



CLEAN STEAM DIRECT-ACTING PRESSURE REDUCING VALVE

MODEL DR8-P/DR8-EP

COMPACT STAINLESS STEEL DIRECT-ACTING PRV FOR CLEAN STEAM

Benefits

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 (16 micro-inch) 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 (in)	1/2", 3/4", 1"			
Maximum Operating Pressure (psig) PMO	115			
Maximum Operating Temperature (°F) TMO	347			
Maximum Allowable Pressure (psig) PMA	150			
Maximum Allowable Temperature (°F) TMA	365			
Primary Pressure Range (psig)	30 to 60	60 to 115	30 to 60	60 to 115
Adjustable Pressure Range (psig)	2.5 to 45	40 to 85	2.5 to 45	40 to 85
Secondary pressure must not exceed 75% of primary pressure				
Finishing**	Internal	0.8 µm (32 micro-inch) Ra Buff-polished		Buff-polished then
	External	25 µm (1000 micro-inch) Ra electro-polished		0.4 µm (16 micro-inch) Ra electro-polished
Applicable Fluids***	Steam			

* Option ** Treated base surfaces are lost-wax cast

These are non-standard products, consult TLV for delivery time required.

*** Do not use for toxic, flammable, or otherwise hazardous fluids.



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	ASTM/AISI ¹⁾	JIS
①	Body	Cast Stainless Steel	A351 Gr.CF3M	—
② ^V	Valve	Stainless Steel	AISI316L	SUS316L
③ ^{MD}	Diaphragm	Silicone Rubber ²⁾	—	—
④ ^{MD}	Protective Sheet	FI ³⁾ rine Resin ²⁾	PTFE	PTFE
⑤	Spring Housing	Cast Stainless Steel	A351 Gr.CF3M	—
⑥	Upper Diaphragm Retainer	Stainless Steel	AISI316L	SUS316L
⑦	Coil Spring	Stainless Steel	AISI304	SUS304
⑧	Cap	Cast Stainless Steel	A351 Gr.CF3M	—
⑨	Lower Diaphragm Retainer	Stainless Steel	AISI316L	SUS316L
⑩	Spacer	Stainless Steel	AISI303	SUS303
⑪	Spring Washer	Stainless Steel	AISI304	SUS304
⑫	Diaphragm Nut	Stainless Steel	AISI304	SUS304
⑬	Spring Retainer	Stainless Steel	AISI304	SUS304
⑭ ^{DV}	O-Ring	FEP ³⁾ Coated Silicone Rubber ²⁾	—	FEP/Silicone
⑮	Locknut	Stainless Steel	AISI304	SUS304
⑯	Adjustment Screw	Stainless Steel	AISI420F	SUS420F
⑰ ^G	Valve Guide	Stainless Steel	AISI316L	SUS316L
⑱ ^{MDVG}	Inlet Clamp Gasket	High-performance Fluorine Resin ²⁾	—	—
⑲ ^G	Snap Ring	Stainless Steel	AISI316	SUS316CPS
⑳ ^G	Slide Bearing	Polymer Resin ²⁾	—	—
㉑	Body Clamp	Cast Stainless Steel	A351 Gr.CF3M	—
㉒	Body Clamp Bolt	Stainless Steel	AISI304	SUS304
㉓	Body Clamp Nut	Stainless Steel	AISI304	SUS304
㉔	Spring Washer	Stainless Steel	AISI304	SUS304
㉕	Inlet Clamp	Cast Stainless Steel	A351 Gr.CF3M	—
㉖	Inlet Clamp Bolt	Stainless Steel	AISI304	SUS304
㉗	Inlet Clamp Nut	Stainless Steel	AISI304	SUS304
㉘	Spring Washer	Stainless Steel	AISI304	SUS304
㉙	Adapter	Stainless Steel	AISI316L	SUS316L

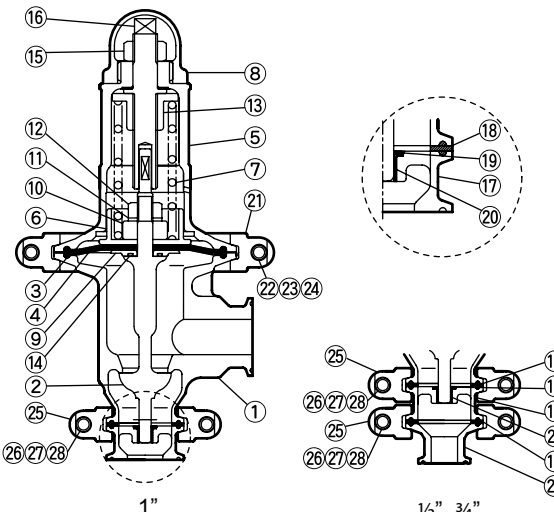
¹⁾ Equivalent ²⁾ USP/FDA compliant material. See the table above-right for details.

