BYPASS BLOWDOWN STEAM TRAP

MODEL BT3N

FREE FLOAT STEAM TRAP WITH BYPASS BLOWDOWN FUNCTION

Features

A reliable and durable steam trap that includes a built-in bypass valve to facilitate discharge of the large quantities of condensate produced at start-up by process equipment, heaters, air conditioners, tank heating, etc.

1. A sealed, manually operated ball valve integrated into the top of the steam trap can be used for bypass blowdown to reduce startup time.
2. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
3. Precision-ground float, constant water seal and three-point seating design ensure a steam tight seal, even under no-load conditions.

Specifications

Model		BT3N
Connection		Screwed
Size (mm)		15, 20, 25
Orifice No.		5, 10
Maximum Operating Pressure (MPaG)	PMO	0.5, 1.0
Maximum Differential Pressure (MPa)	ΔPMX	0.5, 1.0
Maximum Operating Temperature (°C)	TMO	185

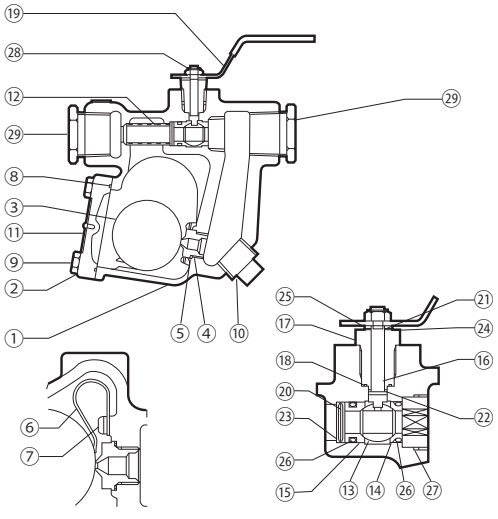
CAUTION

To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): 1 MPa = 10.197 kg/cm²
Maximum Allowable Pressure (MPaG) PMA: 1.0
Maximum Allowable Temperature (°C) TMA: 185
Minimum Allowable Temperature (°C): 0

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Iron	FC250	A126 Cl.B
②	Cover	Cast Iron	FC250	A126 Cl.B
③	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice	—	—	—
⑤	Orifice Gasket	Fluorine Resin	PTFE	—
⑥	Air Vent Strip (Bimetal)	—	—	—
⑦	Screw & Spring Washer	Stainless Steel	SUS304	AISI304
⑧	Cover Gasket	Fluorine Resin	PTFE	—
⑨	Cover Bolt	Carbon Steel	S45C	AISI1045
⑩	Orifice Plug	Carbon Steel	SS400	A6
⑪	Nameplate	Stainless Steel	SUS304	AISI304
⑫	Screen	Stainless Steel	SUS430	AISI430
⑬	Ball	Stainless Steel	SUS304	AISI304
⑭	Outlet Valve Seat	Fluorine Resin	GF PTFE	—
⑮	Inlet Valve Seat	Fluorine Resin	GF PTFE	—
⑯	Spindle	Brass	C3604	B16 C36000
⑰	Gland	Brass	C3604	B16 C36000
⑱	Gland Gasket	Fluorine Resin	PTFE	—
⑲	Handle	Stainless Steel	SUS304	AISI304
⑳	Disc Spring	Stainless Steel	SUS301	AISI301
㉑	Disc Spring	Stainless Steel	SUS301	AISI301
㉒	Gland Packing	Fluorine Resin	CF PTFE	—
㉓	Washer	Stainless Steel	SUS304	AISI304
㉔	Thrust Washer	Fluorine Resin	CF PTFE	—
㉕	Washer	Stainless Steel	SUS304	AISI304
㉖	O-ring (Inlet/Outlet Valve Seat)	Fluorine Rubber	FPM	D2000HK
㉗	Valve Holder	Brass	C3604	B16 C36000
㉘	Locknut	Stainless Steel	SUS304	AISI304
㉙	Bushing**	Malleable Cast Iron	FCMB	A47 Gr.32510

