

Metals Industry

Rotary unions for water cooling

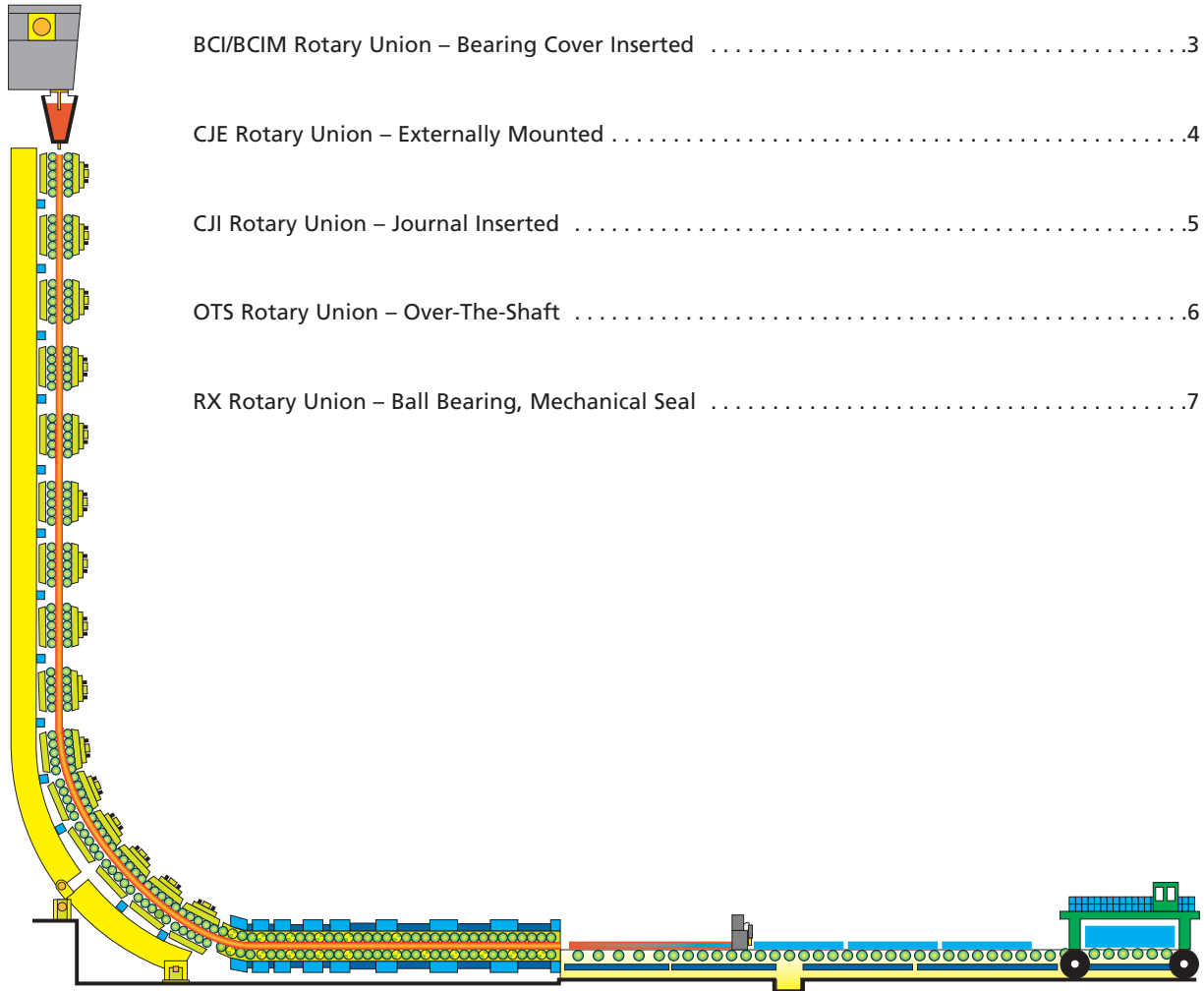
KADANT
AN ACCENT ON INNOVATION

Engineered reliability
and effective
cooling.



