

### Features

- No live steam blow through
- Large air and condensate capacities
- Fast heat up of equipment
- Simplified parts inventory
- Factory calibrated for uniform performance
- One piece interior – monel and stainless steel Cage Unit
- Freeze proof
- Instantaneous in-line repair
- Compact in size.

### Description

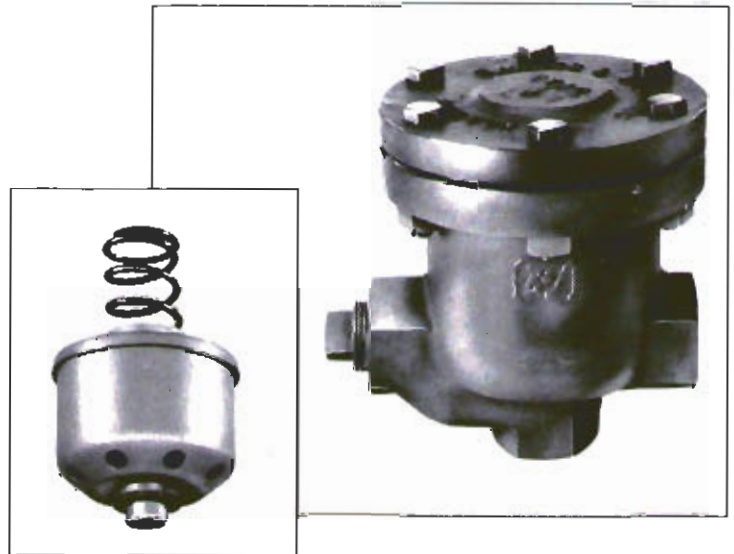
Industrial thermostatic steam traps are designed for all types of steam distribution systems, including the following ...

- tracer lines
- sterilizers
- platen presses
- drying rolls
- steam kettles
- laundry equipment
- textile equipment
- petrochemical processing
- large mains where air handling is critical
- plating tanks
- high pressure air heating coils
- cooking equipment

The ability of an industrial steam trap to stop steam at its point of use and expel vast amounts of air and condensate is extremely important to the proper operation of the equipment mentioned above. Working up to pressures of 300 PSIG, an inferior trap can be responsible for incredible waste. The Barnes & Jones industrial thermostatic trap is rugged enough for the most demanding environment, but also sensitive enough to afford great efficiency for the equipment it is trapping. Our unique, solidly encased, one piece thermostatic element, the Cage Unit, is constructed of monel and stainless steel and has been calibrated at the factory under live steam to ensure uniform operation in the field. This element, because of its one piece construction, is fully removable for testing in a test body, eliminating the need to ever take the trap off line and dramatically reducing down time of the equipment.\*

### Operation

Using a monel bellows, within which is a volatile liquid, sealed under vacuum, the trap opens and closes in a modulating manner dependent upon the temperature affecting it. The trap's normal state is that of being wide open to expel air and condensate. When surrounded by steam at saturated temperature, the volatile fill has flashed, creating an internal pressure equal to the surrounding pressure. This equalization of pressures allows the bellows to expand to its natural length or "closed" position, preventing steam from passing. The presence of condensate sufficiently cools the bellows to condense the vapor within, causing the external pressure to be greater and the bellows to revert back to its contracted, or "open" position, allowing the condensate to drain from the trap, permitting more steam to enter, thus the modulating action of the trap.



Industrial  
"Cage Unit" Interior

\*Adaptations of the "Cage Unit" are available to renew all manufacturers' industrial thermostatic steam traps. Call for "Steam Trap Repair Guide."

# Engineering Specifications

## CAPACITIES (Gross)

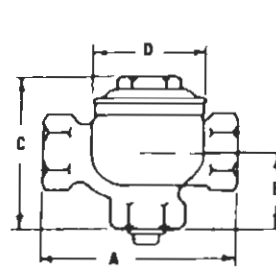
lbs. condensate per hour

Type	Pipe Size	Orifice Dia.	Pressure Differential (PSIG)															
			5	10	15	20	40	50	60	80	100	125	150	175	200	225	250	300
L & V	1/2" & 3/4"	1/4"	1150	1540	1700	1910	2370	2960	3260	3670	4050	4350	4975	5200	5500	5820	5950	6500
GW	1/2" & 3/4"	1/4"	1150	1540	1700	1910	2370	2960	3260	3670	4050	4350	4970	5200	5500	5820	5950	—
S & SW	1/2" & 3/4" and 1"	3/8"	1600	2050	2350	2650	4200	4300	4400	5000	5600	6400	6750	7700	8600	9400	10000	—
PW	1/2"	3/8"	1600	2050	2350	2650	4200	4300	4400	5000	5600	6400	6750	7700	8600	9400	10000	—
	3/4"	1/2"	2200	3100	3350	3720	4900	5330	5810	6530	7160	9000	10250	10500	11000	11200	11400	—

