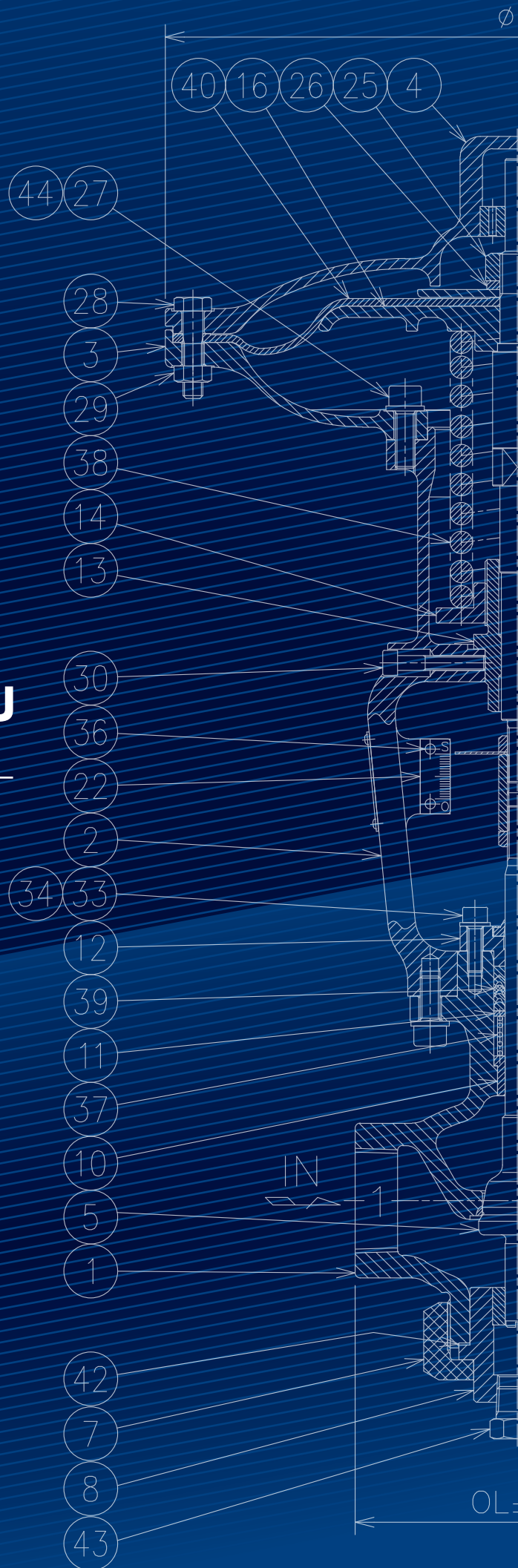


ROCKY-ICHIMARU

Tire Curing Press Valves



Steam Regulating Valve SR Series

The steam regulating valve is a remote control regulation valve capable of regulating primary steam pressure into downstream pressure by controlling the air pressure supplied by the loading port remotely. It uses an external detector (*1) and a large area diaphragm to accurately sense downstream pressure and provide a sensitive response to slight changes, thereby enabling high accuracy regulation. Our regulating valve is also resistant to leaks due to its soft seat construction using the same specialized material as in the piston valves, giving fine pressure control. Further, as primary steam emerges from the center seat orifice as downstream steam, regulation is achieved while avoiding chattering due to highly expandable fluids such as steam. A steam regulating valve is used in tire curing presses where primary steam pressure is regulated to shaping pressure to feed a bladder.

*1. The pressure detector is sited away from the downstream regulating valve and provides feedback to the regulating valve via a connecting pipe.

Main Specifications

Fluid	Steam
Maximum Working Pressure	1.3MPa
Maximum Working Temperature	195°C
End Connection	Loading Pressure port & Downstream Pressure Port Rc1/4, NPT1/4, G1/4 Ports 1 & 2 Threaded End (Rc, NPT) Flanged End (JIS 20K, ASME Class 300, DIN PN40)
Material of main parts *	Body: FCD450 or SCS13 Flange: SUS304 or S25C Center Rod: SUS403 with hard chrome plating

* See valve assembly drawings for details.

