



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 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 (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		½", ¾", 1", 1½"			
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					
Minimum Adjustable Flow Rate		44 lb/h or more			
Finishing	Internal	0.8 µm (32 micro-inch) Ra Buff-polished		Buff-polished then 0.4 µm (16 micro-inch) Ra electro-polished	
	External	Electro-polished			
Applicable Fluid**		Steam			

* Option

DR8-P and DR8-EP 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.

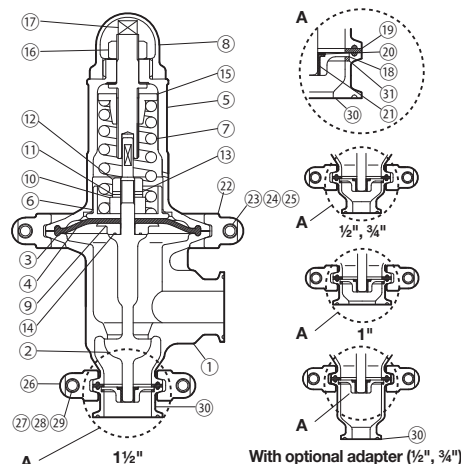
No.	Description	Material	ASTM/AISI ¹⁾	JIS
①	Body	Forged Stainless Steel	A182/A182M Gr.F316L	—
② ^V	Valve	Stainless Steel	AISI316L	SUS316L
③ ^D	Diaphragm	Silicone Rubber ²⁾	—	—
④ ^D	Protective Sheet	Fluorine Resin ²⁾	—	PTFE
⑤	Spring Housing	Forged Stainless Steel	A182/A182M Gr.F316L	—
⑥	Upper Diaphragm Retainer	Stainless Steel	AISI316L	SUS316L
⑦	Coil Spring	Stainless Steel	AISI304	SUS304
⑧	Cap	Cast Stainless Steel	A351/A351M Gr.CF3M	—
⑨	Lower Diaphragm Retainer	Stainless Steel	AISI316L	SUS316L
⑩	Spacer	Stainless Steel	AISI303	SUS303
⑪	Spring Washer	Stainless Steel	AISI304	SUS304
⑫	Locknut	Stainless Steel	AISI304	SUS304
⑬	Plain Washer	Stainless Steel	AISI304	SUS304
⑭ ^{MDV}	Retainer Gasket	High-performance Fluorine Resin ²⁾	—	PTFE
⑮	Spring Retainer	Stainless Steel	AISI304	SUS304
⑯	Locknut	Stainless Steel	AISI304	SUS304
⑰	Adjustment Screw	Stainless Steel	AISI420F	SUS420F
⑱ ^G	Valve Guide	Cast Stainless Steel	AISI316L	SUS316L
⑲ ^{MVG}	Inlet Clamp Gasket	High-performance Fluorine Resin ²⁾	—	PTFE
⑳ ^G	Snap Ring	Stainless Steel	AISI316	SUS316
㉑ ^G	Slide Bearing	Polymer Resin ²⁾	—	—
㉒	Body Clamp	Cast Stainless Steel	A351/A351M Gr.CF8	—
㉓	Body Clamp Bolt ³⁾	Stainless Steel	—	—
㉔	Body Clamp Nut ³⁾	Stainless Steel	—	—
㉕	Spring Washer ³⁾	Stainless Steel	—	—
㉖	Inlet Clamp ³⁾	Cast Stainless Steel	A351/A351M Gr.CF8	—
㉗	Inlet Clamp Bolt ³⁾	Stainless Steel	—	—
㉘	Inlet Clamp Nut ³⁾	Stainless Steel	—	—
㉙	Spring Washer ³⁾	Stainless Steel	—	—
㉚	Adapter	Stainless Steel	AISI316L	SUS316L
㉛ ^{MVG}	Valve Guide Gasket	High-performance Fluorine Resin ²⁾	—	PTFE

¹⁾ Equivalent ²⁾ USP or PFDA compliant material. See the table above-right for details. ³⁾ Shown on reverse

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

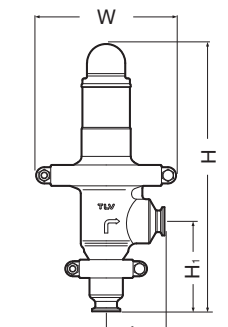
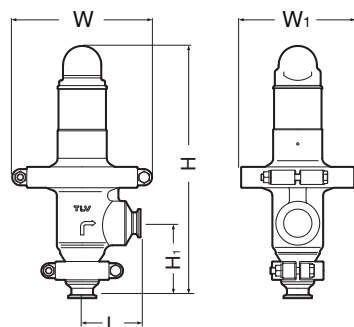
Parts with USP/FDA Compliant Materials			Standard	
			USP	FDA*
⑭	Retainer Gasket	High-performance Fluorine Resin	Class VI	—
③	Diaphragm	Silicon Rubber		—
④	Protective Sheet	Fluorine Resin		—
㉑	Slide Bearing	Polymer Resin	—	A
⑲	Inlet Clamp Gasket	High-performance Fluorine Resin	Class VI	—

* FDA: A: 21 CFR 177.2415



Dimensions

● DR8-P/DR8-EP Clamp End



With optional adapter
(1/2", 3/4")

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

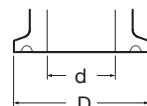
DR8-P/DR8-EP Clamp End* (in)