Increase productivity. Decrease maintenance downtime.

Rotary Unions

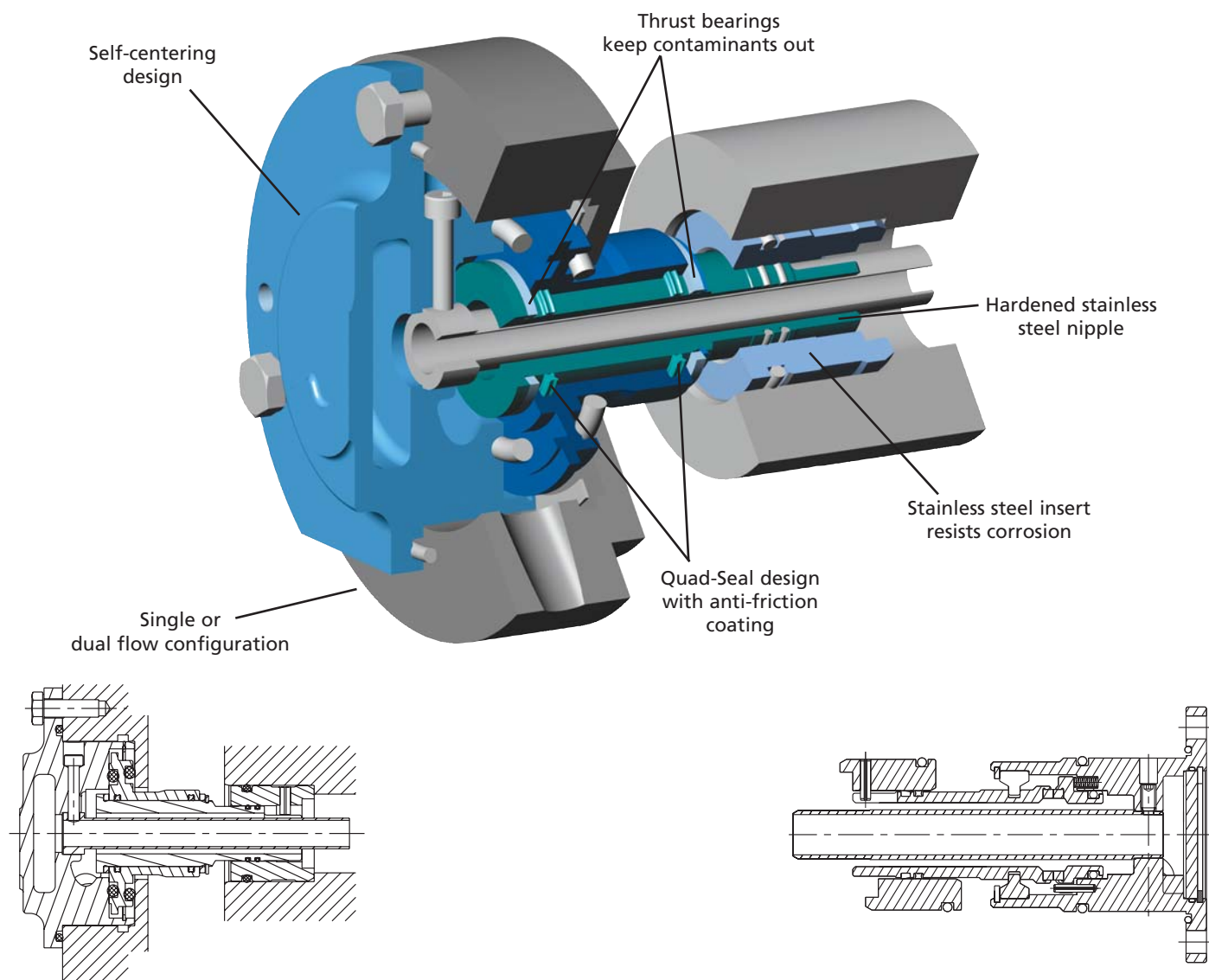


BCI/BCIM Rotary Union – Bearing Cover Inserted	3
CJE Rotary Union – Externally Mounted	4
CJI Rotary Union – Journal Inserted	5
OTS Rotary Union – Over-The-Shaft	6
RX Rotary Union – Ball Bearing, Mechanical Seal	7

