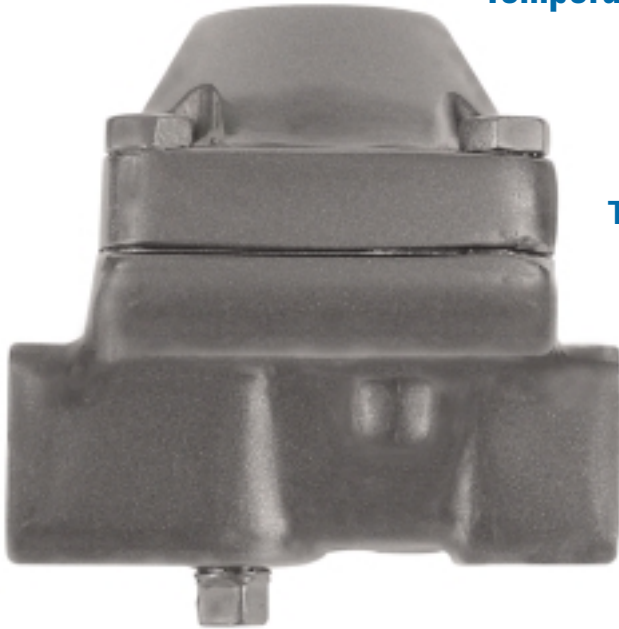
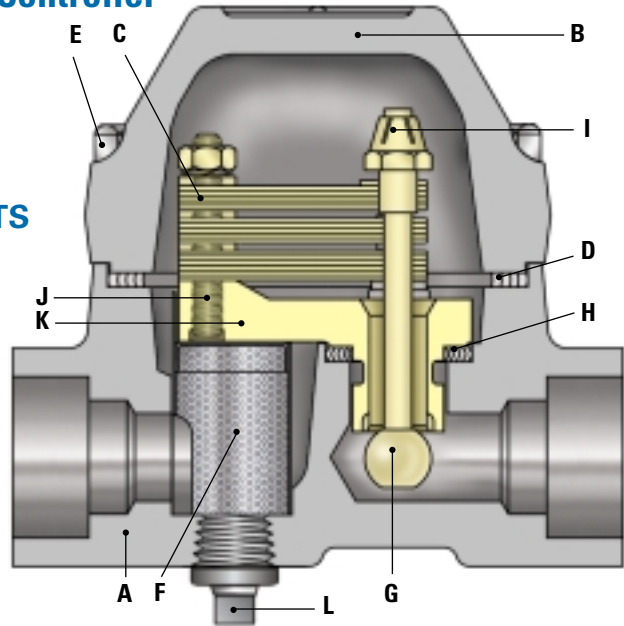


VELAN FORGED UNIVERSAL BIMETALLIC STEAM TRAPS

Type TS, TSF & SF with Cage Unit, Air Vent, Check Valve, Strainer & Optional Temperature Controller

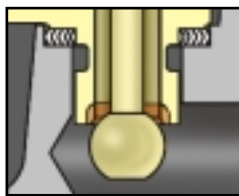
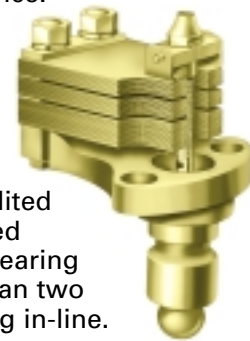