Appearance		
Body Material	Stainless Steel SCS13	
Model Number	SR2211-□□	SR2212-□□
End Connection	Threaded End	Flanged End
		Threaded End



Product Coding

SR **2** **2** **1** **2** - **20** **J** **P** **Y**

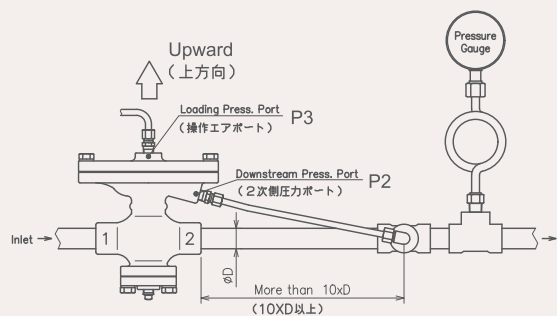
Symbol	Meaning of symbol	Code	Meaning of code	Remarks
N1	Body Material	2	SCS13	
		3	FCD450	
N2	Number of Ports	2	2-way type	
N3	Function	1	Normally Closed (NC)	
N4	End Connection	1	Threaded End	
		2	Flanged End	
N5	Nominal Size	20	DN20	
		25	DN25	
N6	End Connection Flange Type	Nil	-	If all connections are threaded spec (N4 = 1) then no code is used.
		J	JIS 20K	Indicates the specification of the flanged end.
		A	ASME Class 300	
		D	DIN PN40	
N7	End Connection Body Port/ Loading & Downstream Pressure port Thread Type	P	Rc / Rc	Indicates the specification of the threaded end and pilot port. For "B", the connection is a flange or Rc type and pilot port is a G type. Thread size on pilot port is 1/4 inch (Rc1/4, NPT1/4, G1/4).
		N	NPT / NPT	
		B	Rc / G	
N8	End Connection Flange Material (Ports 1 & 2)	Nil	Steel (S25C)	Flange material is S25C.
		Y	SUS304	Flange material is SUS304.
N9	Specialized Code	Z□□	Specialized Specification	Bespoke code (e.g. Z1) is used for specialized options.

Specialized Specifications (Example)

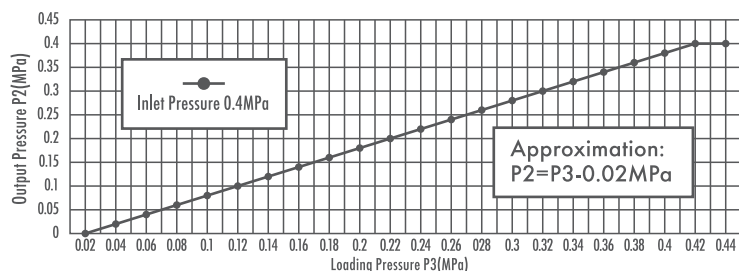
- Diaphragm material change (Specialized Code: Z5)
- Diaphragm material and heat treatment have been changed to extend the life of the diaphragm.
- CRN compliant (Specialized Code: Z98)

Warnings

- The lifespan of this product will vary greatly depending on the conditions of use and manner of installation. Please confirm the lifespan of the product in the intended usage environment.
- The standard installation for an SR valve is as shown below. The product should be used upstream of the loading pressure port on a horizontal pipe. Be certain to check the embossed port numbers on the valve to ensure the loading and output connections are not the wrong way around.



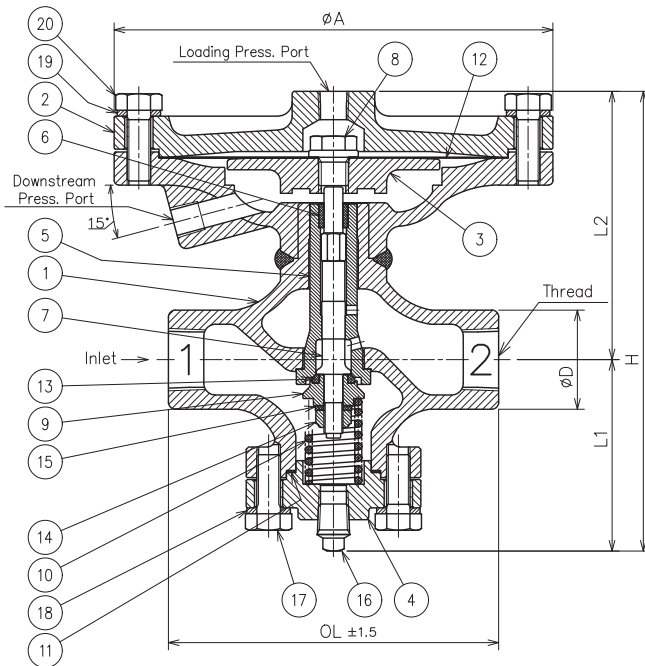
- The relationship between the output pressure and the pressure at the loading pressure port is as shown in the figure to the right. Note that minor differences will emerge due to usage conditions, and the output pressure should be regulated to suit the required output pressure.



