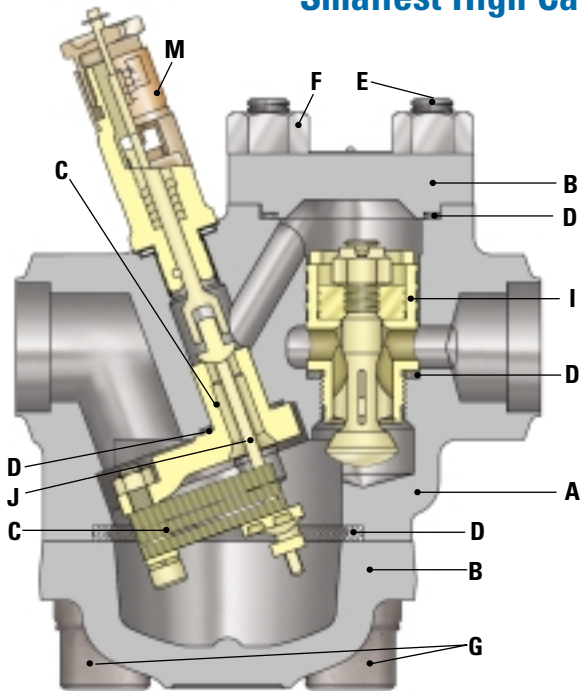
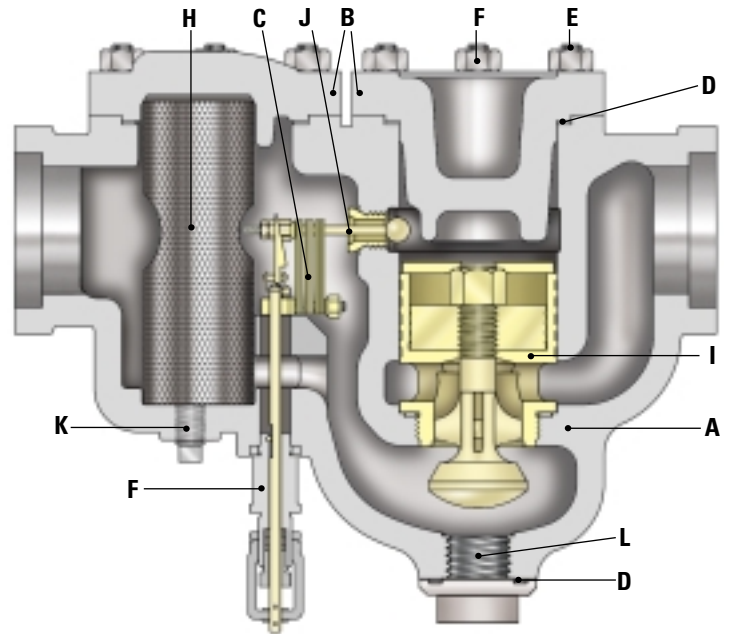


VELAN HIGH CAPACITY PISTON OPERATED STEAM TRAP

Type SPF & SP for High Pressure Service Smallest High Capacity Trap Ever Developed



Type SPF (Forged)

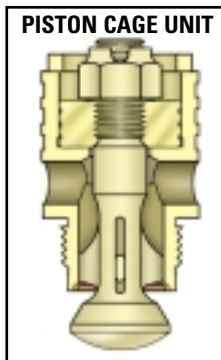


Type SP (Cast)

TYPE SPF & SP DESIGN FEATURES

- **Piston Cage Unit**

The advanced piston cage unit design combines a liner, piston, main seat and main valve into one factory-tested assembly to ensure precise alignment and simple maintenance. In the SPF Type there is also a bimetallic cage unit.



- **Valve seats Stellite**

The main and pilot valve seats are Stellite faced to increase their resistance to the high degree of wear through velocity of flow, dirt and scale.

- **Small and lightweight design** for piping convenience, no mounting brackets required.

