

Simsite® HusHeaters

In most plants, it would seem, machinery must serve a double purpose. Not only must each machine perform its job—it must do it with an unmelodic fanfare of grinding and screeching and clattering.

No man ever really grows used to the unnecessary noise of the typical plant. He forgets it, at times, but the din is always a drain on the nerves.

The mechanical equipment used to heat water and other liquids through the introduction of steam into the liquid can produce as much racket as any of its brother machines. It can if it's the old-fashioned heater... it can't if it's a Sims HusHeater.



HusHeaters

The HusHeater goes about its job without making a sound!

Moreover, the HusHeater operates completely free from the destructive vibration that loosens rivets, opens seams and damages instruments . . . thus adding to the life of the tank and control equipment.

The most common application of the Sims HusHeater is in filter boxes and hotwells, in both of which it will raise the temperature of condensate to any desired degree (depending, of course, on the amount of steam available and liquid throughput). The HusHeater has also proven successful in heating processes in sugar refineries, paper mills and other plants.

Here are the advantages of the Sims HusHeater:

- Eliminates nerve shattering noise;
- Eliminates tank wrecking vibration;
- Conserves maximum amount of heat in the available steam;
- Efficiently heats liquids;
- Lessens burden on heater by reducing temperature difference between feed-water discharge and heater exhaust;
- Reduces back pressure on auxiliaries, thus effecting a saving of steam;
- Increases temperature of feed-water entering into the boiler.

How to install the HusHeater

Installation of the HusHeater is easily managed, but there are certain precautions which should be taken to insure trouble-free operation.

Your HusHeater comes to you assembled, ready to screw onto a three-inch pipe. It can be fitted to odd sizes of piping by means of reducers that step the pipe either up or down.

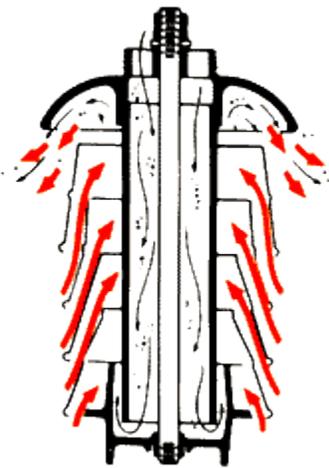
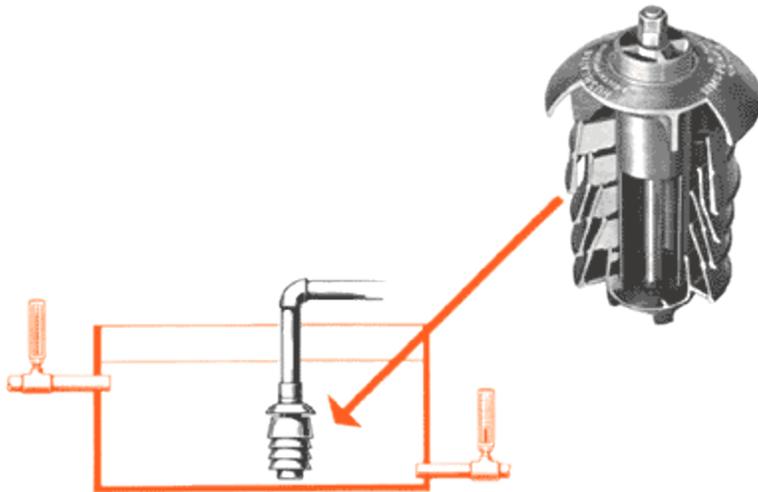
An important note: if the nuts on the HusHeater's rod are loosened for inspection, it is essential that they be tightened to the point where the spring washer is entirely flat. There are no moving parts so there is no need to disassemble for adjustments.

When used in an open feed system, the HusHeater may be installed in any compartment of the filter box, but performance will be better if it is located in the clear filter water section. Sponges fail to do an efficient job in removing oil and other contamination from hot water.

