

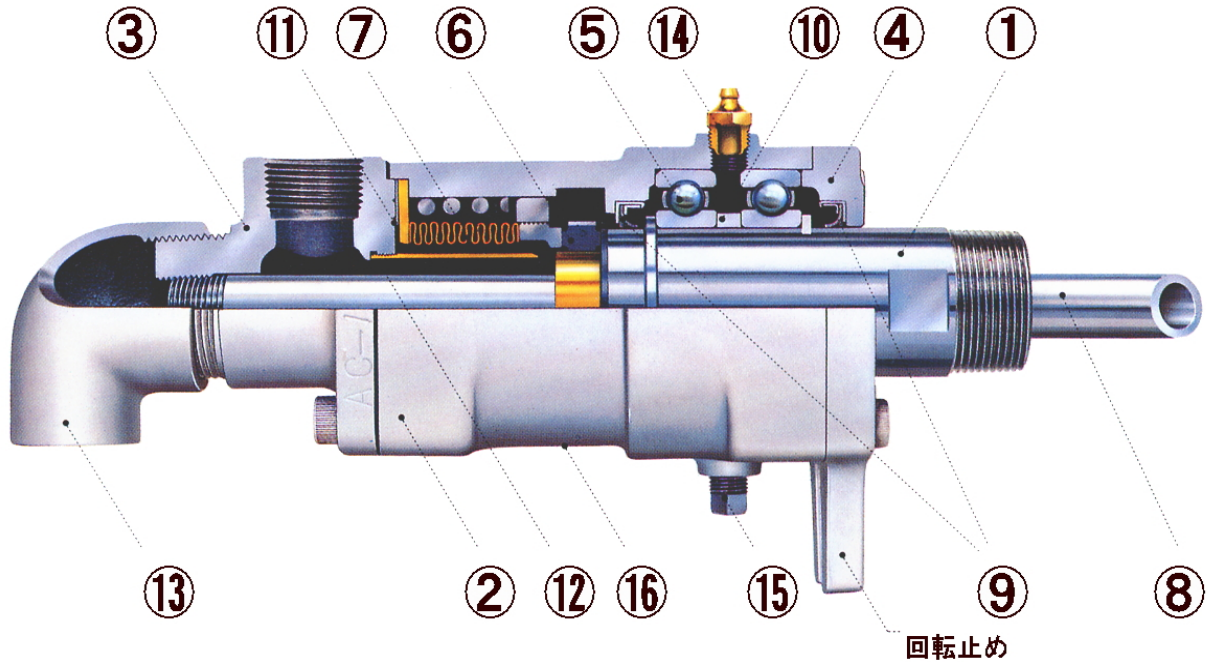
Pearl Rotary Joints

AC Series

FEATURES

1. Can be alternated between heating and cooling
2. Capable of high temperature and pressure under high rotation speed
3. Long life due to low seal-face friction and wear

CONSTRUCTION



- ① ROTOR (CARBON STEEL) ② CASING (CASTING IRON) ③ HEAD (CASTING IRON) ④ COVER (CASTING IRON) ⑤ BALL BEARINGS
 ⑥ SEAL RING (CARBON) ⑦ BELLOWS ASS'Y (BRONZE) ⑧ INTERNAL PIPE ⑨ OIL SEAL ⑩ SPACER ⑪ GASKET
 ⑫ PROTECTING TUBE ⑬ ELBOW ⑭ GREASE NIPPLE ⑮ PLUG ⑯ INSPECTION HOLE

SERVICE CONDITIONS

Fluid	Steam, Therm Oil, Water, Air
Max. Temperature	180 degrees C
Max. Pressure	1.47MPa
Max. Rotation Speed	15A to 40A 300min ⁻¹ 50A to 80A 100min ⁻¹

BELLOWS ASS'Y: 304 Stainless Steel is available upon request.

ACY type uses a stainless steel bellows assembly.

ACX type uses a stainless steel bellows assembly utilizing a hot oil-lubricated seal ring.

In the ACZ type, the head connecting port is directed opposite (180°) to the position shown in the brochure.

MAINTENANCE AND LUBRICATION

The Pearl Rotary Joint AC Series requires lubrication with high-performance grease on the bearing areas. When operating at high temperatures, use heat-resistant grease and be sure to check/refill grease as needed. When adding grease, remove the plug, top off the grease and refit the plug. The table to the right provides an approximate guide for greasing. Determine appropriate greasing intervals depending on the operating temperature, RPMs and operating time.

Greasing frequency	
0°C~130°C	Once every 3 months
130°C~150°C	Once a month
150°C~180°C	Once a week

NOTE

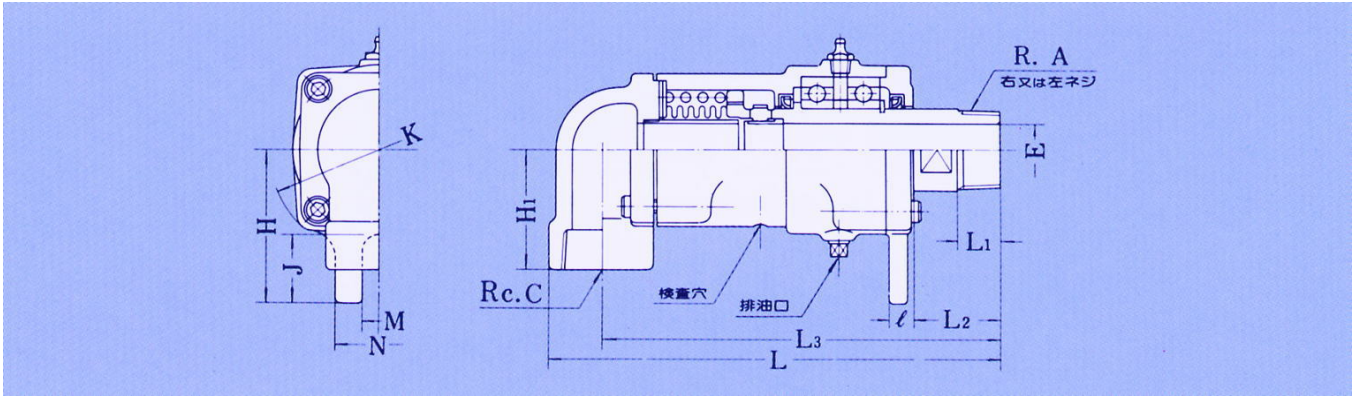
Operation at Max. pressure combined with Max. speed should be avoided.

For operation at a steam pressure of 0.98MPa or more, use a stainless steel bellows.

The joint should not run dry (without liquid). When air service, mix oil mist into the air to avoid dry operation.

