

ENVIREX® SLUDGE HEATER / HEAT EXCHANGER

SAFE, RELIABLE AND LONG-LASTING PERFORMANCE

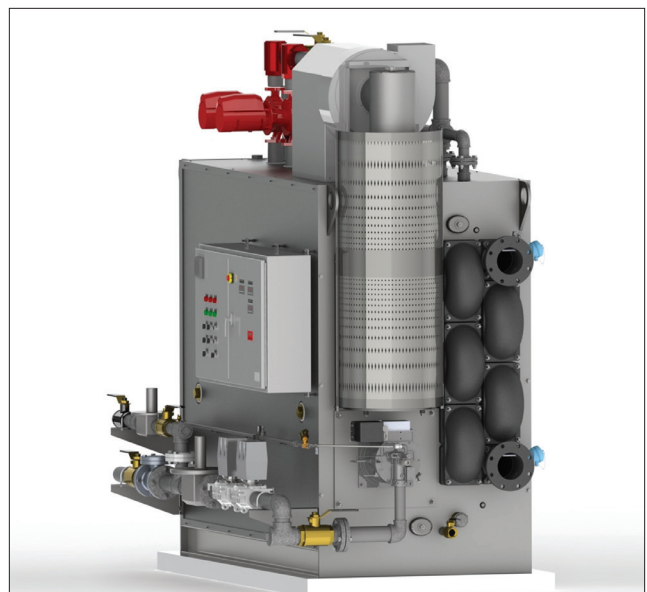
The integrally built Envirex® sludge heater and heat exchanger is designed to ensure safe and reliable operation for durable, long-lasting performance. The flame safeguard system guards the system from unsafe conditions. The induced draft fan maintains a negative pressure on the firing chamber, protecting against the possibility of dangerous gases leaking to the surrounding area. The induced draft configuration also permits the burner to operate at lower digester gas pressures, optimizing the use of digester gas and preventing the need for gas booster pumps. The Envirex heater/heat exchanger also burns dirty digester gas, with no gas conditioning required.

The heat exchanger section of all Envirex units is designed for durability and ease of maintenance. Return bends of cast iron construction ensure long life. Heat exchange tubes are held in place by gaskets and cast iron following rings. This arrangement permits cleaning of the interior surfaces of the tubes without draining the water bath. The multiple gasket arrangement incorporating the cast iron following ring ensures early detection of gasket failure and eliminates the possibility of waste solids or water fouling the interior of the heat exchanger.

All fired surfaces on the heater / heat exchanger, including the rear return section known as the water back, transfer heat to the boiler water. The water back, unlike conventional refractory return sections which require frequent replacement, will last the life of the boiler resulting in a substantial savings in maintenance and a reduction in downtime.

Envirex Heater/Heat Exchanger Advantages:

- Flame safeguard system
- Durable cast iron construction
- Induced draft fan
- Ease of maintenance
- No gas conditioning required
- Long-lasting performance



Safe and reliable Envirex sludge heater/heat exchanger.

ADVANCED OPTIONS FOR MAXIMUM EFFICIENCY

Honeywell SLATE® Combustion Control System

The Envirex sludge heater and heat exchanger is now available with Honeywell's state of the art combustion control system. The Honeywell SLATE system allows for 24/7 monitoring and access to the combustion system providing operators with detailed performance and running characteristics. Troubleshooting is made simple with the "first out" functionality, providing operators with detailed error logs and component failures.

The SLATE system can also be provided with dynamic air and fuel ratio control to ensure maximum efficiency with changing conditions and gas quality. This ensures maximum utilization of digester gas and reduces secondary fuel cost in times of peak heating demand.

Low Emissions System

The Envirex sludge heater and heat exchanger is now available with a Honeywell/Maxon M-PAKT® Burner to meet strict emission requirements. The system can achieve NOx emissions of less than 20ppm and CO emissions of less than 400ppm when firing on natural gas. Emissions while firing on digester gas are dependent upon gas quality.

This low emission heater is also provided with a Honeywell combustion control system offering real time monitoring and access to the system. Controls dynamically tune air and fuel ratio to provide optimal performance and to ensure emissions levels are continually met.



Honeywell SLATE Combustion Control System with 24/7 monitoring.

ENGINEERING AND SERVICE SUPPORT

Evoqua product engineers and service teams can provide on-site inspections, engineering support, and process expertise for complete turnkey installation and repairs.

- Inspection services
- Personnel training and maintenance guidelines
- Complete turnkey installation services and repairs
- OEM parts for all Envirex and PFT equipment
- Control system upgrades



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