SR2211-□□ <Threaded connection>

Body Material

Stainless steel



☆: Recommended Spare Parts

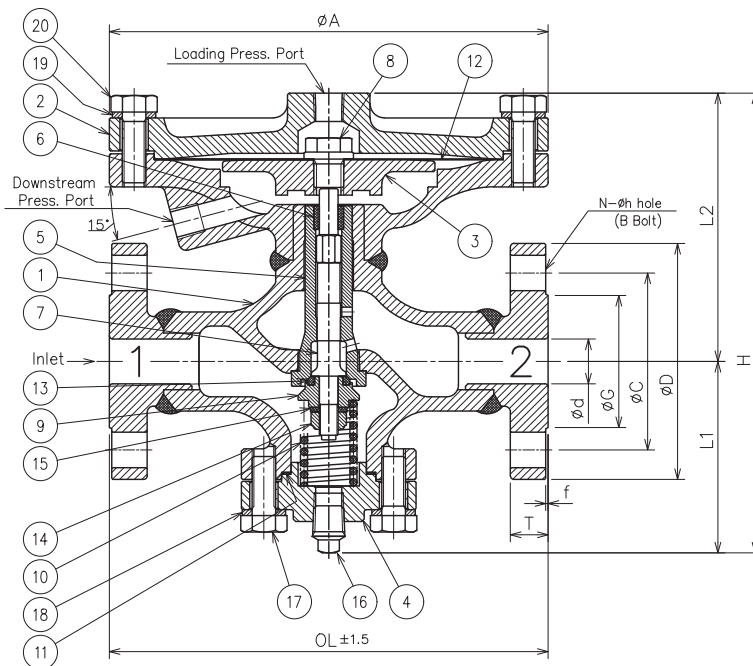
20	Hexagon Head Screw
19	Spring Lock Washer
18	Spring Lock Washer
17	Hexagon Head Screw
16	Plug
15	Spring Lock Washer
14	Lock Nut
☆13	Disc Ring
☆12	Diaphragm
☆11	Gasket
10	Disc Spring
9	Disc Adapter
8	Screw
7	Center Rod
6	Bush
5	Center Seat
4	Bottom Cover
3	Plate
2	Cover
1	Body

Nominal Size		Dimensions (mm)						Weight (kg)
mm	inch	ϕD	OL	L1	L2	H	A	
20	3/4	42	140	82	113	195	186	8.4
25	1	48	165	91	128	219	228	13.4

SR2212-□□ <Flange connection>

Body Material

Stainless steel



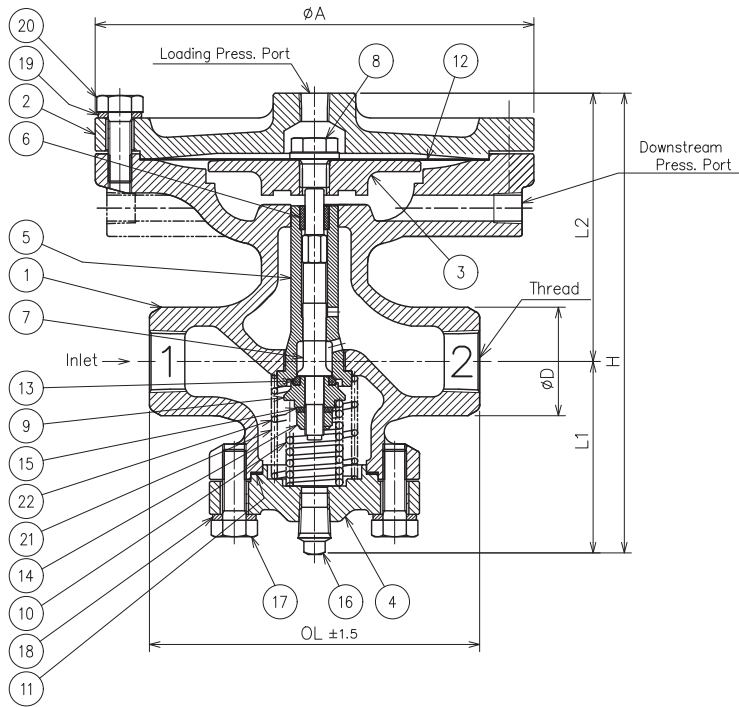
☆: Recommended Spare Parts

20	Hexagon Head Screw
19	Spring Lock Washer
18	Spring Lock Washer
17	Hexagon Head Screw
16	Plug
15	Spring Lock Washer
14	Lock Nut
☆13	Disc Ring
☆12	Diaphragm
☆11	Gasket
10	Disc Spring
9	Disc Adapter
8	Screw
7	Center Rod
6	Bush
5	Center Seat
4	Bottom Cover
3	Plate
2	Cover
1	Body & Flange

Nominal Size		Dimensions (mm)									Weight (kg)		
		ϕd	OL			L1	L2	H	A	JIS	ASME	DIN	
20	3/4	19	186	190	190	82	113	195	186	11.1	11.9	11.5	
25	1	25	212	215	215	91	128	219	228	16.3	16.5	16.1	

*For flange dimensions, please refer to the appendix on page 50.

