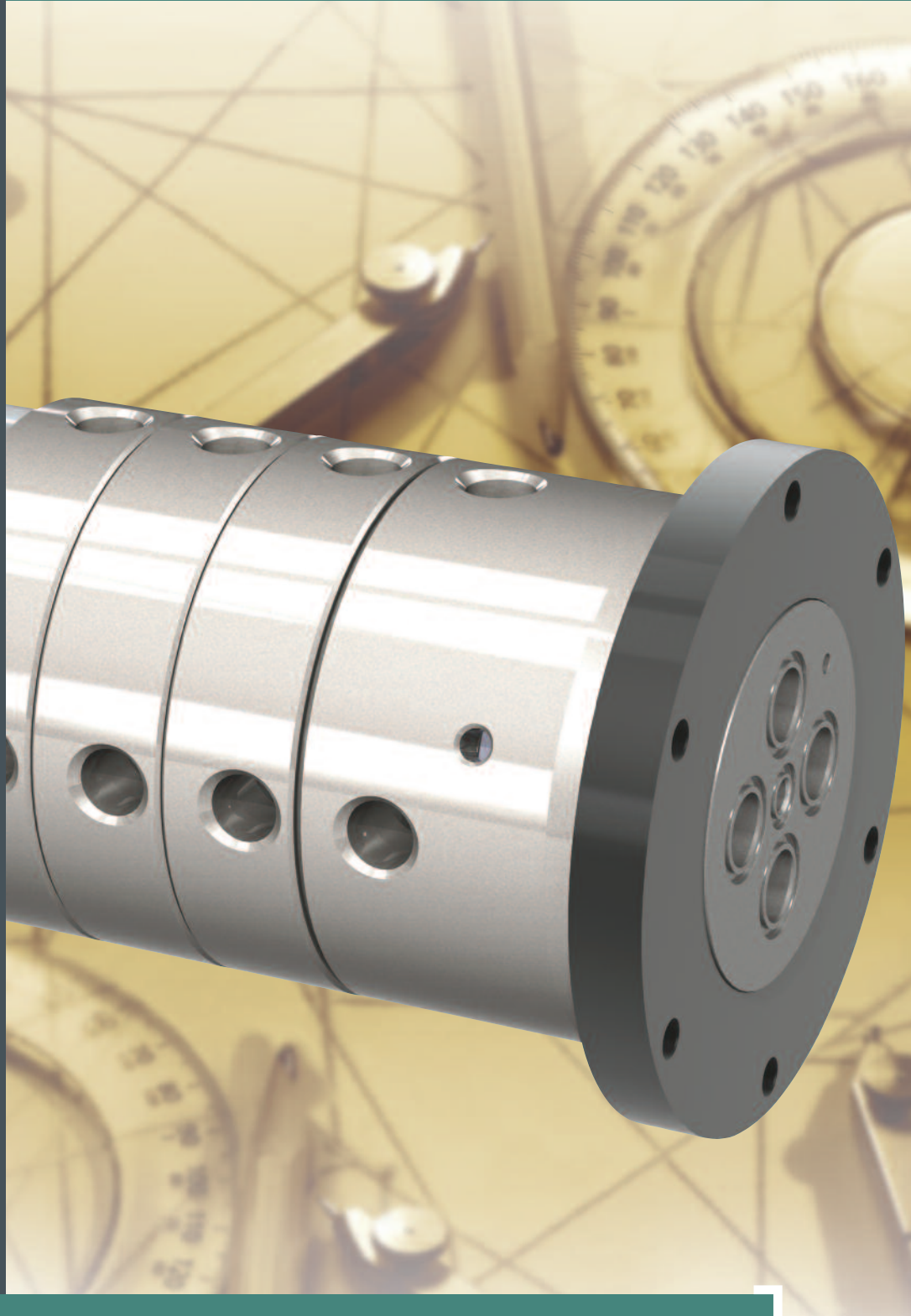
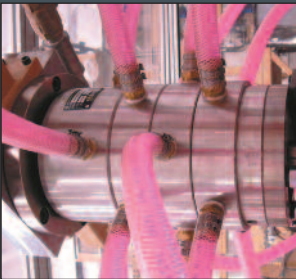


Custom Rotary Unions

for transferring fluid and power

KADANT
AN ACCENT ON INNOVATION

Engineered rotary unions, swivels, and pipe connectors



Engineered reliability and performance.

Innovation

In 1933, Kadant Johnson invented the rotary pressure union. It was a device that eliminated the problems associated with stuffing boxes and packing glands and allowed fluids to be introduced into rotating equipment in an economical method.



While our early years were focused on sealing steam and water unions, today we offer thousands of configurations of standard and custom rotary unions applied to a variety of media including water, air, coolant, oil, molten salt, and gas. From mechanical seals to our DuraSeal™ high-performance elastomeric sealing materials, Kadant Johnson can design the right solution for your application.

