

# Inverted bucket steam traps for steam with universal connection



TI

Seteam traps

**DIN PN 40 — DN 15 and 20 mm**  
**ANSI 300 — 1/2" and 3/4 "**

TI 35 U

## Application

The TI 35U series inverted bucket steam traps with universal connection is recommended for services where efficiency and lasting during its application in process are required. They operate in intermittent way, that is, totally open or totally closed. Getting like that more solicited for medium and high steam. Between their current applications we can detach the condensate drainage and in saturated steam lines and heat exchangers where the intermittent operation, referring to the inverted bucket steam traps, does not harm the system performance.

## Main characteristics

- Installation in any position;
- Fast replacement;
- Easy maintenance;
- Opening Frequency variable in function of condensation load;
- Material of high resistance to the wear and corrosion;
- Condensate Intermittent discharge at saturated and superheated steam temperature;
- Insensitive to waterhammer and temperature overload.

## Presentation

The inverted bucket mechanical steam traps with universal connection TI 35U from ASCA are totally done in stainless steel, and are composed of three main parts: body, cover and bucket.

The characteristic of the body is the connection and passage pipe, cover where will accumulate the condensate made up and the bucket is the component that will drive the opening and closing mechanism according to the accumulated condensate level.

## Options of connections

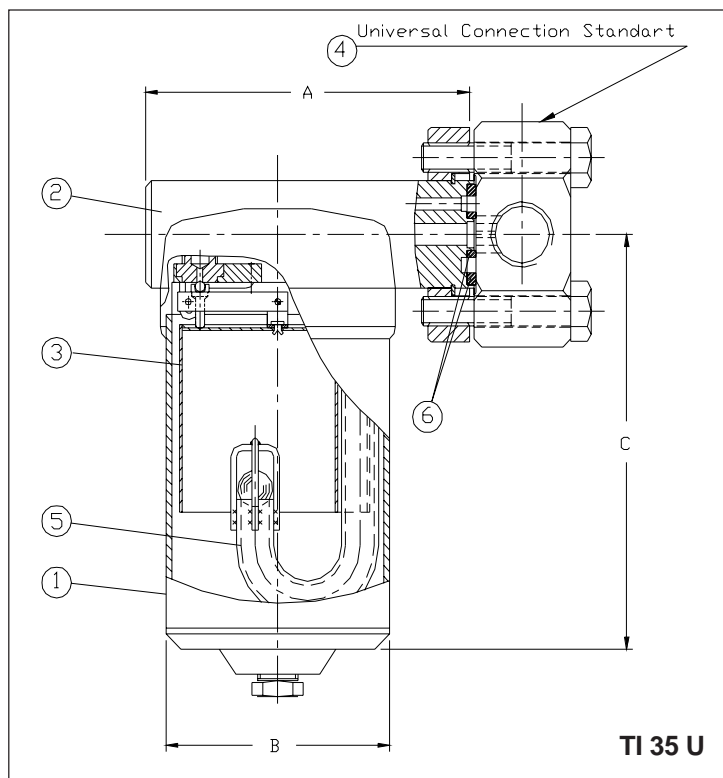
The TI 35U model was projected for using as the universal connection standard as the flow distributor valves, since these three connections allow the installation of the steam trap in pipings with any inclination, besides making easy the replacement when necessary.

These three type of connections can be supplied with thread BSPT (BS 21), NPT (ANSI-B1.20.1) or for weld SW (ANSI-B16.11).

These connections are supplied on the gauges of 1/2" or 3/4", and the fixing of the steam traps on them is done by 2 screws 3/8" UNC.

The requirement of purchase of these connections must be done separately and indicated one of the 3 options:

- Universal connection (standard).
  - Flow distributor valve 4 ways VD35D.
  - Flow distributor valve 2 ways VD35S.
- (See project PR-10.10.40-I)



## Technical competence, materials and connection

Model		TI 35 U		
Nominal Diameter	(mm)	15	20	
	(pol)	1/2"	3/4"	
Admissible maximum pressure (bar man)		30		
Admissible maximum temperature (°C)		234		
Pressão diferencial máxima** (bar)		12	20	30
Materials	No	Description	Quant.	Specification
	1	Cover	1	AISI 304
	2	Body	1	AISI 304
	3	Bucket	1	AISI 304
	4	Flange	1	AISI 304
	5	Siphon pipe	1	AISI 304
6*	Spiral gasket	2	Graphite / Stainless	
Connections				See options

\*Recommended spare parts

\*\*According to O.O. used

## Measures and weights

Model		TI 35 U	
Measures	(mm)		
	A	115	
	B	76	
C	135		
Approx. weight	(Kg)	2,2	

**Operation**

The principle operation of the steam traps TI is similar to the float traps, since both are mechanical steam traps. The difference is in the float traps the opening is related to floating of the float, and in the inverted bucket steam traps the opening is related to the sinking of the bucket.

**Flow chart**

The chart indicates the maximum flows of the condensate. These capacities can be influenced by several service conditions depending on the pressure upstream, that nor always corresponds to the nominal pressure of the boiler and of the occasional backpressures established by the condensate discharge, causing variations in the differential pressure.

If there is condensate elevation to a higher level, don't disdain backpressure about 1 bar for each 7m high of elevation.

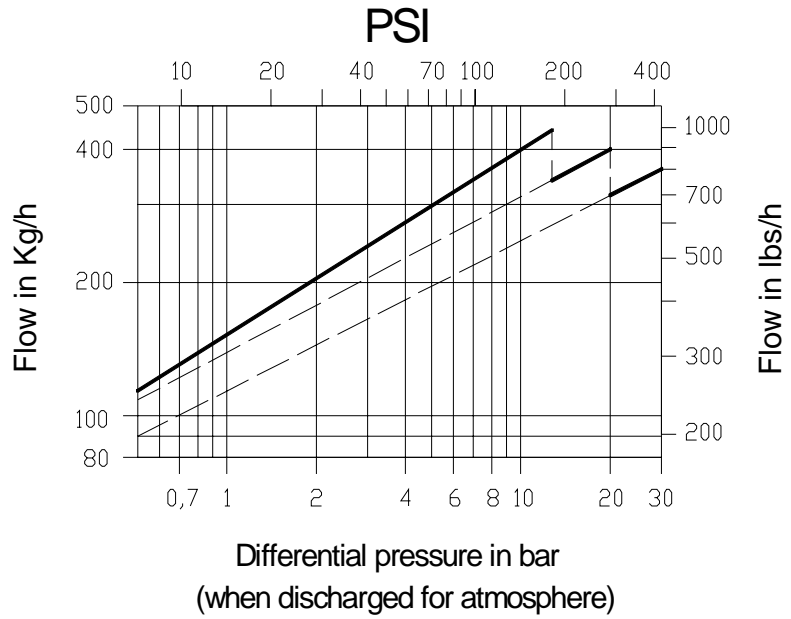
**Example:**

Service pressure	12 bar
Backpressure	2 bar
Differential pressure	10 bar
Flow of hot condensate	400 kg/h

**Available orifices list**

- OS 12 = differential press. from 0 to 12bar
- OS 20 = differential press. from 12 to 20bar
- OS 30 = differential press. from 20 to 30bar

**Capacity chart**



**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 steam trap;
  - Desired size of the outlet orifice (OO)

**Standard specification**

- Inverted bucket steam traps for saturated and superheated steam
- Model TI 35 U from ASCA
- According to prospect PR-01.90.10-I
- Connections .....
- As per norm .....
- Pressure class .....
- Nominal diameter .....

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