

## STEAM TRAPS

**IB Series**

## Inverted Bucket Steam Traps

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Model	1031, 1032, 1033, 1034, 1031S, 1041, 1042, 1044, 1038S
Sizes	1/2", 3/4", 1", 1 1/4", 1 1/2"
Connections	NPT
Body Material	Cast Iron
Options	Internal check valve, air vent
PMO Max. Operating Pressure	250 PSIG
TMO Max. Operating Temperature	450°F
PMA Max. Allowable Pressure	250 PSIG up to 450°F
TMA Max. Allowable Temperature	450°F @ 250 PSIG

**TYPICAL APPLICATIONS**

**DRIP, TRACER, PROCESS:** The **IB Series** inverted bucket traps are available in several sizes and capacity ranges. Inverted bucket traps can handle superheated steam when a check valve is used. The smaller traps are primarily used in drip and tracer applications. These traps are also used on unit heaters, laundry equipment, and other process equipment where slow start-up due to poor air handling capability can be tolerated. Larger sizes are used on process equipment; however, since bucket traps have limited air handling capability, F&T traps are the preferred choice.

**HOW IT WORKS**

When there is condensate in the system, the inverted bucket inside the steam trap sits on the bottom of the trap due to its inherent weight. This allows condensate to enter the trap and to be discharged through the seat orifice located at the top. When steam enters the trap, the bucket floats to the surface and closes off the discharge valve containing the steam in the system. Eventually steam is bled off through a small hole in the top of the bucket causing the bucket to sink which repeats the cycle.

**FEATURES**

- Water hammer resistant
- Suitable for superheated steam (use internal check valve option to eliminate loss of prime)
- In-line repairability is simplified by having all internals attached to the cover
- Valve & seat are at the top of the trap making it less sensitive to dirt
- All stainless steel internals with hardened valve & seat

**SAMPLE SPECIFICATION**

The steam trap shall be of an inverted bucket trap design. Trap body and cover shall be of cast iron construction with all stainless steel internals and hardened seat and disc.

**MAINTENANCE**

All working components can be replaced with the trap body remaining in-line. The repair kit for the traps contain a lever and seat assembly with gasket. With superheated steam, a check valve must be installed at inlet of trap. For full maintenance details see Installation and Maintenance Manual.



1031/1032/1033/1034  
(No Strainer)  
1031S  
(with Strainer)

1041/1042/1044/1038S  
(with Strainer)

**DIRECT REPLACEMENT FOR THE FOLLOWING ARMSTRONG MODELS**

Watson Model	Armstrong Model
<b>(Without Integral Strainer)</b>	
1031	800
1032	811
1033	812
1034	813
<b>(Includes Integral Strainer)</b>	
1031S/1038S	N/A
1041	880
1042	881
1044	883

**OPTIONS**

Blowdown valve connection available on 1041, 1042, 1044 & 1038S. Thermic vent to improve air handling capability. Internal check valve for superheated or condensate backflow applications.

**HOW TO SIZE/ORDER**

From the capacity chart, select the model that can handle the working pressure of the system (PMO). Select the appropriate trap that will meet the capacity requirements at the differential pressure. Example:

Application: 1000 lbs/hr at 75 PSIG working pressure and 2 PSI differential pressure

Note: Specify Model, PMO and Connection Size

Size/Model: **IB-1034, 80 PSIG**, Specify pipe size (3/4", 1"), or **IB-1044, 80 PSIG**, Specify pipe size (3/4", 1")



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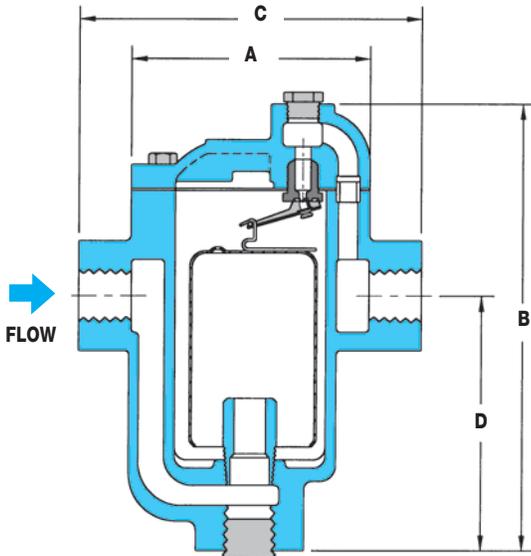
### Inverted Bucket Steam Traps

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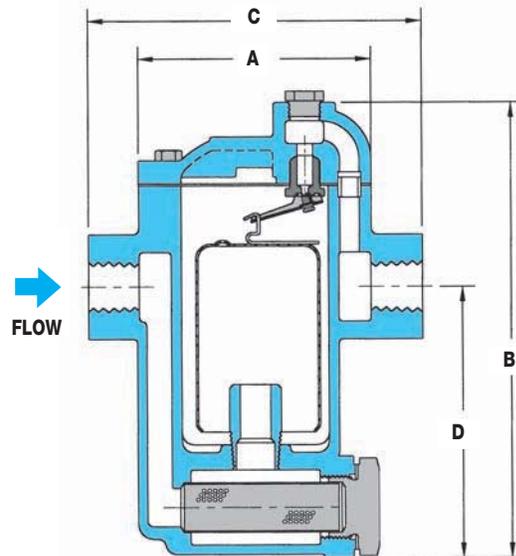
#### MATERIALS

Body & Cover	Cast Iron, ASTM A-278 Class 30
Nuts & Bolts	High-Tensile Steel
Gasket	Non-Asbestos Fiber
Bucket	Stainless Steel
Lever & Seat Assembly	Stainless Steel
Valve & Seat	Hardened Stainless Steel
Integral Strainer*	Stainless Steel

\* 1031S, 1038S, 1041, 1042, 1044 models only.



