KĀDANT

FLUID HANDLING

Kadant Johnson Products and Services

Kadant Johnson designs, manufactures, installs, and services fluid handling systems.

The Kadant Johnson Advantage

Full Service Partner

Kadant Johnson designs, manufactures, installs, and services equipment used to manage flow in industrial processes. Kadant Johnson supplies a wide range of rotary joints and precision unions along with a broad portfolio of other fluid handling equipment including jet devices, condensate pumps, flexible hose, syphons, dryer bars, and system controls. Kadant Johnson services range from training, nondestructive testing, and repairs to system design and installation. Partnering with Kadant Johnson ensures your hardware is fully integrated into your process for maximum performance and a single source of accountability.

Innovative Solutions

Kadant Johnson invented the rotary pressure joint in 1930 and has never stopped innovating. Kadant Johnson's research and development center allows products to be developed and tested in real world conditions, before they are installed. Kadant Johnson's controls and engineering design team develops system-based fluid handling solutions and Kadant Johnson's materials group is on the leading edge of testing seal rings, counter seals, bearings, and elastomeric seal materials to extend rotary joint life in ever demanding applications.

On Time Delivery

Today's manufacturers operate in a "just-in-time" environment. Customers demand products are delivered when they need them, not after. A continuous improvement culture and a U.S. based operation allows Kadant Johnson to meet the customer requested delivery date on over 96% of orders in North America, while sister companies in Europe, South America, and Asia support customers globally.

Proven Performance Across Industries

Kadant Johnson products have a reputation for performance and durability and many products have been in continuous operation at customers for decades. Process industries that use Kadant Johnson products to heat, cool, or transfer energy include packaging, food, metal, oil and gas, textile, nonwoven, machine tool, rubber, plastic, chemical, converting, and construction.

Kadant Johnson's Research and Development Center

Systems and Services

Installation, Training, and Maintenance

The experts at Kadant Johnson install and maintain rotary joints, syphons, and other fluid handling equipment to the highest standards; letting maintenance supervisors focus their limited resources elsewhere. For paper dryers, Kadant Johnson offers dryer surface cleaning to remove stickies and other debris to improve dryer surface smoothness and contact with the dryer sheet.

Inspections, Audits, and NDT Services

Kadant Johnson offers a complete line of services to maximize safety and steam system performance. These include dryer performance evaluations, inspections, and nondestructive testing (NDT) for the paper industry, and steam system audits, Boiler Room Safety Audits (BRSA), and NDT for the corrugated packaging industry. All services include a comprehensive report prioritizing improvement opportunities. Once the report is issued, Kadant Johnson partners with customers to address any open items.

Steam System Design and Installation

Developing an integrated steam system maximizes energy efficiency, quality, and uptime. Kadant Johnson combines over 90 years of process expertise and an extensive product portfolio to deliver cost-effective, application-specific steam and condensate system designs. All Kadant Johnson installations come with turnkey project management. This single source of accountability ensures problems are solved efficiently and effectively.

Control Systems

Dryer Management System® (DMS) control technology creates a stable and efficient operation of the paper dryer section by continuously monitoring dryer section operating conditions including grade, speed, and moisture content. It automatically and continuously controls and adjusts all steam system set points. The control systems for the corrugated industry include boiler room control, hot plate control, and steam system integration including the corrugator, high-pressure receiver, deaerator tank, and boiler.

Rotary Joints and Unions

Industry Specific Solutions

Paper Drying

The **PT2X™ rotary joint and stationary syphon system** is the ultimate in rotary joint technology for paper machine dryers. It is bracket mounted and designed for speed, durability, and ease-of-maintenance.

The **ELSX™ rotary joint** is the newest generation of self-supported rotary joints. It is used in applications where a ring bracket mount is not possible. It can accommodate rotating or stationary syphons.

Corrugated Packaging

The **CorrPro® rotary joint** is for corrugators running up to and over 1,500 feet per minute. It uses balanced seal technology and is the preferred joint by OEMs. It is ring bracket mounted.

The **LJX™ rotary joint and rigid syphon system** is for corrugators running up to 1,000 feet per minute and is easily adaptable to OEM equipment using lug supports.

The **SX® rotary joint** is compact in size and is self-supported. It has two internal support guides and is used in applications with good alignment, low vibration, and properly aligned flexible hose piping.

Metal Processing

C-Cast™ rotary unions are used in continuous casting machines. With a minimum of moving parts and low maintenance requirements, the C-Cast is preferred by steel makers and OEMs worldwide.

BCI™ rotary unions are bearing cover inserted and applied to continuous casting steel segment rolls on water service. The ability to handle misalignment, the large flow area, and the simple design make this rotary union a preferred design for continuous casting roll segments.

Machine Tools

The **G™ rotary union** is a high performance, high precision rotary union for coolant or other media. It is generally used in the machine tool industry for equipment including gun drills, spindles, and CNC machines.

Rotary Joints and Unions

General Industry Solutions

Rotary Joints for Steam and Thermal Oil

Self-supported rotary joints come in many configurations and models. Some are supported internally with a widely spaced, double guide-design which provides internal support for the rotary union. This extends life and maintains alignment in high-vibration and mis-aligned applications.

Self-supported joints with more narrowly spaced internal support guides are more compact in size. They are used in space constrained applications with good alignment, low vibration, and properly aligned flexible hose piping.

