

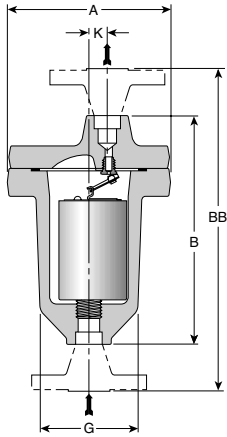


411G/421 Series Inverted Bucket Steam Traps

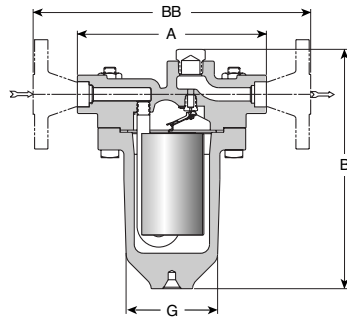
Forged Carbon Steel for Vertical and Horizontal Installation

For Pressures to 1,000 psig (69 bar)...Capacities to 1,300 lb/hr (590 kg/hr)

Steam Trapping and Steam Tracing Equipment



Model 411G Trap



Model 421 Trap



Description

Armstrong Model 411G vertical installation and Model 421 horizontal installation offer smaller capacities at higher pressures.

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.

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

Model 421 adds the convenience and savings of in-line repairability and is designed to meet today's energy-management requirements efficiently and economically over a long, trouble-free service life.

411G Bottom Inlet, Top Outlet Traps; 421 Side Inlet, Side Outlet Traps
Add suffix "CV" to trap number for internal check valve.

Model No. Screwed or SW Model No. Flanged	411G 411G-FW		421 421-FW	
	in	mm	in	mm
Pipe Connections	1/2, 3/4	15, 20	1/2, 3/4	15, 20
"A" (Diameter)	6-5/16	160	8	203
"B" (Height, Screwed or SW)	8-13/16	224	10-9/64	258
"BB"	13-15/16*	354*	11-3/4*	298*
"G" (Body OD)	4-1/16	103	3-7/8	98
"K" (⌀ Outlet to ⌀ Inlet)	3/4	19.0	—	—
Number of Bolts	8		8	
Weight Scr. or SW lb (kg)	25 (11.3)		27-1/2 (12.6)	
Weight, Flanged lb (kg)	35 (15.9)		36 (16.3)	

*"BB" dimensions shown are for 3/4" conn., Class 900 flanged. Consult factory for dimensions of models with other connection sizes and/or flanges.

Connections

Screwed NPT and BSPT
Socketweld
Flanged

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

Materials

Body:	ASTM A105
411G cap:	ASTM A105
421 cap:	ASTM A216 WCB
Internals:	All stainless steel—304
Valve and seat:	Titanium

Options

Stainless steel internal check valve (411G only)

Specifications

Inverted bucket steam trap, type ... in forged carbon 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:

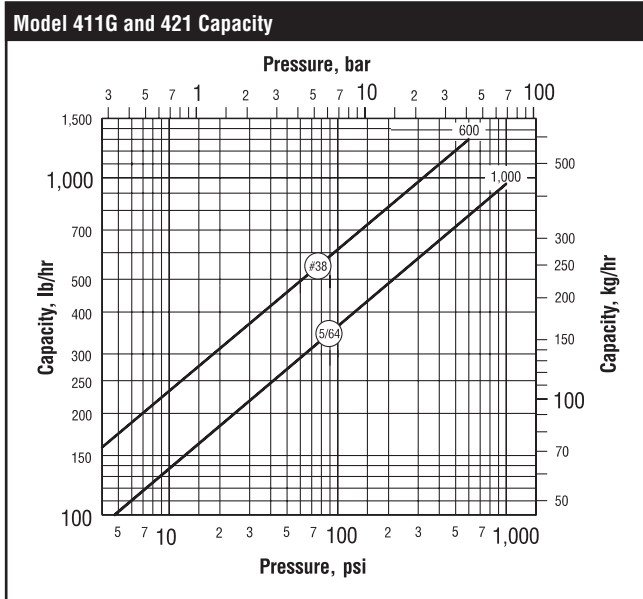
- Model number
- Size and type of pipe connection. When flanges are required, specify type of flange in detail
- Maximum working pressure that will be encountered or orifice size
- Any options required

For a fully detailed certified drawing, refer to CD #1105.

411G/421 Series Inverted Bucket Steam Traps

Forged Carbon Steel for Vertical and Horizontal Installation

For Pressures to 1,000 psig (69 bar)...Capacities to 1,300 lb/hr (590 kg/hr)



NOTE: #38 orifice in Model 421 is limited to 560 psi (39 bar).

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	
			psig	bar	psig	bar	psig	bar	psig	bar
411G/421	1,000	69	1,000	69	1,000	69	950	65.5	840	58

NOTE: 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.