

Features

- Variety of hook-up combinations
- Unaffected by sudden or wide pressure changes
- Responds quickly to condensate load changes
- Continuous discharge
- Condensate discharge temperature closely follows the saturated steam curve
- Function is not impaired by high back pressure
- Energy efficient
- Simple construction
- On-line repair

Description

The Barnes & Jones float and thermostatic traps, Series 2000 are designed for all types of low pressure or vacuum steam heating systems and steam process equipment. Typical applications include; unit heaters, space heaters, water heaters, pressing machines and low pressure mains and risers.

Float and thermostatic traps are specially well suited for apartments, hospitals, office buildings and schools or wherever quiet operation is necessary.

Operation

The opening and closing of the valve is caused by changes of the condensate level within the trap shell.

When the water level drops, the weight of the float closes the valve. As condensate enters the traps, the



float rises and opens the valve, allowing condensate to be discharged. The float is designed to provide sufficient buoyancy to overcome the differential pressure across the valve. The internal float and valve configuration is such that the condensate level is always above the valve, creating a continuous water seal at the seat.

Air and other gasses are freely discharged as they reach the trap through the air vent. The calibrated thermostat will close the air vent immediately when the temperature surrounding the element reaches saturated steam temperature.

Construction

Barnes & Jones float and thermostatic traps are compact, of rugged design, with easy access to all interior parts. The body is cast with two inlet and two outlet pipe connections that permit four combinations of pipe hook-ups for all types of applications.* All working parts are made of corrosion resistant materials and attached to the cover casting. The repair kit consists of a complete, factory assembled head which simply bolts on for ease of repair.* No pipe connections need to be broken.

*except the 2" model which is piped through the head.

MATERIALS

| Part | Description |
|---------|----------------------------------|
| Head | Cast Iron, ASTM-A278 Class 30 |
| Body | Cast Iron, ASTM-A278 Class 30 |
| Bolting | Steel, Grade 5 |
| Gaskets | Non-Asbestos Fiber |
| Float | Stainless Steel |
| Plug | Stainless Steel |
| Seat | Brass, 15#; Stainless Steel, 30# |

Engineering Specifications

CAPACITIES (SHEMA)

lbs. condensate per hour.

| Pipe Size | Model No. | Pressure Differential (PSIG) | | | | | | |
|-----------|-----------|------------------------------|------|------|------|------|------|------|
| | | 1/4 | 1/2 | 1 | 2 | 5 | 10 | 15 |
| 3/4" | FT2015-3 | 70 | 100 | 140 | 200 | 210 | 220 | 230 |
| 1" | FT2015-4 | 175 | 250 | 350 | 500 | 525 | 550 | 575 |
| 1 1/4" | FT2015-5 | 425 | 600 | 850 | 1200 | 1260 | 1320 | 1380 |
| 1 1/2" | FT2015-6 | 850 | 1200 | 1700 | 2400 | 2520 | 2640 | 2760 |
| 2" | FT2015-8 | 1775 | 2500 | 3550 | 5000 | 5250 | 5500 | 5750 |

Note on capacity: Low pressure F & T Trap capacities are in accordance with standard adopted by the Steam Heating Manufacturer's Association (SHEMA) providing for the continuous elimination of air when the trap is operating at its maximum rating. No Safety factor need be applied. Actual capacities are significantly greater than the SHEMA rating indicate.

