



Rotary Unions

Type R®



Applications:

Textile
Chemical
Pharmaceutical
Plastic & Rubber
Food & Beverages
Printing/Converting/Flexo
Metal



Oil



Water



Steam



Air

EASY
MAINTENANCE



Our rotary joints are featured with a Quick Replacement Design (QRD) which allows you to repair the union while it is **STILL INSTALLED** on the machine.

It is enough to remove the blocking screws and separate the body to **replace SEAL rings and O-rings**.

WITHOUT HAVING TO REMOVE THE ROTARY UNION FROM THE MACHINE

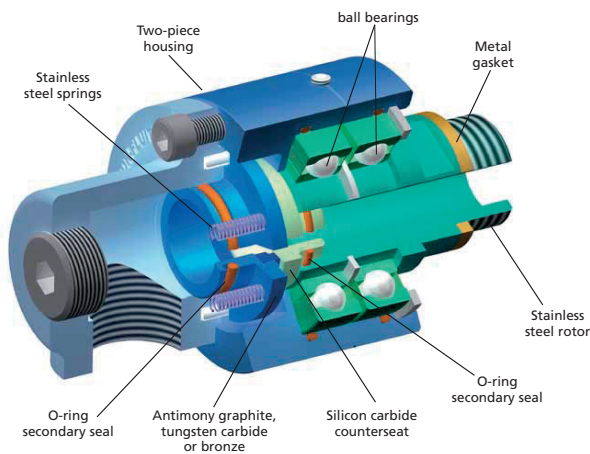


This solution allows as well to **quickly** adapt the rotary joint to fluids requiring **DIFFERENT sealing materials**

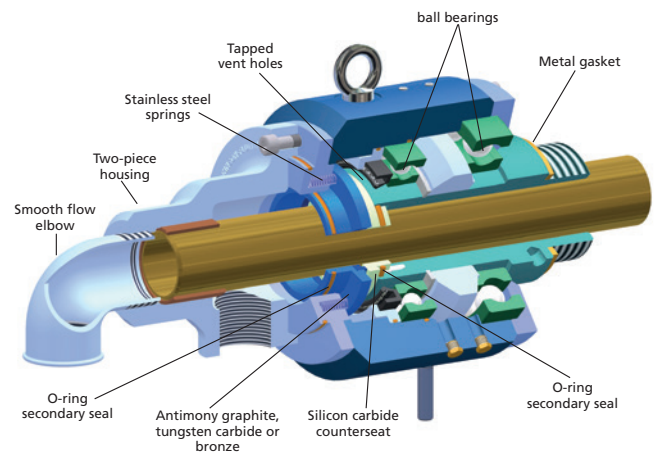
QUICK
REPLACEMENT
DESIGN

The R rotary union connects stationary piping to a rotating device. The fluid is sealed by precision, micro-lapped seals that provide a uniform, full-flow design. The union is supported by two widely-spaced anti-friction bearings and is available with a bearing isolation system for added bearing protection. The R union is capable of intermittent dry running and features a carbon graphite seal inserted in stainless steel and silicon carbide counterseat.

Single Passage Rotary Joint From 3/8" to 6"



Double Passage Rotary Joint From 3/8" to 6"



Overview



Features

- Springs located outside the flow area
- Stainless steel rotor
- Two-piece housing, on-machine seal replacement
- O-rings fully captured in glands
- Balanced seal assembly
- Full flow area
- Bearing isolation system
- Different mechanical seal material



Benefits

- Improved reliability, increased flow area
- Corrosion resistant
- Reduced down-time and cost of maintenance
- Robust design, no risk of o-ring slipping
- Extended operating life
- Low pressure drop
- Materials selected for specific service
- Increased bearing protection

Available Size from 3/8" to 6"

- Single & Double PASSAGE
- With Rotating or Stationary syphons
- Threaded or Flanged connections
- Available in Stainless Steel

R - Type 3/8" to 2"



- Temperature MAX: 120°
- Media: Water, Air, Oil
- Seal material: B3/C3

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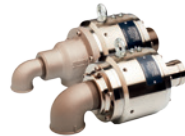
RH - Type 3/8" to 2"



- Temperature MAX: 180°
- Media: Water, Steam, Oil
- Seal material: B4/T4

pag. 6-7

R/RH- Type 2 1/2" to 6"



- Temperature MAX: 180°
- Media: Water, Air, Oil, Steam
- Seal material: B3/C3 - B4/T4

pag. 8-9

R/RH - Type 3/8" to 6"



- STAINLESS STEEL
- Temperature: 180°
- Media: Water, Air, Steam, Oil
- Seal material: B3/C3 - B4/T4

pag. 10

RHB - Type 3/8" to 6"



- CUSTOM JOINT FOR HIGH TEMPERATURES up to 400°

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Repair Kit

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Quick Release Flange

pag. 14

Fixed Flange Connections

pag. 15

Technical Data

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Quick Select Chart

Type		Media				Pressure (Max.)	Temperature (Max.)
		Water	Thermal Oil	Steam	Air	BAR	°C
3/8" to 2"	R	Recommended	Acceptable	Contact us for more info	Recommended	50	120
	RH	Recommended	Acceptable	Acceptable	Recommended	50	180
	RHB	Recommended	Acceptable	Contact us for more info	Recommended	25	400
2 1/2" to 6"	R	Recommended	Acceptable	Contact us for more info	Recommended	13	120
	RH	Recommended	Acceptable	Acceptable	Recommended	13	180
	RHB	Recommended	Acceptable	Contact us for more info	Recommended	12	400

■ Recommended
 ■ Acceptable
 ■ Contact us for more info

Do not operate unions at maximum values of pressure, temperature, and speed

Type R® - 3/8" to 2"



Water



Oil



Air

- Temperature MAX: 120°
- Seal material: B3

	Water / Oil		Air	
	Pressure	Speed	Pressure	Speed
R009	50	3000	10	1500
R012	50	2800	10	1400
R019	50	2600	10	1300
R025	50	2300	10	1150
R031	40	2000	8	1000
R038	35	1700	7	850
R050	35	1400	7	700

Size	K ISO 228-1 Rotor	M ISO 228-1 RH	Part ID			P ISO 228-1 RH	A	C	D	F	G	H1 Fixed pipe	H2 Rotary pipe	J1	J2	Q	R	S		V	V1	W	Y	⚡	Approx. Weight
			Single Flow	Dual Flow Fixed pipe	Dual Flow Rotary pipe													Fixed pipe ISO 228-1	Rotary pipe h 13						
R009	G 3/8"-RH	3/8"	R009002641	R009020550	R009020621	1/4"	10	54	80	9	34	97	109	98	125	M5	68	M6x1	6	22	16	13	M6x5	19	0.65-0.7
	G 3/8"-LH		R009006594	R009020610	R009020622																				
R012	G 1/2"-RH	1/2"	R012001963	R012002296	R012019858	3/8"	13	59	90	12	40	110	120	110	142	M6	77	1/8"	10	23	17	14	M10x5	24	0.85-0.95
	G 1/2"-LH		R012004960	R012002295	R012020623																				
R019	G 3/4"-RH	3/4"	R019003061	R019004475	R019020624	1/2"	16	67	106	14	49	131	144	132	170	M8	89	1/4"	13	27,5	19	16	∅ 8,7x5	30	1.4-1.6
	G 3/4"-LH		R019003062	R019020611	R019020625																				
R025	G 1"-RH	1"	R025010909	R025009768	R025005179	1/2"	25	82	120	16	55	149	163	150	192	M8	99	3/8"	16	34	22	19	∅ 8,7x5	36	2.1-2.4
	G 1"-LH		R025020546	R025008933	R025020626																				
R031	G 1-1/4"-RH	1-1/4"	R031003361	R031020614	R031020628	3/4"	32	93	134	19	67	172	188	173	221	M10	112	1/2"	22	38,5	23	23	∅ 8,7x5	46	3.0-3.5
	G 1-1/4"-LH		R031003362	R031020613	R031020629																				
R038	G 1-1/2"-RH	1-1/2"	R038003436	R038008225	R038020631	3/4"	38	108	146	20	75	189	209	190	241	M10	120	3/4"	26	44,5	29	24	∅ 10x5	55	4.3-4.9
	G 1-1/2"-LH		R038003437	R038020616	R038020632																				
R050	G 2"-RH	2"	R050020608	R050021182	R050002497	1-1/4"	48	120	154	23	93	205	222	203	277	M10	125	1"	32,2	48,5	36	24	∅ 12x5	60	5.4-6.6
	G 2"-LH		R050002800	R050020619	R050020634																				

