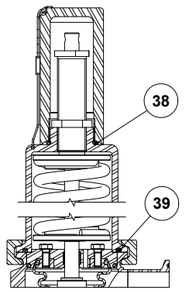
Pneumatic lifting device



Blocking system



Lift indicator



Gas tight assembly

ORDERING CODES SRV6											
Valve model	**SV6**	**L**	**E**	**E**	**1**	**X**	**XX**	**005**	**DI**	**20**	**E**
SRV6 - AISI 316L / 1.4404 safety relief valve	**SV6**										
Application											
Liquids		**L**									
Gases		**G**									
Oxygen (degreased)		**O**									
Bellows											
EPDM			**E**								
Valve head											
EPDM				**E**							
Metal to metal				**M**							
FPM / Viton				**V**							
Top cap											
Top cap					**1**						
Pneumatic lifting device					**2**						
High capacity pneumatic lifting device (for do = 23 mm and set pressures > 7 bar)					**3**						
Top cap and gas tight assembly					**4**						
Pneumatic lifting device and gas tight assembly					**5**						
High capacity pneumatic lifting device and gas tight assembly					**6**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**XX**				
Lift indicator							**LX**				
Blocking system							**XB**				
Lift indicator and blocking system							**LB**				
Set pressure											
0,5 bar								**005**			
...											
1 bar								**010**			
...											
7,6 bar								**076**			
...											
16 bar								**160**			
Pipe connection											
Clamp ferrule ASME BPE									**D**		
Clamp ferrule DIN (DIN 32676-A)									**F**		
Tube weld (ETO) according to ASME BPE									**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)									**FI**		
Hygienic male threads DIN (DIN 11851)									**G1**		
Aseptic male threads DIN (DIN 11864-1 Form A)									**G2**		
Size											
3/4" x 1" or DN 20 x 25										**20**	
1" x 11/2" or DN 25 x 40										**25**	
DN 32 x DN 40										**32**	
11/2" x 2" or DN 40 x 50										**40**	
Special valves / Extras											
Full description or additional codes have to be added in case of non-standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.

SAFETY RELIEF VALVES
SRV8

DESCRIPTION

The ADCA SRV8 series aseptic safety relief valves with angle type connections are designed for use with clean steam, air, water and other gases and liquids compatible with the construction materials.
Main applications are overpressure protection on steam equipment, pressure vessels and pipelines, particularly within the food, beverage and pharmaceutical industries.

MAIN FEATURES

Completely machined from solid bar stock material.
Metal to metal or soft sealing.
Elastomer bellows to isolate the product chamber from the spring housing.
Self draining design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Pneumatic lifting device (for CIP/SIP).
Lift indicator.
Blocking system.
Gas tight assembly.

USE: Clean steam, air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: SRV8.

SIZES: 3/4" x 1", 1" x 11/2" and 11/2" x 2".
DN 20 x 25, DN 25 x 40, DN 32 x 40 and DN 40 x 50.

CONNECTIONS: ASME BPE and DIN clamp ferrules.
Others on request.

DESIGNS: DIN EN ISO 4126-1.
PED – Pressure Equipment Directive.

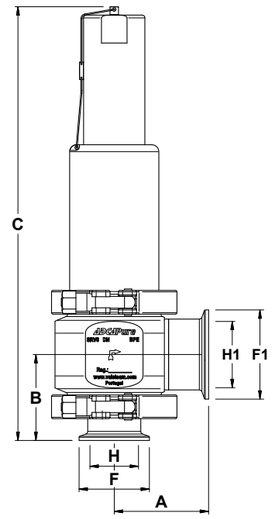
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

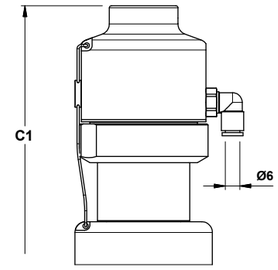
LIMITING CONDITIONS *	
Valve model	**SRV8**
Body design conditions	PN 16
Maximum operating pressure	16 bar
Maximum operating temperature	180 ºC
Minimum operating temperature	- 40 ºC

* Higher or lower limits on request.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
All sizes	4 (CE marked)

CE Marking: This product has been designed for use on steam, air and other gases which are in Group 2 and 1 (only oxygen, others on request) of the European PED - Pressure Equipment Directive in use and it complies with those requirements. The product carries the CE mark.





Optional pneumatic lifting device

DIMENSIONS (mm) ASME BPE										
SIZE	**do**	**A**	**B**	**C**	**C1 ***	**F**	**H**	**F1**	**H1**	**WEIGHT (kg)**
3/4" x 1"	10	62,5	49,5	279	285	25	15,8	50,5	22,1	4,3
1" x 11/2"	13	62,5	53.5	281	287	50,5	22,1	50,5	34,8	4,4
11/2" x 2"	23	67,5	61,5	311	317	50,5	34,8	64	47,5	5,3

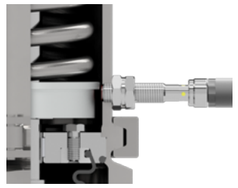
DIMENSIONS (mm) DIN										
SIZE	**do**	**A**	**B**	**C**	**C1 ***	**F**	**H**	**F1**	**H1**	**WEIGHT (kg)**
DN 20 x 25	10	55,5	50	279	285	34	20	50,5	26	4,3
DN 25 x 40	13	55,5	55	282	288	50,5	26	50,5	38	4,4
DN 32 x 40	17	55,5	53	282	288	50,5	32	50,5	38	4,3
DN 40 x 50	23	60,5	61,5	311	317	50,5	38	64	50	5,2

* Valve with pneumatic lifting device.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

We reserve the right to change the design and material of this product without notice.
IS SRV8.20 E 08.19

FLOW CAPACITIES (10% overpressure in accordance with ISO 4126-1)												
SIZE	**DN 20 x 25 3/4" x 1"**			**DN 25 x 40 1" x 11/2"**			**DN 32 x 40**			**DN 40 x 50 11/2" x 2"**		
do (mm)	**10**			**13**			**17**			**23**		
Flow area (mm^2)	**78,5**			**132,7**			**227**			**415,5**		
Set Pressure	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**	**Steam (kg/h)**	**Air (Nm^3/h)**	**Water (m^3/h)**
***0,5**	57,01	70,57	2,81	77,95	96,49	2,87	115,25	142,67	4,59	170,76	211,39	7,05
1	77,17	94,40	3,97	109,95	134,50	4,08	168,83	206,52	6,47	256,34	313,57	9,87
2	96,34	119,26	5,06	173,32	214,56	5,73	299,91	371,26	9,09	451,04	558,35	13,80
3	137,36	171,50	5,94	243,69	304,27	7,05	414,65	517,72	11,18	639,96	799,03	16,92
4	172,30	216,50	6,66	312,82	393,08	8,19	533,64	670,55	12,72	822,32	1033,30	19,66
5	210,34	265,70	7,38	380,01	480,04	9,19	631,97	798,31	14,35	1007,39	1272,54	22,17
6	251,79	319,40	7,87	445,63	565,30	10,00	738,53	936,85	15,67	1191,15	1511,01	24,39
7	287,18	365,63	8,46	508,27	647,13	10,96	842,33	1072,45	17,02	1358,56	1729,71	26,51
8	322,48	411,86	8,93	570,74	728,95	11,81	945,86	1208,05	18,13	1525,55	1948,41	28,45
9	357,74	458,09	9,52	633,15	810,77	12,39	1049,30	1343,65	19,20	1692,37	2167,11	30,36
10	393,02	504,32	9,98	695,60	892,59	13,21	1152,79	1479,24	20,25	1859,29	2385,81	31,95
11	428,16	550,55	10,46	757,80	974,41	13,85	1255,86	1614,84	21,23	2025,53	2604,51	33,51
12	463,16	596,78	10,93	819,73	1056,23	14,47	1358,50	1750,44	22,18	2191,07	2823,21	35,00
13	498,26	643,01	11,38	881,86	1138,05	15,06	1461,47	1886,04	23,08	2357,15	3041,91	36,43
14	533,26	689,24	11,81	943,81	1219,87	15,63	1564,13	2021,63	23,96	2522,72	3260,61	37,80
15	568,44	735,47	12,22	1006,07	1301,69	16,18	1667,32	2157,23	24,80	2689,16	3479,31	39,13
16	603,55	781,70	12,62	1068,21	1383,51	16,71	1770,30	2292,83	25,61	2855,25	3698,01	40,41

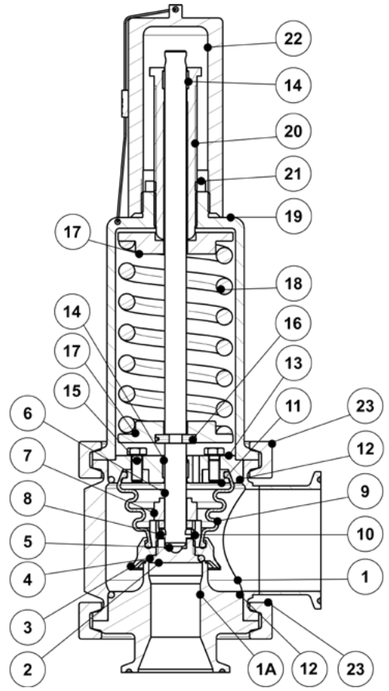
* Lower set pressures on request.

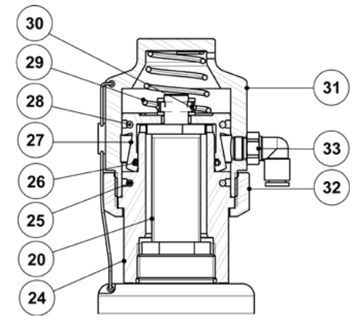
SRV OPTIONS		
PNEUMATIC LIFTING DEVICE *	**LIFT INDICATOR**	**BLOCKING SYSTEM**
		

* For do = 23 mm and set pressures above 7 bar, a special high capacity pneumatic lifting device is required.

We reserve the right to change the design and material of this product without notice.

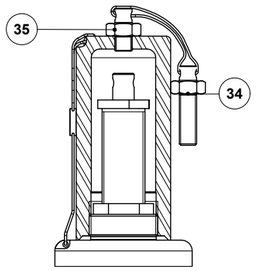
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
1A	Seat	AISI 316L / 1.4404
2	* Seat disc	AISI 316L / 1.4404
3	Lifting bell	AISI 316L / 1.4404
4	* O-ring	EPDM
5	Ball	AISI 316 / 1.4401
6	Spindle	AISI 316L / 1.4404
7	Lift stopper	AISI 316L / 1.4404
8	* Pin	AISI 301 / 1.4310
9	* Bellows	EPDM
10	Fixing nut	AISI 316L / 1.4404
11	Bellows fixing ring	AISI 316L / 1.4404
12	* O-ring	EPDM
13	Guide bushing	AISI 316L / 1.4404
14	Bushing	PTFE + 15% GF
15	Bolts	Stainless Steel A2-70
16	Split ring	AISI 316L / 1.4404
17	Spring plate	AISI 316L / 1.4404
18	* Spring	Stainless steel
19	Bonnet	AISI 316L / 1.4404
20	Adjusting screw	AISI 316L / 1.4404
21	Lock nut	AISI 316L / 1.4404
22	Cap	AISI 316L / 1.4404
23	Clamp	AISI 316 / 1.4401
24	Connector	AISI 316L / 1.4404
25	O-ring	EPDM
26	O-ring	EPDM
27	Piston	AISI 316L / 1.4404
28	O-ring	EPDM
29	Spring	AISI 302 / 1.4300
30	Pin	AISI 301 / 4.4310
31	Cover	AISI 316L / 1.4404
32	Lock nut	AISI 316L / 1.4404
33	Pneumatic fitting	Nickel plated brass
34	Test gag screw	AISI 316 / 1.4401
35	Gag lock nut	AISI 316 / 1.4401
36	Proximity sensor	Nickel plated brass
37	Lock nut	Stainless Steel A4-70
38	O-ring	EPDM
39	O-ring	EPDM



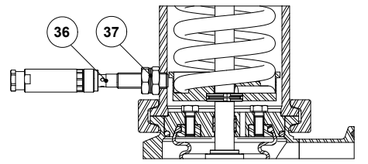


Pneumatic lifting device

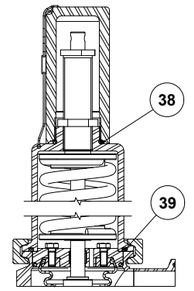
* Available spare parts.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



Blocking system



Lift indicator



Gas tight assembly

VALSTEAM ADCA

We reserve the right to change the design and material of this product without notice.

IS SRV8.20 E 08.19

ORDERING CODES SRV8											
Valve model	**SV8**	**L**	**E**	**E**	**1**	**X**	**XX**	**005**	**DI**	**20**	**E**
SRV8 - AISI 316L / 1.4404 safety relief valve	**SV8**										
Application											
Liquids		**L**									
Gases		**G**									
Oxygen (degreased)		**O**									
Bellows											
EPDM			**E**								
Valve head											
EPDM				**E**							
Metal to metal				**M**							
FPM / Viton				**V**							
Top cap											
Top cap					**1**						
Pneumatic lifting device					**2**						
High capacity pneumatic lifting device (for do = 23 mm and set pressures > 7 bar)					**3**						
Top cap and gas tight assembly					**4**						
Pneumatic lifting device and gas tight assembly					**5**						
High capacity pneumatic lifting device and gas tight assembly					**6**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**XX**				
Lift indicator							**LX**				
Blocking system							**XB**				
Lift indicator and blocking system							**LB**				
Set pressure											
0,5 bar								**005**			
...											
1 bar								**010**			
...											
7,6 bar								**076**			
...											
16 bar								**160**			
Pipe connection											
Clamp ferrule ASME BPE									**D**		
Clamp ferrule DIN (DIN 32676-A)									**F**		
Tube weld (ETO) according to ASME BPE									**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)									**FI**		
Hygienic male threads DIN (DIN 11851)									**G1**		
Aseptic male threads DIN (DIN 11864-1 Form A)									**G2**		
Size											
3/4" x 1" or DN 20 x 25										**20**	
1" x 11/2" or DN 25 x 40										**25**	
DN 32 x DN 40										**32**	
11/2" x 2" or DN 40 x 50										**40**	
Special valves / Extras											
Full description or additional codes have to be added in case of non-standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.

VACUUM BREAKER
VB16C

DESCRIPTION

The VB16C vacuum breakers are simple and reliable devices that automatically relieve or “break” an unwanted vacuum condition, restoring the atmospheric pressure.
This device is particularly suitable for steam heated units of small and medium volume, such as heat exchangers, heating coils, calorifiers, jacketed kettles, steam boilers, etc.

MAIN FEATURES

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

USE: Saturated steam and other gases compatible with the construction.

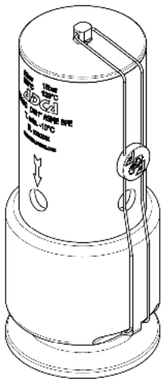
AVAILABLE MODELS: VB16C.

SIZES: 1” – DN 25.

REGULATING RANGES: 0,05 – 0,10 bar; 0,09 – 0,20 bar; 0,19 – 0,30 bar; 0,29 – 0,40 bar; 0,39 – 0,50 bar.

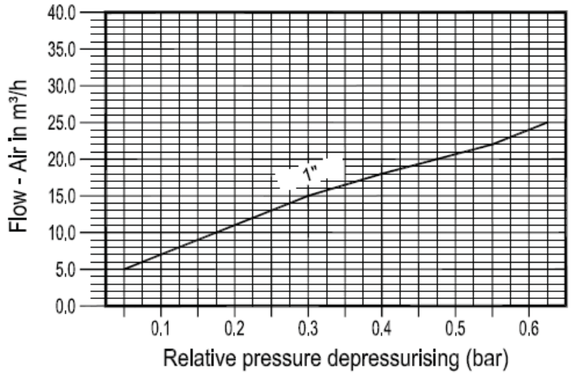
CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules. Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.



INSTALLATION: Vertical installation. See IMI – Installation and maintenance instructions.

CAPACITY CHART



LIMITING CONDITIONS	
Body design conditions	PN 16
Maximum operating pressure	13 bar @ 38ºC
Maximum operating steam pressure	6 bar
Max. operating temp. (steam and water)	170 ºC
Maximum operating temperature (air)	150 ºC
Minimum operating temperature	- 10 ºC

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1” – DN 25	SEP

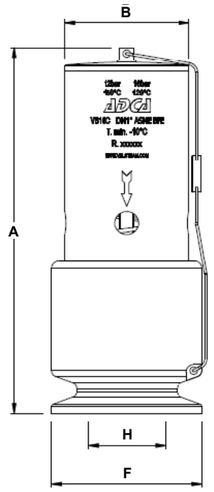
DIMENSIONS (mm) ASME BPE					
SIZE	A	B	F	H	WEIGHT (kg)
1”	120	42	50,5	22,1	0,85

DIMENSIONS (mm) DIN					
SIZE	A	B	F	H	WEIGHT (kg)
DN 25	120	42	50,5	26	0,85

Remark: Clamp ferrules according to DIN 32676-A.

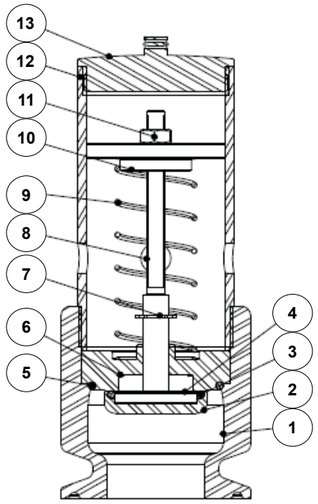
DIMENSIONS (mm) ISO					
SIZE	A	B	F	H	WEIGHT (kg)
DN 25	120	42	50,5	29,7	0,85

Remark: Clamp ferrules according to DIN 32676-B.



MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Body	AISI 316L / 1.4404
2	* Valve plug	AISI 316L / 1.4404
3	* O-ring	High performance EPDM
4	* Plug disc	AISI 316L / 1.4404
5	* O-ring	High performance EPDM
6	Seat	AISI 316L / 1.4404
7	* Retaining washer	Stainless steel A2-70
8	* Stem	AISI 316L / 1.4404
9	* Spring	AISI 302 / 1.4300
10	Spring guide	AISI 316L / 1.4404
11	Nut	Stainless steel A2-70
12	Spring cover	AISI 316L / 1.4404
13	Top cover	AISI 316L / 1.4404

* Available spare parts.
Remarks: FDA / USP Class VI seals certificate on request.



HYGIENIC STEAM FILTER
ISH10i

DESCRIPTION

The ISH10i high efficiency filters are used to remove contaminated particles from gases such as steam and compressed air.
The optimized construction of these units offers low differential pressure at high flow rates.
All sizes are built in two halves and are joined by a sanitary clamp ferrule according to DIN 32676 Series A.
The replaceable filter elements are made of sintered austenitic stainless steel and available with 1, 5 or 25 micron absolute rating.

MAIN FEATURES

Several retention rates available.
Good durability against aggressive gases.
Porosity level is more than 50% ensuring high particle and dirt load capacity as well as good flow rate at a low differential pressure.
Regeneration by ultrasonic cleaning.

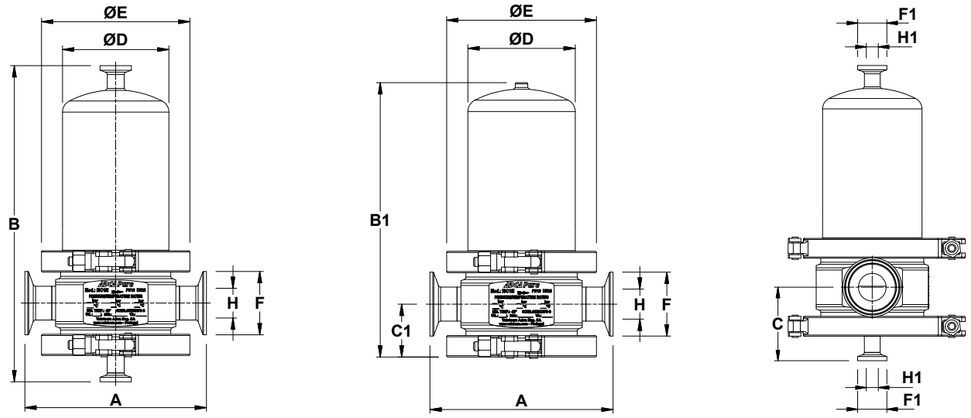
STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS:	Air vent and condensate drain connections. Other connections and dimensions. Vertical installation design (ISV10i).
USE:	Steam, compressed air and other gases.
AVAILABLE MODELS:	ISH10i.
RETENTION RATES:	1, 5 and 25 micron.
SIZES:	1/2" to 2"; DN 10 to DN 50.
CONNECTIONS:	ASME BPE, DIN and ISO clamp ferrules. Others on request.
INSTALLATION:	Horizontal installation always with the drain connection pointing downwards. See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
Ps 16 bar	Category
1/4" to 2"L – DN 10 to DN 50L	SEP
2"H – DN 50H	1 (CE marked)

ISV10i – Vertical inlet/outlet



DIMENSIONS – ASME BPE (mm)

SIZE *	A	B	B1	C	C1	D	E	F	F1	H	H1	ISFE SIZE	ISFE QTY.	VOL. (L)	WGT. (kg)
1/2"	140	204	154	55	34	70	104	25	25	9,4	9,4	0310	1	0,31	3,3
3/4"	140	237	187	58	37	70	104	25	25	15,75	9,4	0420	1	0,37	3,6
1"	159	272	222	63	42	85	119	50,5	25	22,1	9,4	0520	1	0,84	5,3
11/2"	161	339	288	70	49	85	119	50,5	25	34,8	9,4	0725	1	1,22	6,3
2"L	174	418	369	73	52	104	134	64	25	47,5	9,4	1030	1	2,15	7,9
2"H	174	545	496	73	52	104	134	64	25	47,5	9,4	1530	1	3,56	8,7

DIMENSIONS – DIN (mm)

SIZE *	A	B	B1	C	C1	D	E	F	F1	H	H1	ISFE SIZE	ISFE QTY.	VOL. (L)	WGT. (kg)
DN 10	140	204	154	55	34	70	104	34	34	10	10	0310	1	0,31	3,4
DN 15	140	237	187	58	37	70	104	34	34	16	10	0420	1	0,37	3,7
DN 20	159	272	222	63	42	85	119	34	34	20	10	0520	1	0,8	5,2
DN 25	174	272	222	63	42	85	119	50,5	34	26	10	0525	1	0,81	5,2
DN 32	176	344	295	70	49	85	119	50,5	34	32	10	0725	1	1,19	6,4
DN 40	189	344	295	73	52	104	134	50,5	34	38	10	0730	1	1,64	7,6
DN 50L	189	418	369	73	52	104	134	64	34	50	10	1030	1	2,32	7,8
DN 50H	189	545	496	73	52	104	134	64	34	50	10	1530	1	3,64	8,6

Remark: Clamp ferrules according to DIN 32676-A (for pipes DIN 11866-A – DIN 11850-2).

DIMENSIONS – ISO (mm)

SIZE *	A	B	B1	C	C1	D	E	F	F1	H	H1	ISFE SIZE	ISFE QTY.	VOL. (L)	WGT. (kg)
DN 08	140	204	155	55	34	70	104	25	25	10,3	10,3	0310	1	0,35	3,3
DN 10	140	237	187	55	34	70	104	25	25	14	10,3	0410	1	0,45	3,5
DN 15	140	242	192	58	37	70	104	50,5	25	18,1	10,3	0420	1	0,46	3,7
DN 20	145	272	222	63	42	85	119	50,5	25	23,7	10,3	0520	1	0,85	5,1
DN 25	145	282	232	63	42	85	119	50,5	25	29,7	10,3	0525	1	0,89	5,1
DN 32	147	344	294	70	49	85	119	64	25	38,4	10,3	0725	1	1,26	6,3
DN 40	160	344	295	73	52	104	134	64	25	44,3	10,3	0730	1	1,95	7,6
DN 50L	173	433	384	78	57	104	134	77,5	25	56,3	10,3	1030	1	2,69	8,4
DN 50H	173	560	511	78	57	104	134	77,5	25	56,3	10,3	1530	1	3,71	9,2

* Suffix L corresponds to low capacity design; suffix H corresponds to high capacity design.
Remarks: clamp ferrules according to DIN 32676-B (for pipes DIN 11866-B – ISO 1127).
Other sizes on request.

LRQA CERTIFIED ISO 9001
EHEDG Valsteam ADCA is an EHEDG Member
ADCA

LIMITING CONDITIONS

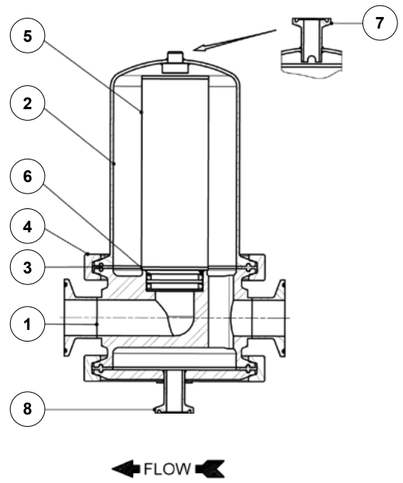
Maximum allowable pressure		16 bar
Maximum allowable temperature		200 °C
Minimum allowable temperature		-20 °C
Maximum operating temperature	EPM or EPDM filter element seals	150 °C
	EPM or EPDM filter element seals (steam)	180 °C
	Fluoraz® filter element seals	200 °C
Minimum operating temperature		0 °C
Maximum cold hydraulic test pressure		28 bar
Maximum differential pressure		5 bar

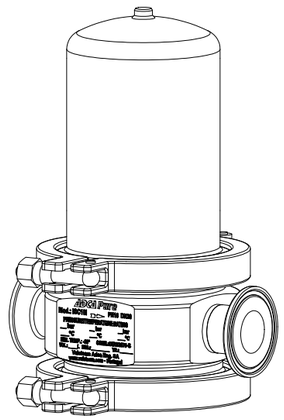
Remark: maximum recommended pressure drop of 0,07 bar.

MATERIALS

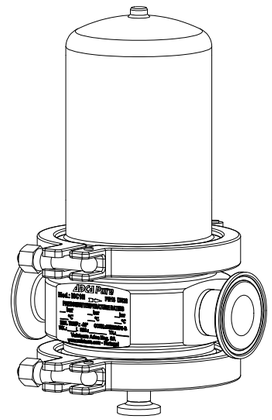
POS. Nº	DESIGNATION	MATERIAL
1	Filter housing	AISI 316L / 1.4404
2	Filter housing cover	AISI 316L / 1.4404
3	* Seal	PTFE / FKM
4	Safety clamp	AISI 316 / 1.4401
5	* Filter element	Sintered AISI 316L
	Filter end caps	AISI 304 / 1.4301
6	* Filter seal o-rings	EPDM; EPM; Fluoraz®
7	Air vent connection	AISI 316L / 1.4404
8	Drain connection	AISI 316L / 1.4404

* Available spare parts.
FDA / USP Class VI seals certificate on request.
All filters have a serial number. In case of non-standard filters this number must be supplied if spare parts are ordered.

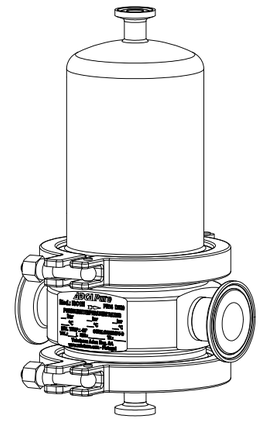




Filter without bottom drain or top vent connections



Filter with bottom drain connection for clean steam applications



Filter with air vent and bottom drain connections

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS ISH10.10 E 14.16

ORDERING CODES – ISH10i FILTER HOUSING								
Filter model	**ISH10I**	**.**	**T**	**D**	**X**	**.**	**08**	
ISH10i – AISI 316L / 1.4404 filter housing	**ISH10I**							
Housing seal material								
PTFE / FKM			**T**					
Pipe connection								
Clamp ferrule ASME BPE				**D**				
Clamp ferrule DIN (DIN 32676-A)				**F**				
Clamp ferrule ISO (DIN 32676-B)				**E**				
Optional connections								
Without vent or drain connection					**X**			
With condensate drain					**1**			
With condensate drain and vent					**2**			
Size								
1/4" or DN 08							**08**	
3/8" or DN 10							**10**	
1/2" or DN 15							**15**	
...							**...**	
2"L or DN 50L							**50L**	
2"H or DN 50H							**50H**	
Special / Extras								
Full description or additional codes have to be added in case of non-standard combination								**E**

ORDERING CODES – FILTER ELEMENT							
Filter element model	**ISFE**	**.**	**X**	**0310**	**.**	**01**	
ISFE – AISI 316L / 1.4404 filter element	**ISFE**						
Filter seal o-rings							
Without o-rings			**X**				
EPDM			**E**				
EPM			**P**				
Fluoraz®			**F**				
Filter element size according to housing connections							
1/2" ASME BPE	DN 10 DIN	DN 08 ISO		**0310**			
–	–	DN 10 ISO		**0410**			
3/4" ASME BPE	DN 15 DIN	DN 15 ISO		**0420**			
1" ASME BPE	DN 20 DIN	DN 20 ISO		**0520**			
–	DN 25 DIN	DN 25 ISO		**0525**			
11/2" ASME BPE	DN 32 DIN	DN 32 ISO		**0725**			
–	DN 40 DIN	DN 40 ISO		**0730**			
2"L ASME BPE	DN 50L DIN	DN 50L ISO		**1030**			
2"H ASME BPE	DN 50H DIN	DN 50H ISO		**1530**			
Retention rate							
1 micron						**01**	
5 micron						**05**	
25 micron						**25**	
Special / Extras							
Full description or additional codes have to be added in case of non-standard combination							**E**

Order example:
1 ADCAPure filter housing ISH10I with PTFE seals and clamp ferrules ASME BPE 2"L – Code: ISH10I.TDX.50L
1 ISFE filter element with 5 micron retention rate for the above mentioned filter – Code: ISFE.P1030.05
Remark: we recommend a second filter element set as a spare part to ensure minimum downtime when replacing the one in use after saturation.

HYGIENIC STEAM FILTER ISC16

DESCRIPTION

The ISC16 high efficiency filters are used to remove contaminated particles from gases such as steam and compressed air.
The optimized construction of these units offers low differential pressure at high flow rates.
All sizes are built in two halves. Up to 3" / DN 80 they are joined by a food industry fitting according to DIN 11851 and the larger sizes DN 100 to DN 200 by flat flanges fixed with bolts and nuts.
The replaceable filter elements are made of sintered austenitic stainless steel.

MAIN FEATURES

Several retention rates available.
Good durability against aggressive gases.
Porosity level is more than 50% ensuring high particle and dirt load capacity as well as good flow rate at a low differential pressure.
Regeneration by ultrasonic bath.

STANDARD SURFACE FINISH

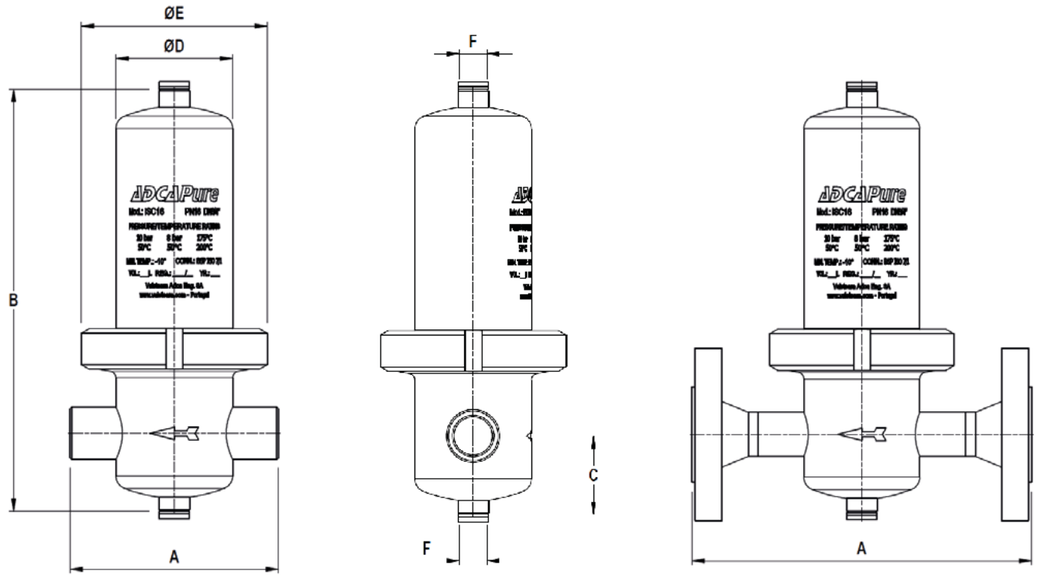
Internal parts: ≤ 0,76 mícron Ra – SF3.
External: Satin bead blast finish – 1,6 micron Ra.
Other surface conditions see IS PV20.00 E – Technical information.

USE:	Steam, compressed air and other gases (Group 2).
AVAILABLE MODELS:	ISC16 – AISI 304 / 1.4301 stainless steel. ISC16I – AISI 316L / 1.4404 stainless steel.
RETENTION RATES:	1, 5 and 25 micron.
SIZES:	1/4" to 3". DN 10 to DN 80 (DN 100 to DN 200 on request).
CONNECTIONS:	Female threaded ISO 7 Rp or NPT. Flanged EN 1092-1 PN 16. Flanged ASME B16.5 Class 150. Others on request.
INSTALLATION:	Horizontal installation always with the drain connection pointing downwards. See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)		
Ps 16 bar	**Ps 12 bar**	**Category**
1/4" to 11/2" – DN 10 to 40	–	SEP
2"L to 3"L – DN 50L to 80L	–	1 (CE marked)
–	3"H – DN 80H	2 (CE marked)

LIMITING CONDITIONS		
Maximum allowable pressure	DN 10 to 80L	16 bar
	DN 80H	12 bar
Maximum allowable temperature		200 ºC
Minimum allowable temperature		- 20 ºC
Maximum operating pressure	EPM	8,5 bar @ 178 ºC
	FLUORAZ	10 bar @ 200 ºC
Minimum operating temperature		0 ºC
Maximum differential pressure		5 bar
Maximum cold hydraulic test pressure	DN 10 to 80L	20,8 bar
	DN 80	15,6 bar

Remark: maximum recommended pressure drop of 0,07 bar.

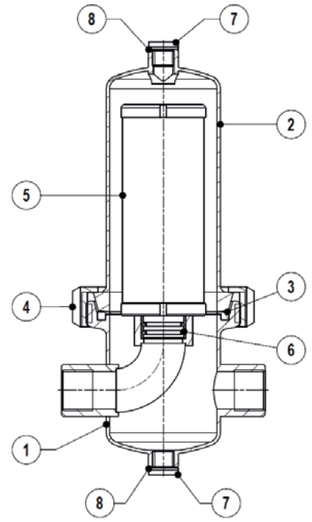


DIMENSIONS (mm) ISO											
SIZE *	A THREADED	A TUBE WELD	A PN 16	A CLASS 150	B	C	D	E	F	VOL. ** (L)	WEIGHT ** (kg)
1/4" – DN 08	108	108	–	–	220	55	70	112	1/4"	0,6	1,8
3/8" – DN 10	108	108	180	–	248	55	70	112	1/4"	0,7	1,9
1/2" – DN 15	108	108	180	203	248	55	70	112	1/4"	0,7	2
3/4" – DN 20	125	125	202	230	272	55	70	112	1/4"	0,8	2,2
1" – DN 25	125	125	212	247	298	74	85	127	1/4"	1,3	2,8
11/4" – DN 32	140	140	220	254	350	74	85	127	1/4"	1,6	3,2
11/2" – DN 40	170	170	254	294	388	93	104	148	1/4"	2,8	4,6
2"L – DN 50L	170	170	260	297	463	93	104	148	1/4"	3,2	4,7
2"H – DN 50H	170	170	260	297	590	93	104	148	1/4"	4,5	5,3
21/2" – DN 65	216	216	306	356	740	107	129	178	1/4"	8,9	8,3
3"L – DN 80L	216	216	316	356	1002	111	129	178	1/4"	12,2	9,7
3"H – DN 80H	240	240	340	380	1027	113	154	210	1/4"	17,8	13,3

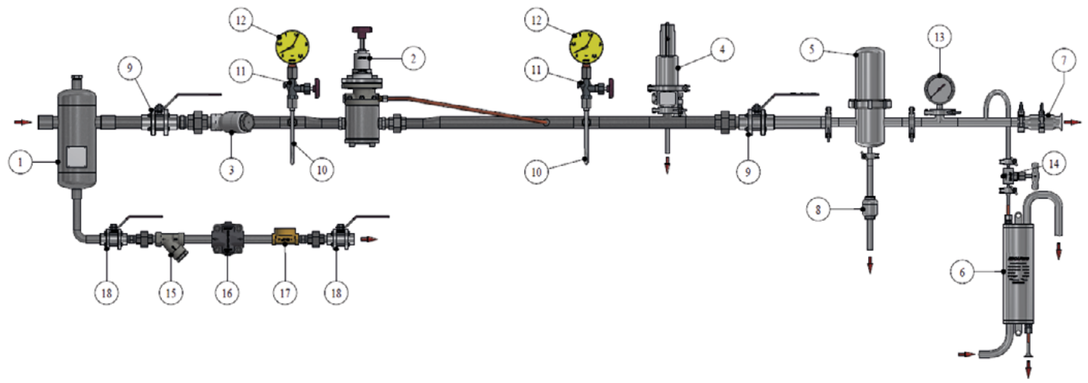
* Suffix L corresponds to low capacity design; suffix H corresponds to high capacity design.
** Volume and weight correspond to flanged EN 1092-1 PN 16 design. Other designs may have slightly different values.
Remark: larger sizes up to DN 200 on request.

MATERIALS			
POS. Nº	DESIGNATION	ISC16	ISC16I
1	Filter housing bowl	AISI 304 / 1.4301	AISI 316L / 1.4404
	Flanges	AISI 304 / 1.4301 **	AISI 316L / 1.4404 **
2	Filter housing cover	AISI 304 / 1.4301	AISI 316L / 1.4404
3	* Seal	EPM, FLUORAZ	EPM, FLUORAZ
4	Closing ring	AISI 304 / 1.4301	AISI 304 / 1.4301
5	* Filter element	Sintered AISI 316L	Sintered AISI 316L
	Filter end caps	AISI 304 / 1.4301	AISI 304 / 1.4301
6	* Filter seal o-rings (2)	EPM; FLUORAZ	EPM; FLUORAZ
7	Plug	AISI 304 / 1.4301	AISI 304 / 1.4301
8	Gasket	PTFE	PTFE

* Available spare parts; ** Can be supplied in the following materials:
ISC16: 1.4307 / AISI 304L; 1.4541 / AISI321; 1.4401 / AISI 316; 1.4404 / AISI316L; 1.4571 / AISI316Ti.
ISC16I: 1.4404 / AISI316L; 1.4571 / AISI316Ti.
FDA seals certificate on request.
All filters have a serial number. In case of non-standard filters this number must be supplied if spare parts are ordered.



