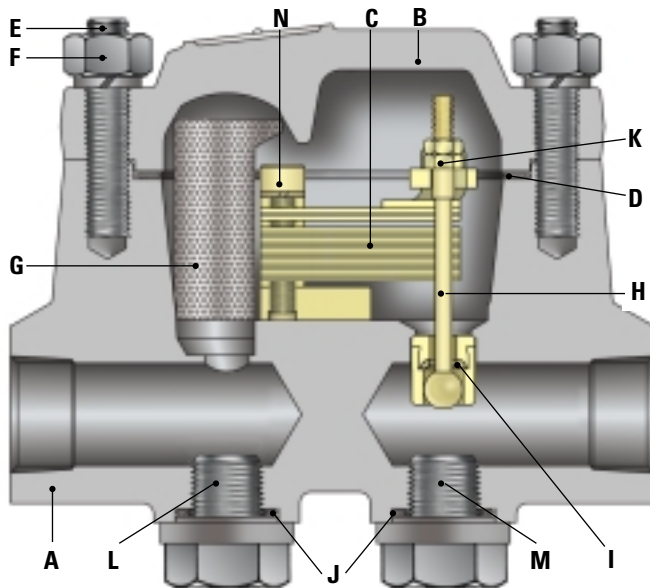
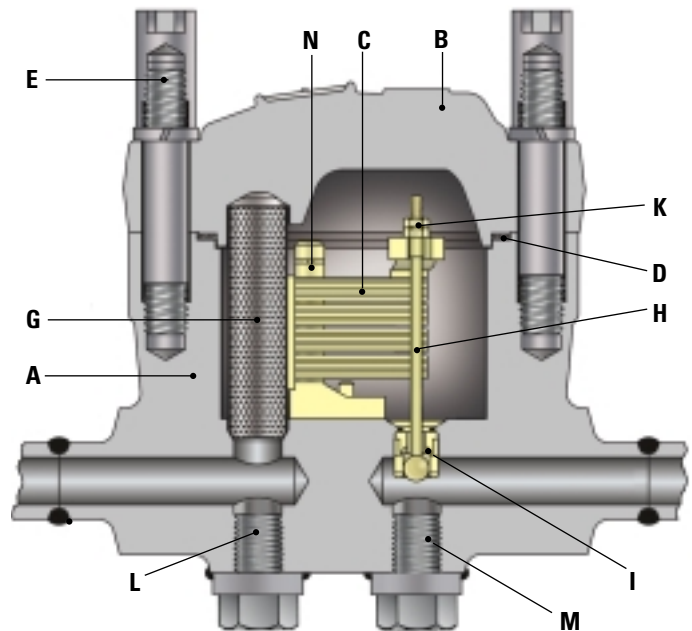


# VELAN FORGED HP/HT STEAM TRAPS

## Type N for High Pressure/High Temperature Service Complete with Air Vent, Check Valve and Strainer



**Type N675**



**Type N2500**

### TYPE N DESIGN FEATURES

- **The only positive closing steam trap on superheated steam**

The bimetallic element is a function of the saturated steam curve (pages 2 & 3) and its sensitivity to the temperature change assures an immediate reaction to both steam and condensate for the entire pressure range. At saturated temperature the valve is closed. Superheated steam increases the thermal pull of the bimetallic element, closing the valve even tighter. See page 2 for details.

- **Easy Access** to all the internal operating parts when the body cover is removed.

- **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.

- **Gaskets (D, J)** are spiral wound, stainless steel with graphite.

- **Trim** is stainless steel with ball 58 Rc min.

- **Welded-in seats are Stellite (I)** to increase their resistance to high pressure/temperature applications and wear through velocity of flow, dirt and scale. N150/300 has screwed seat.



- **Freezeproof in vertical position - inlet on top** without insulation – complete drainage when cold.

- **Positive condensate drainage.**

- **Integral strainer (G)**

Stainless steel screens are integral 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 (C)**

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. An ideal feature for "complete trap standardization".

- **All-position installation** simplifies piping layout.

Can be installed vertically or horizontally. Both plugs can be replaced with valves. Can be adjusted to suit plant requirements.