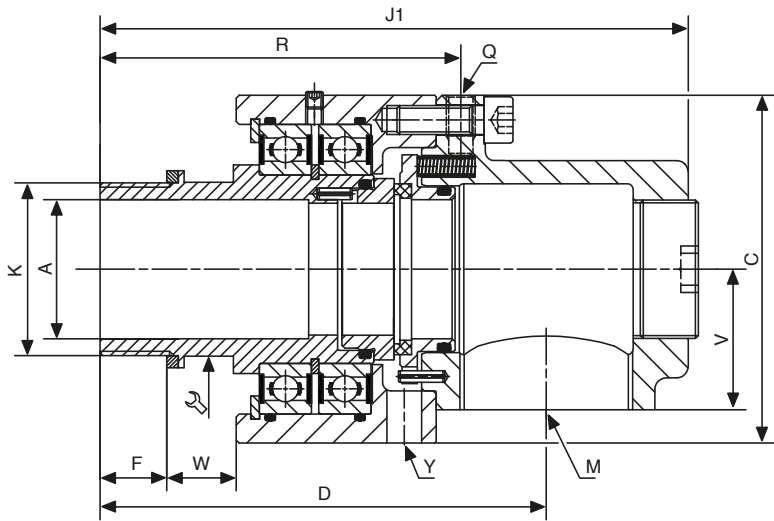


Water with particles

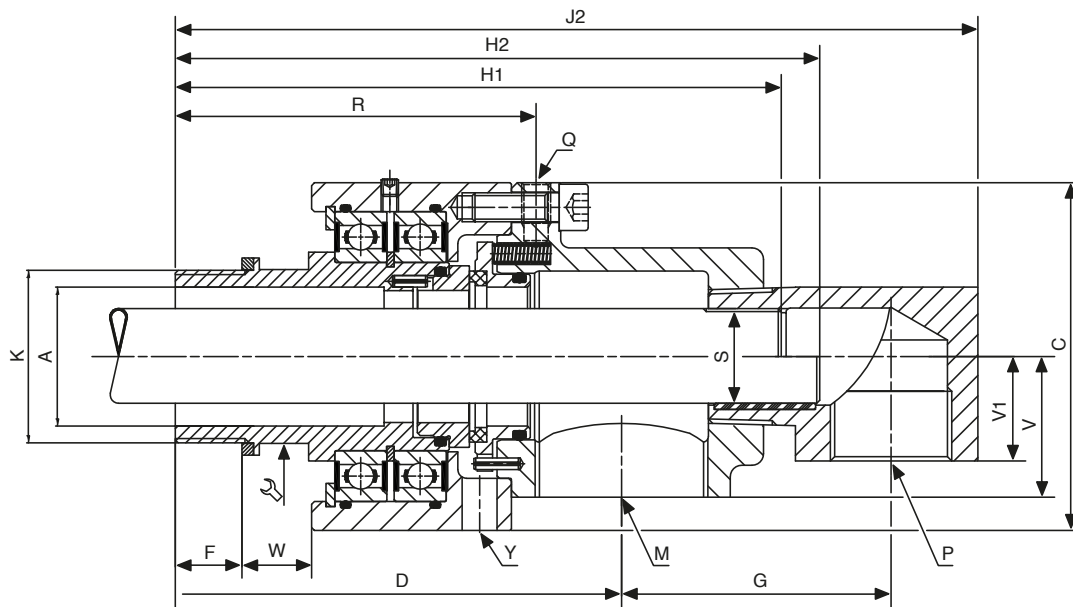
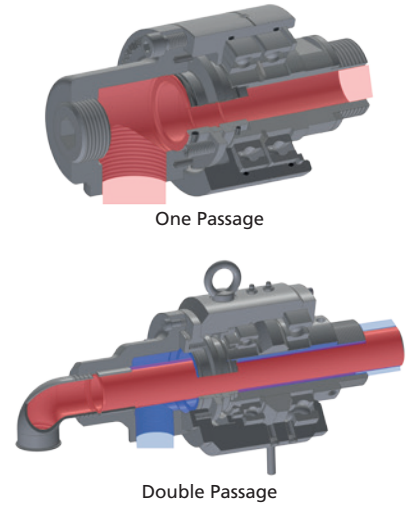
- Temperature MAX: 120°
- Seal material: C3

	Water	
	Pressure	Speed
R009	50	3000
R012	50	2800
R019	50	2600
R025	50	2300
R031	40	2000
R038	35	1700
R050	35	1400

Size	K ISO 228-1	M ISO 228-1 RH	Part ID			P ISO 228-1 RH	A	C	D	F	G	H1 Fixed pipe	H2 Rotary pipe	J1	J2	Q	R	S		V	V1	W	Y	⚡	Approx. Weight
			Single Flow	Dual Flow Fixed pipe	Dual Flow Rotary pipe													Fixed pipe ISO 228-1	Rotary pipe h 13						
R009	G 3/8"-RH	3/8"	R009002376	R009020644	R009020659	1/4"	10	54	80	9	34	97	109	98	125	M5	68	M6x1	6	22	16	13	M6x5	19	0.65-0.7
	G 3/8"-LH		R009014221	R009020645	R009020660																				
R012	G 1/2"-RH	1/2"	R012011330	R012010773	R012020661	3/8"	13	59	90	12	40	110	120	110	142	M6	77	1/8"	10	23	17	14	M10x5	24	0.85-0.95
	G 1/2"-LH		R012020636	R012020646	R012020662																				
R019	G 3/4"-RH	3/4"	R019002344	R019005077	R019020663	1/2"	16	67	106	14	49	131	144	132	170	M8	89	1/4"	13	27,5	19	16	∅ 8,7x5	30	1.4-1.6
	G 3/4"-LH		R019003245	R019020647	R019003336																				
R025	G 1"-RH	1"	R025003360	R025020648	R025020664	1/2"	25	82	120	16	55	149	163	150	192	M8	99	3/8"	16	34	22	19	∅ 8,7x5	36	2.1-2.4
	G 1"-LH		R025003505	R025020649	R025020665																				
R031	G 1-1/4"-RH	1-1/4"	R031020638	R031020651	R031020667	3/4"	32	93	134	19	67	172	188	173	221	M10	112	1/2"	22	38,5	23	23	∅ 8,7x5	46	3.0-3.5
	G 1-1/4"-LH		R031020639	R031020652	R031020668																				
R038	G 1-1/2"-RH	1-1/2"	R038006621	R038020654	R03820670	3/4"	38	108	146	20	75	189	209	190	241	M10	120	3/4"	26	44,5	29	24	∅ 10x5	55	4.3-4.9
	G 1-1/2"-LH		R038012107	R038008716	R038020671																				
R050	G 2"-RH	2"	R050019572	R050020656	R050011274	1-1/4"	48	120	154	23	93	205	222	203	277	M10	125	1"	32,2	48,5	36	24	∅ 12x5	60	5.4-6.6
	G 2"-LH		R050006143	R050020657	R050015641																				



Single flow straight thread rotor



Dual flow rotary straight thread rotor



Special Features available for all Rotary Joints



The FDA (Food and Drug Administration) is a scientific, regulatory, public health agency within the United States Department of Health and Human Services.

FDA is responsible for the safety of the United States' foods, cosmetics, drugs, biologics, medical devices, and radiological products. It is one of the United States' oldest consumer protection agencies.



Type RH® - 3/8" to 2"



Water



Steam

- Temperature MAX: 180°
- Seal material: B4

Water Steam

	Water		Steam	
	Pressure	Speed	Pressure	Speed
RH009	25	3000	25	1500
RH012	25	2800	25	1400
RH019	25	2600	25	1300
RH025	25	2300	25	1150
RH031	25	2000	20	1000
RH038	17,5	1700	17,5	850
RH050	17,5	1400	17,5	700

Size	K ISO 228-1 Rotor	M ISO 228-1 RH	Part ID			P ISO 228-1 RH	A	C	D	F	G	H1 Fixed pipe	H2 Rotary pipe	J1	J2	Q	R	S		V	V1	W	Y	Hand	Approx. Weight
			Single Flow	Dual Flow Fixed pipe	Dual Flow Rotary pipe													Fixed pipe ISO 228-1	Rotary pipe h 13						
RH009	G 3/8"-RH	3/8"	RH009020674	RH009015360	RH009020687	1/4"	10	54	80	9	34	97	109	98	125	M5	68	M6x1	6	22	16	13	M6x5	19	0.65-0.7
	G 3/8"-LH		RH009020675	RH009020681	RH009020688																				
RH012	G 1/2"-RH	1/2"	RH012014450	RH012016168	RH012020689	3/8"	13	59	90	12	40	110	120	110	142	M6	77	1/8"	10	23	17	14	M10x5	24	0.85-0.95
	G 1/2"-LH		RH012014451	RH012020682	RH012020690																				
RH019	G 3/4"-RH	3/4"	RH019005373	RH019016700	RH019013300	1/2"	16	67	106	14	49	131	144	132	170	M8	89	1/4"	13	27,5	19	16	∅ 8,7x5	30	1.4-1.6
	G 3/4"-LH		RH019005372	RH019016701	RH019015652																				
RH025	G 1"-RH	1"	RH025012056	RH025004244	RH025004970	1/2"	25	82	120	16	55	149	163	150	192	M8	99	3/8"	16	34	22	19	∅ 8,7x5	36	2.1-2.4
	G 1"-LH		RH025014183	RH025004245	RH025020691																				
RH031	G 1-1/4"-RH	1-1/4"	RH031015341	RH031015651	RH031005355	3/4"	32	93	134	19	67	172	188	173	221	M10	112	1/2"	22	38,5	23	23	∅ 8,7x5	46	3.0-3.5
	G 1-1/4"-LH		RH031014184	RH031014743	RH031020693																				
RH038	G 1-1/2"-RH	1-1/2"	RH038012205	RH038016335	RH038007158	3/4"	38	108	146	20	75	189	209	190	241	M10	120	3/4"	26	44,5	29	24	∅ 10x5	55	4.3-4.9
	G 1-1/2"-LH		RH038012206	RH038020092	RH038009571																				
RH050	G 2"-RH	2"	RH050005419	RH050009923	RH050007542	1-1/4"	48	120	154	23	93	205	222	203	277	M10	125	1"	32,2	48,5	36	24	∅ 12x5	60	5.4-6.6
	G 2"-LH		RH050020679	RH050016844	RH050015389																				



