

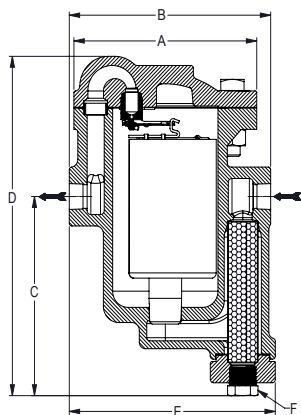


# 970 Series Inverted Bucket Steam Traps

Cast Steel for Horizontal Installation With Integral Strainer

For Pressures to 600 psig (41 barg)...Capacities to 4 400 lb/hr (2 000 kg/hr)

Steam Trapping and Steam Tracing Equipment



## Description

Armstrong offers two sizes of cast steel traps with in-line horizontal pipe connections and vertical integral strainers with a choice of screwed, socketweld or flanged connections.

A unique leverage system multiplies the force provided by the bucket to open the valve against system pressure. The mechanism is free-floating, and has no fixed pivots to create wear or friction.

Because the mechanism is located at the top of the trap, no dirt can collect on the orifice. Small particles of dirt are held in suspension until discharged by the full differential purging action when the bucket sinks, pulling the valve off the seat.

The discharge orifice is surrounded by a water seal, preventing live steam loss. Automatic air venting is provided by a small vent hole in the bucket, which provides continuous automatic air and CO2 venting at steam temperature.

Inverted bucket traps drain continuously, although discharging intermittently, allowing no condensate backup. They are also resistant to water hammer.

## Maximum Operating Conditions

Maximum allowable pressure (vessel design):  
 600 psig @ 650°F (41 barg @ 343°C)  
 750 psig @ 100°F (51.7 barg @ 38°C)

Maximum operating pressure:  
 600 psig (41 barg)

## Connections

Screwed NPT and BSPT  
 Socketweld  
 Flanged

Note: For Integral Flanged connections option see 990F Series

## Materials

Body: ASTM A216 WCB  
 Internals: All stainless steel—304  
 Valve and seat: < 500psig (34.5barg): Hardened chrome steel 17-4PH  
 > 500psig (34.5barg): Titanium  
 Strainer: Stainless steel—304  
 Cap: ASTM A351 Gr. CF8M Stainless Steel

## Options

- Stainless steel internal check valve
- Thermic vent bucket (973 only) maximum operating pressure 250 psig (17 barg)
- Scrub wire

## Specification

Inverted bucket steam trap, type ... in cast steel, with continuous air venting at steam temperature, free-floating stainless steel mechanism, integral strainer, and 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
  - Any options required

For a fully detailed certified drawing, refer to CD 971-CD2989: 973-CD2990.

970 Series Traps				
Model No.	971		973	
	in	mm	in	mm
Pipe Connections	1/2, 3/4, 1	15, 20, 25	3/4, 1	20, 25
"A" (Flange Diameter)	4.7	119	7.4	188
"B" (Face - Face, SCR or SW)	6.0	152	8.1	206
"C" (Center to Bottom Height)	5.4	138	7.5	190
"D" (Total Height)	9.0	229	12.9	328
"E" (Total Length)	5.7	145	8.3	211
"F" (Blowdown Connection)	3/8 NPT		3/4 NPT	
Weight, SCR or SW lb (kg)	15 (6.8)		44 (20.0)	

\*Consult factory for flanged connections

Shading indicates products that are CE Marked according to the PED (2014/68/UE). All other models comply with Article 4.3 of the same directive.

\*Face-to-face, other flanges on request. Also available with ANSI raised face, flat face or ring joint flanges.