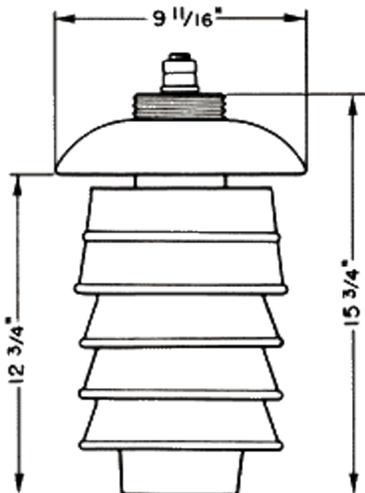
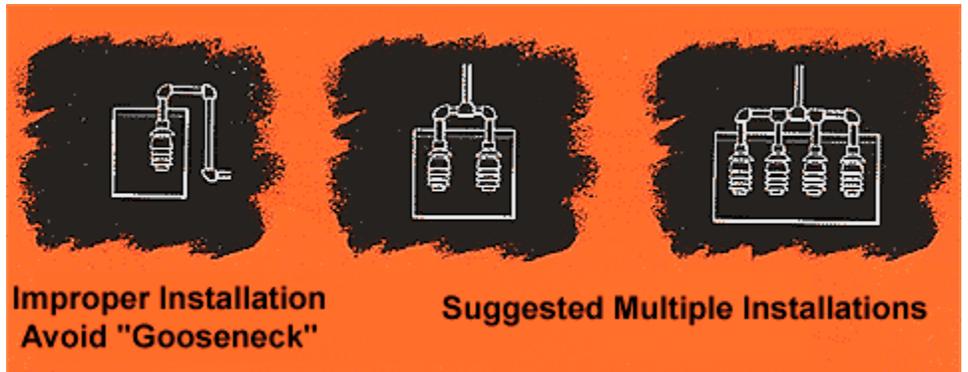
In setting the heater into any tank, the edge of the hood must be submerged to obtain proper mixing of the heated liquid and prevent surface noises. Complete submersion is better, but it is important not to have the HusHeater rest on the bottom of the tank. It should be suspended from the steam pipe or rigid support and be completely clear of the tank base and walls. There must be room for free circulation of the liquid under and around the HusHeater.

The HusHeater is guaranteed to operate silently and efficiently if properly installed. It can and will rumble noisily if installed on the end of a gooseneck" (Fig. 43). With correct piping, allowing for a downward flow of steam, there will be neither noise nor vibration.

The HusHeater, as in the case of the Sims pump valve, can be made of any suitable material to withstand service conditions. For the most part, however, the efficient Sims pre-heater is made of bronze.



Steam enters at the top of the HusHeater and flows downward through the inside of the center tube, black arrows; it traces an upward course on the outside of the tube, where it passes through a series of converging nozzles. Suction created by the high-velocity flow of steam through the nozzles draws the liquid, colored arrows, into the mixing chambers. The liquid is heated to the desired temperature by the condensing steam, after which it is discharge through the opening under the hood of the HusHeater. Throughout, the operation is silent and free from vibration.



**WEIGHT OF BRONZE
UNIT 47 POUNDS.**

How to order HusHeaters

The Engineering Department of the Sims Pump Valve Company offers you full assistance in ordering one or more HusHeaters for your plant. As the first step in putting an end to your problems of heating a liquid by the liberation of live steam into it, send our engineers the necessary six points of

information concerning service conditions. Working from there, they will be able to determine:

- the number of HusHeaters your operation requires;
- from what material they should be made.

While often one HusHeater is sufficient to do the job, some operations have required three and even four. Materials which are used in manufacturing these units to meet specific conditions are: bronze, cast iron, aluminum, stainless steel and others.

Here is the information our engineers will need to supply you with a silent, vibration-free HusHeater:

- a. Liquid to be heated;
- b. Pressure and volume of steam available;
- c. Dimensions of tank and normal liquid level;
- d. Throughput of tank;
- e. Normal inlet temperature;
- f. Desired temperature.

Case Histories

An electric control system was employed at one plant to regulate the output and temperature of liquid heated in a process tank. The original heater vibrated so much that the delicate mechanism of the controls was upset. As a result, specifications were rarely met. The vibration problem ceased with the installation of a silent Sims HusHeater, and from then on the electric controls were thoroughly reliable.

- Coil heaters and jet heaters both were tried in heating sugar liquor in a cylindrical tank at a sugar refinery. With each type of heater, vibration was so strong that even the steel supports of the tanks shuddered visibly. Two 3-inch Sims HusHeaters were installed with these results: no vibration, steady performance, practically no operating noise.
- A Sims HusHeater used in the filter box of a steamship's open feed system greatly improved efficiency. The Chief Engineer wrote, "Using the Sims HusHeater, I find we have a gain of 14 degrees in feed water temperature, and a gain of 46 degrees in filter box, above the best obtainable without use of the Sims Silent HusHeater. The 230 degrees maximum temperature can easily be obtained with a 5 to 6 pound less back-pressure using the HusHeater."