



# BALANCED PRESSURE THERMOSTATIC STEAM TRAP

## MODEL FL21/FL32 QuickTrap®

### CARBON STEEL

#### UNIVERSAL BALANCED PRESSURE THERMOSTATIC TRAP WITH "FAIL OPEN" DESIGN

#### Features

**Inline replaceable and cleanable two-bolt universal flange steam trap with high air venting capability. For steam mains, tracers, dryers and heaters.**

1. Two-bolt flange connector permits trap replacement or cleaning in minutes without disturbing piping.
2. Universal flange allows trap to be positioned in the correct attitude, regardless of pipeline configuration.
3. Patented "fail open" feature for critical service.
4. Rugged yet light construction withstands superheat and water hammer.
5. Cyclic operation with fixed subcooling throughout the whole pressure range.
6. Built-in screens in connector and trap body protect and keep trap module replacement costs low.
7. Easily cleanable and repairable design.
8. Hardened stainless steel valve head and seat.
9. Models FL21-C and FL32-C with built-in check valve available upon request.



#### Pressure Equipment Directive (PED)

Classification according to PED 2014/68/EU, fluid group 2

Size	Category	CE marking
DN 15 to DN 25	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

\* Manufactured in accordance with sound engineering practice

#### Specifications

Model	FL21	FL32
Connection	Screwed, Socket Welded, Flanged	
Size	1/2", 3/4", 1" / DN 15, 20, 25	
Max. Operating Pressure (barg) PMO	21	32
Min. Operating Pressure (barg)	0.1	
Maximum Back Pressure	90% of inlet pressure	
Max. Operating Temp. (°C) TMO	see graph at right	
Subcooling of X-element Fill (°C)	up to 6	
Type of X-element	C6	
Connector Unit	F46	
Trap Unit	L21*	L32*

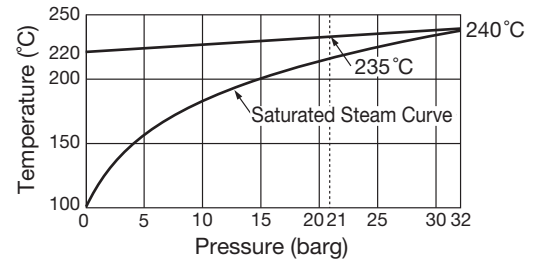
\* Designed for use with the F46, F32 Connector Units and V1/V2 Trap Stations. 1 bar = 0.1 MPa Trap and Connector Units sent as separate units for flexible installation.

**PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):**

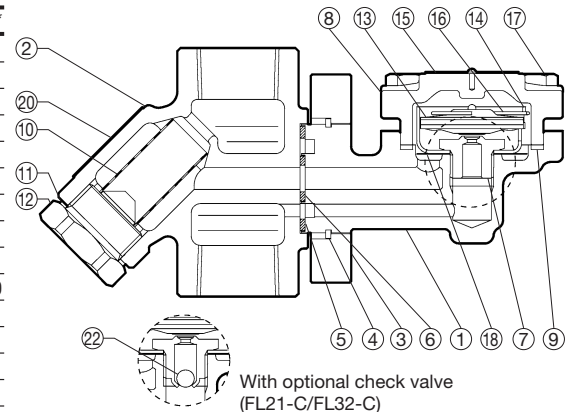
Maximum Allowable Pressure (barg) PMA: 32

Maximum Allowable Temperature (°C) TMA: 300

**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.



No.	Description	Material	DIN*	ASTM/AISI*
① <sup>T</sup>	Trap Body	Cast Stainless Steel A351 Gr.CF8	1.4312	—
②	Connector Body	Cast Stainless Steel A351 Gr.CF8	1.4312	—
③ <sup>T</sup>	Connecting Flange	Carbon Steel A105	1.0460	—
④ <sup>T</sup>	Snap Ring	Carbon Steel SWRH57	1.0535	AISI1055
⑤ <sup>MRT</sup>	Outer Connector Gasket	Graphite/Stainl. Stl. SUS304	-/1.4301	-/AISI304
⑥ <sup>MRT</sup>	Inner Connector Gasket	Graphite/Stainl. Stl. SUS304	-/1.4301	-/AISI304
⑦ <sup>RT</sup>	Valve Seat	Stainless Steel SUS420F	1.4028	AISI420F
⑧ <sup>T</sup>	Trap Cover	Carbon Steel A105	1.0460	—
⑨ <sup>MRT</sup>	Cover Gasket	Graphite/Stainl. Stl. SUS316L	-/1.4404	-/AISI316L
⑩ <sup>R</sup>	Screen inside/outside	Stainless Steel SUS304/430	1.4301/1.4016	AISI304/430
⑪ <sup>MR</sup>	Screen Holder Gasket	Stainless Steel SUS316L	1.4404	AISI316L
⑫	Screen Holder	Stainless Steel A351 Gr.CF8	1.4312	—
⑬ <sup>RT</sup>	X-element	Stainless Steel	—	—
⑭ <sup>RT</sup>	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑮ <sup>T</sup>	Nameplate	Stainless Steel SUS304	1.4301	AISI304
⑯ <sup>RT</sup>	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑰ <sup>T</sup>	Cover Bolt	Carbon Steel S45C	1.0503	AISI1045
⑱ <sup>RT</sup>	Trap Screen	Stainless Steel SUS304	1.4301	AISI304
⑲ <sup>T</sup>	Connector Bolt**	Alloy Steel SNB7	1.7225	A193 Gr.B7
⑳	Connector Nameplate	Stainless Steel SUS304	1.4301	AISI304
㉑	Flange***	Cast Stainless Steel A351 Gr.CF8	1.4312	—
		Stainless Steel SUS304	1.4301	AISI304
㉒	Steel Ball (Check Valve)	Stainless Steel SUS440C	1.4125	AISI440C