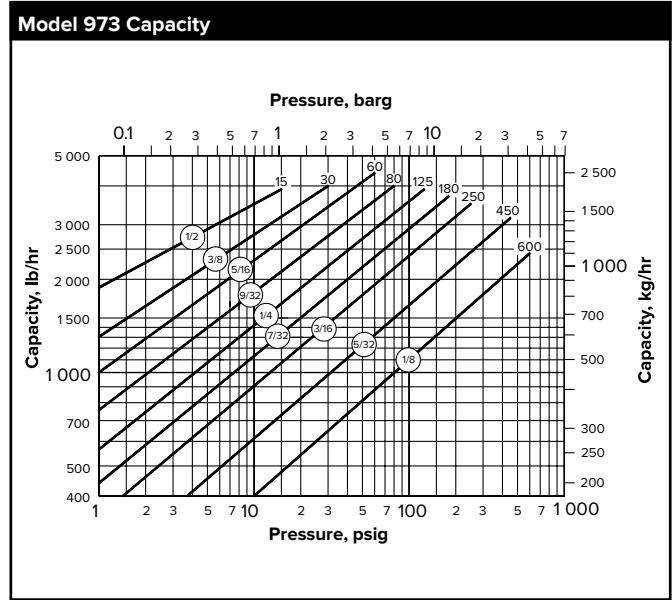
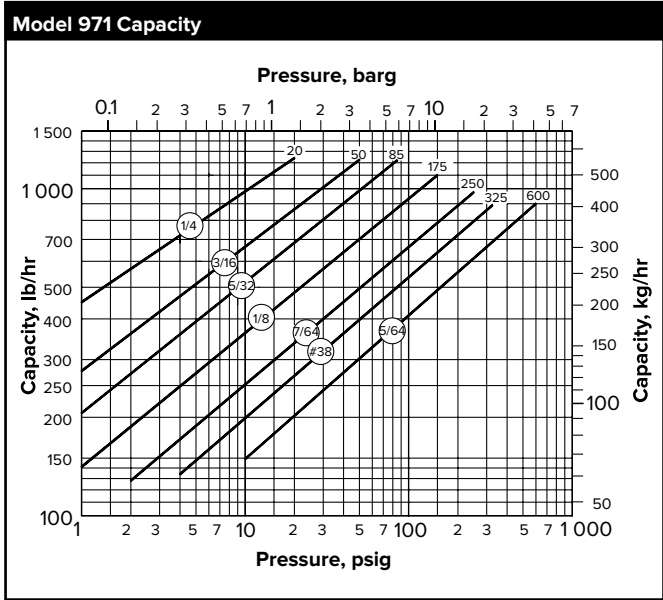
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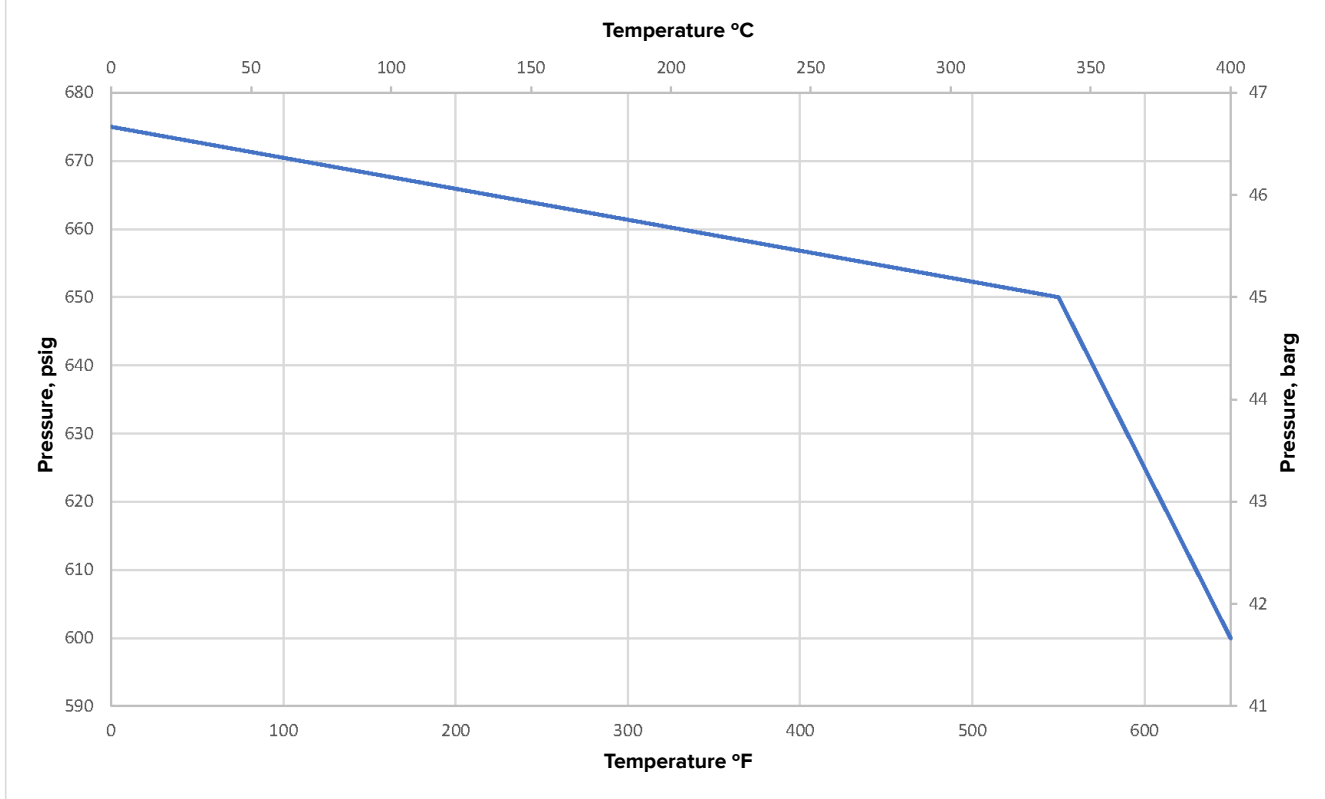
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## 970 Series Allowable Pressure/Temperature



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.