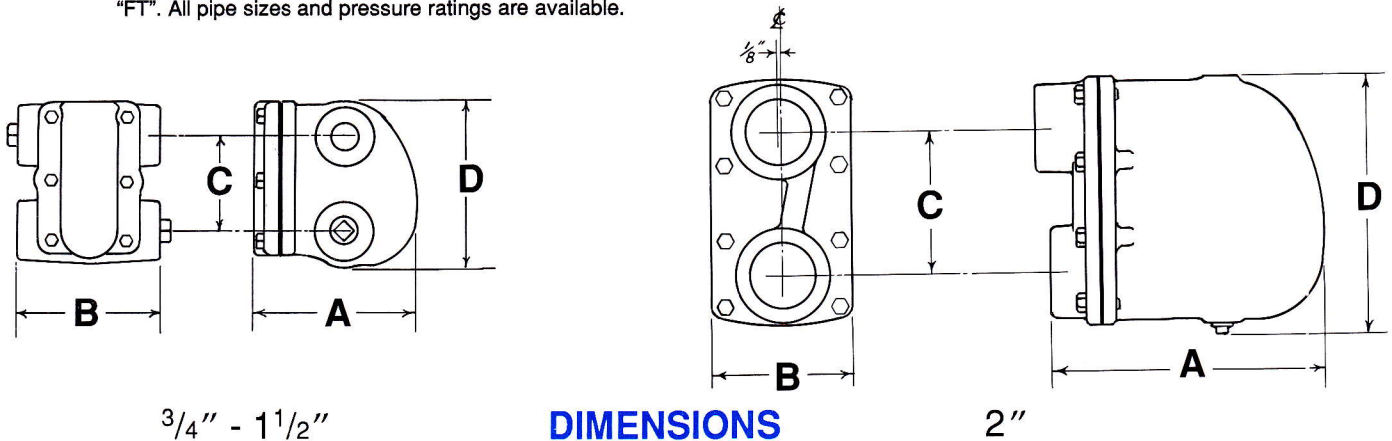
CAPACITIES (Gross)

lbs. condensate per hour.

| Pipe Size | Model No. | Pressure Differential (PSIG) | | | | | | | | | |
|-----------|-----------|------------------------------|------|------|------|------|------|-------|------|------|-------|
| | | 1/4 | 1/2 | 1 | 2 | 5 | 10 | 15 | 20 | 25 | 30 |
| 3/4" | FT2015-3 | 293 | 387 | 513 | 683 | 824 | 1050 | 1129 | — | — | — |
| 1" | FT2015-4 | 293 | 387 | 513 | 683 | 824 | 1050 | 1129 | — | — | — |
| 1 1/4" | FT2015-5 | 630 | 808 | 1029 | 1302 | 1722 | 2100 | 2457 | — | — | — |
| 1 1/2" | FT2015-6 | 1155 | 1785 | 2520 | 3465 | 5250 | 6930 | 7980 | — | — | — |
| 2" | FT2015-8 | 2415 | 2940 | 3780 | 4883 | 7245 | 9450 | 11445 | — | — | — |
| 3/4" | FT2030-3 | 293 | 387 | 513 | 683 | 824 | 1050 | 1129 | 1271 | 1365 | 1439 |
| 1" | FT2030-4 | 293 | 387 | 513 | 683 | 824 | 1050 | 1129 | 1271 | 1365 | 1439 |
| 1 1/4" | FT2030-5 | 394 | 525 | 725 | 956 | 1260 | 1575 | 1764 | 1890 | 1995 | 2100 |
| 1 1/2" | FT2030-6 | 1050 | 1365 | 1785 | 2415 | 3570 | 4830 | 5775 | 6300 | 6930 | 7350 |
| 2" | FT2030-8 | 1365 | 1890 | 2625 | 3570 | 5460 | 7140 | 8190 | 9030 | 9765 | 10500 |

Note on capacity: Trap capacities are based on continuous discharge at steam temperature. The published figures 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 is below saturated steam temperature. Appropriate safety factors should be applied to these ratings.

NOTE: FLOAT TRAPS are available for those applications where draining liquid is the only requirement of the trap. In those instances the thermostatic air vent is replaced by a solid plug. To order, use the previous model numbers with the prefix "F" instead of "FT". All pipe sizes and pressure ratings are available.



| Size | Models | A | B | C | D | WT. |
|--------|--------------------|---------|-------|--------|-------|---------|
| 3/4" | FT2015-3, FT2030-3 | 5 11/16 | 5 | 3 5/16 | 5 5/8 | 11 lbs. |
| 1" | FT2015-4, FT2030-4 | 5 11/16 | 5 | 3 5/16 | 5 5/8 | 11 lbs. |
| 1 1/4" | FT2015-5, FT2030-5 | 6 1/8 | 5 1/2 | 3 | 5 3/8 | 12 lbs. |
| 1 1/2" | FT2015-6, FT2030-6 | 8 3/4 | 6 | 3 | 8 1/4 | 24 lbs. |
| 2" | FT2015-8, FT2030-8 | 10 | 4 7/8 | 4 7/8 | 9 1/4 | 22 lbs. |