

# Drying Water-Based Adhesive on Vinyl Veneer Laminated to Particle Board with Model 4554 High Density Pyropanels

## Application

A manufacturer of home entertainment speaker cabinets drying a water-based adhesive used to laminate vinyl veneer to particle board.

## Problem

**Environmental Issues** - Due to strict air quality regulations the manufacturer was forced to switch from a solvent-based to a water-based adhesive.

**Varying Product Widths** - The vinyl veneer was laminated to particle board of varying widths.

**Slow Drying Time** - The water-based adhesive had a much greater drying time than the solvent-based adhesive.

**Limited Production Output** - Production output was significantly lowered due to the long drying time of the water-based adhesive.

## Solution

**Heat** - Two Model 4554-A-38-12 High Density Pyropanels were mounted side-by-side, parallel to product flow, to heat the water-based adhesive on the particle board before the vinyl veneer was applied.

**Power Control** - Two Model 664K Phase Angle SCR Power Controllers controlled the High Density Pyropanels.

**Heat Zoning** - The High Density Pyropanels were configured with center and end heating zones running parallel to product flow.

## Benefits

**Faster Drying Time** - By applying heat to the water-based adhesive with the Model 4554 High Density Pyropanels, the manufacturer was able to dry the new adhesive as quickly as the solvent-based adhesive had dried.

**Increased Production Output** - Applying heat to the water-based adhesive enabled the manufacturer to match production levels previously achieved with the solvent-based adhesive.

**Varying Heated Widths** - By turning center and end heating zones on and off as appropriate, the manufacturer was able to apply heat to accommodate the varying product widths.

**Limited Power Consumption** - The configured heat zones on the High Density Pyropanels allowed the manufacturer to change the heated width to accommodate varying product widths, keeping power consumption to the minimum level required.

**Better Environment** - By successfully using a water-based adhesive, the manufacturer was able to comply with environmental regulations while maintaining production output.