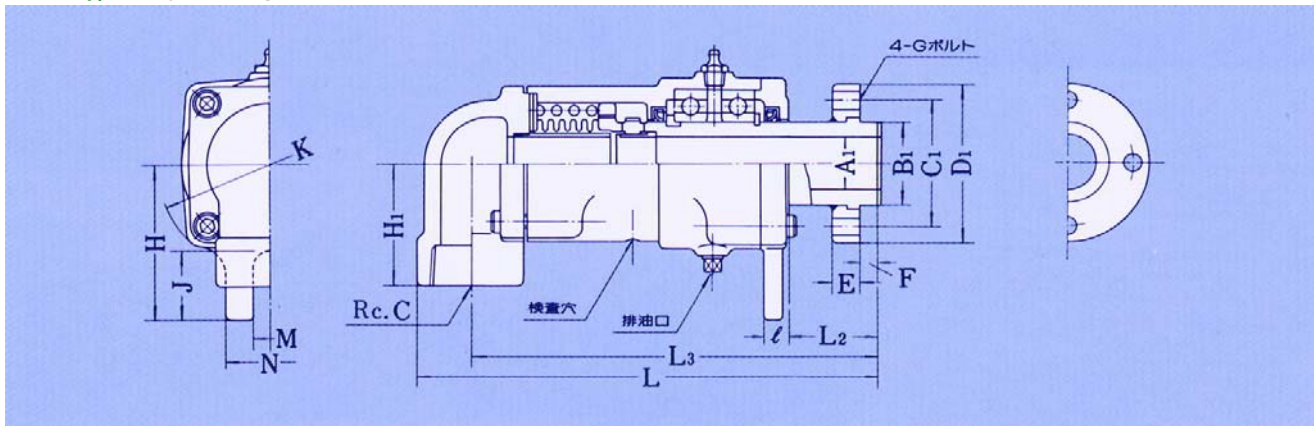
DIMENSIONS

ACL Type Simplex, Thread Connection



SIZE		A	C	E	H1	H	J	K	M	N	L1	L2	I	L3	L
(A)	(B)														
10	3/8	3/8	3/8	8	43	55	24	78	15	35	18	38	9	164	179
15	1/2	1/2	1/2	12	43	55	24	78	15	35	18	38	9	164	179
20	3/4	3/4	3/4	18	45	65	28	90	20	45	20	38	12	180	198
25	1	1	1	24	60	75	32	110	20	50	25	48	12	204	227
32	1 1/4	1 1/4	1 1/4	30	75	95	40	130	20	50	25	52	14	239	270
40	1 1/2	1 1/2	1 1/2	34	75	95	40	130	20	50	25	52	14	239	270
50	2	2	2	46	85	100	40	138	20	55	30	63	16	268	307
65	2 1/2	2 1/2	2 1/2	60	97	120	46	180	25	60	30	78	19	319	367
80	3	3	3	72	100	130	52	193	30	70	34	85	20	346	401

ACLF Type Simplex, Flange Connection



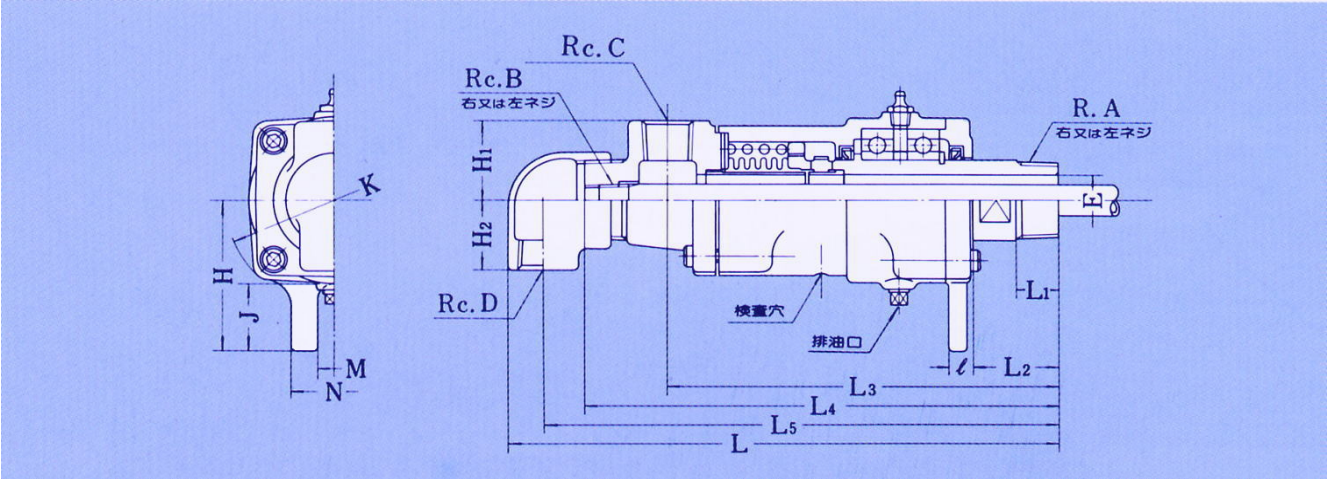
SIZE		C	A1	FLANGE DIMENSIONS						H1	H	J	K	M	N	L2	I	L3	L
(A)	(B)			B1	C1	D1	E	F	G										
10	3/8	3/8	12	25	45	62	11	8	M8	43	55	24	78	15	35	38	9	164	179
15	1/2	1/2	12	25	45	62	11	8	M8	43	55	24	78	15	35	38	9	164	179
20	3/4	3/4	18	30	54	74	13	8	M10	45	65	28	90	20	45	42	12	184	202
25	1	1	24	35	60	80	14	9	M10	60	75	32	110	20	50	46	12	202	225
32	1 1/4	1 1/4	34	50	75	96	16	9	M10	75	95	40	130	20	50	49	14	236	267
40	1 1/2	1 1/2	34	50	75	96	16	9	M10	75	95	40	130	20	50	49	14	236	267
50	2	2	46	65	95	120	19	10	M12	85	100	40	138	20	55	60	16	265	304
65	2 1/2	2 1/2	60	80	110	136	20	12	M12	97	120	46	180	25	60	62	19	303	351
80	3	3	72	90	125	154	20	15	6-M12	100	130	52	193	30	70	85	20	346	401

The flange connection type is supplied with a copper gasket (to be attached on the shaft end) , along with a stud bolt, nut and washer set.

When you place an order for the flange connection type, it is not necessary to specify the direction of the thread. Since Type 80A has a split ring on the flange, be sure to use a gasket at the end of the shaft.