³⁾ Fluorinated Ethylene Propylene Copolymer

Replacement kits available: (M) maintenance parts, (D) diaphragm repair parts, (V) valve repair parts, (G) valve guide repair parts

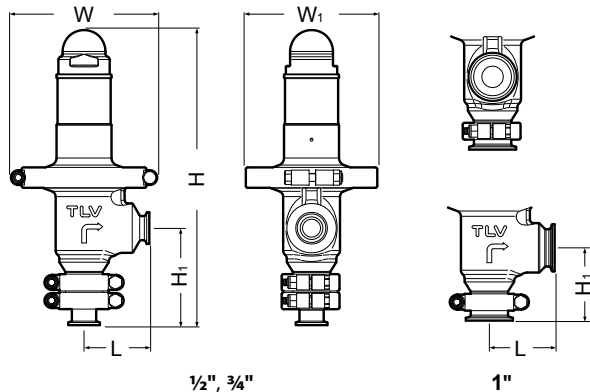
	Parts with USP/FDA Compliant Materials		Standard	
			USP	FDA*
⑭	O-Ring	FEP Coated Silicone Rubber / Internal (Silicone) Coating (FEP)	—**	A
⑬	Diaphragm	Silicon Rubber	Class VI	B
④	Protective Sheet	Fluorine Resin		A
⑳	Slide Bearing	Polymer Resin		B
⑱	Inlet Clamp Gasket	High-performance FI ³⁾ rine Resin		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



Dimensions

● DR8-P/DR8-EP Clamp End



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

Size	L	H**	H ₁ **	W	W ₁	Weight (lb)
1/2"	2 3/4	12 3/4	4 1/4	6 3/4	5 3/8	11
3/4"		11 5/8	3 3/8			
1"						

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

Clamp End Dimensions

Size	φ d	φ D
1/2"	5/8 (3/8)	1 (1 3/8)
3/4"	7/8 (7/32)	
1"	1 (7/8)	2

() ISO 2852 Clamp / ISO 2037 Tube

Tri-Clamp is a registered trademark of Alfa Laval Corporate AB.

Capacity Table (Max. Flow Rate)

The following tables are used for sizing the DR8 when adjusted for maximum flow.

		DR8-3P	DR8-3EP		
P ₁ (psig)	P ₂ (psig)	Nominal Valve Size			
		1/2"	3/4"	1"	
30	**22	320	380	430	
	20	360	420	480	
	15	430	500	570	
	10	470	550	630	
	*2.5-7	500	580	660	
35	**26	360	420	480	
	25	380	440	510	
	20	450	530	600	
	15	510	590	680	
	*2.5-10	550	640	730	
40	**30	400	470	530	
	25	480	560	640	
	20	540	630	720	
	15	580	680	780	
	*2.5-10	610	710	810	
45	**33	460	530	610	
	30	500	590	670	
	25	570	660	760	
	20	620	720	820	
	*2.5-15	660	770	880	
50	**37	500	580	660	
	35	530	610	700	
	30	600	690	790	
	25	650	760	870	
	20	690	810	930	
55	*2.5-15	720	840	960	
	**41	530	620	710	
	40	550	640	730	
	35	620	730	830	
	30	680	790	910	
60	25	730	850	970	
	*2.5-20	770	900	1030	
	**45	570	670	760	
	40	650	760	860	
	35	710	830	950	

		DR8-6P	DR8-6EP		
P ₁ (psig)	P ₂ (psig)	Nominal Valve Size			
		1/2"	3/4"	1"	
60	**45	570	670	760	
	*40	650	760	860	
	**52	660	770	890	
	50	650	810	930	
	45	760	890	1020	
70	*40	820	960	1100	
	**56	700	820	940	
	55	720	840	960	
	50	790	920	1050	
	45	850	100	1140	
75	*40	900	1060	1210	
	**60	740	860	990	
	55	820	950	1090	
	50	880	1030	1170	
	45	940	1090	1250	
80	*40	980	1150	1310	
	**63	790	930	1060	
	60	840	980	1120	
	55	910	1060	1210	
	50	960	1130	1290	
85	45	1020	1180	1350	
	*40	1060	1240	1410	
	**67	820	960	1100	
	65	860	1010	1150	
	60	930	1090	1240	
90	55	990	1160	1320	
	50	1050	1220	1400	
	45	1100	1280	1460	
	*40	1140	1320	1510	
	**71	870	1010	1150	
95	70	890	1030	1180	
	65	960	1120	1280	
	60	1020	1190	1360	
	55	1080	1260	1440	
	50	1130	1310	1500	
100	*40-45	1170	1370	1560	
	**75	910	1060	1210	
	70	980	1150	1310	
	65	1050	1220	1400	
	60	1110	1290	1480	

P ₁ (psig)	P ₂ (psig)	Nominal Valve Size		
		1/2"	3/4"	1"
105	**78	960	1120	1280
	75	1010	1180	1340
	70	1080	1260	1430
	65	1140	1330	1510
	60	1190	1390	1590
110	55	1330	1550	1770
	50	1280	1490	1710
	*40-45	1330	1550	1770
	**82	1000	1170	1340
	80	1030	1200	1380
115	75	1100	1290	1470
	70	1160	1360	1550
	65	1220	1420	1630
	60	1270	1480	1690
	55	1320	1530	1750
115	50	1360	1570	1810
	*40-45	1380	1610	1840
	86	1060	1230	1410
	80	1130	1320	1500
	75	1190	1390	1590
115	65	1300	1520	1740
	60	1350	1570	1790
	55	1390	1620	1850
	*40-50	1440	1680	1910

P₁ = Primary Pressure P₂ = Secondary (Set) Pressure
 * Minimum adjustable secondary pressure ** Maximum adjustable secondary pressure

Cv Values

Size (in)	1/2	3/4	1
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



DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE.
 Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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Manufacturer

ISO 9001/ISO 14001



Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

