



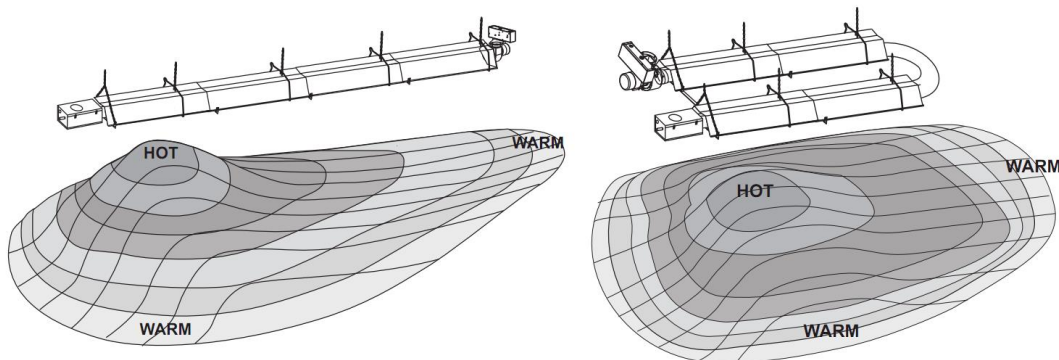
Tips on Sizing & Installing Straight Tube Heaters

Since straight tubes are always hotter at the burner end than the exhaust end, installers should always observe the minimum recommended heights shown on the specification sheets as well as the I&O Instructions. Install tube heaters as high as possible for more uniform energy distribution. The temperature drop along the emitter tube of a 125 MBTU 40' long straight tube heater could be on average as much as 15-20°F per foot of length of the emitter tube. Also 86% of energy is radiated within the first 20 ft. of the straight heater and very little energy is available at the exhaust end of the tube.

Radiant Output of Straight Tube Heaters		
<i>Distance from burner in feet</i>	<i>% of total radiant output</i>	<i>Emitter tube temperature in degrees °F</i>
2-1/2	13.2 %	967
5	18.7 %	1,097
7-1/2	16.0 %	1,037
10	12.8 %	957
12-1/2	9.8 %	867
15	7.1 %	767
17-1/2	5.0 %	667
20	3.4 %	567
<i>86% of radiant output is in the first 20ft of the straight tube heater</i>		

Some people think that “longer is better” but the straight tube heaters do not perform like florescent light fixtures. If the exhaust end temperature is the same as the burner end temperature, then your flue temperature will be 1000°F and it will not be an efficient radiant heater and it will not comply with ANSI Z83.20 Standard for Infrared Tube Heaters (where the flue temperature must be a maximum 400°F plus ambient temperature).

When a **single** heater is utilized for building space heating (e.g. spot heating) always use a u-tube for more uniform energy distribution.



Consult your SunStar distributor for additional technical design assistance.