DIMENSIONS

AC Type Duplex, Stationary Internal Pipe: Thread Connection

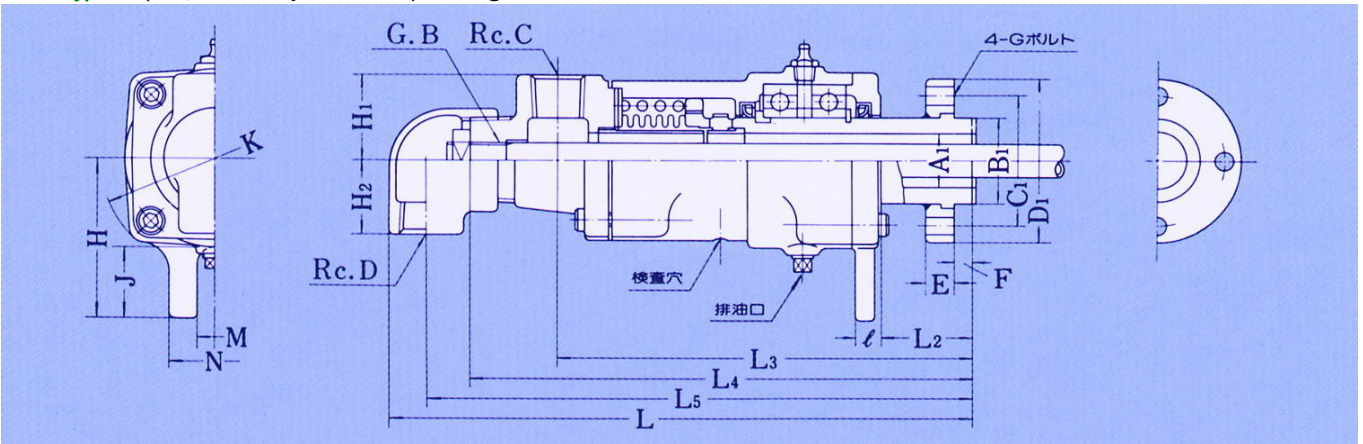


SIZE		A	B	C	D	E	H1	H2	H	J	K	M	N	L1	L2	I	L3	L4	L5	L	
(A)	(B)																				
15	1/2	1/2	1/8	1/2	1/2	12	30	30	55	24	78	15	35	18	38	9	165	198	218	233	
20	3/4	3/4	(1/8),1/4	3/4	3/4	18	45	35	65	28	90	20	45	20	38	12	181	221	245	263	
25	1	1	(1/4),3/8	1	3/4	24	59	40	75	32	110	20	50	25	48	12	205	255	280	298	
32	1 1/4	1 1/4	1/2	1	1	30	50	45	95	40	130	20	50	25	52	14	231	283	311	333	
40	1 1/2	1 1/2	(1/2),3/4			34															
50	2	2	(3/4),1	1 1/2	1	46	55	51	100	40	138	20	55	30	63	16	267	333	361	383	
65	2 1/2	2 1/2	(1),1 1/4	2	1 1/2	60	65	62	120	46	180	25	60	30	78	19	314	382	419	449	
80	3	3	1 1/2,(2)	2	2	72	90	72	130	52	193	30	70	34	85	20	327	411	459	497	

Please prepare the internal pipe by yourself. If you should place an order for the internal pipe with us, please be sure to specify the dimensions.

On types that are 50A or larger in size, the pipe connection part Rc.C is directed downward.

ACF Type Duplex, Stationary Internal Pipe: Flange Connection



SIZE		B	C	D	A1	FLANGE DIMENSIONS					H1	H2	H	J	K	M	N	L2	I	L3	L4	L5	L	
(A)	(B)					B1	C1	D1	E	F	G													
15	1/2	1/8	1/2	1/2	12	25	45	62	11	8	M8	30	30	55	24	78	15	35	38	9	165	198	218	233
20	3/4	(1/8),1/4	3/4	3/4	18	30	54	74	13	8	M10	45	35	65	28	90	20	45	42	12	185	225	249	267
25	1	(1/4),3/8	1	3/4	24	35	60	80	14	9	M10	59	40	75	32	110	20	50	46	12	203	253	278	296
40	1 1/2	1/2,3/4	1	1	34	50	75	96	16	9	M10	50	45	95	40	130	20	50	49	14	228	280	308	330
50	2	3/4,1	1 1/2	1	46	65	95	120	19	10	M12	55	51	100	40	138	20	55	60	16	264	330	358	380
65	2 1/2	1, 1 1/4	2	1 1/2	60	80	110	136	20	12	M12	65	62	120	46	180	25	60	62	19	298	366	403	433
80	3	1 1/2, 2	2	2	72	90	125	154	20	15	6-M12	90	74	130	52	193	30	70	85	20	327	411	459	497

The internal pipe retaining nut is supplied with the joint.

Please prepare the internal pipe by yourself. If you should place an order for the internal pipe with us, please be sure to specify the dimensions.

On types that are 50A or larger in size, the pipe connection part Rc.C is directed downward.

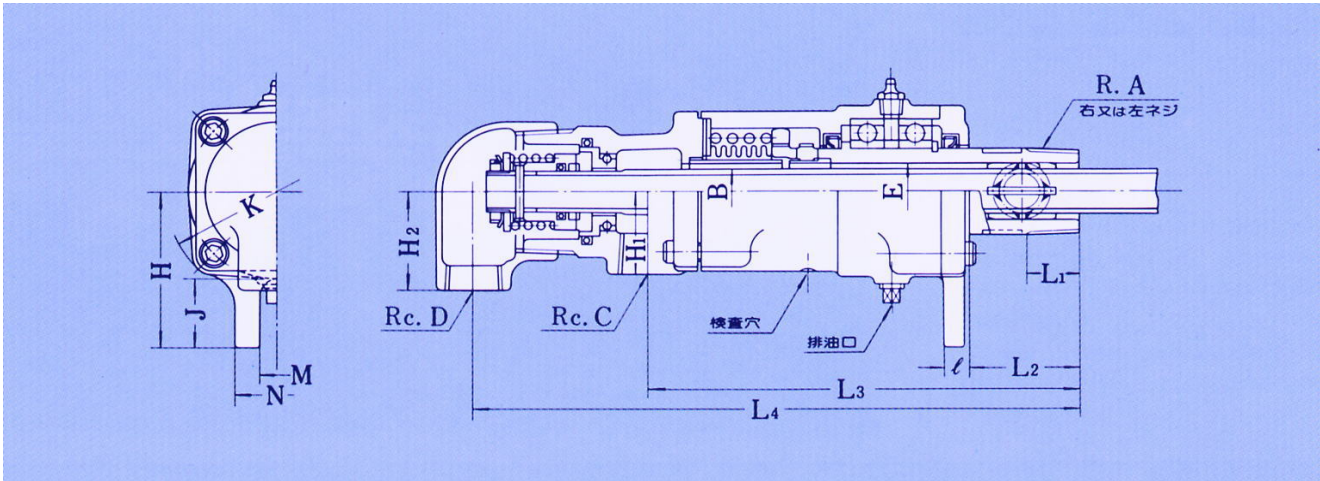
The flange connection type is supplied with a copper gasket (to be attached on the shaft end), along with a stud bolt, nut and washer set.