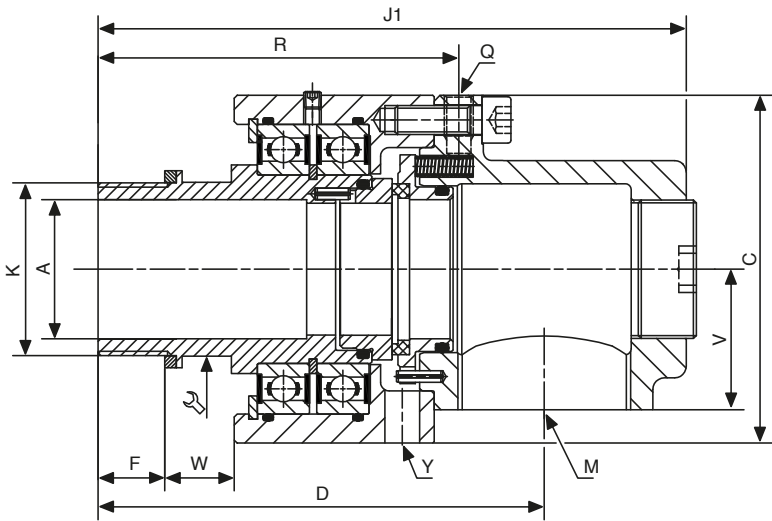
Oil

- Temperature MAX: 180°
- Seal material: T4

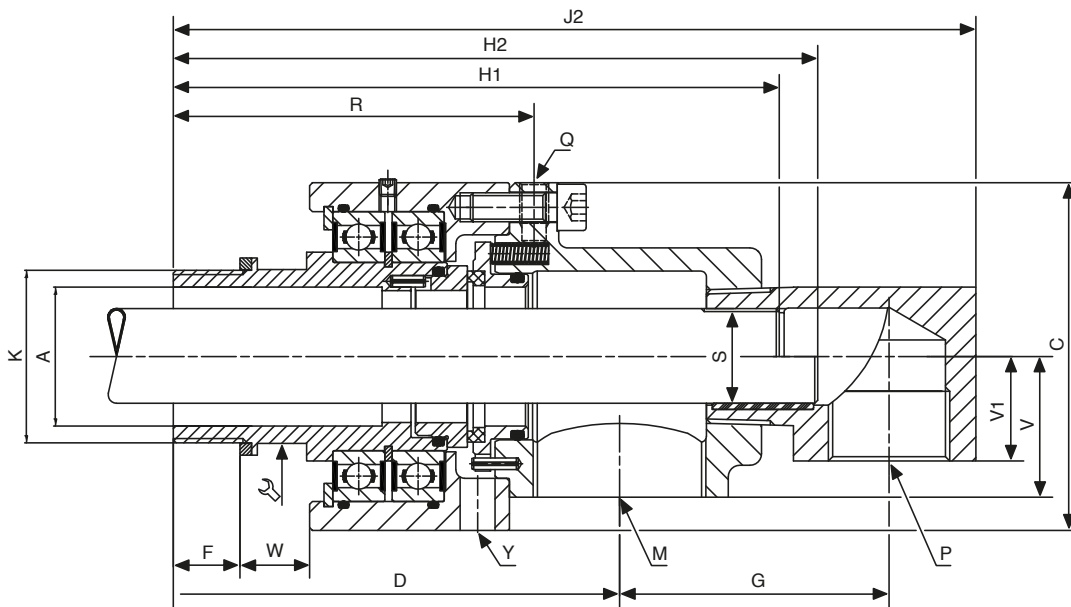
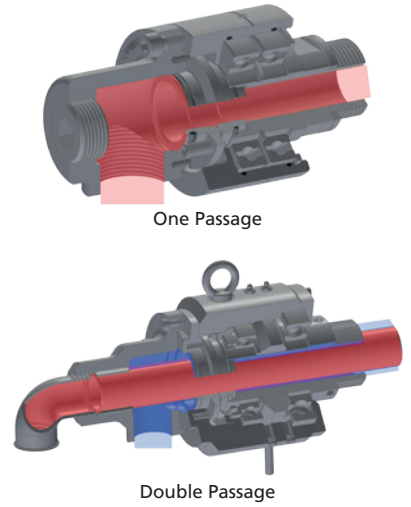
Oil

	Pressure	Speed
RH009	25	3000
RH012	25	2800
RH019	25	2600
RH025	25	2300
RH031	25	2000
RH038	17,5	1700
RH050	17,5	1400

Size	K ISO 228-1 Rotor	M ISO 228-1 RH	Part ID			P ISO 228-1 RH	A	C	D	F	G	H1 Fixed pipe	H2 Rotary pipe	J1	J2	Q	R	S		V	V1	W	Y	Hand	Approx. Weight
			Single Flow	Dual Flow Fixed pipe	Dual Flow Rotary pipe													Fixed pipe ISO 228-1	Rotary pipe h 13						
RH009	G 3/8"-RH	3/8"	RH009020696	RH009020907	RH009020919	1/4"	10	54	80	9	34	97	109	98	125	M5	68	M6x1	6	22	16	13	M6x5	19	0.65-0.7
	G 3/8"-LH		RH009020697	RH009020908	RH009020920																				
RH012	G 1/2"-RH	1/2"	RH012015347	RH012017148	RH012020921	3/8"	13	59	90	12	40	110	120	110	142	M6	77	1/8"	10	23	17	14	M10x5	24	0.85-0.95
	G 1/2"-LH		RH012020698	RH012020909	RH012020922																				
RH019	G 3/4"-RH	3/4"	RH019020699	RH019015438	RH019020923	1/2"	16	67	106	14	49	131	144	132	170	M8	89	1/4"	13	27,5	19	16	∅ 8,7x5	30	1.4-1.6
	G 3/4"-LH		RH019020700	RH019020910	RH019020924																				
RH025	G 1"-RH	1"	RH025006969	RH025016987	RH025015689	1/2"	25	82	120	16	55	149	163	150	192	M8	99	3/8"	16	34	22	19	∅ 8,7x5	36	2.1-2.4
	G 1"-LH		RH025006970	RH025020911	RH025020926																				
RH031	G 1-1/4"-RH	1-1/4"	RH031016774	RH031015374	RH031020928	3/4"	32	93	134	19	67	172	188	173	221	M10	112	1/2"	22	38,5	23	23	∅ 8,7x5	46	3.0-3.5
	G 1-1/4"-LH		RH031020902	RH031018271	RH031020929																				
RH038	G 1-1/2"-RH	1-1/2"	RH038017083	RH038020914	RH038007794	3/4"	38	108	146	20	75	189	209	190	241	M10	120	3/4"	26	44,5	29	24	∅ 10x5	55	4.3-4.9
	G 1-1/2"-LH		RH038020904	RH038020915	RH038020931																				
RH050	G 2"-RH	2"	RH050017082	RH050020917	RH050020933	1-1/4"	48	120	154	23	93	205	222	203	277	M10	125	1"	32,2	48,5	36	24	∅ 12x5	60	5.4-6.6
	G 2"-LH		RH050018024	RH050019406	RH050020934																				



Single flow straight thread rotor



Dual flow rotary straight thread rotor



Special Features available for all Rotary Joints



The ATEX directive consists of two EU directives describing what equipment and work environment is allowed in an environment with an explosive atmosphere. Johnson Fluiten supplies most of its products with ATEX approval according to Art.8, Par.1 & 3 of 94/9/CE European Directive: II 2 GD c X. Please consult your sales contact for confirmation for your product requirements.



Type R/RH® - 2 1/2" to 6"



Water



Air

- Temperature MAX: 120°
- Seal material: B3

	Water		Air	
	Pressure	Speed	Pressure	Speed
R064-076	25	750	10	375
R089	20	700	5	375
R102	20	600	5	350
R125	20	500	4	300
R150	10	400	3	200

Size	K Rotor ISO 228.1 (threaded) h8 (flanged)	M single flow ISO-228/1 RH	Part ID			M+P double passage ISO-228/1 RH	A	B	C	D single / double	F	G	H1 Fixed
			Single flow	Dual flow Fixed Pipe	Dual flow Rotary Pipe								
R064	G 2-1/2"-RH	2-1/2"	R064024421	R064022872	R064019629	1-1/2"	60	35	180	305 / 245	32	135	292
	G 2-1/2"-LH		R064024422	R064022873	R064025542								
	72,08 flanged		R064022894	R064030140	R064019646								
R076	G 3"-RH	3"	R076026401	R076019651	R076022913	2"	72	35	205	355 / 289	42	165	345
	G 3"-LH		R076026402	R076022911	R076022912								
	87,12 flanged		R076019637	R076021327									
R089	G 3-1/2"-RH	4"	R089030168	CF	R089025531	2"	81	60	230	395/309	45	165	366
	G 3-1/2"-LH		R089026424	R089030145	R089025541								
	99,82 flanged		R089028654	R089024904	R089019645								
R102	G 4"-RH	4"	R102026403	R102028693	R102022561	2-1/2"	95	60	262	425/ 352	50	188	420
	G 4"-LH		R102026404	R102028694	CF								
	112,5 flanged		R102026442	R102023525	R102026447								
R125	G 5" RH	5"	CF	CF	CF	3"	118	60	305	570/408		211	490
	G 5" LH		CF	CF	CF								
	138,99 flanged		CF	CF	R125030149								
R150	G 6" RH	6"	CF	CF	CF	4"	145	60	352			253	545
	G 6" LH		CF	CF	CF								
	167,5 flanged		CF	CF	R150033361								



Water



Steam



Oil

- Temperature MAX: 180°
- Seal material: B4/T4*

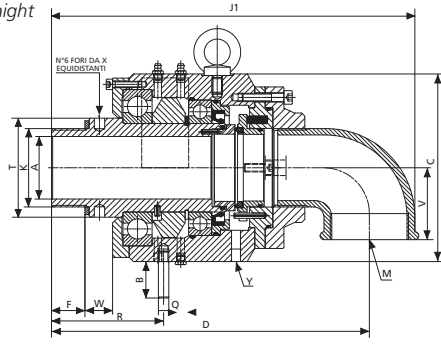
	Water		Steam		Oil	
	Pressure	Speed	Pressure	Speed	Pressure	Speed
RH064-R076	12,5	750	12,5	750	12,5	750
RH089	12,5	700	12,5	700	12,5	700
RH102	10	600	10	600	10	600
RH125	10	500	10	500	10	500
RH150	7,5	400	7,5	400	7,5	400