About Kadant Johnson

Since 1933, Kadant Johnson has specialized in the design and manufacture of rotary joints and precision unions and in the integration of these products with systems and services. Rotary unions are sealing devices used on rotating components to convey steam, water, air, coolant, and oil. In addition to rotary unions, Kadant Johnson also supplies auxiliary products, such as vacuum breakers, flexible metal hoses, sight flow indicators, steam and air separators, and pressure-powered pumps.

Bearing Cover Inserted



Type BCI with Quad-Seal
US Patent No. 7,004,509

Type BCIM with mechanical seal

Ratings

Maximum Pressure:	150 psig (10 bar)
Maximum Temperature:	250°F (121°C)
Maximum Speed:	25 RPM
Media:	Water

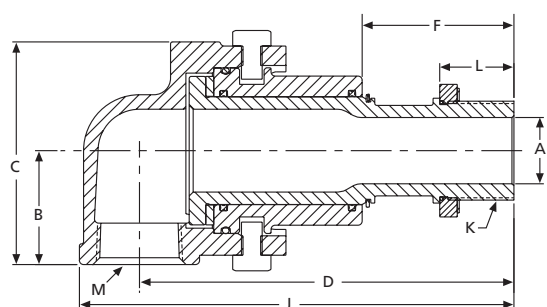
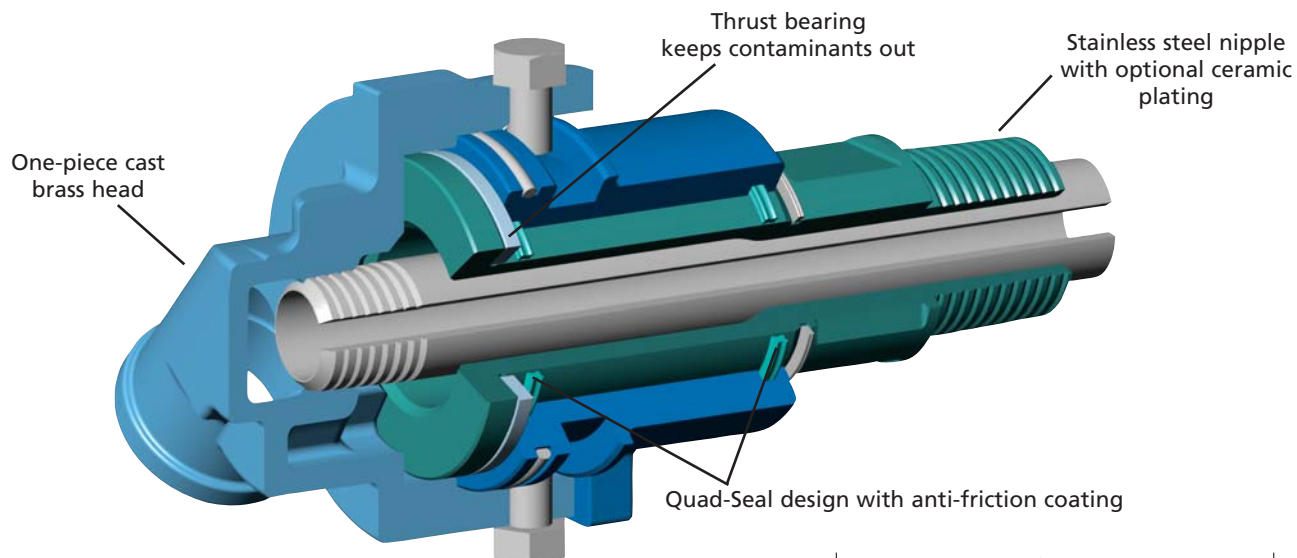
Features

