

# AIR-COOLED PUMP AFTER MARKET

The combination of the air-cooled design with other design improvements makes this pump superior to water-cooled and oil-lubricated models for Vapor Power's Circulatic Steam Generator.

## **Air-Cooled Pump Features**

- The pump is virtually maintenance-free
- The air-cooled power end requires no lubricating oil for the shaft and bearings
- No oil quality or level maintenance issues
- Eliminates expensive cooling water
- No packing, thus eliminating leakage, daily maintenance and periodic replacement issues
- Direct drive eliminates pulleys and belts and the related maintenance issues





# **ADVANTAGES**

- LOW MAINTENANCE
- COST SAVINGS
- NO PACKING



### VAPOR POWER INTERNATIONAL

(888) 874-9020 VaporPower.com 551 S. County Line Rd. Franklin Park, IL 60131





# **COMBUSTION COIL UPGRADE** AFTER MARKET

After many years of research and development, we now offer a Combustor Coil Upgrade Kit to be applied to any Circulatic or Hi-R-Temp. The coil is installed as a replacement for bricked or poured refractory combustion chambers.

All of the recirculated water, drawn from the drum through the circulation pump, is fed through the combustor coil. It is then fed through the manifold and is divided evenly through the original existing parallel flow coils.

## Circulatic & Hi-R-Temp Upgrade Kit

- The front section of the boiler is converted to useful heat transfer area
- Exhaust gas temperatures are reduced
- Cooler flame temperature lowers
  NOx emissions
- Overall refractory content in the unit is substantially reduced
- You will never need re-bricking or refractory chamber replacement again
- It is less costly than a replacement refractory chamber



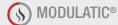
## **ADVANTAGES**

- FUEL SAVINGS
- INCREASED EFFICIENCY
- COST SAVINGS
- REDUCED EMISSIONS



VAPOR POWER INTERNATIONAL









# **CONTROL PANELS** AFTER MARKET

New, microprocessor-based control panels are available to retrofit obsolete control systems on our steam generators and thermal fluid heaters. These panels are equipped with modern digital coil and stack temperature controls for comprehensive monitoring.

Your control panel can be replaced with the Flame Safeguard of your choice (Honeywell or Siemens), or upgraded to include linkageless technology.



The new panels provide a higher level of safety and state-of-theart controls, with features beyond the capacity of conventional controls. These features significantly reduce service cost and downtime. The flame safeguard control provides diagnostic information to aid the operator if troubleshooting becomes necessary.

### **Simplicity**

Vapor Power steam generators and heaters require fewer and more reliable components than what is in your existing control panel. As a result, writing diagrams are simpler and service parts requirements are reduced.

#### **Return On Investment**

The new Vapor Power control panel will pay for itself within a short period of time. The reason is the panel's ability to help minimize downtime by assisting with troubleshooting and eliminating the need for outside service if control problems occur.



## **ADVANTAGES**

- INCREASED EFFICIENCY
- SIMPLICITY
- INCREASED SAFETY
- MINIMIZE DOWNTIME



**VAPOR POWER** INTERNATIONAL

(888) 874-9020 VaporPower.com 551 S. County Line Rd. Franklin Park, IL 60131



# FEEDWATER & DRUM LEVEL CONTROLS

Vapor Power's drum level sensor and controller provide dependable, low-maintenance control of the water level in a circulatic drum. Our combination of a differential level sensor, a digital level controller, and an electric actuated valve or pneumatic feed water valve increases dependability and performance.

### **No Moving Parts**

Unlike the pneumatic and 135-Ohm "slidewire" float controls, the differential pressure level sensors and 4-20mA controllers have no mechanical moving parts to wear out or get stuck in one position. 135-Ohm slidewire devices have always suffered from wear and breakage of the wire wound resistor, causing a loss of signal. Wipers can travel too far off the end of the slidewire, which also causes a loss of signal. Pneumatic controls rely on sliding plungers that often get stuck in one position.

### **Dependable Signal Technology**

Our combination of the differential pressure level sensor and digital controller rely on 4-20mA-signal technology. This signal technology is considered "tried and true." Engineers from a wide range of industries accept this as a stable, repeatable and dependable signal technology.

### **Control Valves**

Our electric-actuated valves for feedwater control offer tight shutoff. The high torque actuators assure reliable positioning over a long service life. The proven 4-20mA -signal technology is used from the controller to the valve.



# **ADVANTAGES**

- DEPENDABLE SIGNAL TECHNOLOGY
- TIGHT SHUT OFF
- NO MOVING PARTS
- LONG SERVICE LIFE



**VAPOR POWER** INTERNATIONAL

(888) 874-9020 VaporPower.com 551 S. County Line Rd. Franklin Park, IL 60131











Upgrade your existing panel and eliminate difficult troubleshooting, obsolete components and the risk of going down with no readily available replacements. Replace your old burner control with an RM7800 flame safeguard, or other available control choices, complete with all component materials and revised electrical drawings from the factory.