When you place an order for the flange connection type, it is not necessary to specify the direction of the thread.

Since Type 80A has a split ring on the flange, be sure to use a gasket at the end of the shaft.

DIMENSIONS

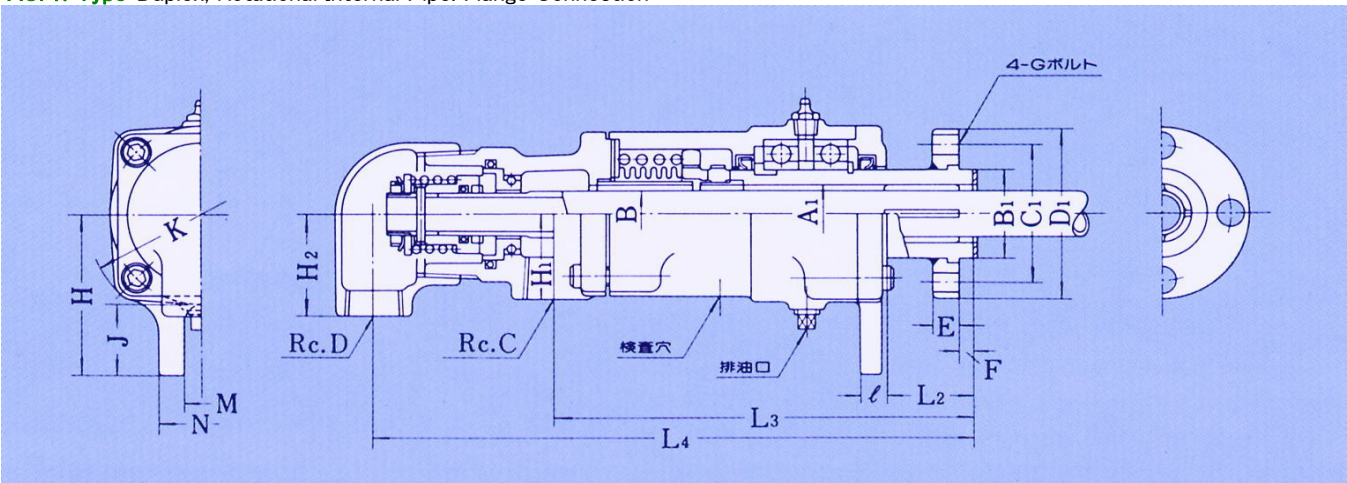
ACW Type Duplex, Rotational Internal Pipe: Thread Connection



SIZE		A	B	C	D	E	H1	H2	H	J	K	M	N	L1	L2	I	L3	L4
(A)	(B)																	
25	1	1	1/4, 3/8	1	3/4	24	60	49	75	32	110	20	50	25	48	12	205	295
32	1 1/4	1 1/4	1/2	1	1	30	47	60	95	40	130	20	50	25	52	14	243	341
40	1 1/2	1 1/2	1/2, 3/4	1	1	34	47	60	95	40	130	20	50	25	52	14	243	341
50	2	2	3/4, 1	1 1/2	1	46	55	55	100	40	138	20	55	30	63	15	269	389
65	2 1/2	2 1/2	1, 1 1/4, 1 1/2	2	1 1/2	60	65	70	120	46	180	25	60	30	78	19	310	460
80	3	3	1 1/2	2	1 1/2	72	85	70	130	52	193	30	70	34	85	20	334	486
			2		85			502										

If you should place an order for the internal pipe with us, please be sure to specify the dimensions.
Nut and lock washer to fix rotating ring and internal pipe are supplied with the joint.

ACFW Type Duplex, Rotational Internal Pipe: Flange Connection



SIZE		B	C	D	A1	FLANGE DIMENSIONS						H1	H2	H	J	K	M	N	L2	I	L3	L4
(A)	(B)					B1	C1	D1	E	F	G											
25	1	1/4, 3/8	1	3/4	24	35	60	80	14	9	M10	60	49	75	32	110	20	50	46	12	203	293
40	1 1/2	1/2, 3/4	1	1	34	50	75	96	16	9	M10	47	60	95	40	130	20	50	49	14	240	338
50	2	3/4, 1	1 1/2	1	46	65	95	120	19	10	M12	55	55	100	40	138	20	55	60	15	266	386
65	2 1/2	1, 1 1/4, 1 1/2	2	1 1/2	60	80	110	136	20	12	M12	65	70	120	46	180	25	60	62	20	294	444
80	3	1 1/2	2	1 1/2	72	90	125	154	20	15	6-M12	85	70	130	52	193	30	70	85	20	334	486
		2		85								502										

If you should place an order for the internal pipe with us, please be sure to specify the dimensions.

Nut and lock washer to fix rotating ring and internal pipe are supplied with the joint.

The flange connection type is supplied with a copper gasket (to be attached on the shaft end), along with a stud bolt, nut and washer set.

When you place an order for the flange connection type, it is not necessary to specify the direction of the thread.

Since Type 80A has a split ring on the flange, be sure to use a gasket at the end of the shaft.