TYPICAL INSTALLATION – FILTERED STEAM PRESSURE REDUCING STATION



MATERIALS			
POS. Nº	DESIGNATION	POS. Nº	DESIGNATION
1	ADCA S16S Steam centrifugal humidity separator	10	ADCA GSU Gauge siphon
2	ADCA PRV47 Pilot operated pressure regulator	11	ADCA GC400 Gauge cock
3	ADCA IS140 Y Strainer	12	ADCA MAN100 Pressure gauge
4	ADCAPure Safety valve	13	ADCAPure SMAN-63R Pressure gauge
5	ADCAPure ISC16 Culinary steam filter	14	ADCAPure NV400P Sanitary needle valve
6	ADCAPure SC32P Sample cooler	15	ADCA IS140 Y Strainer
7	ADCAPure SRT10	16	ADCA FLT17 Float and thermostatic steam trap
8	ADCA TSS22 Steam trap	17	ADCA SW12 Sight glass
9	ADCA M3i1 Three piece ball valve	18	ADCA M3S1 Three piece ball valve

ORDERING CODES – ISC16 FILTER HOUSING							
Filter model	**ISC16**	**.**	**P**	**A**	**.**	**08**	
ISC16 – AISI 304 / 1.4301 filter housing	**ISC16**						
ISC16I – AISI 316L / 1.4404 filter housing	**ISC16I**						
Housing seal material							
EPM (up to 180 °C)			**P**				
FLUORAZ (up to 200 °C)			**F**				
Pipe connection							
Female threaded ISO 7 Rp				**A**			
Female threaded NPT ASME B1.20.1				**C**			
Tube weld				**H**			
Flanged EN 1092-1 PN 16				**L**			
Flanged ASME B16.5 Class 150				**U**			
Size							
1/4” or DN 08						**08**	
3/8” or DN 10						**10**	
...						**...**	
2”L or DN 50L						**50L**	
2”H or DN 50H						**50H**	
...						**...**	
3”L or DN 80L						**80L**	
3”H or DN 80H						**80H**	
Special / Extras							
Full description or additional codes have to be added in case of non-standard combination							**E**

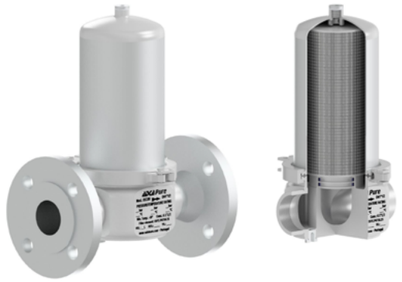
ORDERING CODES – FILTER ELEMENT							
Filter element model	**ISFE**	**.**	**P**	**1030**	**.**	**01**	
ISFE – AISI 316L / 1.4404 filter element	**ISFE**						
Filter to housing sealing o-rings							
Without sealing o-rings			**X**				
EPM (up to 180 °C)			**P**				
FLUORAZ (up to 200 °C)			**F**				
Filter size according to housing DN connection							
1/4" or DN 08				**0310**			
3/8” or DN 10				**0410**			
1/2” or DN 15				**0420**			
3/4" or DN 20				**0520**			
1" or DN 25				**0525**			
11/4” or DN 32				**0725**			
11/2” or DN 40				**0730**			
2”L or DN 50L				**1030**			
2”H or DN 50H				**1530**			
21/2” or DN65				**2030**			
3”L or DN 80L				**3030**			
3”H or DN80H				**3050**			
Retention rate							
1 micron						**01**	
5 micron						**05**	
25 micron						**25**	
Special / Extras							
Full description or additional codes have to be added in case of non-standard combination							**E**

Order example:
1 ADCAPure filter housing ISC16 with EPM seals, female threaded NPT, 2”L – Code: ISC16.PC.50L
1 ISFE filter element with 5 micron retention rate for the above mentioned filter – Code: ISFE.P1030.05
Remark: it is recommended to always have a second filter element, in order to ensure minimum downtime when replacing the one in use after saturation.

CULINARY STEAM FILTER
ISC20i

DESCRIPTION

The ISC20i high efficiency filters are used to remove contaminated particles from gases such as steam and compressed air.
The optimized construction of these units offers low differential pressure at high flow rates.
All sizes are built in two halves, with 1/4" to 3" being joined by a sanitary clamp ferrule according to DIN 32676 Series A. Whereas 4" to 6" are joined by bolts and nuts. All sizes include plugged drain and vent connections.
The replaceable filter elements are made of sintered austenitic stainless steel and available with 1, 5 or 25 micron absolute rating.



ISC20i (AISI 316L body)
1/4" to 3" – DN 10 to DN 80

MAIN FEATURES

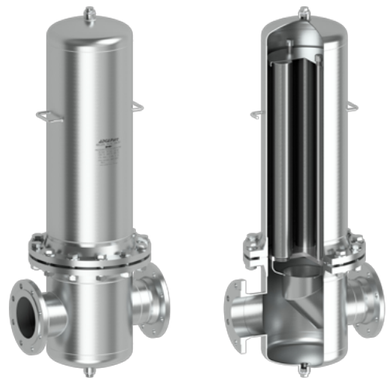
Several retention rates available.
Good durability against aggressive gases.
Porosity level is more than 50% ensuring high particle and dirt load capacity as well as high flow rates at a low differential pressure.
Regeneration by ultrasonic cleaning.

STANDARD SURFACE FINISH

Internal wetted parts upstream of filter elements:
≤ 1,6 micron Ra for model ISC20i.
As casted for model ISC20i2.
Internal wetted parts downstream of filter elements:
≤ 0,76 micron Ra – SF3, for all models.
External:
Satin bead blast finish. As casted body for model ISC20i2.
Other surface conditions see IS PV20.00 E – Technical information.

ISC20i2 (CF8M body)
3/4" to 3" – DN 20 to DN 80

USE:	Steam, compressed air and other gases.
AVAILABLE MODELS:	ISC20i – AISI 316L / 1.4404 stainless steel. ISC20i2 – CF8M / 1.4408 body and AISI 316L / 1.4404 cover.
RETENTION RATES:	1, 5 and 25 micron.
SIZES:	1/4" to 6"; DN 10 to DN 150.
CONNECTIONS:	Female threaded ISO 7 Rp or NPT. Tube weld (TW). Flanged EN 1092-1 PN 16. Flanged ASME B16.5 Class 150. Others on request.
INSTALLATION:	Horizontal installation always with the drain connection pointing downwards. See IMI – Installation and maintenance instructions.



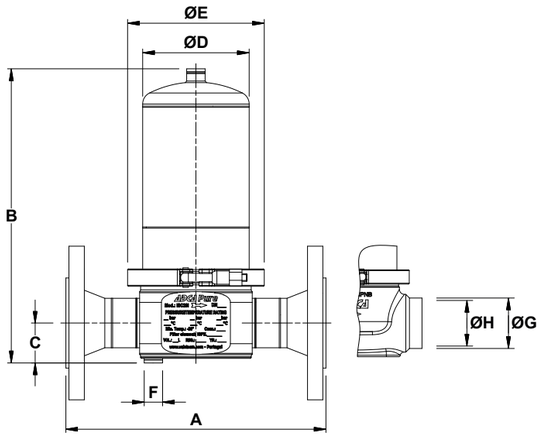
ISC20i (AISI 316L body)
4" and 6" – DN 100 and DN 150

CE MARKING – GROUP 2 (PED – European Directive)			
Ps 16 bar	**Ps 12 bar**	**Ps 10 bar**	**Category**
1/4" to 2"L – DN 10 to DN 50L	–	–	SEP
2"H to 3"L – DN 50H to DN 80L	3"H – DN 80H	–	1
–	–	4"L to 6"L – DN 100L to DN 150L	2
–	–	6"H – DN 150H	3

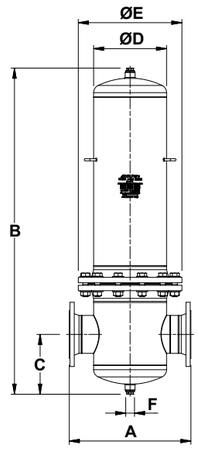
LIMITING CONDITIONS		
Maximum allowable pressure	1/4" to 3"L – DN 10 to DN 80L	16 bar
	3"H – DN 80H	12 bar
	4"L to 6"H – DN 100L to DN 150L	10 bar
Maximum allowable temperature		200 ºC
Minimum allowable temperature		-20 ºC
Maximum operating temperature	EPM or EPDM filter element seals	150 ºC
	EPM or EPDM filter element seals (steam)	180 ºC
	Fluoraz® filter element seals	200 ºC
Minimum operating temperature		0 ºC
Maximum cold hydraulic test pressure	1/4" to 21/2" – DN 10 to DN 65	28 bar
	3"L to 3"H – DN 80L to DN 80H	24,5 bar
	4"L to 6"H – DN 100L to DN 150L	20 bar
Maximum differential pressure		5 bar

Remark: maximum recommended pressure drop of 0,07 bar.

DIMENSIONS



1/4" to 3" – DN 10 to DN 80



4" and 6" – DN 100 and DN 150

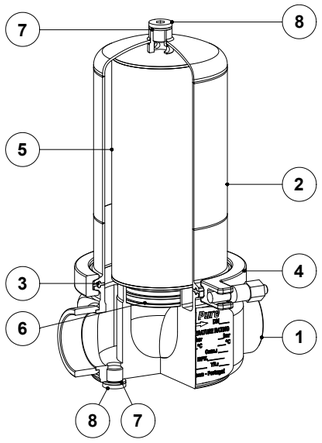
DIMENSIONS – ISC20i (mm)														
SIZE *	**A THREADED**	**A ** TUBE WELD**	**A PN 16**	**A CLASS 150**	**B**	**C**	**ØD**	**ØE**	**F**	**ØG**	**ØH**	**ISFE SIZE**	**ISFE QTY.**	**VOL. *** (L)**	**WGT. *** (kg)**
1/4"	99	99	–	–	145	23	70	104	1/4"	13,5	10,3	0310	1	0,4	2,3
3/8"– DN 10	101	101	180	–	173	23	70	104	1/4"	17,2	14	0410	1	0,5	3,7
1/2" – DN 15	107	108	180	203	180	25	70	104	1/4"	21,3	15,8	0420	1	0,5	4,3
3/4" – DN 20	130	130	202	230	210	28	85	118	1/4"	26,7	21	0520	1	0,9	6
1" – DN 25	136	136	212	247	217	31	85	118	1/4"	33,4	27,9	0525	1	1	6,9
11/4" – DN 32	142	142	220	254	279	36	85	118	1/4"	42,2	36,7	0725	1	1,1	8,9
11/2" – DN 40	154	154	254	294	287	39	104	133	1/4"	48,3	42,8	0730	1	2,2	10,6
2"L – DN 50L	163	163	260	297	374	45	104	133	1/4"	60,3	54,8	1030	1	2,8	13
2"H – DN 50H	163	163	260	297	501	45	104	133	1/4"	60,3	54,8	1530	1	3,9	14
21/2" – DN 65	–	216	306	356	637	52	129	170	1/4"	76,1	68,9	2030	1	8,2	21,7
3"L – DN 80L	–	240	340	380	911	60	129	170	1/4"	88,9	82,5	3030	1	11	28,6
3"H – DN 80H	–	240	340	380	918	60	154	198	1/4"	88,9	82,5	3050	1	16	30,4
4"L – DN 100L	–	–	410	395	1070	214	219	340	1"	–	–	2030	3	34,6	65,2
4"H – DN 100H	–	–	410	395	1331	214	219	340	1"	–	–	3030	3	43,7	73,5
6"L – DN 150L	–	–	480	484	1409	256	273	405	1"	–	–	3030	4	74,1	112
6"H – DN 150H	–	–	540	534	1446	265	324	460	1"	–	–	3030	6	106,1	138

* Suffix L corresponds to low capacity design; suffix H corresponds to high capacity design.
** Tube weld (TW) ends according to ASME B36.19 or ISO 1127 depending on the size. See dimensions ØG and ØH. Other dimensions on request.
*** Volume and weight correspond to flanged EN 1092-1 PN 16 design. Weight of filter housing with filter element(s). Other designs may have slightly different values.
Remark: other sizes on request.

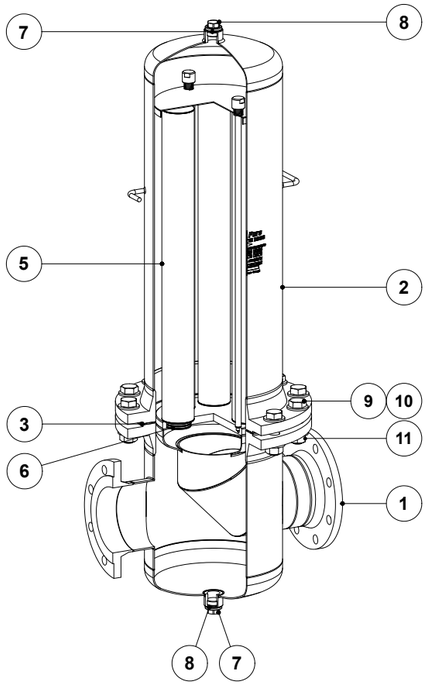
DIMENSIONS – ISC20i2 (mm)														
SIZE *	**A THREADED**	**A ** TUBE WELD**	**A PN 16**	**A CLASS 150**	**B**	**C**	**ØD**	**ØE**	**F**	**ØG**	**ØH**	**ISFE SIZE**	**ISFE QTY.**	**VOL. *** (L)**	**WGT. *** (kg)**
3/4" – DN 20	130	122	202	227	234	36	85	118	1/4"	26,9	22,3	0520	1	0,9	5,9
1" – DN 25	136	132	212	243	234	36	85	118	1/4"	33,7	28,5	0525	1	0,9	6,4
11/4" – DN 32	136	136	220	250	286	36	85	118	1/4"	42,4	37,2	0725	1	1,3	7,6
11/2" – DN 40	164	164	254	288	302	43	104	133	1/4"	48,3	43,1	0730	1	2	10,4
2"L – DN 50L	164	164	260	291	377	43	104	133	1/4"	60,3	54,5	1030	1	2,7	11,8
2"H – DN 50H	164	164	260	291	503	43	104	133	1/4"	60,3	54,5	1530	1	3,7	12,8
21/2" – DN 65	–	216	306	356	669	60	129	170	1/4"	76,1	70,3	2030	1	7,5	20,8
3"L – DN 80L	–	216	316	356	923	60	129	170	1/4"	88,9	82,5	3030	1	10,8	24,3
3"H – DN 80H	–	240	340	380	934	60	154	198	1/4"	88,9	82,5	3050	1	15,2	28,4

* Suffix L corresponds to low capacity design; suffix H corresponds to high capacity design.
** Tube weld (TW) ends according to ISO 1127. Other dimensions on request.
*** Volume and weight correspond to flanged EN 1092-1 PN 16 design. Weight of filter housing with filter element(s). Other designs may have slightly different values.
Remark: other sizes on request.

We reserve the right to change the design and material of this product without notice.



1/4" to 3" – DN 10 to DN 80



4" and 6" – DN 100 and DN 150

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Filter housing body	AISI 316L / 1.4404 (ISC20i)
		CF8M / 1.4408 (ISC20i2)
2	Filter housing cover	AISI 316L / 1.4404
3	* Seal	PTFE / FKM (1/4" to 3" - DN 10 to DN 80)
		PTFE (4" and 6" – DN 100 and DN 150)
4	Safety clamp	AISI 316 / 1.4401
5	* Filter element	Sintered AISI 316L
	Filter end caps	AISI 304 / 1.4301
6	* Filter seal o-rings	EPDM; EPM; Fluoraz®
7	Gasket	PTFE
8	Plug	AISI 304 / 1.4301
9	Bolts (4" and 6" – DN 100 and DN 150)	Stainless steel A2-70
10	Washers (4" and 6" – DN 100 and DN 150)	Stainless steel A2
11	Nuts (4" and 6" – DN 100 and DN 150)	Stainless steel A2-70

* Available spare parts.
FDA / USP Class VI seals certificate on request.
All filters have a serial number. In case of non-standard filter, this number must be supplied if spare parts are ordered.

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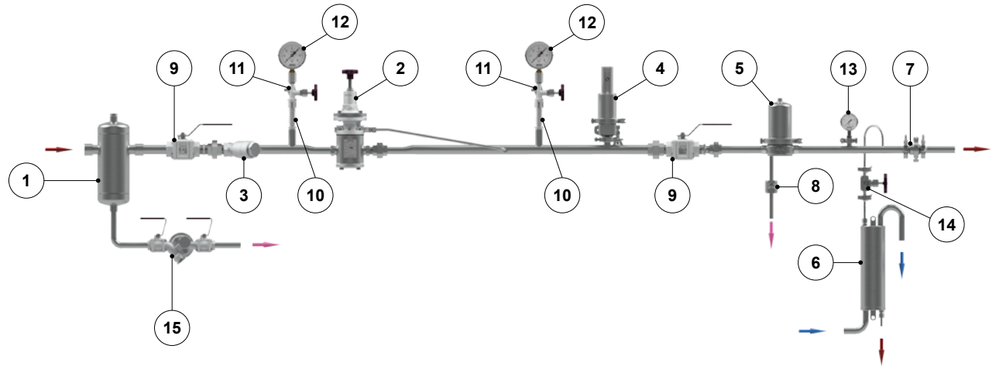
EHEDG Valsteam ADCA is an EHEDG Member
ADCA

TYPICAL INSTALLATION – FILTERED STEAM PRESSURE REDUCING STATION



MATERIALS			
POS. Nº	**DESIGNATION**	**POS. Nº**	**DESIGNATION**
1	ADCA S16SS Centrifugal humidity separator	**9**	ADCA M3i1 Three piece ball valve
2	ADCA PRV47i Pilot operated pressure reducing valve	**10**	ADCA GSV Gauge siphon
3	ADCA IS140i Y Strainer	**11**	ADCA GC400i Gauge cock
4	ADCA Safety valve	**12**	ADCA MAN100i Pressure gauge
5	ADCAPure ISC20i Culinary steam filter	**13**	ADCAPure SMAN-63R Pressure gauge
6	ADCAPure SC32P Sample cooler	**14**	Sanitary needle valve
7	ADCAPure SRTH10 Check valve	**15**	UniADCA CTS4U Compact trapping station with UFS32 Steam trap
8	ADCA TSS22 Steam trap		

ORDERING CODES – ISC20i FILTER HOUSING							
Filter model	**ISC20I**	**.**	**T**	**A**	**.**	**08**	
ISC20i – AISI 316L / 1.4404 filter housing	**ISC20I**						
ISC20i2 – CF8M / 1.4408 body and AISI 316L / 1.4404 cover	**ISC20I2**						
Housing seal material							
PTFE / FKM (1/4" to 3" - DN 10 to DN 80) or PTFE (4" and 6" - DN 100 and DN 150)			**T**				
Pipe connection							
Female threaded ISO 7 Rp (only available from 1/4" up to 2")				**A**			
Female threaded NPT ASME B1.20.1 (only available from 1/4" up to 2")				**C**			
Tube weld				**H**			
Flanged EN 1092-1 PN 16				**L**			
Flanged ASME B16.5 Class 150				**U**			
Size							
1/4"						**08**	
3/8" or DN 10						**10**	
...						**...**	
3"L or DN 80L						**80L**	
3"H or DN 80H						**80H**	
...						**...**	
6"L or DN 150L						**150L**	
6" or DN 150H						**150H**	
Special / Extras							
Full description or additional codes have to be added in case of non-standard combination							**E**

ORDERING CODES – FILTER ELEMENT							
Filter element model	**ISFE**	**.**	**X**	**0310**	**.**	**01**	
ISFE – AISI 316L / 1.4404 filter element	**ISFE**						
Filter seal o-rings							
Without o-rings			**X**				
EPDM			**E**				
EPM			**P**				
Fluoraz®			**F**				
Filter element size according to housing connections							
1/4"				**0310**			
3/8" or DN 10				**0410**			
1/2" or DN 15				**0420**			
3/4" or DN 20				**0520**			
1" or DN 25				**0525**			
11/4" or DN 32				**0725**			
11/2" or DN 40				**0730**			
2"L or DN 50L				**1030**			
2"H or DN 50H				**1530**			
21/2" and 4"L or DN 65 and DN 100L				**2030**			
3"L, 4"H, 6"L and 6"H or DN 80L, DN 100H, DN 150L and DN 150H				**3030**			
3"H or DN 80H				**3050**			
Retention rate							
1 micron						**01**	
5 micron						**05**	
25 micron						**25**	
Special / Extras							
Full description or additional codes have to be added in case of non-standard combination							**E**

Order example:
1 ADCAPure filter housing ISC20i with PTFE/FKM seals, threaded NPT, 2"L – Code: ISC20I.TC.50L
1 ISFE filter element with 5 micron retention rate for the above mentioned filter – Code: ISFE.P1030.05
Remark: we recommend a second filter element set as a spare part to ensure minimum downtime when replacing the one in use after saturation.

SANITARY SIGHT GLASS SWS

DESCRIPTION

The SWS sanitary sight glasses are designed to monitor liquid flow in any direction.
Sight glasses (or flow indicators) are usually employed to detect either the presence or absence of fluid flow, turbulence, colour, etc.
They are specially recommended for high purity applications.

MAIN FEATURES

Compact design.
Completely machined from bar stock materials, no castings or forgings are used on the standard version.
Precision glass mounted without stress.
Excellent visualization.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Full view design.

USE: Water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: SWS.

SIZES: 1/2” to 4”.

CONNECTIONS: DIN clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

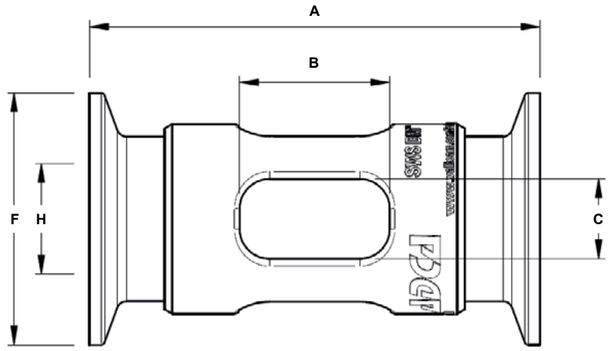
INSTALLATION: In any position. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Maximum operating temperature (steam and water) – EPDM seals *	180 ºC
Maximum operating temperature (air and other gases) – EPDM seals	150 ºC
Maximum operating temperature – PTFE seals	200 ºC
Minimum operating temperature	- 10 ºC

* High performance EPDM. Maximum operating temperature of 210 ºC, for short periods of time.

CE MARKING – GROUP 2 (PED – European Directive)	
Size	**Category**
1/2" to 4”	SEP

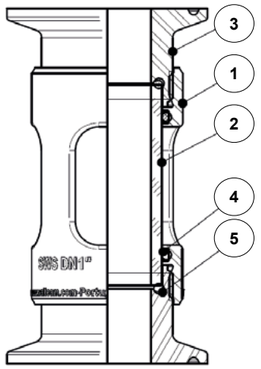
MAXIMUM OPERATING PRESSURE (bar)							
1/2"	**3/4"**	**1”**	**11/2”**	**2”**	**21/2”**	**3”**	**4”**
20	16	14	10	10	9	9	8



DIMENSIONS (mm) DIN						
SIZE	**A**	**B**	**C**	**F**	**H**	**WEIGHT (kg)**
1/2"	76	20	10	25	9,4	0,13
3/4"	92	30	10	25	15,75	0,23
1”	92	30	15	50,5	22,1	0,4
11/2”	105	32	24	50,5	34,8	0,58
2”	120	48	34	64	47,5	0,83
21/2”	151	55	40	77,5	60,2	1,35
3”	175	90	50	91	72,9	2,53
4”	200	110	60	119	97,38	3,81

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	* Glass	Borosilicate
3	Connection ends	AISI 316L / 1.4404
4	* O-ring	High performance EPDM
5	* O-ring	High performance EPDM **
	* O-ring	PTFE **

* Available spare parts; ** Others available on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



SANITARY CHECK VALVE SRT10

DESCRIPTION

The SRT10 all stainless steel disc check valve has a compact design and is specially designed for use with clean steam, hot condensate and other process fluid applications.
They are particularly recommended for high purity applications.

MAIN FEATURES

Compact design.
Completely machined from bar stock material, no castings or forgings are used on the standard version.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

USE: Clean steam, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: SRTV10 – vertical installation.
SRTH10 – horizontal installation.

SIZES: 1/2" to 4".

CONNECTIONS: ASME BPE clamp ferrules or tube weld (ETO) ends.
Others on request.

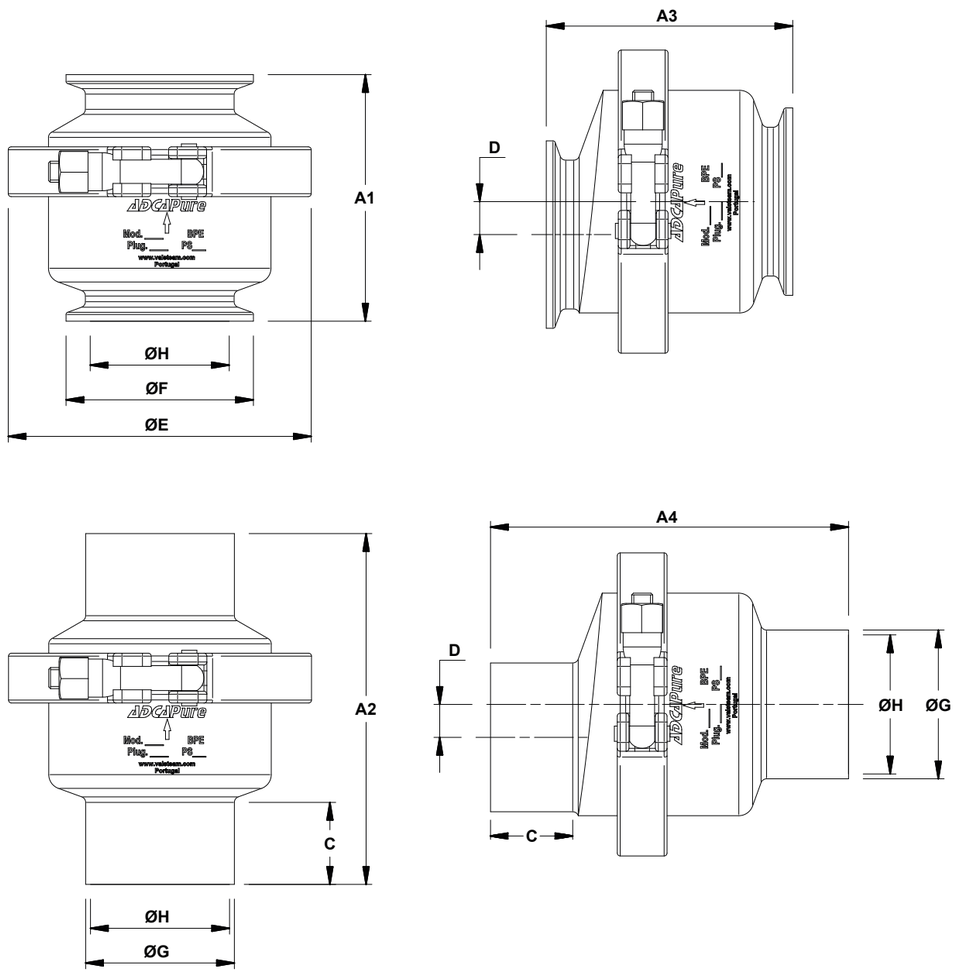
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical or horizontal according to the selected model and type of fluid.
See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
Size	**Category**
1/2" to 4"	SEP

LIMITING CONDITIONS	
Body design conditions	PN 10
Maximum operating temperature (steam and water) – EPDM seals *	180 ºC
Maximum operating temperature (air and other gases) – EPDM seals	150 ºC
Maximum operating temperature – PTFE seals	200 ºC
Minimum operating temperature	- 10 ºC

* High performance EPDM. Maximum operating temperature of 210 ºC, for short periods of time.



DIMENSIONS (mm) ASME BPE											
SIZE	A1	A2	A3	A4	C	D	E	F	G	H	WEIGHT (kg)
1/2"	50	88,8	50	90,4	28	11,8	61	25	12,7	9,4	0,4
3/4"	50	91,9	50	91,1	28	8,6	61	25	19,05	15,8	0,5
1"	60	97	60	96,5	28	5,5	61	50,5	25,4	22,1	0,6
11/2"	73	112,2	73	112,1	28	11,1	90	50,5	38,1	34,8	1,1
2"	84	119,8	84	122,3	28	11,3	104	64	50,8	47,5	1,4
21/2"	89	129	89	124	28	9,2	119	77,5	63,5	60,2	1,8
3"	98	141	98	134	28	11,1	134	91	76,2	72,9	2,7
4"	109	165,7	109	160	36	15,6	170	119	101,6	97,38	4,9

Remarks: Face to face dimensions are not standardized. Different dimensions available on request.

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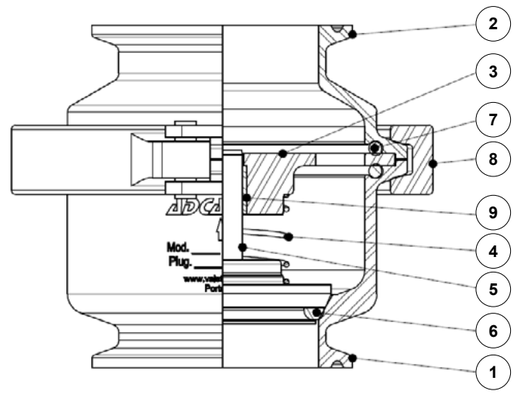
Valsteam ADCA is an EHEDG Member



MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve inlet body	AISI 316L / 1.4404
2	Valve outlet body	AISI 316L / 1.4404
3	Guide plate	AISI 316L / 1.4404
4	Spring	AISI 316 / 1.4401 electropolished
5	* Valve and stem	AISI 316L / 1.4404
6	* Valve seal	High performance EPDM **
		PTFE **
7	* Body seals	High performance EPDM **
		PTFE **
8	Safety clamp	AISI 316 / 1.4401
9	Plain bearing	PTFE

* Available spare parts; ** Others on request.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS SRT.10 E 09.18

HIGH PURITY BALL VALVES
M3HP TRUE BORE
(1/2” – 2” ASME BPE)

DESCRIPTION

M3HP three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

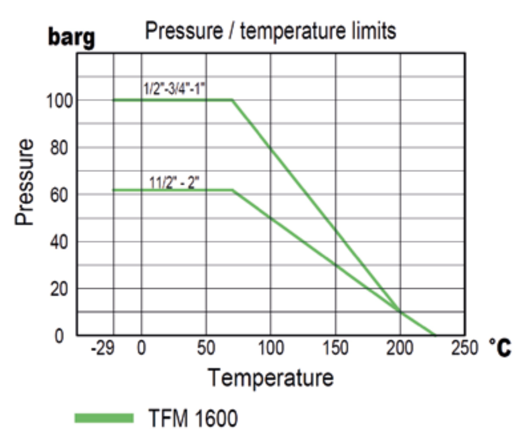
MAIN FEATURES

True bore floating ball design.
Completely made from solid bar stock material.
Can be serviced without removal from pipeline.
Bidirectional.
Antistatic device.
Anti blow out proof stem.
Tube weld with loose body flanges (360º rotation after installation).
ISO 5211 mounting (only sizes ≥1”).

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

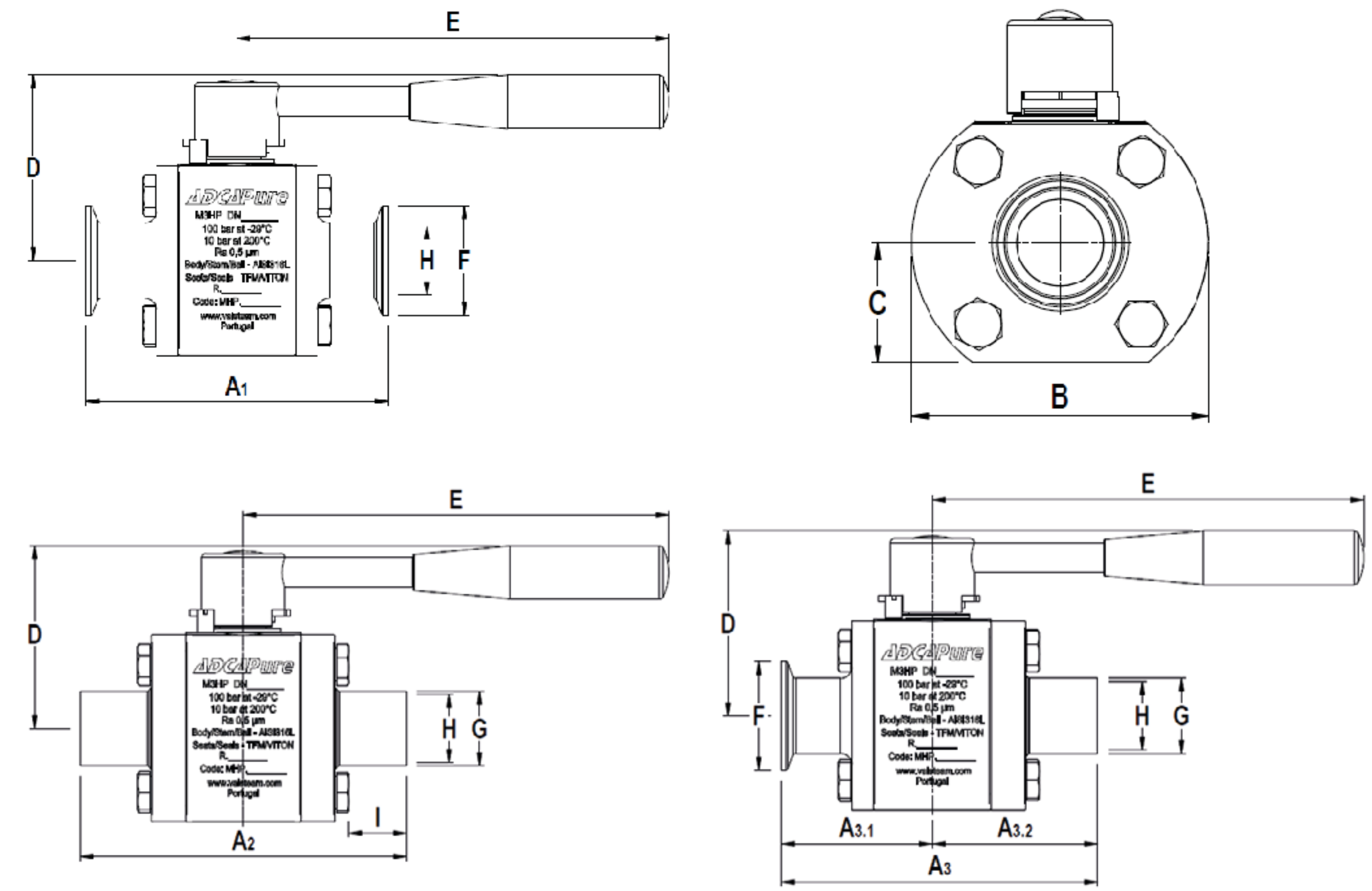
OPTIONS:	Different sealing materials. 1/2” and 3/4” ISO mounting with flange adapter. Degreased for oxygen use. Cavity filler.
USE:	Clean steam, gases and liquids compatible with the construction.
AVAILABLE MODELS:	M3HP – Complete bar stock construction.
SIZES:	1/2” to 2”.
CONNECTIONS:	According to ASME BPE. TC – Sanitary clamps. ETO – Extended tube orbital welding. TC / ETO – Combination.
PACKAGING:	Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.
INSTALLATION:	See IMI – Installation and maintenance instructions.



Note: Working pressure may be limited by the valve connections.

CE MARKING – GROUP 2 (PED – European Directive)		
PN63	PN100	Category
—	1/2” to 1”	SEP
11/2” to 2”	—	1 (CE marked)

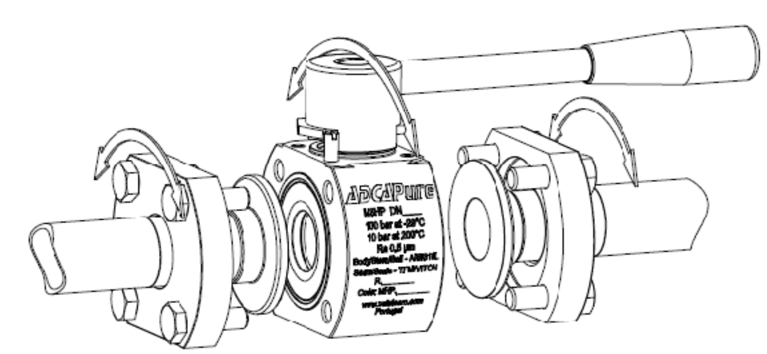
LRQA CERTIFIED ISO 9001
Valsteam ADCA is an EHEDG Member
ADCA



DIMENSIONS (mm) ASME BPE																
SIZE	A1	A2	A3	A3.1	A3.2	B	C	D	E	F	G	H	I	BALL PORT	ISO 5211	WGT. (kg)
1/2”	88,9	101,6	95,5	44	51,5	59	22	49	130	25	12,7	9,4	25	9,4	F03 *	0,9
3/4"	101,6	114,3	108	51	57	64	24,5	53	130	25	19,05	15,75	27	15,8	F03 *	1,4
1”	114,3	127	120,5	57	63,5	79	31	68	165	50,5	25,4	22,1	27	22,1	F04	2,3
11/2”	139,7	152,4	146,5	70	76,5	109	44	86	200	50,5	38,1	34,8	27	34,8	F05	5,3
2”	165,1	177,8	171,5	82,5	89	134	53	97	200	64	50,8	47,5	28	47,5	F05	8,5

* Flange adapter is required, against extra price. See IS M3H.25 E Options and extras.

Tube weld easy and quick installation - standard

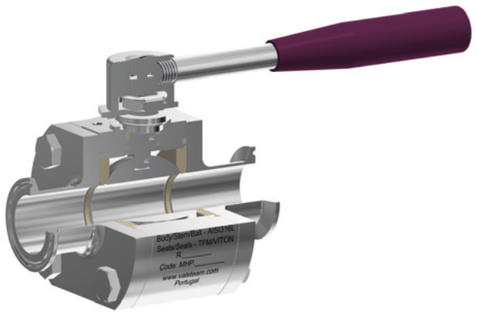


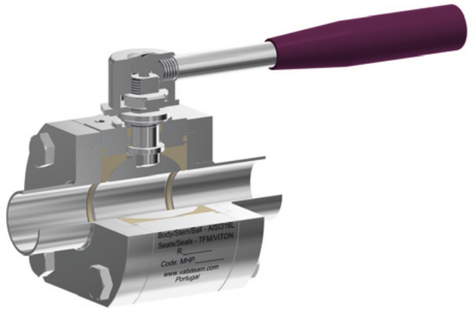
Loose body flanges make it possible to install the valve without the aligning of the welded end connections.
After installation the valve can rotate 360º for the desired orientation.

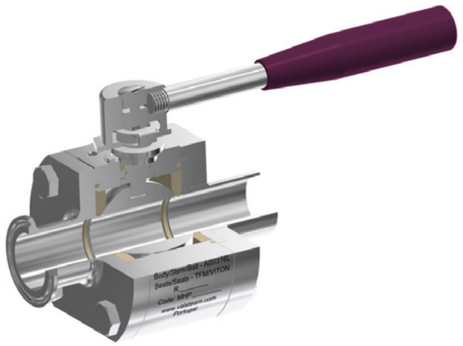
VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3HP.10 E 08.16

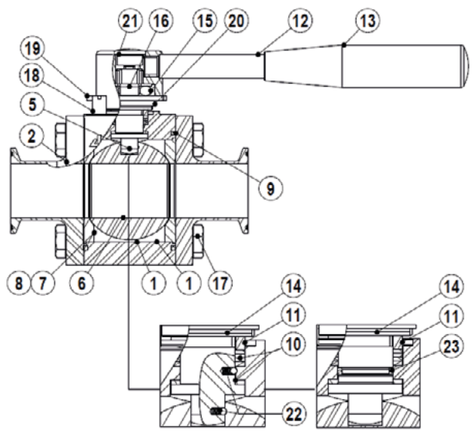
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	TC end connection	AISI 316L / 1.4404
3	Tube weld end connection	AISI 316L / 1.4404
4	Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	* Body seal	PTFE
10	* Stem seals	TFM 1600
11	* Spacer	AISI 316 / 1.4401
12	Handle	AISI 304 / 1.4301
13	Handle end	Vinyl
13	Handle end (optional)	AISI 316L / 1.4404
14	* Spring washers	AISI 304 / 1.4301
15	Compression nut	AISI 304 / 1.4301
16	* Lock washer	AISI 304 / 1.4301
17	Fixing bolt	AISI 304 / 1.4301
18	Stop pin	AISI 304 / 1.4301
19	Handle stopper	AISI 304 / 1.4301
20	Washer	AISI 304 / 1.4301
21	Fixing screw	AISI 304 / 1.4301
22	Antistatic device	AISI 316 / 1.4401
23	O-ring	Viton

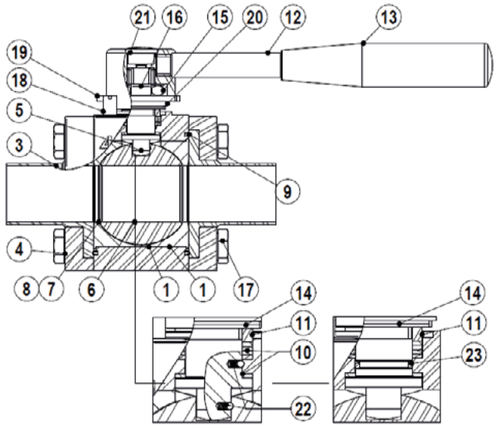
* Available spare parts;
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

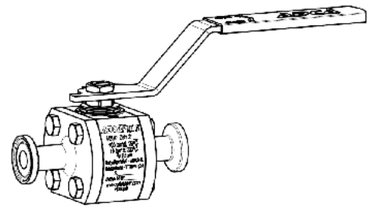




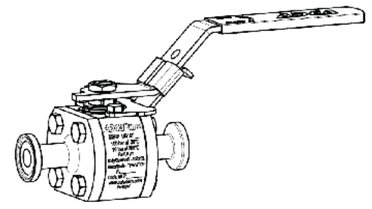








Flat lever handle with plastic cover.



Flat lever handle with plastic cover and lockable system.