- ▶ Mounts inside bearing cover
- ▶ External flexible hose eliminated
- ▶ Custom-designed and manufactured
- ▶ Available with Quad-Seal or mechanical seal
- ▶ High Cv flow values
- ▶ Can be rebuilt without removing bearing cover
- ▶ Up to 10 mm axial movement

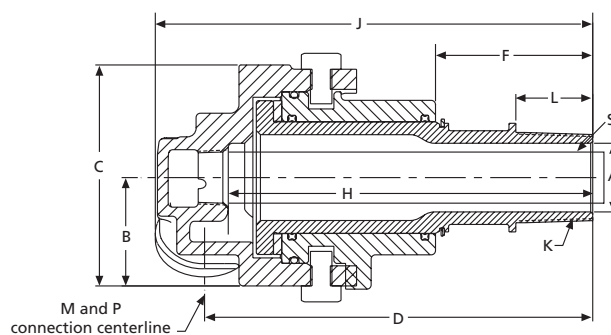
Benefits

- ▶ Rotary union protected from break-outs
- ▶ Side loading eliminated
- ▶ Application flexibility
- ▶ Multiple campaign performance
- ▶ Continuous cooling, large flow areas
- ▶ Easy installation and repair
- ▶ Accommodates thermal growth of roll

Type CJE



CJE – Single Flow



CJED – Dual Flow

Ratings

Maximum Pressure:	150 psig (10 bar)
Maximum Temperature:	250°F (121°C)
Maximum Speed:	25 RPM
Media:	Water

CJE – Single Flow

Size (K)	M	A	B	C	D	F	J	L	Units
3/4"	3/4"	0.75	1.44	2.75	4.12	1.69	4.88	0.88	inches
		19	37	69	105	43	124	22	mm
1"	3/4" – 1"	1.00	1.75	3.38	5.69	2.31	6.56	1.12	inches
		25	44	86	144	59	167	29	mm
1 1/2"	1 1/2"	1.50	2.06	4.00	7.50	2.69	8.69	1.50	inches
		38	56	102	191	68	221	38	mm

CJED – Dual Flow

Size (K)	M	P	S	A	B	C	D	F	H	J	L	Units
3/4"	3/4"	3/4"	9/16"*	0.75	1.31	2.56	4.13	1.69	4.25	4.88	0.88	inches
				19	33	65	105	43	108	22	mm	
1"	1/2" – 3/4"	1/2" – 3/4"	3/8" – 3/4"*	1.00	1.56	3.19	5.69	2.31	5.69	6.38	1.13	inches
				25	40	81	144	59	144	29	mm	
1 1/2"	3/4" – 1"	3/4" – 1"	3/4" – 1 1/8"*	1.50	1.88	3.81	7.50	2.69	7.31	8.44	1.50	inches
				38	48	97	191	68	186	38	mm	

* Tube O.D.