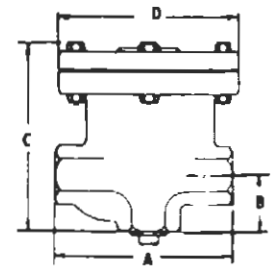
**Note on capacity:** Capacities shown are 10° below saturated steam temperature and are the result of an extensive testing program conducted in accordance with ANSI/ASME PTC 39.1 – 1980. *Condensate Removal Devices for Steam Systems*, at the B & J factory. Significantly greater capacities are realized when condensate temperature are cooler than 10° below saturation temperature.

## DIMENSIONS

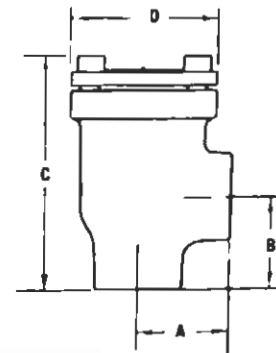
Model No.	Pipe Size	A	B	C	D	Wt. (lbs.)
2GW	1/2"	3 3/8"	1 1/8"	2 1/2"	2 1/8"	2
3GW	3/4"	3 3/8"	1 1/8"	2 1/2"	2 1/8"	2
2L	1/2"	2 1/8"	1 1/8"	3 3/8"	2 1/8"	2 1/4
3L	3/4"	2 1/8"	1 1/8"	3 3/8"	2 1/8"	2 1/4
2V	1/2"	3 3/8"	3 3/8"	4 1/4"	2 1/8"	2 1/16
3V	3/4"	3 3/8"	3 3/8"	4 1/4"	2 1/8"	2 1/16
2SW	1/2"	4 1/2"	1 1/2"	4 1/2"	3 1/8"	4 1/2
3SW	3/4"	4 1/2"	1 1/2"	4 1/2"	3 1/8"	4 1/2
4S	1"	2 1/8"	2 1/2"	4 1/4"	3 1/8"	3 1/2
2PW	1/2"	5 1/8"	1 1/8"	5 1/2"	5 1/8"	12
3PW	3/4"	5 1/8"	1 1/8"	5 1/2"	5 1/8"	12



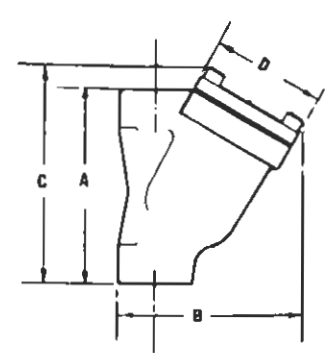
Type GW



Type PW



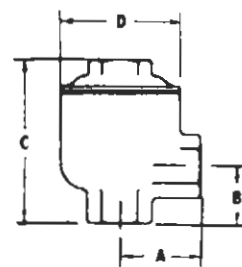
Type L



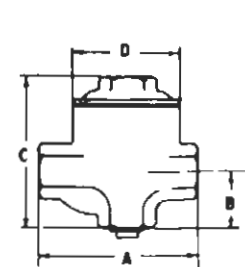
Type V

## MATERIALS

Part	GW, S & SW	PW	L & V
Cap	Bronze	Grey Iron, ASTM A48-74 Class 30-2	Steel
Body	Bronze	Grey Iron, ASTM A48-74 Class 30-2	Malleable Iron
Bolting	N/A	Steel, Grade 5	Steel, Grade 5
Gaskets	Copper	Copper Asbestos	Copper Asbestos
Belows	Monel	Monel	Monel
Plug	Stainless Steel	Stainless Steel	Stainless Steel
Seal	Stainless Steel	Stainless Steel	Stainless Steel



Type S



Type SW