



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 or 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, 38 mm (ISO) 1/2", 3/4", 1", 1 1/2" (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 Fluid***	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

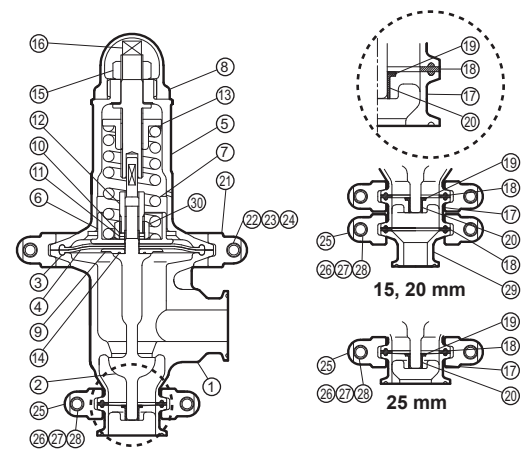


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI ¹⁾
①	Body	Cast Stainless Steel	—	A351 Gr.CF3M
② ^D	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	AISI316L
⑦ ^D	Coil Spring	Stainless Steel	SUS304	AISI304
⑧	Cap	Cast Stainless Steel	—	A351 Gr.CF3M
⑨ ^D	Lower Diaphragm Retainer	Stainless Steel	SUS316L	AISI316L
⑩ ^D	Plain Washer	Stainless Steel	SUS304	AISI304
⑪ ^D	Spring Washer	Stainless Steel	SUS304	AISI304
⑫ ^D	High Nut	Stainless Steel	SUS304	AISI304
⑬ ^D	Spring Retainer	Stainless Steel	SUS304	AISI304
⑭ ^D	Retainer Gasket	Fluorine Resin ²⁾	PTFE	PTFE
⑮	Locknut	Stainless Steel	SUS304	AISI304
⑯ ^D	Adjustment Screw	Stainless Steel	SUS420F	AISI420F
⑰ ^G	Valve Guide	Cast Stainless Steel	—	A351 Gr.CF3M
⑱ ^{MDG}	Inlet Clamp Gasket	High-performance Fluorine Resin ²⁾	—	—
⑲ ^G	Snap Ring	Stainless Steel	SUS316CPS	AISI316
⑳ ^G	Slide Bearing	Polymer Resin ²⁾	—	—
21	Body Clamp	Cast Stainless Steel	—	A351 Gr.CF8
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.CF8
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
30 ^D	Coil Spring Guide	Stainless Steel	SUS304	AISI304

Parts with USP/FDA Compliant Materials		Standard		
		USP	FDA*	
⑭	Retainer Gasket	Fluorine Resin	—	A
③	Diaphragm	Silicon Rubber	—	—
④	Protective Sheet	Fluorine Resin	Class VI	—
20	Slide Bearing	Polymer Resin	—	B
18	Inlet Clamp Gasket	High-performance Fluorine Resin	Class VI	—

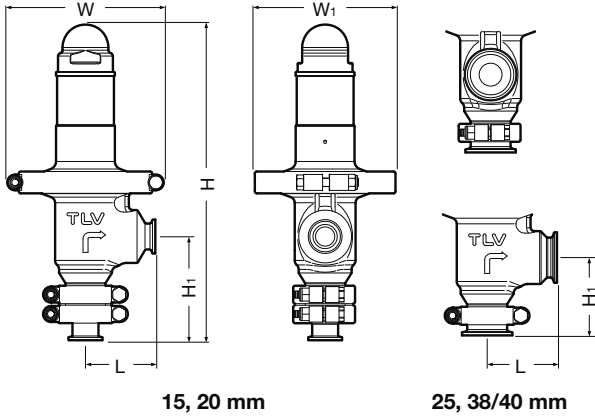
* FDA: A: 21 CFR 177.1550, B: 21 CFR 177.2415



¹⁾ Equivalent ²⁾ USP or PFDA compliant material. See the table above-right for details.
 Replacement kits available: (M) maintenance parts, (D) diaphragm and 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**	H1**	W	W1	Weight (kg)
15 (1/2")	70	325	108	170	135	5.0
20 (3/4")						
25 (1")		295	80			4.9
38 (1 1/2")						

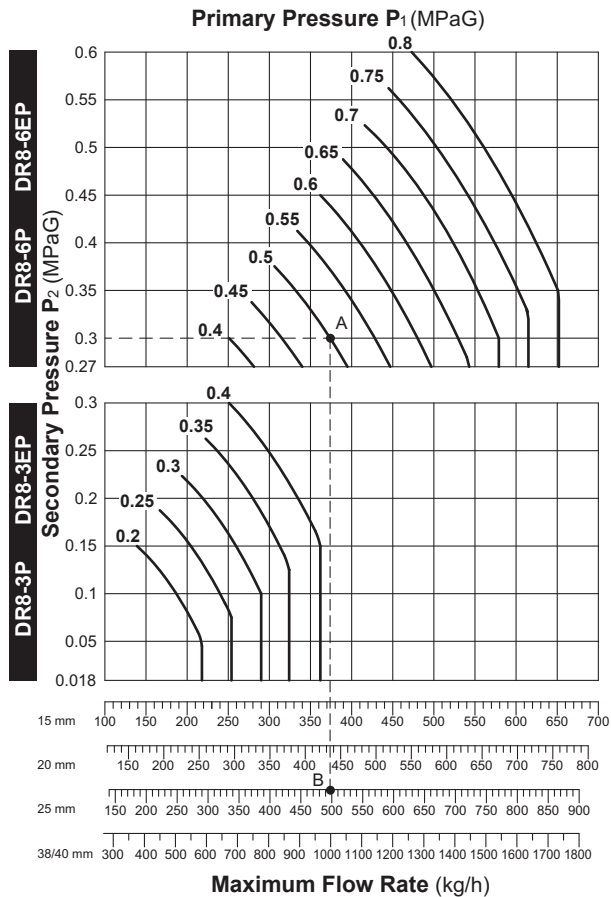
* ISO 2852 Clamp / ISO 2037 Tube or ASME-BPE (Tri-Clamp compatible)
 ** Approximate dimensions
 () ASME-BPE (Tri-Clamp compatible)

Clamp End Dimensions

Size	ϕd	ϕD
15 (1/2")	15.2 (9.4)	34 (25)
20 (3/4")	19.3 (15.75)	50.5
25 (1")	22.6 (22.1)	
40 (1 1/2")	35.6 (34.8)	

() 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 ($P_1 = 0.5$ MPaG) intersects the set pressure ($P_2 = 0.3$ 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	38/40
Cv (US)	6	7	8	16
Cv (UK)	5	5.8	6.7	13.3
Kvs (DIN)	5.1	6	6.8	13.7

Cv & Kvs values are for maximum flow

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