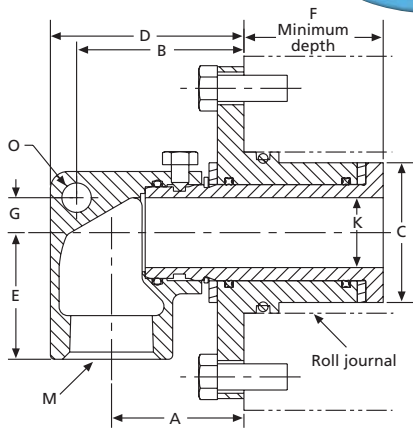
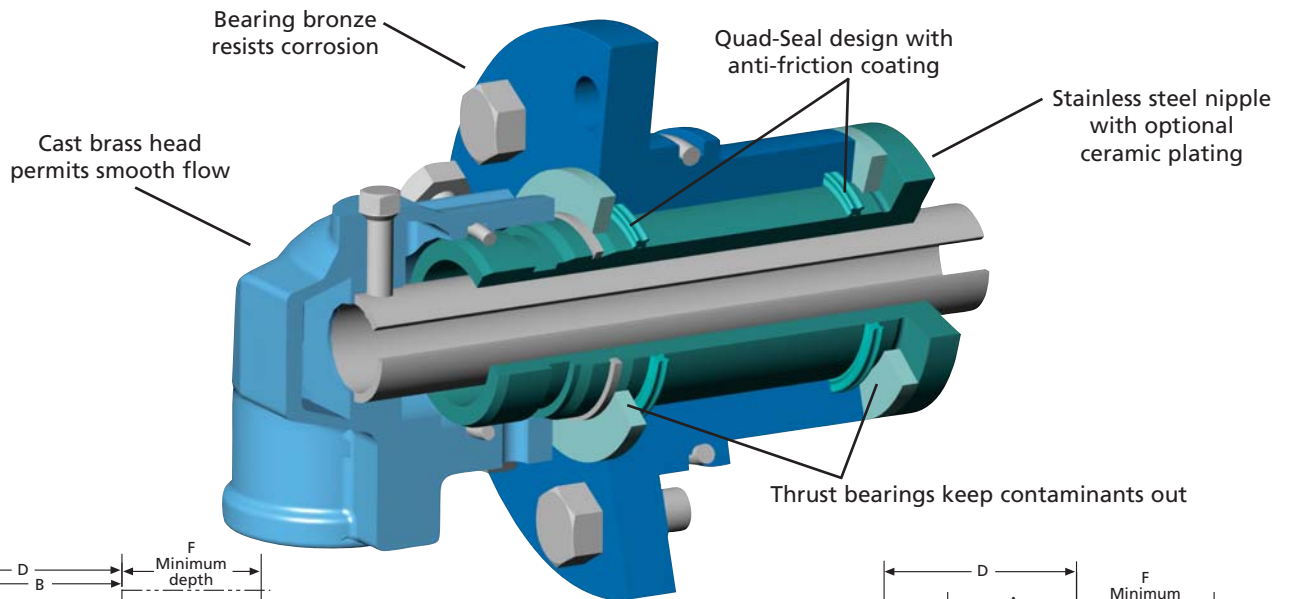
Features

- ▶ Minimum number of moving parts
- ▶ Permanently lubricated
- ▶ Large bearing area

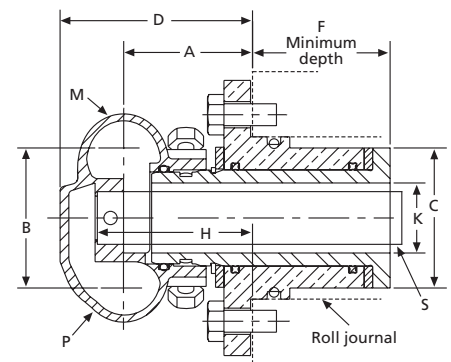
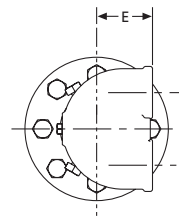
Benefits

- ▶ Simple design for easy operation
- ▶ Low maintenance requirements
- ▶ Provides shock and vibration resistance

Type CJI



CJIA – Single Flow



CJID – Dual Flow

Ratings

Maximum Pressure:	150 psig (10 bar)
Maximum Temperature:	250°F (121°C)
Maximum Speed:	100 RPM
Media:	Water

CJIA – Single Flow

Size (K)	M	A	B	C	D	E	F	G	O	Units
3/8"	3/8"	0.72	–	1.04	–	1.19	1.05	–	–	inches
		18	–	26	–	30	26	–	–	mm
3/4"	1/2" – 1"	1.75	2.25	1.63	2.63	1.81	1.38	0.50	0.44	inches
		44	57	41	67	45	35	12	11	mm
1"	1/2" – 1"	1.88	2.38	2.00	2.75	1.81	2.00	0.50	0.44	inches
		48	60	51	70	45	51	12	11	mm
1 1/2"	1 1/4" – 1 1/2"	2.63	3.38	2.75	3.75	1.88	3.25	0.81	0.44	inches
		67	86	70	95	48	83	21	11	mm

