

GRINNELL COMPANY^{INC.}

Heating, Industrial and Power Plant Piping, Fittings, Hangers, Valves, Pipe Bending, Welding, Piping Supplies, Etc.

Executive Offices: Providence, R. I.

Exclusive Distributors of Thermoflex Traps and Heating Specialties

For data on other Grinnell Products, see pages 707-713

Thermoflex Specialties

The heart of all Thermoflex Traps is the Hydron Bellows.

The Hydron Bellows is formed under hydraulic pressure. This powerful internal pressure locates any weakness of any nature in the tubing. Such hydraulic pressure is many times more severe than any pressure the Trap will ever be called upon to control. Every Thermoflex Trap, therefore, is practically indestructible.

Thermoflex Traps have an exceptionally large orifice. This large orifice combined with high lift, insures fast action and freedom from clogging.

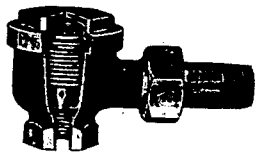
We supply Thermoflex Traps guaranteed for steam pressures up to 25 lb. and to 125 lb. Complete information and details of typical installations will be gladly sent on your request.

Each Thermoflex Trap is tested, certified, and tagged by the Pittsburgh Testing Laboratory.

Valves, Traps, Gauges, Etc.

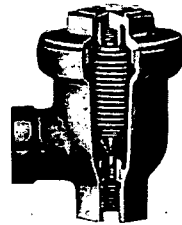
The Thermoflex line includes: Radiator Traps, Offset Traps, Blast Traps, Drip Traps, High Pressure Traps, Vent Traps, High-grade Packless Inlet Valves, and the Thermoflex Alternator, Thermoflex Compound Gauge, Thermoflex Damper Regulator.

No. 12 Thermoflex Radiator Trap



The full eight-fold Thermoflex-Hydron Bellows is the best bellows ever made. Because of the Hydron-forming process every bellows is absolutely perfect. Body is heavy bronze construction throughout, using a forging for the cap and spudnut. Fully nickel-plated with highly polished trimmings. The No. 12 is made in angle pattern only, with 1/2 in. inlet and 1/2 in. outlet tappings. The inlet neck is double thick to allow for expansion strains. Guaranteed for steam pressures up to 25 lb.

Thermoflex High Pressure Traps



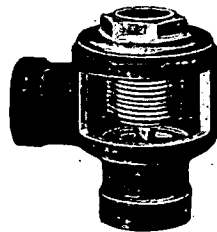
The No. 100 Thermoflex Trap is guaranteed for steam pressures from 25-125 lb. Must not be used where the steam temperature exceeds 400 deg. Fahr.

For use with all types of process work, Laundry Machinery, Kitchen Equipment, Hospital Sterilizers, Vulcanizers, Dry Kilns, Unit Heaters, Street Steam Service, etc., in fact any place that a trap is desired for service at the above pressures.

Small, compact and inexpensive in comparison to the usual float or bucket trap. Extra heavy body with stainless steel renewable seat. Valve on bellows is of nitrided steel which will not rust and resists wear.

Regularly furnished without unions, plain nickel finish. Can be furnished with unions, polished nickel or chromium plated at extra cost.

No. 4 Thermoflex Drip Traps



For dripping mains, risers, coils and unit heaters, we offer this type of trap. Cast iron body, bronze cap and inserted renewable bronze seat, angle pattern only, without unions. Can be used for any general purpose where a finished, nickel-plated trap is not necessary, and at a lower cost. Guaranteed for steam pressures up to 25 lb.

William S. Haines & Company

12th and Buttonwood Sts., Philadelphia, Pa.

Manufacturers of Equipment for Vapor and Vacuum Heating Systems

Haines Radiator Traps.

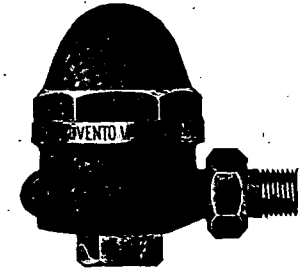
Haines Medium Pressure Thermostatic Traps.

Haines High Pressure Thermostatic Traps.

Haines Float and Thermostatic Blast Traps.

Haines Vent Traps.

Haines Modulating Valves.



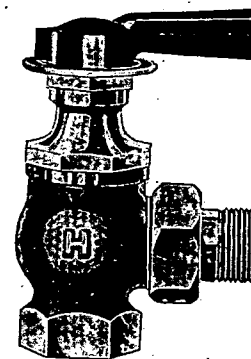
All HAINES traps, whether designed for pressures below atmosphere or pressures in excess of 100 lbs. per sq. in., employ as their operating member a specially constructed bourdon tube—the principle that actuates the steam gauge.

The tube is of tempered steel. It is charged with a volatile fluid and hermetically sealed. It is the expansion and contraction of the fluid, under varying temperatures, that furnishes the operating power.

The tube is mounted vertically on a horizontal valve motion. The end opposite the valve is anchored so that the travel of the tube either opens or closes the valve piece.

The thermostatic member is outboard the valve seat and closes the valve against the flow of steam. This arrangement prevents fouling of the trap due to scale or other foreign matter and permits a thorough draining of the unit to which it is attached.

HAINES thermostatic traps are made in sizes from 1/2 in. to 1 1/2 in. All traps are factory tested and adjusted before shipment.



HAINES modulating valves never need re-packing. They seat tightly and open on less than a full turn of the lever or wheel handle.

Made in sizes from 1/2 to 2 in. in angle, globe, or corner pattern.

HAINES VENTO TRAPS

No. of Trap	Center to Inlet	Center to Outlet	Capacity Sq. Ft.
1	2 1/4"	1 1/2"	125
2	3 1/4"	1 1/2"	200
2E	3 3/4"	1 1/2"	250
3	3 3/4"	1 1/2"	400
3E	3 3/4"	1 1/2"	500

HAINES MODULATING VALVES

Size of Valve	Center to Inlet	Center to Outlet
1/4"	1 1/4"	2 1/4"
1/2"	1 1/2"	2 1/2"
3/4"	1 3/4"	3"
1"	1 3/4"	3 1/4"
1 1/4"	2 1/4"	4 1/4"
1 1/2"	2 3/4"	4 3/4"