FLOW RATES

Type	Nominal Size (A)	Cross Sectional Area (cm ²)	Water Flow Rate (m ³ /h)	Saturated Steam Flow Rate (when the pressure of steam is ...)				
	Out-In			(kg/h)				
				0.1(Mpa)	0.2(Mpa)	0.4(Mpa)	0.6(Mpa)	0.8(Mpa)
AC	15-6	0.26-0.33	0.28	3.25	4.75	7.66	10.5	13.3
	20-6	1.14-0.33	0.35	14.0	20.5	33.1	45.4	57.6
	20-8	0.51-0.69	0.55	6.31	9.22	14.9	20.4	25.9
	25-8	2.31-0.69	0.74	28.2	41.3	66.7	91.5	116
	25-10	1.45-1.19	1.28	17.8	26.0	41.9	57.6	73.0
	32-20	3.37-1.94	2.09	41.3	60.3	97.4	134	170
	40-15	4.34-1.94	2.09	53.2	77.8	126	172	219
	40-20	2.23-3.53	2.41	27.3	40.0	64.5	88.6	112
	50-20	10.8-3.53	3.81	132	194	312	429	544
	50-25	7.54-5.73	6.18	92.3	135	218	299	380
	65-25	15.6-5.73	6.18	190	278	450	617	783
	65-32	10.3-9.46	10.2	126	185	298	409	519
	80-40	22.2-12.9	14.0	271	397	641	879	1120
(80-50)	12.0-21.6	12.9	147	214	346	475	603	
ACL	10	0.50	0.54	6.16	9.00	14.5	19.9	25.3
	15	1.13	1.22	13.9	20.3	32.7	44.9	56.9
	20	2.01	2.17	24.6	36.0	58.1	79.8	101
	25	3.80	4.11	46.6	68.1	110	151	191
	32	7.07	7.63	86.6	127	204	280	356
	40	8.04	8.69	98.5	144	233	319	405
	50	16.6	17.9	204	298	480	659	837
	65	24.6	26.6	302	441	712	977	1240
	80	40.7	44.0	499	729	1180	1620	2050

Calculation of water flow is based on the smaller area of passage, and steam flow on the cross section of out side pipe.

Velocity of Water: 3m/sec

Velocity of Steam: 30m/sec

Air: normal state

For the dimension specifications of the internal pipes, refer to "SUS304 Pipe dimensions for internal pipes" below.

"SUS304 Pipe dimensions for internal pipes"

SIZE	Outer diameter / Thickness
6A	φ 10.5xt2.0
8A	φ 13.8xt2.2
10A	φ 17.3xt2.5
15A	φ 21.7xt3.0
20A	φ 27.2xt3.0
25A	φ 34.0xt3.5
32A	φ 42.7xt4.0
40A	φ 48.6xt4.0
50A	φ 60.5xt4.0

Table of Saturated Steam : Mpa abs (Reference Value)

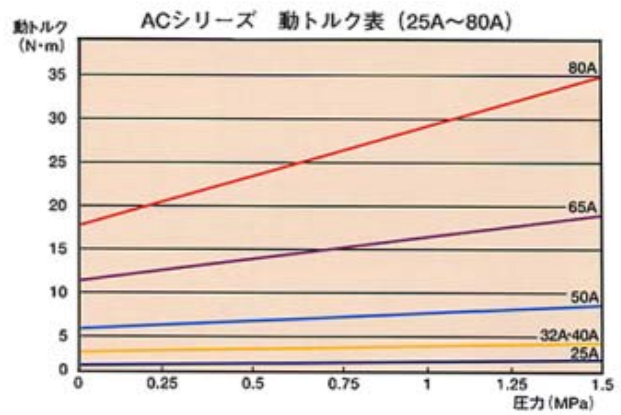
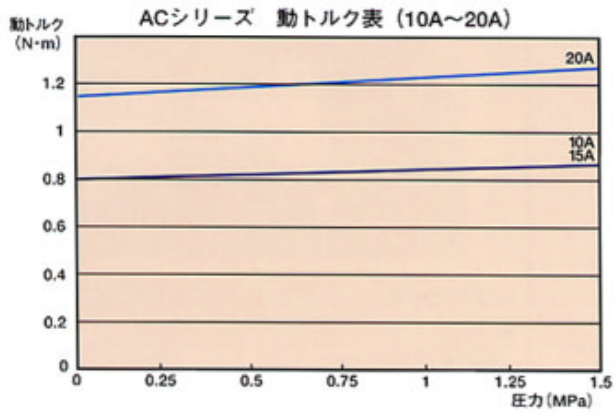
°C	0	+1	+2	+3	+4	+5	+6	+7	+8	+9
100	0.10	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.14
110	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.19	0.19
120	0.20	0.20	0.21	0.22	0.23	0.23	0.24	0.25	0.25	0.26
130	0.27	0.28	0.29	0.30	0.30	0.31	0.32	0.33	0.34	0.35
140	0.36	0.37	0.38	0.39	0.40	0.42	0.43	0.44	0.45	0.46
150	0.48	0.49	0.50	0.52	0.53	0.54	0.56	0.57	0.59	0.60
160	0.62	0.63	0.65	0.67	0.68	0.70	0.72	0.74	0.75	0.77
170	0.79	0.81	0.83	0.85	0.87	0.89	0.91	0.94	0.96	0.98
180	1.00	1.03	1.05	1.07	1.10	1.12	1.15	1.17	1.20	1.23
190	1.26	1.28	1.31	1.34	1.37	1.40	1.43	1.46	1.49	1.52
200	1.55	1.59	1.62	1.65	1.69	1.72	1.76	1.80	1.83	1.87
210	1.91	1.95	1.99	2.02	2.07	2.11	2.15	2.19	2.23	2.28
220	2.32	2.36	2.41	2.46	2.50	2.55	2.60	2.65	2.70	2.75
230	2.80	2.85	2.90	2.95	3.01	3.06	3.12	3.17	3.23	3.29

Subtract 0.10 from the figures of the table to obtain the gauge pressure (Mpa).

Unless specified, the pressure is written in terms of absolute pressure for steam,

or in terms of gauge pressure for air.

DYNAMIC TORQUE GRAPH



The rotation torque of the rotary joint varies according to the storage condition, storage period and fluid type. The above graphs show representative values measured according to our in-house testing standard and do not represent guaranteed values.

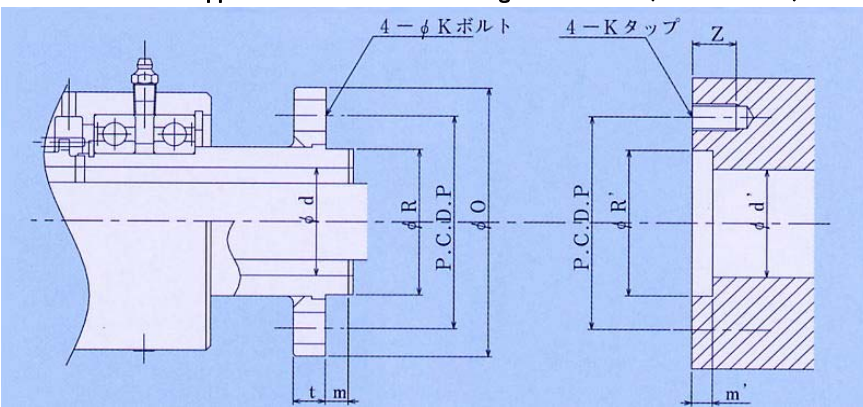
The initial (starting) torque is larger than the dynamic torque.

