

## FOR YOUR COMPLETE LINE OF HEATING, COOLING AND VENTILATION NEEDS

## **Direct Fired Advantages**



RuppAir has been a leading manufacturer of high quality, efficient direct fired heating equipment since 1965. Every Rupp direct-fired heater is designed and tested to produce the highest level of efficiency, safety, and comfort for years of operation. RuppAir direct fired heaters are certified and listed to meet the newest ANSI and CSA standards. These standards require that all direct fired heating equipment generate less than 5 ppm CO, 4000 ppm CO2, and 0.5 ppm NO2. Meeting and surpassing these requirements ensures that Rupp equipment satisfies all OSHA and ANSI/CSA emissions standards. Direct-fired heaters are safe and widely accepted for a wide range of applications, including commercial kitchens, service garages, transit facilities, factories, warehouses, paint booths, and more.

Indirect fired heating units rely on an expensive and heavy heat exchanger to supply conditioned air to a building. As a result, unit efficiency typically falls around 80%, with up to a fifth of fuel energy being lost to the environment in the form of flue gasses. While indirect fired units are required by code for applications serving sleeping quarters, in most other applications they create unnecessary expense for a project and the end user. A comparable RuppAir direct fired unit offers the same heating performance while reducing first cost as well as operational costs.

Direct fired units achieve this by delivering all of a fuel's thermal energy to the space, increasing unit efficiency to 92%. This results in less fuel being required, reducing end user operational costs and the amount of green house emissions being released into the environment. Simplified construction and lack of a heat exchanger, further results in unit first cost being lowered. Ancillary benefits include cheaper freight, less rooftop clutter, and reduced unit weight.