ORDERING CODES M3HP											
Valve model	**MHP**	**X**	**X**	**X**	**F**	**X**	**X**	**CB**	**X**	**15**	
M3HP 3 pieces ball valve - AISI 316L	**MHP**										
Lever handle											
Round lever handle stainless steel / plastic cover		**X**									
Round lever handle complete stainless steel		**1**									
Flat lever handle stainless steel / plastic cover		**2**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
AISI 316L / 1.4404			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
Pipe connections											
TC – Sanitary clamps ASME BPE								**CB**			
ETO – Extended tube orbital welding ASME BPE (360º rotation design)								**TB**			
TC / ETO – Combination ASME BPE (360º rotation design)								**CTB**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
1/2”										**15**	
3/4”										**20**	
1”										**25**	
11/2”										**40**	
2”										**50**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.
NA – Not available.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3HP.10 E 08.16

HIGH PURITY BALL VALVES
M3HP TRUE BORE
(21/2" – 4" ASME BPE)

DESCRIPTION

M3HP three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

True bore floating ball design.
Completely made from solid bar stock material.
Can be serviced without removal from pipeline.
Bidirectional.
Antistatic device.
Anti blow out proof stem.
Tube weld with loose body flanges (360º rotation after installation).
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

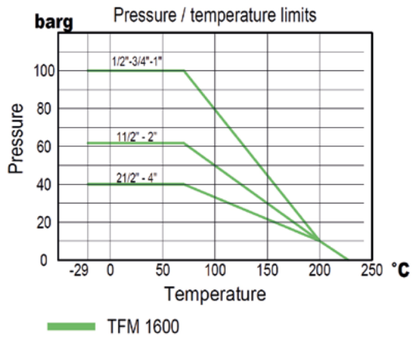
AVAILABLE MODELS: M3HP – Complete bar stock construction.

SIZES: 21/2" to 4".

CONNECTIONS: According to ASME BPE.
TC – Sanitary clamps.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

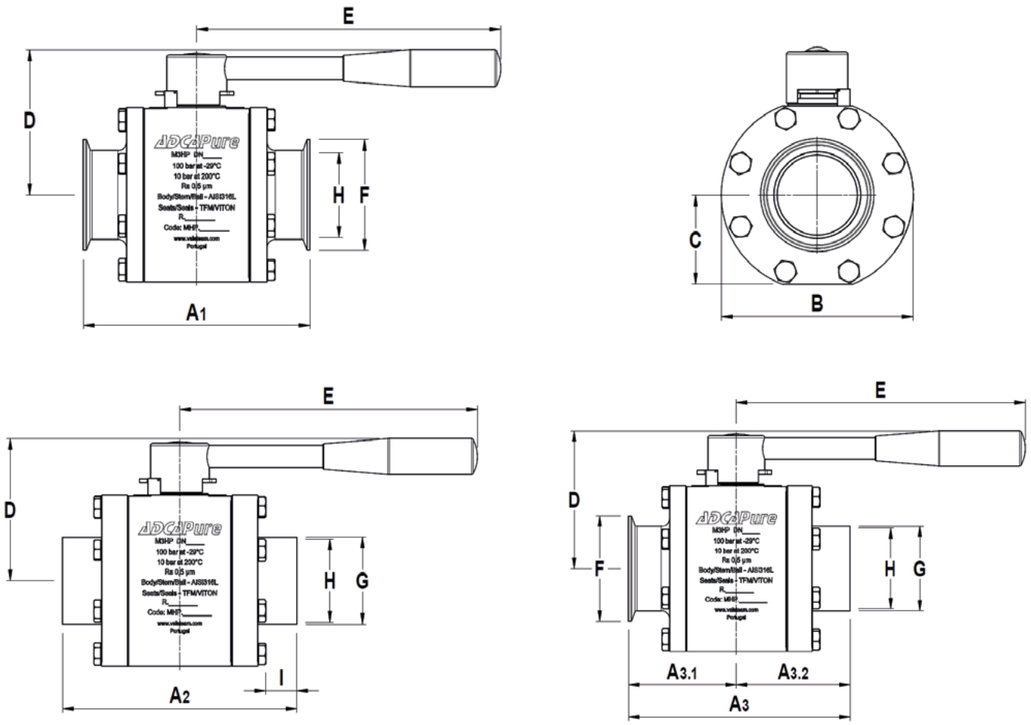
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: See IMI – Installation and maintenance instructions.



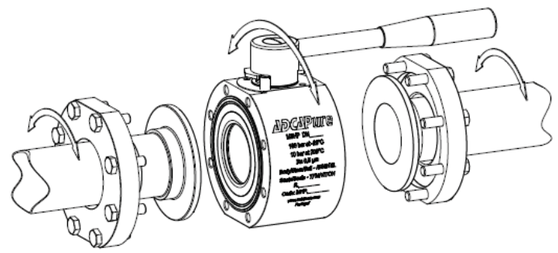
Note: Working pressure may be limited by the valve connections.

CE MARKING – GROUP 2 (PED – European Directive)	
PN40	**Category**
21/2" to 4"	1 (CE marked)



DIMENSIONS (mm) ASME BPE																
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
21/2"	190	203	196,3	95	101,5	160	72,5	130	250	77,5	63,5	60,2	29	60,2	F7	15,3
3"	216	228	222	108	114	180	83,5	140	290	91	76,2	72,9	30	72,9	F7	22,1
4"	254	267	260,5	127	133,5	220	101,5	158	290	119	101,6	97,4	36	97,4	F10	39,7

Tube weld easy and quick installation - standard



Loose body flanges make it possible to install the valve without aligning of the welded end connections.
After installation the valve can rotate on 360º for the desired orientation.

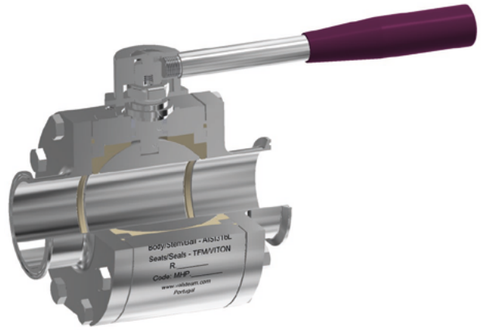
VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3HP.15 E 08.16

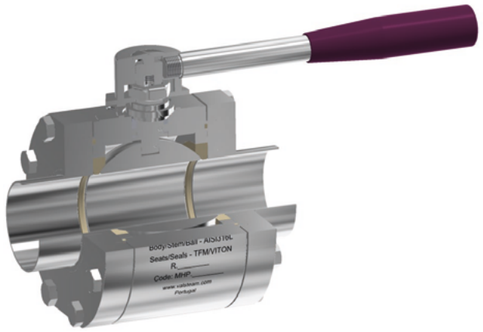
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	TC end connection	AISI 316L / 1.4404
3	Tube weld end connection	AISI 316L / 1.4404
4	Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	Body ring	AISI 316L / 1.4404
10	* Body seal	PTFE
11	* Stem seals	TFM 1600
12	* Spacer	AISI 316 / 1.4401
13	Handle	AISI 304 / 1.4301
14	Handle end	Vinyl
14	Handle end (optional)	AISI 316L / 1.4404
15	Compression nut	AISI 304 / 1.4301
16	* Spring washers	AISI 304 / 1.4301
17	* Lock washer	AISI 304 / 1.4301
18	Fixing bolt	AISI 304 / 1.4301
19	Stop pin	AISI 304 / 1.4301
20	Handle stopper	AISI 304 / 1.4301
21	Fixing screw	AISI 304 / 1.4301
22	Antistatic device	AISI 316 / 1.4401
23	O-ring	Viton

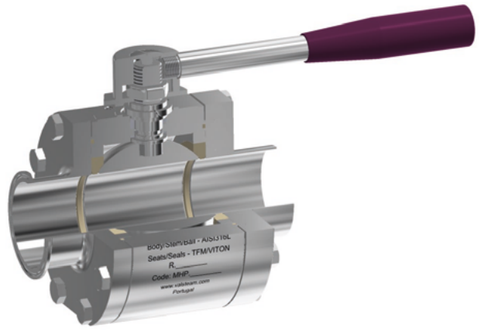
* Available spare parts;

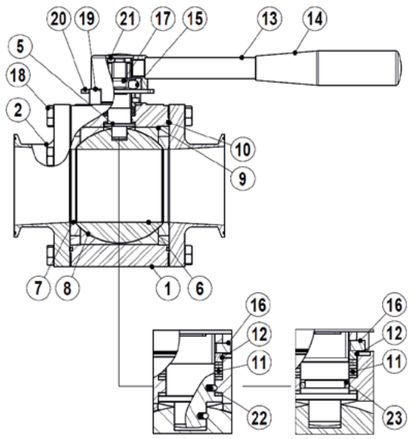
Remarks: FDA / USP Class VI seals certificate on request.

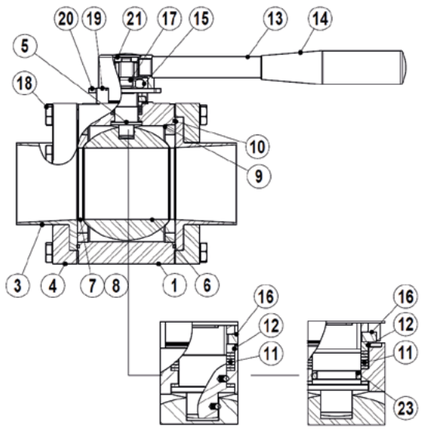
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.











ORDERING CODES M3HP											
Valve model	**MHP**	**X**	**X**	**X**	**F**	**X**	**X**	**CB**	**X**	**65**	
M3HP 3 pieces ball valve - AISI 316L	**MHP**										
Lever handle											
Round lever handle stainless steel / plastic cover		**X**									
Round lever handle complete stainless steel		**1**									
Flat lever handle stainless steel / plastic cover		**2**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
AISI 316L / 1.4404			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
Pipe connections											
TC – Sanitary clamps ASME BPE								**CB**			
ETO – Extended tube orbital welding ASME BPE (360º rotation design)								**TB**			
TC / ETO – Combination ASME BPE (360º rotation design)								**CTB**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
21/2”										**65**	
3”										**80**	
4”										**100**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.

NA – Not available.

We reserve the right to change the design and material of this product without notice.

IS M3HP.15 E 08.16

HIGH PURITY BALL VALVES
M3HP TRUE BORE
(6” ASME BPE)

DESCRIPTION

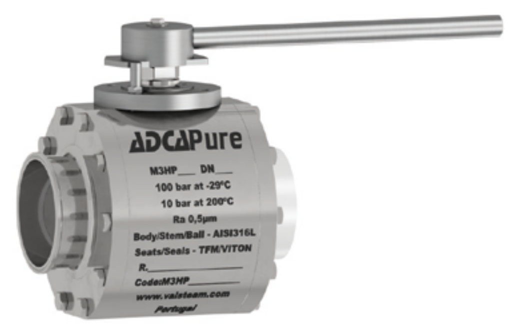
M3HP three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

True bore floating ball design.
Completely made from solid bar stock material.
Can be serviced without removal from pipeline.
Bidirectional.
Antistatic device.
Anti blow out proof stem.
Tube weld with loose body flanges (360º rotation after installation).
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

AVAILABLE MODELS: M3HP – Complete bar stock construction.

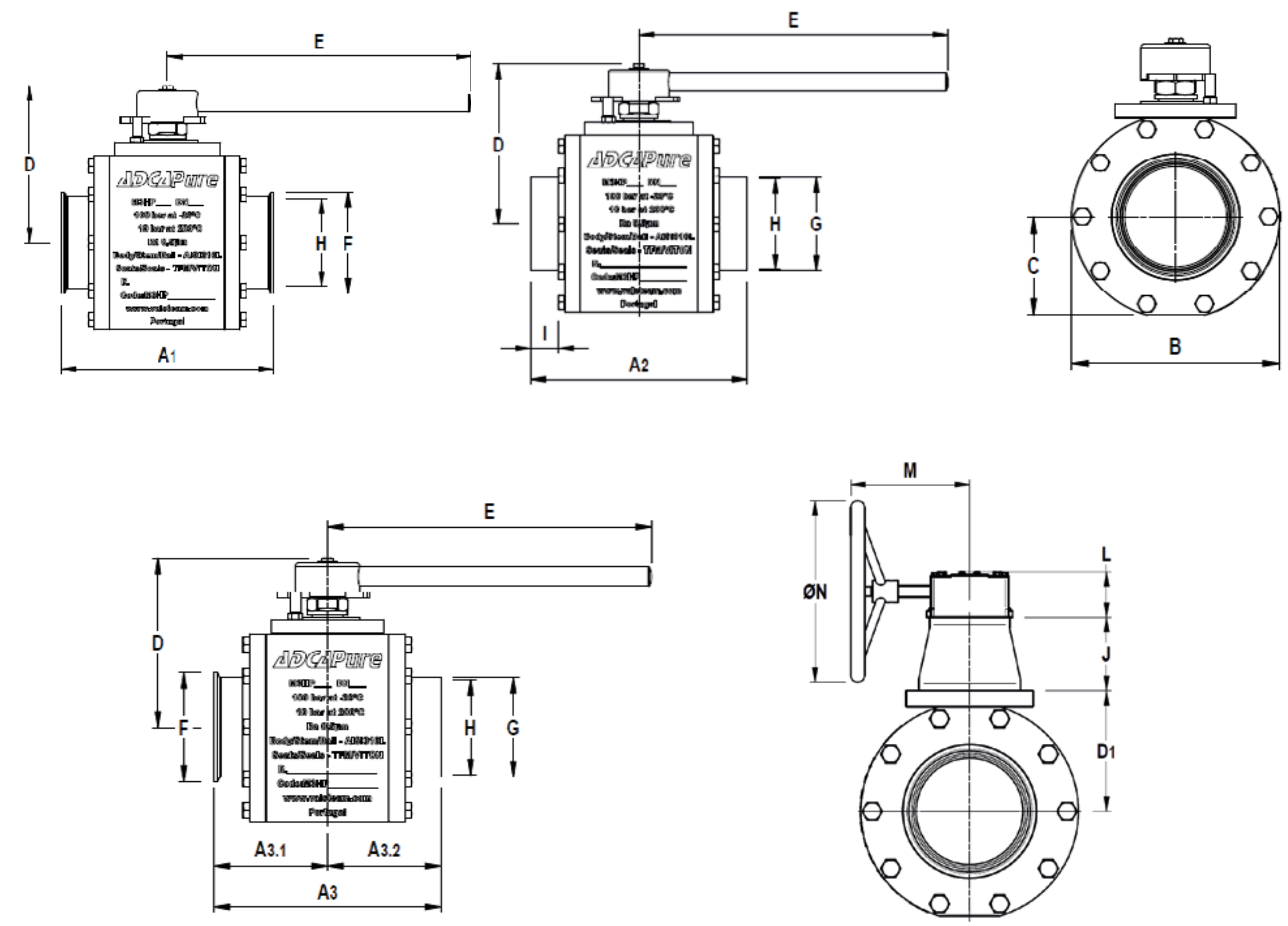
SIZES: 6”.

CONNECTIONS: According to ASME BPE.
TC – Sanitary clamps.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

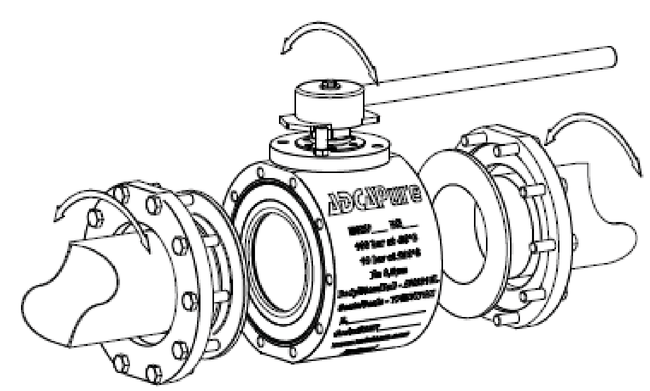
INSTALLATION: See IMI – Installation and maintenance instructions.

CE MARKING – GROUP 2 (PED – European Directive)	
PN16	Category
6”	1 (CE marked)



DIMENSIONS (mm) ASME BPE																				
SIZE	A1	A2	A3	A3.1	A3.2	B	C	D	D1	E	F	G	H	I	J	L	M	N	BALL PORT	ISO 5211	WGT. (kg)
6”	350	350	350	175	175	300	144	260	166	500	167	152	147	45	101	63	164	250	152,4	F14	101,6

Tube weld easy and quick installation - standard

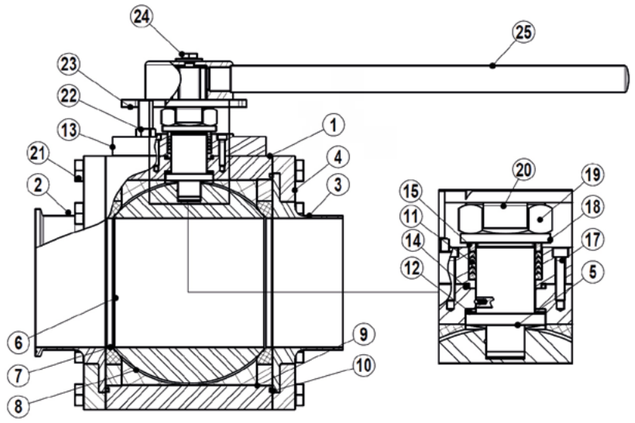


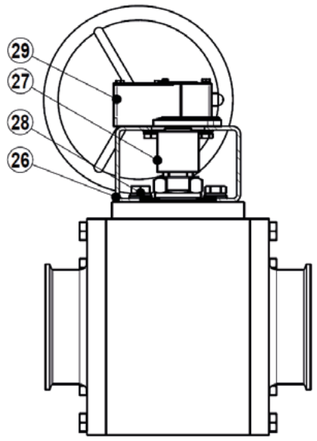
Loose body flanges make it possible to install the valve without aligning of the welded end connections.
After installation the valve can rotate on 360º for the desired orientation.

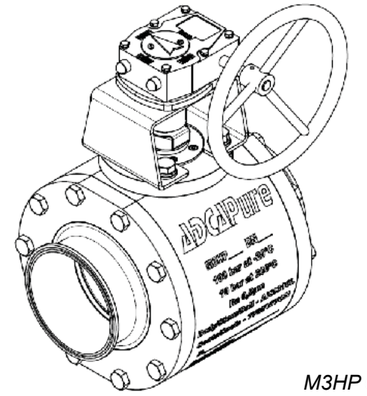
1
2
3
4
5
6
7
8

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	TC end connection	AISI 316L / 1.4404
3	Tube weld end connection	AISI 316L / 1.4404
4	Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	Body ring	AISI 316L / 1.4404
10	* Body seal	PTFE
11	* Stem seals	TFM 1600
12	* Stem thrust seal	TFM 1600 + PEEK
13	ISO flange	AISI 316L / 1.4404
14	ISO flange seal	TFM 1600
15	* Spacer	AISI 316 / 1.4401
17	Bolts	AISI 304 / 1.4301
18	Spring washer	AISI 304 / 1.4301
19	Compression nut	AISI 304 / 1.4301
20	* Lock washer	AISI 304 / 1.4301
21	Fixing screw	AISI 304 / 1.4301
22	Handle stopper pin	AISI 304 / 1.4301
23	Handle stopper	AISI 304 / 1.4301
24	Handle fixing bolt	AISI 304 / 1.4301
25	Handle	AISI 304 / 1.4301
26	Bracket	AISI 304 / 1.4301
27	Bracket stem	AISI 304 / 1.4301
28	Bracket bolts	AISI 304 / 1.4301
29	Gear box	Cast iron

* Available spare parts;
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.







M3HP 6” with gearbox

ORDERING CODES M3HP											
Valve model	**MHP**	**1**	**X**	**X**	**F**	**X**	**X**	**CB**	**X**	**150**	
M3HP 3 pieces ball valve - AISI 316L	**MHP**										
Lever handle											
Round lever handle complete stainless steel		**1**									
Bare stem		**9**									
Material											
AISI 316L / 1.4404			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps ASME BPE								**CB**			
ETO – Extended tube orbital welding ASME BPE (360º rotation design)								**TB**			
TC / ETO – Combination ASME BPE (360º rotation design)								**CTB**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
6”										**150**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.
NA – Not available.

HIGH PURITY BALL VALVES
M3HP TRUE BORE
(DN 10 – 50 DIN)

DESCRIPTION

M3HP three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

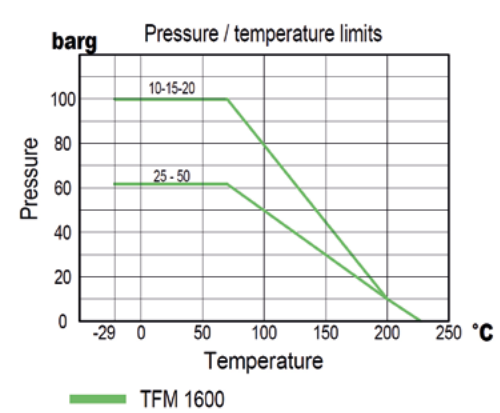
MAIN FEATURES

True bore floating ball design.
Completely made from solid bar stock material.
Can be serviced without removal from pipeline.
Bidirectional.
Antistatic device.
Anti blow out proof stem.
Tube weld with loose body flanges (360º rotation after installation).
ISO 5211 mounting (only sizes ≥ DN 20).

STANDARD SURFACE FINISH

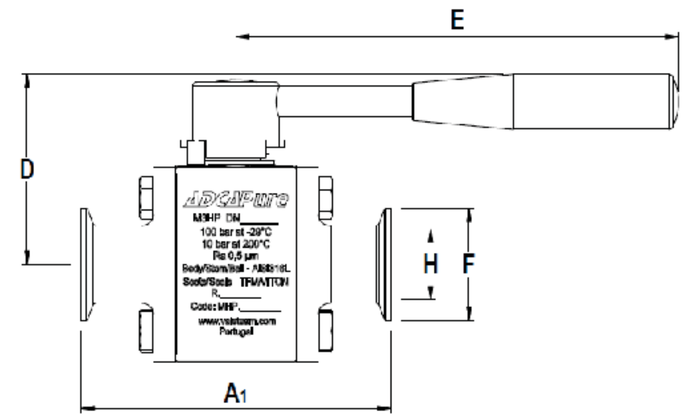
Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

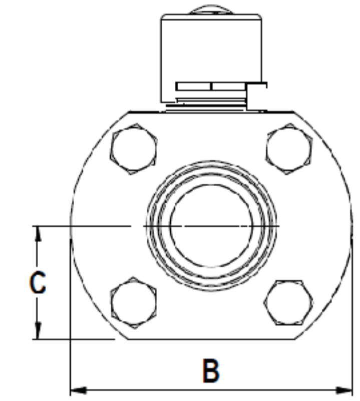
OPTIONS:	Different sealing materials. DN 10 and DN 15 ISO mounting with adapter. Degreased for oxygen use. Cavity filler.
USE:	Clean steam, gases and liquids compatible with the construction.
AVAILABLE MODELS:	M3HP – Complete bar stock construction.
SIZES:	DN 10 to DN 50.
CONNECTIONS:	According to DIN 11850 tube. TC – Sanitary clamps DIN 32676. ETO – Extended tube orbital welding. TC / ETO – Combination.
PACKAGING:	Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.
INSTALLATION:	See IMI – Installation and maintenance instructions.

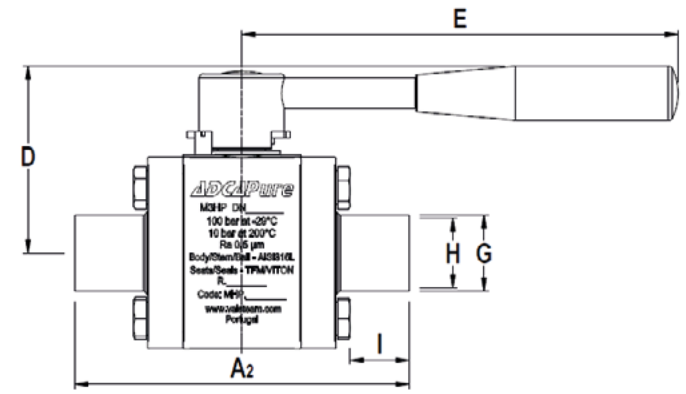


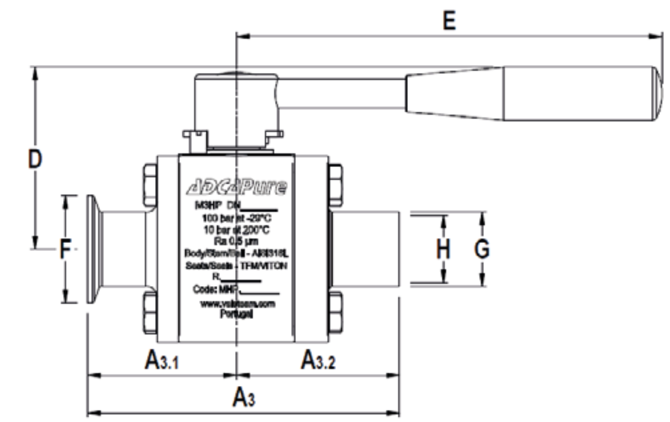
Note: Working pressure may be limited by the valve connections.

CE MARKING – GROUP 2 (PED – European Directive)		
PN63	PN100	Category
—	DN 10 to 20	SEP
DN 25 to 32	—	SEP
DN 40 to 50		1 (CE Marked)





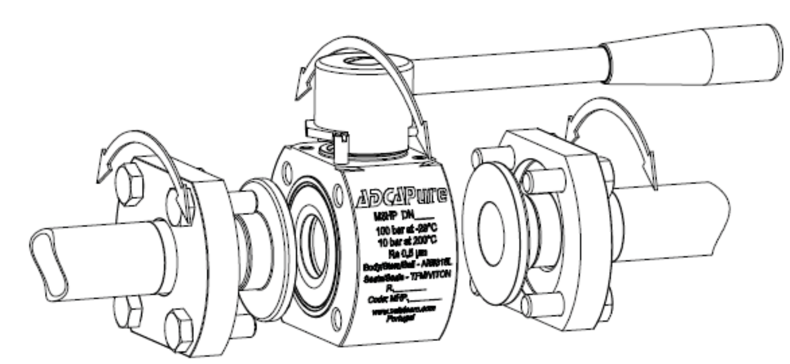




DIMENSIONS (mm) DIN															
SIZE	A1	A2	A3	A3.1	A3.2	B	C	D	E	F	G	H	I	BALL PORT	ISO 5211	WGT. (kg)
DN 10	90	102	96	45	51	59	22	48	130	34	13	10	25	10	F03 *	0,8
DN 15	100	114	107	50	57	64	24,5	53	130	34	19	16	27	16	F03 *	1,1
DN 20	115	127	121,5	57,5	64	79	31	68	165	34	23	20	27	20	F04	2,2
DN 25	125	135	130,5	62,5	68	89	36	73	165	50,5	29	26	27	26	F04	2,9
DN 32	140	153	147	71	76	109	44	86	200	50,5	35	32	27	32	F05	5,1
DN 40	150	161	155	75	80	119	48	90	200	50,5	41	38	27	38	F05	6,3
DN 50	165	178	172	82	90	134	53	97	200	64	53	50	28	50	F05	8,4

* Flange adapter is required, against extra price. See IS M3H.25 E Options and extras.

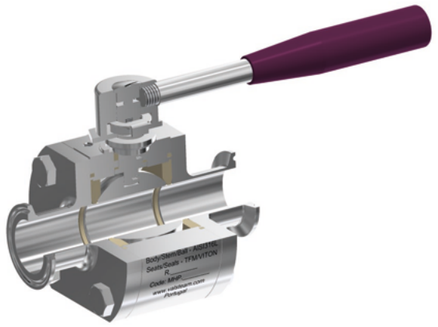
Tube weld easy and quick installation - standard

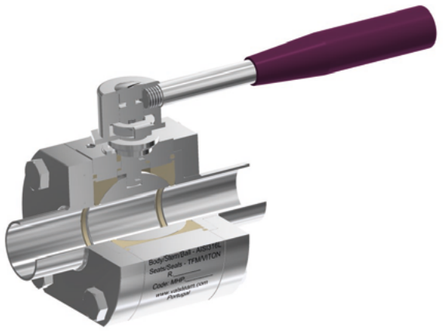


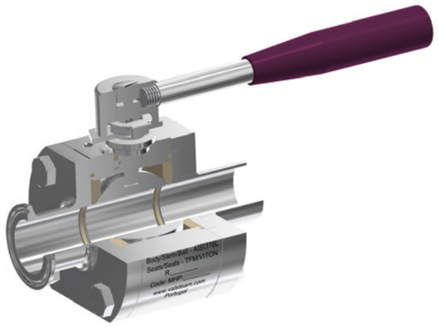
Loose body flanges make it possible to install the valve without the aligning of the welded end connections.
After installation the valve can rotate 360º for the desired orientation.

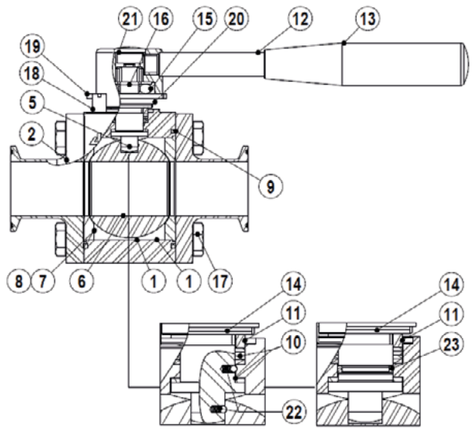
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	TC end connection	AISI 316L / 1.4404
3	Tube weld end connection	AISI 316L / 1.4404
4	Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	* Body seal	PTFE
10	* Stem seals	TFM 1600
11	* Spacer	AISI 316 / 1.4401
12	Handle	AISI 304 / 1.4301
13	Handle end	Vinyl
14	* Spring washers	AISI 304 / 1.4301
15	Compression nut	AISI 304 / 1.4301
16	* Lock washer	AISI 304 / 1.4301
17	Fixing bolt	AISI 304 / 1.4301
18	Stop pin	AISI 304 / 1.4301
19	Handle stopper	AISI 304 / 1.4301
20	Washer	AISI 304 / 1.4301
21	Fixing screw	AISI 304 / 1.4301
22	Antistatic device	AISI 316 / 1.4401
23	O-ring	Viton

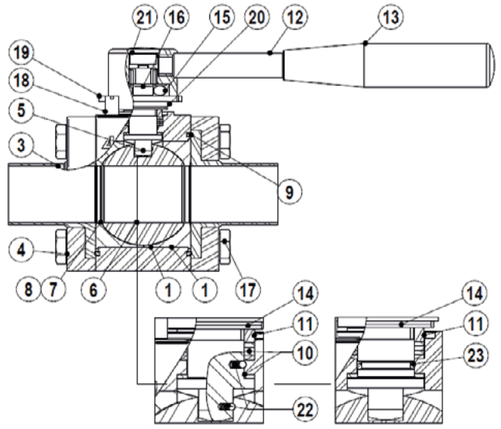
* Available spare parts;
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.











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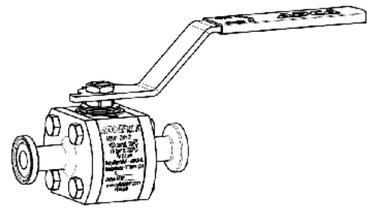
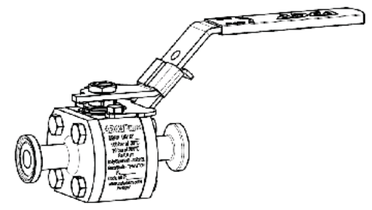
ADCA



Flat lever handle with plastic cover.



Flat lever handle with plastic cover and lockable system.

ORDERING CODES M3HP											
Valve model	**MHP**	**X**	**X**	**X**	**F**	**X**	**X**	**CD**	**X**	**15**	
M3HP 3 pieces ball valve - AISI 316L	**MHP**										
Lever handle											
Round lever handle stainless steel / plastic cover		**X**									
Round lever handle complete stainless steel		**1**									
Flat lever handle stainless steel / plastic cover		**2**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
AISI 316L / 1.4404			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps DIN 32676								**CD**			
ETO – Extended tube orbital welding DIN 11850 (360º rotation)								**TD**			
TC / ETO – Combination DIN (360º rotation)								**CTD**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
DN 10										**10**	
DN 15										**15**	
DN 20										**20**	
DN 25										**25**	
DN 32										**32**	
DN 40										**40**	
DN 50										**50**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.
NA – Not available.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3HP.20 E 07.16

HIGH PURITY BALL VALVES
M3HP FULL BORE
(DN 65 – 100 DIN)

DESCRIPTION

M3HP three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

Full bore floating ball design.
Completely made from solid bar stock material.
Can be serviced without removal from pipeline.
Bidirectional.
Antistatic device.
Anti blow out proof stem.
Tube weld with loose body flanges (360º rotation after installation).
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

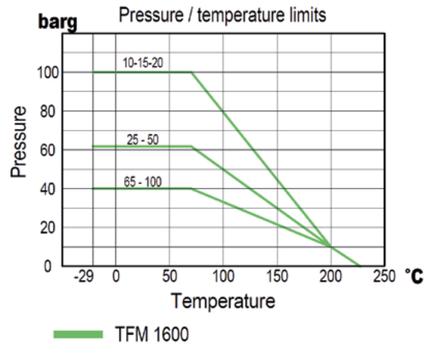
AVAILABLE MODELS: M3HP – Complete bar stock construction.

SIZES: DN 65 to DN 100.

CONNECTIONS: According to DIN 11850 tube.
TC – Sanitary clamps DIN 32676.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

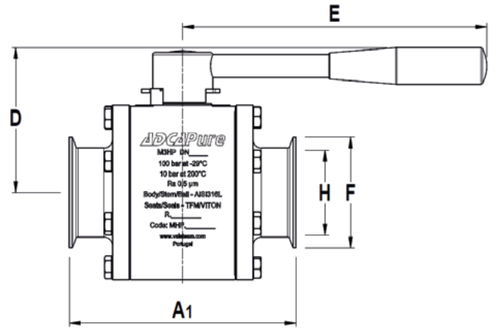
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

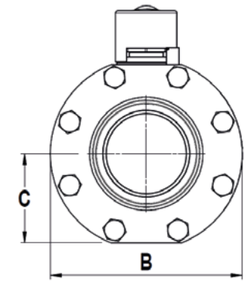
INSTALLATION: See IMI – Installation and maintenance instructions.

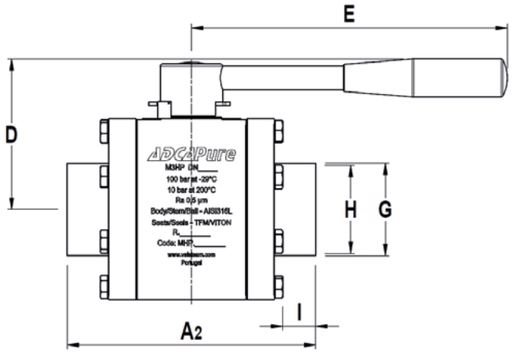


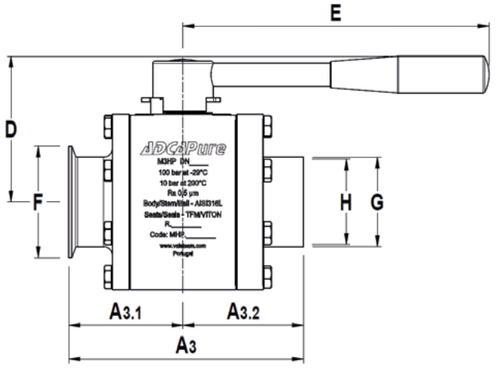
Note: Working pressure may be limited by the valve connections.

CE MARKING – GROUP 2 (PED – European Directive)	
PN40	**Category**
DN 65 to DN 100	1 (CE marked)



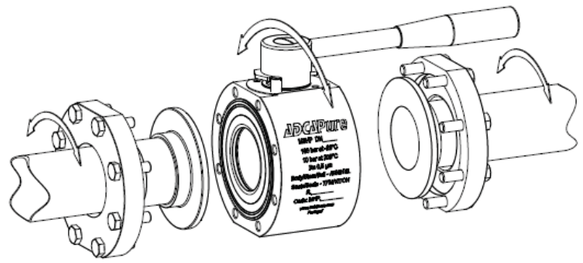






DIMENSIONS (mm) DIN															
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
65	190	203	197	95	102	160	72,5	130	250	91	70	66	29	62	F7	15,4
80	216	228	222	108	114	180	83,5	140	290	106	85	81	30	75	F7	22,1
100	255	267	261,5	127,5	134	220	101,5	158	290	119	104	100	36	98	F10	36,4

Tube weld easy and quick installation - standard



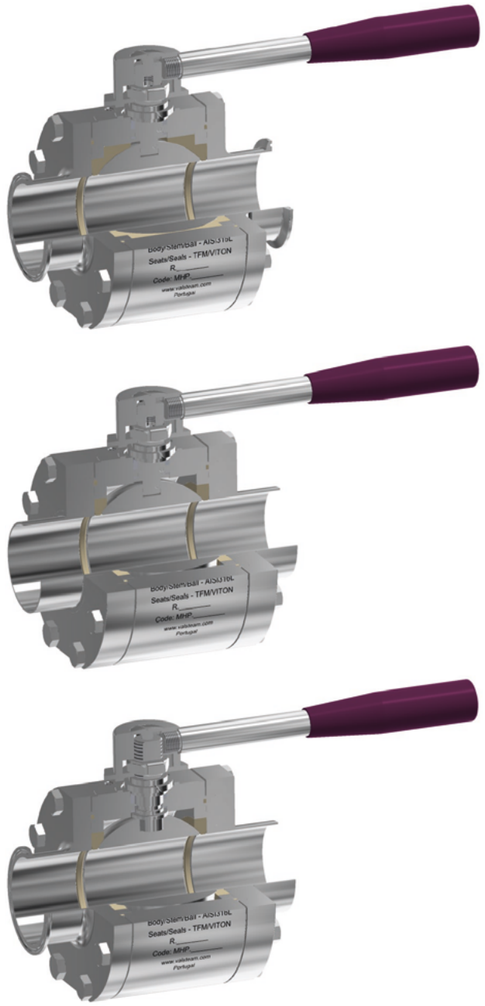
Loose body flanges make it possible to install the valve without aligning of the welded end connections.
After installation the valve can rotate on 360º for the desired orientation.

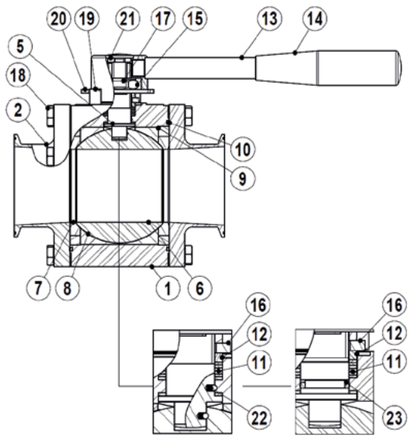
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
2	TC end connection	AISI 316L / 1.4404
3	Tube weld end conn.	AISI 316L / 1.4404
4	Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	Body ring	AISI 316L / 1.4404
10	* Body seal	PTFE
11	* Stem seals	TFM 1600
12	* Spacer	AISI 316 / 1.4401
13	Handle	AISI 304 / 1.4301
14	Handle end	Vinyl
14	Handle end (optional)	AISI 316L / 1.4404
15	Compression nut	AISI 304 / 1.4301
16	* Spring washers	AISI 304 / 1.4301
17	* Lock washer	AISI 304 / 1.4301
18	Fixing bolt	AISI 304 / 1.4301
19	Stop pin	AISI 304 / 1.4301
20	Handle stopper	AISI 304 / 1.4301
21	Fixing screw	AISI 304 / 1.4301
22	Antistatic device	AISI 316 / 1.4401
23	O-ring	Viton

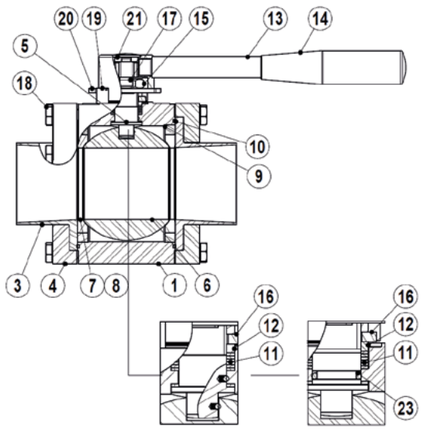
* Available spare parts;

Remarks: FDA / USP Class VI seals certificate on request.

All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.







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ORDERING CODES M3HP											
Valve model	**MHP**	**X**	**X**	**X**	**F**	**X**	**X**	**CD**	**X**	**65**	
M3HP 3 pieces ball valve - AISI 316L	**MHP**										
Lever handle											
Round lever handle stainless steel / plastic cover		**X**									
Round lever handle complete stainless steel		**1**									
Flat lever handle stainless steel / plastic cover		**2**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
AISI 316L / 1.4404			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish a)											
Standard surface finish						**X**					
Mirror mechanical polished external surfaces (SF1)						**P**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps DIN 32676								**CD**			
ETO – Extended tube orbital welding DIN 11850 (360º rotation)								**TD**			
TC / ETO – Combination DIN (360º rotation)								**CTD**			
Ball port											
Full bore (standard)									**X**		
True bore									**NA**		
Size											
DN 65										**65**	
DN 80										**80**	
DN 100										**100**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.