Key industries and sectors served by Kadant Johnson:

- ▶ Aerospace
- ▶ Alternative Energy
- ▶ Chemical
- ▶ Converting
- ▶ Corrugating
- ▶ Food and Beverage
- ▶ Life Sciences
- ▶ Machine Tool
- ▶ Medical
- ▶ Metals
- ▶ Mining
- ▶ Oil and Gas
- ▶ Packaging
- ▶ Paper
- ▶ Plastics
- ▶ Rubber
- ▶ Semiconductor
- ▶ Textile/Nonwovens





Rapid design and prototyping

Our product innovation team focuses on making the best solution possible in the shortest time possible. We provide rapid design and manufacturing services to ensure our custom product solutions process puts our customers first and stays on schedule. Our streamlined custom engineered innovation cycle ensures your project moves quickly and seamlessly from concept to production. We specialise in “impossible deadlines” and work hard to ensure your satisfaction.



Responsiveness and on-time delivery

Kadant Johnson has established a solid reputation for responsiveness and on-time delivery. Our mission is to help our customers improve their production processes by providing reliable and innovative fluid handling products, systems, process expertise, and technical services; delivering on our promises of quality, on-time delivery, and responsiveness.



Global platform, local support

With 17 manufacturing sites in North America, South America, Europe, and Asia, Kadant is uniquely positioned to support its global customers wherever they are in the world. Having a local presence can make all the difference when it comes to ensuring technical and service needs are quickly and efficiently met by qualified and experienced personnel.



Creating the future

While most suppliers are preparing for the future, Kadant Johnson is creating it. Our research and development activities are the force behind the patented technologies and innovative products that we bring to process industries worldwide. With major R&D facilities in Europe and the USA, we are uniquely positioned to address process industry challenges.

Multi-Passage Unions

Two-passage, flange mounted

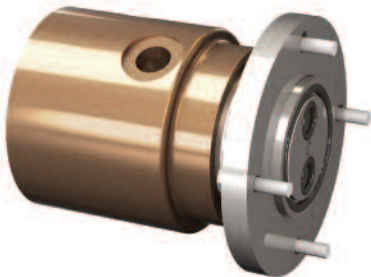


Design Parameters

Pressure:	207 bar (3,000 psi)
Temperature:	66°C (150°F)
Rotation Speed:	Up to 25 RPM
Media:	Air

Multi-purpose, two-passage, flange mounted rotary union used for air service. Features include low torque and centerpass for wires. The rotary union is for use on a rotary indexing machine.

Two-passage, flange mounted



Design Parameters

Pressure:	10 bar (145 psi)
Temperature:	90°C (195°F)
Rotation Speed:	Up to 10 RPM
Media:	Water

Multi-purpose, two-passage, flange mounted rotary union used for water service. Features include a recessed and hardened ground shaft and a special bronze bearing for reduced friction.

Two-passage, over-the-shaft



Design Parameters

Pressure:	10 bar (145 psi)
Temperature:	90°C (195°F)
Rotation Speed:	Up to 4 RPM
Media:	Water

Multi-purpose, two-passage, over-the-shaft rotary union used for water service in the metals industry. Features include a recessed and hardened ground shaft and a special bronze bearing for reduced friction.

Two-passage, over-the-shaft

Design Parameters

Pressure:	4 bar (60 psi)
Temperature:	66°C (150°F)
Rotation Speed:	Up to 200 RPM
Media:	Water



Two-passage, over-the-shaft rotary union for water service on an induction roll cleaning application. Features include light-weight construction and low torque design.

Two-passage, thread mounted

Design Parameters

Pressure:	10 bar (145 psi)
Temperature:	90°C (195°F)
Rotation Speed:	Up to 12 RPM
Media:	Water



Multi-purpose, two-passage, thread mounted rotary union used for mixing glass in liquid fusion. Features include a recessed and hardened ground shaft and deep groove radial contact bearings.

Two-passage, 90 degree swivel

Design Parameters

Pressure:	6 bar (90 psi)
Temperature:	30°C (86°F)
Rotation Speed:	Swivel
Media:	Deionized Water



Two-passage, stainless steel rotary union for use on a deionised water application in the semiconductor industry. Designed with a special key-way drive, the rotary union provides a 90 degree swivel movement in 0.3 seconds and cycles every 7 to 30 seconds.

