

## IntegraHeat™ Electric Process Heating Systems

Integrated Flow Solutions IntegraHeat™ Electric Process Heating Systems are flanged heater bundles & control panels designed in accordance with IFS-607A technical specification to electrically heat liquids and gases.

### Industries



<i>Standard Features – Process</i>	<i>Benefit</i>
IntegraHeat™ Electric Heater Process Sizing Software	Accurate Selection of Heater Size & Watt Density Based on the Process Application Parameters
	Predict Accurate Element/Process Temperature
ASPEN Simulation of Complete Process	Process Guarantee
Element Watt Density Selection by Application	Prevent Coking Heater Bundle Elements
	Proper Heat Transfer to the Process
	Optimize the Heating of the Process
IFS 607A Technical Specification	Technical Specification for the Design, Fabrication, Inspection, & Testing of Industrial Grade Electric Process Heaters & Heater Control Panels

<i>Standard Features – Electrical</i>	<i>Benefit</i>
Programmable Logic Control (PLC)	Flexible Process Control
	<ul style="list-style-type: none"> <li>• Outlet Temperature Control Applications</li> <li>• Differential Temperature Control Applications</li> <li>• Pressure Control Applications</li> </ul>
	Process Control for Complete Process (in addition to Heater Control)
	Flexible Number of Digital Inputs/Outputs
	Flexible Number of Thermocouple/RTD Inputs
	Expandable Analog Inputs/Outputs Modules
	PID Loop Tracking - Bumpless Transfer
	Individual Alarm(s) for each Thermocouple/RTD/Analog Input
	Adjustable Delay Timer for Thermocouple/RTD/Analog Alarm(s)
	Easy Troubleshooting

# AUTOMATION and CONTROLS

<i>Standard Features – Electrical</i>	<i>Benefit</i>
“Low Select” Over Ride Logic Control	Optimize Heater Bundle Temperature by Comparing <ul style="list-style-type: none"> <li>• Heater Bundle Temperature PID Loop</li> <li>• Process Temperature PID Loop(s)</li> </ul>
	Accurate Heater Bundle Set Point Control <ul style="list-style-type: none"> <li>• Eliminate Extreme High Element Temperature</li> <li>• Prevents Heater Bundle Degradation</li> </ul>
	Independent PID Loop Tuning
Load Management Control	Modulate Number of Energized Circuits to Prevent Power Grid Spikes at Low Load Requirements
	Manage Time Each Circuit is Energized to Match the Load Requirement
	Equalize SCR Operation Time
Human Machine Interface (HMI) by Color Touch Screen Graphic Display	Graphical Process Representation
	Operator Friendly
	Visual Process & Heater Bundle Temperature Monitoring
	Visual Process & Heater Bundle Temperature Set Point Entry
	Visual Alarm and Alarm Timer Delay Set Point Entry Visual Process
	Heater Bundle Temperature Loop
	Tuning Parameter Entry
	Visual Process & Heater Bundle Temperature PID Loop Trending
	<ul style="list-style-type: none"> <li>• Set Points</li> <li>• Process Variables</li> <li>• Control Variables</li> </ul>
	Alarm History Backlog Viewing
	Visual Alarm Banner Popup for Selected Alarm(s)
	Visual Digital & Analog Maintenance Alarm Capabilities
Finger Safe	Prevent Accidental Electrical Shock
	Tidy Layout
Silicon Controlled Rectifier (SCR) Power	Modulate Power to Energize Heater Bundle Solid State Device
	<ul style="list-style-type: none"> <li>• Increases Component Life</li> <li>• No Mechanical/ Moving Parts</li> </ul>
	24 VDC Digitally (or Analog) Fired
Heater Bundle Over Temperature Limit	Protect the Heater Bundle from Permanent Damage
	De-energize Heater Bundle
Ground Fault Detection	Prevents Permanent Damage from System Grounding Problem(s)
Two (2) Heater Bundle Temperature Sensing Elements	One Element Used for Controlling Heater Bundle Temperature
	One Element Used for Heater Bundle Shutdown <ul style="list-style-type: none"> <li>• Located at the Hottest Part of the Heater Bundle</li> </ul>