When ringing (adhesion phenomenon) occurs, torque is particularly large but this is not an abnormal phenomenon.

WEIGHT CHART(Unit = 1kg/1 piece)

	10A	15A	20A	25A	32A	40A	50A	65A	80A
ACL	2.2	2.2	3.2	5.2	9.0	8.9	12.0	19.0	25.0
ACLF	2.4	2.4	3.4	5.6	9.6	9.5	13.5	20.5	27.0
AC	-	2.3	3.8	6.0	9.3	9.2	12.5	22.0	28.0
ACF	-	2.5	4.0	6.4	9.9	9.8	14.0	23.5	30.0
ACW	-	-	-	6.5	11.3	11.3	14.0	25.0	32.0
ACFW	-	-	-	6.9	11.9	11.9	15.5	26.5	34.0

Dimensions of the apparatus to which a SGK flange is attached (For reference)



FLANGE	d	R	O	P	m	t	K
10A	12	25	62	45	8	11	M8
15A	12	25	62	45	8	11	M8
20A	18	30	74	54	8	13	M10
25A	24	35	80	60	9	14	M10
32A	34	50	96	75	9	16	M10
40A	34	50	96	75	9	16	M10
50A	46	65	120	95	10	19	M12
65A	60	80	136	110	12	20	M12
80A	72	90	154	125	15	20	6-M12

Dimensions of the apparatus	d'	R'	P	m'	Z
10A	12	25	45	7	12
15A	12	25	45	7	12
20A	18	30	54	7	16
25A	24	35	60	8	16
32A	34	50	75	8	16
40A	34	50	75	8	16
50A	46	65	95	9	19
65A	60	80	110	11	19
80A	72	90	125	14	19

The diagram above shows RX Series.

Dimension of φ R': +0.05
0

Table of AC series

	Simplex			Duplex, Stationary Internal Pipe			
	Type	Name	Our Code	Type	Name	Our Code	
Thread Connection	ACL	RJ-ACL 10A LH	AC10000200	AC	RJ-AC 15A-6A LH	AC15060202	
		RJ-ACL 10A RH	AC10000100		RJ-AC 15A-6A RH	AC15060101	
		RJ-ACL 15A LH	AC15000200		RJ-AC 20A-6A LH	AC20060202	
		RJ-ACL 15A RH	AC15000100		RJ-AC 20A-6A RH	AC20060101	
		RJ-ACL 20A LH	AC20000200		RJ-AC 20A-8A LH	AC20080202	
		RJ-ACL 20A RH	AC20000100		RJ-AC 20A-8A RH	AC20080101	
		RJ-ACL 25A LH	AC25000200		RJ-AC 25A-8A LH	AC25080202	
		RJ-ACL 25A RH	AC25000100		RJ-AC 25A-8A RH	AC25080101	
		RJ-ACL 32A LH	AC32000200		RJ-AC 25A-10A LH	AC25100202	
		RJ-ACL 32A RH	AC32000100		RJ-AC 25A-10A RH	AC25100101	
		RJ-ACL 40A LH	AC40000200		RJ-AC 32A-15A LH	AC32150202	
		RJ-ACL 40A RH	AC40000100		RJ-AC 32A-15A RH	AC32150101	
		RJ-ACL 50A LH	AC50000200		RJ-AC 40A-15A LH	AC40150202	
		RJ-ACL 50A RH	AC50000100		RJ-AC 40A-15A RH	AC40150101	
		RJ-ACL 65A LH	AC65000200		RJ-AC 40A-20A LH	AC40200202	
		RJ-ACL 65A RH	AC65000100		RJ-AC 40A-20A RH	AC40200101	
		RJ-ACL 80A LH	AC80000200		RJ-AC 50A-20A LH	AC50200202	
		RJ-ACL 80A RH	AC80000100		RJ-AC 50A-20A RH	AC50200101	
						RJ-AC 50A-25A LH	AC50250202
						RJ-AC 50A-25A RH	AC50250101
						RJ-AC 65A-25A LH	AC65250202
						RJ-AC 65A-25A RH	AC65250101
						RJ-AC 65A-32A LH	AC65320202
			RJ-AC 65A-32A RH	AC65320101			
			RJ-AC 80A-40A LH	AC80400202			
			RJ-AC 80A-40A RH	AC80400101			
			RJ-AC 80A-50A LH	AC80500202			
			RJ-AC 80A-50A RH	AC80500101			
Flange Connection	ACLF	RJ-ACLF 10A	AC10000000	ACF	RJ-ACF 15A-6A	AC15060011	
		RJ-ACLF 15A	AC15000000		RJ-ACF 20A-6A	AC20060011	
		RJ-ACLF 20A	AC20000000		RJ-ACF 20A-8A	AC20080011	
		RJ-ACLF 25A	AC25000000		RJ-ACF 25A-8A	AC25080011	
		RJ-ACLF 32A	AC32000000		RJ-ACF 25A-10A	AC25100011	
		RJ-ACLF 40A	AC40000000		RJ-ACF 40A-15A	AC40150011	
		RJ-ACLF 50A	AC50000000		RJ-ACF 40A-20A	AC40200011	
		RJ-ACLF 65A	AC65000000		RJ-ACF 50A-20A	AC50200011	
		RJ-ACLF 80A	AC80001000		RJ-ACF 50A-25A	AC50250011	
						RJ-ACF 65A-25A	AC65250011
						RJ-ACF 65A-32A	AC65320011
						RJ-ACF 80A-40A	AC80401011
						RJ-ACF 80A-50A	AC80501011

