# ThermoZone<sup>™</sup> Condensate Handling Station

For High-Performance Corrugator Double Backers

The ThermoZone condensate handling station enables corrugators to consistently run their double backer at the low-pressures required for flat lightweight board and can provide rapid hot plate temperature response during grade changes.

It is engineered for the corrugator environment with heavy-duty panels, valves, controls, and radar level sensing. It eliminates problematic steam traps that can cause flooding and wasted steam. If there are condensate flow issues, it alerts plant personnel before board quality is affected. Diagnostics enable quick troubleshooting and preventive maintenance. The station comes in one and two zone configurations to handle a single, critical hot plate zone, or the entire hot plate section.



# **Features**



# • Enables near ZERO hot plate steam pressure

- Rapid temperature response (optional)
- Condensate flow diagnostics
- · Preventive maintenance alerts
- Steam trap free design
- Continuous flow mode
- Guided wave radar level sensor
- Fisher<sup>™</sup> pneumatic valves
- Flanged connections, skid base, service panels

# **Benefits**



- Flatter lightweight board for printing
- Quick grade changeovers
- Detects issues before board quality affected
- Maximizes uptime
- Eliminates flooding from failed steam traps
- Increases capacity, extends durability
- · Continuous level sensing, no probe fouling
- Reliable and durable performance
- Easy to service, contaminant protection

EZ Order Number	Zones Served	Continuous* Flow Mode	Pumping** Mode	Size*** L x W x H	Hookup Requirements
19K93205	One	8,000 pph	2,000 pph	42" x 45" x 61"	<ul> <li>Motive steam</li> <li>1", 300 class flanged connection</li> <li>120 V single phase</li> <li>70 psig air</li> </ul>
19K93200	Two	16,000 pph	4,000 pph	62" x 45" x 61"	

<sup>\*</sup>Requires system pressure 5 psid above condensate return pressure. \*\*Requires motive pressure 20 psid above condensate return pressure. \*\*\*Height to top of console. Dimensions are for reference and subject to change.

Note: Fisher™ is a trademark of Emerson Electric Co.

## **Flatter Lightweight Board**

The ThermoZone condensate handling station enables near zero psig steam pressure in the hot plate section. The lower pressure and temperature help bond single face board to the liner without warping. This results in flatter lightweight board without defects and less use of starch.

Unlike diverter stations, which require a minimum pressure in a hot plate zone, the ThermoZone condensate handling station uses motive steam pressure to move condensate from a hot plate zone to the condensate return line.

## **Quick Grade Changeovers**

The optional rapid temperature response package includes steam system controls and rapid relief valves that can quickly lower hot plate pressures and temperatures for grade changeovers. This allows corrugated packaging plants to run a wider range of productivity and stage runs by demand and not by weight.

### **Detects Flow Issues Before Board Defects Occur**

The ThermoZone condensate handling station comes with an easy-to-use operator interface screen. Operators can monitor performance, access trends, and read alarms. Cycles are counted and valve life is monitored for preventive maintenance. The system can be integrated into the in-plant network for remote monitoring and control. Performance monitoring and alerts give visibility to system issues before they become board defects.

## **Built for the Double Backer Environment**

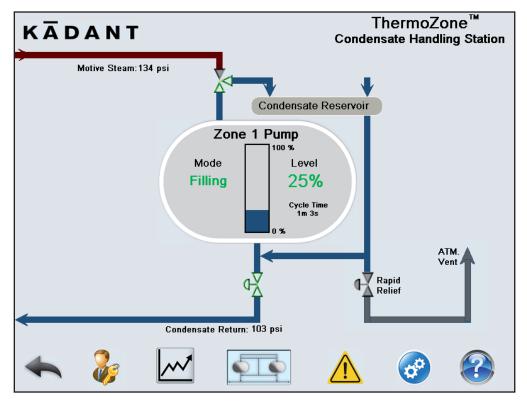
The ThermoZone condensate handling station is designed to operate in the demanding environment of a double backer. Its cabinet enclosure protects it from outside contaminants and Fisher pneumatic valves provide optimal performance and durability. The guided wave radar continuously monitors condensate levels without immersion in the condensate, eliminating the potential for sensor fouling. It has easy-to-remove panels, a skid mount, and connects with standard 1", 300 class flanges for easy service.

### **Continuous Flow Mode**

Continuous flow mode increases capacity and eliminates pump cycling. When the hot plate zone is running 20 psid above the condensate return line pressure, motive steam is not needed to move condensate and the pump switches to continuous flow mode. This is common when running heavier weight board. The control logic, guided wave radar, and modulating valve act together to function as a steam trap to ensure no steam enters the condensate return line, but without the maintenance nuisance of a steam trap.

#### **Turnkey System Integration**

Our experts will manage the design and installation of the Thermozone condensate handling stations so corrugated packaging plants can focus resources elsewhere. Typical installations will include the base ThermoZone condensate handling station, rapid temperature response package, systems engineering, and installation including electrical and piping.



Main Operator Interface Screen

fluidhandling.kadant.com

Kadant is a global supplier of high-value, critical components and engineered systems used in process industries worldwide.