



# 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

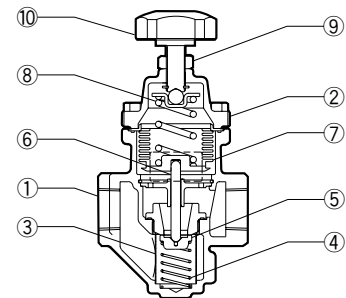
Model	DR20SF-2	DR20SF-6	DR20SF-10
Connection	Screwed		
Size (in)	1/2, 3/4, 1		
Maximum Operating Pressure (psig) PMO	230		
Maximum Operating Temperature (°F) TMO	428		
Maximum Allowable Pressure (psig) PMA	285		
Maximum Allowable Temperature (°F) TMA	428		
Primary Pressure Range (psig)	30 – 230		85 – 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			



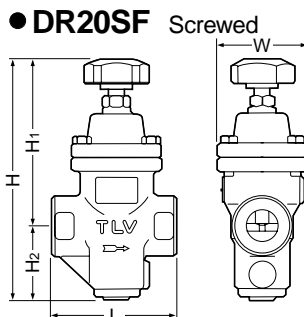
To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

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 <sub>1</sub>	H <sub>2</sub>	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		**30	330	480	570		**30	460	640	770
40	**15 - 30	220	310	390	85	15	320	440	530	175	15	390	550	660
	7	190	280	330		*2.8	270	370	450		*6.7	350	510	600
	*2	150	220	260		**30	380	540	640		**30	470	660	800
50	**30	250	360	430	100	15	350	500	590	200	15	400	570	680
	15	250	350	430		*3.3	310	420	510		*6.6	370	550	620
	**2	180	360	310		**30	430	620	740		**30	480	680	810
60	**30	280	390	460	125	15	370	540	640	230	15	410	580	690
	15	270	370	450		*4.2	330	470	560		*7.6	370	530	640
	**2	200	280	340										

● **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		
75	**67	290	400	480	80	520	730	870	**85	710	1010	1210		
	*27 - 50	310	420	510	75	520	740	890	80	700	990	1190		
85	**76	310	440	530	50	520	730	870	75	680	960	1160		
	30 - 50	330	480	580	45	500	700	850	50	600	850	1020		
	*27	330	480	570	30	440	630	750	45	550	780	950		
100	**85	330	480	580	30	460	640	770	*27	460	650	790		
	80	360	510	610	**80 - 85	580	830	990						
	75	370	530	630	75	570	820	980						
	30 - 50	390	550	650	50	550	770	920						
	*27	370	530	640	45	510	730	880						

● **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
125	*76	360	520	620	*76	530	740	890	*76 - 80	640	910	1100		
	**112	380	540	650	**150	460	660	770	**150	660	940	1120		
	100	430	610	740	125	510	730	880	125	690	990	1180		
	85	460	660	790	115	550	790	950	115	710	1000	1210		
	80	470	680	810	100	570	810	980	100	720	1010	1220		
	*76	480	690	820	*76 - 85	580	830	990	85	710	1000	1210		

\* Minimum adjustable secondary pressure \*\* Maximum adjustable secondary pressure

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Manufacturer

ISO 9001/ISO 14001



Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

