

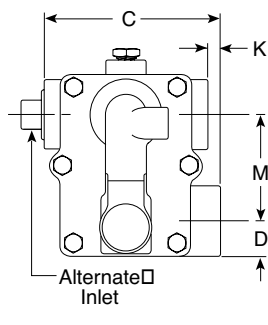


# A & AI Series Float & Thermostatic Steam Trap

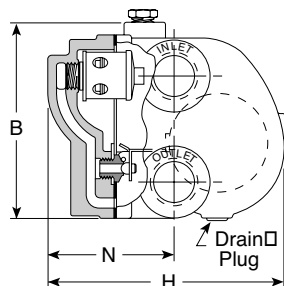
Cast Iron for Horizontal Installation, With Thermostatic Air Vent

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

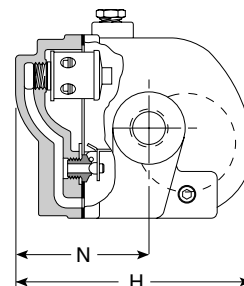
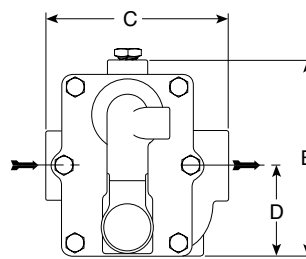
Steam Trapping and  
Steam Tracing Equipment



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:

Internals:

Valve:

Seat:

Thermostatic air vent:

ASTM A48 Class 30  
All stainless steel—304  
Stainless steel—440  
Stainless steel—303 (ASTM A582)  
Stainless steel—440F in 1-1/2" and 2"  
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

	Model		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	
Pipe Connections	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	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.

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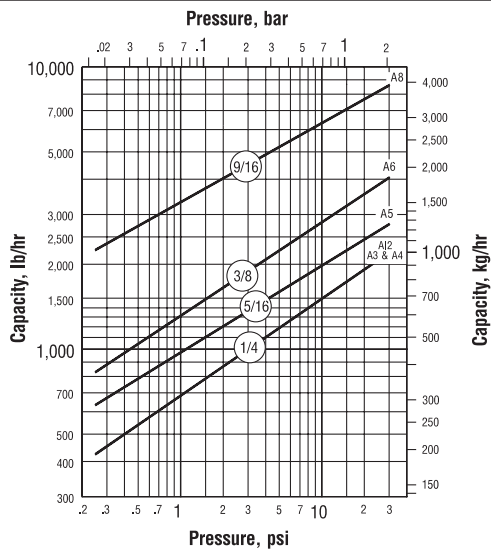
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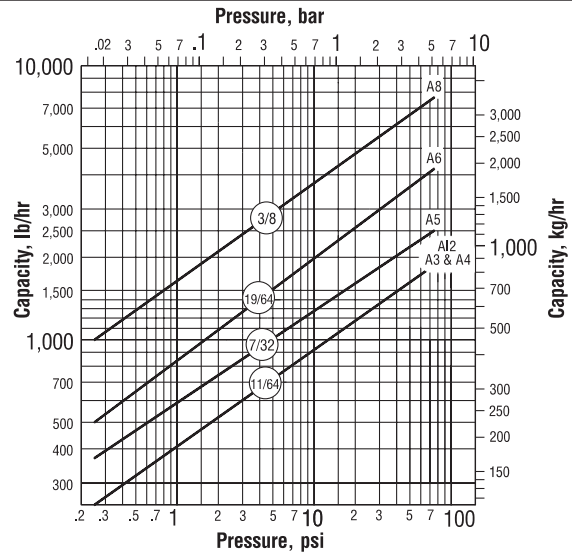


Steam Trapping and  
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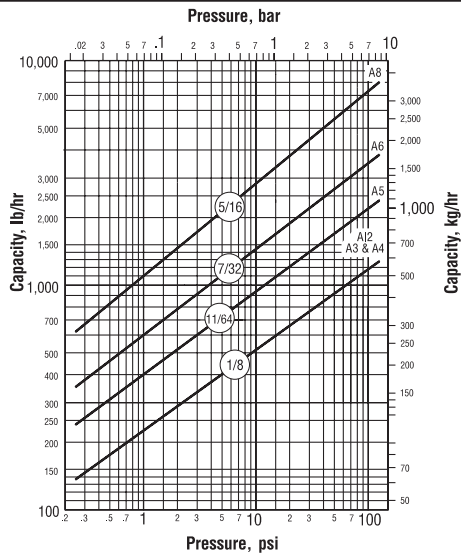
Model A & AI Series Capacity—30 psi



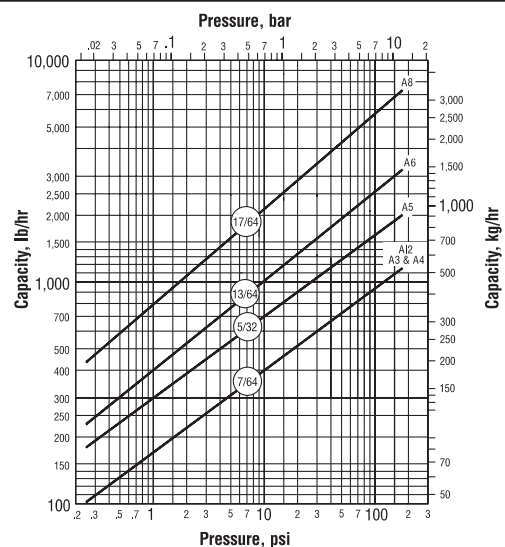
Model A & AI Series Capacity—75 psi



Model A & AI Series Capacity—125 psi



Model A & AI Series Capacity—175 psi



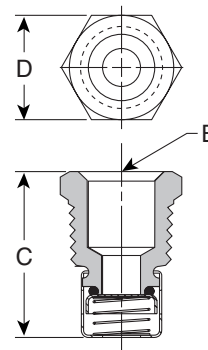
## Options

### 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	32	1-3/32	28
"D" Width	7/8 Hex	22 Hex	11/16 Hex	17 Hex



Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit [www.armstronginternational.com](http://www.armstronginternational.com) for up-to-date information.