Table of AC series

		Duplex, Rotatory Internal Pipe							
		Rotor Without Key Seat			Rotor With Key Seat				
		Type	Name	Our Code	Type	Name	Our Code		
Thread Connection	ACW-1	RJ-ACW-1 25A-8A LH	AC25080281	ACW-2	RJ-ACW-2 25A-8A LH	AC25080481			
		RJ-ACW-1 25A-8A RH	AC25080181		RJ-ACW-2 25A-8A RH	AC25080381			
		RJ-ACW-1 25A-10A LH	AC25100281		RJ-ACW-2 25A-10A LH	AC25100481			
		RJ-ACW-1 25A-10A RH	AC25100181		RJ-ACW-2 25A-10A RH	AC25100381			
		RJ-ACW-1 32A-15A LH	AC32150281		RJ-ACW-2 32A-15A LH	AC32150481			
		RJ-ACW-1 32A-15A RH	AC32150181		RJ-ACW-2 32A-15A RH	AC32150381			
		RJ-ACW-1 40A-15A LH	AC40150281		RJ-ACW-2 40A-15A LH	AC40150481			
		RJ-ACW-1 40A-15A RH	AC40150181		RJ-ACW-2 40A-15A RH	AC40150381			
		RJ-ACW-1 40A-20A LH	AC40200281		RJ-ACW-2 40A-20A LH	AC40200481			
		RJ-ACW-1 40A-20A RH	AC40200181		RJ-ACW-2 40A-20A RH	AC40200381			
		RJ-ACW-1 50A-20A LH	AC50200281		RJ-ACW-2 50A-20A LH	AC50200481			
		RJ-ACW-1 50A-20A RH	AC50200181		RJ-ACW-2 50A-20A RH	AC50200381			
		RJ-ACW-1 50A-25A LH	AC50250281		RJ-ACW-2 50A-25A LH	AC50250481			
		RJ-ACW-1 50A-25A RH	AC50250181		RJ-ACW-2 50A-25A RH	AC50250381			
		RJ-ACW-1 65A-25A LH	AC65250281		RJ-ACW-2 65A-25A LH	AC65250481			
		RJ-ACW-1 65A-25A RH	AC65250181		RJ-ACW-2 65A-25A RH	AC65250381			
		RJ-ACW-1 65A-32A LH	AC65320281		RJ-ACW-2 65A-32A LH	AC65320481			
		RJ-ACW-1 65A-32A RH	AC65320181		RJ-ACW-2 65A-32A RH	AC65320381			
		RJ-ACW-1 65A-40A LH	AC65400281		RJ-ACW-2 65A-40A LH	AC65400481			
		RJ-ACW-1 65A-40A RH	AC65400181		RJ-ACW-2 65A-40A RH	AC65400381			
		RJ-ACW-1 80A-40A LH	AC80400281		RJ-ACW-2 80A-40A LH	AC80400481			
		RJ-ACW-1 80A-40A RH	AC80400181		RJ-ACW-2 80A-40A RH	AC80400381			
		RJ-ACW-1 80A-50A LH	AC80500281		RJ-ACW-2 80A-50A LH	AC80500481			
		RJ-ACW-1 80A-50A RH	AC80500181		RJ-ACW-2 80A-50A RH	AC80500381			
		Flange Connection	ACFW-1		RJ-ACFW-1 25A-8A	AC25080081	ACFW-2	RJ-ACFW-2 25A-8A	AC25082081
					RJ-ACFW-1 25A-10A	AC25100081		RJ-ACFW-2 25A-10A	AC25102081
RJ-ACFW-1 40A-15A	AC40150081			RJ-ACFW-2 40A-15A	AC40152081				
RJ-ACFW-1 40A-20A	AC40200081			RJ-ACFW-2 40A-20A	AC40202081				
RJ-ACFW-1 50A-20A	AC50200081			RJ-ACFW-2 50A-20A	AC50202081				
RJ-ACFW-1 50A-25A	AC50250081			RJ-ACFW-2 50A-25A	AC50252081				
RJ-ACFW-1 65A-25A	AC65250081			RJ-ACFW-2 65A-25A	AC65252081				
RJ-ACFW-1 65A-32A	AC65320081			RJ-ACFW-2 65A-32A	AC65322081				
RJ-ACFW-1 65A-40A	AC65400081			RJ-ACFW-2 65A-40A	AC65402081				
RJ-ACFW-1 80A-40A	AC80401081			RJ-ACFW-2 80A-40A	AC80403081				
RJ-ACFW-1 80A-50A	AC80501081	RJ-ACFW-2 80A-50A	AC80503081						

Table of ACY series

	Simplex			Duplex, Stationary Internal Pipe					
	Type	Name	Our Code	Type	Name	Our Code			
Thread Connection	ACLY	RJ-ACLY 10A LH	AC1000020002	ACY	RJ-ACY 15A-6A LH	AC1506020202			
		RJ-ACLY 10A RH	AC1000010002		RJ-ACY 15A-6A RH	AC1506010102			
		RJ-ACLY 15A LH	AC1500020002		RJ-ACY 20A-6A LH	AC2006020202			
		RJ-ACLY 15A RH	AC1500010002		RJ-ACY 20A-6A RH	AC2006010102			
		RJ-ACLY 20A LH	AC2000020002		RJ-ACY 20A-8A LH	AC2008020202			
		RJ-ACLY 20A RH	AC2000010002		RJ-ACY 20A-8A RH	AC2008010102			
		RJ-ACLY 25A LH	AC2500020002		RJ-ACY 25A-8A LH	AC2508020202			
		RJ-ACLY 25A RH	AC2500010002		RJ-ACY 25A-8A RH	AC2508010102			
		RJ-ACLY 32A LH	AC3200020002		RJ-ACY 25A-10A LH	AC2510020202			
		RJ-ACLY 32A RH	AC3200010002		RJ-ACY 25A-10A RH	AC2510010102			
		RJ-ACLY 40A LH	AC4000020002		RJ-ACY 32A-15A LH	AC3215020202			
		RJ-ACLY 40A RH	AC4000010002		RJ-ACY 32A-15A RH	AC3215010102			
		RJ-ACLY 50A LH	AC5000020002		RJ-ACY 40A-15A LH	AC4015020202			
		RJ-ACLY 50A RH	AC5000010002		RJ-ACY 40A-15A RH	AC4015010102			
		RJ-ACLY 65A LH	AC6500020002		RJ-ACY 40A-20A LH	AC4020020202			
		RJ-ACLY 65A RH	AC6500010002		RJ-ACY 40A-20A RH	AC4020010102			
		RJ-ACLY 80A LH	AC8000020002		RJ-ACY 50A-20A LH	AC5020020202			
		RJ-ACLY 80A RH	AC8000010002		RJ-ACY 50A-20A RH	AC5020010102			
		Flange Connection	ACLFY		RJ-ACLFY 10A	AC1000000002	ACFY	RJ-ACFY 15A-6A	AC1506001102
					RJ-ACLFY 15A	AC1500000002		RJ-ACFY 20A-6A	AC2006001102
RJ-ACLFY 20A	AC2000000002			RJ-ACFY 20A-8A	AC2008001102				
RJ-ACLFY 25A	AC2500000002			RJ-ACFY 25A-8A	AC2508001102				
RJ-ACLFY 32A	AC3200000002			RJ-ACFY 25A-10A	AC2510001102				
RJ-ACLFY 40A	AC4000000002			RJ-ACFY 40A-15A	AC4015001102				
RJ-ACLFY 50A	AC5000000002			RJ-ACFY 40A-20A	AC4020001102				
RJ-ACLFY 65A	AC6500000002			RJ-ACFY 50A-20A	AC5020001102				
RJ-ACLFY 80A	AC8000100002			RJ-ACFY 50A-25A	AC5025001102				
				RJ-ACFY 65A-25A	AC6525001102				
				RJ-ACFY 65A-32A	AC6532001102				
				RJ-ACFY 80A-40A	AC8040101102				
				RJ-ACFY 80A-50A	AC8050101102				

ACY type uses a stainless steel bellows assembly.

