

Circulation Heaters



Process Circulation heaters utilize the flanged or screw plug immersion heater bundle mated to a welded pressurized pipe body or as we commonly refer to in our industry, the heater vessel. The circulation heater can be mounted horizontally or vertically and piped in line with your process inlet and outlet connections. The process air, liquid, or gas is force flowed from the inlet side of the heater vessel over the metal sheathed nichrome resistive heating elements to the outlet side of the heater vessel. This effectively allows 100% heat transfer efficiency from heater element to the process air, liquid or gas.

A temperature sensor is located at the heater outlet to measure process temperature and provide process temperature feedback to the temperature control panel or plant control room. Circulation heaters are designed and manufactured to be application specific depending on the design temperatures and pressures of the process air, fluid or gas and the overall system parameters. We offer standard circulation heater designs with or without insulation and well as customized circulation heaters to meet your project specific application requirements.

Features

Circulation Heaters manufactured to ISO 9000, ASME, CRN, PED, GOST, INMETRO, NACE

99.9% pure MGO compacted insulation

Operating temperatures up to 1400 F.

Hazardous area terminal enclosures certified to: CSA/ATEX/IEC Ex

Watt Densities available from 2-90 watts/in.sq

Liquid tight terminal enclosures NEMA 4 and NEMA 4X/IP 66

Wattages available up to 3.5 MW in single units or circulation heaters can be piped in series to achieve higher wattage requirements

General Purpose terminal enclosures

Voltages available up to 4160V

UL listing available

Flange sizes range from 2"-36" ANSI Class. Customized fittings available

Element sheath sensors attached to elements for overheat protection

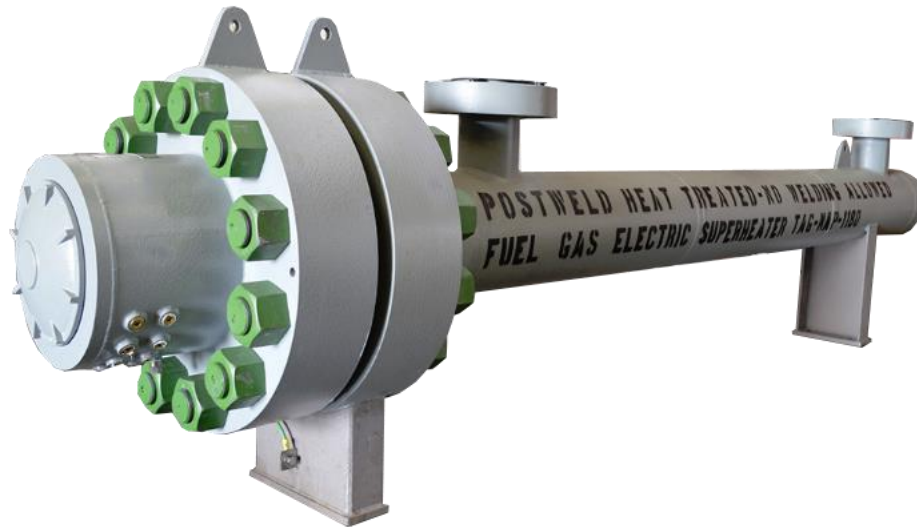
Screw plugs range from 1"-2 ½" NPT. Customized fittings available

We can provide a control system solution for your circulation heater

Incoloy 800 sheath material, other sheath materials available upon request

We can skid mount your circulation heater and control system

80/20 Nickel Chrome resistance wire



Applications

Fuel Gas	Process Air
Hydrocarbon Gases	Stagnant Air
Regeneration Gas	Boiler equipment
LNGs	Freeze protection for many types of fluids
Boil Off Gas	Anti-freeze (glycol) solutions
Heat Transfer Fluids	Paraffin
TEG	Steam
API Crude Oil	Process Water
Hydraulic Oil	Deionized Water
Lubricating oils at API specified watt densities	Demineralized Water
Asphalt	Clean water
Specialty Chemicals	Potable water
Process Industrial Gas Flow	Industrial water