- **All in one construction unit**

Air vent, main valve, check valve, strainer and temperature controller are a single unit, ensuring perfect alignment and ease of maintenance.

- **Positive closing**

As steam contacts the bimetal element, the pull closes the pilot valve, reducing the pressure on the piston. Line pressure below the main valve closes the valve tightly on the seat (see pg. 5).

- **Positive condensate drainage** for process work.

- **Check valve operation**

The main valve acts as a check valve preventing back flow.

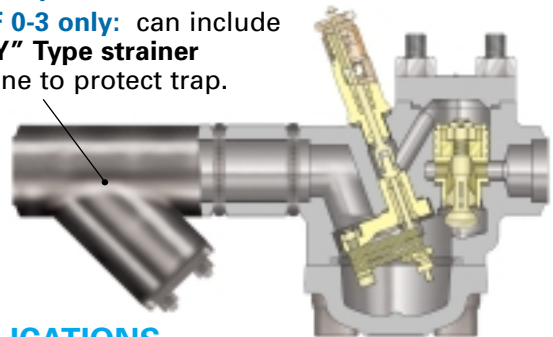
- **Temperature Controller**

controls and adjusts the discharge temperature of condensate which can be calibrated using a special thermometer (see page 29).

- **Other options include:** Piping King Units, thermometer.

SP only: Strainer blowdown valve.

SPF 0-3 only: can include a "Y" Type strainer in line to protect trap.



APPLICATIONS

- **SP & SPF:** Reboilers, Purifiers, Vacuum pans, Heat Exchangers, Evaporators, Feed Water Heaters, Digesters, Desuperheaters, Steam Separators, Flash Tanks, Large Autoclaves, Steam catapult service on U.S. Navy aircraft carriers and other large capacity applications.

VELAN HIGH CAPACITY PISTON OPERATED STEAM TRAP

STANDARD MATERIALS

PART		MATERIALS	
		SPF	SP
A	Body	Forged carbon steel A105 Forged alloy steel F22	Cast steel WCB
B	Cover	Same as body material	
C	Bimetal element	Truflex GB-14	
D	Gasket	Stainless steel spiral wound with graphite filler	
E	Cover stud ⁽¹⁾	Chrome moly. alloy B7	
F	Cover nut ⁽¹⁾	Carbon or stainless steel	Carbon steel 2H
G	Cap screw ⁽²⁾	Chrome moly. alloy	
H	Strainer	–	Stainless steel
I	Piston cage unit	Stainless steel	
J	Pilot valve	Stainless steel, ball 58 Rc min.	
K	Blowdown plug	–	Carbon steel
L	Bottom plug	–	Stainless steel
M	Temp controller	Stainless steel	

(1) B7/2H (A105), B16/Gr.4 (F22), B8M/8M (F316).

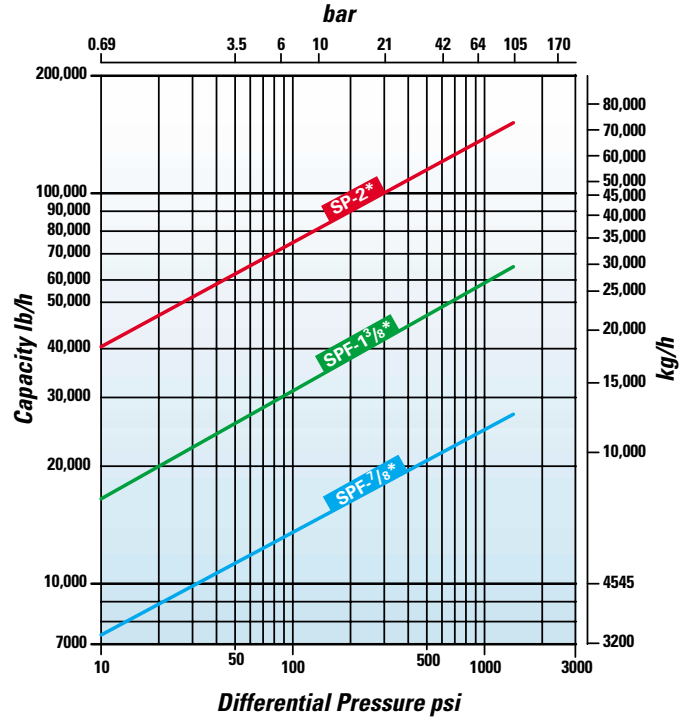
(2) F316 applies to SPF0-3 design only.