SR3211-20 □ <Threaded connection> **Body Material** **Ductile steel**



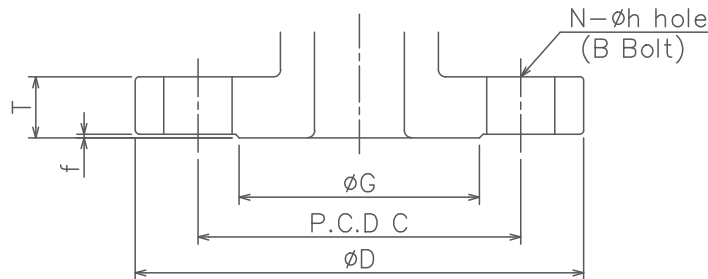
☆: Recommended Spare Parts

22	Filter Spring
21	Filter
20	Hexagon Head Screw
19	Spring Lock Washer
18	Spring Lock Washer
17	Hexagon Head Screw
16	Plug
15	Spring Lock Washer
14	Lock Nut
13	Disc Ring
12	Diaphragm
11	Gasket
10	Disc Spring
9	Disc Adapter
8	Screw
7	Center Rod
6	Bush
5	Center Seat
4	Bottom Cover
3	Plate
2	Cover
1	Body

Nominal Size		Dimensions (mm)						Weight (kg)
mm	inch	ϕD	OL	L1	L2	H	A	
20	3/4	46	140	82	113	195	186	8.4

Reference Materials

JIS/ANSI/DIN Piping Flange Dimension List



※All of our valve flange surfaces have a smooth finish ($Ra \leq 3.2$).

JIS 20K Flange Dimensions

Unit: mm

Nominal Size		Dimensions of Flange Part				Bolt Holes			Bolt Size
		Flange Diameter	Thickness	RF Part		Pitch Circle Diameter	Number	Hole Diameter	
mm	inch			D	T				Raised Height
15	1/2	95	14	1	51	70	4	15	M12
20	3/4	100	16	1	56	75	4	15	M12
25	1	125	16	1	67	90	4	19	M16
32	1-1/4	135	18	2	76	100	4	19	M16
40	1-1/2	140	18	2	81	105	4	19	M16
50	2	155	18	2	96	120	8	19	M16
65	2-1/2	175	20	2	116	140	8	19	M16
80	3	200	22	2	132	160	8	23	M20

JIS B 2220: 2012

ANSI/ASME Class 300 Flange Dimensions

Unit: mm

Nominal Size		Dimensions of Flange Part				Bolt Holes			Bolt Size
		Flange Diameter	Thickness	RF Part		Pitch Circle Diameter	Number	Hole Diameter	
mm	inch			D	T				Raised Height
15	1/2	95	14.5	1.6	35	66.5	4	15	1/2"
20	3/4	117	16	1.6	43	82.5	4	19	5/8"
25	1	124	18	1.6	51	89.0	4	19	5/8"
32	1-1/4	133	19.1	1.6	63.5	98.5	4	19	5/8"
40	1-1/2	156	21	1.6	73	114.5	4	22	3/4"
50	2	165	22.3	1.6	92	127.0	8	19	5/8"
65	2-1/2	190	25.5	1.6	104.6	149.4	8	22	3/4"
80	3	210	28.5	1.6	127	168.1	8	22	3/4"

ANSI/ASME B 16.5: 1996

DIN PN40 Flange Dimensions

Unit: mm

Nominal Size		Dimensions of Flange Part				Bolt Holes			Bolt Size
		Flange Diameter	Thickness	RF Part		Pitch Circle Diameter	Number	Hole Diameter	
mm	inch			D	T				Raised Height
15	1/2	95	16	2	45	65	4	14	M12
20	3/4	105	18	2	58	75	4	14	M12
25	1	115	18	2	68	85	4	14	M12
32	1-1/4	140	18	2	78	100	4	18	M16
40	1-1/2	150	18	3	88	110	4	18	M16
50	2	165	20	3	102	125	4	18	M16
65	2-1/2	185	22	3	122	145	8	18	M16
80	3	200	24	3	138	160	8	18	M16

EN 1092-1: 2001

<Manufacturer>

ROCKY-ICHIMARU Co., Ltd.

601, Oaza Tsunemochi, Chikugo City,

Fukuoka 833-0016, JAPAN

Phone +81-942-53-7510

FAX +81-942-52-8799

<https://www.rocky-ichimaru.co.jp>

Email info@ml.rocky-ichimaru.co.jp



<Sole Distributor>

RIX Corporation

1-15-15, Sanno, Hakata-ku

Fukuoka 812-8672, JAPAN

Phone +81-92-472-7311

FAX +81-92-472-7335

<https://www.rix.co.jp>