Multi-Passage Unions

Two-passage, flange mounted



Design Parameters

Pressure:	152 bar (2,200 psi)
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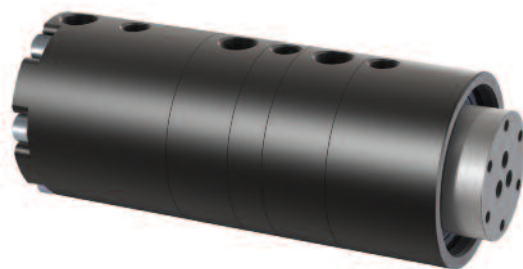
Temperature:	107°C (225°F)
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Rotation Speed:	Up to 500 RPM
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Media:	Hydraulic oil
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Multi-purpose, two-passage, hydraulic rotary union for an expanding mandrel application in the metals industry. Features include drain ports to channel oil to a safe place, as well as a ceramic coated nipple.

Three-passage, flange mounted



Design Parameters

Pressure:	15 bar (218 psi)
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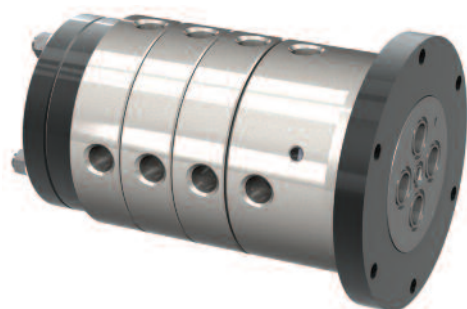
Temperature:	90°C (195°F)
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Rotation Speed:	Up to 2,000 RPM
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Media:	Oil/Coolant/Air
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Multi-purpose, three-passage, flange mounted rotary union used for CNC turning centres. Features include a recessed and hardened ground shaft, drain ports to channel leakage to a safe place, and deep groove radial contact bearings.

Four-passage, flange mounted



Design Parameters

Pressure:	103 bar (1,495 psi)
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Temperature:	107°C (225°F)
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Rotation Speed:	Up to 350 RPM
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Media:	Water
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Four-passage, flange mounted rotary union for a cooling application on a rotary capping machine. Features include ceramic coated rotor, bearings, and protective drains for vertical mounting.

Seven-passage, flange mounted

Design Parameters

Pressure:	11 bar (160 psi)
Temperature:	90°C (195°F)
Rotation Speed:	Up to 12 RPM
Media:	Air



Multi-purpose, seven-passage, flange mounted rotary union for the tire industry. Features include a recessed and hardened ground shaft, through-bore to accommodate an additional rotary union, and deep groove radial contact bearings.

Ten-passage, flange mounted

Design Parameters

Pressure:	11 bar (160 psi)
Temperature:	90°C (195°F)
Rotation Speed:	Up to 12 RPM
Media:	Air



Multi-purpose, ten-passage, flange mounted rotary union for the tire industry. Features include a recessed and hardened ground shaft, through-bore to accommodate an additional rotary union, and deep groove radial contact bearings.

12" swivel

Design Parameters

Pressure:	10 bar (145 psi)
Temperature:	185°C (365°F)
Rotation Speed:	Up to 5 RPM
Media:	Steam



Single-flow passage swivel for door hinge in the municipal waste industry. Features include a recessed and hardened ground shaft and a special bronze bearing for reduced friction.

Standard Rotary Unions

Type RX for water, thermal oil, and air ($\frac{3}{8}$ " to 6")



The RX[®] rotary union features a balanced seal and carbon-to-tungsten carbide seal package that makes the RX union more robust and able to run longer than other ball bearing designs. The RX union is supported by two widely-spaced anti-friction bearings, capable of intermittent dry running, and has the balanced seal-loading springs located outside the flow area to minimise potential for fouling. The RX rotary union is available in sizes from $\frac{3}{8}$ " to 6" and is rated up to 260°C (500°F), 10 bar (150 psi), and 3,000 RPM.

Type SX for steam and thermal oil ($\frac{3}{4}$ " to 5")



The SX[®] rotary union is designed for steam and thermal oil applications with a stationary supply pipe. Its two internal carbon-graphite bearings permit self-alignment and long operating life – even on cylinders that are not concentric. The convex seal ring and optimised seal diameter provide extended seal life and reduced maintenance for the SX union. The SX rotary union line is available in sizes from $\frac{3}{4}$ " to 5" and can be used in single or dual flow applications. The union is rated up to 343°C (650°F), 20 bar (300 psi), and 550 RPM.

Type ELS for steam and thermal oil service (2" to 16")



The ELS[™] rotary union features two carbon-graphite bearings to provide internal support for the rotary union and maintain alignment. The ELS rotary union is available in sizes from 2" to 16" and is rated up to 343°C (650°F), 20 bar (300 psi), and 200 RPM.

Type G for coolant, air, and hydraulic oil service ($\frac{1}{4}$ " to $\frac{5}{8}$ "



The G[™] high precision rotary unions are generally applied to spindles on CNC machines, gun drilling, milling, and other machinery. These rotary unions are designed for speeds up to 50,000 RPM and pressures up to 250 bar (3,600 psi) in sizes ranging from m10 ($\frac{1}{4}$ " to m16 ($\frac{5}{8}$ ").

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

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