TYPE	PRESSURE RANGE psi/bar	MAX. TEMP. °F/°C			ORIFICE in/mm	MAX. CAPACITY lb/h kg/h
		A105/WCB	F316	F22		
SPF0	10-200 0.69-14	850 ⁽¹⁾ 454	1000 537	1050 565	7/8 22	17,000 7,727
SPF1	10-350 0.69-24					19,000 8,636
SPF2	10-600 0.69-42					22,000 10,000
SPF3	10-1500 0.69-103					27,000 12,273
SPF4	10-200 0.69-14	850 ⁽¹⁾ 454	N/A	1050 565	1 3/8 35	38,000 17,272
SPF5	10-350 0.69-24					43,000 19,545
SPF6	10-600 0.69-42					49,000 22,272
SPF7	10-1500 0.69-103					63,000 28,636
SP6	10-200 0.69-14	850 ⁽¹⁾ 454	N/A	2	51	90,000 40,909
SP7	10-600 0.69-42					130,000 59,090
SP8	10-1500 0.69-103					160,000 72,727

(1) Permissible, but not recommended for prolonged use above 800°F (426°C).

CAPACITY

The performance graph indicates the continuous discharge capacities of condensate per hour at various pressure differentials across the trap.



* Fraction represents orifice size.

CONNECTIONS:

- Screwed
- Socketweld
- Buttweld
- Flanged

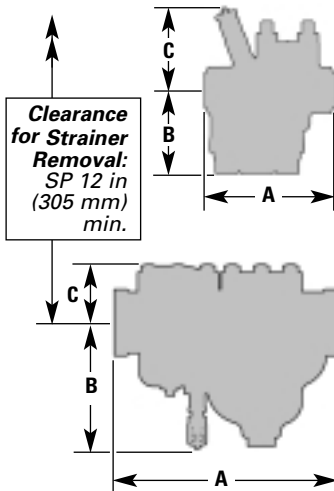
Type
SPF



Type
SP



DIMENSIONS & WEIGHTS



TYPE	SIZE in mm		A Face to Face						B Center to Bottom	C Center to Top	WEIGHT lb/kg					
			SCR/SW	BW	FLANGED						SCR/SW	BW	FLANGED			
					200	350	600	1500					200	350	600	1500
SPF 0,1,2,3	1	1 1/2	7 3/4	13 3/4	10 3/4	11	11	12 3/4	4 7/8	5 3/16	35	39	48	53	56	64
	25	40	197	349	273	279	279	324	124	132	16	18	22	24	25	29
SPF 4,5,6,7	1 1/2	2	8 3/4	14 3/4	12	12	12	14 1/4	5 1/8	5 1/2	50	55	67	69	81	100
	40	50	222	375	305	305	305	362	130	140	23	25	30	31	37	45

TYPE	SIZE in mm		A Face to Face						B Center to Bottom	C Center to Top	WEIGHT lb/kg					
			SCR/SW	BW	FLANGED						SCR/SW	BW	FLANGED			
					200	600	1500	200					600 & 1500	200	600 & 1500	200
SP 6,7,8	2	50	15	21	18	19	22	9 1/8	4 1/4	115	120	118	123	139	170	
	54	56	54	56	63	63	77									
	2 1/2	65	381	533	457	483	559	232	108	52	55	120	125	151	192	
	55	57	55	57	69	87										
3	80	16	22	122	127	155	216									
406	559	56	58	70	98											