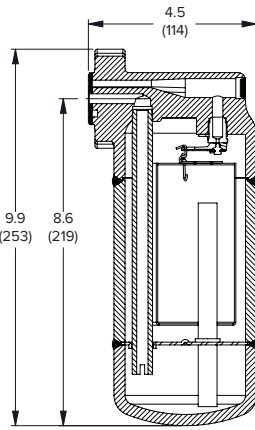
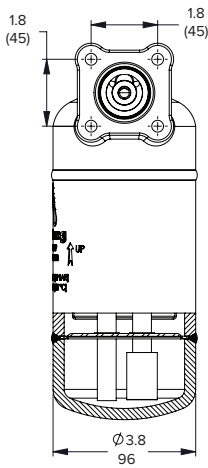




# IB4500 Series Inverted Bucket Superheat Steam Trap

All Stainless Steel and Compatible with IS-4 4-Bolt Connector  
For Pressures to 1 000 psig (68.9 barg)...Capacities to 1 300 lb/hr (590 kg/hr)

Steam Trapping and  
Steam Tracing Equipment



## Description

Armstrong's IB4500 Series inverted bucket steam trap line is made for overcoming the difficult combination of superheat and high pressure/low load service.

To survive this most severe steam service, Armstrong created an inverted bucket trap with a unique accumulation chamber. The chamber collects sufficient condensate to ensure full discharge cycles. A cup in the chamber floats up and down on the steam inlet tube, sealing it off as the condensate level rises. At the same time as the chamber collects condensate, steam continues to flow under the bucket, making sure that the discharge valve closes tightly until the condensate rises into the trap body and the bucket falls down. The operation is on/off, no throttling or dribbling.

Furthermore, it combines all the advantages of an inverted bucket steam trap:

- High resistance to wear, corrosion and water hammer.
- A unique leverage system multiplies the force provided by the bucket, to open the valve against system pressure.
- The mechanism is located at the top. No dirt can collect on the orifice. Small particles of dirt will be held in suspension until discharged by the full differential purging action.
- The discharge orifice is surrounded by a water seal, preventing live steam loss. Automatic air venting is provided by a small hole in the bucket.
- Inverted bucket traps require no adjustment. They do not allow condensate backup and are resistant to water hammer.
- No maintenance required as this is a sealed trap
- Compatible with IS4 connectors

## Maximum Operating Conditions

Maximum allowable pressure (vessel design):  
1,000 psig @ 800°F (68.9 barg @ 427°C)

Maximum operating pressure:  
1,000 psig (68.9 barg)

## Connector's Connection

- NPT
- BSPT
- Socket Weld
- Flanged

Consult factory for flanged connection

## Materials

Body/Shell/Cap: ASTM A351 Gr. CF8M  
Valve: Titanium  
Seat: Titanium  
Internals: Stainless Steel

## Specification

Inverted bucket steam trap, type ... in stainless steel, compatible with 4-bolt connector, with accumulation chamber, continuous air venting at steam temperature, stainless steel leverage system, with the discharge orifice at the top of the trap.

## How to Order

Specify:

- Model number
- Size and type of pipe connection. When flanges are required, specify type of flange in detail
- Maximum working pressure that will be encountered or orifice size

## For Superheat Service

- Don't oversize the orifice. A restricted orifice may be advisable.
- Provide a drip leg of adequate diameter and length.
- Provide a generous length of 2 - 3 ft (600 - 900 mm) with the trap below the main.
- Don't insulate the trap or the inlet piping.

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit [armstronginternational.com](http://armstronginternational.com) for up-to-date information.

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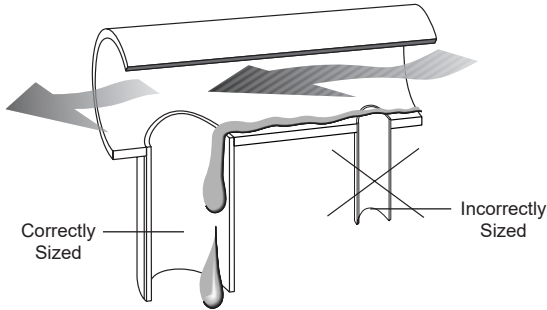
For Pressures to 1 000 psig (68.9 barg)...Capacities to 1 300 lb/hr (590 kg/hr)



Steam Trapping and  
Steam Trapping Equipment

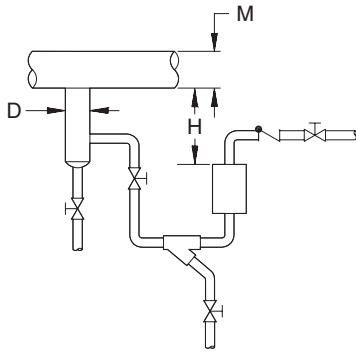
## Installation Recommendations

What little condensate there is on superheat and high pressure/low load service usually forms in drip legs and in the traps themselves. Therefore proper piping and drip legs of adequate size and diameter are essential for the successful operation of the Armstrong superheat trap.