* Equivalent materials
** Included only with 15, 20 mm sizes



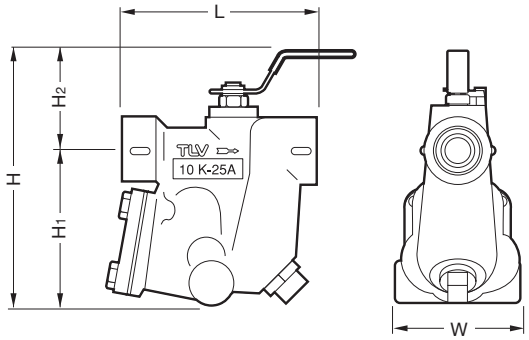
Orifice Detail Valve Detail

When the arrow on the handle is pointing in a direction perpendicular to the piping, the built-in bypass valve is in the CLOSED position, so the product functions as a normal steam trap.

When the arrow on the handle is pointing in a direction parallel to the piping, the built-in bypass function is enabled.

Dimensions

● **BT3N** Screwed



BT3N Screwed* (mm)

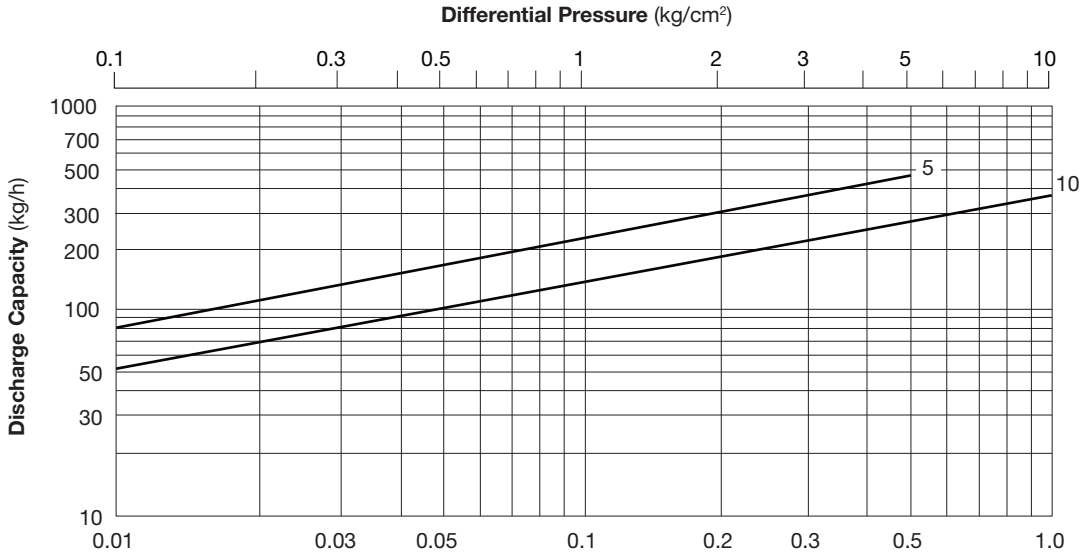
Size	L**	H**	H1**	H2**	W**	Weight (kg)
15	175***	190	115	75	95	3.6
20						
25	145					

* Rc(PT), other standards available
** Approximate dimensions
*** 15, 20 mm sizes come with an additional bushing

Note: The built-in bypass valve can not be used as a stop valve for the inlet and outlet of the product. Accordingly, it is recommended that a separate stop valve be installed at the inlet and outlet for maintenance purposes.

CAUTION Removing the handle or locknut causes degradation of the gland section seal. Do not remove the handle or locknut except when performing a disassembly inspection.

Discharge Capacity



1. Line numbers within the graph refer to orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
4. Recommended safety factor: at least 1.5.

CAUTION DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd, to ISO 9001/14001

ISO 9001
ISO 14001

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