



REDUCING VALVE FOR STEAM

MODEL DR20SF

Benefits

Extremely compact direct-acting pressure reducing valve for use on pure and clean steam applications.

1. Exceptionally light and compact PRV.
2. Wetted parts are all high-durability 316L grade stainless steel, suitable for clean steam applications.
3. Stable secondary pressure.
4. High flow rate for its class.
5. Capable of a 30:1 pressure reduction.
6. Easy to adjust.
7. Built-in screen ensures extended trouble-free operation.
8. Easy, in-line access to internal parts simplifies cleaning and reduces maintenance cost.



Specifications

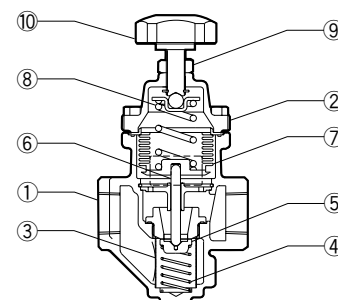
Model	DR20SF-2	DR20SF-6	DR20SF-10
Connection	Screwed		
Size (in)	1/2, 3/4, 1		
Maximum Operating Pressure (psig) PMO	230		
Maximum Operating Temperature (°F) TMO	428		
Maximum Allowable Pressure (psig) PMA	285		
Maximum Allowable Temperature (°F) TMA	428		
Primary Pressure Range (psig)	30 – 230		85 – 230
Adjustable Pressure Range (psig)	2 – 30, but not less than 1/30 of primary pressure	27 – 85	76 – 150
Secondary pressure must not exceed 90% of primary pressure			



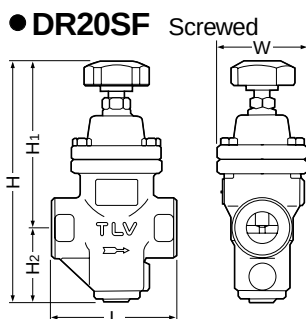
To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Stainless Steel	SCS16A	A351 Gr. CF3M
②	Cover	Cast Stainless Steel	SCS16A	A351 Gr. CF3M
③	Screen	Stainless Steel	SUS316L	AISI316L
④	Coil Spring	Nickel-based Alloy	—	—
⑤	Main Valve	Stainless Steel	SUS316L	AISI316L
⑥	Valve Stem	Stainless Steel	SUS316L	AISI316L
⑦	Bellows	Stainless Steel	SUS316L	AISI316L
⑧	Coil Spring	Stainless Steel	SUS304	AISI304
⑨	Locknut	Stainless Steel	SUS304	AISI304
⑩	Adjustment Handle	Plastic Resin + Stainless Steel	SUS304	AISI304

* Equivalent



Dimensions



DR20SF Screwed* (in)						
Size	L	W	H	H ₁	H ₂	Weight (lb)
1/2						4.1
3/4	3 3/4	2 11/16	7 5/16	5 1/8	2 3/16	3.9
1						

* NPT, other standards available

Cv Values

Size (in)	1/2	3/4	1
Cv (US)	2.0	3.0	3.6

Cv values are for maximum flow

Capacity Table

The following tables are used for sizing the DR20SF when adjusted for maximum flow.

● DR20SF-2 (For secondary steam pressures of 2 – 30 psig)

(lb/h)

Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size			Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size			Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size		
		1/2"	3/4"	1"			1/2"	3/4"	1"			1/2"	3/4"	1"
30	**27	180	250	300	75	**30	310	420	510	150	**30	440	630	750
	15	170	240	290		15	300	410	500		15	380	540	650
	7	150	200	240		*2.5	240	340	410		*5	330	480	470
	*2	100	140	180										
40	**15 - 30	220	310	390	85	**30	330	480	570	175	**30	460	640	770
	7	190	280	330		15	320	440	530		15	390	550	660
	*2	150	220	260		*2.8	270	370	450		*5.7	350	510	600
50	**30	250	360	430	100	**30	380	540	640	200	**30	470	660	800
	15	250	350	430		15	350	500	590		15	400	570	680
	**2	180	360	310		*3.3	310	420	510		*6.6	370	550	620
60	**30	280	390	460	125	**30	430	620	740	230	**30	480	680	810
	15	270	370	450		15	370	540	640		15	410	580	690
	*2	200	280	340		*4.2	330	470	560		*7.6	370	530	640

● DR20SF-6 (For secondary steam pressures of 27 – 85 psig)

(lb/h)

Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size			Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size			Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size		
		1/2"	3/4"	1"			1/2"	3/4"	1"			1/2"	3/4"	1"
30	*27	180	250	300	125	**85	460	660	790	200	**85	650	920	1110
40	*27 - **36	220	310	390		80	470	680	810		80	640	910	1100
50	**45	110	160	190		50 - 75	500	690	830		75	630	900	1080
	*27 - 30	110	160	200		45	450	680	810		50	570	810	980
60	**54	260	370	440		30	430	620	740		45	530	760	920
	45	280	390	460		*27	400	600	730		30	460	660	790
	*27 - 30	290	390	470		**85	510	720	870		*27	450	640	770
	**67	290	400	480		80	520	730	870	230	**85	710	1010	1210
75	*27 - 50	310	420	510		75	520	740	890		80	700	990	1190
	**76	310	440	530	150	50	500	700	850		75	680	960	1160
85	30 - 50	330	480	580		30	440	630	750		50	600	850	1020
	*27	330	480	570		*27	430	610	740		45	550	780	950
	**85	330	480	580		**80 - 85	580	830	990		30	470	670	800
	80	360	510	610		75	570	820	980		*27	460	650	790
100	75	370	530	630		50	550	770	920					
	30 - 50	390	550	650		45	510	730	880					
	*27	370	530	640		30	460	640	770					
						*27	440	630	750					

● DR20SF-10 (For secondary steam pressures of 76 – 150 psig)

(lb/h)

Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size			Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size			Primary Steam Pressure (psig)	Secondary (Set) Steam Pressure (psig)	Nominal Valve Size		
		1/2"	3/4"	1"			1/2"	3/4"	1"			1/2"	3/4"	1"
85	*76	310	450	540	150	**135	390	550	660	200	**150	570	810	980
100	**90	320	460	550		115	440	660	770		125	620	880	1060
	85	340	480	590		100	480	680	810		115	640	910	1100
	80	360	510	620		80 - 85	520	730	880		85 - 100	650	930	1100
	*76	360	520	620		*76	530	740	890		*76 - 80	640	910	1100
											**150	660	940	1120
125	**112	380	540	650	175	**150	460	660	770	230	125	690	990	1180
	100	430	610	740		125	510	730	880		115	710	1000	1210
	85	460	660	790		115	550	790	950		100	720	1010	1220
	80	470	680	810		100	570	810	980		85	710	1000	1210
	*76	480	690	820		*76 - 85	580	830	990		80	690	990	1180
											*76	690	980	1180

* Minimum adjustable secondary pressure ** Maximum adjustable secondary pressure

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Manufacturer

ISO 9001/ISO 14001

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