NA – Not available.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3HP.25 E 08.16

HYGIENIC BALL VALVES
M3H TRUE BORE
(1/2” – 2” ASME BPE)

DESCRIPTION

M3H three pieces body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

True bore floating ball design.
A351 CF3M body and ends with ferrite content of less than 2% and low sulphur between 0,005 and 0,017%.
Can be serviced without removal from pipeline.
Tube weld with loose body flanges (360º rotation after installation).
Bidirectional.
Antistatic device.
Anti blow out proof stem.
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: as casted.
Ultrasonic cleaning.

OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

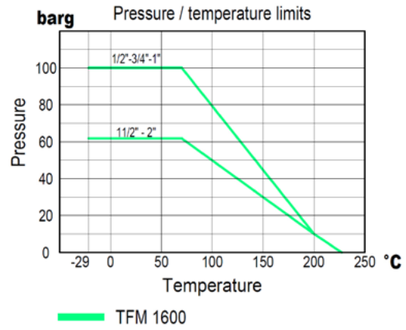
AVAILABLE MODELS: M3H – Investment casting.

SIZES: 1/2” to 2”.

CONNECTIONS: According to ASME BPE.
TC – Sanitary clamps.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film to avoid contamination.

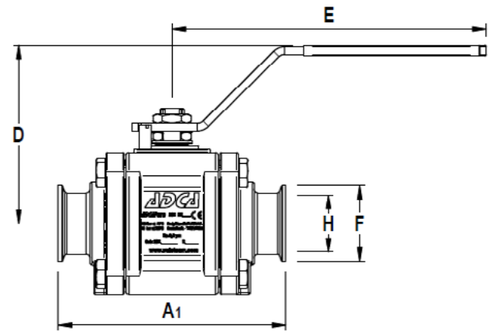
INSTALLATION: See IMI - Installation and maintenance instructions.

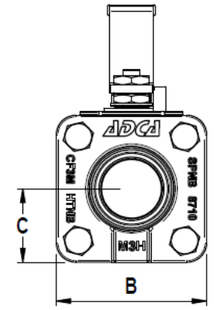


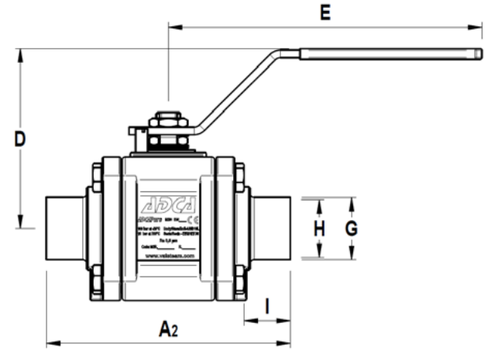
Note: Working pressure may be limited by the valve connections.

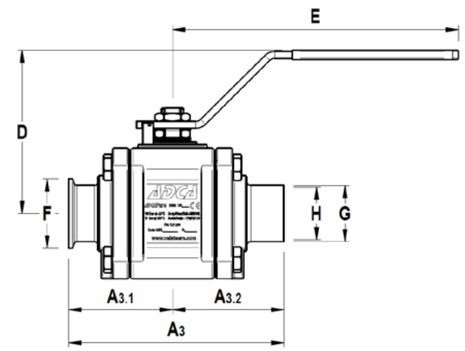
CE MARKING – GROUP 2 (PED – European Directive)		
PN63	**PN100**	**Category**
—	1/2” to 1”	SEP
11/2” to 2”	—	1 (CE marked)

DIMENSIONS (mm) ASME BPE																
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
1/2”	88,9	101,6	95,5	44	51,5	42	21	65	150	25	12,7	9,4	25	9,4	F03	0,42
3/4”	101,6	114,3	108	51	57	50	25	69	150	25	19,05	15,75	27	15,8	F03	0,99
1”	114,3	127	120,5	57	63,5	62	31	87	175	50,5	25,4	22,1	27	22,1	F04	2,1
11/2”	139,7	152,4	146,5	70	76,5	85	42,5	114	207	50,5	38,1	34,8	27	34,8	F05	4,3
2”	165,1	177,8	171,5	82,5	89	105	52,5	124	232	64	50,8	47,5	28	47,5	F05	7,3

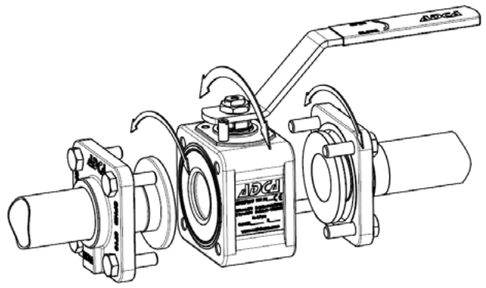








Tube weld easy and quick installation - standard



Loose body flanges make it possible to install the valve without the aligning of welded end connections.
After installation the valve can rotate 360º for the desired orientation.

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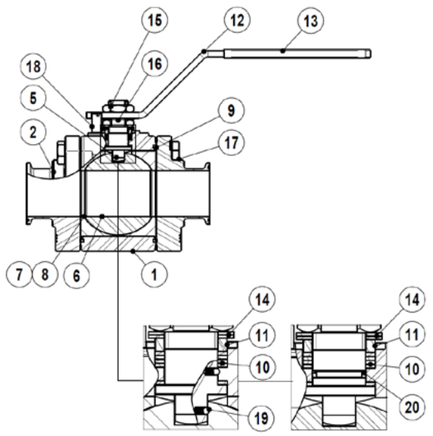
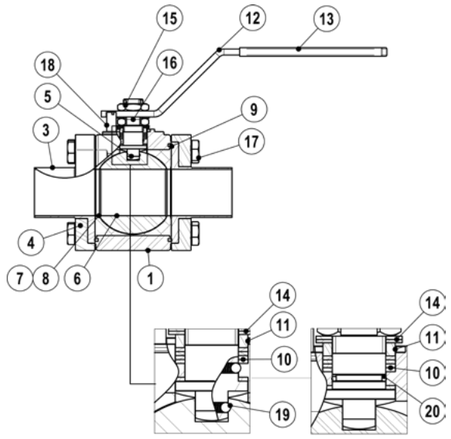
We reserve the right to change the design and material of this product without notice.

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	CF3M / 1.4409
2	TC end connection	CF3M / 1.4409
3	Tube weld end connection	AISI 316L / 1.4404
4	** Flange	CF3M / 1.4409
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	* Body seal	PTFE
10	* Stem seals	TFM 1600
11	* Spacer	AISI 316 / 1.4401
12	Handle	AISI 304 / 1.4301
13	Handle end	Vinyl
14	* Spring washers	AISI 304 / 1.4301
15	Compression nut	AISI 304 / 1.4301
16	* Lock washer	AISI 304 / 1.4301
17	Fixing bolt	AISI 304 / 1.4301
18	Stop pin	AISI 304 / 1.4301
19	Antistatic device	AISI 316 / 1.4401
20	O-ring	Viton

* Available spare parts;
** Loose flange, allows a 360º rotation of the valve when using tube weld connections.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





LRQA CERTIFIED ISO 9001
EHEDG Valsteam ADCA is an EHEDG Member
ADCA

ORDERING CODES M3H											
Valve model	**MH**	**X**	**X**	**X**	**F**	**X**	**X**	**CB**	**X**	**15**	
M3H 3 pieces ball valve CF3M	**MH**										
Lever handle											
Flat lever handle stainless steel / plastic cover		**X**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
CF3M / 1.4409			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish (a)											
Standard surface finish						**X**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps ASME BPE								**CB**			
ETO – Extended tube orbital welding ASME BPE (360º rotation design)								**TB**			
TC / ETO – Combination ASME BPE (360º rotation design)								**CTB**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
1/2”										**15**	
3/4”										**20**	
1”										**25**	
11/2”										**40**	
2”										**50**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

(a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.
NA – Not available.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3H.10 E 13.16

HYGIENIC BALL VALVES
M3H TRUE BORE
(21/2” – 4” ASME BPE)

DESCRIPTION

M3H three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

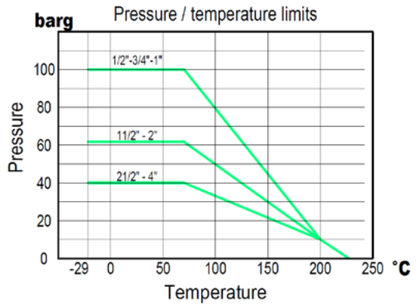
MAIN FEATURES

True bore floating ball design.
A351 CF3M body and ends with ferrite content of less than 2% and low sulphur between 0,005 and 0,017%.
Can be serviced without removal from pipeline.
Tube weld with loose body flanges (360º rotation after installation).
Bidirectional.
Antistatic device.
Anti blow out proof stem.
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: as casted.
Ultrasonic cleaning.

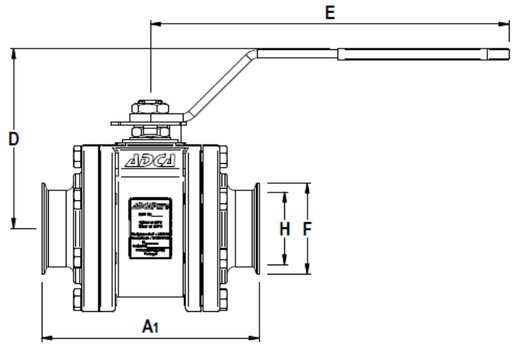
OPTIONS:	Different sealing materials. Degreased for oxygen use. Cavity filler.
USE:	Clean steam, gases and liquids compatible with the construction.
AVAILABLE MODELS:	M3H – Investment casting.
SIZES:	21/2” to 4”.
CONNECTIONS:	According to ASME BPE. TC – Sanitary clamps. ETO – Extended tube orbital welding. TC / ETO – Combination.
PACKAGING:	Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.
INSTALLATION:	See IMI - Installation and maintenance instructions.

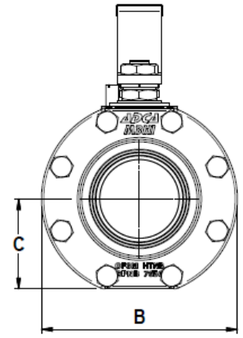


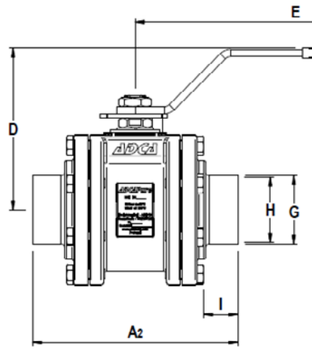
Note: Working pressure may be limited by the valve connections.

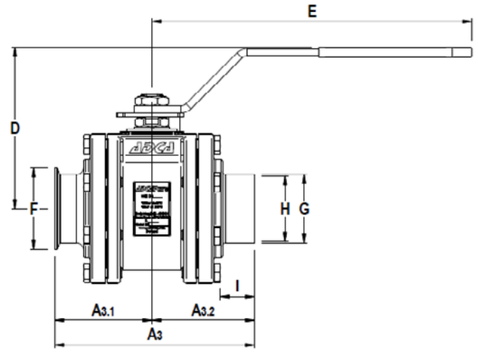
CE MARKING – GROUP 2 (PED – European Directive)	
PN40	**Category**
21/2” to 4”	1 (CE marked)

DIMENSIONS (mm) ASME BPE																
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
21/2”	190	203	196,3	95	101,5	160	72,5	169	400	77,5	63,5	60,2	37	60,2	F7	13,3
3"	216	228	222	108	111	180	83,5	180	400	91	76,2	72,9	38	72,9	F7	18,6
4”	254	267	260,5	127	133,5	220	101,5	198	400	119	101,6	97,4	44	97,4	F10	29,6

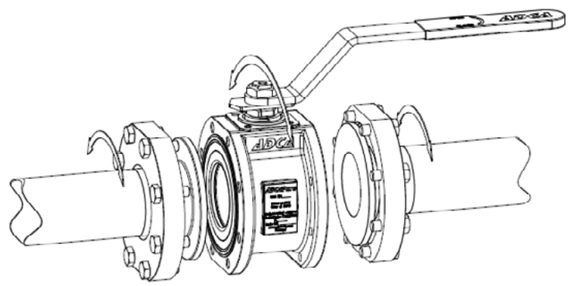








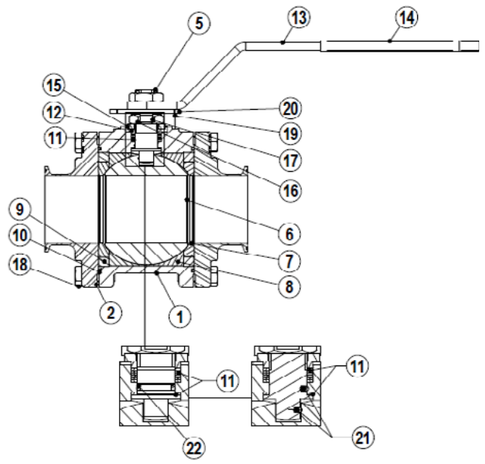
Tube weld easy and quick installation - standard

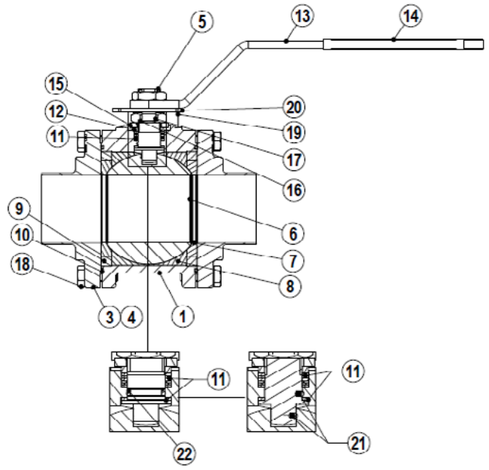


Loose body flanges make it possible to install the valve without aligning of the welded end connections.
After installation the valve can rotate on 360º for the desired orientation.

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	CF3M / 1.4409
2	TC end connection	CF3M / 1.4409
3	Tube weld end connection	AISI 316L / 1.4404
4	** Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	Body ring	AISI 316L / 1.4404
10	* Body seal	PTFE
11	* Stem seals	TFM 1600
12	* Spacer	AISI 316 / 1.4401
13	Handle	AISI 304 / 1.4301
14	Handle end	Vinyl
15	* Spring washers	AISI 304 / 1.4301
16	Compression nut	AISI 304 / 1.4301
17	* Lock washer	AISI 304 / 1.4301
18	Fixing bolt	AISI 304 / 1.4301
19	Stop pin	AISI 304 / 1.4301
20	Handle stopper	AISI 304 / 1.4301
21	Antistatic device	AISI 316 / 1.4401
22	O-ring	Viton

* Available spare parts;
** Loose flange. Allows a 360º rotation of the valve when using tube weld connections.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.





ORDERING CODES M3H											
Valve model	**MH**	**X**	**X**	**X**	**F**	**X**	**X**	**CB**	**X**	**65**	
M3H 3 pieces ball valve CF3M	**MH**										
Lever handle											
Flat lever handle stainless steel / plastic cover		**X**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
CF3M / 1.4409			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish (a)											
Standard surface finish						**X**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps ASME BPE								**CB**			
ETO – Extended tube orbital welding ASME BPE (360º rotation design)								**TB**			
TC / ETO – Combination ASME BPE (360º rotation design)								**CTB**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
21/2”										**65**	
3”										**80**	
4”										**100**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

(a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.
NA – Not available.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3H.15 E 10.16

HYGIENIC BALL VALVES
M3H TRUE BORE
(DN 10 – 50 DIN)

DESCRIPTION

M3H three pieces body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

True bore floating ball design.
A351 CF3M body and ends with ferrite content of less than 2% and low sulphur between 0,005 and 0,017%.
Can be serviced without removal from pipeline.
Tube weld with loose body flanges (360º rotation after installation).
Bidirectional.
Antistatic device.
Anti blow out proof stem.
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: as casted.
Ultrasonic cleaning.

OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

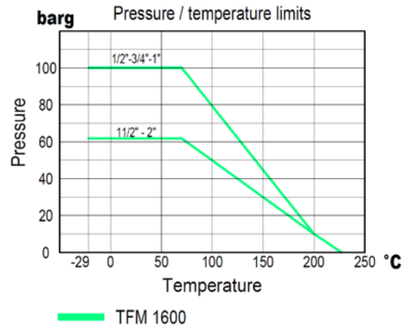
AVAILABLE MODELS: M3H – Investment casting.

SIZES: DN 10 to DN 50.

CONNECTIONS: According to DIN 11850 tube.
TC – Sanitary clamps DIN 32676.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film to avoid contamination.

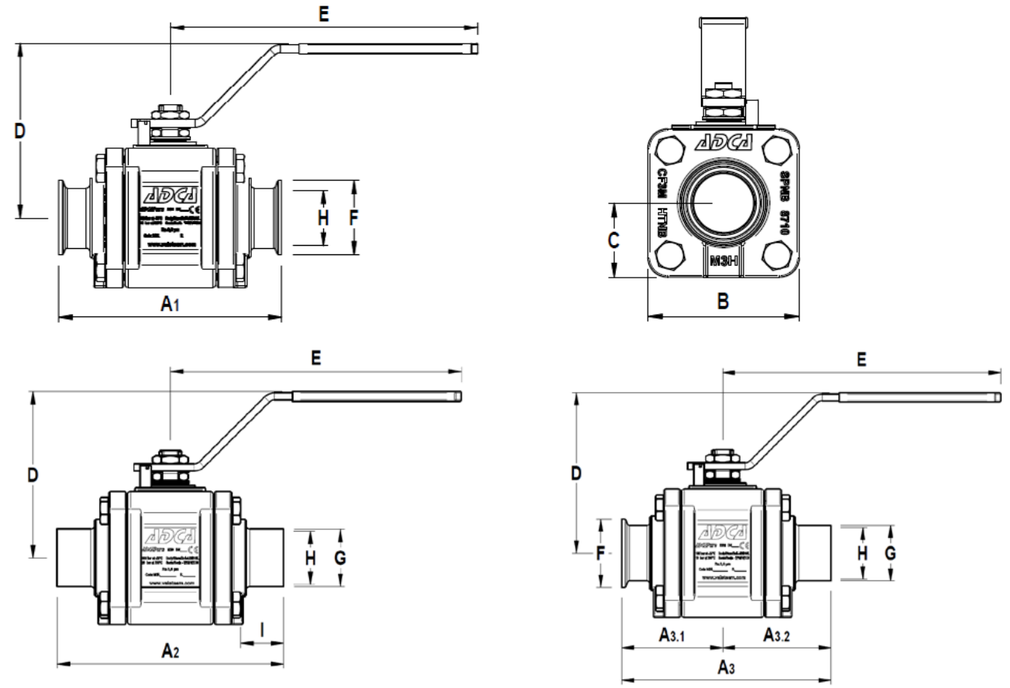
INSTALLATION: See IMI - Installation and maintenance instructions.



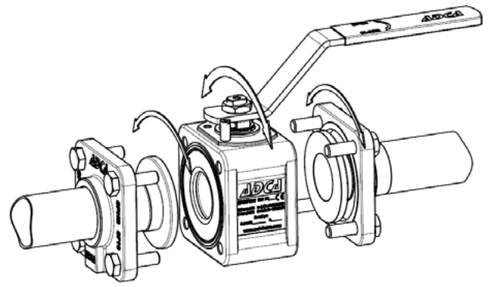
Note: Working pressure may be limited by the valve connections.

CE MARKING – GROUP 2 (PED – European Directive)		
PN63	**PN100**	**Category**
–	DN 10 to 20	SEP
DN 25 to 32	–	SEP
DN 40 to 50	–	1 (CE Marked)

DIMENSIONS (mm) DIN																
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
DN 10	90	102	96	45	51	42	21	65	150	34	13	10	25	10	F03	0,73
DN 15	100	114	107	50	57	50	25	69	150	34	19	16	27	16	F03	1,49
DN 20	115	127	121,5	57,5	64	62	31	87	175	34	23	20	27	20	F04	1,94
DN 25	125	135	130,5	62,5	68	72	36	92	175	50,5	29	26	27	26	F04	2,62
DN 32	140	153	147	71	76	85	42,5	114	207	50,5	35	32	27	32	F05	4,41
DN 40	150	161	155	75	80	95	47,5	119	207	50,5	41	38	27	38	F05	5,5
DN 50	165	178	172	82	90	105	52,5	124	232	64	53	50	28	50	F05	7



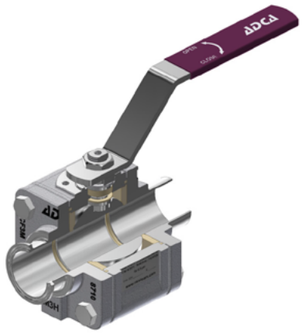
Tube weld easy and quick installation - standard

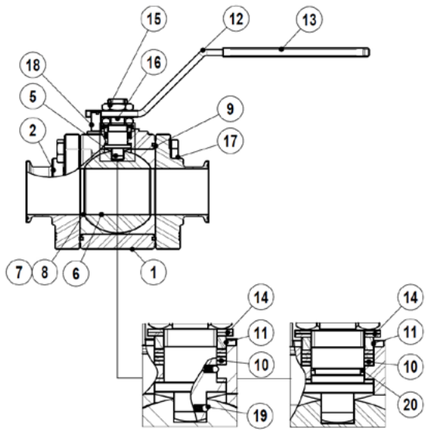


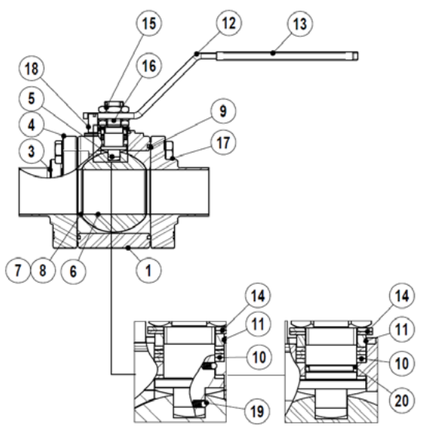
Loose body flanges make it possible to install the valve without the aligning of welded end connections.
After installation the valve can rotate 360º for the desired orientation.

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	CF3M / 1.4409
2	TC end connection	CF3M / 1.4409
3	Tube weld end connection	AISI 316L / 1.4404
4	** Flange	CF3M / 1.4409
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	* Body seal	PTFE
10	* Stem seals	TFM 1600
11	* Spacer	AISI 316 / 1.4401
12	Handle	AISI 304 / 1.4301
13	Handle end	Vinyl
14	* Spring washers	AISI 304 / 1.4301
15	Compression nut	AISI 304 / 1.4301
16	* Lock washer	AISI 304 / 1.4301
17	Fixing bolt	AISI 304 / 1.4301
18	Stop pin	AISI 304 / 1.4301
19	Antistatic device	AISI 316 / 1.4401
20	* O-ring	Viton

* Available spare parts;
** Loose flange. Allows a 360º rotation of the valve when using tube weld connections.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.







ORDERING CODES M3H											
Valve model	**MH**	**X**	**X**	**X**	**F**	**X**	**X**	**CD**	**X**	**15**	
M3H 3 pieces ball valve CF3M	**MH**										
Lever handle											
Flat lever handle stainless steel / plastic cover		**X**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
CF3M / 1.4409			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish (a)											
Standard surface finish						**X**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps DIN 32676								**CD**			
ETO – Extended tube orbital welding DIN 11850 (360º rotation design)								**TD**			
TC / ETO – Combination DIN (360º rotation design)								**CTD**			
Ball port											
True bore (standard)									**X**		
Full bore									**NA**		
Size											
DN 10										**10**	
DN 15										**15**	
DN 20										**20**	
DN 25										**25**	
DN 32										**32**	
DN 40										**40**	
DN 50										**50**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

(a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.
NA – Not available.

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3H.20 E 12.16

HYGIENIC BALL VALVES
M3H FULL BORE
(DN 65 – 100 DIN)

DESCRIPTION

M3H three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

Full bore floating ball design.
A351 CF3M body and ends with ferrite content of less than 2% and low sulphur between 0,005 and 0,017%.
Can be serviced without removal from pipeline.
Tube weld with loose body flanges (360º rotation after installation).
Bidirectional.
Antistatic device.
Anti blow out proof stem.
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: as casted.
Ultrasonic cleaning.

OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

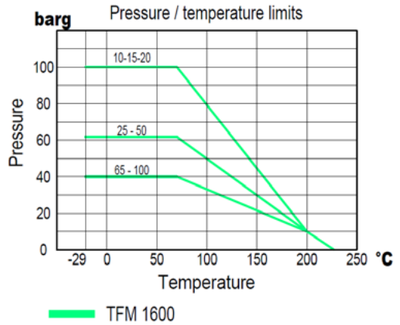
AVAILABLE MODELS: M3H – investment casting.

SIZES: DN 65 to DN 100.

CONNECTIONS: According to DIN 11850 tube.
TC – Sanitary clamps DIN 32676.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

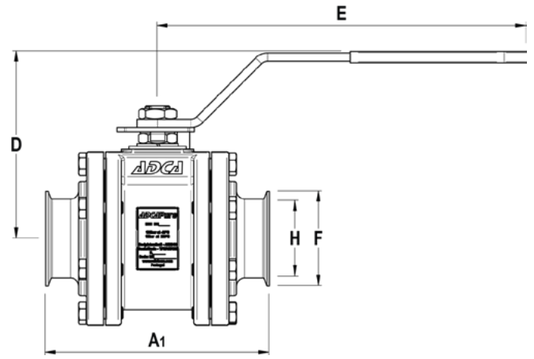
INSTALLATION: See IMI – Installation and maintenance instructions.

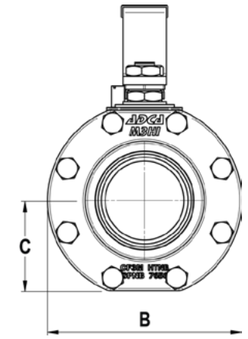


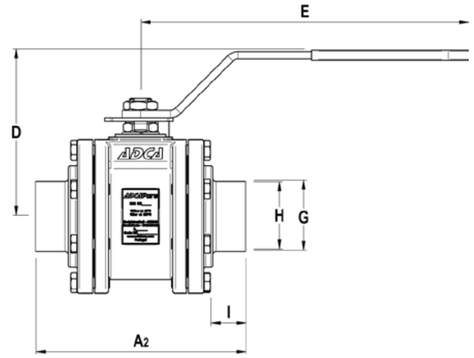
Note: Working pressure may be limited by the valve connections.

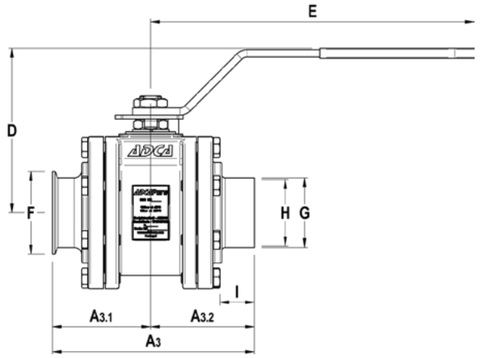
CE MARKING – GROUP 2 (PED – European Directive)	
PN 40	**Category**
DN 65 to DN 100	1 (CE marked)

DIMENSIONS (mm) DIN																
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
65	190	203	197	95	98,5	160	72,5	169	400	91	70	66	37	62	F7	13,3
80	216	228	222	108	111	180	83,5	180	400	106	85	81	38	75	F7	18,6
100	255	267	261	127,5	133,5	220	101,5	198	400	119	104	100	44	98	F10	29,6

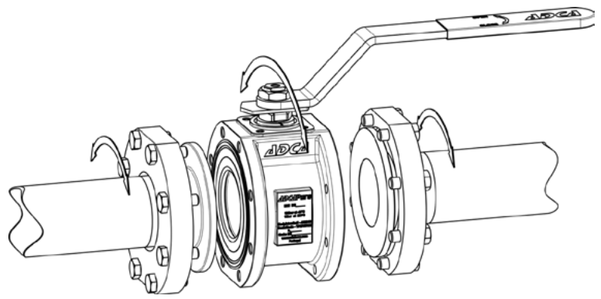








Tube weld easy and quick installation - standard

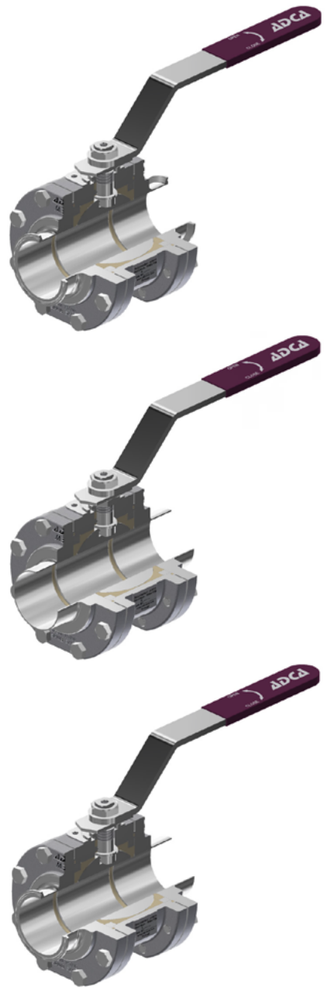


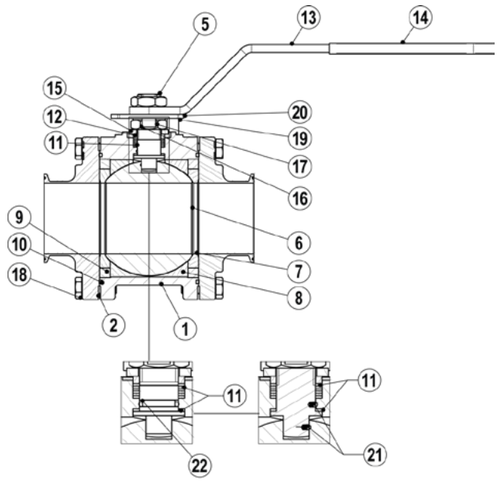
Loose body flanges make it possible to install the valve without aligning of the welded end connections.
After installation the valve can rotate on 360º for the desired orientation.

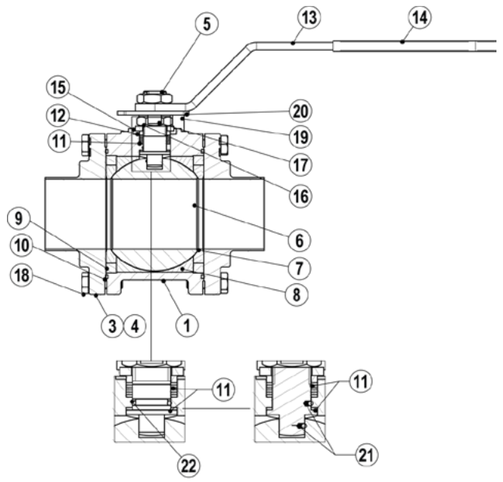
VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3H.25 E 11.16

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	A351 CF3M / 1.4409
2	TC end connection	A351 CF3M / 1.4409
3	Tube weld end connection	AISI 316L / 1.4404
4	** Flange	AISI 316L / 1.4404
5	Stem	AISI 316L / 1.4404
6	* Valve ball	AISI 316L / 1.4404
7	* Standard seat	TFM 1600
8	* Cavity filler seat	TFM 1600
9	Body ring	AISI 316L / 1.4404
10	* Body seal	PTFE
11	* Stem seals	TFM 1600
12	* Spacer	AISI 316 / 1.4401
13	Handle	AISI 304 / 1.4301
14	Handle sleeve	Vinyl
15	* Spring washers	AISI 304 / 1.4301
16	Compression nut	AISI 304 / 1.4301
17	* Lock washer	AISI 304 / 1.4301
18	Fixing bolt	AISI 304 / 1.4301
19	Stop pin	AISI 304 / 1.4301
20	Handle stopper	AISI 304 / 1.4301
21	Antistatic device	AISI 316 / 1.4401
22	O-ring	Viton

* Available spare parts;
** Loose flange. Allows a 360º rotation of the valve when using tube weld connections.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.







LRQA CERTIFIED ISO 9001
EHEDG Valsteam ADCA is an EHEDG Member
ADCA

ORDERING CODES M3H											
Valve model	**MH**	**X**	**X**	**X**	**F**	**X**	**X**	**CD**	**X**	**65**	**E**
M3H – A351 CF3M / 1.4409 3 pieces ball valve	**MH**										
Lever handle											
Flat lever handle stainless steel / plastic cover		**X**									
Flat lever handle stainless steel / plastic cover w/ lockable system		**3**									
Bare stem		**9**									
Material											
A351 CF3M / 1.4409			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish (a)											
Standard surface finish						**X**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps DIN 32676								**CD**			
ETO – Extended tube orbital welding DIN 11850 (360º rotation design)								**TD**			
TC / ETO – Combination DIN (360º rotation design)								**CTD**			
Ball port											
Full bore (standard)									**X**		
True bore									**NA**		
Size											
DN 65										**65**	
DN 80										**80**	
DN 100										**100**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

(a) Consult IS PV20.00 – Technical information – for further details and other surface finish options.
NA – Not available.

HYGIENIC BALL VALVES
M3H FULL BORE
(6" ASME BPE)

DESCRIPTION

M3H three piece body ball valves are isolating valves designed for use with clean steam, condensate and other gases and liquids used in high purity and aseptic processes.
The valve is not designed as a control valve and should only be used as an isolating valve, fully open or fully closed.
The product is mainly designed for the pharmaceutical, biotech, semiconductor, cosmetics, fine chemical, food and beverage industries.

MAIN FEATURES

Full bore floating ball design.
A351 CF3M body and ends with ferrite content of less than 2% and low sulphur between 0,005 and 0,017%.
Can be serviced without removal from pipeline.
Tube weld with loose body flanges (360º rotation after installation).
Bidirectional.
Antistatic device.
Anti blow out proof stem.
ISO 5211 mounting.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: as casted.
Ultrasonic cleaning.

OPTIONS: Different sealing materials.
Degreased for oxygen use.
Cavity filler.

USE: Clean steam, gases and liquids compatible with the construction.

AVAILABLE MODELS: M3H – investment casting.

SIZES: 6".

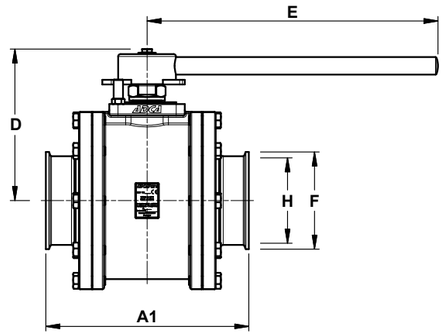
CONNECTIONS: According to ASME BPE.
TC – Sanitary clamps.
ETO – Extended tube orbital welding.
TC / ETO – Combination.

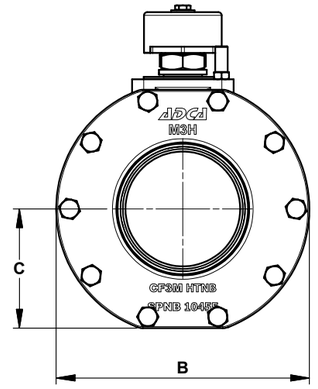
PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

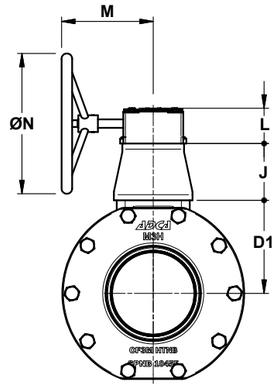
INSTALLATION: See IMI – Installation and maintenance instructions.

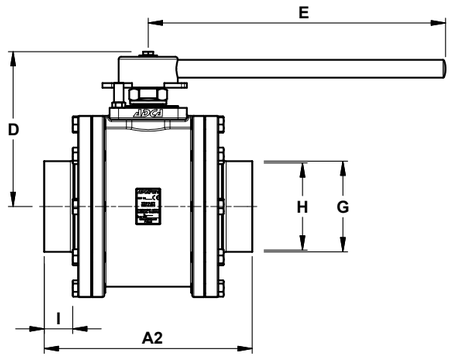
CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
6"	1 (CE marked)

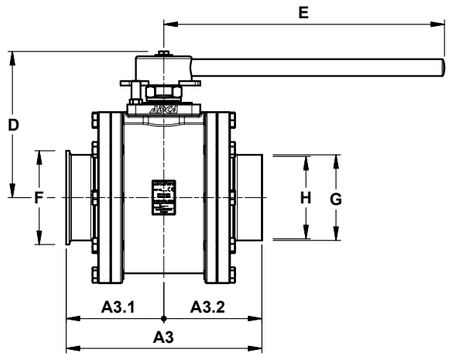
DIMENSIONS (mm) ASME BPE																					
SIZE	**A1**	**A2**	**A3**	**A3.1**	**A3.2**	**B**	**C**	**D**	**D1**	**E**	**F**	**G**	**H**	**I**	**J**	**L**	**M**	**N**	**BALL PORT**	**ISO 5211**	**WGT. (kg)**
6"	350	350	350	175	175	324	153	260	166	500	167	152	147	48	101	63	164	250	152,4	F14	94,9



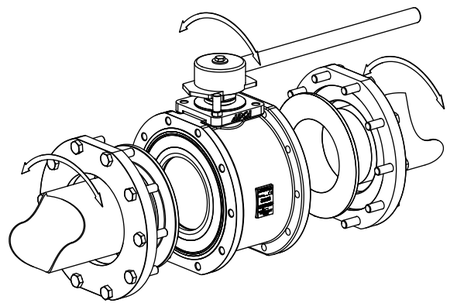








Tube weld easy and quick installation - standard



Loose body flanges make it possible to install the valve without aligning of the welded end connections.
After installation the valve can rotate on 360º for the desired orientation.

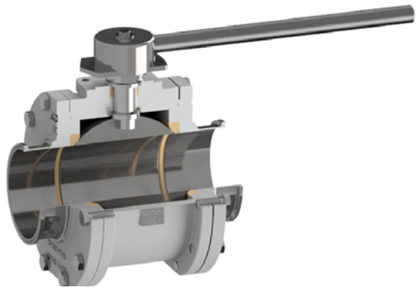
VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.
IS M3H.30 E 05.18

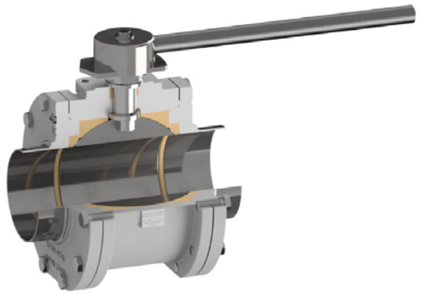
MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	A351 CF3M / 1.4409
2	TC end connection	A351 CF3M / 1.4409
3	Tube weld end connection	A351 CF3M / 1.4409
4	Stem	AISI 316L / 1.4404
5	* Valve ball	AISI 316L / 1.4404
6	* Standard seat	TFM 1600
7	* Cavity filler seat	TFM 1600
8	Body ring	AISI 316L / 1.4404
9	* Body seal	PTFE
10	* Stem seals	TFM 1600
11	* Stem thrust seal	TFM 1600 - PEEK
12	* Spacer	AISI 316 / 1.4401
13	Spring washer	AISI 304 / 1.4301
14	Compression nut	AISI 304 / 1.4301
15	* Lock washer	AISI 304 / 1.4301
16	Fixing screw	AISI 304 / 1.4301
17	Handle stopper pin	AISI 304 / 1.4301
18	Handle stopper	AISI 304 / 1.4301
19	Handle fixing bolt	AISI 304 / 1.4301
20	Handle	AISI 304 / 1.4301
21	Bracket	AISI 304 / 1.4301
22	Bracket stem	AISI 304 / 1.4301
23	Bracket bolts	AISI 304 / 1.4301
24	Gearbox	Cast iron

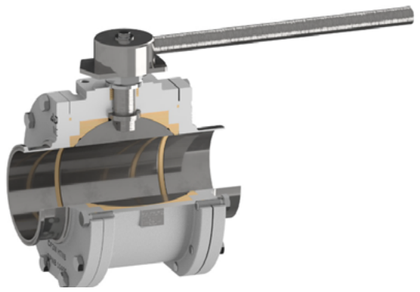
* Available spare parts.

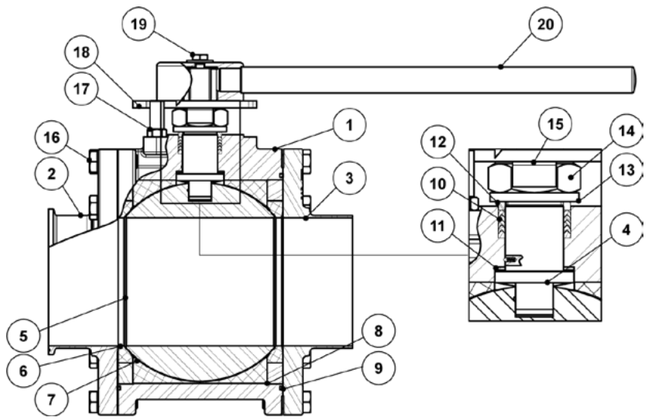
Remarks: FDA / USP Class VI seals certificate on request.

