



CLEAN STEAM DIRECT-ACTING PRESSURE REDUCING VALVE

MODEL DR8-P/DR8-EP

COMPACT STAINLESS STEEL DIRECT-ACTING PRV FOR CLEAN STEAM

Features

Compact pressure reducing valve for use on autoclaves, sterilizers, humidifiers, etc. in the pharmaceutical, medical, food and other industries.

1. Wetted parts are stainless steel and USP/FDA compliant rubber or resin with high durability and corrosion resistance for long service life.
2. Double-guided valve for stable operation.
3. Internal buff-polishing with an additional interior and exterior electro-polish option to 0.4 μm Ra for improved resistance to bacterial growth.
4. Easy to operate and adjust.
5. Easy access to internal parts simplifies cleaning and reduces maintenance cost.
6. High flow rate for its class.



Specifications

Model	DR8-3P	DR8-6P	DR8-3EP*	DR8-6EP*
Connection	Clamp End			
Size	15, 20, 25 mm (ISO) 1/2", 3/4", 1" (ASME-BPE)			
Maximum Operating Pressure (MPaG) PMO	0.8			
Maximum Operating Temperature (°C) TMO	175			
Primary Pressure Range (MPaG)	0.2 to 0.4	0.4 to 0.8	0.2 to 0.4	0.4 to 0.8
Adjustable Pressure Range (MPaG)	0.018 to 0.3	0.27 to 0.6	0.018 to 0.3	0.27 to 0.6
Secondary pressure must not exceed 75% of primary pressure				
Finishing**	Internal	0.8 μm Ra Buff-polished		Buff-polished then 0.4 μm Ra electro-polished
	External	25 μm Ra electro-polished		
Applicable Fluids***	Steam			

* Option ** Treated base surfaces are lost-wax cast *** Do not use for toxic, flammable, or otherwise hazardous fluids. 1 MPa = 10.197 kg/cm²
 PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 1.0
 Maximum Allowable Temperature (°C) TMA: 185

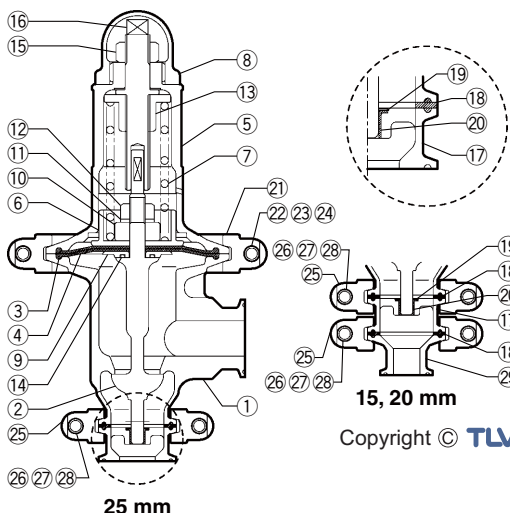


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI ¹⁾
①	Body	Cast Stainless Steel	—	A351 Gr.CF3M
② ^V	Valve	Stainless Steel	SUS316L	AISI316L
③ ^{MD}	Diaphragm	Silicone Rubber ²⁾	—	—
④ ^{MD}	Protective Sheet	Fluorine Resin ²⁾	PTFE	PTFE
⑤	Spring Case	Cast Stainless Steel	—	A351 Gr.CF3M
⑥	Upper Diaphragm Retainer	Stainless Steel	SUS316L	AISI316LL
⑦	Coil Spring	Stainless Steel	SUS304	AISI304
⑧	Cap	Cast Stainless Steel	—	A351 Gr.CF3M
⑨	Lower Diaphragm Retainer	Stainless Steel	SUS316L	AISI316L
⑩	Spacer	Stainless Steel	SUS303	AISI303
⑪	Spring Washer	Stainless Steel	SUS304	AISI304
⑫	Diaphragm Nut	Stainless Steel	SUS304	AISI304
⑬	Spring Retainer	Stainless Steel	SUS304	AISI304
⑭ ^{DV}	O-Ring	FEP ³⁾ Coated Silicone Rubber ²⁾	FEP/Silicone	—
⑮	Locknut	Stainless Steel	SUS304	AISI304
⑯	Adjustment Screw	Stainless Steel	SUS420F	AISI420F
⑰ ^G	Valve Guide	Stainless Steel	SUS316LCPS	AISI316L
⑱ ^{MDVG}	Inlet Clamp Gasket	High-performance Fluorine Resin ²⁾	—	—
⑲ ^G	Snap Ring	Stainless Steel	SUS316	SUS316
⑳ ^G	Slide Bearing	Polymer Resin ²⁾	—	—
㉑	Body Clamp	Cast Stainless Steel	—	A351 Gr.CF3M
㉒	Body Clamp Bolt	Stainless Steel	SUS304	AISI304
㉓	Body Clamp Nut	Stainless Steel	SUS304	AISI304
㉔	Spring Washer	Stainless Steel	SUS304	AISI304
㉕	Inlet Clamp	Cast Stainless Steel	—	A351 Gr.CF3M
㉖	Inlet Clamp Bolt	Stainless Steel	SUS304	AISI304
㉗	Inlet Clamp Nut	Stainless Steel	SUS304	AISI304
㉘	Spring Washer	Stainless Steel	SUS304	AISI304
㉙	Adapter	Stainless Steel	SUS316L	AISI316L