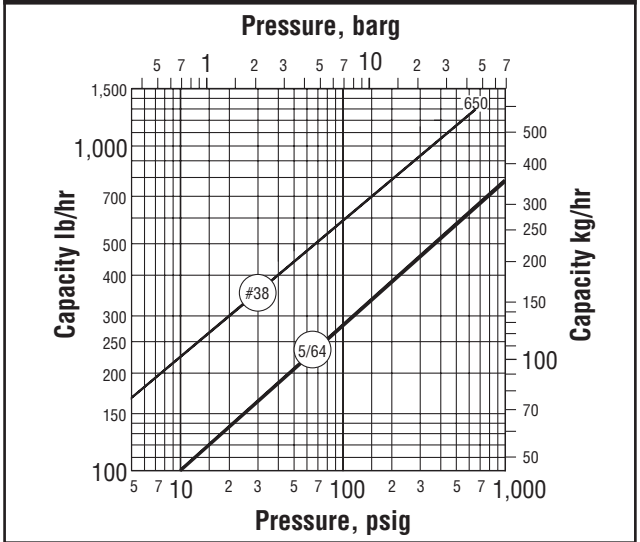
### Drip Leg Sizing

The properly sized drip leg will capture condensate. Too small a drip leg can actually cause a venturi "piccolo" effect where pressure drop pulls condensate out of the drip leg and trap.



Trap Draining Drip Leg on Steam Main

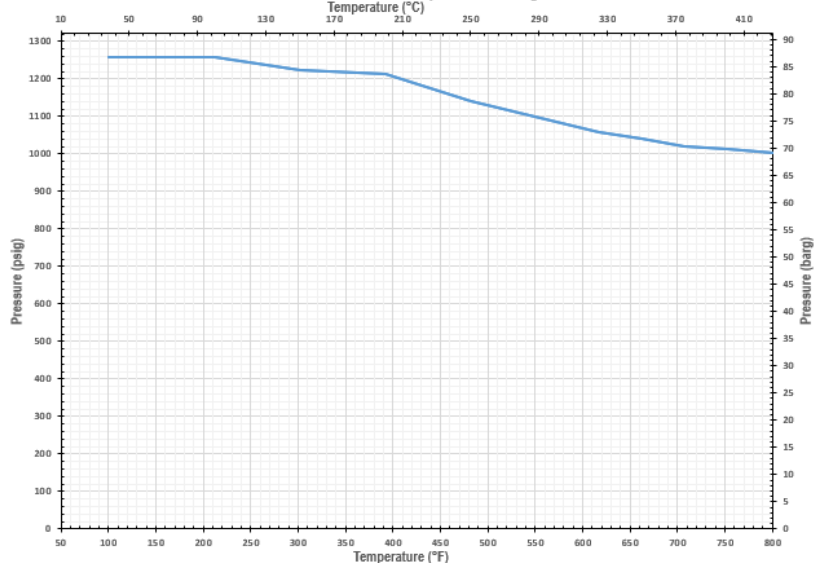
## Model IB4500 Capacity



## Recommended Steam Main and Branch Line Drip Leg Sizing

M		D		H Drip Leg Length Minimum			
Steam Main Size		Drip Leg Diameter		Supervised Warm-Up		Automatic Warm-Up	
in	mm	in	mm	in	mm	in	mm
1/2	15	1/2	15	10	250	28	710
3/4	20	3/4	20	10	250	28	710
1	25	1	25	10	250	28	710
2	50	2	50	10	250	28	710
3	75	3	75	10	250	28	710
4	100	4	100	10	250	28	710
6	150	4	100	10	250	28	710
8	200	4	100	12	300	28	710
10	250	6	150	15	380	28	710
12	300	6	150	18	450	28	710
14	350	8	200	21	530	28	710
16	400	8	200	24	600	28	710
18	450	10	250	27	685	28	710
20	500	10	250	30	760	30	760
24	600	12	300	36	910	36	910

## IB4500 Pressure/Temperature Rating



"Maximum degree of superheat will be 140 ° C"

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