



TEMPERATURE CONTROL STEAM TRAP

MODEL LEX3N

FIXED TEMPERATURE DISCHARGE THERMOSTATIC TRAPS TO CONTROL TEMPERATURE

Benefits

Steel-bodied bimetal thermostatic trap for accurate control of condensate discharge temperature. Ideal for use with steam tracers, tank heaters, space heaters, and instrument enclosures.

1. Maintains temperature control at preset levels between 120 and 390 °F by setting the valve closing temperature.
2. Provides maximum energy utilization of the sensible heat in condensate that is wasted.
3. Lowers cost of heating instrument enclosures and eliminates need for heat lamps.
4. Built-in, easy-to-clean screen protects internals to extend trouble-free service life.
5. Inline repairable to lower maintenance cost.
6. Suitable for use as an automatic non-freeze valve.
7. Overexpansion mechanism extends life by preventing damage to the bimetal element.



Specifications

Model	LEX3N	LEXW3N	LEXF3N
Connection	Screwed	Socket Weld	Flanged
Size (in.)	3/8, 1/2, 3/4, 1	3/8, 1/2, 3/4, 1	1/2, 3/4, 1
Condensate Temperature Setting Range (°F)*	120 - 390		
Maximum Operating Pressure (psig) PMO	650		
Minimum Operating Pressure (psig)	15		
Maximum Operating Temperature (°F) TMO	662		
Maximum Allowable Pressure (psig) PMA	900		
Maximum Allowable Temperature (°F) TMA	800		

* Set temperature should be lower than 30 °F below the steam saturation temperature

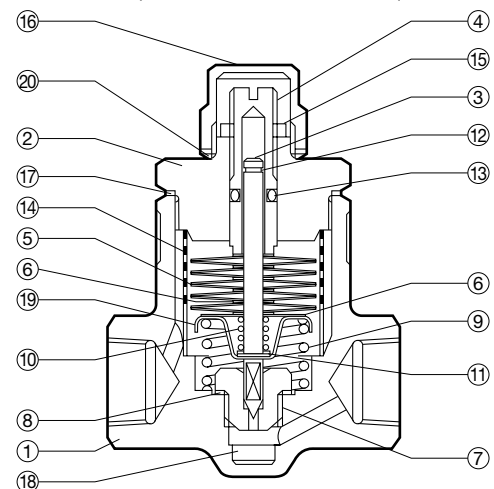
Connection and sizes in bold letters are standard

No.	Description	Material	ASTM/AISI*	JIS
①	Body	Carbon Steel	A105	—
②	Cover	Carbon Steel	A105	—
③	Valve Stem	Stainless Steel	AISI420	SUS420J2
④	Adjusting Screw	Stainless Steel	AISI303	SUS303
⑤	Bimetal Element	Bimetal	—	—
⑥	Plain Washer	Stainless Steel	AISI304	SUS304
⑦	Valve Seat	Stainless Steel	AISI303	SUS303
⑧	Valve Seat Gasket	Soft Iron	AISI1010	SUYP
⑨	Overexpansion Spring	Stainless Steel	AISI304	SUS304
⑩	Return Spring	Stainless Steel	AISI304	SUS304
⑪	Snap Ring	Stainless Steel	AISI304	SUS304
⑫	Snap Ring	Stainless Steel	AISI304	SUS304
⑬	Seal Ring	Fluorine Rubber	D2000HK	FPM
⑭	Screen	Stainless Steel	AISI430	SUS430
⑮	Lock Nut	Carbon Steel	A307 Gr.B	SS400
⑯	Cap Nut	Carbon Steel	A105	—
⑰	Cover Gasket	Soft Iron	AISI1010	SUYP
⑱	Bushing	Stainless Steel	AISI303	SUS303
⑲	Spring Guide	Stainless Steel	AISI304	SUS304
⑳	Cap Nut Gasket	Soft Iron	AISI1010	SUYP
㉑	Flange***	Carbon Steel**	A105/216 WCB	A105/216 WCB