Rotary Unions for Water Service

Rotary unions used in water service feature a high-performing ball bearing design with multiple bearing and seal packages for applications with different pressures, temperatures, and speeds. These rotary unions are capable of intermittent dry running and feature a large internal flow area. They are available in single and dual flow configurations.

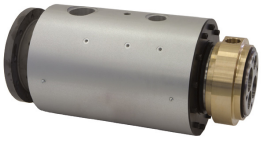
Rotary Unions for Multiple Fluid Types

Over-the-shaft rotary unions are used in applications that require media flow through passages in an existing journal. They seal around the journal to provide leak free fluid transfer through the ports.

Multi-passage rotary unions are used in applications that simultaneously transfer one or more types of media into rotating equipment and don't have an existing journal with passages. They can transfer any combination of fluid types in any direction.

Custom Rotary Unions

Kadant Johnson's rapid response product innovation team can custom-engineer solutions for unique applications or different media. They focus on making the best solution in the shortest time possible.



Jet Devices and Pumps

Thermocompressors

Thermocompressors boost low-pressure steam to higher pressures for reuse in multiple applications. This maximizes energy efficiency by retaining the energy in low-pressure steam while capturing 100% of the energy in the high-pressure motive steam.

Desuperheaters

Desuperheaters reduce the temperature of superheated steam. In many manufacturing processes, superheated steam is initially required, but downstream applications require saturated steam. Desuperheaters atomize and inject cooling water into the superheated steam flow to lower its temperature.

Direct Injection Heaters

A direct steam injection heater precisely heats water and other fluids by injecting steam directly into the fluid. One hundred percent of the steam energy is used to heat the fluid, making it up to 30% more efficient than traditional heating methods.

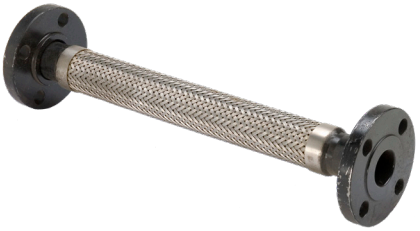
Liqui-Mover® Pumps

Liqui-Mover pumps use positive pressure to pump condensate with no maintenance-intensive components to leak, wear, or fail. The Liqui-Mover condensate pump will work longer, with less maintenance and less downtime than conventional pumps.

Accessories

Flexible Hose

Flexible hose prevents stress on rotary joints and unions as well as connected piping due to thermal expansion or vibration. Its flexibility makes installations easier and does not restrict the built-in movement of the rotary joint.

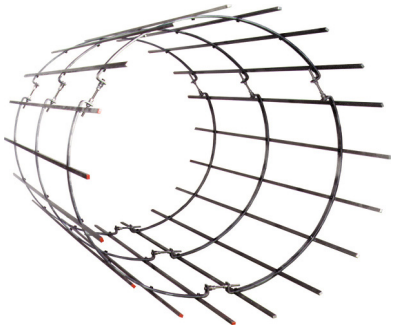


Syphons

Syphons remove condensate from drying systems after heat transfer has occurred. The Kadant Johnson portfolio of stationary and rotating syphons are tailored to the machine speed, steam pressure, condensing loads, and blow-through steam characteristics of the application.

Turbulator® Tube™ Bars

Turbulator Tube bars significantly improve the heat transfer rate and uniformity in rolls by inducing turbulence in rimming condensate. Turbulator Tube bars not only improve roll surface temperature profiles, they also improve runnability.



Sight Flow Indicators

Sight flow indicators are engineered to provide maximum visual observation of liquid and gas flows through pipelines. All windows are made of low-thermal expansion borosilicate glass and can be furnished with special mica liners to protect against erosion and corrosion.

Vacuum Breakers

Vacuums are often caused by cooling fluids and can cause equipment implosion or contamination from back siphonage. Kadant Johnson's simple and reliable design provides instant response to vacuums and a large air venting capacity. They are easy to install and are rigorously tested for a long service life.

About Kadant Johnson

Kadant Johnson is part of Kadant's Flow Control segment and supplies equipment and critical components used in process industries worldwide. Kadant Johnson's products, technologies, and services play an integral role in enhancing process efficiency, optimizing energy utilization, and maximizing productivity in resource-intensive businesses.

Primary Industries Served

- Chemical
- Construction
- Converting
- Corrugating
- Food and beverage
- Machine tool
- Metals
- Oil and gas
- Pulp and paper
- Rubber and plastics
- Textiles/nonwovens

Products

Rotary Joints and Unions

- Custom rotary unions
- Multi-passage rotary unions
- Precision unions
- Single passage rotary joints

Jet Devices

- Desuperheaters
- Direct steam injection heaters
- Thermocompressors

Liqui-Mover Condensate Pumps

- Float Free™ level control
- Float level control
- Replacement level control

Accessories

- Air and steam separators
- Flexible metal hose
- Sight flow indicators
- Steam traps
- Syphon systems
- Turbulator Tube bars
- Vacuum breakers
- Variable Moisture Steam™ showers

Services

- Boiler room safety audits
- Dryer cleaning
- Dryer performance audits
- Inspections and nondestructive testing (NDT)
- Installation and repair
- Steam system audits

Systems

- Dryer Management System control system
- Project management
- Steam and condensate system design
- Steam system performance evaluations

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

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