* Code Referring to Seal Material B4, for T4 data CONTACT US

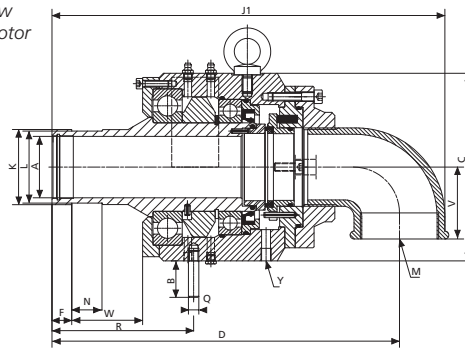
Size	K Rotor ISO 228.1 (threaded) h8 (flanged)	M single flow ISO-228/1 RH	Part ID			M+P double passage ISO-228/1 RH	A	B	C	D single / double	F	G	H1 Fixed Pipe
			Single flow	Dual flow Fixed Pipe	Dual flow Rotary Pipe								
RH064	G 2-1/2"-RH	2-1/2"	RH064028661	RH064025520	RH064025550	1-1/2"	60	35	180	305 / 245	32	135	345
	G 2-1/2"-LH		RH064028662	RH064038638	RH064026400								
	72,08 flanged		RH064022961	RH064036885	RH064022943								
RH076	G 3"-RH	3"	CF	RH076019649	CF	2"	72	35	205	355 / 289	42	165	346
	G 3"-LH		CF	RH076019650	CF								
	87,12 flanged		CF	CF	RH076024903								
RH089	G 3-1/2"-RH	4"	RH089024451	CF	RH089016689	2"	81	60	230	395/309	45	165	366
	G 3-1/2"-LH		RH089024452	CF	CF								
	99,82 flanged		CF	CF	RH089033383								
RH102	G 4"-RH	4"	CF	CF	CF	2-1/2"	95	60	262	425/ 352	50	188	420
	G 4"-LH		CF	CF	CF								
	112,5 flanged		CF	CF	RH102028691								
RH125	G 5" RH	5"	CF	CF	CF	3"	118	60	305	570/408		211	490
	G 5" LH		CF	CF	CF								
	138,99 flanged		CF	CF	RH125030192								
RH150	G 6" RH	6"	CF	CF	CF	4"	145	60	352			253	545
	G 6" LH		CF	CF	CF								
	167,5 flanged		CF	CF	CF								



single flow straight thread rotor



single flow flanged rotor

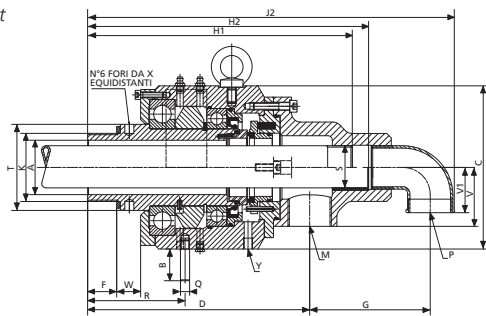


INSTALLATION INSTRUCTIONS

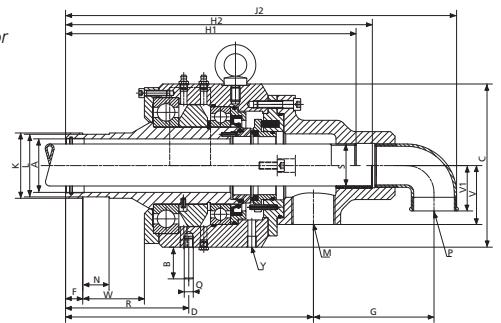


H2 Rotary Pipe	J1	J2	L h8	N	Q	R	S		T f(8)	V single/double	V1	W	Y ISO 228/1	Approx. Weight Single-Double passage
							Fixed Pipe ISO 228-1	Rotary Pipe h 13						
310	349,0	404,5			10	107,5	1-1/2"	45	95	69 / 65	50	26,5	5 x G 1/8"	22-28
338,5	377	433	69,09	29	10	136	1-1/2"	45		69 / 65	50	68	5 x G 1/8"	22-28
370	404,4	480			10	132	2"	60	112	80 / 75	58	33	5 x G 1/8"	30-32,5
390	424,4	500	84,12	33,3	10	152	2"	60		80 / 75	58	72,65	5 x G 1/8"	30-32,5
390	462,0	500			16	139,5	2"	60	124	98 / 85	58	33,5	5 x G 1/8"	42-50
429,5	502	540	96,85	36,6	16	179	2"	60		98 / 85	58	92,6	5 x G 1/8"	42-50
445	494,7	581			16	165	2-1/2"	75	144	98 / 95	69		5 x G 1/8"	52-70
474	523,7	610	109,55	38,1	16	194	2-1/2"	75		98 / 95	69	96,6	5 x G 1/8"	52-70
		694			16		3"	88		x / 105	80		5 x G 1/4"	92-98
540,5		793,5	135,74	44,5	16	225	3"	88		x / 105	80	110,25	5 x G 1/4"	92-98
					16		4"	110		x / 130	98		5 x G 1/4"	125-145
607			165,1	44,5	16	240	4"	110		x / 130	98	115,25	5 x G 1/4"	125-145

dual flow straight thread rotor



dual flow flanged rotor



H2 Rotary Pipe	J1	J2	L h8	N	Q	R	S		T f(8)	V double	V1	W	Y ISO 228/1	Approx. Weight Single-Double passage
							Fixed Pipe ISO 228-1	Rotary Pipe h 13						
310	349,0	404,5			10	107,5	1-1/2"	45	95	69 / 65	50	26,5	5 x G 1/8"	22-28
338,5	377	433	69,09	29	10	136	1-1/2"	45		69 / 65	50	68	5 x G 1/8"	22-28
370	404,4	480			10	132	2"	60	112	80 / 75	58	33	5 x G 1/8"	30-32,5
390	424,4	500	84,12	33,3	10	152	2"	60		80 / 75	58	72,65	5 x G 1/8"	30-32,5
390	462,0	500			16	139,5	2"	60	124	98 / 85	58	33,5	5 x G 1/8"	42-50
429,5	502	540	96,85	36,6	16	179	2"	60		98 / 85	58	92,6	5 x G 1/8"	42-50
445	494,7	581			16	165	2-1/2"	75	144	98 / 95	69		5 x G 1/8"	52-70
474	523,7	610	109,55	38,1	16	194	2-1/2"	75		98 / 95	69	96,6	5 x G 1/8"	52-70
		694			16		3"	88		x / 105	80		5 x G 1/4"	92-98
540,5		793,5	135,74	44,5	16	225	3"	88		x / 105	80	110,25	5 x G 1/4"	92-98
					16		4"	110		x / 130	98		5 x G 1/4"	125-145
607			165,1	44,5	16	240	4"	110		x / 130	98	115,25	5 x G 1/4"	125-145

Type R/RH® STAINLESS STEEL - 3/8" to 6"

Go to our website



Water



Oil



Air

- Temperature: 120°
- Seal material: B3/C3 - B4/T4*

* Codes Referring to Seal Material B3 for C3-B4-T4 contact us

Water / Oil Air

	Water / Oil		Air	
	Pressure	Speed	Pressure	Speed
R009	50	3000	10	1500
R012	50	2800	10	1400
R019	50	2600	10	1300
R025	50	2300	10	1150
R031	40	2000	8	1000
R038	35	1700	7	850
R050	35	1400	7	700

Size	K ISO 228-1 Rotor	M ISO 228-1 RH	Part ID			P ISO 228-1 RH	A	C	D	F	G	H1 Fixed pipe	H2 Rotary pipe	J1	J2	Q	R	S		V	V1	W	Y	⌀	Approx. Weight	
			Single Flow	Dual Flow Fixed pipe	Dual Flow Rotary pipe													Fixed pipe ISO 228-1	Rotary pipe h 13							
R009	G 3/8"-RH	3/8"	R009021575	R009025543	R009049005	1/4"	10	54	80	9	34	97	109	98	125	M5	80	M6x1	6	22	16	13	M6x5	19	0.65-0.7	
	G 3/8"-LH		R009024783	cf	cf																					
R012	G 1/2"-RH	1/2"	R012021618	R012036643	R0012038691	3/8"	13	59	90	12	40	110	120	110	142	M6	89	1/8"	10	23	17	14	M10x5	24	0.85-0.95	
	G 1/2"-LH		R012033393	R012036642	cf																					
R019	G 3/4"-RH	3/4"	R019021507	R019047505	R019047349	1/2"	16	67	106	14	49	131	144	132	170	M8	89	1/4"	13	27,5	19	16	⌀ 8,7x5	30	1.4-1.6	
	G 3/4"-LH		R019038645	R019038649	cf																					
R025	G 1"-RH	1"	R025012003	R025022043	R025008209	1/2"	25	82	120	16	55	149	163	150	192	M8	99	3/8"	16	34	22	19	19	⌀ 8,7x5	36	2.1-2.4
	G 1"-LH		R025026425	R025038646	R025036863																					
R031	G 1-1/4"-RH	1-1/4"	R031038647	R031022939	R031030107	3/4"	32	93	134	19	67	172	188	173	221	M10	112	1/2"	22	38,5	23	23	23	⌀ 8,7x5	46	3.0-3.5
	G 1-1/4"-LH		R031028686	R031038652	R031038651																					
R038	G 1-1/2"-RH	1-1/2"	R038016865	cf	R038030173	3/4"	38	108	146	20	75	189	209	190	241	M10	149	3/4"	26	44,5	29	24	24	⌀ 10x5	55	4.3-4.9
	G 1-1/2"-LH		R038026448	cf	R038038648																					
R050	G 2"-RH	2"	R050022923	cf	R050022874	1-1/4"	48	120	154	23	93	205	222	203	277	M10	125	1"	32,2	48,5	36	24	24	⌀ 12x5	60	5.4-6.6
	G 2"-LH		R050023508	cf	R050036874																					



Water



Oil



Steam



Air

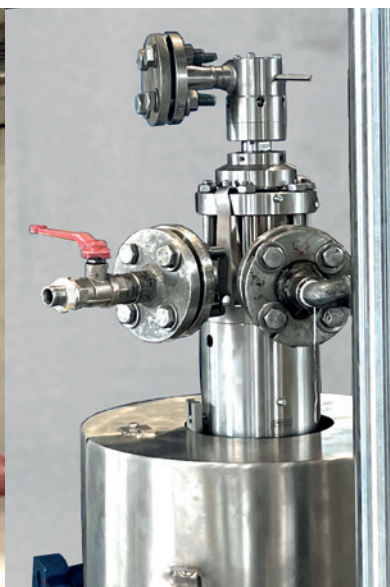
- Temperature: 180°
- Seal material: B3/C3 - B4/T4

Water / Oil Steam Air

	Water / Oil		Steam		Air	
	Pressure	Speed	Pressure	Speed	Pressure	Speed
RH064-R076	12,5	750	12,5	750	10	375
RH089	12,5	700	12,5	700	5	375
RH102	10	600	10	600	5	350
RH125	10	500	10	500	4	300
RH150	7,5	400	7,5	400	3	200



De Dietrich Process Systems



RH Joint for pharmaceutical application



Repair Kit Items

Easy seal replacement

The R line has a unique feature. The line from ¾" to 6" is featured with a repair kit, which consists of the sealings, springs and gaskets. This feature will allow you to repair the R union while the union is still installed on the machine.