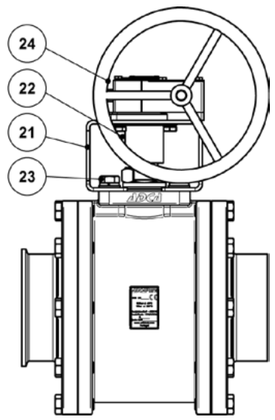
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.











ORDERING CODES M3H											
Valve model	**MH**	**1**	**X**	**X**	**F**	**X**	**X**	**CB**	**X**	**150**	
M3H – A351 CF3M / 1.4409 3 pieces ball valve	**MH**										
Lever handle											
Round lever handle complete stainless steel		**1**									
Bare stem		**9**									
Material											
A351 CF3M / 1.4409			**X**								
Seat design											
Standard seats				**X**							
Cavity fillers				**F**							
Seat material											
TFM 1600					**F**						
Surface finish (a)											
Standard surface finish						**X**					
Electropolished internal wetted parts (SF5)						**E**					
Special features											
None							**X**				
Oxygen cleaning							**O**				
End connections											
TC – Sanitary clamps ASME BPE								**CB**			
ETO – Extended tube orbital welding ASME BPE (360º rotation design)								**TB**			
TC / ETO – Combination ASME BPE (360º rotation design)								**CTB**			
Ball port											
Full bore (standard)									**X**		
True bore									**NA**		
Size											
6"										**150**	
Special valves / Extras											
Full description or additional codes have to be added in case of a non standard combination											**E**

(a) Consult IS PV20.00 – Technical information – for further details and other surface finish options.
NA – Not available.

VALSTEAM ADCA

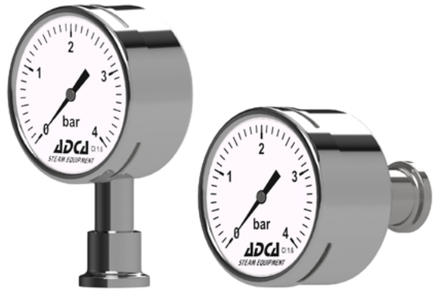
We reserve the right to change the design and material of this product without notice.

IS M3H.30 E 05.18

SANITARY PRESSURE GAUGES
SMAN-63

DESCRIPTION

The SMAN-63 are reliable general purpose sanitary bourdon tube pressure gauges designed for pressure measurement of liquid and gaseous media. These units have a size diameter of 63 mm, range marked in bar and are fully manufactured in stainless steel.



MAIN FEATURES

Compact full stainless steel construction.
Wetted parts in AISI 316L / 1.4435 – flush diaphragm.
Designed according to EN 837-1.
Bayonet lock case with blow-out.
Suitable to be filled with glycerine.

USE: Gases and liquids compatible with the construction.

AVAILABLE MODELS: SMAN-63R – radial connection.
SMAN-63A – axial connection.

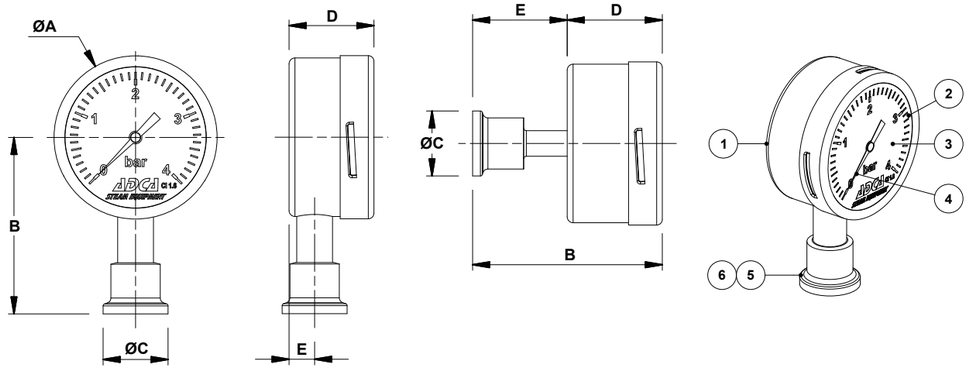
SIZES: 3/4".

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

MEASURING RANGES: 0 to 4 bar, 0 to 6 bar, 0 to 10 bar and 0 to 16 bar.

LIMITING CONDITIONS	
Accuracy	±2,5% FS
IP rating	IP 65
Maximum allowable pressure	Full scale reading
Maximum operating temperature *	120 ºC
Minimum operating temperature	- 20 ºC
Ambient temperature	- 10 ºC to 60 ºC

* 150 ºC for short term (cleaning).



DIMENSIONS (mm)						
MODEL	**ØA**	**B**	**ØC**	**D**	**E**	**WEIGHT (kg)**
SMAN-63R	63,8	69	25,4	33,2	10	0,2
SMAN-63A	63,8	74,2	25,4	37,2	37	0,4

MATERIALS					
POS. Nº	**DESIGNATION**	**MATERIAL**	**POS. Nº**	**DESIGNATION**	**MATERIAL**
1	Case and bezel ring	AISI 304 / 1.4301	**4**	Pointer	Black aluminium
2	Window	Glass	**5**	Connection	AISI 316L / 1.4435
3	Dial	White aluminium	**6**	Measuring system	AISI 316L / 1.4435

HUMIDITY SEPARATORS
CLEAN STEAM SEPARATOR
S10H

DESCRIPTION

When wet steam is used in sterilization, moisture in suspension reduces the heat transfer efficiency, and the validity of the sterilization process can be compromised.
S10H series baffle separators remove moisture from steam pipelines. Steam passes through the separator and as a result of expansion, impact and swirling effects, the particles with a heavier specific gravity are separated, such as water droplets and moisture in suspension.
The condensate collected at the bottom of the separator must be automatically drained by a suitable steam trap.

MAIN FEATURES

316L stainless steel construction.
No moving parts.
Self draining design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: Satin bead blast finish – 1,6 micron Ra.
Other surface conditions see IS PV20.00 E – Technical information.

OPTIONS: Vent connection.
Different kinds of connections and dimensions.

USE: Steam, compressed air and other gases (Group 2).

AVAILABLE MODELS: S10H – horizontal connections, baffle design.
S10HA – S10H with air vent connection.

SIZES: 1/2” to 3”.

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

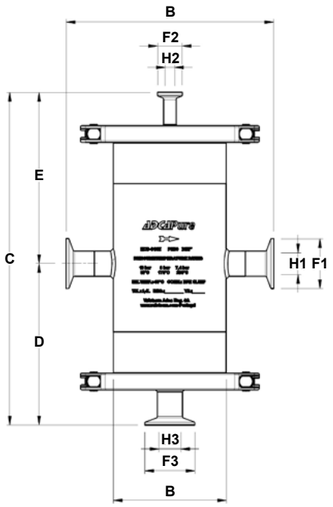
INSTALLATION: Always with the condensate discharge pointing downwards.
See IMI – Installation and maintenance instructions.

HOW TO SELECT: Generally, in an existing plant it is advisable to fit a separator with the same size of the pipe line. Pressure drop is normally negligible. For approximate pressure drop calculation, consult manufacturer.

BODY LIMITING CONDITIONS	
ALLOWABLE PRESSURE	**RELATED TEMPERATURE**
10 bar	50 ºC
8 bar *	175 ºC
7,4 bar	200 ºC

* PMO – Max. operating pressure for saturated steam.
Minimum operating temperature: -10 ºC.
Design code: AD-Merkblatt.

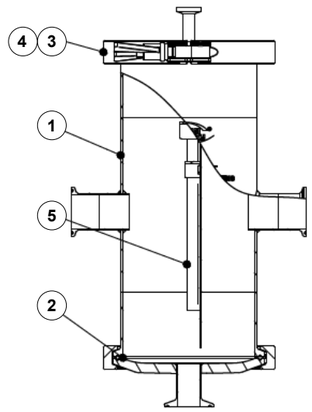
CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" to 2”	SEP
21/2” to 3”	1 (CE Marked)



DIMENSIONS (mm)													
SIZE	**A**	**B**	**C**	**D**	**E**	**F1**	**F2**	**F3**	**H1**	**H2**	**H3**	**VOL. (dm^3)**	**WEIGHT (kg)**
1/2"	210	114	338	163	175	25	25	50,5	9,4	9,4	22,1	2,4	5
3/4”	210	114	338	163	175	25	25	50,5	15,75	9,4	22,1	2,4	5
1”	210	114	338	163	175	50,5	25	50,5	22,1	9,4	22,1	2,4	5,1
11/2"	240	140	404	163	209	50,5	25	50,5	34,8	9,4	22,1	4,7	9,6
2”	240	140	404	195	209	64	25	50,5	47,5	9,4	22,1	4,7	9,6
21/2”	270	168	478	235	244	77,5	25	50,5	60,2	9,4	22,1	8,4	13,7
3”	270	168	478	235	244	91	25	50,5	72,9	9,4	22,1	8,6	13,8

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Clamp	AISI 316L / 1.4404
4	* Seal	FKM / PTFE
5	Internals	AISI 316L / 1.4404

* Available spare parts.
EN 10204 3.1 certificate available if requested along with the order.
Remarks: FDA / USP Class VI seals certificate on request.
All separators have a serial number. In case of non-standard separators, this number must be supplied if spare parts are ordered.



HUMIDITY SEPARATORS
CLEAN STEAM CENTRIFUGAL SEPARATOR
S10HV

DESCRIPTION

When wet steam is used in sterilization, moisture in suspension reduces the heat transfer efficiency, and the validity of the sterilization process can be compromised.
S10HV series centrifugal separators remove moisture from steam pipelines. Steam passes through the separator and as a result of centrifugal forces, impact and swirling effects, the particles with a heavier specific gravity are separated, such as water droplets and moisture in suspension.
The condensate collected at the bottom of the separator must be automatically drained by a suitable steam trap.

MAIN FEATURES

316L stainless steel construction.
No moving parts.
Self draining design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: Satin bead blast finish – 1,6 micron Ra.
Other surface conditions see IS PV20.00 E – Technical information.

OPTIONS: Different kinds of connections and dimensions.

USE: Steam, compressed air and other gases (Group 2).

AVAILABLE MODELS: S10HV – horizontal inlet, vertical outlet.

SIZES: 1/2" to 2".

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

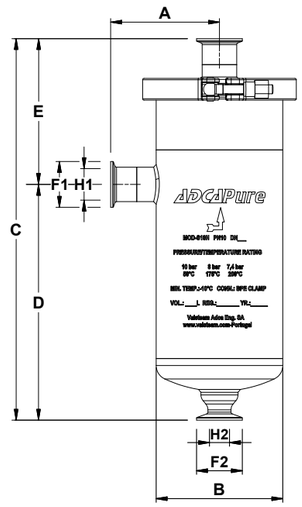
INSTALLATION: Always with the condensate discharge pointing downwards.
See IMI – Installation and maintenance instructions.

HOW TO SELECT: Generally, in an existing plant it is advisable to fit a separator with the same size of the pipe line. Pressure drop is normally negligible. For approximate pressure drop calculation, consult manufacturer.

BODY LIMITING CONDITIONS	
ALLOWABLE PRESSURE	**RELATED TEMPERATURE**
10 bar	50 ºC
8 bar *	175 ºC
7,4 bar	200 ºC

* PMO – Max. operating pressure for saturated steam.
Minimum operating temperature: -10 ºC.
Design code: AD-Merkblatt.

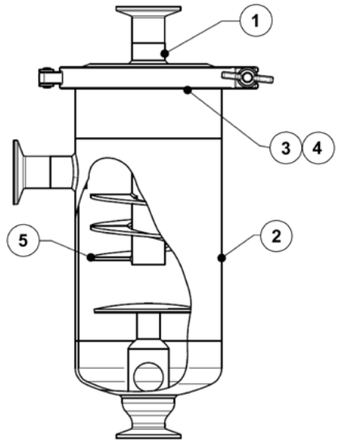
CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" to 1"	SEP
11/2" and 2"	1



DIMENSIONS (mm)											
SIZE	**A**	**B**	**C**	**D**	**E**	**F1**	**H1**	**F2**	**H2**	**VOL. (dm^3)**	**WEIGHT (kg)**
1/2"	105	114	326	195	131	25	9,4	50,5	22,1	2,84	3,8
3/4"	105	114	326	195	131	25	15,75	50,5	22,1	2,87	3,9
1"	105	114	341	210	131	50,5	22,1	50,5	22,1	2,9	4,2
11/2"	120	140	421	260	161	50,5	34,8	50,5	22,1	5,82	7,25
2"	120	140	421	260	161	64	47,5	50,5	22,1	5,93	7,28

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Clamp	AISI 316L / 1.4404
4	* Seal	FKM / PTFE
5	Internals	AISI 316L / 1.4404

* Available spare parts.
EN 10204 3.1 certificate available if requested along with the order.
Remarks: FDA / USP Class VI seals certificate on request.
All separators have a serial number. In case of non-standard separators, this number must be supplied if spare parts are ordered.



HUMIDITY SEPARATORS
CLEAN STEAM CENTRIFUGAL SEPARATOR
S11

DESCRIPTION

When wet steam is used in sterilization, moisture in suspension reduces the heat transfer efficiency, and the validity of the sterilization process can be compromised.
S11 series centrifugal separators remove moisture from steam pipelines. Steam passes through the separator and, as a result of centrifugal forces, impact and swirling effects, the particles with a heavier specific gravity are separated, such as water droplets and moisture in suspension.
The condensate collected at the bottom of the separator must be automatically drained by a suitable steam trap.

MAIN FEATURES

316L stainless steel construction.
No moving parts.
Self draining design.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: Satin bead blast finish – 1,6 micron Ra.
Other surface conditions see IS PV20.00 E – Technical information.

OPTIONS: Vent connection.
Different kinds of connections and dimensions.

USE: Steam, compressed air and other gases.

AVAILABLE MODELS: S11 – inline connections.
S11A – S11 with air vent connection.

SIZES: 1/2" to 2".

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

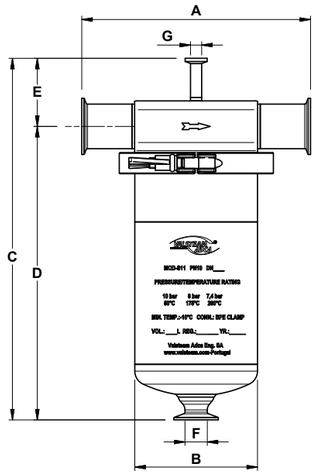
INSTALLATION: Always with the condensate discharge pointing downwards.
See IMI – Installation and maintenance instructions.

HOW TO SELECT: Generally, in an existing plant it is advisable to fit a separator with the same size of the pipe line. Pressure drop is normally negligible. For approximate pressure drop calculation please consult.

BODY LIMITING CONDITIONS	
ALLOWABLE PRESSURE	**RELATED TEMPERATURE**
10 bar	50 ºC
8 bar *	175 ºC
7,4 bar	200 ºC

* PMO – Max. operating pressure for saturated steam.
Minimum operating temperature: -10 ºC.
Design code: AD-Merkblatt.

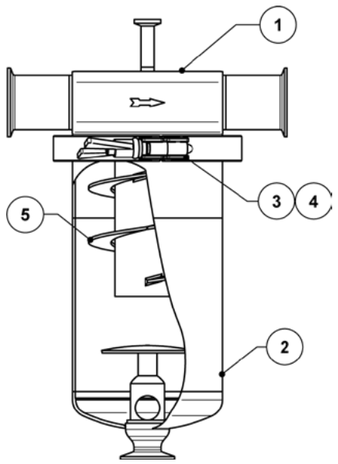
CE MARKING – GROUP 2 (PED – European Directive)	
PN 10	**Category**
1/2" to 1"	SEP
11/2" to 2"	1



DIMENSIONS (mm)													
SIZE	**A**	**B**	**C**	**D**	**E**	**F1**	**F2**	**F3**	**H1**	**H2**	**H3**	**VOL. (dm^3)**	**WEIGHT (kg)**
1/2"	215	114	345	283,5	62,5	25	25	50,5	9,4	9,4	22,1	2,84	3,8
3/4"	215	114	345	283,5	62,5	25	25	50,5	15,75	9,4	22,1	2,87	3,9
1"	215	114	345	283,5	62,5	50,5	25	50,5	22,1	9,4	22,1	2,9	4,2
11/2"	235	141	416	338,5	77,5	50,5	25	50,5	34,8	9,4	22,1	5,82	7,25
2"	260	141	416	338,5	77,5	64	25	50,5	47,5	9,4	22,1	5,93	7,28

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	* Clamp	AISI 316L / 1.4404
4	* Seal	FKM / PTFE
5	Internals	AISI 316L / 1.4404

* Available spare parts.
EN 10204 3.1 certificate available if requested along with the order.
Remarks: FDA / USP Class VI seals certificate on request.
All separators have a serial number. In case of non-standard separators, this number must be supplied if spare parts are ordered.



HYGIENIC DIRECT STEAM INJECTION HUMIDIFIERS
DSHS

DESCRIPTION

The presence of chemicals used in water treatment of plant steam boilers which produce steam used in humidification systems can have toxic effects on human health. Regulations have come into force in some countries so that only clean steam is used for humidification purposes and, to meet such requirements.
The ADCAPure DSHS series of hygienic direct steam injection humidifiers are designed to ensure highly efficient and moisture free clean steam injection in air ducts and AHU for humidification purposes. These units are completely manufactured in 316L stainless steel, and are available as plug and play packaged solutions or alternatively as individual components to be incorporated into humidification systems. Each humidifier is manufactured as a bespoke solution to meet flow requirements and duct design with single or multiple injection tubes.

Single tube humidifier

MAIN FEATURES

Quiet and efficient.
Hygienic design in 316L stainless steel.
Bespoke injection tubes to meet flow requirements and duct design.
Fully jacketed injection tubes providing moisture free steam injection.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: Satin bead blast finish – 1,6 micron Ra.
Other surface conditions see IS PV20.00 E – Technical information.

OPTIONS: Fully assembled in a plug and play package.

USE: Saturated steam.

AVAILABLE MODELS: DSHS10 and DSHS25.

INJECTION TUBE SIZES: 3/4" and 1".

CONNECTIONS: ASME BPE clamp ferrules.
Others on request.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Horizontal or vertical (pointing upwards) installation in horizontal air ducts.
Horizontal installation in vertical air ducts. See IMI – Installation and maintenance instructions.

Injection tube

S10HV centrifugal separator

OPERATION

Clean steam moves in the supply line passing, if necessary, through an ADCAPure pressure reducing valve to reduce it to humidification pressure (generally around 1 to 2 barg). Steam then passes through an ADCAPure S10HV centrifugal humidity separator which removes most of its moisture content. The separator special design dries the steam which is injected and also the steam which feeds the injection tube heating chamber keeping heating temperatures stable. As steam leaves the humidity separator and passes through the jacketed injection tubes it is kept at a constant temperature, preventing condensation to be carried over with the steam.
Condensate collects on the bottom of the separator and is removed from the system via a ADCAPure TSS6 thermostatic steam trap. Condensate which forms inside the injection tube heating chamber is removed by means of one or multiple steam traps depending on the case.
An ADCAPure hygienic control valve equipped with a fail-safe electric or pneumatic actuator provides accurate modulation of flow and, thus, precise humidity control.

ABSORPTION DISTANCE

Absorption distance is the dimension from the injection tube outlet to the downstream point where steam has been fully absorbed by the air passing through and is no longer visible as mist. The absorption distance serves as base for the calculation of the minimum distances to any obstacle (e.g. branches, filters, ventilators) installed downstream. If such obstacles would otherwise be located at a shorter distance, unabsorbed steam would hit those parts and condense, causing dripping which often results in microbial growth and, consequently, odors and an overall unhealthy air.

Absorption distance is mainly affected by:

- Air temperature: absorption distance decreases with increase in inlet air temperature.
- Inlet relative humidity: absorption distance decreases with increase in inlet relative humidity.
- Required relative humidity: absorption distance increases with increase in required relative humidity.
- Mixing homogeneity: absorption distance decreases with increase in mixing homogeneity.

SINGLE VS MULTI-TUBE HUMIDIFIERS

A single-tube humidifier is the most economically viable solution if a single injection tube respects the humidification load and the higher absorption distance (generally associated with single-tube humidifiers) is lower than the distance to any obstacle downstream – Consult Table 1 and Table 2.
If on the other hand, the available distance is insufficient to accommodate the necessary absorption distance of a single-tube solution or when duct height is significant then a multi-tube humidifier should be selected. This solution will shorten the necessary absorption distance by up to 4 times as the increase in injection points will decrease flow velocity and also promote an homogenous and efficient mixing – Consult Table 3 and Table 4.

TABLE 1 – INJECTION TUBE STEAM CAPACITY – SINGLE-TUBE (kg/h)

MODEL	C * (mm)	STEAM PRESSURE TO HUMIDIFIER SUPPLY CONNECTION (barg)															
		0,25	0,5	0,75	1	1,25	1,5	1,75	2	2,25	2,5	2,75	3	3,25	3,5	3,75	4
DSHS10	180 – 450	17	24	30	35	38	41	45	49	51	53	56	60	61	63	67	70
	451 – 650	21	31	38	43	46	50	55	61	64	67	71	75	77	79	83	87
	651 – 1000	32	46	55	64	70	76	83	90	94	99	105	111	114	117	123	128
	≥ 1001	43	63	74	86	94	103	112	121	127	133	141	149	153	157	165	173
DSHS25	330 – 600	72	103	126	145	159	173	188	204	214	226	237	251	257	266	279	291
	601 – 900	78	114	138	158	172	187	204	221	232	248	261	274	280	288	303	319
	901 – 1250	95	139	168	192	212	232	253	273	286	301	316	332	339	349	368	386
	≥ 1251	114	166	200	230	252	275	299	324	341	359	377	397	–	–	–	–

* Tube insertion length (see dimensions table).

TABLE 2 – MAXIMUM RECOMMENDED DUCT HEIGHT FOR SINGLE-TUBE HUMIDIFIER

INJECTION TUBE	DSHS10	DSHS25
DUCT HEIGHT	Up to 900 mm	Up to 1100 mm

We reserve the right to change the design and material of this product without notice.

HOW TO SIZE

Example 1 – Single-tube humidifier

Installation position: Inside a horizontal air duct with 2000 mm of available downstream distance without obstacles.
Duct size (H x W): 500 x 800 mm
Maximum humidification load: 100 kg/h @ 1 barg

Step 1: Select the injection tube model

A single-tube humidifier is appropriate for the required absorption distance (see Note).

According to Table 1 a single DSHS25 injection tube respects the maximum humidification load as it ensures 158 kg/h for an insertion length between 601 and 900 mm.

Step 2: Select the humidity separator

The humidity separator should be of the same size as the pipeline upstream which has previously been sized accordingly, e.g. by pressure drop or velocity, not exceeding 25 m/s (recommended).
For the current example, with a maximum humidification load of 100 kg/h @ 1 barg, the recommended pipe size is 11/4" and so the appropriate humidity separator is a 11/4" ADCAPure S10HV.

Step 3: Select the control valve and actuator

After calculating the required Kv for the application one can find the valve Kvs on the respective ADCAPure control valve datasheet. For the current example, the selection could be e.g. a 11/2" ADCAPure V926H with a 25 mm seat and Kvs of 10 m³/h to suit the application. The valve can be fitted with an ADCATrol ELF series electric fail-safe spring return actuator or a reverse action ADCATrol PA series pneumatic actuator.

Step 4: Steam traps, pressure reducing station and ancillaries

A suitable trapping set must be installed on the drain connection of the humidity separator and heating chamber. A pressure reducing station may be required in some situations to reduce system pressure to the desired value and different valves and ancillaries may also be necessary. Consult the manufacturer for further information.

TABLE 3 – INJECTION TUBE STEAM CAPACITY – MULTI-TUBE (kg/h)

MODEL	C * (mm)	STEAM PRESSURE TO HUMIDIFIER SUPPLY CONNECTION (barg)															
		0,25	0,5	0,75	1	1,25	1,5	1,75	2	2,25	2,5	2,75	3	3,25	3,5	3,75	4
DSHS10	180 – 1000	43	62	74	86	94	102	112	121	126	133	141	149	153	157	166	172
	≥ 1001	58	85	99	116	126	139	151	163	171	179	190	201	206	211	222	233
DSHS25	330 – 1250	128	187	226	259	286	313	341	368	386	406	426	448	457	471	496	521
	≥ 1251	153	224	270	310	340	371	403	437	460	484	508	535	562	589	617	645

* Tube insertion length (see dimensions table).

TABLE 4 – MINIMUM RECOMMENDED NUMBER OF INJECTION TUBES FOR MULTI-TUBE HUMIDIFIER

DUCT HEIGHT	Up to 1500 mm	1501 – 2000 mm	2001 – 2500 mm	above 2501 mm
Nº OF TUBES	2	3	4	5 or more

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IS DSHS.020 E 00.22

HOW TO SIZE

Example 1 – Single-tube humidifier

Installation position: Inside a horizontal air duct with 2000 mm of available downstream distance without obstacles.
Duct size (H x W): 500 x 800 mm
Maximum humidification load: 100 kg/h @ 1 barg

Step 1: Select the injection tube model

A single-tube humidifier is appropriate for the required absorption distance (see Note).

According to Table 1 a single DSHS25 injection tube respects the maximum humidification load as it ensures 158 kg/h for an insertion length between 601 and 900 mm.

Step 2: Select the humidity separator

The humidity separator should be of the same size as the pipeline upstream which has previously been sized accordingly, e.g. by pressure drop or velocity, not exceeding 25 m/s (recommended).
For the current example, with a maximum humidification load of 100 kg/h @ 1 barg, the recommended pipe size is 11/4" and so the appropriate humidity separator is a 11/4" ADCAPure S10HV.

Step 3: Select the control valve and actuator

After calculating the required Kv for the application one can find the valve Kvs on the respective ADCAPure control valve datasheet. For the current example, the selection could be e.g. a 11/2" ADCAPure V926H with a 25 mm seat and Kvs of 10 m³/h to suit the application. The valve can be fitted with an ADCATrol ELF series electric fail-safe spring return actuator or a reverse action ADCATrol PA series pneumatic actuator.

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DSHS10	180 – 1000	43	62	74	86	94	102	112	121	126	133	141	149	153	157	166	172
	≥ 1001	58	85	99	116	126	139	151	163	171	179	190	201	206	211	222	233
DSHS25	330 – 1250	128	187	226	259	286	313	341	368	386	406	426	448	457	471	496	521
	≥ 1251	153	224	270	310	340	371	403	437	460	484	508	535	562	589	617	645

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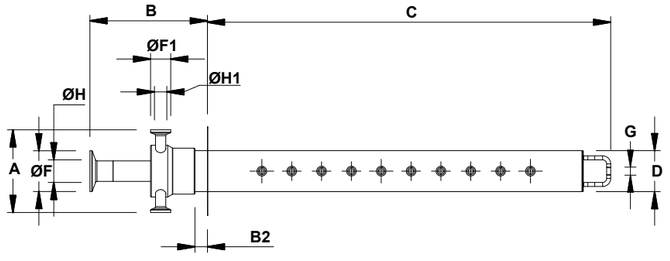
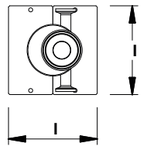
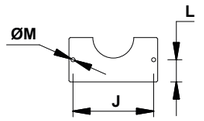
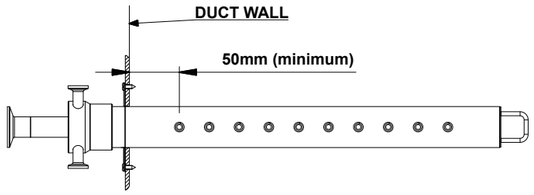
INJECTION TUBES







Cover plates



CE MARKING – GROUP 2 (PED – European Directive)	
PN 6	**Category**
3/4" and 1"	SEP

LIMITING CONDITIONS	
Body design conditions	PN 6
PMA – Maximum allowable pressure	4 bar
TMA – Maximum allowable temperature	152 ºC

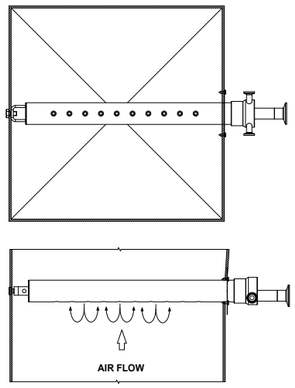
DIMENSIONS (mm)

MODEL	A	B	B1	B2 *	C ** Min. - Max.	D	E	ØF	ØF1	G	ØG1	ØH	ØH1	I	J	L	ØM	WGT. (kg)
DSHS10	91	147,5	85	20	180 - 3100	38	3,1	25	25	M10	8,5	15,75	9,4	100	90	25	5	***
DSHS25	102,5	145,7	87,7	15,5	330 - 3100	50	4,9	50,5	25	M10	8,5	22,1	9,4	110	100	25,5	5	

* When thermal insulation is present, this dimension must be increased accordingly.
** Tube insertion length to be defined according to customer requirements (e.g. duct width).
*** To be confirmed after exact length is defined.

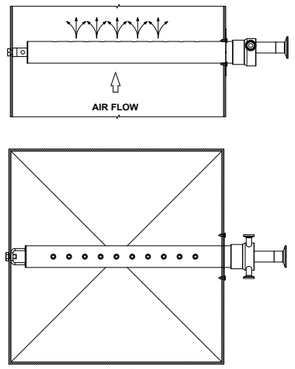
STEAM EMISSION DIRECTION

Steam injection should be against the air flow. On vertical air flow applications, the steam should be injected upwards, regardless of the air flow direction.



(plan view)

Horizontal duct



(plan view)

Vertical duct

VALSTEAM ADCA
We reserve the right to change the design and material of this product without notice.

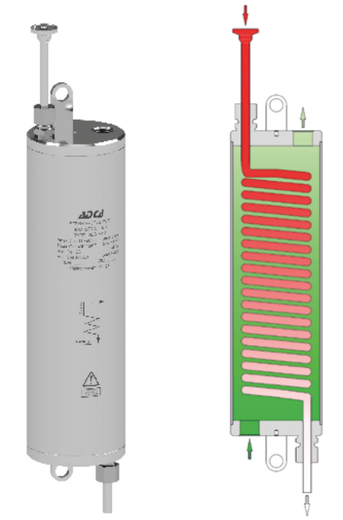
ORDERING CODES DSHS										
Model	**DHS**	**10**	**XXXX**	**XX**	**A**	**X**	**X**	**A**	**15**	
DSHS Hygienic injection tube	**DHS**									
Type										
10		**10**								
25		**25**								
Insertion length (mm)										
Specify dimension “C”			**XXXX**							
Options										
None				**XX**						
“B2” increased by 30 mm to accommodate thermal insulation thickness				**I3**						
Pipe connection (d1)										
Clamp ferrule ASME BPE					**D**					
Surface finish a)										
Standard surface finish						**X**				
Mirror mechanical polished external surfaces (SF1)						**P**				
Electropolished internal wetted parts (SF5)						**E**				
Special features										
None							**X**			
Pipe connection (d2)										
Clamp ferrule ASME BPE								**D**		
Size (d1 x d2)										
3/4" x 3/4"									**20**	
1" x 1"									**25**	
Specials / Extras										
Full description or additional codes have to be added in case of non-standard combination										**E**

a) Consult IS PV20.00 (Technical information) for further details and other surface finish options.

SAMPLE COOLERS
SC32P and SC32PP

DESCRIPTION

The ADCAPure SC32P sample cooler consists in a helical-coil heat exchanger used to take samples quickly and safely from steam generators, clean or pure steam systems, WFI and other high purity mediums. Its spiral design saves significant space without compromise and a counter current flow path maximizes heat transfer and consequently cooling efficiency. The vertical sampling side ensures self drainability, as medium flows naturally by gravity to the sample outlet with no chance to remain inside.
The device is available with integrated mounting brackets for fixed installation at the point of use or alternatively in a portable version (suffix PP) to carry along to any sampling point within the system.

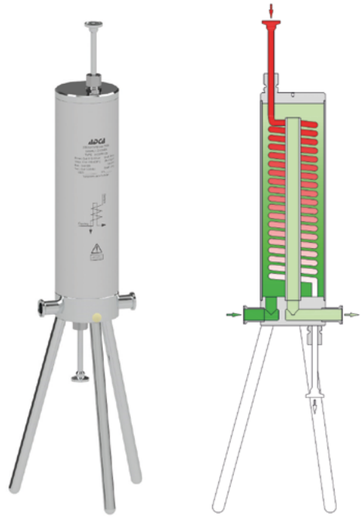


MAIN FEATURES

Fully manufactured from corrosion-resistant 316L stainless steel.
Compact and efficient.
Self-drainable design eliminates possibility of sample retention.
Integrated mounting bracket and alternative portable version.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External : ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



USE: Steam, WFI and other liquids and condensable gases compatible with the construction.

AVAILABLE MODELS: SC32P – fixed installation version.
SC32PP – portable version.

SIZES AND CONNECTIONS: Cooling water inlet/outlet: 1/2” on body (ISO 7 Rp or NPT) or 3/4” tri-clamp.
Sample tube inlet/outlet: 8 mm O/D.
Alternative: 1/2” tri-clamp compatible.

PACKAGING: Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

INSTALLATION: Vertical installation.
See IMI – Installation and maintenance instructions.

OPERATION: Cooling water must be at its maximum flow before opening or closing the sample inlet valve, in order to avoid scalding.
Sample valve must also be closed before opening the cooling water valve.
Sample coil should always be completely immersed in water.

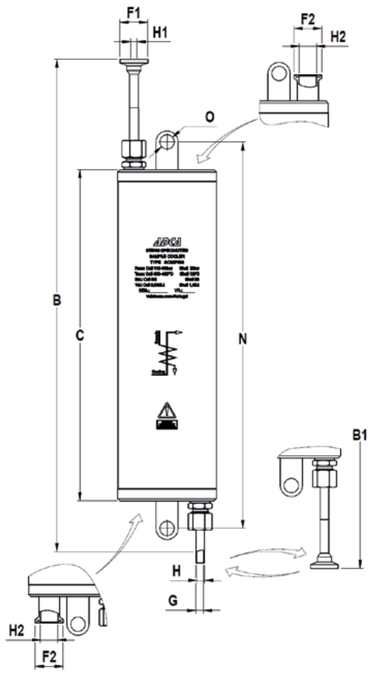
PERFORMANCE: 30 to 60 kg/h of sample water at ≈ 30 ºC with 1 m³/h – 15 ºC inlet cooling water (boilers up to 20 bar – 220 ºC). For other pressures, temperatures and/or certified values, consult manufacturer.

MATERIALS	
DESIGNATION	**MATERIAL**
Body	AISI 316L / 1.4404
Covers	AISI 316L / 1.4404
Coil	AISI 316L / 1.4404
Compression fittings	AISI 316Ti / 1.4571 Class L
Discharge tube	AISI 316L / 1.4404

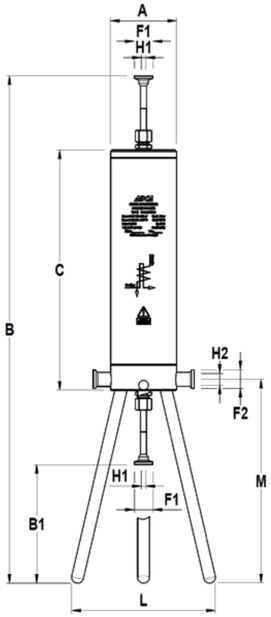
EN 10204 3.1 certificate and internal coil surface finish certification available if requested with the order.

LIMITING CONDITIONS				
MODEL	**BODY**		**COIL**	
	ALLOW. PRESS.	**RELATED TEMP.**	**ALLOW. PRESS. ***	**RELATED TEMP. ***
SC32P SC32PP	20 bar	120 ºC	110 bar	400 ºC
			90 bar	450 ºC

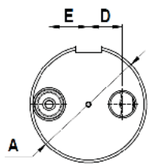
* Limited to the clamp adaptor rating.
Minimum operating temperature: - 10 ºC.

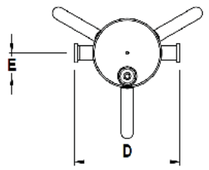


SC32P



SC32PP





DIMENSIONS (mm)																	
MODEL	**A**	**B**	**B1**	**C**	**D**	**E**	**G**	**H**	**L**	**M**	**N**	**O**	**F1**	**H1**	**F2**	**H2**	**WEIGHT (kg)**
SC32P	90	456	500	300	26	30	8	6	–	–	350	13	25	6	25	15,75	3,3
SC32PP	90	684	160	324	136	30	–	–	194	275 *	–	–	25	6	25	15,75	5,9

* Extended legs on request.

We reserve the right to change the design and material of this product without notice.

IS 9.210 E 07.14

$$Kv = Q1\sqrt{\frac{d1}{Dp \times 1000}}$$

$$P2 < \frac{P1}{2}$$

$$Kv = \frac{Q2}{2,4\ \sqrt{Dp \times P2}}$$

$$Kv = \frac{Q3}{257 \times P1}\sqrt{d2 \times T}$$

$$Kv = Q2\sqrt{\frac{d3}{Dp \times 587}}$$

T(ºF) = (2,4 × T(ºC)) + 25

N.m3/h (0 ºC – 1013 mbar)

$$Kv = \frac{Q1}{195 \times P1}\sqrt{d1 \times T}$$

ADCA Pure

Technical Information

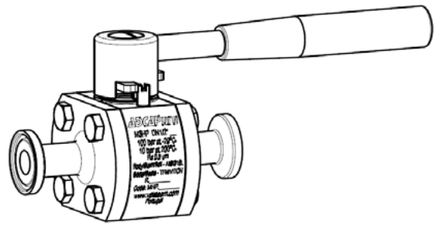
LRQA CERTIFIED ISO 9001
EHEDG EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP
Valsteam ADCA is an EHEDG Member

ADCA
ADCA Pure

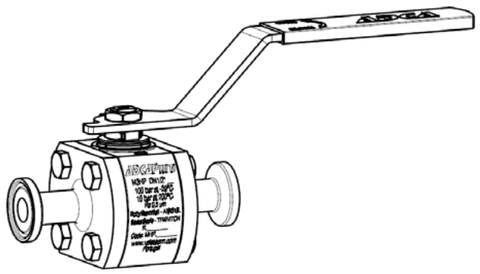
M3HP and M3H
Options and Extras

VALVES DESCRIPTION

M3HP (Barstock)

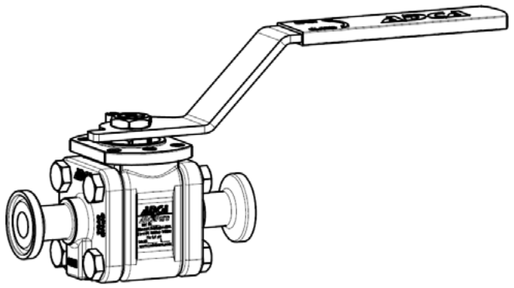


Round lever handle – Standard on M3HP.
Stainless steel / plastic knob.
(Complete stainless steel on request, not recommended for hot fluids).
Lockable system not available with round lever.



Flat lever handle (optional).
Stainless steel / plastic cover.
Available with lockable system (optional).

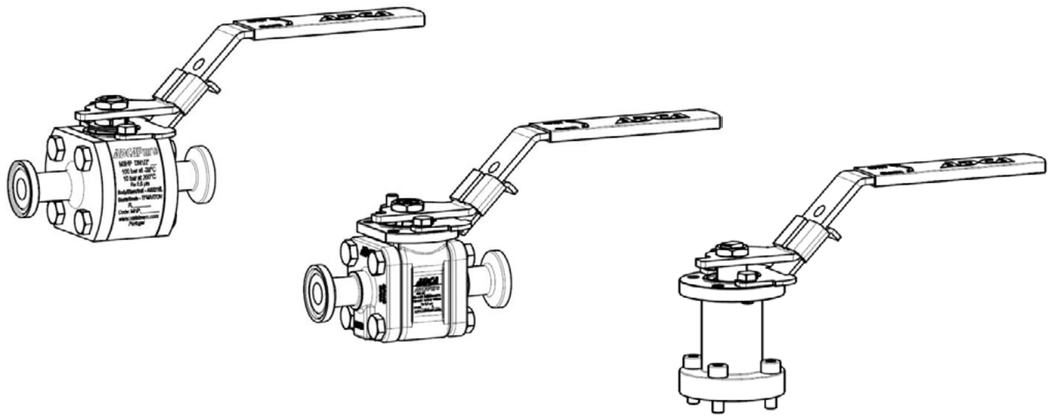
M3H (Investment casting)



Flat lever handle – Standard on M3H.
Stainless steel / plastic cover.
Available with lockable system (optional).

Important:
Valves with stem extensions are only available with flat lever.
SEF stem extensions are designed only for flat levers.

