



# BALANCED PRESSURE THERMOSTATIC STEAM TRAP

## MODEL FL21/FL32 QuickTrap®

UNIVERSAL BALANCED PRESSURE THERMOSTATIC TRAP WITH "FAIL OPEN" DESIGN

### Benefits

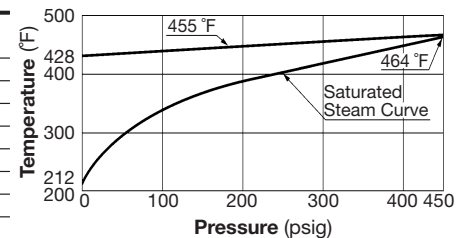
**Inline replaceable and cleanable 2-bolt universal flange steam trap with high air venting capability. For steam mains, tracers and light process.**

1. Two-bolt flange connector permits trap replacement or cleaning in minutes.
2. Patented "fail open" design for critical service.
3. "Pressure-to-close" valve design with hardened stainless steel valve head and seat for maximum life.
4. Valve, four diaphragms and casing have matching contours for high superheat capability and water hammer resistance.
5. Flat mirror-finish valve head provides tightest sealing for energy efficiency and life.
6. Pipeline screen located in connector protects and keeps trap module replacement costs low.
7. Easily cleanable and repairable design with replaceable module gaskets lowers maintenance costs.



### Specifications

Model	FL21			FL32		
	Screwed	Socket Weld	Flanged	Screwed	Socket Weld	Flanged
Connection						
Size (in)	<b>1/2, 3/4, 1</b>	<b>1</b>	<b>1/2, 3/4, 1</b>	<b>1/2, 3/4, 1</b>	<b>1</b>	<b>1/2, 3/4, 1</b>
Max. Operating Pressure (psig) PMO	300			450		
Min. Operating Pressure (psig)	Vacuum					
Maximum Back Pressure	90% of inlet pressure					
Max. Operating Temperature (°F) TMO	see graph at right					
Max. Allowable Pressure (psig) PMA	450					
Max. Allowable Temperature (°F) TMA	572					
Subcooling of X-element Fill (°F)	up to 11 (option: up to 40)					
Type of X-element	C6 (option: C22)					
Connector Unit	F46					
Trap Unit	L21*			L32*		

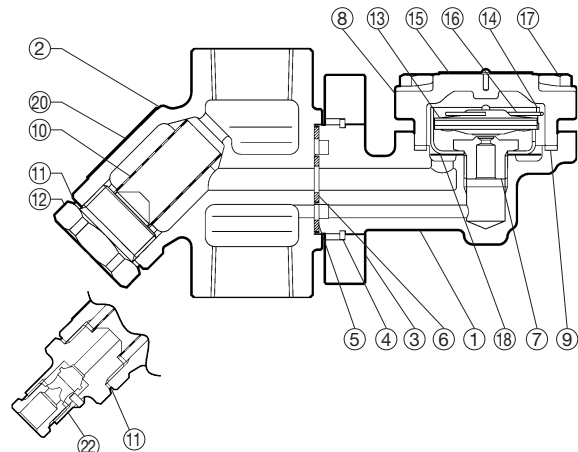


\* Designed for use with F46, F32 Connector Units and V1/N2/V1P/N2P Trap Stations. **Connections and sizes in bold are standard**



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.

No.	Description	Material	ASTM/AISI*	JIS
① <sup>T</sup>	Trap Body	Cast Stainless Steel	A351 Gr.CF8	—
②	Connector Body	Cast Stainless Steel	A351 Gr.CF8	—
③ <sup>T</sup>	Connector Flange	Carbon Steel	A105	—
④ <sup>T</sup>	Snap Ring	Carbon Steel	AISI1055	SWRH57
⑤ <sup>MR</sup>	Outer Connector Gasket	Graphite/Stainl. Steel	—/AISI304	—/SUS304
⑥ <sup>MR</sup>	Inner Connector Gasket	Graphite/Stainl. Steel	—/AISI304	—/SUS304
⑦ <sup>RT</sup>	Valve Seat	Stainless Steel	AISI420F	SUS420F
⑧ <sup>T</sup>	Trap Cover	Carbon Steel	A105	—
⑨ <sup>MR</sup>	Cover Gasket	Graphite/Stainl. Steel	—/AISI316L	—/SUS316L
⑩	Screen	Stainless Steel	AISI430	SUS430
⑪ <sup>MR</sup>	Screen Holder Gasket	Stainless Steel	AISI316L	SUS316L
⑫	Screen Holder	Stainless Steel	A351 Gr.CF8	—
⑬ <sup>RT</sup>	X-element	Stainless Steel	—	—
⑭ <sup>RT</sup>	X-element Guide	Stainless Steel	AISI304	SUS304
⑮ <sup>T</sup>	Nameplate	Stainless Steel	AISI304	SUS304
⑯ <sup>RT</sup>	Spring Clip	Stainless Steel	AISI304	SUS304
⑰ <sup>T</sup>	Cover Bolt	Carbon Steel	AISI1045	S45C
⑱ <sup>RT</sup>	Trap Screen	Stainless Steel	AISI304	SUS304
⑲ <sup>T</sup>	Connector Bolt**	Alloy Steel	A193 Gr.B7	SNB7
⑳	Connector Nameplate	Stainless Steel	AISI304	SUS304
㉑	Flange**	Cast Stl. Steel (Carbon Steel***)	A351 Gr.CF8 (A105***)	—
㉒	BD2 Blowdown Valve***	Cast Stainless Steel	A351 Gr.CF8	—