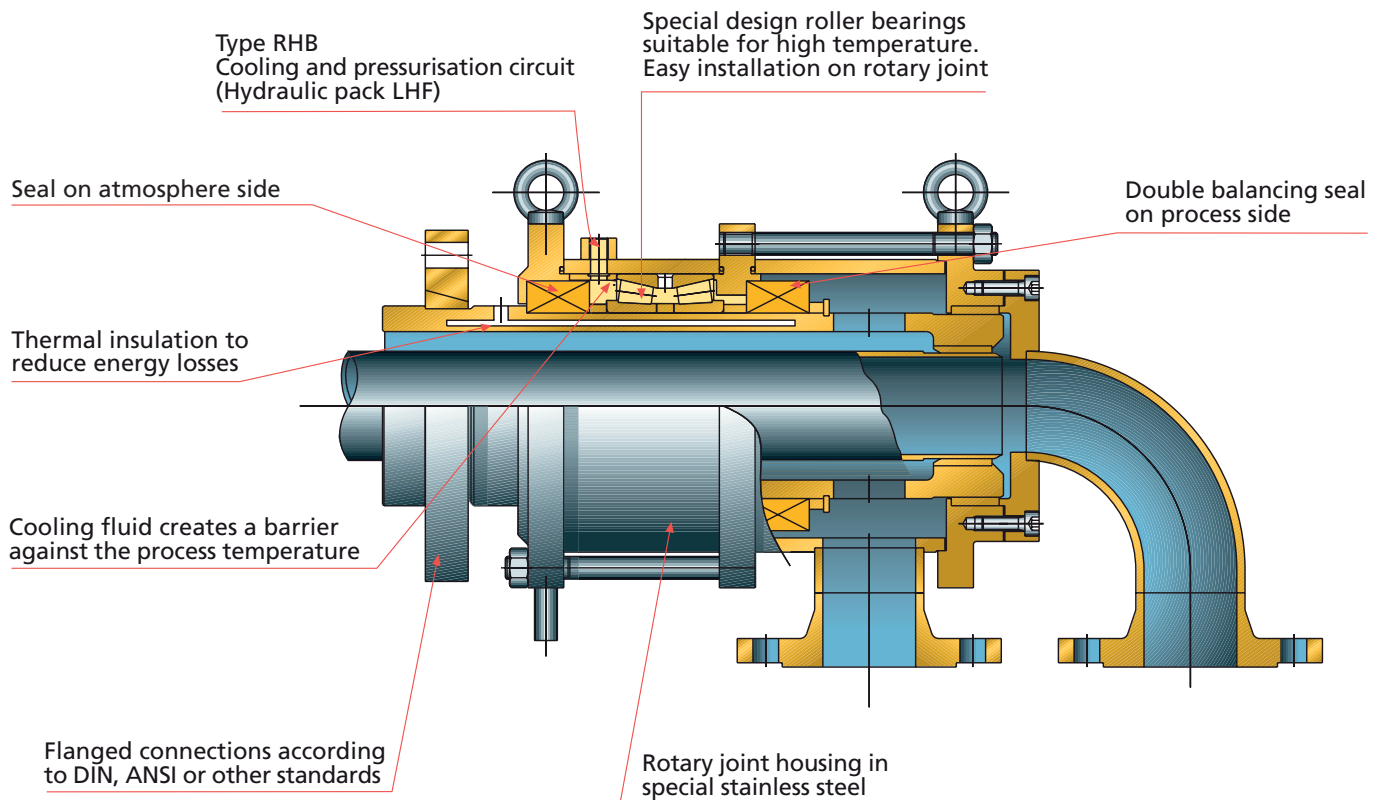
The Johnson-Fluiten R union is the only one offering this feature in a ball bearing line. The R union is designed for long operating life and short maintenance time to guarantee the best operating times for your product line.

Size	B3	C3	B4	T4
R-RH 019	KR019005348	KR019003383	KRH019015716	KRH019016114
R-RH 025	KR025020943	KR025012728	KRH025005664	KRH025017738
R-RH 031	KR031003585	KR031020947	KRH031015717	KRH031020074
R-RH 038	KR038004210	KR038015855	KRH038007591	KRH038016115
R-RH 050	KR050020944	KR050004494	KRH050011299	KRH050017858
R-RH 064	KR064021658	KR064028671	KRH064025529	KRH064021657
R-RH 076	KR076022904	KR076036861	KRH076027998	KRH076027994
R-RH 089	KR089023511	KR089030191	KR089047339	X
R-RH 102	KR102023526	KR102049015	KRH102027999	KRH102016116
R-RH 125	KR125033361	X	KR125036855	X
R-RH 150	KR150033328	KR150049016	X	X



Type RHB Rotary Unions

Go to our website



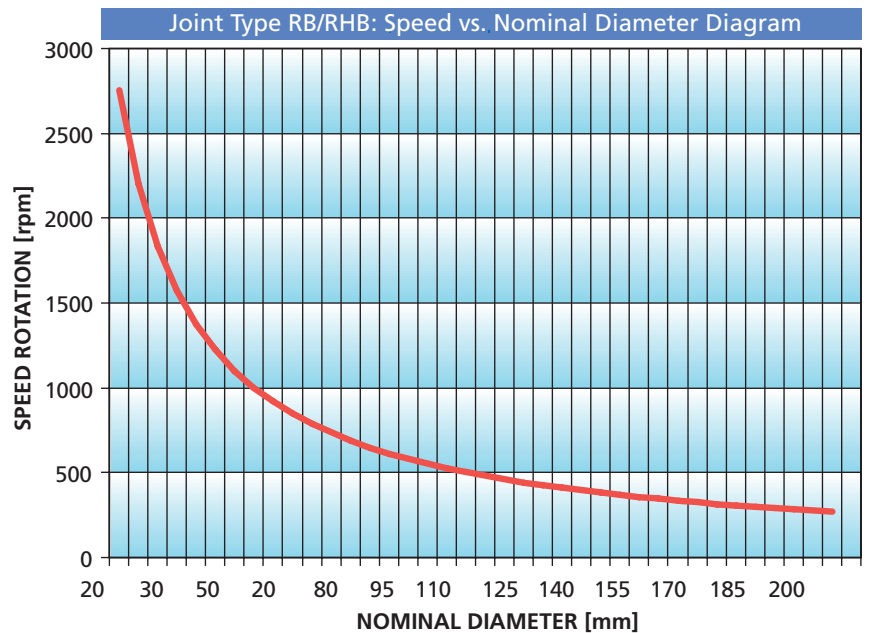
Joints type RB/RHB are designed to work at the contemporaneous presence of temperatures of 400 °C and high rotation speeds. Such performances can be reached by using two special seals.

This fluid is circulated by a pumping and cooling group that continuously verifies the system's effectiveness, and signals through visual and sound alarms, possible variations from the set values.

The above results are reached by using ball bearings with closed loop oil cooling. Oil sealing is obtained by two double balanced seals that guarantee the effectiveness of the system even in case of an electrical failure.

Double mechanical seals with pressurised barrier fluid avoid any leakage of the process fluid to the atmosphere; in a worst case event, the barrier fluid will leak into the process.

Such double mechanical seal systems have been manufactured and installed in chemical, petrochemical and pharmaceutical applications by Fluiten since 1972.



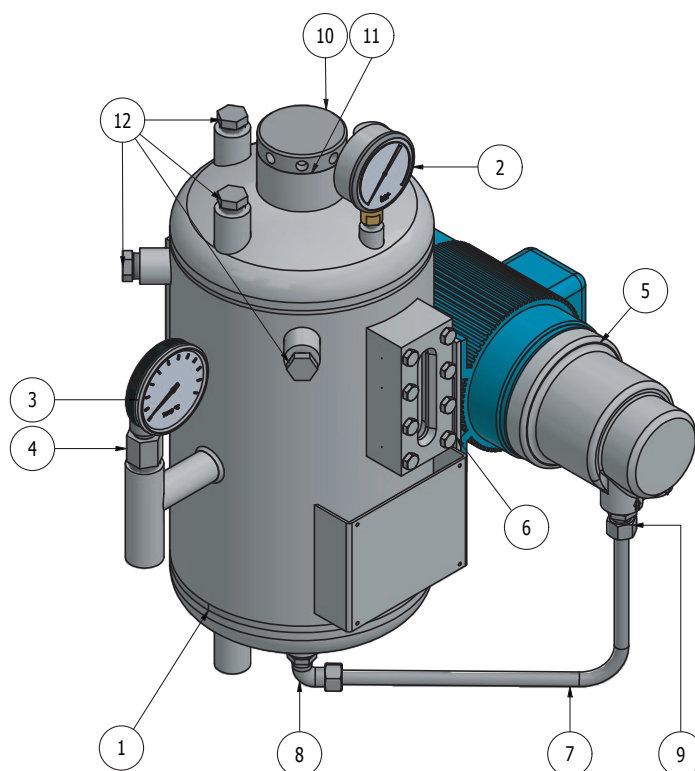
Cooling solutions

Complete Control Units for cooling

RHB joints are designed to operate with fluids at very high temperatures; Johnson-Fluiten also designs and manufactures complete system cooling solutions. Our standard cooling units include:

- Cooling coil
- Pressure gauge
- Thermometer
- Visual level indicator
- Circulation pump

It is possible to develop customized control units based on the specific needs of the customer's end application.



