



THERMAL PRODUCTS INC.
 Engineered Solutions To Industrial Applications

Date: _____ Job Reference _____
 Company Name _____
 Address _____
 City _____ State _____ Zip _____
 Customer Contact _____
 Phone No. _____ Fax No. _____
 E-Mail Address _____
 Submitted By (if different than above) _____
 Date Quote Required _____

CIRCULATION HEATERS

APPLICATION

Material to be heated _____ Flow rate _____ Heat Sensitive: YES / NO
 Inlet Temp. _____ °F Outlet Temp. _____ °F Indoor Outdoor Min./Max. Ambient Temps _____ / _____ °F
 Operating/Design Pressure _____ / _____ PSIG; Design Temperature _____ °F; ASME Code Stamp: YES / NO
 Specified Inlet/Outlet Size: _____ Dia., Sch. _____ Type: Flanged , NPT , Other (if applicable) If Flanged, Flange Rating _____ lb.
 Explain other: _____
 Fluid Properties: Density or Specific Gravity _____ at _____ °F Specific Heat _____ at _____ °F
 Thermal Conductivity _____ at _____ °F Viscosity _____ at _____ °F
 Maximum Fluid Film Temperature _____ °F
 Describe how the heater is to be used: _____
 Describe the process loop: _____

HEATER DESIGN

Required KW rating or heat duty (if known) _____
 Available power: _____ volts _____ phase _____ cycle
 Maximum watt density on heater element: _____ W/in²
 Circulation Heater Vessel Material: Carbon steel , 304SS , 316SS , Other: _____
 Heating Element Material: Copper , Steel , 304SS , 316SS , Incoloy , Other: _____
 Heater Environment (NEMA Type): 1 , 4 , 4X , 7 Non-hazardous Area or Hazardous Area
 If Hazardous Area: Class _____, Division _____, Groups _____, Ignition Temperature Code _____
 Special Items: _____

CONTROLS

Type: ON/OFF / Multi Stage , Number of Stages: _____ / Solid-state SCR (modulated)
 Control Mounting Options: On heater (prewired) Remote control panel Mounted & prewired on skid with heater
 Control Panel Environment (NEMA Type): 12 , 4 , 4X , With Purge? YES or NO , 7 (cast aluminum)
 Non-hazardous Area or Hazardous Area ; If Hazardous Area: Class _____, Division _____, Groups _____
 Special Control Items: _____
 Process Thermostat Process Thermocouple Sheath Thermocouple