

# Float traps with thermal regulator for steam



# TF

Steam traps

DIN PN 16 - 40 — DN 15 to 50 mm  
ANSI 125 - 300 — 1/2" to 2"

TF 11,12, 33, 35

## Application

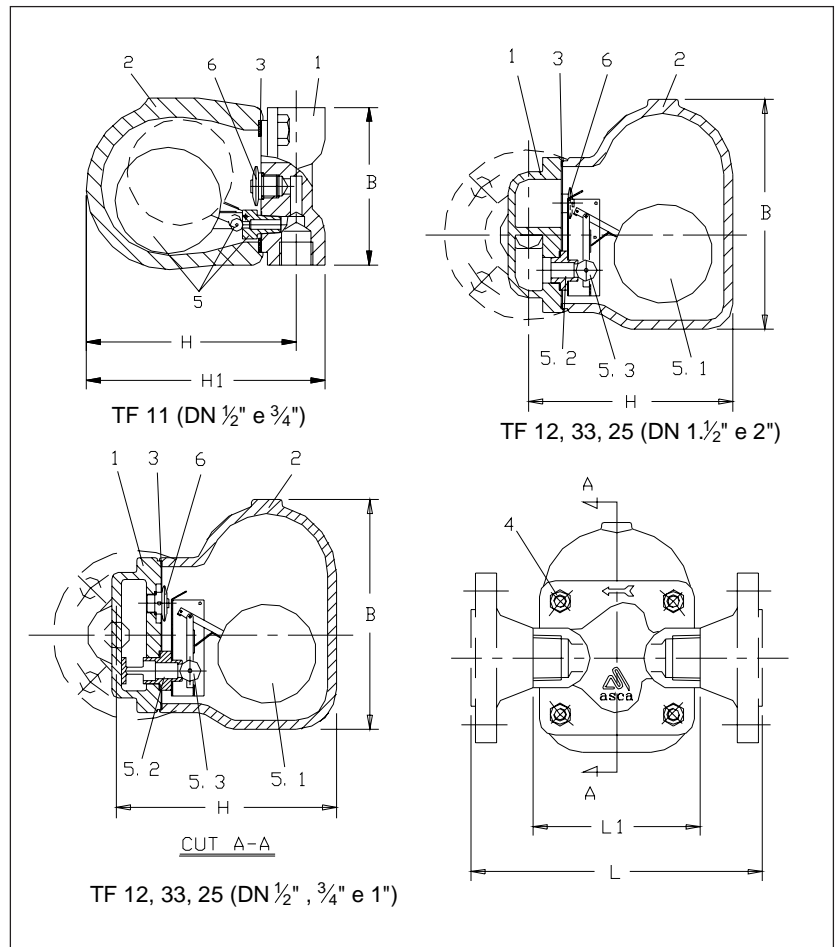
For drainage and deaeration of steam lines and all kinds of heat exchangers. Applicable, specially in controlled circuits and for level control.

## Description

The TF float traps series are automatic drainage valves with shutter of guided ball. Using this system, the float trap reaches high condensate flow. Opening and closing are made by the float, through condensate level. A monobloc thermo-control (MTC) assures initial and continuous deaeration. With robust construction, these traps are insensitive to backpressure and are applicable to all service conditions within its technical competence.

## Main characteristics

- Shutter of guided ball increases flow and minimizes wear per attrition;
- Removable cap allows easy access to the regulator assembly, without need of disassembling the body from the line;
- Minimum maintenance;
- High versatility of connections.



## Technical competence, materials and connections

Model		TF11	TF12	TF33	TF35		
Nominal Diameter	(mm)	15 20	15 20 25	15 20 25	40 50		
	(pol)	1/2" 3/4"	1/2" 3/4" 1"	1/2" 3/4" 1"	1.1/2" 2"		
Maximum service pressure	(bar man)	16 13	40 32 21	40 30 27			
Maximum correspondent temp.	(°C)	120 300	120 250 400	120 250 400			
Materials	Nº	Description	Quant.	Specification			
	1	Body	1	Cast iron ASTM A 126 B	Cast carbon steel ASTM A 216 WCB**	Cast carbon steel ASTM A 216 WCB	Cast Stinless steel ASTM A351 CF 8 M
	2	Cover	1	Cast iron ASTM A 126 B	Cast iron ASTM A 536	Cast carbon steel ASTM A 216 WCB	Cast stainless steel ASTM A351 CF 8 M
	3*	Gasket	1	Hydraulic cardboard			
	4	Screw	4	Qual. 8.8			
	5	Regulator assembly	1	Stainless Steel			
	5.1*	Float with lever	1	AISI 304			
	5.2*	Seat (without gasket in TF11P)	1	AISI 420			
5.3*	Ball with pin and bushing	1	stainless steel				
6*	Deaerator (RTM)	1	stainless steel				
Connections	Thread	BSPT ou NPT					
	Flanged	DIN PN 10/16 or 25/40 ANSI B 16.5 Class 150 or 300					
	Weld	ANSI B 16.11					

\*\*Body in cast iron ASTM A 536 when threaded

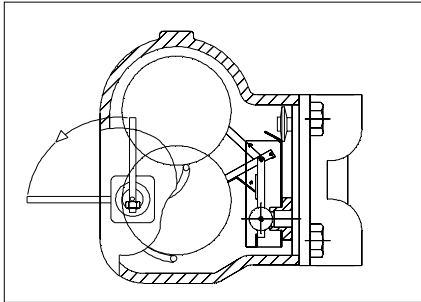
\*Recommended spare parts

**Presentation**

The float traps are composed of body and cap joined by screws. The cap can be removed without need of removing the body from the piping, what allows easy access to regulator assembly, to the outlet orifice (OS) and to the monobloc thermo-control (MTC).