Complete control unit (custom)

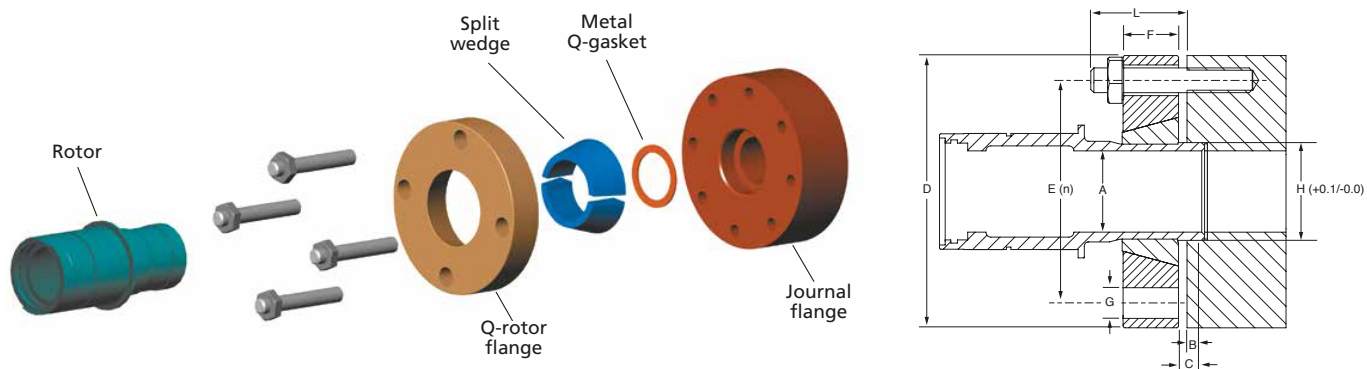
STANDARD CONTROL UNIT PART LIST	
POS.	DESCRIPTION
1	TANK 12 L
2	PRESSURE GAUGE DN63 0 ÷ 16 Barg
3	TEMPERATURE GAUGE DN80 0 ÷ 120 °C
4	THERMOWELL 3/4" NPT
5	PUMP STANDARD
6	PUMP SUPPORT PLATE
7	TUBING PUMP Ø12
8	ELBOW 1/2" NPT-M x 12 OD-F
9	STRAIGHT FITTING 1/2" NPT-F x 12 OD-F
10	PLUG 2"
11	OR VITON 2"
12	HEX HEAD PLUG 1/2" NPT

Customized Rotary Union Solutions

Do you have an application that requires a specialized solution? Our product innovation team focuses on making the best solution in the shortest time possible. Johnson-Fluiten's engineering team is committed to provide technology that meets customers' application demands. Our goal is to work closely with our customers to develop reliable, efficient, and technically advanced products that add value by improving the end product's process and quality.



Quick Release Flange



Joint Size	Flange (n)	Flange set Water/Air/Steam	Flange set Oil	Flange	Split Wedge	Gasket Copper Water/Air/Steam	Gasket Aluminium (Oil)
1"	4 holes	050.303	050.403	050.003	550.003	080.053	080.102
1¼"	4 holes	050.304	050.404	050.004	550.004	080.054	080.103
1½"	4 holes	050.305	050.405	050.005	550.005	080.055	080.104
2"	4 holes	050.306	050.406	050.006	550.006	080.056	080.105
2½"	4 holes	050.307	050.407	050.007	550.007	080.057	080.106
3"	4 holes	050.317	050.417	050.017	550.008	080.058	080.107
	5 holes	050.308	050.408	050.008			
	6 holes	050.318	050.418	050.018			
3½"	6 holes	050.309	050.409	050.009	550.009	080.059	080.108
	8 holes	050.310	050.410	050.010			
4"	6 holes	050.311	050.411	050.011	550.010	080.060	080.109
	8 holes	050.312	050.412	050.012			
5"	8 holes	050.313	050.413	050.013	550.015	080.061	080.110
6"	8 holes	050.314	050.414	050.014	550.012	080.062	080.111

Overview



Features

- Split wedge construction for ease of installation
- Q-flange can be used for LH and RH rotation
- Gasket for different media
- Mounting with multiple bolts
- Size available from 1/2" to 12"



Benefits

- Reduced installation and maintenance times
- Reduced inventory levels
- Application for all media
- Easy installation with hand tools

Size	Type	A	B	C	D	E	F	G	H	L	n	Torque (Nm) Copper Gasket	Torque (Nm) Aluminium Gasket	Kg
1"	R/RH025	24,5	8	11,1	127	88,9	15	14,25	32,5	M10X35	4	21	19	1,3
1¼"	R/RH031	32,5	10	12,7	127	88,9	16	14,25	41,3	M12x35	4	23	21	1,3
1½"	R/RH038	38	10	12,7	140	100	20	14,25	47,6	M12x40	4	25	22	1,9
2"	R/RH050	48	13	15,9	165	120,6	20	14,25	59,1	M12x40	4	29	25	2,6
2½"	R/RH064	59	16	19	165	120,6	20	14,25	72,2	M12x40	4	34	28	2,5
3"	R/RH076	73	19	22,2	203	171,5	31	17,5	87,3	M16x55	4	72	62	5,9
											5	66	57	
											6	61	54	
3½"	R/RH089	85	20	25,4	216	177,8	32	17,5	100	M16x55	6	66	57	6,4
											M12X55	8	31	
4"	R/RH102	97	20	25,4	229	190,5	35	17,5	112,7	M16x60	6	71	61	7,6
											8	63	56	
5"	R/RH125	122	25	32	292	235	39	22	139,2	M20x70	8	117	104	13,8
6"	R/RH150	146	25	32	330	279,5	41	22	168	M20x70	8	138	119	19

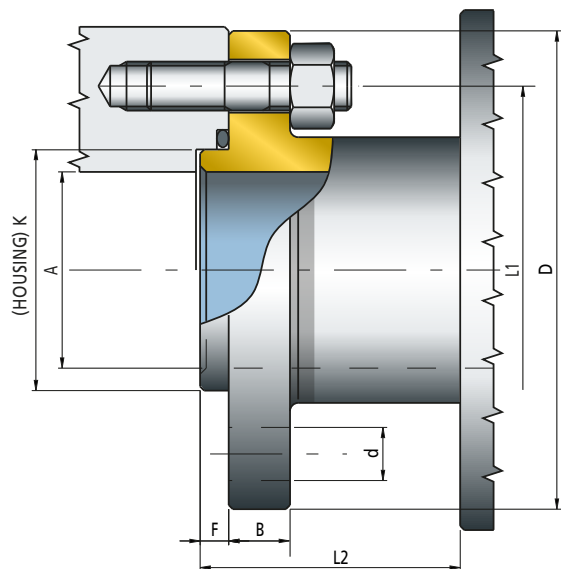
Fixed Flange Connections

DIMENSIONS

Fixed flanges type F for rotor

MODEL	A	HOUSING K G 7	F	D	L1	B	nr holes	d	L2	Screws
R-RH 019	16	30	8	75	55	12	4	9	50	M8
R-RH 025	25	35	8	80	60	12	4	9	50	M8
R-RH 031	32	45	8	100	75	12	4	9	55	M10
R-RH 038	38	50	10	105	80	15	4	11	60	M10
R-RH 050	48	65	10	130	100	15	4	14	70	M12
R-RH 064	60	85	12	180	145	25	4	18	70	M16
R-RH 076	72	105	15	210	175	30	6	18	90	M16
R-RH 089	81	105	15	210	175	30	6	18	90	M16
R-RH 102	95	114	20	230	195	30	8	18	115	M16
R-RH 125	118	150	20	250	210	35	8	18	142	M16
R-RH 150	145	180	20	305	260	40	8	22	150	M20

Dimensions subject to change without notice.



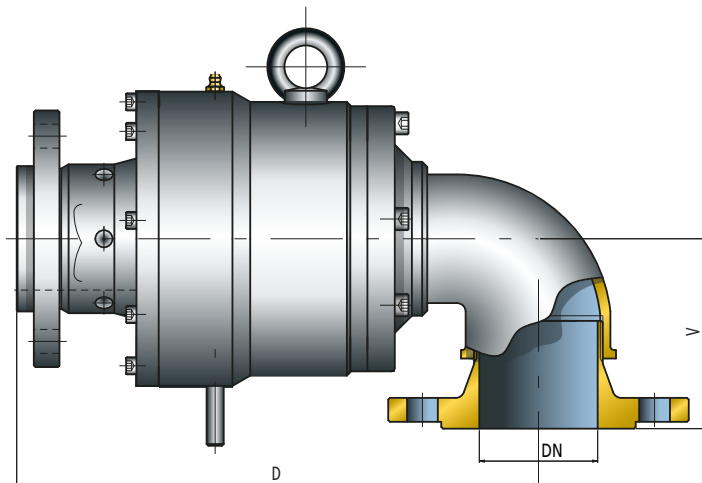
DIMENSIONS

R / RH 064 - 150

Flanged version - Single passage

MODEL	DN	D	V	MASS Kg
R-RH 064	DN 65-PN40	305	140	25
R-RH 076	DN 80-PN40	355	155	34
R-RH 089	DN100-PN40	395	180	45
R-RH 102	DN100-PN40	425	180	58
R-RH 125	DN125-PN16	570	245	92
R-RH 150	DN150-PN16	650	285	125

Dimensions subject to change without notice.