Type TS

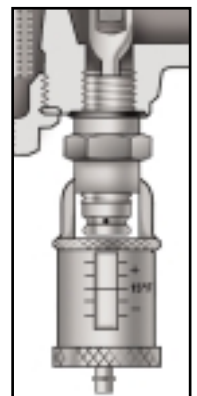


TYPE TS, TSF & SF DESIGN FEATURES

- Forged valve body and cover (A, B)**
 offer the advantages of high strength, structural integrity and reliability that make it an ideal choice for steam service.
- Stainless Steel Trim**
- Cage Unit (K, C, J, G, I)**
 The advanced cage unit design in Velan Steam Traps combines a bimetal element, hardened Rc 58 min. ball valve and a Stellite seat area all in one factory-tested assembly. Replacement of all wearing parts can be achieved in less than two minutes, with the trap remaining in-line.
- Stellite Seats**
 All Velan valve seats are Stellite faced to increase their resistance to the high degree of wear through velocity of flow, dirt and scale.
- Integral strainer (F)**
 Stainless steel screens are integral in all three models to protect the trap operating mechanism from damage by dirt or scale. No extra fittings or installation costs are required. Free strainer area minimum 5 to 1. Perforation is 0.031" (0.8 mm).
- Universal operation**
 The individual segments of the bimetallic element act consecutively, developing forces in close relation to the saturated steam curve. This permits sensitive, efficient trap operation at all



- pressures from 1 psi to maximum, without orifice change or adjustment.
- Silent operation** – no violent line shocks.
- Positive closing**
 Every Velan steam trap closes tightly on saturated steam temperature. Positive closing for long periods on dry superheated steam has enormous advantages in power plant and marine service.
- All-position operation** simplifies piping layout.
- Freezeproof**
 Velan traps do not require a reservoir of priming water in the body to operate. When installed vertically with inlet on top, they drain completely when cold, and are freezeproof without insulation.
- Positive condensate drainage** for process work.
- Optional Temperature controller on SF**
 An ingenious device that allows adjustment of factory setting under full steam pressure. Condensate discharge temperature can be increased or decreased to meet the specific requirements of any process application. Up to 30% of energy can be saved by extracting the sensible heat of steam.
- Other options include:**
 NPT blow down plug, Piping King Units complete with valving.



VELAN FORGED UNIVERSAL BIMETALLIC STEAM TRAPS

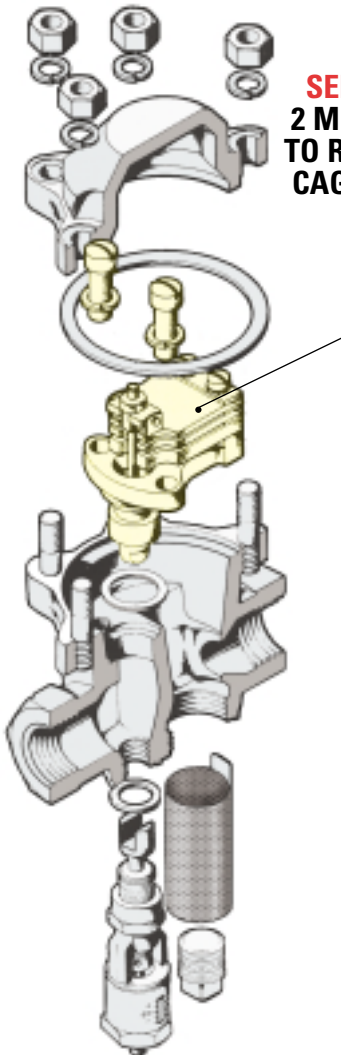
STANDARD MATERIALS

PART	MATERIALS
A Body	Forged carbon steel A105 [C. Max. 0.25] Forged stainless steel F316 ⁽¹⁾
B Cover	Same as body material
C Bimetal element	Truflex GB-14
D Cover gasket	Stainless steel with graphite filler
E Cover bolt ⁽²⁾	Chrome moly. alloy
F Strainer	Stainless steel
G Stem & ball	SS, ball valve 58 Rc min.
H Cage unit gasket	Stainless steel spiral wound with graphite filler
I Self-lock adjusting nut	Stainless steel
J Fixing screw	Stainless steel
K Bimetal holder	Stainless steel
L Plug: 3/8" - NPT	Carbon steel

(1) Type TS only. (2) B7 (A105), B8M2 (F316)

CONNECTIONS:

- Screwed
- Socketweld
- Buttweld
- Flanged

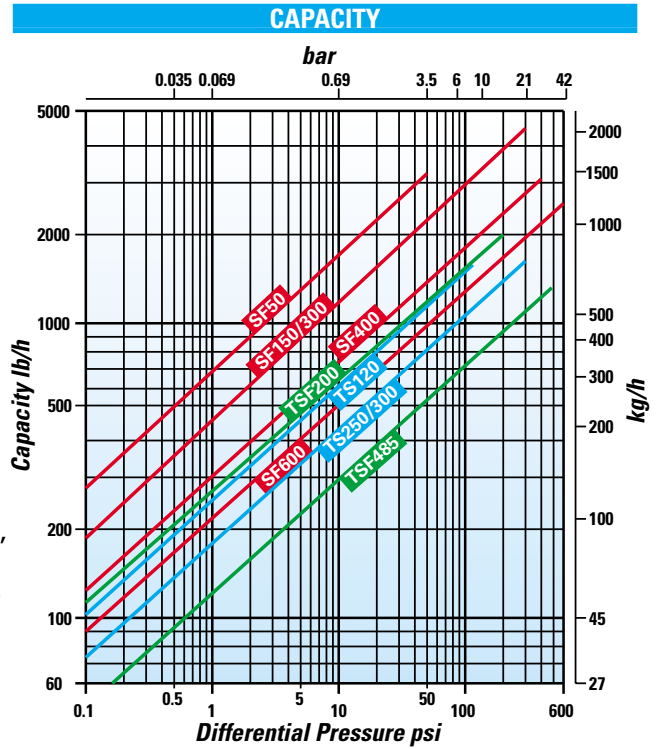


**SERVICE:
2 MINUTES
TO REPLACE
CAGE UNIT**

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

APPLICATIONS

- **TS & TSF**
Steam tracing or instrument cabinet service etc.
- **TSF & SF**
Storage tank heating, sterilizers, cookers, dry kilns, water heaters, greenhouse coils, fuel oil heaters, drip legs, drum dryers, platen presses, tire moulds etc.
- **SF**
High or low pressure drips, plating tank, vacuum pans, evaporators, pipe coils, bleach tanks etc.



ENGINEERING DATA

TYPE	PRESSURE RANGE psi/bar	MATERIAL	MAX. TEMP. °F/°C	ORIFICE	MAX. CAPACITY lb/h kg/h
TS	0-120 0-8	A105 ⁽¹⁾	850 ⁽²⁾ 454	3/8 9.5	1,650 750
	0-250 0-17			5/16 8	1,500 682
	0-300 0-21			5/16 8	1,700 773
TSF	0-200 0-14	A105	850 ⁽²⁾ 454	3/8 9.5	2,000 909
	0-485 0-33.5			1/4 6.4	1,400 636
	SF			0-50 0-3.5	A105
0-150 0-10.4		1/2 12.7	3,250 1,477		
0-300 0-21		1/2 12.7	4,500 2,045		
0-400 0-28		3/8 9.5	3,100 1,409		
0-600 0-42		5/16 8	2,600 1,182		

(1) Also available in: F316, Max. temp. 1,000°F (537°C).
(2) Permissible, but not recommended for prolonged use above 800°F (426°C).

DIMENSIONS & WEIGHTS

TYPE	SIZE in/mm	A Face to Face			B Center to Bottom	C Center to Top	Weight lb/kg		
		SCR/SW	BW	FLG			SCR/SW	BW	FLG
TS	3/8 1/2 3/4	4	10	6	7/8	2 7/8	4	6	8
	10 15 20	102	254	152	22	73	2	2.7	3.6
TSF	1 3/4	4	10	6	1	3 1/8	4.25	6.5	11
	15 20	102	254	152	25	79	2	3	5
SF	1/2 3/4 1	4 3/8	10 3/8	7 3/8	1	3 1/2	8	9	14
	15 20 25	111	264	187	25	89	3.6	4	6.4
SF	1/2 3/4 1	6 1/8	12 1/8	8 1/8 ⁽¹⁾	2 1/8	4 3/4	13	16	21 ⁽²⁾
	15 20 25	156	308	206	54	121	6	7	9.5

(1) SF 300/600 FLG: 9 9/16 in (232 mm). (2) SF 300/600 FLG: 23 lb (10.4 kg).