Parts with USP/FDA Compliant Materials	Standard	
	USP	FDA*
⑭ O-Ring	—**	A
③ Diaphragm	Class VI	B
④ Protective Sheet		A
㉒ Slide Bearing		B
⑱ Inlet Clamp Gasket		C
		B

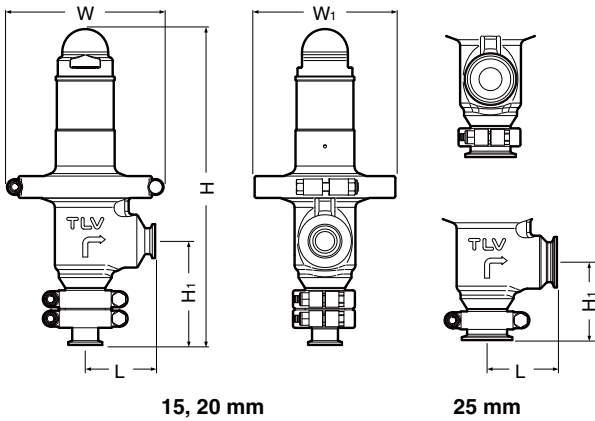
* FDA: A: 21 CFR 177.2600, B: 21 CFR 177.1550, C: 21 CFR 177.2415
 ** USP not applied for because wetted material is FEP coating



¹⁾ Equivalent ²⁾ USP/FDA compliant material. See the table above-right for details.
³⁾ Fluorinated Ethylene Propylene Copolymer
 Replacement kits available: (M) maintenance parts, (D) diaphragm repair parts,
 (V) valve repair parts, (G) valve guide repair parts

Dimensions

● DR8-P/DR8-EP Clamp End



DR8-P/DR8-EP Clamp End* (mm)

Size	L	H**	H ₁ **	W	W ₁	Weight (kg)
15 (1/2")	70	325	108	170	136	5.0
20 (3/4")		295	80			
25 (1")						

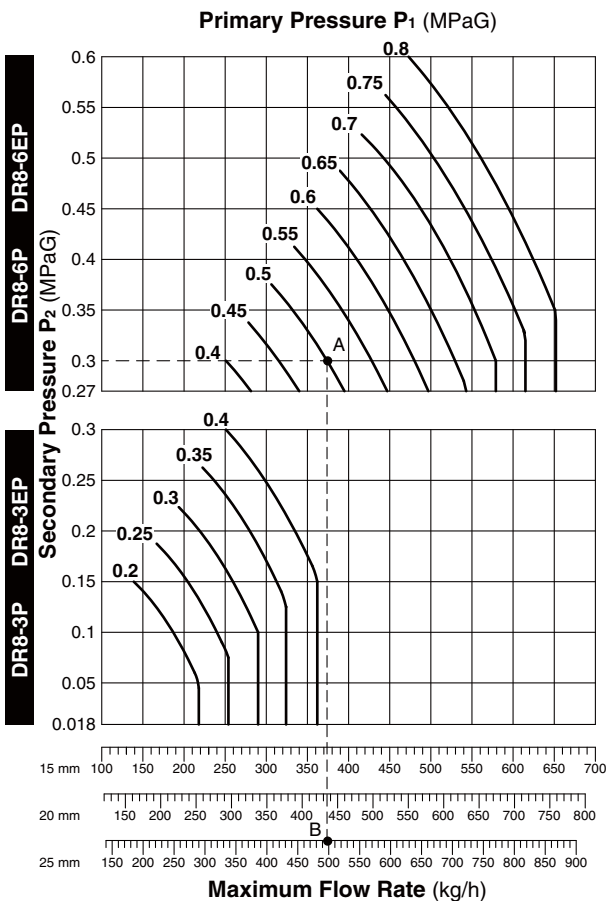
* ISO 2852 Clamp / ISO 2037 Tube or ASME-BPE (Tri-Clamp compatible)
 ** Approximate dimensions
 () ASME-BPE (Tri-Clamp compatible)

Clamp End Dimensions

Size	φ d	φ D
15 (1/2")	15.2 (9.4)	34 (25)
20 (3/4")	19.3 (15.75)	
25 (1")	22.6 (22.1)	50.5

() ASME-BPE (Tri-Clamp compatible)

Sizing Chart and Flow Graph (Max. Flow Rate)



Sizing Example

For a primary pressure of 0.5 MPaG, a set pressure of 0.3 MPaG, and a maximum saturated steam flow rate of 450 kg/h, select an appropriate size.

Locate point A, where the primary pressure (P₁ = 0.5 MPaG) intersects the set pressure (P₂ = 0.3 MPaG). Move straight down from point A until reaching a size with a rated flow rate exceeding the desired flow rate. This first occurs at point B on the 25 mm flow rate line.

- The 25 mm size should be selected.
- For a primary pressure of 0.5 MPaG, model DR8-6P or DR8-6EP should be selected (see the adjustable pressure range information given in the specifications (overleaf)).

Cv Values

Size (mm)	15	20	25
Cv (US)	6	7	8
Cv (UK)	5	5.8	6
Kvs (DIN)	5.1	6	6.8

Cv & Kvs values are for maximum flow

Manufacturer
TLV CO., LTD.
 Kakogawa, Japan
 is approved by LRQA Ltd. to ISO 9001/14001

