

DUNHAM TYPE OTS HEATING ELEMENT

An extended surface heating element made entirely of steel. Construction and design entirely different than in the ordinary radiator—long and narrow, suitable for many installations where standard type radiators are not desirable. Light in weight, unusual heating capacity.



Each element is made up of 1 1/4 in. steel pipe, with No. 22 gage heavy fins, mechanically attached, eliminating the use of a solder bond without sacrifice of heat transfer. The fin design is unique. Each fin, when pressed on the pipe, interlocks with the preceding fin—an exceedingly tight and permanent mechanical joint. This construction assures greater contact area between fin and tube than is obtained with commonly used methods—greater heating capacity. The complete unit is painted with heat-resisting zinc chromate black enamel.

Covers for OTS elements are available for all lengths of units. Constructed of No. 16 gage metal and extends the entire fin length of the unit. Covers reduce the rated capacity of the unit by approximately 3 per cent.

OTS elements are manufactured in standard lengths from 18 in. to 72 in. as given in table. Lengths up to 12 ft can be supplied by coupling two standard lengths together with pipe couplings or by welding. Standard units are threaded at each end with standard pipe threads. Units for welding can be supplied on special order with chamfered ends.

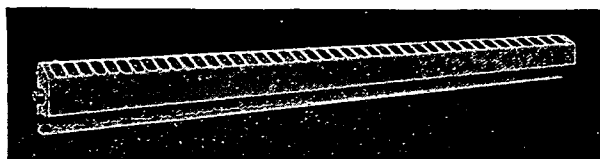
Capacity Ratings 1 1/4 In. OTS Heating Element (without cover)

Element Number	"L" Length Inches	1 Lb Steam—65 Deg Entering Air		Approx. Net Weight, Pounds	
		Btu	Rated EDR	Less Cover	With Cover
OTS-418	18	1880	7.8	11.0	12.0
OTS-424	24	2525	10.5	14.9	16.9
OTS-436	36	3815	15.9	22.6	25.6
OTS-448	48	5105	21.3	34.4	34.4
OTS-460	60	6395	26.7	38.2	43.2
OTS-472	72	7685	32.0	46.0	52.0

Deduct 3 per cent from above capacities if cover is used. To determine capacity at conditions other than given in above table, apply proper conversion factor.

DUNHAM TYPE OTS CONVECTOR

This Convector is an adaptation of the OTS heating element to a deluxe enclosure.



Particularly suitable for installation on shipboard or other applications where appearance is a major factor.

The unit casing is constructed of No. 18 gage metal with punched-in grille in the sloping

top. Casings are painted with gray paint chromate primer for protection.

Capacities are based on Standard conditions of 1 lb steam, 65 F entering air. For capacities at other than standard conditions, apply proper conversion factor.

This unit is available in lengths from 18 in. to 72 in.

Capacity Table

Unit Number	"L" Length Inches	1 Lb Steam—65 F Entering Air		Approx. Net Weight Pounds
		Btu	Rated EDR	
COTS-418	18	1995	8.3	19.8
COTS-424	24	2680	11.3	26.7
COTS-436	36	4050	16.8	40.8
COTS-448	48	5420	22.5	54.8
COTS-460	60	6790	28.2	68.9
COTS-472	72	8160	34.0	82.9

OTHER DUNHAM SPECIALTIES

Float and Thermostatic Traps 8 sizes, 800 sq ft to 20,000 sq ft. Closed Float Traps 8 sizes, 800 sq ft to 20,000 sq ft. High Pressure Traps (Inverted Bucket) 1/2 in. and 3/4 in. sizes, up to 150 lb. Return Traps 5 sizes, 1500 sq ft to 13,000 sq ft. Pressure Reducing Valves Single seated (Type 340) 3/4 in. to 3 in. Double seated (Type 300) 1 1/2 in. to 10 in. Standard Flanged. Strainers 1/2 in. to 2 in.

William S. Haines & Company

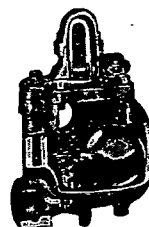
12th and Buttonwood Sts., Philadelphia, Pa.

Manufacturers of

EQUIPMENT FOR VAPOR AND VACUUM HEATING SYSTEMS

PRODUCTS—Haines Vento Radiator Traps, Medium Pressure and Blast Type Traps, Combined Float and Thermostatic Traps, Air Eliminators, High Pressure Thermostatic Traps, Boiler Return Traps, Radiator Valves.

HAINES F & T TRAPS

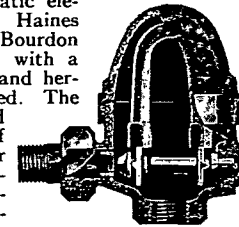


Designed to handle large quantities of condensation. For dripping steam mains, unit heaters, hot water generators, etc. Cannot become air bound as it has a thermostatically controlled air by pass. Sizes 3/4 in., 1 in., 1 1/2 in..

HAINES RADIATOR TRAPS

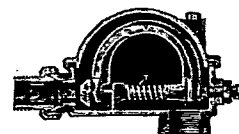
The thermostatic element in all Haines Traps is a Bourdon tube, charged with a volatile fluid and hermetically sealed. The expansion and contraction of the fluid, under varying temperatures, furnishes the operating power.

The vertical seat of this trap prevents it from becoming inoperative from scale or other foreign matter.

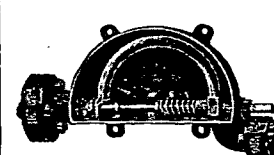


HAINES MEDIUM PRESSURE TRAPS

A ruggedly constructed bolted case trap. Ideal for hospital and kitchen equipment and all process work operating on pressure up to 60 pounds.

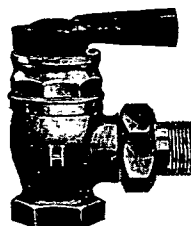


HAINES HIGH PRESSURE TRAPS



For dripping high pressure mains, laundry equipment and all process fixtures with working pressures up to 125 pounds.

HAINES MODULATING VALVES



A packless valve assuring positive and leak proof performance. Completely opens or closes on less than a full turn of handle. Can be furnished with wheel or lever handle or lock-shield.

HAINES BOILER RETURN TRAPS

For vapor and atmospheric heating systems. Assures positive circulation by venting the air and returning the water of condensation to the boiler. Has no stuffing boxes or packed joints to leak air or water.



Each device is individually tested, factory adjusted and guaranteed.