CJID – Dual Flow

Size (K)	M	P	S	A	B	C	D	E	F	H	Units
3/4"	1/2" – 3/4"	1/2" – 3/4"	3/4"*	1.56	2.00	1.63	2.50	1.56	1.38	1.94	inches
				40	51	41	64	40	35	49	mm
1"	1/2" – 3/4"	1/2" – 3/4"	3/4"*	1.69	2.00	2.00	2.63	1.56	2.00	2.12	inches
				43	51	51	67	40	51	54	mm
1 1/2"	3/4" – 1"	3/4" – 1"	1 1/8"*	2.19	2.50	2.75	3.38	1.56	3.19	2.44	inches
				56	64	70	86	40	81	62	mm

* Tube O.D.

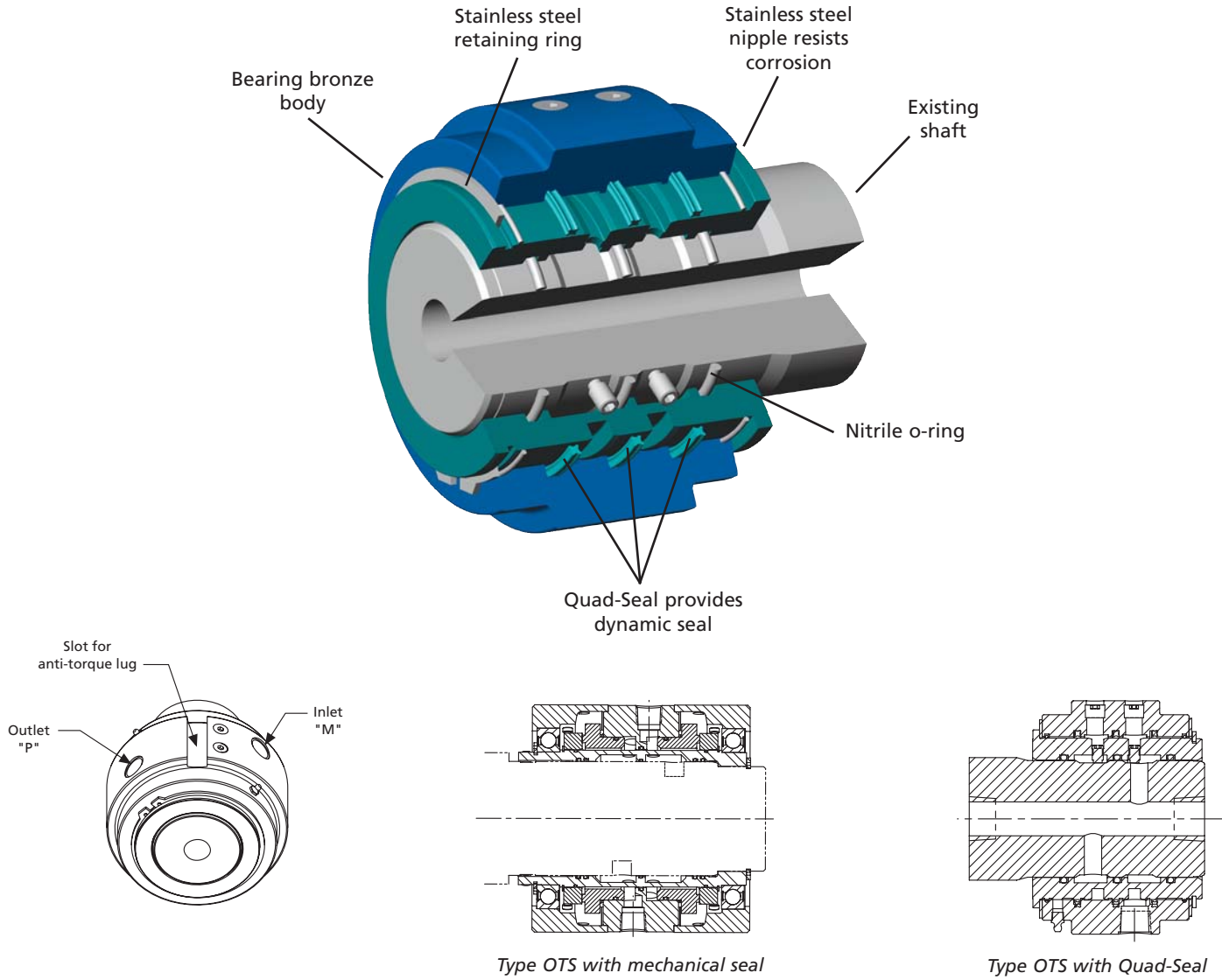
Features

- ▶ Deep grease galley
- ▶ No mechanical seal
- ▶ Quad-Ring with anti-friction coating
