

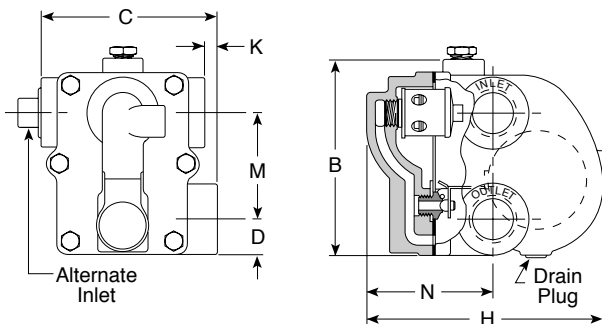


# A & AI Series Float & Thermostatic Steam Trap

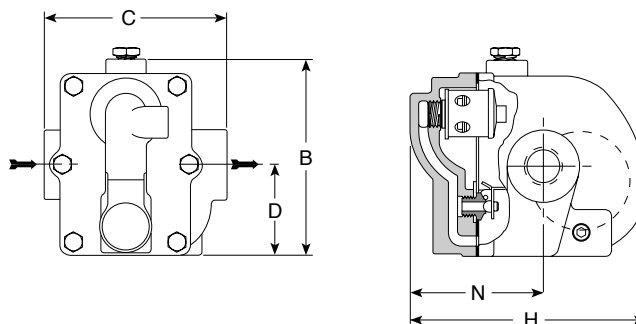
Cast Iron for Horizontal Installation, With Thermostatic Air Vent

For Pressures to 175 psig (12 bar)...Capacities to 8,600 lb/hr (3,900 kg/hr)

Steam Trapping and Steam Tracing Equipment



Model A Traps



Model AI Traps

## Description

Armstrong A & AI Series F&T traps are for industrial service from 0 to 175 psig and feature a balanced pressure phosphor-bronze type bellows caged in stainless steel. Armstrong A & AI Series F&T traps are designed for service on heat exchange equipment where there is a need to vent air and non-condensable gases quickly.

The AI Series F&T traps feature the convenience of in-line connections with the same rugged internals found in the A Series.

## Maximum Operating Conditions

Maximum allowable pressure (vessel design):  
175 psig @ 377°F (12 bar @ 191°C)

Maximum operating pressure:

Model 30-A, AI:	30 psig (2 bar) saturated steam
Model 75-A, AI:	75 psig (5 bar) saturated steam
Model 125-A, AI:	125 psig (8.5 bar) saturated steam
Model 175-A, AI:	175 psig (12 bar) saturated steam

**NOTE:** Cast iron traps should not be used in systems where excessive hydraulic or thermal shock are present.

## Connections

Screwed NPT and BSPT

## Materials

Body and cap:	ASTM A48 Class 30
Internals:	All stainless steel—304
Valve:	Stainless steel—440
Seat:	Stainless steel—303 (ASTM A582)
	Stainless steel—440F in 1-1/2" and 2"
Thermostatic air vent:	Stainless steel and bronze with phosphor bronze bellows, caged in stainless steel

## Options

Integral vacuum breaker. Add suffix VB to model number.

**CAUTION:** Do not use a conventional vacuum breaker open to the atmosphere in any system that incorporates a mechanical return system that carries pressure less than atmospheric pressure. This includes all return systems designated as vacuum returns, variable vacuum returns or subatmospheric returns. If a vacuum breaker must be installed in such a system, it should be of the type that is loaded to open only when the vacuum reaches a calibrated level well in excess of the design characteristics of the system.

## Specification

Float and thermostatic steam trap, type ... in cast iron, with thermostatic air vent.

For a fully detailed certified drawing, refer to CD #1009.

## How to Order

Pressure	Model	Connection Size	Option
75	AI	2	VB
30 75 125 175	A = Standard Connection  AI = In-line Connection	3 = 3/4" 4 = 1" 5 = 1-1/4" 6 = 1-1/2" 8 = 2"  2 = 1/2" 3 = 3/4" 4 = 1"	VB = Vacuum Breaker

## A & AI Series Traps

Trap Series	Model A								Model AI			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Pipe Connections	3/4	20	1	25	1-1/4	32	1-1/2	40	2	50	1/2, 3/4, 1	15, 20, 25
"B" (Height)	5-1/8	130	5-1/8	130	5-13/16	148	7-7/16	189	9-3/4	248	5-1/2	140
"C" (Face to Face)	4-7/8	124	4-7/8	124	4-5/8	117	5-3/4	146	7-5/8	194	5	127
"D" (Bottom to C)	1	25.4	1	25.4	1-7/32	31.0	1-13/32	35.7	1-11/16	42.9	2-9/16	65.1
"H" (Width)	6-7/16	164	6-7/8	164	8-1/8	206	8-7/16	214	11-5/8	295	6-1/2	165
"K" (Connection Offset)	3/8	95.2	3/8	95.2	—	—	—	—	—	—	—	—
"M" (C to C)	3	76.2	3	76.2	3	76.2	4-3/16	106	6	152	—	—
"N" (Top to C)	3-3/8	85.7	3-3/8	85.7	3-3/4	95.2	3-3/4	95.2	5	127	3-11/16	93.7
Weight lb (kg)	9-1/2 (4.3)		8-1/4 (3.7)		11 (5.0)		18-3/4 (8.5)		40 (18.1)		9-3/4 (4.4)	