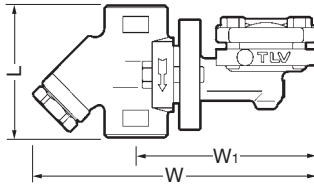
\* Equivalent \*\* Shown on reverse \*\*\* Option

Replacement kits available:

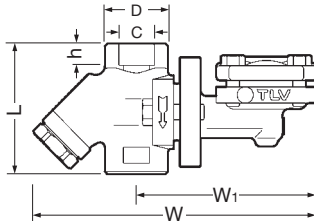
(M) maintenance parts, (R) repair parts, (T) trap unit L21/L32  
Replacement parts for former connector body F32 differ from those for F46.

**Dimensions**

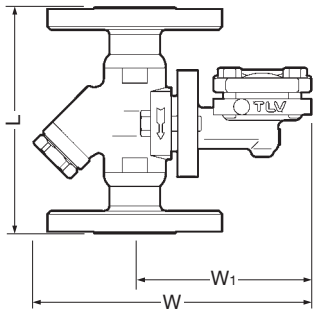
● **FL21/FL32**  
Screwed



● **FL21/FL32**  
Socket Weld



● **FL21/FL32**  
Flanged



**FL21/FL32 Screwed\*** (in)

Size	L	W**	W <sub>1</sub>	Weight (lb)
1/2	3 1/8	6 5/8	4 1/8	4.0
3/4				
1	3 3/4	6 23/32	4 9/32	4.6

\* NPT, other standards available  
\*\*With optional BD2 add approx. 1 1/16" to W

**FL21/FL32 Socket Weld\*** (in)

Size	L	W**	W <sub>1</sub>	φD	φC	h	Weight (lb)
1/2	3 1/8	6 5/8	4 1/8	1 7/16	0.855	1/2	4.0
3/4						9/16	
1	3 3/4	6 23/32	4 9/32	1 3/4	1.330	9/16	4.6

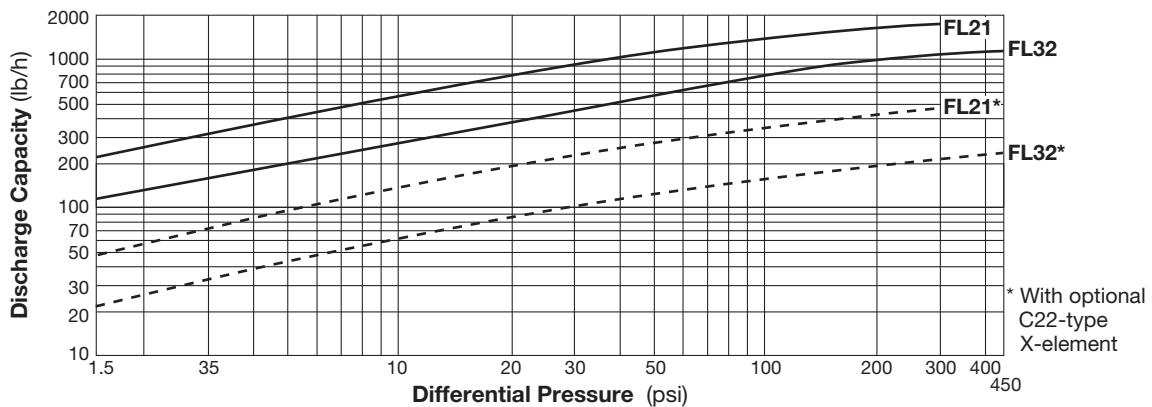
\* ASME B16.11-2005, other standards available  
\*\*With optional BD2 add approx. 1 1/16" to W

**FL21/FL32 Flanged** (in)

Size	L*			W**	W <sub>1</sub>	Weight*** (lb)				
	Connects to ASME Class									
	150RF	300RF	600RF							
1/2	SS: 5 7/8	SS: 5 7/8	SS: 7 1/16	6 5/8	4 1/8	11				
	CS: 5 1/2	CS: 5 1/2	CS: 5 1/2							
3/4	SS: 5 7/8	SS: 5 7/8	SS: 7 1/16			6 5/8	4 1/8	12		
	CS: 6 1/2	CS: 6 1/2	CS: 6 1/2							
1	SS: 6 5/16	SS: 6 5/16	SS: 7 1/2					6 5/8	4 1/8	14
	CS: 8 1/4	CS: 8 1/4	CS: 8 1/4							

Other standards available, but length and weight may vary  
\* SS: stainless steel, CS: carbon steel. Flange material refers only to flanges. F46 connector body material is always stainless steel.  
\*\* With optional BD2 add approx. 1 1/16" to W  
\*\*\* Weight is for Class 600 RF

**Discharge Capacity**



1. Differential pressure is the difference between the inlet and outlet pressure of the trap.
2. Recommended safety factor: at least 2.



**CAUTION** DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE. Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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