- **Other options include:**

NPT blow down plug, strainer blowdown valve and Piping King Unit with all valving.

### APPLICATIONS

Type N steam traps resolve all problems with high pressure steam trapping on superheated steam lines in thermal power plants or aboard ships. Over 1,100 U.S. Navy ships have used Velan Steam Traps.

- Steam main drainage, ● Turbine drains,
- Desuperheater, ● High pressure processing,
- General high pressure/ temperature service.

# VELAN FORGED HP/HT STEAM TRAPS

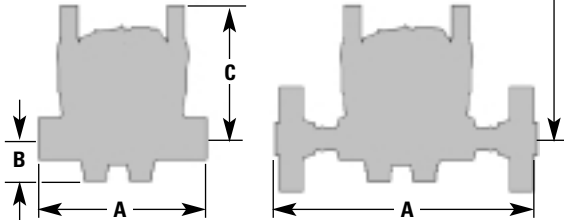
Type N Steam Traps also available as one unit Piping Kings with Velan Bonnetless Globe Valves or Power Ball Valves

## STANDARD MATERIALS

PART	MATERIALS
A Body	Forged carbon steel A105 [C. Max. 0.25] Forged alloy steel F22, F91 Forged stainless steel F316
B Cover	Same as body material
C Bimetal element	Truflex GB-14
D Cover gasket	Stainless steel spiral wound with graphite filler
E Cover stud <sup>(1)</sup>	Chrome moly. alloy
F Cover nut <sup>(1)</sup>	Carbon steel, Stainless steel
G Strainer	Stainless steel
H Stem & ball	Stainless steel, ball 58 Rc
I Seat	SS hardfaced with Stellite 6
J Plug gasket	Stainless steel spiral wound with graphite filler
K Adjusting nut & locknut	Stainless steel
L Strainer blowdown plug	Carbon steel or chrome moly. steel
M Test Plug	Carbon steel or chrome moly. steel
N Fixing screw & washer	Stainless steel

(1) B7/2H (A105), B8M/8M (F316),  
B16/Gr.4 (F22), Nimonic 80A (F91).

**Clearance for Strainer Removal:** N150/300; 5 1/2 in  
(140 mm) min., N2500/2600; 15 in (381 mm) min.



Type  
N675



Type  
N2500



## ENGINEERING DATA

TYPE	PRESSURE RANGE psi/bar	MATERIAL	MAX. TEMP. °F/°C	ORIFICE in/mm	MAX. CAPACITY lb/h kg/h
N150	0-150 0-10.5	A105 <sup>(1)</sup>	850 <sup>(1)(2)</sup> 454	1/2 12.7	2,800 1,272
N300	0-300 0-21				3,500 1,590
N675	0-675 0-46.5			5/16 8	2,900 1,315
N900	0-900 0-62			1/4 6.4	1,850 841
N1500	0-1500 0-103				2,100 955
N2500	500-2500 34.5-172	F22	1050 565	5/16 8	4,800 2,182
N2600	500-2600 34.5-179	F91	1100 593		4,900 2,227

(1) Also available in: F22, max. temp. 1,050°F (565°C)  
F316, max. temp. 1,000°F (537°C).

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

## CONNECTIONS:

N150-1500: ● Screwed ● Socketweld ● Buttweld ● Flanged  
N2500-N2600: ● Socketweld ● Buttweld ● Flanged

## DIMENSIONS & WEIGHTS

TYPE	SIZE in/mm			A Face to Face			B Center to Bottom	C Center to Top	Weight lb/kg		
				SCR/SW <sup>(1)</sup>	BW	FLG			SCR/SW*	BW	FLG
N150 N300 N675 N900 N1500	1/2 15	3/4 20	1 25	7 1/4 184	13 1/4 337	11 1/4 286	2 51	4 1/2 115	24 11	26 12	37 17
N2500 N2600	1/2 15	3/4 20	1 25	10 254	16 406	15 1/2 394	2 5/8 67	8 1/8 206	80 36	83 38	105 48

(1) Screwed connection not available for N2500/N2600.

## CAPACITY

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

