



# 6000 Series Inverted Bucket Steam Traps

Forged Chrome-moly Steel for Vertical Installation

For Pressures to 186 bar...Capacities to 2 950 kg/h

## Description

Armstrong offers its 6000 Series forged chrome-moly steel traps for vertical installation with a choice of 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. This provides continuous automatic air and CO<sub>2</sub> venting at steam temperature.

Inverted bucket traps drain continuously, although discharging intermittently, to prevent condensate backup. They are also resistant to water hammer.

**Operation on Superheat.** A normally operating bucket trap is filled with saturated steam and condensate. Superheated steam can enter only as fast as the steam inside can condense. As a result, the temperature of the trap is at (or slightly below) saturated steam temperature, regardless of the degree of superheat.

**Trap Selection.** The pressure-containing parts of the steam trap should safely withstand the maximum pressure and temperature conditions of the system. For example, a trap is required for a 102 bar main at 538°C. The normal operating temperature of the trap will be about 299°C. A Model 6155G trap should be selected, even though several smaller traps are capable of handling the working pressure.

### For Superheat Service:

1. Don't oversize the orifice; a restricted orifice may be advisable.
2. Specify an extended inlet tube and a check valve..
3. Provide a drip leg of adequate diameter and length.
4. Provide a generous length (600-900 mm) of inlet piping, with the trap below the main.
5. Don't insulate the trap or the inlet piping.

### Connections

Socketweld  
Flanged EN 1092-1 & ASME B16.5 (welded)

### Materials

Body: ASTM A182 F22 Class 3  
Internals: All stainless steel – 304  
Valve and seat: Titanium

### Options

- Stainless steel internal check valve with extended inlet tube.

Screwed connections are available in all sizes for pressures of 62 bar or less. Traps for pressures of 62 bar or higher are available with socketweld or flanged connections.

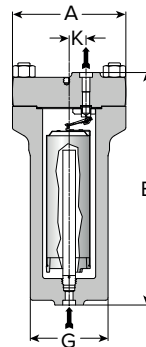
### Specification

Inverted bucket steam trap, type 6155 in forged chrome-moly steel, with continuous air venting at steam temperature, free-floating stainless steel mechanism, with the discharge orifice at the top of the trap. Maximum allowable back pressure 99% of inlet pressure.

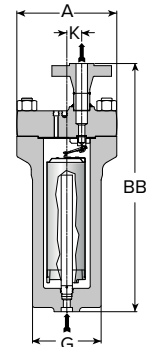
### How to Order

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



Model 6000 Trap



Series 6000 FW Trap

**Table ST-106-1. 6000 Series Bottom Inlet, Top Outlet Trap (dimensions in mm)**

Add suffix "CV" to trap number for internal check valve.

Model No. Screwed or SW	6155G
Model No. Flanged	6155G-FW
Pipe Connections	25 – 32
"A" Flange Diameter	300
"B" Face-to-Face (SW)	613
"BB" Face-to-Face (flanged PN250*)	740 – 740
"G" Body Outside Diameter	213
"K" $\varnothing$ Outlet to $\varnothing$ Inlet	44,5
Number of Bolts	10
Weight in kg (SW)	147,4
Weight in kg (flanged PN250*)	151,0 – 154,0

\* Other flange sizes, ratings and face-to-face dimensions are available on request.  
All models are CE Marked according to the PED (2014/68/UE).

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

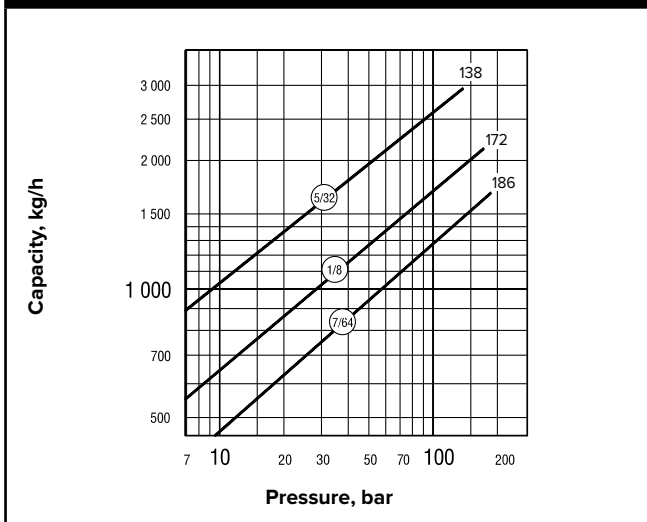
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**Table ST-107-1. Model 6155G Capacity**



**Table ST-107-2. Pressure-Temperature Rating for Forged Steel Traps**

Model No.	Maximum Operating Pressure, Saturated Steam	Maximum Allowable Pressure (Vessel Design) <sup>†</sup> of Pressure-Containing Parts at Indicated Temperature							
		-28 / +343°C	371°C	399°C	427°C	454°C	482°C	510°C	538°C
	bar	bar							
<b>6155G</b>	186	241	241	241	241	<b>241</b>	213	166	114

**Notes:** Maximum operating pressure to be marked on nameplate will be determined by actual orifice used. Maximum allowable pressures shown in boldface will be marked on nameplate, unless otherwise requested. Traps with flanges may have different pressure-temperature ratings. Maximum back pressure is 99% of inlet pressure.

**Options**

**Internal Check Valves** are spring loaded stainless steel and screw into an extended inlet tube having a pipe coupling at the top to save fittings, labor and money. Internal check valves may result in slightly reduced capacities.

<sup>†</sup> May be derated depending on flange rating and type.

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