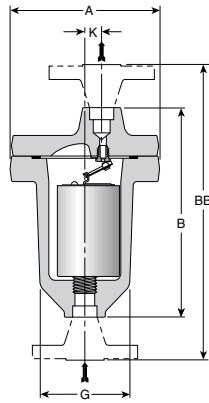




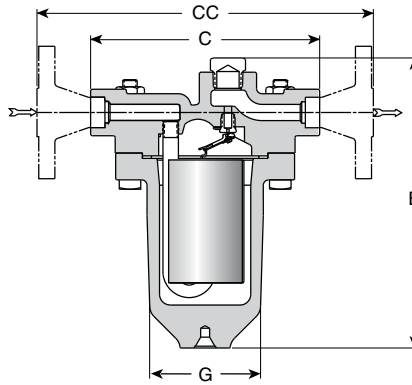
411G/421 Inverted Bucket Steam Traps

Forged Carbon Steel for Vertical and Horizontal Installation
For Pressures to 69 bar...Capacities to 590 kg/h

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 reparability and is designed to meet today's energy management requirements efficiently and economically over a long, trouble-free service life.

Connections

Screwed BSPT and NPT
Socketweld
Flanged DIN or ANSI (welded), (consult factory for material specification)

Materials

| | |
|-----------------|---------------------------|
| Body: | ASTM A105 |
| 411G Cap: | Stainless steel |
| 421 Cap: | Stainless steel |
| 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. 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

Table ST-96-1. Model 411G Bottom Inlet, Top Outlet Trap; Model 421 Side Inlet, Side Outlet Trap (dimensions in mm)
Add suffix "CV" to trap number for internal check valve.

| Model No. Screwed or SW Model No. Flanged | 411G 411G-FW | 421 421-FW |
|---|-----------------|---------------|
| Pipe Connections | 15 – 20 | 15 – 20 |
| "A" Flange Diameter | 160 | — |
| "B" & "C" Face-to-Face (screwed & SW) | 224 | 203 |
| "BB" & "CC" Face-to-Face (flanged PN100*) | 298 – 304 | 277 – 283 |
| "G" Body Outside Diameter | 103 | 98 |
| "K" \varnothing Outlet to \varnothing Inlet | 19 | — |
| Number of Bolts | 8 | 8 |
| Weight in kg (screwed & SW) | 11,3 | 12,6 |
| Weight in kg (flanged PN100*) | 14,4 – 15,4 | 15,1 – 16,1 |

* Other flange sizes, ratings and face-to-face dimensions are available on request.
All models comply with the article 3.3 of the PED (97/23/EC).

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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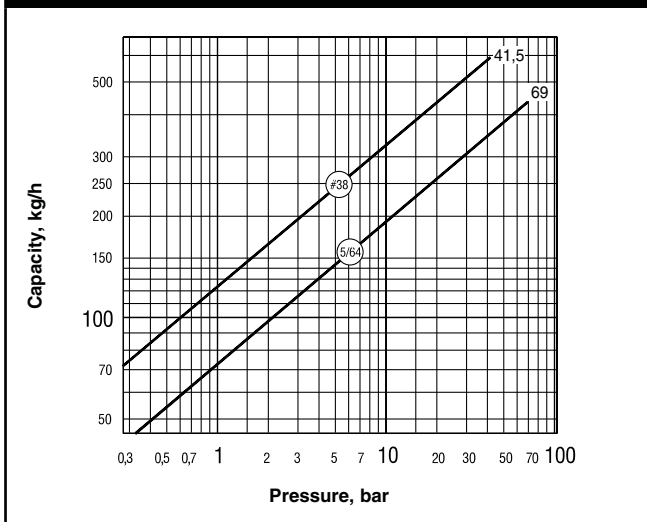
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Table ST-97-1. Model 411G and 421 Capacity



Note: #38 orifice in Model 421 is limited to 39 bar.

Table ST-97-2. Pressure-Temperature Rating for Forged Steel Traps

| Model No. | Maximum Operating Pressure, Saturated Steam bar | Max. Allowable Pressure (Vessel Design)† of Pressure-Containing Parts at Indicated Temp. | | |
|-------------------|--|--|-------|-------|
| | | -21 / +371°C | 399°C | 427°C |
| 411G / 421 | 69 | 69 | 65,5 | 58 |

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.

† May be derated depending on flange rating and type.

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