1031/1031S/1032/1033/1034  
without Strainer (except 1031S)



1041/1042/1044/1038S  
with Strainer

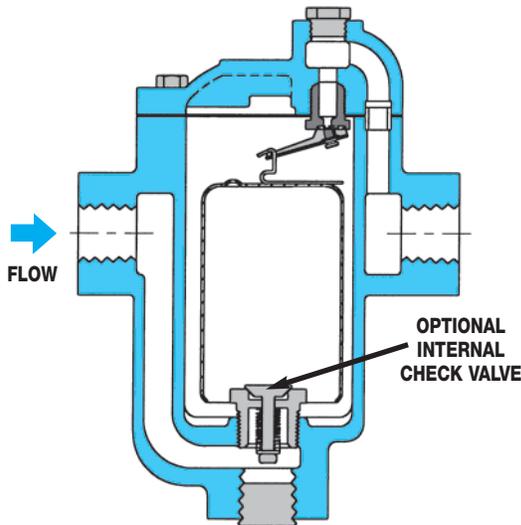
#### DIMENSIONS & WEIGHTS – inches/pounds

Model	A	B	C	D	Weight (lbs)
1031	3.75	5.875	5.00	2.75	5
1031S*	3.75	5.875	5.00	2.75	5
1032	3.75	6.875	5.00	4.25	6
1033	5.625	9.06	6.50	5.375	15
1034	7.00	11.75	7.75	7.03	27
1041*	3.75	6.06	5.00	3.43	5
1042*	3.75	7.06	5.00	4.43	6
1044*	7.00	12.375	7.125	7.375	30
1038S*	7.00	12.375	7.125	7.375	30

\* With Integral Strainer

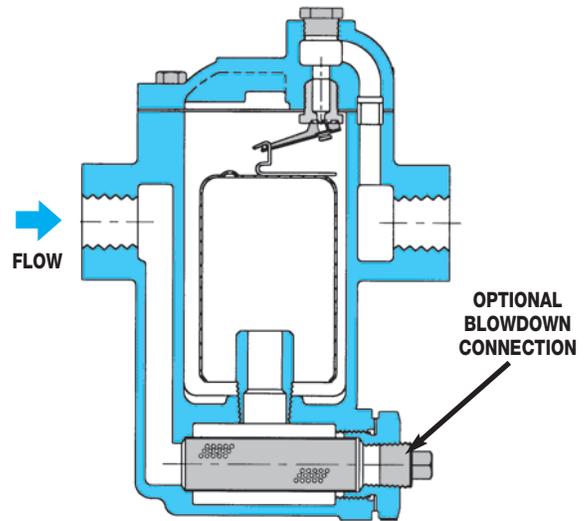
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#### CHECK VALVE OPTION

The optional internal check valve allows the bucket trap to retain its prime even when exposed to superheated steam. Under vacuum conditions it will also stop condensate from back-flowing from the condensate return line into the steam system.



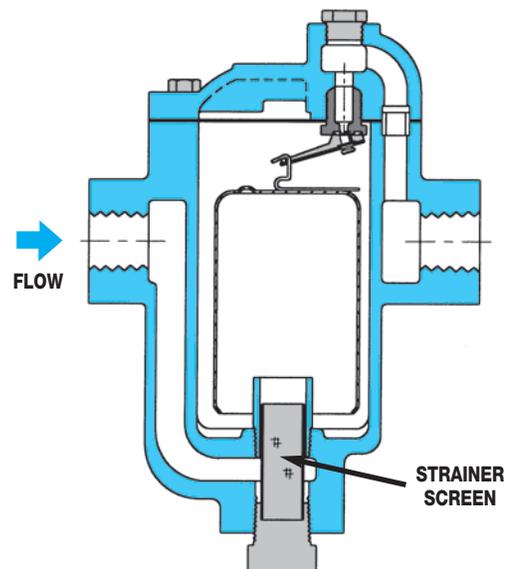
#### BLOWDOWN CONNECTION OPTION

A blowdown valve connection is available as an option on the **1041**, **1042**, **1044**, and **1038S** models. This simplifies maintenance by allowing the strainer to be cleaned without removal. User to supply blowdown valve.

#### REPLACEMENT KITS

A replacement kit containing the lever and seat assembly is a more economical option than replacing the entire steam trap. Also available are replacement screens, gaskets and buckets.

When ordering replacement lever and seat assemblies specify model and operating pressure. Reference price sheet for exact cross-reference to Armstrong PCA (Pressure Change Assembly) Kits.



#### 1031S

The **1031S** is equipped with a small protection screen to guard against dirt in the steam system. It is a more economical alternative than the 1041 which has a full-port strainer. Specifically designed for use in laundries. Available in 125 PSIG rating only.