* Equivalent ** Either A105 or A216 WCB, depending upon flange specifications *** Shown on reverse

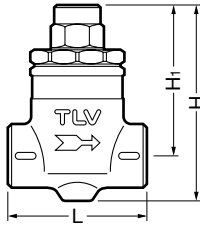


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

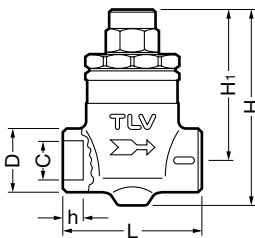


Dimensions

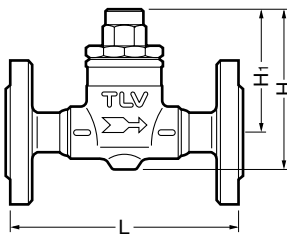
● **LEX3N**
Screwed



● **LEXW3N**
Socket Weld



● **LEXF3N**
Flanged



LEX3N Screwed* (in)

Size	L	H	H ₁	Weight (lb)
3/8	2 3/4	4 1/16	3 1/8	1.8
1/2				2.9
3/4	3 1/8	4 7/16	3 1/2	2.6
1				

* NPT, other standards available

LEXW3N Socket Weld (in)

Size	L	H	H ₁	φD	φC	h	Weight (lb)
3/8	2 3/4	4 1/16	3 1/8	1 1/4	1 1/16	1/2	1.8
1/2							2.9
3/4	3 1/8	4 7/16	3 1/2	1 13/16	1 1/8	9/16	2.6
1							

LEXF3N Flanged* (in)

Size	L	H	H ₁	Weight (lb)
1/2	5 11/16	4 1/16	3 1/8	5.7
3/4				7.7
1				8.6

* ANSI 600, other standards available

Connection and sizes in bold letters are standard

Sizing Charts

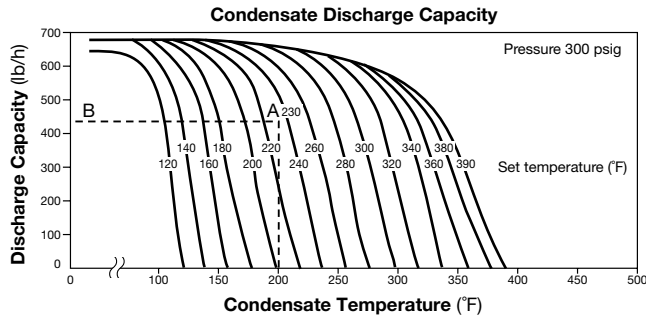
Estimation of discharge capacity.

Example: The flow rate of condensate discharging from 100 psig to atmosphere at 200 °F from a trap set to 230 °F is determined as follows:

Step 1: Use the discharge capacity graph.

From the 200 °F condensate temperature on the horizontal axis, follow a vertical line until it intersects the 230 °F set temperature curve (point A).

From A, follow a horizontal line across to the vertical axis (point B), and read the discharge capacity, 440 lb/h.

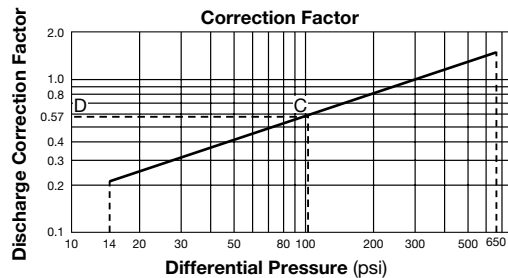


Step 2: Use the correction graph.

Because the discharge capacity graph is based on a steam pressure of 300 psig, a correction factor must be used to adjust the discharge capacity value to the actual differential pressure at the trap.

Read up from 100 psi on the horizontal axis to the diagonal line (point C), then across to the correction factor (point D), 0.57.

Multiply the discharge capacity obtained in step 1 by the correction factor to get the actual discharge capacity: 440 °F × 0.57=250 lb/h.



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Manufacturer

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

ISO 9001/ISO 14001