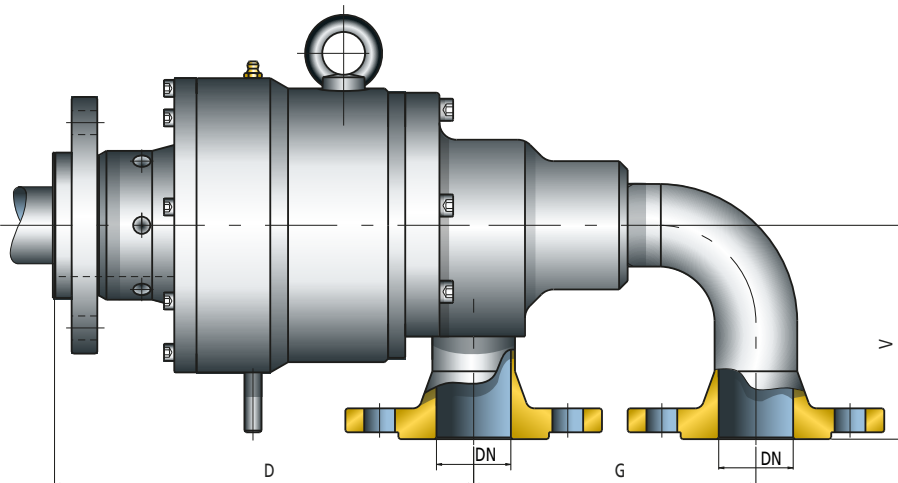
DIMENSIONS

R / RH 064 - 150

Flanged version - Double passage

MODEL	DN	D	G	V	MASS Kg
R-RH 064	DN 65-PN40	245	165	125	36
R-RH 076	DN 80-PN40	290	205	140	34
R-RH 089	DN100-PN40	310	205	150	60
R-RH 102	DN100-PN40	352	250	170	82
R-RH 125	DN125-PN16	408	282	180	110
R-RH 150	DN150-PN16	447	338	215	150

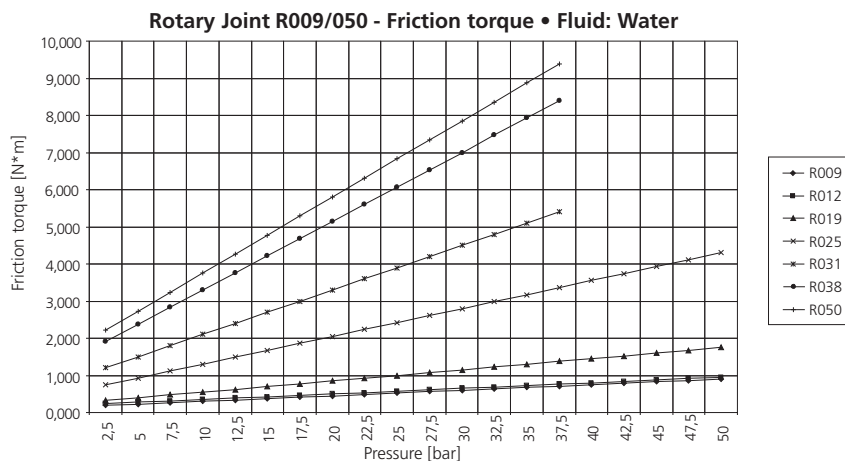
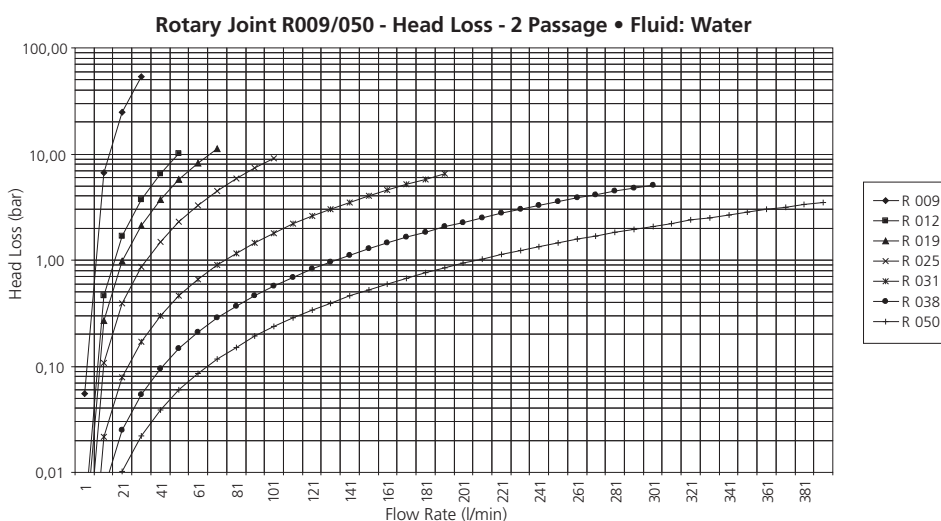
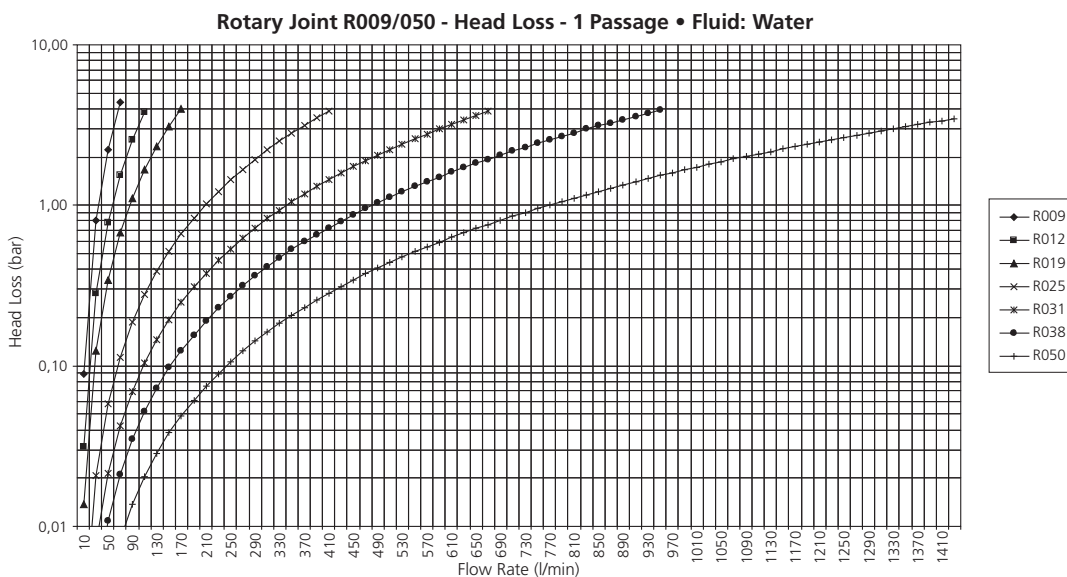
Dimensions subject to change without notice.



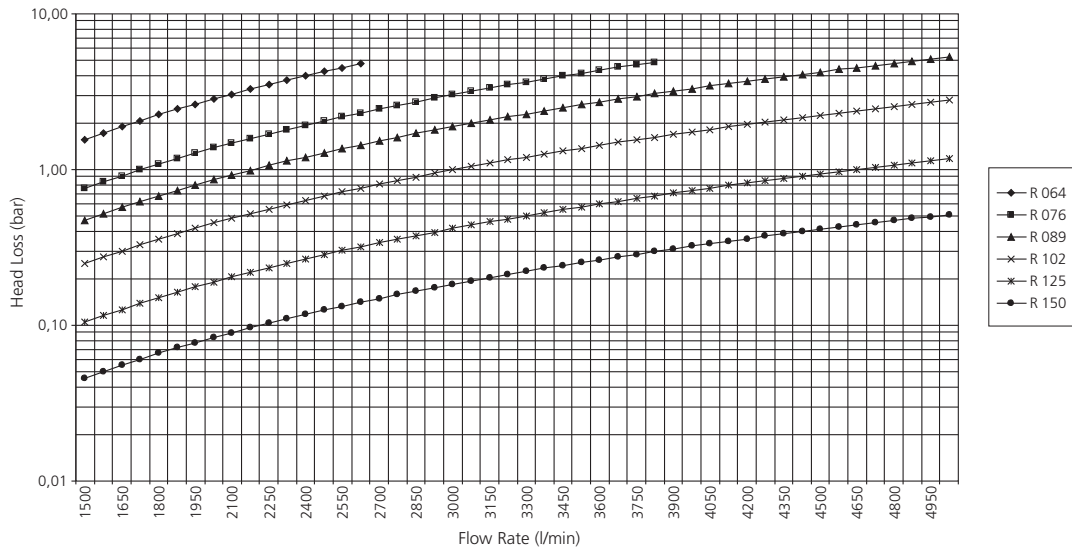
Technical Data

Rotary union sizing

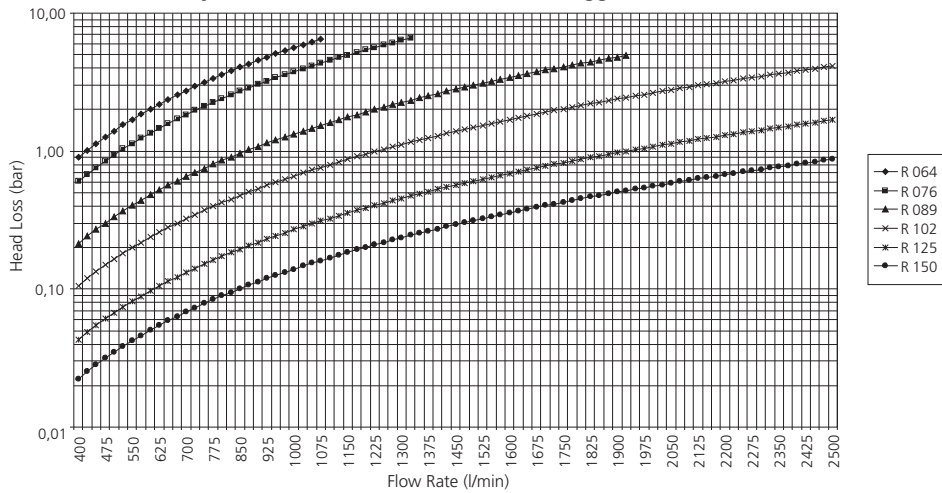
Rotary unions that are used for liquid flow are typically sized so that the pressure drop is less than 0,20 bar for open- loop system and less than 0,40 bar for closed-loop system. The pressure drop through a dual flow rotary union is higher than the pressure drop through a single flow union of the same size, because the internal flow area is lower. Use the appropriate chart below for your configuration. Note that the pressure drop shown for dual flow unions is for the supply passage. The total pressure drop (flow in and flow out) would be approximately 2x this value.