- ▶ Optional ceramic plated nipple

Benefits

- ▶ Optimal lubrication for multiple campaigns
- ▶ Fast and easy repair
- ▶ Extended operating life, less wear
- ▶ Minimal wear to nipple sealing area

Type OTS



	Mechanical Seal	Quad-Seal
Maximum Pressure:	150 psig (10 bar)	150 psig (10 bar)
Maximum Temperature:	220°F (105°C)	200°F (93°C)
Maximum Speed:	750 RPM	4 RPM
Media:	Water	Water

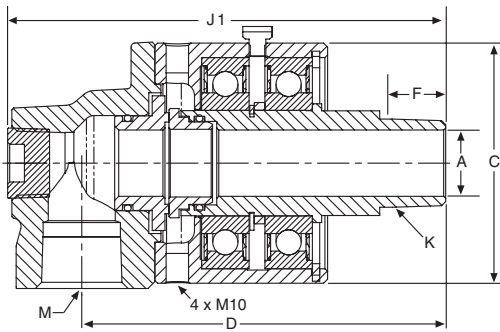
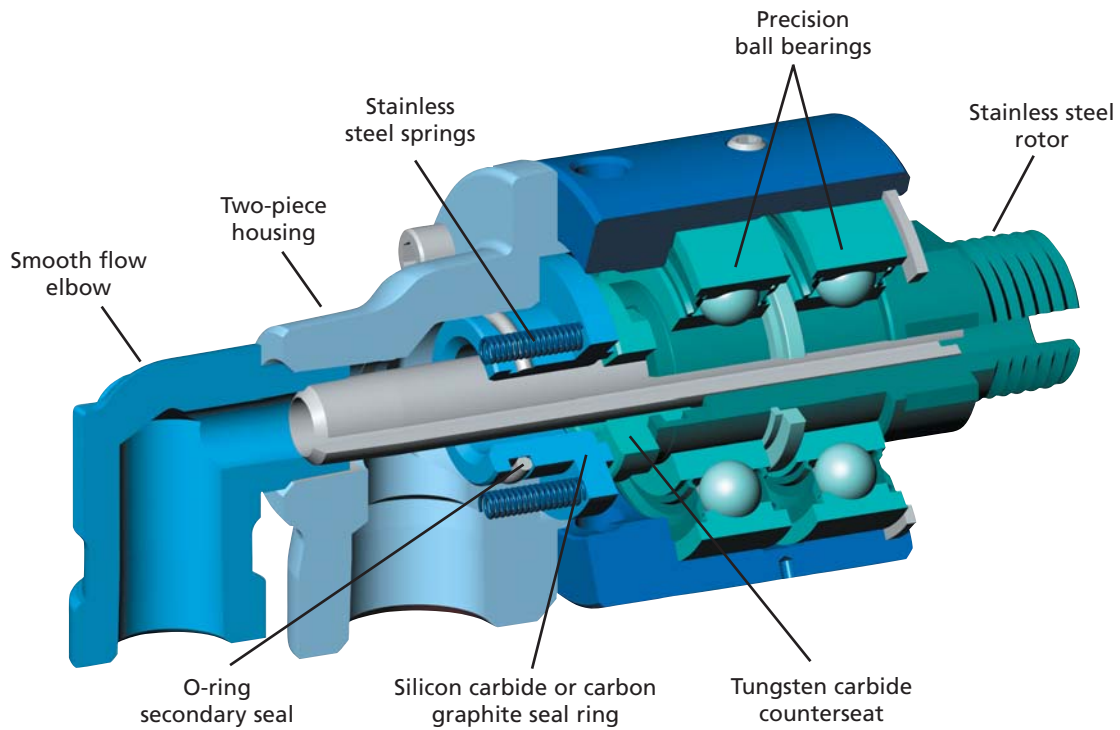
Features

