**Optimising Steam Utilisation**

### Applications

Building on decades of steam system engineering and the design and manufacture of steam specialty products, Kadant offers process industries engineered solutions to the handling of steam and condensate.

### Features

- Packaged steam system solutions
- Fully assembled skid-mounted systems
- Retrofit existing systems and components
- Global technical and application support
- Single-source, integrated systems approach

### Benefits

- Improve energy utilisation
- Optimise existing steam system performance
- Lower energy costs
- Ease of deployment and commissioning
- Increase range of operation for stable production

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**Steam distribution expertise**

For more than 75 years, Kadant has applied a systematic, application-specific approach to solving steam and fluid handling challenges. Our extensive process knowledge in steam systems engineering and the ability to integrate these systems with process equipment provides industrial processors with cost-effective solutions to steam distribution and energy conservation.

**System integration**

The efficient integration of manufactured products into a functioning system will define the success of a capital project. Kadant’s line of steam specialty products, including steam jet thermocompressors, direct steam injection water heaters, condensate pumping stations, and steam joints can be seamlessly integrated into the steam distribution system for optimal system efficiency.

**Single source accountability**

To complete the integration of hardware and systems, we offer technical and mechanical services, ranging from training to installation, maintenance, troubleshooting, and turnkey project management. With references across the globe, you can be confident when selecting Kadant as your integrated steam systems partner.
**Thermocompressors**
Steam jet thermocompressors are designed to boost low pressure steam by accurately mixing low pressure steam with high pressure steam. With just three basic components; nozzle, mixing section, and diffuser, the Kadant thermocompressor is simple yet highly energy efficient. Thermocompressors are used in the chemical, petrochemical, pulp and paper, food, power, steel, and other process industries in applications such as drying, filtration, distillation, absorption, mixing, vacuum packaging, freeze drying, flash cooling, deaerating, and dehydrating.

**Desuperheaters**
Desuperheaters are designed to reduce the temperature of superheated steam for optimal heat transfer and efficiency as well as reduced degradation of system components. Kadant desuperheaters are custom designed for each application and are available in various materials. The efficient geometry allows for direct installation into the steam pipeline with flanged connections. Typical applications include pulp and paper, food processing, HVAC, and shipboard service, among others.

**Direct Steam Injector Water Heaters**
A direct steam injection heater heats water and other fluids by injecting steam directly into the fluid. The direct injection heater is most appropriate where various volumes of hot liquids at precise temperatures are required. Direct injection heaters can be used in operations such as starch cooking, liquor heating, filling pulpers, calender roll heating, wastewater treatment, and industrial laundry, among others.

**Skid-Mounted Systems**
Skid-mounted steam distribution systems offer a packaged solution for steam handling and steam distribution. The custom-engineered solution can be retrofit to existing installations or installed in new applications. The ease of deployment and commissioning along with the skid-mounted systems’ wide range of operation offer flexibility and convenience for a relatively simple solution to steam handling and distribution needs.

**Condensate Pumping Stations**
Custom-engineered condensate pumping stations have separator tank diameters ranging from 300 mm to 1800 mm (12” to 72”) and are capable of handling up to 90000 kg/hr (200,000 lb/hr) of condensate flow.

**Vortec Vacuum Generators**
Capable of creating up to 0.94 atmospheres or 28” Hg (9.6 m H2O) of vacuum, the Vortec Vacuum Generator eliminates the need for traditional, maintenance-intensive vacuum pumps.

**Heat Exchangers**
Heat exchangers maintain vacuum in the steam and condensate system by cooling steam and condensing it to reusable water. For efficiency, heat exchangers are designed to maximise the surface area of the wall between the steam and cool water, while minimising resistance to fluid flow through the exchanger.