LOCKABLE LEVER



VALSTEAM ADCA

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SEF - STEM EXTENSION

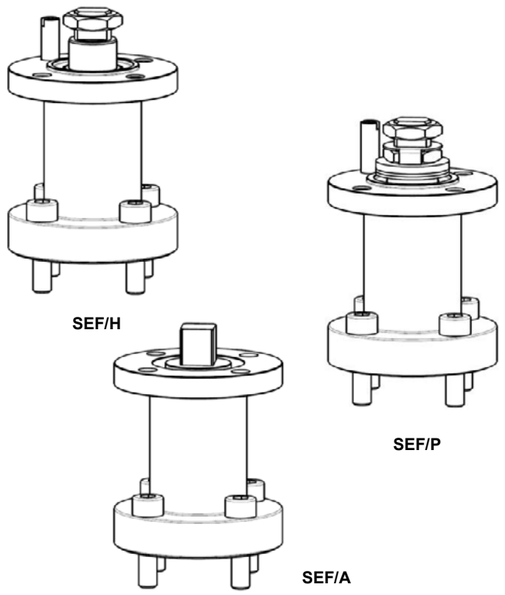
DESCRIPTION

The installation of SEF unit has three main options with specific main features as described below:

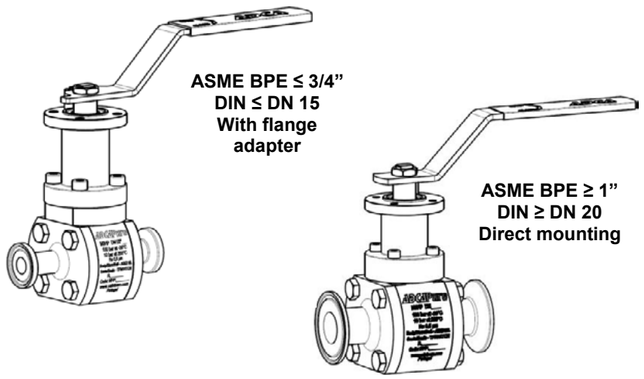
SEF/H - Stem extension, where overall height readily clears common insulation thickness.
The installation of the SEF/H unit is tight against the ball valve body avoiding the fluid leakage in the insulation.
All SEF/H stem extension units allow ISO 5211 mounting.
The lever handle parts from the valve, should be reassembled on the extension unit.

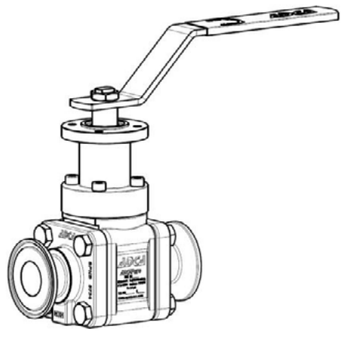
SEF/P – This version has the same features as the previous one and extra security leak to atmosphere through the use of a second packing set.
Optional connection on stem extension to check for leakage of main valve packing. This design includes two sensing ports to provide means of detection and repair of emission sources.

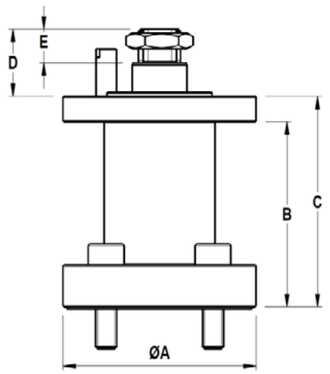
SEF/A - Direct mounting assembling unit between the valve and actuator without the use of brackets and couplings. This mounting adapter serves dual purpose as a mounting adapter and a stem extension.



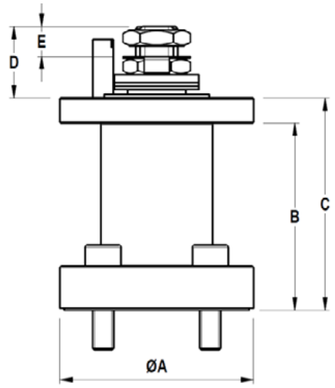
M3HP ISO 5211 mounting	M3H Direct mounting ISO 5211 All sizes



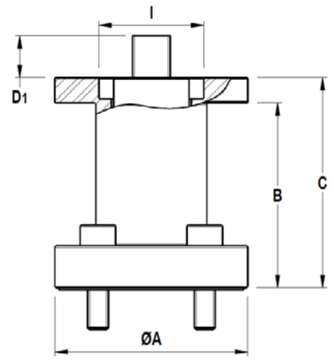




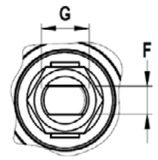
SEF/H



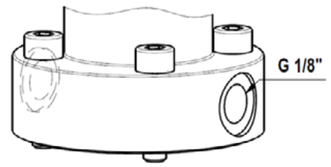
SEF/P



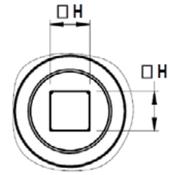
SEF/A



SEF/H and SEF/P
Same dimensions as top of valve.



Leakage detection sensing points.



SEF/A

DIMENSIONS (mm)														
MODEL	ISO 5211 *	SIZE		A	B	C	D	D1	E	F	G	H	I	WGT. ** (kg)
		BPE	DIN											
SEF/...3	F03 *	1/2"	10	46	44	50	16	10	8	6	M10 x 1	9	25	0,35
SEF/...3	F03 *	3/4"	15	46	44	50	16	10	8	6	M10 x 1	9	25	0,35
SEF/...4	F04	1”	20	55	48	55	24	12	11	7,5	M12 x 1,25	11	30	0,6
SEF/...4	F04	–	25	55	48	55	24	12	11	7,5	M12 x 1,25	11	30	0,6
SEF/...5	F05	11/2”	32	65	57	65	27	16	13	11	M16 x 1,5	14	35	0,91
SEF/...5	F05	2”	40	65	57	65	27	16	13	11	M16 x 1,5	14	35	0,91
SEF/...5	F05	–	50	65	57	65	27	16	13	11	M16 x 1,5	14	35	0,91
OR	F7	21/2”	65	–	–	–	44	19	16,5	18	M24 x 2	17	55	–
OR	F7	3”	80	–	–	–	44	19	16,5	18	M24 x 2	17	55	–
OR	F10	4”	100	–	–	–	44	24	16,5	18	M24 x 2	22	70	–
OR	F14	6”	150	–	–	–	79	38	45	30	M39 x 2	36	100	–

* Flange adapter is required (M3HP only).
** Approximate weights. For certified values, consult factory.
OR – On request.

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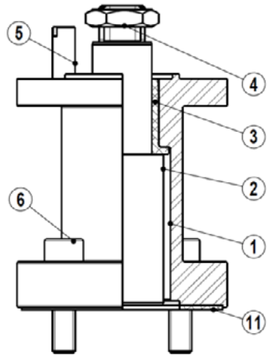
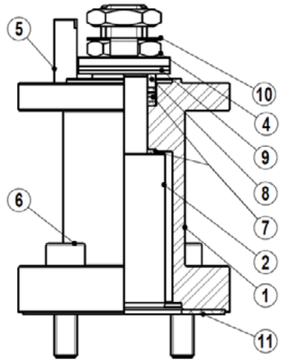
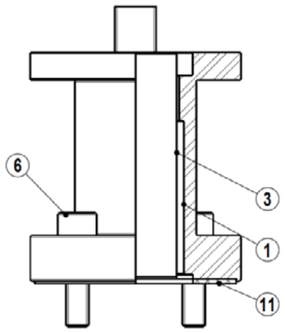


SEF/H



SEF/P

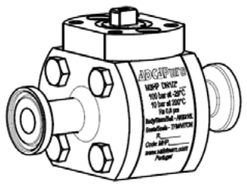


SEF/A

MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Body	CF3M / 1.4409
2	Stem	CF3M / 1.4409
3	Plain bearing	CF3M / 1.4409 (integral)
4	Compression nut	AISI 304 / 1.4301
5	Stop pin	AISI 304 / 1.4301
6	Fixing bolts	AISI 304 / 1.4301
7	Steam seal	TFM 1600
8	Spacer	AISI 316L / 1.4404
9	Spring washer	AISI 304 / 1.4301
10	Lock washer	AISI 304 / 1.4301
11	Gasket	PTFE

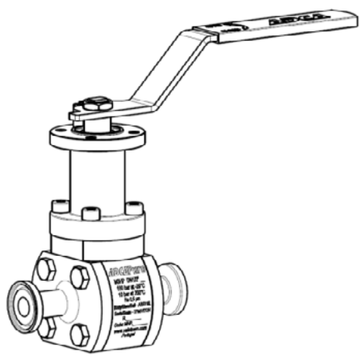
FLANGE ADAPTER FOR M3HP BALL VALVES

M3HP Only!
The M3HP ASME BPE DN 1/2”, 3/4” and DIN DN 10, DN 15 are not provided with ISO mounting connections. When necessary to use that possibility and if the M3H model is not an option, a flange adapter should be fitted using the two standard stop pin threads and making available the ISO 5211 connection.



ASME BPE ≤ 3/4”.
DIN ≤ DN 15.

Valve with flange adapter for ISO mounting.



Example of valve with flange adapter and stem extension using ISO 5211 connections.

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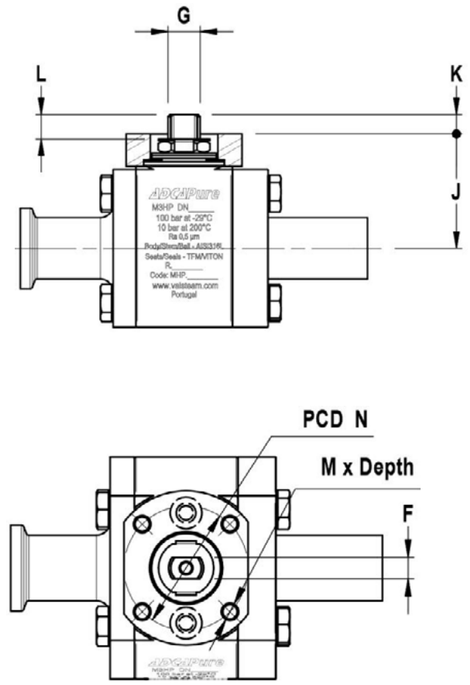
ADCA

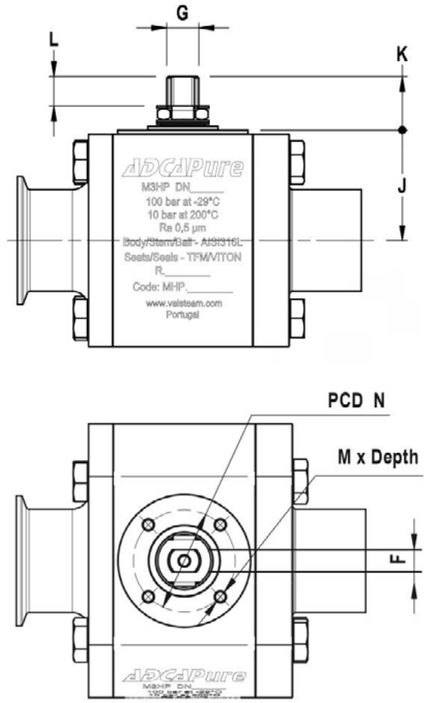
DIMENSIONS FOR ACTUATOR MOUNTING

M3HP

BPE 1/2” to 3/4”; DIN DN 10 to DN 15



BPE 1” to 6”; DIN DN 20 to DN 150



DIMENSIONS (mm)								
SIZE		**J**	**K**	**L**	**F**	**G**	**M x Depth**	**N**
BPE	**DIN**							
1/2”	DN 10	32	5,5	7,5	6	M10 x 1	M5 x 10	PCD Ø36 (F03) *
3/4”	DN 15	35,5	6	7,5	6	M10 x 1	M5 x 10	PCD Ø36 (F03) *
1”	DN 20	32	24	13	7,5	M12 x 1,25	M5 x 8	PCD Ø42 (F04)
--	DN 25	37	24	13	7,5	M12 x 1,25	M5 x 8	PCD Ø42 (F04)
11/2”	DN 32	45	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
--	DN 40	49	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
2”	DN 50	55	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
21/2”	DN 65	72,5	44	25	18	M24 x 2	M8 x 15	PCD Ø70 (F07)
3”	DN 80	83,5	44	25	18	M24 x 2	M8 x 15	PCD Ø70 (F07)
4”	DN 100	101,5	44	25	18	M24 x 2	M10 x 18	PCD Ø102 (F10)
6”	DN 150	166	79	45	30	M39 x 2	M16 x 22	PCD Ø140 (F14)

* Given dimensions include flange adapter for ISO 5211 mounting.

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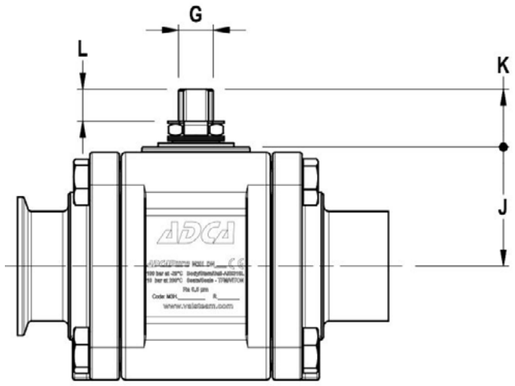
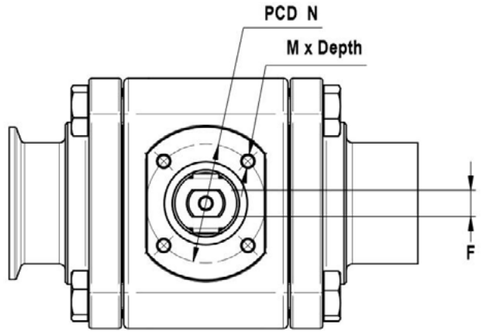
DIMENSIONS FOR ACTUATOR MOUNTING

M3H





DIMENSIONS (mm)								
SIZE		J	K	L	F	G	M x Depth	N
BPE	DIN							
1/2”	DN 10	27,5	10	7	6	M10 x 1	M5 x 5	PCD Ø36 (F03)
3/4”	DN 15	30,5	11	7,5	6	M10 x 1	M5 x 5	PCD Ø36 (F03)
1”	DN 20	38	18	14	7,5	M12 x 1,25	M5 x 10	PCD Ø42 (F04)
--	DN 25	37	24	13	7,5	M12 x 1,25	M5 x 10	PCD Ø42 (F04)
11/2”	DN 32	45	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
--	DN 40	50	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
2”	DN 50	55	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
21/2”	DN 65	74,5	41	25	18	M24 x 2	M8 x 13	PCD Ø70 (F07)
3”	DN 80	86	41	25	18	M24 x 2	M8 x 13	PCD Ø70 (F07)
4”	DN 100	104	42	25	18	M24 x 2	M10 x 18	PCD Ø102 (F10)
6”	DN 150	166	79	45	30	M39 x 2	M16 x 20	PCD Ø140 (F14)

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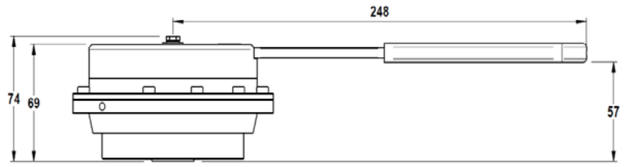
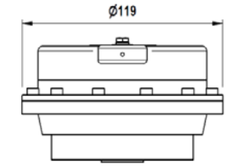
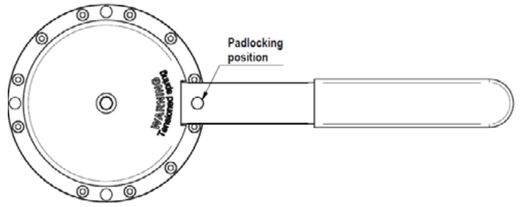
SRH1 - SPRING RETURN HANDLES

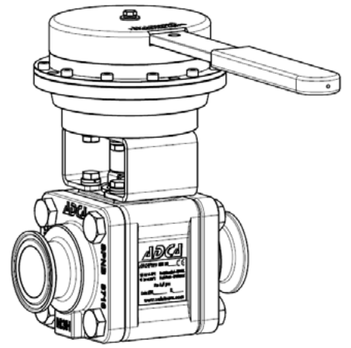
The SRH consists in a spring box which when assembled, switches the ball valve to a safe position (closed or open), as soon as the operator releases its handle.







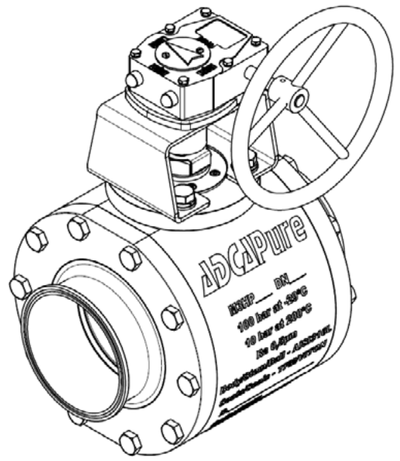
SPRING RETURN HANDLES		
MODEL	MOUNT. TYPES	TORQUE (Nm)
SRH1/24	F03; F05; F07	24
SRH1/40	F03; F05; F07	40



“Dead-man” lever ball valve.

GEARBOXES

Gearboxes are quarter-turn devices intended for the operation of ball valves, among others. The handwheels are designed for smooth and easy operation.



M3HP 6” valve with gearbox.

MAINTENANCE VALVE DATA

M3H / M3HP VALVE DATA

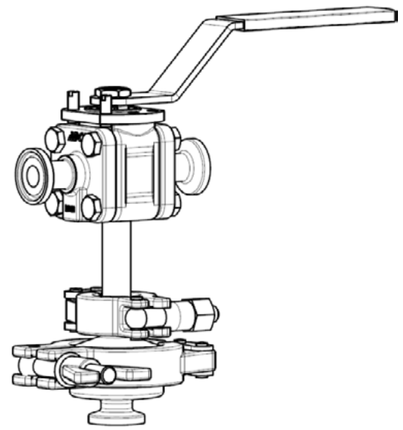
SIZE		VALVE TORQUE	BODY BOLTS		STEM NUT	
ASME	DIN	* TORQUE (Nm)	Nº x m	Torque (Nm)	G	Torque (Nm)
1/2"	10	4	4 x M6	15	M10	20
3/4"	15	4	4 x M6	15	M10	20
1"	20	10	4 x M8	25	M12	25
–	25	16	4 x M8	25	M12	25
11/2"	32	23	4 x M10	30	M16	30
–	40	28	4 x M10	30	M16	30
2"	50	35	4 x M12	35	M16	30
21/2"	65	48	6 x M12	35	M24	40
3"	80	75	8 x M12	35	M24	40
4"	100	120	10 x M12	35	M24	40
6"	150	180	10 x M16	60	M39	100

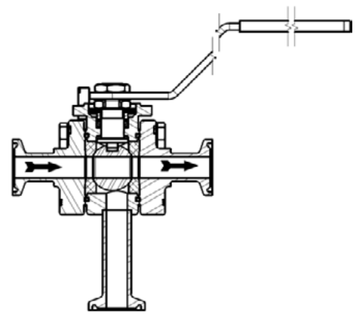
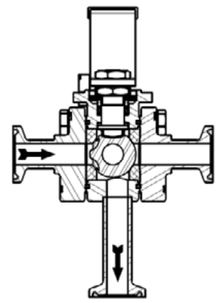
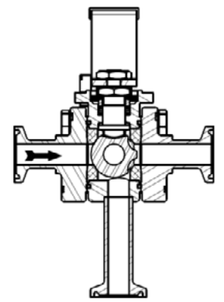
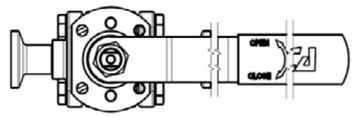
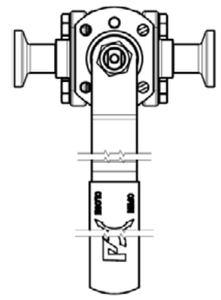
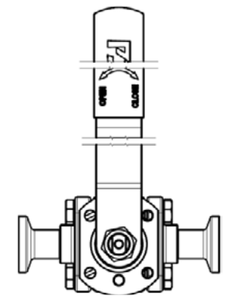
* Torque values for valves with PTFE / TFM standard seals at full differential pressure. The indicated torques are for valves operated frequently. Greater torques can be requested for valves subject to long static periods. Safety margins not included in these figures. Values may vary depending on the working conditions.
For more detailed information, consult the IMI.

M3H – WITH CONDENSATE DRAIN

DESCRIPTION
This option directs upstream steam condensate or trapped liquids in the valve body cavity to be drained.
The flow of steam surrounding the valve also ensures complete sterilization of the valve body cavity.

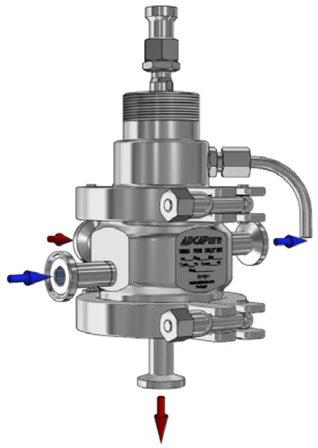
HOW IT WORKS
When the valve is in the closed position (B) the condensate flows inside the valve body cavity and it's discharged by an automatic steam trap connected to the bottom connection, preventing liquid backup.
On the position (A) the valve allows the steam flow to the process.
Position (C) allows the maintenance of the steam trap without the need of a second isolating valve, since in this position the inlet valve is fully closed.

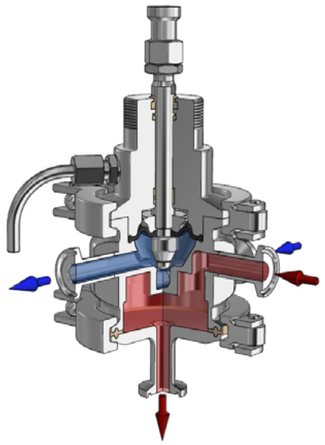


Open position (A)	Trap position (B)	Steam trap maintenance position (C)
		
		

TAILOR MADE EQUIPMENT

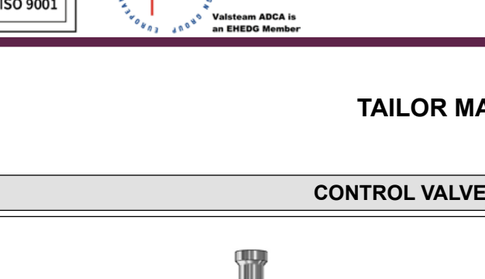
CONTROL VALVE WITH HEATING JACKET





To maintain the required fluid temperature throughout the valve.

MUSHROOM STYLE AIR VENTS

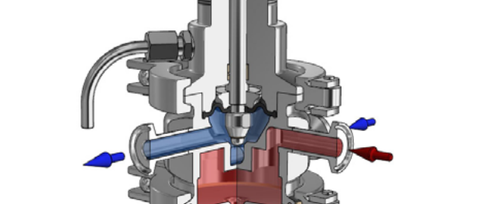


Made in 316L / 1.4404 stainless steel. To be installed on tanks to prevent foreign materials from entering the tank.

CLEAN STEAM INJECTORS

Made in 316L / 1.4404 stainless steel. Designed for direct water heating with clean steam.

DIRECT CLEAN STEAM INJECTION HUMIDIFIER



Made in 316L / 1.4404 stainless steel. Designed for direct fluid heating with clean steam.

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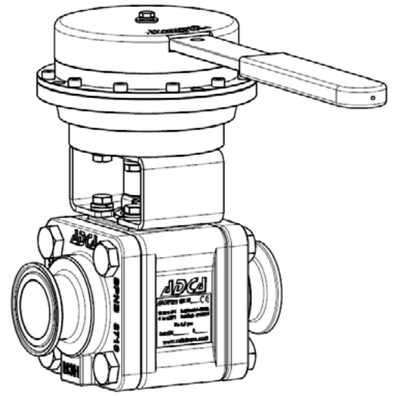
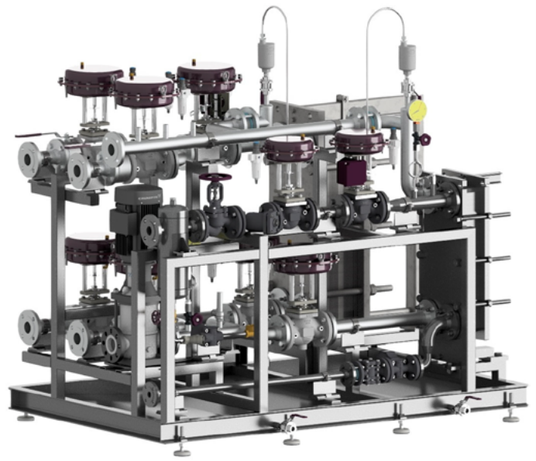
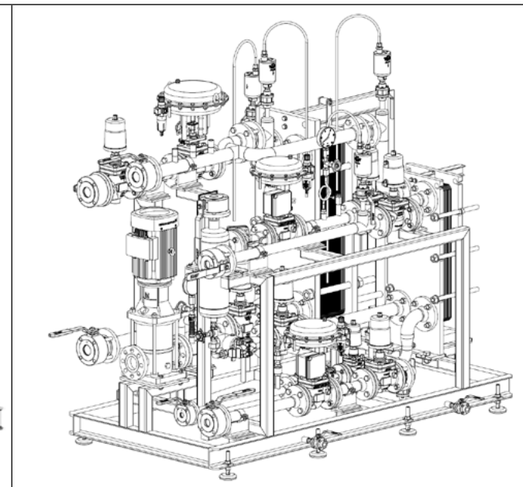
“DEAD MAN” LEVER BALL VALVE



To switch the ball valve to a safe position (closed or open), as soon as the operator releases its handle.

SKID MOUNTED SYSTEMS





Compact and modular design, easy to transport and install skid mounted systems either for heating or cooling service.

VALSTEAM ADCA
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Produced in accordance with Sound Engineering Practices of the European PED - Pressure Equipment Directive.
IS AP.10 E 02.18

CONTROL VALVE SIZING

The valve sizing is based on the calculation of the Kv coefficient. The Kv represents the quantity of water, expressed in cubic meters (m^3) at 15 ºC that flows through the valve with a pressure drop of 1 bar, in a one-hour period. The formulas below indicated allow the Kv calculation in accordance with the type of fluid and its operating condition.
After the Kv calculation, the corresponding Kvs is available from the valve data sheet. If real operating data have been used for the calculation, as a rule, the calculated Kv should be around 70% to 80% of the selected valve Kvs in order to guaranty the proper regulation of maximum flow rate at the given operating conditions preventing that sometimes some *precautionary additions* will result in undesirable valve oversizing. At the same time, it is necessary to check whether the minimum flow rate can be even regulated or not, considering the chosen valve rangeability.
For critical applications (critical flow velocities, for example), noise prediction, etc, please fill the data sheet available in the next pages and submit it to our technical department for proper selection using our software.

CALCULATION OF KV VALUE

PRESSURE DROP	MEDIUM		
	LIQUIDS	SATURATED STEAM	GASES
a) $P2 > \frac{P1}{2}$ $Dp < \frac{P1}{2}$	$Kv = Q1\sqrt{\frac{d1}{Dp \times 1000}}$	$Kv = \frac{Q2}{22{,}4\sqrt{Dp \times P2}}$	$Kv = \frac{Q3}{514}\sqrt{\frac{d2 \times T}{Dp \times P2}}$
b) $P2 < \frac{P1}{2}$ $Dp > \frac{P1}{2}$		$Kv = \frac{Q2}{11{,}2 \times P1}$	$Kv = \frac{Q3}{257 \times P1}\sqrt{d2 \times T}$

Remarks: *For superheated steam and other fluids please consult.*
a) *Subcritical pressure drop: downstream absolute pressure more than 50% of the absolute upstream pressure in the valve.*
b) *Supercritical pressure drop: downstream absolute pressure is equal or less than 50% of the upstream absolute pressure in the valve.*

Kv	Flow coefficient	m^3/h
P1	Upstream absolute pressure	bar
P2	Downstream absolute pressure	bar
Dp	Pressure drop (P1 – P2)	bar
Q1	Flow rate	m^3/h
Q2	Flow rate	kg/h
Q3	Flow rate	Nm3/h (0 ºC – 1013 mbar)
d1	Specific weight of liquid	kg/m^3
d2	Specific weight of gas	kg/m^3
T	Absolute temperature (T = 273 + t ºC)	K
t	Fluid temperature	ºC

RECOMMENDED FLOW VELOCITIES AT THE INLET OF VALVES

LIQUIDS	GASES	SATURATED STEAM	SUPERHEATED STEAM
2,5 m/s	20 m/s	25 m/s	50 m/s

STAINLESS STEEL, SPECIAL ALLOYS AND NON-METALLIC MATERIALS

Stainless steels and special alloys

The raw stainless steels and special alloys used in AdcaPure products are acquired according to the ASME BPE specifications and comply with the relevant standards.

Internally, these materials are subject to a strict quality control that involves, not only documentation and dimensions verification, but also, spectrographic chemical composition analysis in our facilities.
All materials are internally traceable, by means of the quality system procedures.

STAINLESS STEELS AND SPECIAL ALLOYS *

MATERIAL	STANDARD	CHARACTERISTICS
AISI304 (1.4301)	ASTM A276	APPLIED ONLY IN NONWETTED PARTS
AISI316 L (1.4404)	ASTM A276	INTERCRYSTALLINE CORROSION RESISTANT ACC.TO ISO3651-2 METHOD A AND ASTM A262 PRACTICE E.
AISI316L (1.4435)	ASTM A276	IMPROVED CORROSION RESISTANCE COMPARED TO OTHER CrNi-STEELS DUE TO ITS INCREASED CONTENT OF MOLYBDENUM.
AISI316Ti (1.4571)	ASTM A276	INTERCRYSTALLINE CORROSION RESISTANT ACC.TO ISO3651-2 METHOD A AND ASTM A262 PRACTICE E.
HASTELLOY® C22 (2.4602)	ASTM B574	RESISTANCE TO BOTH OXIDIZING AND NON-OXIDIZING CHEMICALS, PROTECTION FROM CORROSION, PITTING, CREVICE ATTACK AND STRESS CORROSION CRACKING
CF3M (1.4409)	ASTM A351	FERRITE CONTENT OF LESS THAN 2% AND LOW SULPHUR BETWEEN 0,005% AND 0,017%.

* For other special high corrosion resistance steels, please consult factory.

Non-metallic materials

It is crucial that non-metallic parts are selected to maintain the purity and integrity of the process fluid.
In order to achieve this, they should be compatible with stated processing conditions, cleaning solutions and sterilization conditions, defined by the customer.

The following table has an overview of the non-metallic materials applied in the AdcaPure range and the respective approvals:

NON-METALLIC MATERIALS WETTED PARTS		
MATERIAL DESIGNATION	**STANDARD APPROVALS**	**ON REQUEST**
GYLON® (modified PTFE)	EC1935/2004 EC2023/2006 ADI Free BAM FDA 21CFR177.1550 NSF ROHS USP CL.VI Ch. 31, 87, 88, 281 & 661, 121 ºC	3A Sanitary
EPDM	FDA 21 CFR 177.2600 USP CL.VI Ch. 87 & 88, 121 ºC EC1935/2004 3A Sanitary ADI Free	ACS BAM NSF ROHS WRAS
VITON® (FKM)	EC1935/2004 ADI Free FDA 21 CFR 177.2600 USP CL.VI Ch. 88, 121 ºC	ACS 3A Sanitary BAM
PTFE	EC1935/2004 EC2023/2006 ADI Free FDA 21CFR 177.1550 USP CL. VI Ch. 87 & 88, 121 ºC (TFM 1600 Ch. 88, 121 ºC)	3A Sanitary DVGW W270
PTFE/FKM	EC1935/2004 EC2023/2006 ADI Free BAM FDA 21CFR 177.1550 & 177.2600 ROHS USP CL. VI Ch. 88, 121 ºC	
EPM	EC1935/2004 EC2023/2006 ADI Free FDA 21 CFR 177.2600	
Fluoraz® (FEPM)	EC1935/2004 3A Sanitary ADI Free FDA 21 CFR 177.2400 & 177.2600 USP CL.VI Ch. 87 & 88, 121 ºC	
FEP – SILICONE	EC1935/2004 ADI free 3A Sanitary FDA 21 CFR 177.1550 & 177.2600 ROHS USP CL.VI Ch. 87 & 88, 121 ºC	

We reserve the right to change the design and material of this product without notice.

SURFACE FINISH

The surface quality, especially the area in contact with the fluid, greatly influences the cleanability of the equipment. All the products in AdcaPure range are supplied with a standard internal finishing surface that allows an efficient cleanability. Apart from the standard conditions, we can supply several combinations of roughness internally and externally, for optimized performance according to customers' requests.

We apply ASME BPE acceptance criteria, achieved by internal controlled procedures, which in term apply visual inspection and roughness measurements.
AdcaPure range parts are produced in Valsteam's factory, in dedicated high-end machines with high precision, high speed and wear tools control. This allows Valsteam to guarantee controlled surface conditions directly from the machine.

Explanation of surface finishes

- **Fine machined:** Obtained by high performance turning and milling machines. Mechanical polishing where necessary;
- **Mechanical polishing:** Polished surface, not necessary with a shiny finish;
- **Electro polishing:** Satin surface finish typical from electro polishing process;
- **Mirror:** Shiny surface finish;
- **Satin bead blast finishing:** Obtained by sand blasting process, applicable for actuators, humidity separators, etc.

STANDARD SURFACE CONDITION *				
SURFACE AREA	**Ra ≤ [µm]**	**Ra ≤ [µin]**	**CODE ASME BPE**	**SURFACE FINISH**
INTERNAL WETTED PARTS **	0,51	20	SF1	MECHANICAL POLISHED
EXTERNAL SURFACES	0,76	30	SF3	FINE MACHINED

* Does not substitute the information for standard conditions on each product catalogue. ** Not applied to regulating elements. Consult for certified roughness dimensions.

OPTIONAL SURFACE CONDITION *				
Ra ≤ [µm]	**Ra ≤ [µin]**	**CODE ASME BPE**	**CODE ADCA**	**SURFACE FINISH**
0,38	15	-	AS03	MIRROR MECHANICAL POLISHED
0,38	15	SF4	-	MIRROR MECHANICAL AND ELECTRO POLISHED
0,51	20	SF1	-	MIRROR MECHANICAL POLISHED
0,51	20	SF5	-	ELECTRO POLISHED
0,64	25	SF2	-	FINE MACHINED
0,64	25	SF6	-	ELECTRO POLISHED
0,76	30	SF3	-	STANDARD MACHINED
0,76	30	-	AS07	ELECTRO POLISHED

* Can be applied under request to any surface, with exception of regulating elements. Please consult.

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WELDING

The design of the AdcaPure range valves are in accordance with the latest specifications of ASME BPE and EHDGE directives. The welding tasks are performed by approved welders and according to welding specifications. The process is done manually or via mechanized and orbital machines, inside dedicated rooms with strictly controlled environment to avoid any contamination with external particles.

The welding is subject to a detailed visual inspection according to ASME BPE to guarantee its conformity with high demanding industries.

FROM CLEANING TO PACKING

After the welding and surface finishing operations, the parts enter a certified clean room, to start the process of cleaning and passivation. A full automatic ultra-sound cleaning machine allows us to control the cleaning and protection of the surfaces parts with efficiency.
It is also possible to prepare the equipment's for oxygen applications, with a guaranteed degreasing process.

The parts are then assembled and tested in an ISO14644 clean room, by trained personnel, according to our internal procedures. In the final stage, still inside the clean room, and after all the necessary quality verifications, the products are end capped and vacuum sealed with recyclable plastic film to avoid any contamination.

CERTIFICATES

Our quality system is certified by ISO9001:2015 and guarantees the control of all the processes involved in the project, manufacturing and supply of equipment's. We can supply various sorts of certificates and declarations to attest the conformity of the supplied products.

CERTIFICATES *	
TYPE	**INFORMATION**
CE Conformity declaration	According to the PED directive
AdcaPure specific inspection certificate	Include chemical composition, final testing records, elastomers specifications and approvals, surface finishing requirements.
Hydrostatic test report	According to the PED directive
Pneumatic test report	According to EN12266-1
Degreasing certificate	Includes treatment information
Ultra-sound cleaning report	Includes treatment information

* Others on request.

PHYSICAL PROPERTIES OF SATURATED STEAM

Pm (bar)	Pa (bar)	T (°C)	V (m^3/kg)	he (kcal/kg)	he (kJ/kg)	r (kcal/kg)	r (kJ/kg)	hg (kcal/kg)	hg (kJ/kg)
0,00	1,013	100,0	1,673	100,1	419,1	539,4	2258,4	639,5	2677,5
0,05	1,063	101,4	1,601	101,5	425,0	538,4	2254,2	639,9	2679,1
0,10	1,113	102,6	1,533	102,8	430,4	537,7	2251,2	640,5	2681,6
0,15	1,163	105,1	1,471	104,1	435,8	536,9	2247,9	641,0	2683,7
0,20	1,213	106,2	1,414	105,3	440,9	536,2	2245,0	641,5	2685,8
0,30	1,313	107,4	1,312	107,6	450,5	534,7	2238,7	642,3	2689,2
0,40	1,413	109,5	1,225	109,8	459,7	533,3	2232,8	643,1	2692,5
0,50	1,513	111,6	1,149	111,9	468,5	531,9	2227,0	643,8	2695,5
0,60	1,613	113,5	1,038	113,8	476,5	530,6	2221,5	644,4	2698,0
0,70	1,713	115,4	1,024	115,7	484,4	529,5	2216,9	645,2	2701,3
0,80	1,813	117,1	0,971	117,5	491,9	528,3	2211,9	645,8	2703,8
0,90	1,913	118,8	0,923	119,2	499,1	527,1	2206,9	646,3	2705,9
1,00	2,013	120,4	0,881	120,8	505,8	526,0	2202,3	646,8	2708,0
1,10	2,113	121,9	0,841	122,4	512,5	525,1	2198,5	647,5	2711,0
1,20	2,213	123,4	0,806	124,0	519,2	524,1	2194,3	648,1	2713,5
1,30	2,313	124,9	0,773	125,4	525,0	523,1	2190,1	648,5	2715,1
1,40	2,413	126,3	0,743	126,8	530,9	522,2	2186,3	649,0	2717,2
1,50	2,513	127,6	0,714	128,1	536,3	521,1	2181,7	649,2	2718,1
1,60	2,613	128,9	0,689	129,5	542,2	520,4	2178,8	649,9	2721,0
1,70	2,713	130,1	0,665	130,7	547,2	519,5	2175,0	650,2	2722,3
1,80	2,813	131,4	0,643	132,0	552,7	518,6	2171,3	650,6	2723,9
1,90	2,913	132,5	0,622	133,2	557,7	517,8	2167,9	651,0	2725,6
2,00	3,013	133,7	0,603	134,4	562,7	517,0	2164,6	651,4	2727,3
2,20	3,213	135,9	0,568	136,6	571,9	515,5	2158,3	652,1	2730,2
2,40	3,413	138,0	0,536	138,8	581,1	514,0	2152,0	652,8	2733,1
2,60	3,613	140,0	0,509	140,8	589,5	512,6	2146,2	653,4	2735,7
2,80	3,813	141,9	0,483	142,8	597,9	511,2	2140,3	654,0	2738,2
3,00	4,013	143,7	0,461	144,7	605,8	509,9	2134,8	654,6	2740,7
3,20	4,213	145,4	0,440	146,4	612,9	508,6	2129,4	655,0	2742,4
3,40	4,413	147,2	0,422	148,2	620,5	507,4	2124,4	655,6	2744,9
3,60	4,613	148,8	0,405	149,9	627,6	506,1	2118,9	656,0	2746,5
3,80	4,813	150,4	0,389	151,5	634,3	505,0	2114,3	656,5	2748,6
4,00	5,013	152,0	0,374	153,1	641,0	503,8	2109,3	656,9	2750,3
4,20	5,213	153,4	0,361	154,6	647,3	502,7	2104,7	657,3	2752,0
4,40	5,413	154,8	0,348	156,1	653,6	501,6	2100,1	657,7	2753,7
4,60	5,613	156,2	0,336	157,6	659,8	500,6	2095,9	658,2	2755,8
4,80	5,813	157,6	0,325	159,0	665,7	499,5	2091,3	658,5	2757,0
5,00	6,013	158,9	0,315	160,3	671,1	498,5	2087,1	658,8	2758,3
5,50	6,513	162,1	0,292	163,6	685,0	496,1	2077,1	659,7	2762,0
6,00	7,013	165,0	0,272	166,7	697,9	493,8	2067,4	660,5	2765,4
6,50	7,513	167,8	0,255	169,6	710,1	491,6	2058,2	661,2	2768,3
7,00	8,013	170,5	0,240	172,4	721,8	489,4	2049,0	661,8	2770,8
7,50	8,513	173,0	0,227	175,1	733,1	487,4	2040,6	662,5	2773,8
8,00	9,013	175,4	0,215	177,6	743,6	485,4	2032,3	663,0	2775,8
8,50	9,513	177,7	0,204	180,0	753,6	483,5	2024,3	663,5	2777,9
9,00	10,013	180,0	0,194	182,3	763,3	481,6	2016,4	663,9	2779,6
9,50	10,513	182,1	0,185	184,6	772,9	479,8	2008,8	664,4	2781,7
10,00	11,013	184,1	0,177	186,8	782,1	478,0	2001,3	664,8	2783,4
11,00	12,013	188,0	0,163	190,9	799,3	474,6	1987,1	665,5	2786,3
12,00	13,013	191,7	0,151	194,8	815,6	471,4	1973,7	666,2	2789,2
13,00	14,013	195,1	0,141	198,5	831,1	468,3	1960,7	666,8	2791,8
14,00	15,013	198,3	0,132	202,0	845,7	465,3	1948,1	667,3	2793,9
15,00	16,013	201,4	0,124	205,3	859,6	462,5	1936,4	667,8	2795,9
16,00	17,013	204,4	0,117	208,5	872,9	459,7	1924,7	668,2	2797,6
17,00	18,013	207,2	0,110	211,5	885,5	457,0	1913,4	668,5	2798,9
18,00	19,013	209,9	0,105	214,4	897,8	454,4	1902,5	668,8	2800,1
19,00	20,013	212,5	0,100	217,2	909,4	451,8	1891,6	669,0	2801,0
20,00	21,013	215,0	0,095	220,0	921,1	449,4	1881,5	669,4	2802,6
21,00	22,013	217,3	0,090	222,6	932,0	447,0	1871,5	669,6	2803,5
22,00	23,013	219,6	0,087	225,1	942,4	444,6	1861,5	669,7	2803,9
23,00	24,013	221,8	0,083	227,6	952,9	442,2	1851,4	669,8	2804,3
24,00	25,013	224,0	0,080	230,0	963,0	440,0	1842,2	670,0	2805,2
25,00	26,013	226,1	0,077	232,3	972,6	437,7	1832,6	670,0	2805,2

Pm-gauge pressure; **Pa**-absolute pressure; **T**-temperature; **V**-specific volume; **he**-specific enthalpy of liquid; **r**-specific enthalpy of vaporization; **Hg**-specific enthalpy of saturated steam.