**Optionals**

For order and by means of price increase it can be supplied with lever for hand driving of the trap.



**Installation**

The marking "H" or "V" must be rigorously noticed, that indicates the horizontal or vertical position, respectively. The flow indicating arrow and the float position that always must work in vertical direction must be noticed. Is convenient to install a strainer FY series, upstream of the float trap.

**Operation**

The TF float traps operation is controlled by amount variation of affluent condensate. When the condensate volume increases, the level goes up, raising the float (5.1), which lever displaces the ball shutter (5.3) in direction of opening, until that the amounts of condensate that enter and leave get equal, establishing a new level that keep constant. When the affluent condensate volume decreases, the process inverts and once it is reached the minimum level, the ball shutter seats on the seat (5.2), closing the float trap.

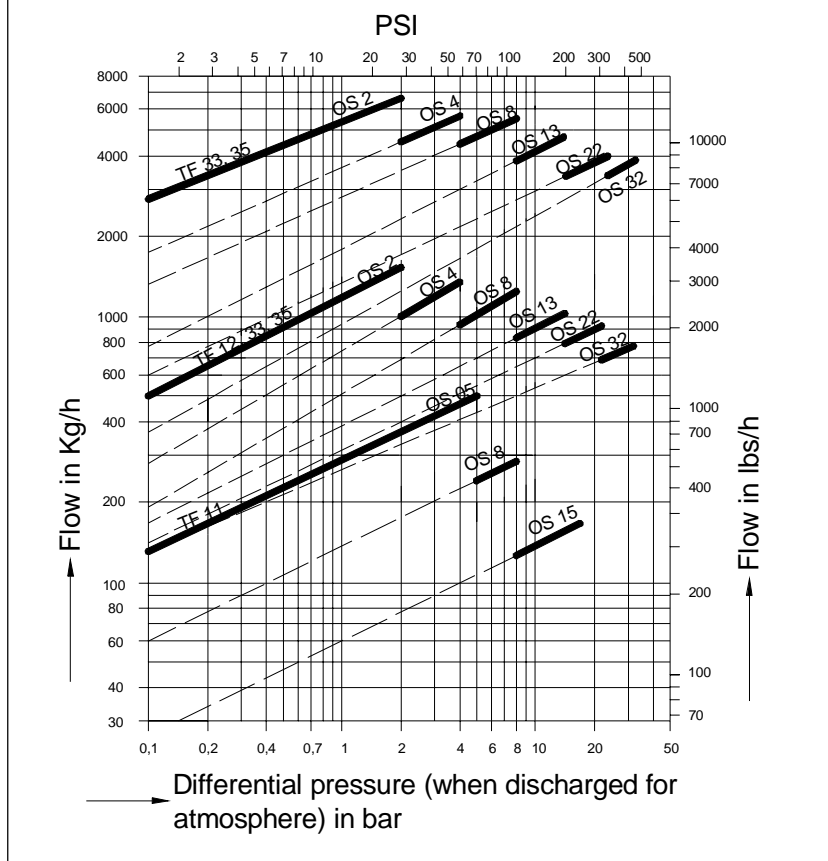
**Flow chart**

The charts show the maximum condensate flows at saturation temperature for several nominal diameters and outlet orifices (OS). The cold condensate flow is about 1,5 times bigger than hot condensate. If there is elevation of the condensate after the float trap, don't disdain the back pressure about 1 bar for each 7 meters high of elevation. (See also technical information 105- How to specify traps).

**Measures and weights**

Model	TF 11	TF 12, 33, 35		TF 33,35	
Nominal diameter	1/2" , 3/4"	1/2"	3/4" , 1"	1.1/2"	2"
Measures (mm)					
L	-	200		290	
L1	98	120		180	
H	130	165		258	
H <sub>i</sub>	148	189		296	
B	107	177		270	
Appr. weight. (Kg)					
Thread / Welded	4,0	6,0	6,0	29	29
Flanged (300 lbs)	—	7,5	8,5	32	35

**Capacity chart**



**Available orifice listing**

- OS 2 = Differential press. from 0 to 2 bar
- OS 4 = Differential press. from 2 to 4 bar
- OS 5 = Differential press. from 4 to 5 bar
- OS 8 =Differential press. from 5 to 8 bar
- OS 13 =Differential press. from 8 to 13 bar
- OS 15 =Differential press. from 13 to 15 bar
- OS 22 =Differential press. from 15 to 22 bar
- OS 32 =Differential press. from 22 to 32 bar

**Data for sizing**

ASCA will make pleasure the sizing. For this purpose must be supplied:

- Service pressure;
- Backpressure;
- Condensate flow to be blowdown;
- Type of forecasted connection;
- Nominal diameter of the float trap;
- Desired size of the outlet orifice (OS).

**Standard specification**

Float traps for steam  
 Model TF .....from ASCA  
 According to prospect PR-01.70.10-I  
 OS .....Position .....  
 Connections .....  
 As per norm .....  
 Pressure class .....  
 Nominal Diameter .....

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