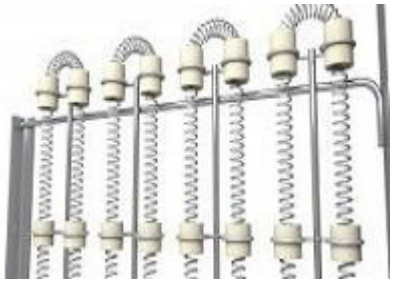
Open Coil Duct Heaters 

HEATCO make **Open Coil Duct Heaters** are the most efficient type of electric heating while at the same time, being the most economically feasible for most heating applications. Used predominantly in the duct heating industry, open coil elements have open circuits that heat air directly from the suspended resistive coils. Fast heat-up also improve efficiency while being designed for low maintenance and easily, inexpensive replacement parts.
Open Coil Duct Heaters utilize the highest grade resistance wire in the manufacturing process. An iron-free, 80% nickel and 20% chromium wire has a lower operating temperature, a higher corrosion resistance, less resistance change, less sag, and a longer life expectancy than other commonly used resistance wires.
For most simple space heating applications, open coil models are a good choice. Open coil models tend to be lower kW and smaller in size than a finned tubular unit. Some of the advantages of an open coil model are:

- Element Temperature – The open coil element releases its heat directly into the airstream. As a result, the open coil runs cooler than the coil in the finned tubular element which is isolated from the air by insulation and a metal sheath. Because the heat is going directly into the airstream, the duct heats up quicker.
- Low Pressure Drop – Because of the high percentage of open space across the heater, open coil heaters have very low pressure drop as compared to finned tubular heaters. This can result in reduced fan motor horsepower and makes it possible to retrofit open coil heaters into existing systems without changing the fan motor.
- Smaller Size – It is normally possible to get a higher kW with open coil construction for a given face area.

DIFFERENCE BETWEEN OPEN COIL , TUBULAR & FINNED TUBULAR ELEMENT.

Open-coil construction is best for applications where no conductive particles or water spray contaminate the air.
Open-coil and tubular designs can be used for outlet temperatures up to 1,200°F (649°C).
Finned tubular designs are recommended for a maximum outlet temperature of 600°F (316°C).
Open-coil heaters cannot withstand high air velocities as compared to tubular and finned tubular design.
Open-coil heaters are best suited to withstand severe applications because there is a large clearance between the live parts of the heating element and ground.
The less space occupied in the heater by elements, the lower the pressure drop will be. Therefore, heaters with open-coil elements have the lowest pressure drop.

Finned tubular elements will have a higher pressure drop than open coil. Tubular elements have the highest pressure drop due to the higher percentage of space occupied in the heater.