**NOTE:** Cast iron traps should not be used in systems where excessive hydraulic or thermal shock are present.

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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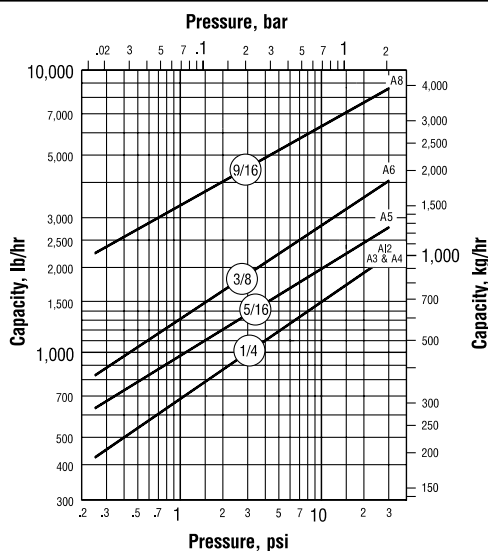
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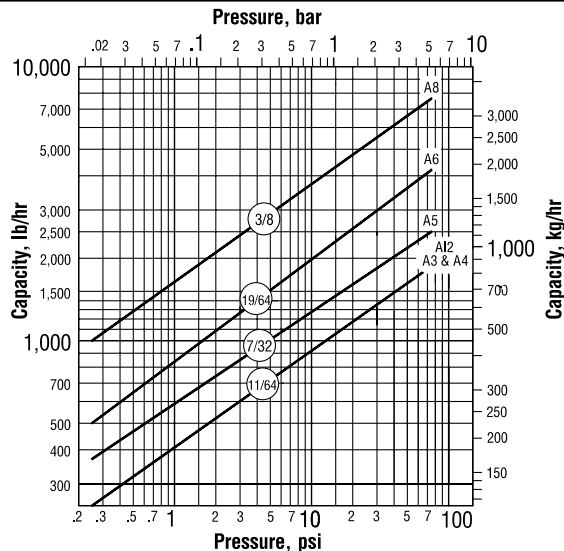


Steam Trapping and Steam Tracing Equipment

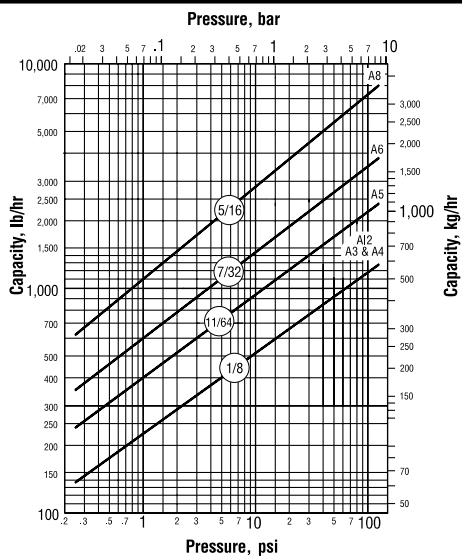
**Model A & AI Series Capacity—30 psi**



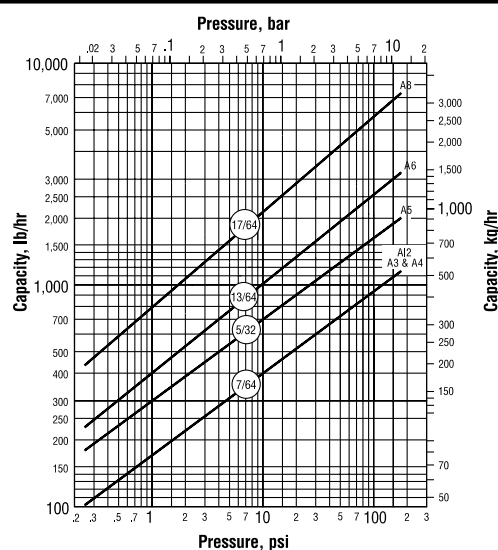
**Model A & AI Series Capacity—75 psi**



**Model A & AI Series Capacity—125 psi**



**Model A & AI Series Capacity—175 psi**



## Options

### Vacuum Breaker—3/8" (10 mm) and 1/2" (15 mm) NPT

Many times, condensate will be retained ahead of steam traps because of the presence of a vacuum. To break a vacuum, air must be introduced into the system by means of a vacuum breaker.

For maximum protection against freezing and water hammer in condensing equipment under modulated control, vacuum breakers are recommended. Armstrong A and AI Series F&T Traps are available with integral vacuum breakers. Maximum service pressure is 150 psig (10 bar).

### Vacuum Breaker

Size	in	mm	in	mm
	1/2 NPT	15	3/8 NPT	10
"B" Pipe Connections	3/8 NPT	10	1/4 NPT	6
"C" Height	1-1/4	30	1-3/32	28
"D" Width	7/8 Hex	22 Hex	11/16 Hex	17 Hex

