

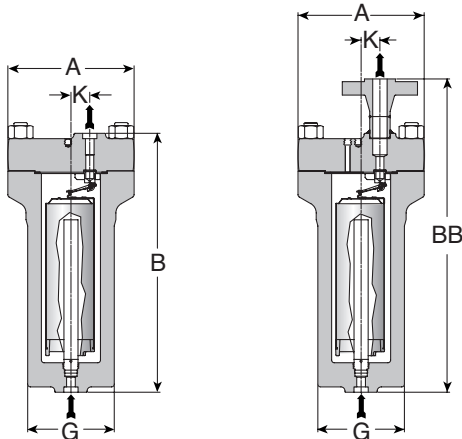


5000 Series Inverted Bucket Steam Trap

Forged Chrome-moly Steel for Vertical Installation

For Pressures to 1,800 psig (124 bar)...Capacities to 5,150 lb/hr (2,336 kg/hr)

Steam Trapping and Steam Tracing Equipment



Series 5133G-5155G Traps

Series 5133G-FW & 5155G-FW Traps



Description

Armstrong offers its 5000 Series forged chrome-moly steel traps for vertical installation 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. This provides continuous automatic air and CO₂ 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 1,000 psig (68 bar) main at 950°F (510°C). The normal operating temperature of the trap will be about 546°F (286°C). A Model 5133G 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 a burnished valve and seat and an extended inlet tube and check valve.
3. Provide a drip leg of adequate diameter and length.
4. Provide a generous length (2'-3') of inlet piping, with the trap below the main.
5. Don't insulate the trap or the inlet piping.

Connections

Screwed NPT and BSPT
Socketweld
Flanged

See page 183 for dimensional information for flanged and socketweld connections.

Materials

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

Options

- Stainless steel internal check valve
- Burnished valve and seat

For a fully detailed certified drawing, refer to:

5133 CD #1069

5155 CD #1096

5000 Series Bottom Inlet, Top Outlet Traps

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

Model No. Screwed or SW Model No. Flanged	5133G 5133G-FW		5155G 5155G-FW	
	in	mm	in	mm
Pipe Connections	1/2, 3/4, 1	15, 20, 25	3/4, 1, 1-1/4	20, 25, 32
"A" (Diameter)	8-1/2	216	10-3/8	264
"B" (Height, Screwed or SW)	14-1/4	362	16-7/32	412
"BB"	18-7/8*	479*	20-7/8*	530*
"G" (Body OD)	5-3/4	146	7-5/8	194
"K" (⌀ Outlet to ⌀ Inlet)	1-5/16	33.3	1-3/4	44.4
Number of Bolts	8		10	
Weight Scr. or SW lb (kg)	113 (44.5)		171 (77.6)	
Weight, Flanged lb (kg)	120 (47.6)		185 (83.9)	

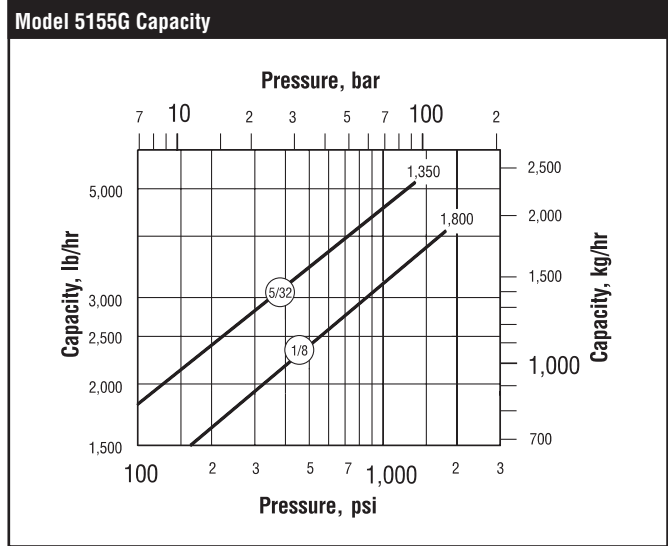
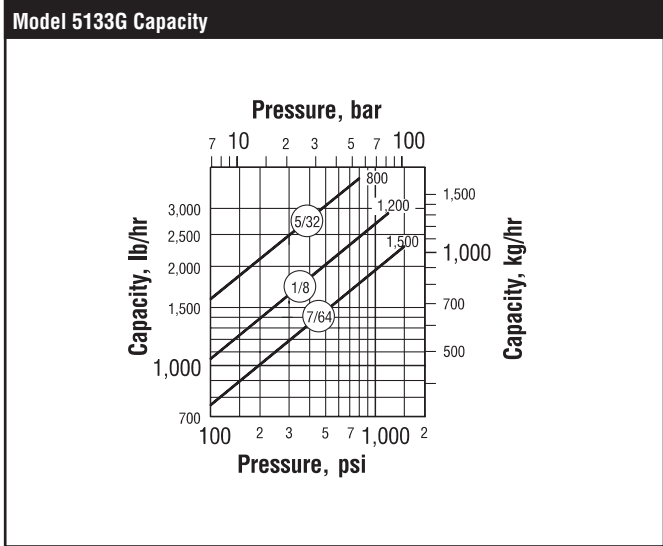
*"BB" dimensions shown are for 1" conn. Class 1500 flanged No. 5133G-FW and 1-1/4" conn. Class 1500 flanged No. 5155G-FW. Consult factory for dimensions of models with other connection sizes and/or flanges.

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit www.armstronginternational.com for up-to-date information.

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For Pressures to 1,800 psig (124 bar)...Capacities to 5,150 lb/hr (2,336 kg/hr)



Pressure-Temperature Rating for Forged Steel Traps

Model No.	Max. Oper. Pressure, Sat. Steam		Maximum Allowable Pressure (Vessel Design) of Pressure-Containing Parts at Indicated Temperature															
			°F		°C		°F		°C		°F		°C		°F		°C	
			-20/+650	-28/+343	700	371	750	399	800	427	850	454	900	482	950	510	1,000	538
	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
5133G	1,500	103	2,120	146	2,120	146	2,120	146	2,120	146	1,990	137	1,730	119	1,350	93	930	64
5155G	1,800	124	2,520	174	2,520	174	2,520	174	2,520	174	2,370	163	2,070	143	1,610	111	1,110	76.5

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.

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.

Screwed Connections are available in all sizes for pressures of 900 psi or less. Traps for pressures of 900 psi or higher are available with socketweld or flanged connections.

Specification

Inverted bucket steam trap, type ... 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.

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