## **Options**

- Keyboard display module
- Communications interface that links the burner control to PC's in local or remote locations
- First-Out Expanded Enunciator that provides specific hold and lockout information at a glance

### **Text Readout Includes**

- Sequence status
- Hold status
- Lockout alarm status
- Flame signal strength
- Total hours and cycles of operation
- Fault history



BURNER CONTROL

## **ADVANTAGES**

- ELIMINATE DIFFICULT **TROUBLESHOOTING**
- INCREASE EFFICIENCY
- ELIMINATE OBSOLETE **COMPONENTS**
- MINIMIZE DOWNTIME



**VAPOR POWER** INTERNATIONAL









# **TEMPERATURE CONTROLS** AFTER MARKET

The digital temperature controls used in the upgrade kits have several advantages over existing controls in units manufactured prior to 1993. Keep in mind that if your existing controls are not tested and verified regularly, they might not be providing protection for your unit. Ask your local service representative to perform a safety test on your existing temperature controls. Upgrade kits are comparably priced to most existing controls (if they are still available) and are a better investment.



- Microprocessor-based technology offers dependable temperature monitoring and improved protection of your boiler or heater.
- Precise readout of the actual process temperature, as well as the alarm set point
- · Easy testing of the alarm circuit

### **Simplicity**

- Kits are pre-wired and pre-programmed for simple and quick installation
- New, thermocouple wires are included for connection to your existing thermocouples.
- New thermocouples can also be included if desired.

### **Follow-up Features**

- Connection sketch and instructions are included
- Factory assistance and technical support during and after installation are available



## **ADVANTAGES**

- DEPENDABLE TECHNOLOGY
- PRECISE DATA
- EASY TESTING
- EASY INSTALLATION



**VAPOR POWER** INTERNATIONAL







# LINKAGELESS CONTROLS AFTER MARKET

The Fuel-Air Ratio Control lets you develop independent combustion curves for each fuel. The system provides reliable and repeatable positioning of the fuel valve and combustion air damper.

Fuel savings/system efficiency- Microprocessor-based control allows for more accurate control. This accuracy increases fuel efficiency and offers system payback in a short period of time.

Reduced setup time- Complete setup for a two-fuel system is just 4-6 hours. Easier and Faster- to service than mechanical cam and linkage assemblies Safety features- include actuator feedback, component anti-swap protection and curve verification algorithms.

#### **Fuel-Air Ratio Control**

- Monitors and controls the burner fuel and air flows to maintain proper combustion
- Provides LED status for power, alarm and motor drives
- Includes fault-annunciating LED's

#### **Universal Parallel-Position Actuator**

- Provides robust torque to control combustion air dampers modulating fuel valves, oil modulation valves and flue gas recirculation (FRG) dampers
- Optimizes burner performance by providing precision potentiometer feedback to control

#### Wire Sub-Base

• For ease of installation, all wiring goes to this panel-mounted sub-base

#### **Commissioning Software**

- Configures the control with online step-bystep instructions
- Windows compatible
- Can also be used as a service tool to access fault history information
- Can be used to commission more than one system

### **Display Module**

• Display tool (optional) gives you diagnostic, configuration and fault information- instantly



## **ADVANTAGES**

- EASY INSTALLATION
- SEAMLESS CONVERSION
- MORE EFFICIENT BURNERS
- REDUCED ENERGY COSTS
- QUICK PAYBACK
- MORE FEATURES
- LESS SERVICE TIME
- LESS DOWNTIME



**VAPOR POWER** INTERNATIONAL

(888) 874-9020 VaporPower.com 551 S. County Line Rd. Franklin Park, IL 60131



LINKAGELESS CONTROLS AFTER MARKET

The Fuel-Air Ratio Control lets you develop independent combustion curves for each fuel. The system provides reliable and repeatable positioning of the fuel valve and combustion air damper.

<u>Fuel savings/system efficiency</u>- Microprocessor-based control allows for more accurate control. This accuracy increases fuel efficiency and offers system payback in a short period of time.

Reduced setup time- Complete setup for a two-fuel system is just 4-6 hours. Easier and Faster- to service than mechanical cam and linkage assemblies Safety features- include actuator feedback, component anti-swap protection and curve verification algorithms.

#### **Fuel-Air Ratio Control**

- Dependable and repeatable fuel-air control—with fuel, air and water electronically adjustable at every curve point—monitors and controls the burner fuel and air flows to maintain proper combustion
- Allows low fire hold to be incorporated
- Provides LED status for power, alarm and motor drives
- Includes fault-annunciating LED's

#### **Universal Parallel-Position Actuator**

- Provides robust torque to control combustion air dampers modulating fuel valves, oil modulation valves and flue gas recirculation (FRG) dampers
- Optimizes burner performance by providing precision potentiometer feedback to control
- Controls modulation speed

#### **Feedwater Flow**

 Provides accurate measurement of feedwater flow, as well as dual element verification of feedwater flow

#### **Wire Sub-Base**

 For ease of installation, all wiring goes to this panel-mounted sub-base

### **Commissioning Software**

- Configures the control with online step-bystep instructions
- Windows compatible
- Can also be used as a service tool to access fault history information
- Can be used to commission more than one system



## **ADVANTAGES**

- EASY INSTALLATION
- SEAMLESS CONVERSION
- MORE EFFICIENT BURNERS
- REDUCED ENERGY COSTS
- QUICK PAYBACK
- MORE FEATURES
- LESS SERVICE TIME
- LESS DOWNTIME



**VAPOR POWER** INTERNATIONAL

(888) 874-9020 VaporPower.com 551 S. County Line Rd. Franklin Park, IL 60131