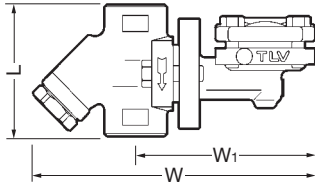


\* Equivalent materials \*\* Shown on reverse  
 \*\*\* Shown on reverse, shape and material depend on flange specifications

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

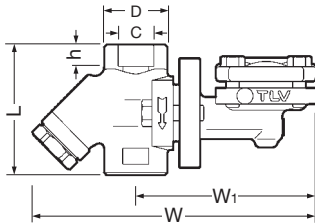


**FL21/FL32** Screwed\* (mm)

Size	L	W	W <sub>1</sub>	Weight (kg)
1/2"	80	169	105	1.8
3/4"				
1"	96	171	109	2.1

\* BSP DIN 2999, other standards available

● **FL21/FL32**  
Socket Welded

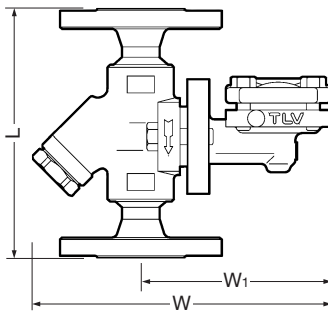


**FL21/FL32** Socket Welded\* (mm)

DN	L	W	W <sub>1</sub>	φD	φC	h	Weight (kg)
15	80	169	105	36	21.8	12	1.8
20						14	
25	96	171	109	44	33.9		2.1

\* ASME B16.11-2005, other standards available

● **FL21/FL32**  
Flanged



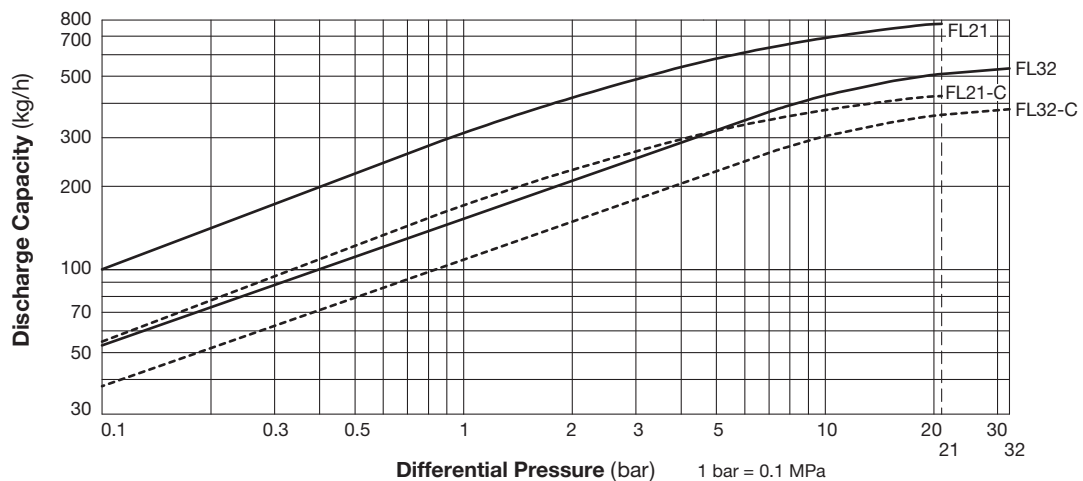
**FL21/FL32** Flanged (mm)

DN	L				W	W <sub>1</sub>	Weight* (kg)
	DIN 2501 PN25/40	ASME Class					
		150RF	300RF	600RF			
15	150	150	150	180	169	105	3.4
20							4.3
25	160	160	160	190			4.8

Other standards available, but length and weight may vary

\* Weight is for DIN PN 25/40

**Discharge Capacity**



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

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