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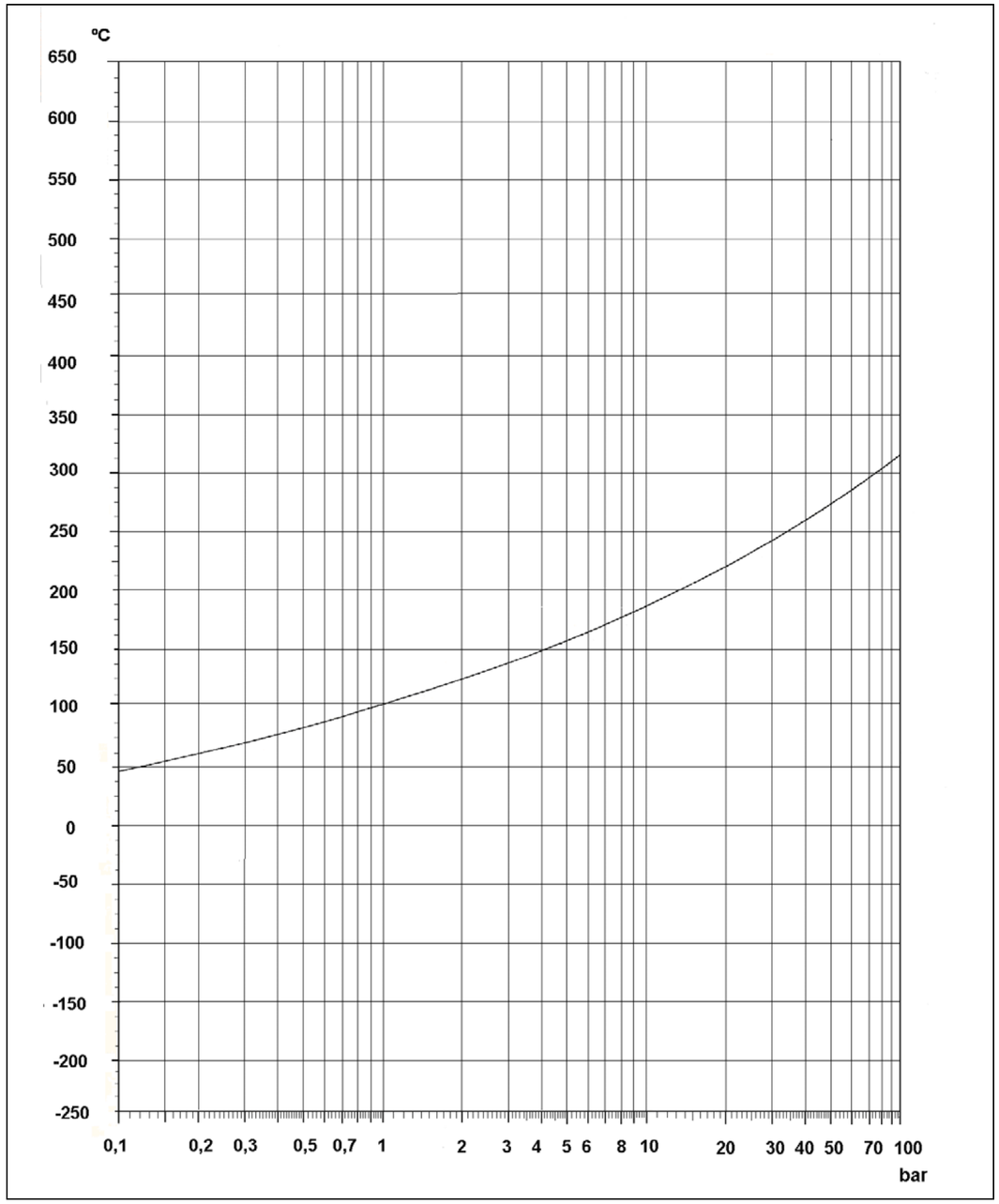
MASS FLOWRATES OF SATURATED STEAM FOR DIFFERENT VELOCITIES IN PIPES DIN2448 - STANDARD

Pm bar	v m/s	FLOWRATE (kg/h)													
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
0.4	15	10	17	28	48	64	103	171	236	397	600	878	1476	2346	3319
	25	17	29	47	80	107	171	285	393	662	1000	1464	2459	3911	5532
	40	28	46	75	128	171	274	456	628	1058	1601	2342	3935	6257	8851
0.6	15	12	20	33	56	76	121	202	278	468	708	1036	1741	2769	3917
	25	20	34	55	94	126	202	336	463	781	1181	1727	2902	4615	6528
	40	33	54	89	151	202	324	538	741	1249	1889	2764	4644	7384	10445
0.8	15	13	22	35	60	81	130	216	297	501	757	1108	1862	2960	4187
	25	22	36	59	101	135	216	360	495	835	1262	1846	3103	4934	6979
	40	35	58	95	161	216	346	575	792	1335	2019	2954	4964	7894	11166
1	15	14	24	39	67	89	143	238	327	552	835	1221	2052	3263	4615
	25	24	40	65	111	149	238	396	546	920	1391	2035	3420	5438	7692
	40	38	64	104	178	238	381	634	873	1472	2226	3256	5471	8700	12307
1.5	15	18	29	48	82	110	176	293	404	681	1030	1507	2532	4026	5694
	25	30	49	80	137	184	294	489	673	1135	1716	2511	4219	6710	9491
	40	47	79	129	219	294	470	783	1078/	1816	2746	4018	6751	10735	15185
2	15	21	35	57	97	131	209	347	478	806	1219	1784	2998	4767	6743
	25	35	58	95	162	218	348	579	797	1344	2032	2973	4996	7945	11238
	40	56	93	152	259	348	557	927	1276	2150	3252	4757	7994	12711	17980
2.5	15	24	40	66	112	151	241	401	553	931	1409	2061	3463	5506	7789
	25	41	67	110	187	251	402	669	921	1552	2348	3435	5771	9177	12982
	40	65	108	176	300	402	643	1070	1474	2484	3756	5495	9234	14684	20770
3	15	28	46	75	127	171	273	454	626	1055	1595	2333	3921	6235	8820
	25	46	76	125	212	285	455	757	1043	1758	2658	3889	6535	10392	14699
	40	73	122	199	339	455	728	1212	1669	2813	4253	6223	10456	16627	23519
4	15	34	56	92	157	211	337	560	771	1300	1966	2876	4833	7685	10871
	25	57	94	154	261	351	561	934	1286	2167	3277	4794	8055	12809	18119
	40	90	150	246	418	561	898	1494	2057	3467	5243	7670	12888	20495	28990
5	15	40	67	109	186	250	400	665	916	1544	2334	3415	5738	9125	12907
	25	67	111	182	310	417	666	1109	1527	2573	3890	5692	9564	15208	21512
	40	107	178	292	496	667	1066	1774	2443	4116	6224	9107	15302	24333	34420
6	15	47	77	127	216	289	463	770	1061	1788	2703	3955	6646	10568	14948
	25	78	129	211	359	482	772	1284	1768	2979	4505	6592	11076	17613	24913
	40	124	206	338	575	772	1235	2054	2829	4767	7208	10546	17722	28180	39861
7	15	53	88	144	244	328	525	873	1202	2026	3064	4482	7532	11977	16941
	25	88	146	239	407	547	875	1455	2004	3377	5106	7470	12553	19961	28235
	40	141	234	383	652	875	1399	2328	3206	5402	8170	11953	20084	31937	45176
8	15	59	98	160	273	366	586	975	1342	2261	3420	5003	8407	13369	18911
	25	98	163	267	455	610	976	1624	2237	3769	5700	8339	14012	22282	31518
	40	157	261	427	727	977	1562	2599	3579	6031	9120	13342	22420	35651	50429
9	15	65	109	178	302	406	649	1080	1487	2506	3790	5545	9318	14816	20958
	25	109	181	296	504	676	1082	1800	2479	4177	6317	9242	15529	24694	34930
	40	174	289	474	806	1082	1731	2880	3966	6683	10107	14787	24847	39510	55888
10	15	72	119	195	331	445	711	1184	1630	2747	4154	6078	10212	16239	22971
	25	119	198	324	552	741	1186	1973	2717	4578/	6923	10129	17021	27066	38285
	40	191	317	519	884	1186	1897	3157	4347	7325	11077	16207	27233	43305	61255
12	15	84	139	228	388	521	834	1388	1911	3220	4869	7124	11971	19036	26926
	25	140	232	380	647	869	1390	2313	3185	5367	8115	11873	19951	31726	44877
	40	224	372	608	1036	1390	2224	3700	5095	8587	12985	18998	31922	50761	71803
14	15	96	160	261	444	596	954	1587	2186	3683	5570	8150	13694	21776	30802
	25	160	266	435	740	994	1590	2645	3643	6139	9284	13583	22823	36293	51336
	40	256	425	696	1185	1591	2544	4233	5829	9823	14854	21732	36517	58068	82138
16	15	108	180	294	501	673	1076	1791	2466	4156	6284	9194	15450	24567	34751
	25	181	300	491	835	1122	1794	2985	4110	6926	10474	15324	25749	40945	57918
	40	289	480	785	1337	1794	2870	4775	6576	11082	16758	24518	41199	65513	92668
18	15	121	201	328	559	750	1199	1995	2748	4631	7003	10245	17215	27375	38722
	25	201	334	547	931	1250	1999	3326	4580	7718	11671	17075	28692	45625	64537
	40	322	535	875	1489	2000	3198	5321	7328	12348	18673	27320	45907	73000	103259
20	15	134	222	363	617	829	1326	2205	3037	5118	7740	11324	19027	30256	42798
	25	223	369	604	1029	1381	2209	3676	5062	8530	12899	18873	31712	50427	71330
	40	356	591	967	1646	2210	3535	5881	8099	13648	20639	30196	50740	80684	114128

VAPOUR TENSION OF WATER



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CONVERSION FACTORS

FLOW RATE IN VOLUME

UNIT		m^3/s	L/s	cfm	gpm
Cubic metre per second	m^3/s	1	1×10^{3}	2118,88	15850
Litre per second	L/s	1×10^{-3}	1	2,1189	15,85
Cubic foot per minute	cfm	$0,4719\times10^{-3}$	0,4719	1	7,48
Gallon per minute	gpm	$0,6309\times10^{-4}$	0,06309	0,1337	1

MASS

UNIT		kg	lb	ton
Kilogramme	kg	1	2,2046	1×10^{-3}
Pound	lb	0,4536	1	$0,454\times10^{-3}$
Ton short (US)	ton	907,1847	2000	1

AREA

UNIT		m^2	cm^2	in^2	ft^2
Square metre	m^2	1	1×10^{4}	1550	10,764
Square centimetre	cm^2	1×10^{-4}	1	0,155	$10,764\times10^{-4}$
Square inch	in^2	$6,452\times10^{-4}$	6,452	1	$6,944\times10^{-3}$
Square foot	ft^2	$9,290\times10^{-2}$	928,03	144	1

LENGTH

UNIT		m	cm	mm	in	ft
Metre	m	1	1×10^{2}	1×10^{3}	39,370	3,281
Centimetre	cm	1×10^{-2}	1	10	0,390	0,033
Milimetre	mm	1×10^{-3}	1×10^{-1}	1	0,039	$3,28\times10^{-3}$
Inch	in	$2,54\times10^{-2}$	2,540	25,4	1	0,083
Foot	ft	0,305	30,480	304,8	12	1

VOLUME

UNIT		m^3	L	in^3	ft^3	gal
Cubic metre	m^3	1	1×10^{3}	$61,024\times10^{3}$	35,315	219,969
Cubic dcm or liter	dm^3 (L)	1×10^{-3}	1	61,024	0,353	0,220
Cubic inch	in^3	$0,0164\times10^{-3}$	0,016	1	$5,787\times10^{-4}$	$3,605\times10^{-3}$
Cubic foot	ft^3	0,028	28,317	1728	1	6,229
Gallon (UK)	gal	$4,546\times10^{-3}$	4,546	277,419	0,161	1

WORK, ENERGY, HEAT AND ENTHALPY

UNIT		J	kgfm	kcal	Wh	Btu
Joule	J	1	0,1020	$0,2388\times10^{-3}$	$0,2778\times10^{-3}$	$0,9478\times10^{-3}$
Kilogramme metre	kgfm	9,807	1	$2,342\times10^{-3}$	$2,724\times10^{-3}$	$9,295\times10^{-3}$
Kilocalorie	kcal	4186,8	426,92	1	3,968	3,968
Watt hour	Wh	3600	367,08	0,861	1	3,413
British thermal unit	Btu	1055,06	107,58	0,252	0,293	1

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POWER

UNIT		W	kcal/h	kgm/s	BTU/h	ft lb/s	BHP	CV
Watt	W	1	0,8605	0,102	3,413	0,7375	$1,341\times10^{-3}$	$1,360\times10^{-3}$
Kilocalorie/hour	kcal/h	1,1628	1	0,1186	3,9683	0,8576	$1,559\times10^{-3}$	$1,581\times10^{-3}$
Kilogramme metre/sec	kgm/s	9,807	8,434	1	33,47	7,233	$1,315\times10^{-2}$	$1,333\times10^{-2}$
British thermal unit/hour	BTU/h	0,293	0,252	0,02988	1	0,2161	$0,393\times10^{-3}$	$0,398\times10^{-3}$
Foot pound/second	ft lb/s	1,356	1,166	0,1383	4,627	1	$1,818\times10^{-3}$	$1,844\times10^{-3}$
Brake horsepower	BHP	745,7	641,3	76,04	2547	550	1	1,0139
Horsepower (metric)	CV	735,5	632,53	75	2512,2	542,4	0,986	1

VELOCITY

UNIT		m/s	ft/s	km/h
Metre per second	m/s	1	3,2808	3,6
Foot per second	ft/s	0,3048	1	1,0973
Kilometre per hour	km/h	0,2778	0,9113	1

PRESSURE

UNIT		Pa	bar	at	mm Hg	kgf/m^2	psi	lbf/ft^2
Pascal	Pa	1	$1x10^{-5}$	$1,0197x10^{-5}$	0,0075	0,10197	$0,145x10^{-3}$	0,02088
Bar	bar	$1x10^{5}$	1	1,0197	750,07	10197	14,5050	2088
Atmosphere (Kgf/cm^2)	atm	98070	0,9807	1	735,56	10000	14,223	2048,16
Millimetre of mercury	mm Hg	133,32	$1,3332x10^{-3}$	$1,3595x10^{-3}$	1	13,595	0,0193	1,392
Kilogramme per sq. mtr.	kgf/m^2	9,807	$9,807x10^{-5}$	$1x10^{-4}$	0,0735	1	0,0014	0,205
Pounds per sq. Inch	psi	6894,14	0,06894	0,0703	51,719	703,07	1	144
Pounds per sq. foot	lbf/ft^2	47,876	$4,7876x10^{-4}$	$4,8824x10^{-4}$	0,7183	4,8824	0,00694	1

WATER HARDNESS

UNIT		ºFr	ºdH	GPG	ppm
French degree	ºFr	1	0,56	0,583	10,0
German degree	ºdH	1,79	1	1,040	17,9
Grain/US gallon	GPG	1,71	0,958	1	17,1
Parts per million	ppm	0,10	0,056	0,0583	1

TEMPERATURE

ºC	ºF	ºC	ºF	ºC	ºF	ºC	ºF
-35	-31	40	104	115	239	190	374
-30	-22	45	113	120	248	195	383
-25	-13	50	122	125	257	200	392
-20	-4	55	131	130	266	205	401
-15	5	60	140	135	275	210	410
-10	14	65	149	140	284	215	419
-5	23	70	158	145	293	220	428
0	32	75	167	150	302	225	437
5	41	80	176	155	311	230	446
10	50	85	185	160	320	235	455
15	59	90	194	165	329	240	464
20	68	95	203	170	338	245	473
25	77	100	212	175	347	250	482
30	86	105	221	180	356	255	491
35	95	110	230	185	365	260	500

Conversion equations	
	T(ºF) = (1,8 × T(ºC)) + 32
	T(ºC) = 0,55 × (T(ºF) - 32)
	T(K) = T(ºC) + 273,15

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MASS PER UNIT VOLUME OF DRY AIR IN kg/m³ FOR TEMPERATURES FROM 0 ºC TO 300 ºC AND PRESSURES FROM 0 TO 25 bar

t (ºC)	Gauge pressure (bar)										
	0	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5
0	1,293	1,931	2,569	3,207	3,845	4,483	5,121	5,759	6,397	7,036	7,674
10	1,247	1,863	2,478	3,094	3,709	4,325	4,941	5,556	6,172	6,787	7,403
20	1,205	1,799	2,394	2,988	3,583	4,177	4,772	5,367	5,961	6,556	7,150
30	1,165	1,740	2,315	2,890	3,465	4,040	4,615	5,189	5,764	6,339	6,914
40	1,128	1,684	2,241	2,798	3,354	3,911	4,467	5,024	5,580	6,137	6,693
50	1,093	1,632	2,172	2,711	3,250	3,790	4,329	4,868	5,408	5,947	6,486
60	1,060	1,583	2,106	2,630	3,153	3,676	4,199	4,722	5,245	5,768	6,292
70	1,029	1,537	2,045	2,553	3,061	3,569	4,077	4,585	5,092	5,600	6,108
80	1,000	1,494	1,987	2,481	2,974	3,468	3,961	4,455	4,948	5,442	5,935
90	0,973	1,453	1,932	2,412	2,892	3,372	3,852	4,332	4,812	5,292	5,772
100	0,947	1,414	1,881	2,348	2,815	3,282	3,749	4,216	4,683	5,150	5,617
110	0,922	1,377	1,832	2,286	2,741	3,196	3,651	4,106	4,561	5,016	5,471
120	0,898	1,342	1,785	2,228	2,672	3,115	3,558	4,002	4,445	4,888	5,331
130	0,876	1,308	1,741	2,173	2,605	3,038	3,470	3,902	4,335	4,767	5,199
140	0,855	1,277	1,699	2,120	2,542	2,964	3,386	3,808	4,230	4,651	5,073
150	0,835	1,247	1,658	2,070	2,482	2,894	3,306	3,718	4,130	4,542	4,953
160	0,815	1,218	1,620	2,023	2,425	2,827	3,230	3,632	4,034	4,437	4,839
170	0,797	1,190	1,584	1,977	2,370	2,763	3,157	3,550	3,943	4,337	4,730
180	0,779	1,164	1,549	1,933	2,318	2,702	3,087	3,472	3,856	4,241	4,626
190	0,763	1,139	1,515	1,891	2,268	2,644	3,020	3,397	3,773	4,149	4,526
200	0,746	1,115	1,483	1,852	2,220	2,588	2,957	3,325	3,693	4,062	4,430
220	0,716	1,070	1,423	1,776	2,130	2,483	2,837	3,190	3,543	3,897	4,250
240	0,688	1,028	1,368	1,707	2,047	2,386	2,726	3,066	3,405	3,745	4,085
260	0,662	0,989	1,316	1,643	1,970	2,297	2,624	2,951	3,278	3,605	3,931
280	0,639	0,954	1,269	1,584	1,899	2,214	2,529	2,844	3,159	3,474	3,789
300	0,616	0,920	1,224	1,528	1,833	2,137	2,441	2,745	3,049	3,353	3,657

t (ºC)	Gauge pressure (bar)										
	6	7	8	9	10	12	14	16	18	20	25
0	8,950	10,226	11,502	12,778	14,054	16,606	19,159	21,711	24,263	26,815	33,196
10	8,634	9,865	11,096	12,327	13,558	16,020	18,482	20,944	23,406	25,868	32,024
20	8,339	9,528	10,717	11,906	13,095	15,473	17,852	20,230	22,608	24,986	30,931
30	8,064	9,214	10,364	11,514	12,663	14,963	17,263	19,562	21,862	24,162	29,911
40	7,807	8,920	10,033	11,146	12,259	14,485	16,711	18,938	21,164	23,390	28,956
50	7,565	8,644	9,722	10,801	11,880	14,037	16,194	18,352	20,509	22,666	28,060
60	7,338	8,384	9,430	10,470	11,523	13,616	5,708	17,800	19,893	21,986	27,217
70	7,124	8,140	9,156	10,171	11,187	13,219	15,250	17,280	19,314	21,345	26,424
80	6,922	7,909	8,896	9,883	10,870	12,845	14,819	16,793	18,767	20,741	25,676
90	6,732	7,692	8,651	9,611	10,571	12,491	14,411	16,330	18,250	20,170	24,969
100	6,551	7,485	8,420	9,354	10,288	12,156	14,024	15,893	17,761	19,629	24,300
110	6,380	7,290	8,200	9,110	10,019	11,839	13,658	15,478	17,297	19,117	23,666
120	6,218	7,105	7,991	8,878	9,764	11,538	13,311	15,084	16,857	18,631	23,064
130	6,064	6,928	7,793	8,658	9,522	11,252	12,981	14,710	16,439	18,168	22,492
140	5,917	6,761	7,604	8,448	9,292	10,979	12,667	14,354	16,041	17,729	21,947
150	5,777	6,601	7,425	8,248	9,072	10,720	12,367	14,015	15,662	17,310	21,429
160	5,644	6,449	7,253	8,058	8,863	10,472	12,082	13,691	15,301	16,910	20,934
170	5,516	6,303	7,090	7,876	8,663	10,236	11,809	13,382	14,955	16,529	20,461
180	5,395	6,164	6,933	7,702	8,472	10,010	11,548	13,087	14,625	16,164	20,010
190	5,278	6,031	6,783	7,536	8,289	9,794	11,299	12,804	14,310	15,815	19,578
200	5,167	5,903	6,640	7,377	8,114	9,587	11,060	12,534	14,007	15,481	19,164
220	4,957	5,664	6,371	7,078	7,784	9,198	10,612	12,025	13,439	14,853	18,387
240	4,764	5,443	6,123	6,802	7,481	8,840	10,198	11,557	12,915	14,274	17,670
260	4,585	5,443	5,893	6,547	7,200	8,508	9,816	11,123	12,431	13,738	17,007
280	4,419	5,050	5,680	6,310	6,940	8,200	9,461	10,721	11,981	13,242	16,392
300	4,265	4,873	5,482	6,090	6,698	7,914	9,131	10,347	11,563	12,780	15,820

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PHYSICAL PROPERTIES OF GASES AND VAPOURS – SI UNITS

Referred to 0ºC (32F) and 1013,25 mbar (14,7 psia)

ρ - mass per unit volume
V - specific volume
t_f - melting temperature
Cp - specific heat at constant pressure
t_e - boiling temperature
λ - thermal conductivity
ρe - mass per unit volume of the liquid at t_e

Gas or Vapour	Formula	ρ (kg/m³)	t_f (ºC)	t_e (ºC)	ρ_e (kg/m³)	V (m³/kg)	Cp (kcal/kg.h.ºC)	λ (kcal/m.h.ºC)
Acetone	C_3H_6O	2,591	-94,8	56,2	749	0,386	0,296	0,0083
Acetylene	C_2H_2	1,162	-83,3	-83,6	613	0,861	0,386	0,0158
Ammonia	NH_3	0,76	-77,9	-33,4	680	1,316	0,491	0,0187
Argon	Ar	1,782	189,2	-185,7	1820	0,561	0,125	0,014
Benzole	C6H6	3,485	-	-	-	0,287	0,227	0,0076
Biogas (40% CH4)	-	1,467	-	-	-	-	-	-
Biogas (56% CH4)	-	1,267	-	-	-	-	-	-
Biogas (70% CH4)	-	1,092	-	-	-	-	-	-
Butane	C_4H_{10}	2,593	-138,4	-0,5	602	0,386	0,382	0,0119
Carbon dioxide	CO_2	1,964	-56,6	-78,2	1219	0,509	0,195	0,0122
Carbon disulphide	CS2	3,397				0,294	0,139	0,0058
Carbon monoxide	CO	1,25	-205	-191,6	801	0,8	0,248	0,0191
Chlorine	Cl_2	3,164	-101	-34,6	1512	0,316	0,116	0,0073
Diethyl ether	C4H10O	3,307				0,302	0,345	0,0108
Dry air	-	1,293	-213	-192,3	875	0,773	0,24	0,0209
Ethane	C_2H_6	1,342	-183,3	-88,6	546	0,745	0,394	0,0155
Ethyl alcohol	C_2H_6O	2,055	-114,2	78,3	747	0,487	0,364	0,0119
Ethylene	C_2H_4	1,251	-169,5	-103,7	568	0,799	0,349	0,0144
Helium	He	0,179	-272,2	-268,9	125	5,599	1,25	0,1233
Hydrochloric acid	HCl	1,627	-111,2	-84,8	1135	0,615	0,19	0,0072
Hydrogen	H_2	0,09	-259,1	-252,9	71	11,118	3,45	0,1508
Hydrogen sulphide	H_2S	1,52	-85,6	-60,4	957	0,658	0,237	0,0108
Methane	CH_4	0,716	-182,5	-161,5	415	1,397	0,517	0,0263
Methyl alcohol	CH_4O	1,429	-97,6	64,7	737	0,7	0,32	0,012
Natural gas	-	0,6	-	-	-	-	-	-
Nitrogen	N_2	1,25	-209,9	-195,8	810	0,8	0,247	0,0205
Oxygen	O_2	1,428	-218,4	-183	1131	0,7	0,218	0,0208
Propane	C_3H_8	1,968	-187,7	-42,1	585	0,508	0,37	0,013
Propylene	C_3H_6	1,877	-185	-47,8	686	0,533	0,34	-
Sulfur dioxide	SO2	2,858	-	-	-	0,35	0,14	0,0072

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PHYSICAL PROPERTIES OF WATER – SI UNITS

t_{ref} - reference temperature for — Ca - actual specific heat at t_{ref}

M_s - mass per unit volume at 20ºC (68ºF) — λ- rthermal conductivity at t_{ref}

Temp. (ºC)	Ms (kg/m³)	V (m³/kgx1000)	Ca (kcal/kg.ºC)	λ (kcal/m.h.ºC)	Temp. (ºC)	Ms (kg/m³)	V (m³/kgx1000)	Ca (kcal/kg.ºC)	λ (kcal/m.h.ºC)
0	999,87	1,00013	–	–	**70**	977,81	1,02269	1,0002	0,57
4	999,99	1,00001	–	–	**71**	977,23	1,0233	–	–
6	999,97	1,00003	–	–	**72**	976,66	1,0239	–	–
8	999,89	1,00011	–	–	**73**	976,07	1,02452	–	–
10	999,75	1,00025	1	0,493	**74**	975,48	1,02514	–	–
12	999,55	1,00045	–	–	**75**	974,89	1,02576	1,0013	0,574
14	999,3	1,0007	–	–	**76**	974,29	1,02639	–	–
16	999	1,001	–	–	**77**	973,68	1,02703	–	–
18	998,65	1,00135	–	–	**78**	973,07	1,02768	–	–
20	998,2	1,0018	1	0,51	**79**	972,45	1,02833	–	–
22	997,83	1,00217	–	–	**80**	971,83	1,02899	1,0025	0,577
24	997,37	1,00264	–	–	**81**	971,21	1,02964	–	–
26	996,87	1,00314	–	–	**82**	970,57	1,03032	–	–
28	996,33	1,00368	–	–	**83**	969,94	1,03099	–	–
30	995,76	1,00426	1	0,526	**84**	969,3	1,03167	–	–
32	995,12	1,0049	–	–	**85**	968,65	1,03236	1,0037	0,58
34	994,49	1,00554	–	–	**86**	968	1,03306	–	–
36	993,74	1,0063	–	–	**87**	967,34	1,03376	–	–
38	993,02	1,00703	–	–	**88**	966,68	1,03447	–	–
40	992,24	1,00782	1	0,539	**89**	966,01	1,03519	–	–
41	991,86	1,00821	–	–	**90**	965,34	1,0359	1,0049	0,582
42	991,47	1,0086	–	–	**91**	964,67	1,03662	–	–
43	991,07	1,00901	–	–	**92**	963,99	1,03736	–	–
44	990,66	1,00943	–	–	**93**	963,3	1,0381	–	–
45	990,25	1,00985	–	–	**94**	962,61	1,03884	–	–
46	989,82	1,01028	–	–	**95**	961,92	1,03959	1,006	0,584
47	989,4	1,01071	–	–	**96**	961,22	1,04034	–	–
48	988,96	1,01116	–	–	**97**	960,51	1,04111	–	–
49	988,52	1,01161	–	–	**98**	959,81	1,04187	–	–
50	988,07	1,01207	1	0,551	**99**	959,09	1,04266	–	–
51	987,62	1,01254	–	–	**100**	958,38	1,04343	1,0061	0,586
52	987,15	1,01302	–	–	**105**	–	–	1,0071	0,588
53	986,69	1,01349	–	–	**110**	–	–	1,0084	0,589
54	986,21	1,01398	–	–	**115**	–	–	1,0098	0,59
55	985,73	1,01448	1	0,556	**120**	–	–	1,0114	0,591
56	985,25	1,01497	–	–	**125**	–	–	1,0132	0,591
57	984,75	1,01549	–	–	**130**	–	–	1,0152	0,592
58	984,25	1,016	–	–	**135**	–	–	1,0175	0,592
59	983,75	1,01652	–	–	**140**	–	–	1,02	0,592
60	983,24	1,01705	1	0,561	**145**	–	–	1,0228	0,591
61	982,72	1,01758	–	–	**150**	–	–	1,0258	0,591
62	982,2	1,01812	–	–	**160**	–	–	1,0328	0,589
63	981,67	1,01867	–	–	**170**	–	–	1,0411	0,586
64	981,13	1,01923	–	–	**180**	–	–	1,0507	0,582
65	980,59	1,01979	1	0,566	**190**	–	–	1,0619	0,578
66	980,05	1,02036	–	–	**200**	–	–	1,0746	0,572
67	979,5	1,02093	–	–	**210**	–	–	1,089	0,565
68	978,94	1,02151	–	–	**220**	–	–	1,1052	0,558
69	978,38	1,0221	–	–	**230**	–	–	1,1234	0,55

We reserve the right to change the design and material of this product without notice.

PHYSICAL PROPERTIES OF LIQUIDS – SI UNITS

t_{ref} - reference temperature for — Ca - actual specific heat at t_{ref}

M_s - mass per unit volume at 20ºC (68ºF) — λ- thermal conductivity at t_{ref}

Liquid	t_{ref} (ºC)	Ms (kg/m³)	Ca (kcal/kg.ºC)	λ (kcal/m.h.ºC)	Liquid	t_{ref} (ºC)	Ms (kg/m³)	Ca (kcal/kg.ºC)	λ (kcal/m.h.ºC)
Acetic acid	25	1049	0,51	0,166	**Methane**	-90	162	-	-
Acetone	20	790	0,515	0,139	**Methanol**	20	791	0,33	-
Ammonia sol. (25%)	20	771	-	0,425	**Methyl alcohol (95%vol.)**	20	792	0,596	0,174
Apple juice	20	1356	0,446	-	**Milk, cow, heavy cream**	20	994	0,94	0,434
Argon	-186	1430	-	-	**Naphta**	15	665	0,92	-
Automobile oils	15	880-940	-	0,125	**Nitric acid**	20	1520	0,411	0,456
Beer	10	1010	-	-	**Nitrogen**	-201	808	-	-
Benzene	20	870	0,43	0,138	**Oil, coconut**	20	924	-	-
Benzole	20	879	0,43	0,132	**Oil, corn**	20	922	-	-
	80	-	0,44	0,13	**Oil, castor**	25	956,1	0,43	0,155
Butane	25	599	0,55	-	**Oil, cotton seed**	15	926	-	-
Butter	20	911	0,557-0,688	-	**Oil, olive**	10	918	0,47	0,146
Carbon tetrachloride	25	1584	0,207	0,089	**Oil, palm**	20	915	-	-
Carbon disulphide	20	1266	0,241	0,138	**Oil, soya**	20	927	0,47	-
Chloride	25	1560	-	-	**Oil, sunflower**	20	920	-	-
Chloroform	20	1489	0,251	0,11	**Oil, peanut**	20	914	-	-
Citric acid	25	1660	-	-	**Oil, whale**	15	925	-	-
Crude oil	20	900	-	0,113	**Oxygen (liquid)**	-186	1155	-	-
Diesel	20	800	-	-	**Petrol**	30	680 - 710	0,45	0,112
Ethane (liquid)	-89	570	-	-	**Phenol**	25	1072	0,34	0,163
Ethyl acetate	20	901	-	-	**Propanol**	25	804	-	-
Ethyl alcohol (95%vol.)	0	789	0,547	0,166	**Propyl alcohol**	25	800	0,57	0,138
	40	-	0,648	0,144	**Sea water**	25	1025	0,94	-
Fuel oil	20	840 - 920	0,471	0,103	**Sodium carbonate**	20	2530	0,86	0,516
Gasoline	20	803	0,53	0,129	**Sodium Hydroxide (caustic soda)**	15	1250	0,77	0,37
Glycerine	10	1260	0,576	0,25	**Sulphuric acid**	12	1853	0,33	0,28
Glycerol	25	1126	-	-	**Sulphurous acid (96%)**	20	1840	0,351	0,43
Helium	-271	147	-	-	**Water**	8	999,88	1	0,485
Honey	20	1420	0,54-0,6	0,00648		41	991,66	1	0,538
Hydrazine	25	795	-	-		72	976,36	1	0,58
Hydrochloric acid (25%)	20	1150	0,75	0,404		100	958,38	1,006	0,586
Kerosene	16	820,1	0,48	0,125		200	0 - 200	1,037	0,572
Lubricating oil	81	920	-	0,105					
	0	-	-	0,133					
	100	-	-	0,128					
	200	-	-	0,122					

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IS PV20.00 E 09.18

PHYSICAL PROPERTIES OF METALS – SI UNITS

t_{ref} - reference temperature for Ms - mass per unit volume at 20ºC		λ - thermal conductivity at t_{ref} Ca - actual specific heat at t_{ref}		
Metal	**t_{ref} (ºC)**	**Ms (kg/m³)**	**λ (kcal/m.h.ºC)**	**Ca (kcal/kg.h.ºC)**
Alloy Steel (5%Cr)	20	7790	28	0,11
(20%Cr)	20	7670	20	0,11
(10%Cr)	20	7760	27	0,11
Alloy Steel (5%Ni)	30	7850	25	-
(10%Ni)	30	-	22	-
(40%Ni)	30	8120	9	-
(20%Ni)	30	-	14	-
Aluminum	0	2700	173	0,21
	100	-	176	0,224
	300	-	198	0,241
Brass	20	8400	79-96	-
	100	-	90-110	-
Bronze	20	8700	50	0,0913
	100	-	62	0,0937
Carbon Steel (0,1%C)	100	7830	47	-
	300	-	43	-
	600	-	32	-
Carbon Steel (0,5%C)	100	7820	45	0,113
	300	-	38	-
	600	-	31	-
Carbon Steel (1,5%C)	100	7740	32	-
	300	-	31	-
	600	-	29	-
Cast Iron (4%C)	20	-	50	-
Chromium	0	7190	-	0,102
	100	-	-	0,113
	300	-	-	0,125
Copper	20	8960	332	0,0911
Gold	0	19320	268	0,0311
	200	-	266	-
Magnesium	100	1738	135	0,257
Nikel	10	8902	54	0,105
	500	-	44	-
Silver	0	10500	360	0,057
	100	-	312	0,0572
	900	-	-	0,0676
Tin	0	7310	56	0,0536
	200	-	52	-
Zinc	0	7133	95	0,0918
	200	-	90	-

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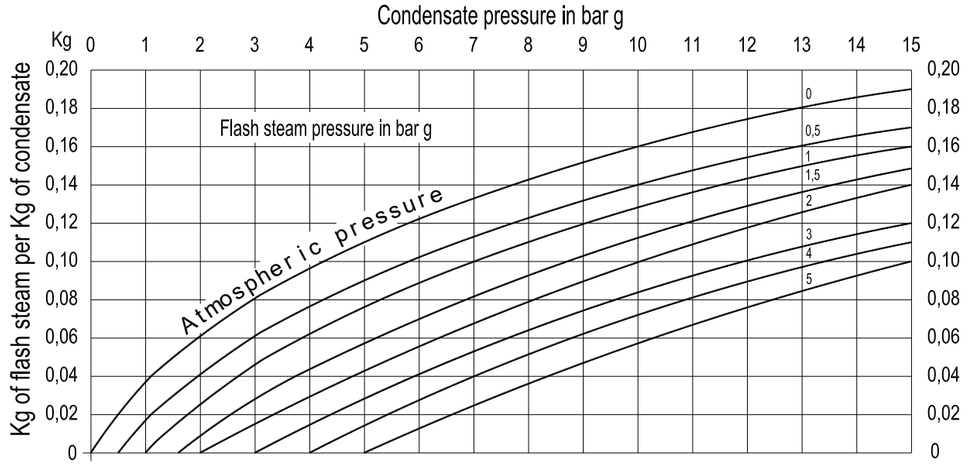
FLASH STEAM FROM BOILING CONDENSATE



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IS PV20.00 E 09.18

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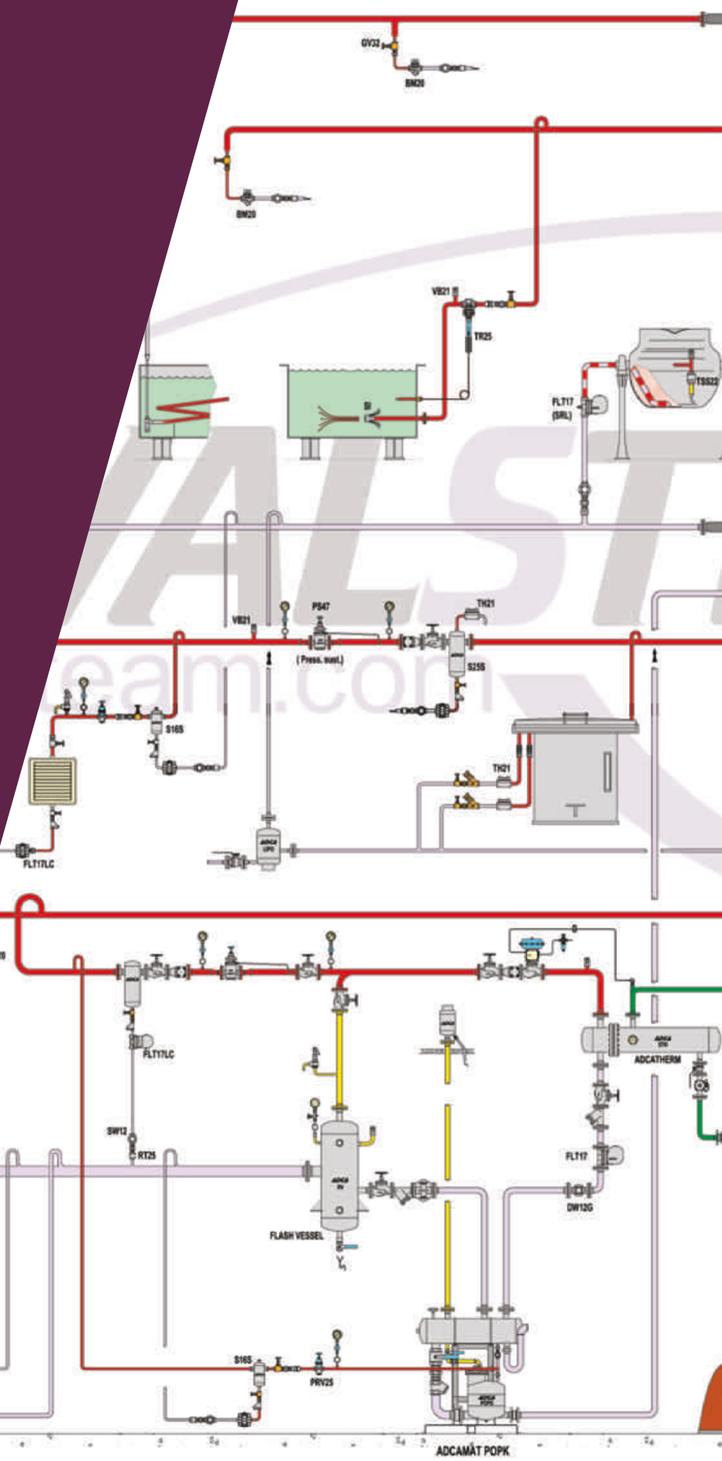

