



# FREE FLOAT® STEAM TRAP

## MODEL FS5 QuickTrap®

### UNIVERSAL FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

#### Features

**Inline replaceable 2-bolt universal flange steam trap for steam mains, tracers and light process.**

1. Two-bolt flange connector permits trap replacement in minutes without disturbing piping.
2. Universal flange allows trap to be positioned in the correct attitude, regardless of pipeline configuration.
3. Precision-ground float, constant water seal and three-point seating design ensure a steam tight seal, even under no-load conditions.
4. Thermostatic air venting with bimetal strip allows for fast start-up.
5. One screen located in connector and one in trap ensure trouble-free operation.



#### Specifications

Model	FS5			FS5H		
	Screwed*	Socket Welded	Flanged	Screwed*	Socket Welded	Flanged
Connection						
Size (mm)		15, 20, 25			15, 20, 25	
Orifice No.		10, 21, 32			46	
Maximum Operating Pressure (MPaG) PMO		1.0, 2.1, 3.2			4.6	
Maximum Differential Pressure (MPa) ΔPMX		1.0, 2.1, 3.2			4.6	
Minimum Operating Pressure (MPaG)		0.01			0.01	
Maximum Operating Temperature (°C) TMO		400			425	
Connector Unit		F46			F46	
Trap Unit		S5**			S5H**	

\* Screwed connection is optional and requires special installation procedure. Consult TLV for details.

1 MPa = 10.197 kg/cm<sup>2</sup>

\*\* Designed for use with F46, F32 Connector Units and V1/V2/V1P/V2P Trap Stations.

Trap and Connector Units sent as separate units for flexible installation.

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 3.2 (FS5), 4.6 (FS5H)  
Maximum Allowable Temperature (°C) TMA: 400 (FS5), 425 (FS5H)

**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.

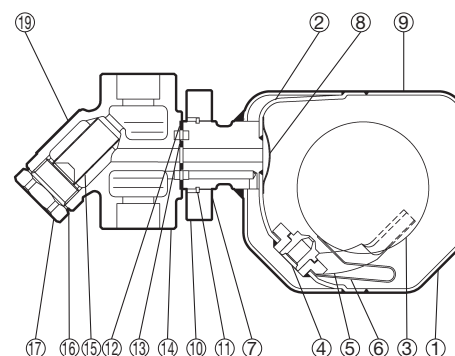
No.	Description	Material	JIS	ASTM/AISI*
① <sup>T</sup>	Trap Body	Stainless Steel	—	A240 Type 316L
② <sup>T</sup>	Inner Cover	Stainless Steel	—	A240 Type 316L
③ <sup>T</sup>	Float	Stainless Steel	SUS316L	AISI316L
④ <sup>T</sup>	Orifice	—	—	—
⑤ <sup>T</sup>	Float Guide	Cast Stainless Steel	—	A351 Gr.CF3M
⑥ <sup>T</sup>	Air Vent Strip	Bimetal	—	—
⑦ <sup>T</sup>	Connector Joint	Stainless Steel	SUS304	AISI304
⑧ <sup>T</sup>	Trap Screen	Stainless Steel	SUS304	AISI304
⑨ <sup>T</sup>	Nameplate	Stainless Steel	SUS304	AISI304
⑩ <sup>T</sup>	Connector Flange	Carbon Steel	—	A105
⑪ <sup>T</sup>	Snap Ring	Carbon Steel	SWRH57	AISI1055
⑫ <sup>MT</sup>	Outer Connector Gasket	Graphite/Stainless Steel	-/SUS304	-/AISI304
⑬ <sup>MT</sup>	Inner Connector Gasket	Graphite/Stainless Steel	-/SUS304	-/AISI304
⑭	Connector Body	Cast Stainless Steel	—	A351 Gr.CF8
⑮	Screen inside/outside	Stainless Steel	SUS304/430	AISI304/430
⑯ <sup>M</sup>	Screen Holder Gasket	Stainless Steel	SUS316L	AISI316L
⑰	Screen Holder	Cast Stainless Steel	—	A351 Gr.CF8
⑱ <sup>T</sup>	Connector Bolt**	Alloy Steel	SNB7	A193 Gr.B7
⑲	Connector Nameplate	Stainless Steel	SUS304	AISI304
⑳	Flange***	Cast Stainless Steel/ Stainless Steel	-/SUS304	A351 Gr.CF8/ AISI304