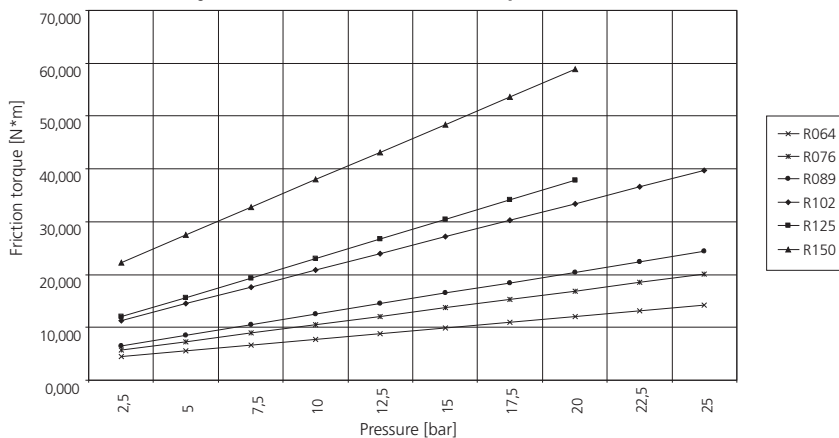
Rotary Joints R064/150 - Head Loss - 1 Passage • Fluid: Water



Rotary Joints R064/150 - Head Loss - 2 Passage • Fluid: Water



Rotary Joints R064/150 - Friction torque • Fluid: Water



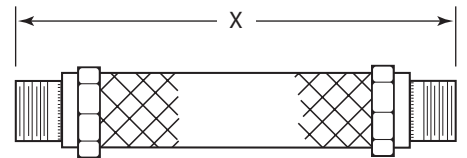
Recommendations

Flexible hose Ratings

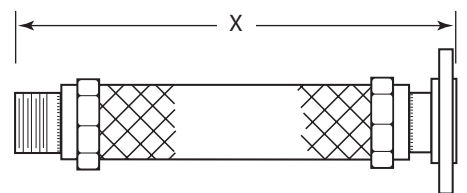
To ensure free movement of the rotary union and elimination of side loading, the proper installation, type, and length of flexible hose should be used.

Recommended hose length, bend, and offset (mm)

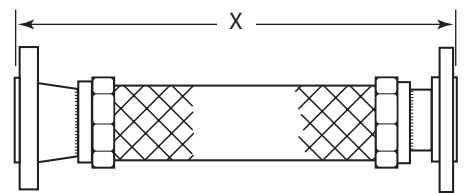
Pipe Size	Minimum Length (x)	Minimum Bend radius	Maximum Offset
1/4"	200	140	50
3/8"	250	140	50
1/2"	250	150	38
3/4"	300	200	25
1"	375	225	38
1 1/4"	450	250	50
1 1/2"	450	300	50
2"	525	375	50
2 1/2"	550	355	60
3"	600	425	60
4"	700	550	75
5"	750	700	60
6"	850	850	60



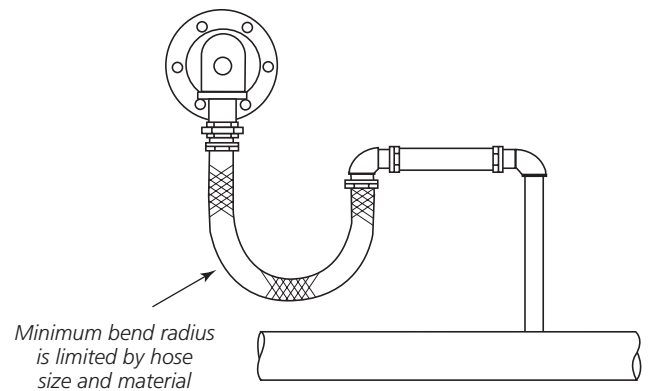
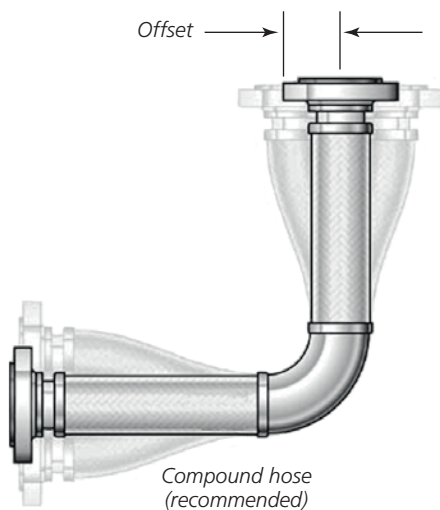
Threaded both ends



Threaded one end, lap flange other end



Fixed flange one end, lap flange other end



Filtration

It is important to follow the filtration requirements recommended by the machinery manufacturer. Type R rotary unions do not require additional filtration other than what is recommended for the fluid circulation system (typically 40-60 micron).

Guarantee

Type R rotary unions are tested prior to shipment and are warranted against manufacturing defects for 12 months. Johnson-Fluiten global sales and service network stands behind its products and provides support to more than 150 countries worldwide.

Rotary Joint Selection

Ordering information Johnson-Fluiten

If you have an existing rotary union with a product label affixed to the housing, the part ID written on the label is all that is required to order a replacement union. For new applications or if no part ID is available, the following data are requested:

1. Number passages (single flow or dual flow)
2. Rotor type (threaded, Q-flange, or integral flange)
3. Rotor thread (right-or left hand and type)
4. Supply pipe (fixed or rotating)
5. Service (water, thermal oil, air, or stream)
6. Fluid pressure
7. Fluid temperature
8. Rotational speed (RPM)
9. Connection sizes shown on drawing (M, P, S, K)



HIGH TEMPERATURE CONFIGURATIONS:

- R T max 120° C
- RH T max 180° C
- RHB T max 400° C
- 009 ÷ 150 ROTARY JOINT NOMINAL DIAMETER
- DRAWING NUMBER FOR SPECIAL DESIGN

MATERIAL SEAL FACES and O-RINGS:

- B3 1 SILICON CARBIDE VS ANTIMONY GRAPHITE / FLUORELASTOMER
- B4 1 SILICON CARBIDE VS ANTIMONY GRAPHITE/AFLAS
- C3 1 SILICON CARBIDE VS TUNGSTEN CARBIDE/FLUOROELASTOMER
- T4 2 SILICON CARBIDE VS BRONZE / AFLAS

PASSAGES:

- M SINGLE PASSAGE
- F TWO PASSAGE - FIXED SYPHON
- L TWO PASSAGE - ROTATING SYPHON

MATERIALS - HOUSING / SUPPORT:

- 1 BRASS / ALUMINIUM
- 2 3 STAINLESS STEEL AISI 316 / ALUMINIUM
- 3 3 STAINLESS STEEL AISI 316/ STAINLESS STEEL AISI 304

CONNECTIONS:

	ROTOR	HOUSING
R	G (ISO 228) RH(°)	G (ISO 228) RH(°)
L	G (ISO 228) LH(°)	G (ISO 228) RH(°)
N	NPT RH(°)	NPT RH(°)
P	NPT LH(°)	NPT RH(°)
J	4 J	G (ISO 7) RH(°)
T	4 J	6 F
U	5 F	G (ISO 7) RH(°)
V	G (ISO 228) RH(°)	6 F
W	G (ISO 228) LH(°)	6 F
Z	5 F	6 F

- 1 For R009 e R012 Silicon Carbide in place of Tungsten Carbide
- 2 For R009 e R012 Hardened Stainless Steel in place of Silicon Carbide
- 3 Stainless Steel Elbow included for Two Passages
- 4 Flanges type with conical rings in two halves (see page 14)
- 5 Fixed flanges type F (see page 15)
- 6 Flanges for housing connections (see page 15)

(°) RH = Right handed threading LH = Left handed threading
 (*) **Warning!** Use only siliconic grease to lubricate these gaskets.

ROTARY JOINT ORDERING EXAMPLE:

ROTARY JOINT: 025	Material Seal Faces: Silicon carbide Vs Antimony Graphite	Passagges: Single Passage	Material Housing: Brass/Aluminium					
R	H	025	/	B	4	M	1	R
Temperature: 180°C	Materials Secondary Seals: Aflas	Connections: Rotor G (ISO 228) RH						

Local Assistance on a Worldwide Basis



JOHNSON-FLUITEN, srl

Via Newton, 21
20016 Pero, Milano (Italy)
tel: +39 02 3394091
www.johnson-fluiten.com
info-jf@johnson-fluiten.com

Many suppliers have committed to the international marketplace. But few have taken that commitment as far as **Johnson-Fluiten**.

To assure **product availability** wherever it's needed, R/RH Rotary Unions are sold and serviced in Asia, Europa, North America and South America.

Because knowledgeable advice and prompt service are as important as the products, Johnson-Fluiten has factory-authorized representatives in nearly **one hundred and fifty countries**.

So **no matter where you are**, Johnson-Fluiten **products, services and assistance** are nearby.



KADANT
805 Wood Street
Three Rivers, MI
49093 USA
tel: +1 269 2781715



KADANT
Via Anhanguera, Km 83,5
CP 351/353 - 13278-530,
Valinhos, SP, Brazil
tel: +55 19 3849 8700
fax: +55 19 3871



KADANT
Nijverheidslaan 23-25
1380 AB Weesp,
The Netherlands
tel: +31 294 494200



KADANT
Wuxi National Hi-Tech
Industrial Development Zone
Wuxi City, Jiangsu Province,
China
tel: +86 510 85212218

SALES LOCATIONS

Germany

Langenfeld (Rheinland)
Tel.: +49 2173 97490
sales.langenfeld@kadant.com

France

Vitry-le-Francois
Tel.: +33-26-74-80-80
kadant.lamort@kadant.com

Finland

Tampere
Tel.: +353 3 255 1111
sales.tampere@kadant.com

Sweden, Norway, Denmark

Huskvarna, Sweden
Tel.: +46 36 136080
info.nordic@kadant.com

Benelux

Weesp
Tel.: +31 294 494200
sales.benelux@kadant.com

United Kingdom

Bury, Lancashire
Tel.: +44 61 764 9111
sales.bury@kadant.com

Poland

Poznan
Tel.: +48 601 702 639
sales.poznan@kadant.com

Turkey

Istanbul
Tel.: +90 1 546 652 32 68
sales.istanbul@kadant.com

Argentina

Buenos Aires
+54 114244 0519
manuel.gomez@kadant.com

Canada

Summerstown, Ontario
+1 877 3696111
gino.colantonio@kadant.com

Mexico

Guadalajara, Jalisco
+52 33 3812 4355
jaime.fabregas@kadant.com

Australia

Springvale, Victoria
+61 3 9546 0355
kadant.aus@kadant.com

Spain

Sant Esteve de Sesrovires (Barcelona)
Tel.: +34 93 7714410
sales.spain@kadant.com

India

Coimbatore
Tel.: +91422 2442692
sales.coimbatore@kadant.com

Czech Republic

Prague
sales.prague@kadant.com