- ▶ All stainless steel, bronze, and aluminum material options
- ▶ Custom-designed and manufactured
- ▶ Quad-Seal with anti-friction coating
- ▶ Simple design, minimal components
- ▶ Soft-seal repair kit available
- ▶ Mechanical seal version available for high speed

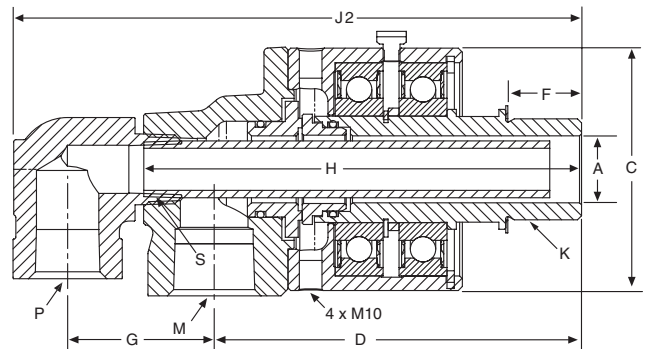
Benefits

- ▶ Highly resistant to corrosion
- ▶ Application flexibility
- ▶ Proven long-term performance
- ▶ Fast repair, long life
- ▶ Convenient ordering, simple maintenance
- ▶ Extended performance life

Type RX



Single flow



Dual flow

Ratings

Maximum Pressure:	200 psig (13 bar)
Maximum Temperature:	400°F (204°C)
Maximum Speed:	3,500 RPM
Media:	Water, Thermal Oil

Size (K)	M	P	S	A	C	D	F	G	H	J1	J2	Units
3/8"	3/8"	1/4"	1/4"	0.38	2.54	3.92	0.41	5.45	4.60	4.67	6.01	inches
				10	65	100	10	138	117	119	153	mm
1/2"	1/2"	3/8"	1/8"	0.50	2.54	4.03	0.53	5.45	4.60	4.79	6.01	inches
				13	65	102	13	138	117	122	153	mm
3/4"	3/4"	1/2"	1/4"	0.68	2.90	4.40	0.56	6.15	5.25	5.40	6.82	inches
				17	74	112	14	156	133	137	173	mm
1"	1"	1/2"	3/8"	1.00	3.58	5.43	0.66	7.60	6.47	6.54	8.40	inches
				25	91	138	17	193	164	166	213	mm
1 1/4"	1 1/4"	1"	1/2"	1.25	3.78	6.09	0.68	8.73	7.86	7.45	9.71	inches
				32	96	155	17	222	200	189	247	mm
1 1/2"	1 1/2"	3/4"	3/4"	1.50	4.57	6.86	0.68	9.56	8.11	8.36	10.54	inches
				38	116	174	17	243	206	212	268	mm

Sizes available up through 6". Dimensions shown for taper threaded rotor.

Local Assistance On A Worldwide Basis

Many suppliers have made a commitment to the international marketplace. But few have taken that commitment as far as Kadant Johnson. To assure product availability wherever it's needed, Kadant Johnson joints, syphons, and related equipment are manufactured in Asia, Europe, North America, and South America.

Because knowledgeable advice and prompt service are as important as the products, Kadant Johnson has factory-authorized representatives in nearly 150 countries. So no matter where you are, Kadant Johnson products, service, and assistance are nearby.

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www.kadant.com

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