\* Equivalent \*\* Shown on reverse

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

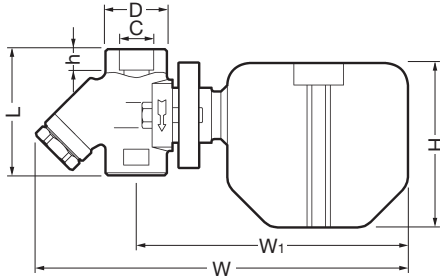
Replacement kits available: (M) maintenance parts, (T) trap unit S5/S5H

Replacement parts for former connector body F32 differ from those for F46.



**Dimensions**

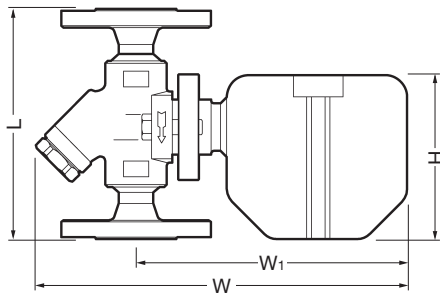
● **FS5/FS5H**  
Socket Welded



**FS5/FS5H** Socket Welded (mm)

Model	Size	L	φH	W	W <sub>1</sub>	φD	φC	h	Weight (kg)
FS5	15	80	104	236	172	36	22.2	12	2.1
	20							14	
	25	96	238	176	44	34.5	14	2.5	
FS5H	15	80	108	238	174	36	22.2	12	2.2
	20							14	
	25	96	240	178	44	34.5	14	2.6	

● **FS5/FS5H**  
Flanged

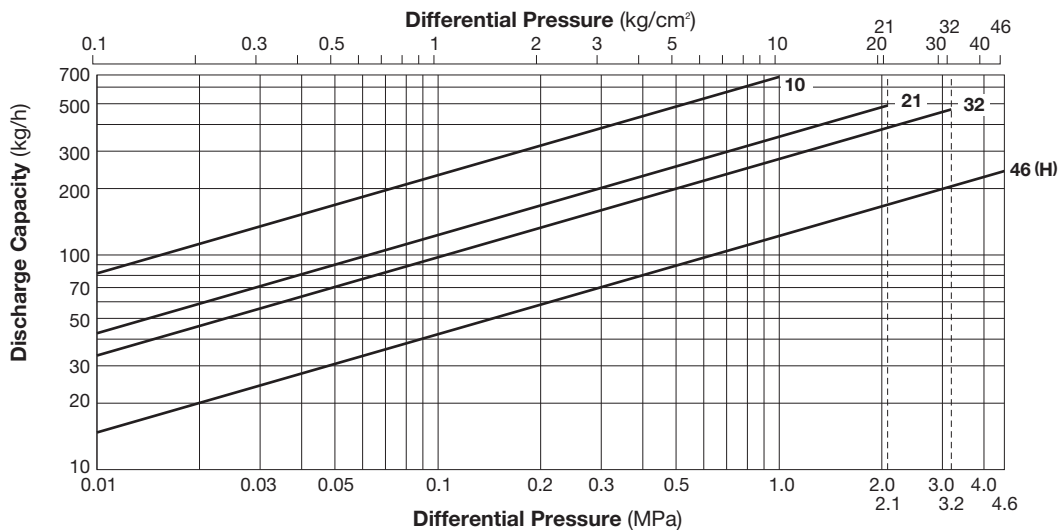


**FS5/FS5H** Flanged (mm)

Model	Size	L			φH	W	W <sub>1</sub>	Weight* (kg)
		ASME Class						
		150RF	300RF	600RF				
FS5	15	150	150	180	104	235	175	3.8 (4.4)
	20							5.2 (5.6)
	25							5.2 (6.4)
FS5H	15	-	-	180	108	240	175	(4.5)
	20							(5.7)
	25							(6.5)

Other standards available, but length and weight may vary  
\* Weight is for Class 300 (600) RF

**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 traps under conditions that exceed maximum differential pressure as condensate back up will occur!

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