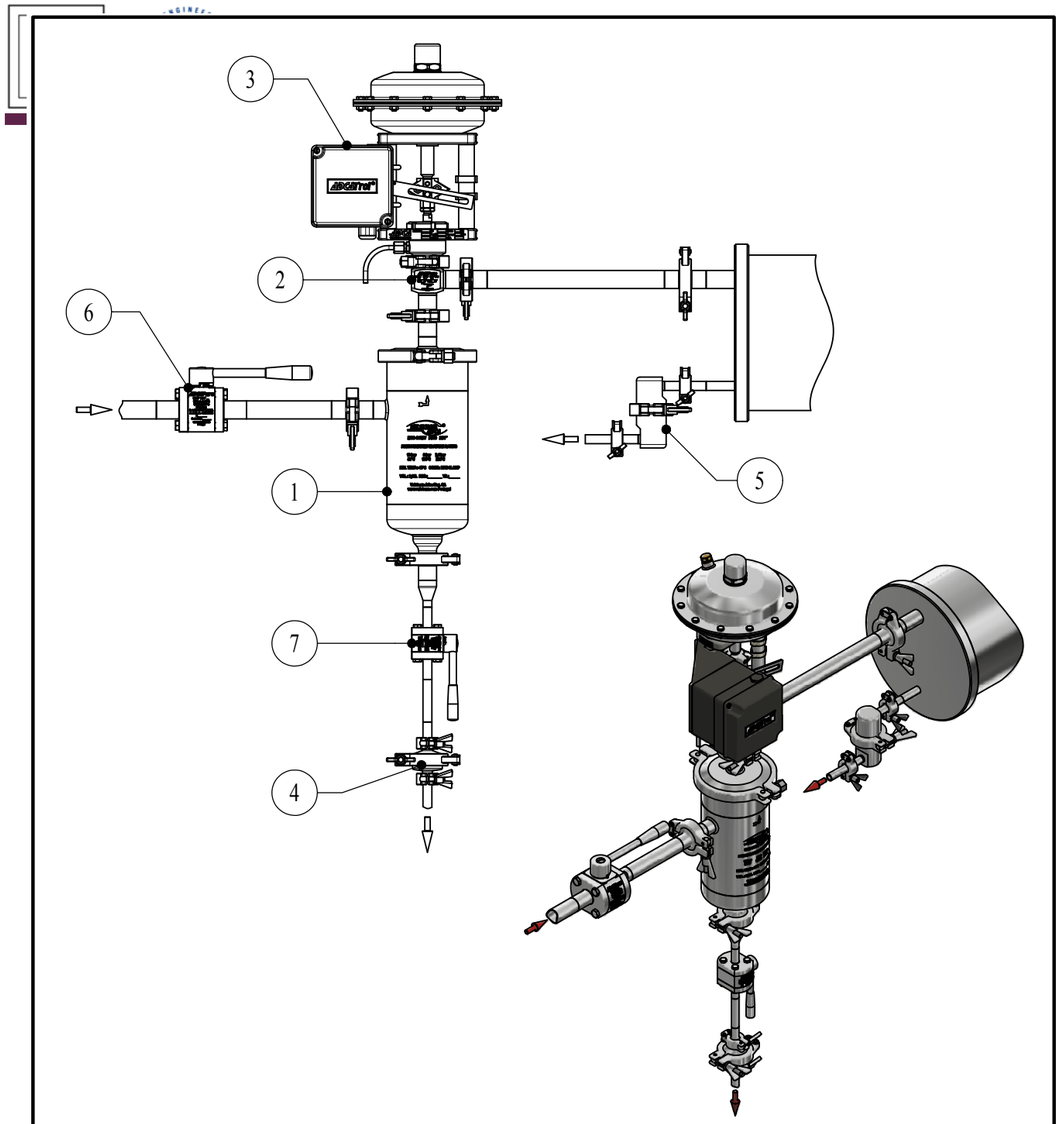

Ref.	Quant.	Designation	Size/Connection	Material	Remarks
7	1	ADCAPure M3HP True bore ball valve	DN___ / _____	AISI 316L(1.4404)	
6	1	ADCAPure M3HP True bore ball valve	DN___ / _____	AISI 316L(1.4404)	
5	1	ADCAPure TSS6A Steam trap	DN___ / _____	AISI 316L(1.4404)	
4	1	ADCAPure TSS7 Steam trap	DN___ / _____	AISI 316L(1.4404)	
3	1	ADCATrol PE986 Electro-pneumatic positioner	DN___ / _____	AISI 316L(1.4404)	Optional
2	1	ADCAPure V926H Control valve	DN___ / _____	AISI 316L(1.4404)	
1	1	ADCAPure S-10HV Centrifugal steam dryer	DN___ / _____	AISI 316L(1.4404)	

	Data	Rubrica
Proj.	16.04.01	F.Soares
Des.	16.04.01	Nuno M.
Rect.	16.04.01	Nuno M.

VALSTEAM ADCA ENGINEERING,SA

Proc. 0.490

Escala: /

Tolerancias n/ especificadas

Dimensões	Desvios
> 0 a 5	±0.2
> 5 a 30	±0.3
> 30 a 120	±0.5
>120	±0.8

Angulos +/-30'
Chanfros / Rolos 0.3

Descrição
ADCAPURE CONTROL VALVE SET
S-10HV Separator / V926H Control valve

Des.N°.
ADCR.13.8605

Rev.: 00 Em: 16.04.01

Peso/Weight: N/A

Pagina: 1 de 1

Mod.A4

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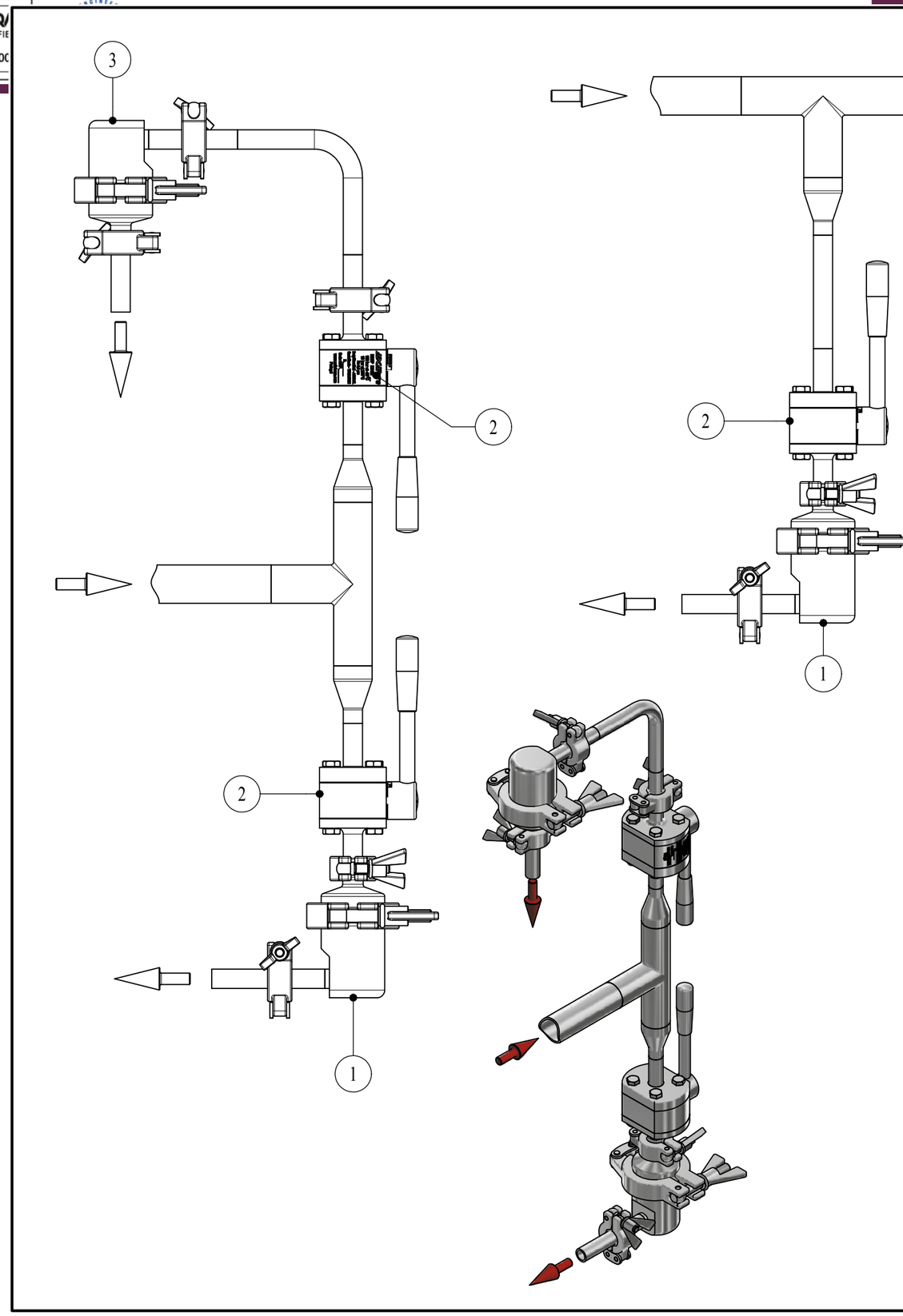
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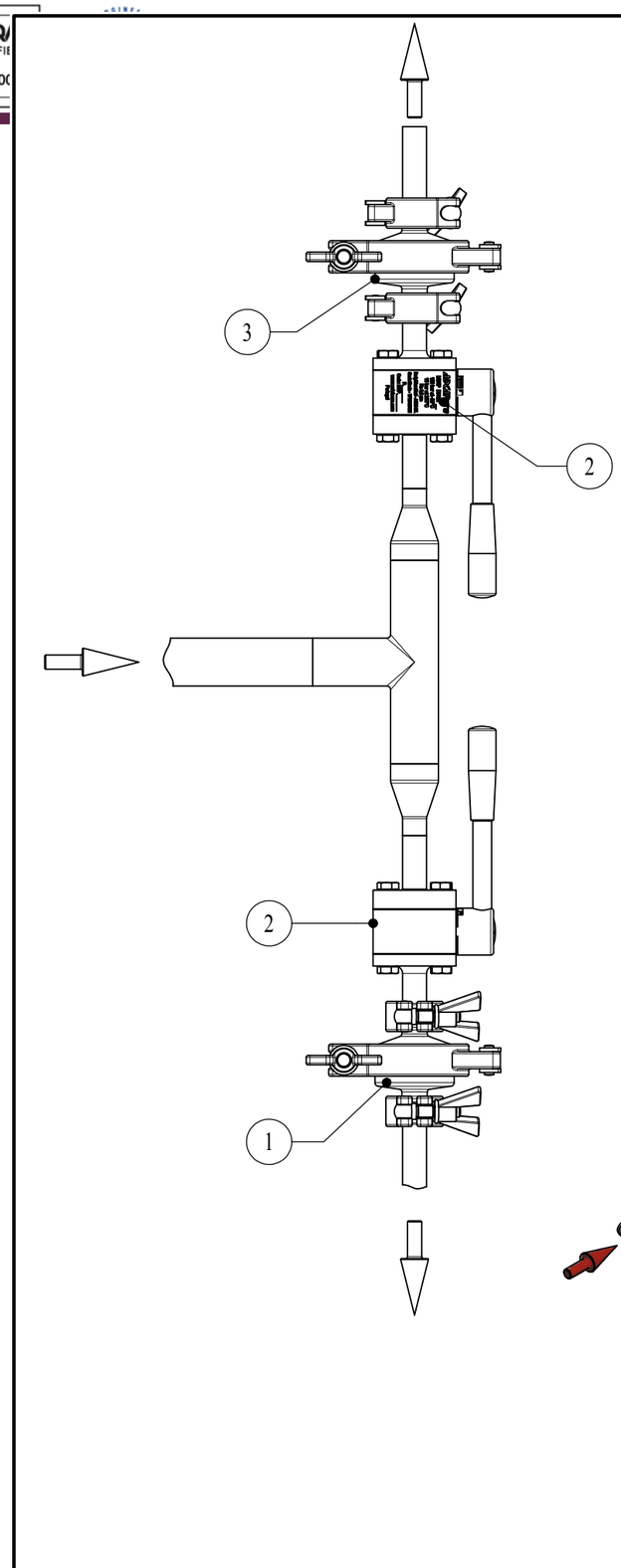
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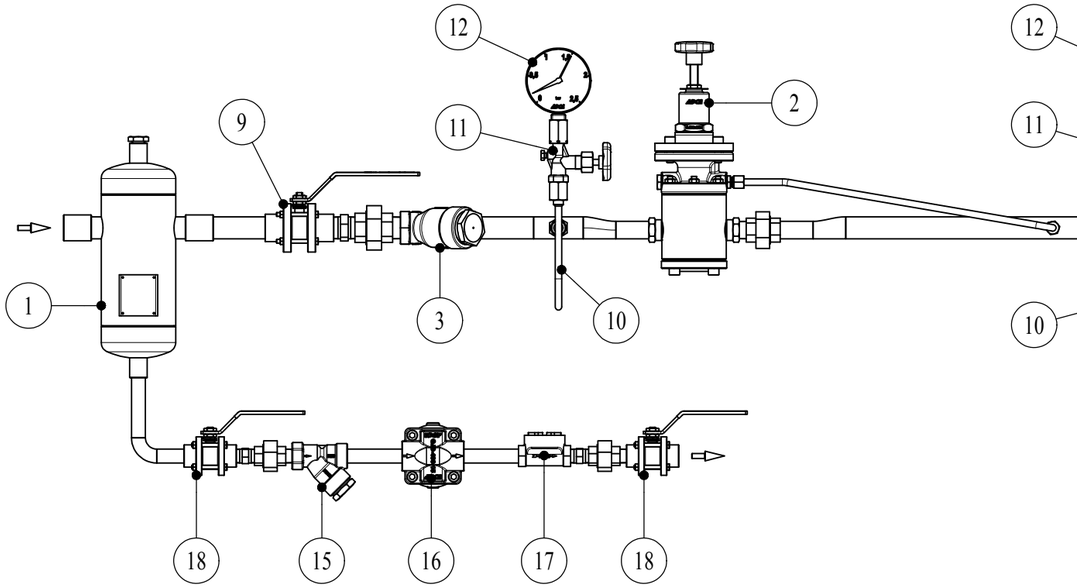
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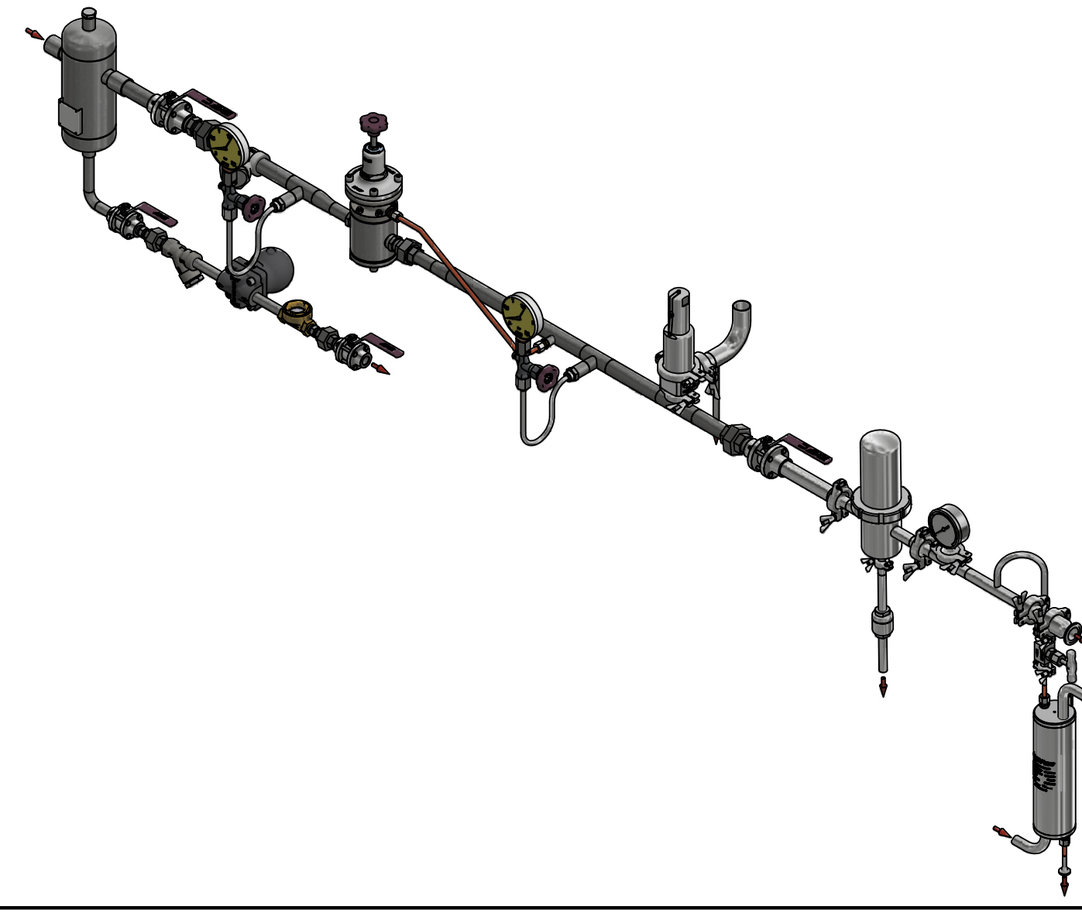

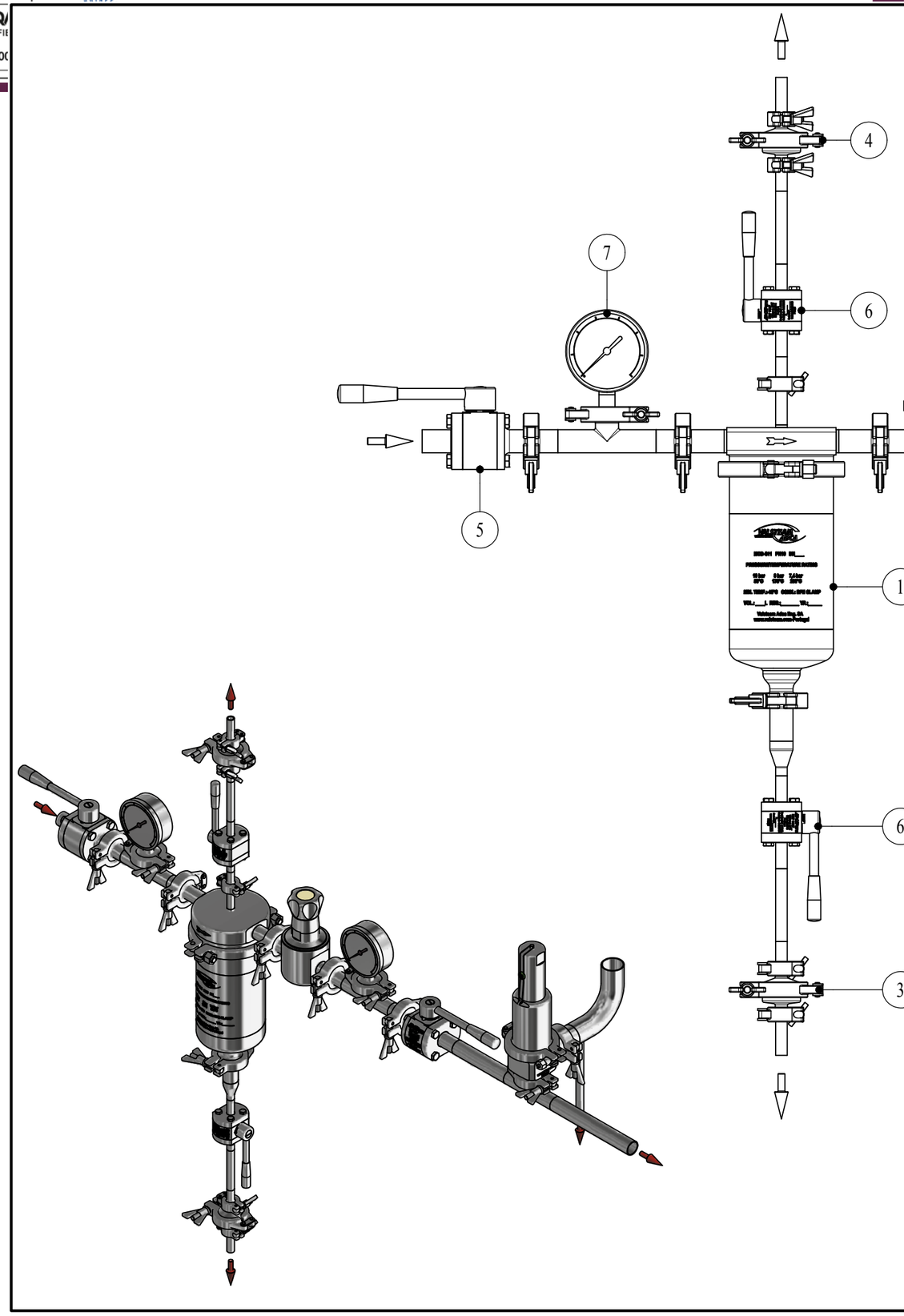
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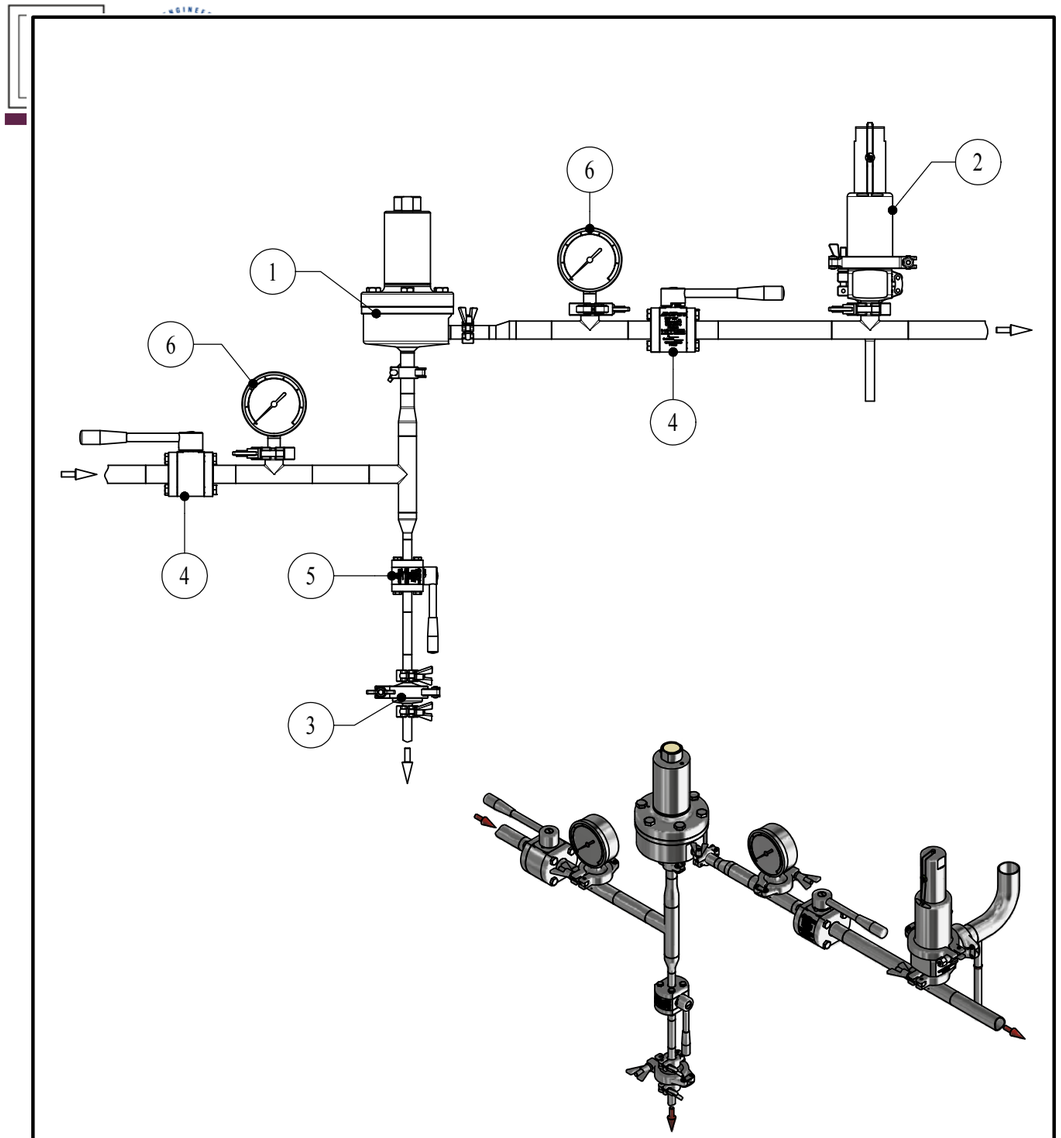

Ref.	Quant.	Designation	Size/Connection	Material	Remarks
6	2	ADCAPure MAN10P Pressure gauge	DN___ / _____	AISI 316L(1.4404)	
5	1	ADCAPure M3HP True bore ball valve	DN___ / _____	AISI 316L(1.4404)	
4	2	ADCAPure M3HP True bore ball valve	DN___ / _____	AISI 316L(1.4404)	
3	1	ADCAPure TSS7 Steam trap	DN___ / _____	AISI 316L(1.4404)	
2	1	ADCAPure SRV6 Safety valve	DN___ / _____	AISI 316L(1.4404)	
1	1	ADCAPure P-160 Pressure regulator	DN___ / _____	AISI 316L(1.4404)	

	Data	Rubrica
Proj.	16.03.31	F.Soares
Des.	16.03.31	Nuno M.
Rect.	16.03.31	Nuno M.

VALSTEAM ADCA ENGINEERING,SA

Proc. 0.490

Escala: /

Tolerancias n/ especificadas:

Dimensões	Desvios
> 0 a 5	±0.2
> 5 a 30	±0.3
> 30 a 120	±0.5
>120	±0.8

Angulos +/-30'
Chanfros / Rolos 0.3

Descrição
ADCAPURE PRESSURE REDUCING STATION
P-160 Regulator

Des.N°.
ADCR.08.8599

Rev.: 00 Em: 16.03.31

Peso/Weight: N/A

Pagina: 1 de 1

Mod.A4

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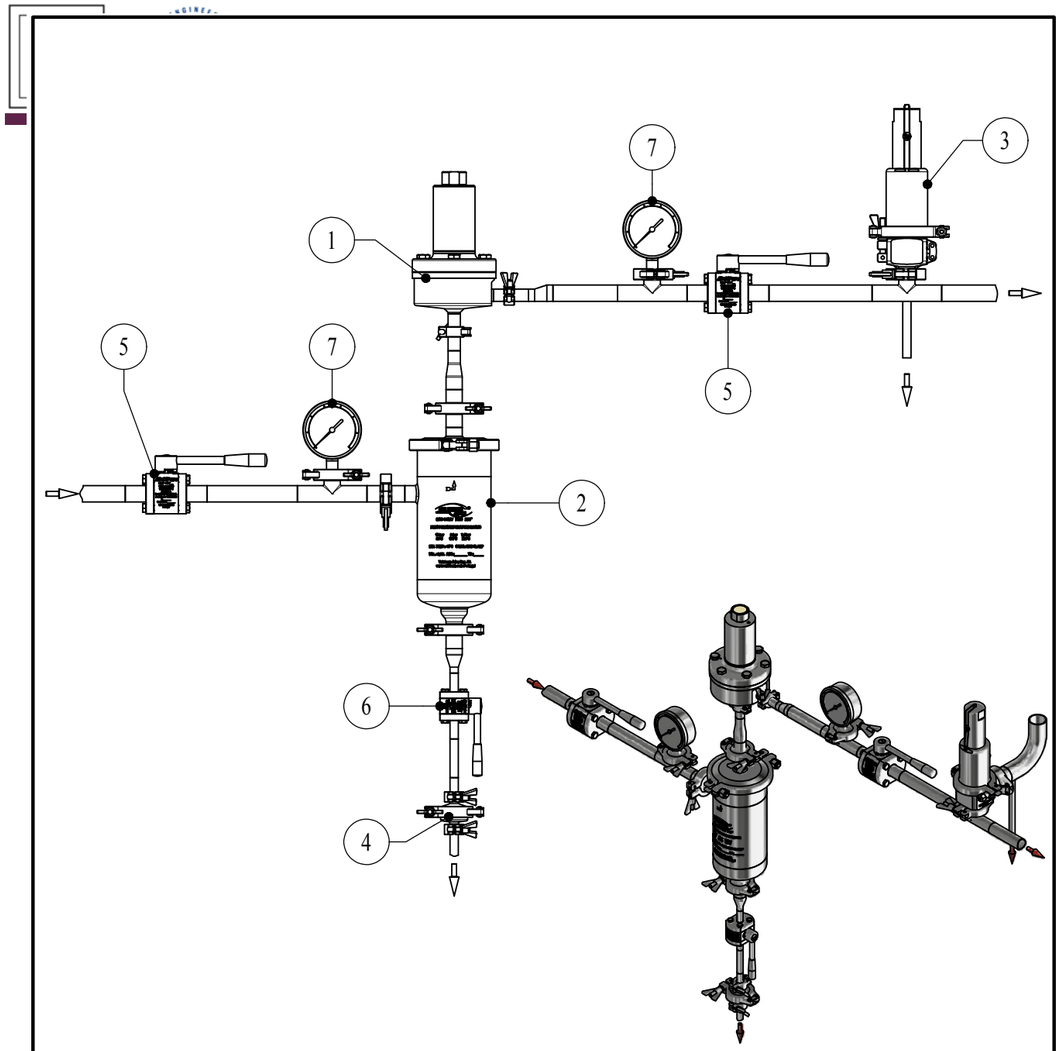

Ref.	Quant.	Designation	Size/Connection	Material	Remarks
7	2	ADCAPure MAN10P Pressure gauge	DN___ / _____	AISI 316L(1.4404)	
6	1	ADCAPure M3HP True bore ball valve	DN___ / _____	AISI 316L(1.4404)	
5	2	ADCAPure M3HP True bore ball valve	DN___ / _____	AISI 316L(1.4404)	
4	1	ADCAPure TSS7 Steam trap	DN___ / _____	AISI 316L(1.4404)	
3	1	ADCAPure SRV6 Safety valve	DN___ / _____	AISI 316L(1.4404)	
2	1	ADCAPure S-10HV Centrifugal steam dryer	DN___ / _____	AISI 316L(1.4404)	
1	1	ADCAPure P-160 Pressure regulator	DN___ / _____	AISI 316L(1.4404)	

	Data	Rubrica
Proj.	16.03.31	F.Soares
Des.	16.03.31	Nuno M.
Rect.	16.03.31	Nuno M.

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Proc. 0.490

Escala:	Tolerancias n/ especificadas	
	Dimensões	Desvios
/	> 0 a 5	±0.2
	> 5 a 30	±0.3
	> 30 a 120	±0.5
	>120	±0.8
	Angulos +/-30'	
	Chanfros / Rolos 0.3	

Descrição
ADCAPURE PRESSURE REDUCING STATION
S-10HV Separator / P-160 Regulator

Des.N°.
ADCR.09.8600

Rev.: 00 Em: 16.03.31
Peso/Weight: N/A
Pagina: 1 de 1

Mod.A4

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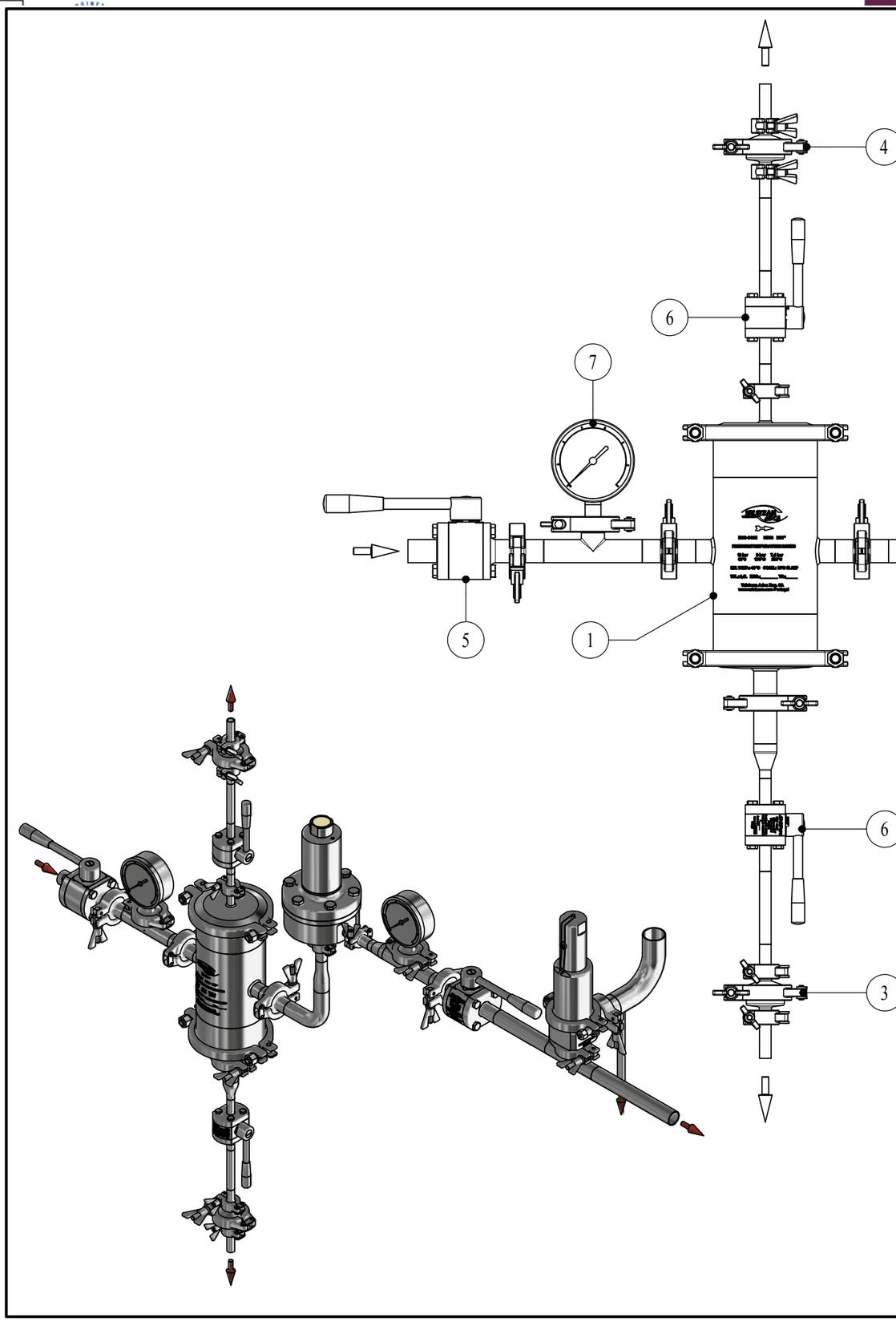

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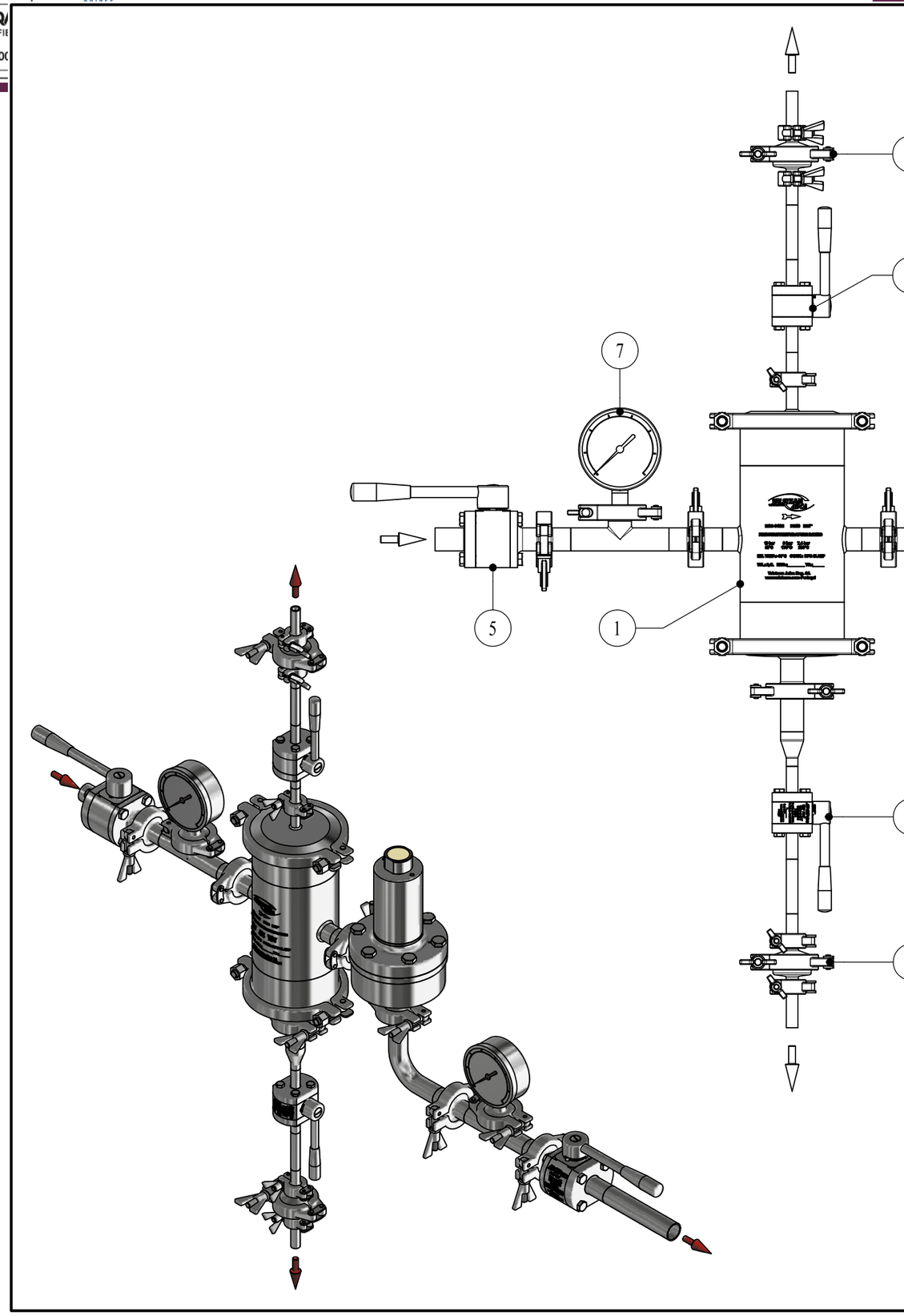

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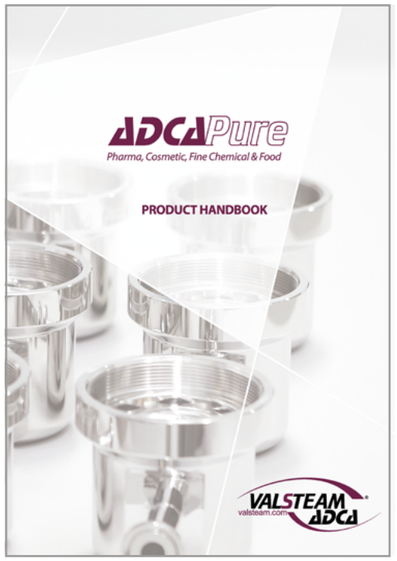

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