Size	L	H**	H ₁	W**	φ W ₁ **	Weight (lb)
1/2"	2 3/4	12	3 9/16	6 3/4	5 5/16	11
3/4"	(2 3/4)	(12 3/4)	(4 1/4)	(6 3/4)		
1"	2 3/4	11 5/8	3 1/8	6 3/4		10.9
1 1/2"						

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

** Approximate dimensions

() With optional adapter



Clamp End Dimensions (in)

Size	φ d	φ D
1/2"	3/8 [5/8]	1 [1 3/8]
3/4"	5/8 [7/8]	
1"	7/8 [1]	2
1 1/2"	1 3/8 [1 13/32]	

[] ISO 2852 Clamp / ISO 2037 Tube

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"	1 1/2"	
30	**22	320	380	430	840	
	20	360	420	480	960	
	15	430	500	570	1130	
	10	470	550	630	1260	
	*2.5-7	500	580	660	1320	
35	**26	360	420	480	950	
	25	380	440	510	1010	
	20	450	530	600	1200	
	15	510	590	680	1350	
	*2.5-10	550	640	730	1470	
40	**30	400	470	530	1070	
	25	480	560	640	1280	
	20	540	630	720	1430	
	15	580	680	780	1560	
	*2.5-10	610	710	810	1610	
45	**33	460	530	610	1190	
	30	500	590	670	1340	
	25	570	660	760	1510	
	20	620	720	820	1650	
	*2.5-15	660	770	880	1760	
50	**37	500	580	660	1300	
	35	530	610	700	1400	
	30	600	690	790	1590	
	25	650	760	870	1730	
	20	690	810	930	1850	
55	*2.5-15	720	840	960	1910	
	**41	530	620	710	1410	
	40	550	640	730	1470	
	35	620	730	830	1660	
	30	680	790	910	1810	
60	25	730	850	970	1940	
	*2.5-20	770	900	1030	2060	
	**45	570	670	760	1520	
	40	650	760	860	1730	
	35	710	830	950	1890	
	30	760	890	1010	2030	
	25	800	940	1070	2150	
	*2.5-20	830	960	1100	2200	

		DR8-6P DR8-6EP				
P ₁ (psig)	P ₂ (psig)	Nominal Valve Size				
		1/2"	3/4"	1"	1 1/2"	
60	**45	570	670	760	1520	
	*40	650	760	860	1730	
	**52	660	770	890	1750	
	50	650	810	930	1850	
	45	760	890	1020	2040	
70	*40	820	960	1100	2190	
	**56	700	820	940	1870	
	55	720	840	960	1910	
	50	790	920	1050	2010	
	45	850	1000	1140	2270	
75	*40	900	1060	1210	2410	
	**60	740	860	990	1970	
	55	820	950	1090	2180	
	50	880	1030	1170	2340	
	45	940	1090	1250	2490	
80	*40	980	1150	1310	2620	
	**63	790	930	1060	2080	
	60	840	980	1120	2240	
	55	910	1060	1210	2420	
	50	960	1130	1290	2570	
85	45	1020	1180	1350	2710	
	*40	1060	1240	1410	2830	
	**67	820	960	1100	2200	
	65	860	1010	1150	2300	
	60	930	1090	1240	2490	
90	55	990	1160	1320	2650	
	50	1050	1220	1400	2790	
	45	1100	1280	1460	2920	
	*40	1140	1320	1510	3030	
	**71	870	1010	1150	2310	
95	70	890	1030	1180	2360	
	65	960	1120	1280	2560	
	60	1020	1190	1360	2720	
	55	1080	1260	1440	2870	
	50	1130	1310	1500	3000	
100	*40-45	1170	1370	1560	3120	
	**75	910	1060	1210	2420	
	70	980	1150	1310	2620	
	65	1050	1220	1400	2800	
	60	1110	1290	1480	2950	
	55	1160	1350	1540	3090	
	50	1200	1410	1610	3210	
	45	1250	1450	1660	3320	
	*40	960	1120	1280	2530	

		DR8-6P DR8-6EP				
P ₁ (psig)	P ₂ (psig)	Nominal Valve Size				
		1/2"	3/4"	1"	1 1/2"	
105	**78	960	1120	1280	2530	
	75	1010	1180	1340	2690	
	70	1080	1260	1430	2870	
	65	1140	1330	1510	3030	
	60	1190	1390	1590	3170	
110	55	1330	1550	1770	3300	
	50	1280	1490	1710	3410	
	*40-45	1330	1550	1770	3530	
	**82	1000	1170	1340	2650	
	80	1030	1200	1380	2750	
115	75	1100	1290	1470	2940	
	70	1160	1360	1550	3100	
	65	1220	1420	1630	3250	
	60	1270	1480	1690	3390	
	55	1320	1530	1750	3510	
	50	1360	1570	1810	3610	
	*40-45	1380	1610	1840	3680	
	**86	1060	1230	1410	2770	
	80	1130	1320	1500	3000	
	75	1190	1390	1590	3180	
	70	1250	1460	1660	3320	
	65	1300	1520	1740	3470	
	60	1350	1570	1790	3600	
	55	1390	1620	1850	3710	
	*40-50	1440	1680	1910	3830	

P₁ = Primary pressure

P₂ = Secondary pressure

* Minimum adjustable secondary pressure

** Maximum adjustable secondary pressure

Cv Values

Size (in)	1/2"	3/4"	1"	1 1/2"
Cv (US)	6	7	8	16
Cv (UK)	5	5.8	6.7	13.7
Kvs (DIN)	5.1	6	6.8	13.3

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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For Technical Service 1-800 "TLV TRAP"



Manufacturer

TLV CO., LTD.

Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001

