



ISO Registered Company

# MODEL 1000HP-SF

## HIGH PRESSURE STEAM REDUCING REGULATOR

### OVERVIEW

A special variation of the basic Model 1000HP pressure reducing regulator enables the Model 1000HP-SF to contain high inlet pressures up to 2600 psig (179.3 Barg) SWP, while controlling downstream pressures between 100 and 300 psig (6.9 and 20.7 Barg). Available in sizes 1/2", 3/4", and 1" (DN15, 20, and 25) with NPT connections.

### FEATURES

- Wrought barstock cylinder
- Integral seat
- Stellite seat surfaces
- Reduced port
- Very high pressure drop capability

### APPLICATIONS

Primarily used in high pressure saturated steam systems.



MODEL 1000HP-SF



### LINE SIZES AVAILABLE

1/2" (DN15), 3/4" (DN20) 1" (DN25)



### END CONNECTIONS

NPT



### COMMON APPLICATIONS

HIGH PRESSURE SATURATED STEAM



### DESIGN PRESSURE

INLET: 2600 psig (179.3 Barg)  
OUTLET: 350 psig (24.1 Barg)

## STANDARD/GENERAL SPECIFICATIONS

<b>Body Sizes:</b>	1/2", 3/4" and 1". (DN15, DN20 and DN25).	<b>Temperature Range:</b>	-20° to 700°F (-28.6° to 371.4°C) at inlet.
<b>End Conn:</b>	NPT female.	<b>Design Outlet Pressure:</b>	350 psig (24.1 Barg).
<b>Body/Spring Chamber Material:</b>	Carbon Steel – Body: ASTM A216, Gr. WCC Spq Chamber: ASTM A216, Gr. WCB	<b>Range Springs:</b>	Epoxy Coated Steel.
<b>Trim Design:</b>	S1 trim, 316 SST, Integral, Stellite Metal Seat, 316 SST Bar Stock Cylinder, 302 SST Diaphragm. <u>1/2" (DN15) size:</u> One-Step reduced port. <u>3/4" &amp; 1" (DN20 &amp; DN25) sizes:</u> Two-Step double reduced port.	<b>Gaskets:</b>	Std. – Carbon graphite.
<b>Design Inlet Pressure:</b>	2600 psig (179.3 Barg), Saturated Steam.	<b>Diaphragm Flange Bolting:</b>	High strength, zinc plated heat treated steel. <u>Nuts</u> - Gr. 2H. <u>Studs</u> - Gr. B7.
		<b>Painting:</b>	All non-corrosion resistant portions to be painted with corrosion resistant epoxy paint per Cashco Spec #S-1606.

**Seat Leakage:** Meets ANSI/FCI 70-2, Class IV.

Body Size		Range Spring	
in	(DN)	psig	(Barg)
1/2"	(15)	150-300	(10.3-20.7)
3/4"	(20)	140-300	(9.6-20.7)
1"	(25)	100-300	(6.9-20.7)

**NOTE:** *Not for use in dead-ended applications. Installations should include a suitable overprotection device immediately downstream of this regulator.*

**MAXIMUM CAPACITY - Cv  
FOR SIZING RELIEF DEVICE (with plug wide open)**

Body Size		Orifice Size		Cv
1/2"	(DN15)	3/8"	(9.5 mm)	3
3/4"	(DN20)	3/8"	(9.5 mm)	4
1"	(DN25)	1/2"	(12.7 mm)	6

**Metric Conversion Factor: Cv x 1.16 = kv**

**FLOW CAPACITY  
Cv vs. DROOP**

Outlet Pressure		Size 1/2" (DN15) One-Step		Size 3/4" (DN20) Two-Step		Size 1" (DN25) Two-Step	
		CV @ % Droop		CV @ % Droop		CV @ % Droop	
psig	(Barg)	10%	20%	10%	20%	10%	20%
100	(6.9)	--	--	--	--	1.27	2.36
150	(10.3)	1.18	2.04	1.18	2.04	1.40	2.48
200	(13.8)	1.28	2.13	1.28	2.13	1.58	2.64
250	(17.2)	1.37	2.21	1.37	2.21	1.67	2.72
300	(20.7)	1.45	2.29	1.45	2.29	1.77	2.88

**Metric Conversion Factor: Cv x 1.16 = kv**

Product Code			
05-26-16			
Body Size		Complete Unit	Parts Rebuild Kit
in	(DN)	Product Code	Kit Code
1/2"	(15)	BG4-5S17-1FX33008A	A99-80-K-33008-0BA
3/4"	(20)	BG5-5S17-1JX33138A	A99-80-K-33138-00A
1"	(25)	BG6-5S17-1KX33009A	A99-80-K-33009-0BA

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