Table of ACY series

		Duplex, Rotatory Internal Pipe							
		Rotor Without Key Seat			Rotor With Key Seat				
		Type	Name	Our Code	Type	Name	Our Code		
Thread Connection	ACWY-1	RJ-ACWY-1 25A-8A LH	AC2508028102	ACWY-2	RJ-ACWY-2 25A-8A LH	AC2508048102			
		RJ-ACWY-1 25A-8A RH	AC2508018102		RJ-ACWY-2 25A-8A RH	AC2508038102			
		RJ-ACWY-1 25A-10A LH	AC2510028102		RJ-ACWY-2 25A-10A LH	AC2510048102			
		RJ-ACWY-1 25A-10A RH	AC2510018102		RJ-ACWY-2 25A-10A RH	AC2510038102			
		RJ-ACWY-1 32A-15A LH	AC3215028102		RJ-ACWY-2 32A-15A LH	AC3215048102			
		RJ-ACWY-1 32A-15A RH	AC3215018102		RJ-ACWY-2 32A-15A RH	AC3215038102			
		RJ-ACWY-1 40A-15A LH	AC4015028102		RJ-ACWY-2 40A-15A LH	AC4015048102			
		RJ-ACWY-1 40A-15A RH	AC4015018102		RJ-ACWY-2 40A-15A RH	AC4015038102			
		RJ-ACWY-1 40A-20A LH	AC4020028102		RJ-ACWY-2 40A-20A LH	AC4020048102			
		RJ-ACWY-1 40A-20A RH	AC4020018102		RJ-ACWY-2 40A-20A RH	AC4020038102			
		RJ-ACWY-1 50A-20A LH	AC5020028102		RJ-ACWY-2 50A-20A LH	AC5020048102			
		RJ-ACWY-1 50A-20A RH	AC5020018102		RJ-ACWY-2 50A-20A RH	AC5020038102			
		RJ-ACWY-1 50A-25A LH	AC5025028102		RJ-ACWY-2 50A-25A LH	AC5025048102			
		RJ-ACWY-1 50A-25A RH	AC5025018102		RJ-ACWY-2 50A-25A RH	AC5025038102			
		RJ-ACWY-1 65A-25A LH	AC6525028102		RJ-ACWY-2 65A-25A LH	AC6525048102			
		RJ-ACWY-1 65A-25A RH	AC6525018102		RJ-ACWY-2 65A-25A RH	AC6525038102			
		RJ-ACWY-1 65A-32A LH	AC6532028102		RJ-ACWY-2 65A-32A LH	AC6532048102			
		RJ-ACWY-1 65A-32A RH	AC6532018102		RJ-ACWY-2 65A-32A RH	AC6532038102			
		RJ-ACWY-1 65A-40A LH	AC6540028102		RJ-ACWY-2 65A-40A LH	AC6540048102			
		RJ-ACWY-1 65A-40A RH	AC6540018102		RJ-ACWY-2 65A-40A RH	AC6540038102			
		RJ-ACWY-1 80A-40A LH	AC8040028102		RJ-ACWY-2 80A-40A LH	AC8040048102			
		RJ-ACWY-1 80A-40A RH	AC8040018102		RJ-ACWY-2 80A-40A RH	AC8040038102			
		RJ-ACWY-1 80A-50A LH	AC8050028102		RJ-ACWY-2 80A-50A LH	AC8050048102			
		RJ-ACWY-1 80A-50A RH	AC8050018102		RJ-ACWY-2 80A-50A RH	AC8050038102			
		Flange Connection	ACFWY-1		RJ-ACFWY-1 25A-8A	AC2508008102	ACFWY-2	RJ-ACFWY-2 25A-8A	AC2508208102
					RJ-ACFWY-1 25A-10A	AC2510008102		RJ-ACFWY-2 25A-10A	AC2510208102
RJ-ACFWY-1 40A-15A	AC4015008102			RJ-ACFWY-2 40A-15A	AC4015208102				
RJ-ACFWY-1 40A-20A	AC4020008102			RJ-ACFWY-2 40A-20A	AC4020208102				
RJ-ACFWY-1 50A-20A	AC5020008102			RJ-ACFWY-2 50A-20A	AC5020208102				
RJ-ACFWY-1 50A-25A	AC5025008102			RJ-ACFWY-2 50A-25A	AC5025208102				
RJ-ACFWY-1 65A-25A	AC6525008102			RJ-ACFWY-2 65A-25A	AC6525208102				
RJ-ACFWY-1 65A-32A	AC6532008102			RJ-ACFWY-2 65A-32A	AC6532208102				
RJ-ACFWY-1 65A-40A	AC6540008102			RJ-ACFWY-2 65A-40A	AC6540208102				
RJ-ACFWY-1 80A-40A	AC8040108102			RJ-ACFWY-2 80A-40A	AC8040308102				
RJ-ACFWY-1 80A-50A	AC8050108102	RJ-ACFWY-2 80A-50A	AC8050308102						

ACY type uses a stainless steel bellows assembly.

Table of ACX series

		Duplex, Rotatory Internal Pipe							
		Rotor Without Key Seat			Rotor With Key Seat				
		Type	Name	Our Code	Type	Name	Our Code		
Thread Connection	ACWX-1	RJ-ACWX-1 25A-8A LH	AC2508028101	ACWX-2	RJ-ACWX-2 25A-8A LH	AC2508048101			
		RJ-ACWX-1 25A-8A RH	AC2508018101		RJ-ACWX-2 25A-8A RH	AC2508038101			
		RJ-ACWX-1 25A-10A LH	AC2510028101		RJ-ACWX-2 25A-10A LH	AC2510048101			
		RJ-ACWX-1 25A-10A RH	AC2510018101		RJ-ACWX-2 25A-10A RH	AC2510038101			
		RJ-ACWX-1 32A-15A LH	AC3215028101		RJ-ACWX-2 32A-15A LH	AC3215048101			
		RJ-ACWX-1 32A-15A RH	AC3215018101		RJ-ACWX-2 32A-15A RH	AC3215038101			
		RJ-ACWX-1 40A-15A LH	AC4015028101		RJ-ACWX-2 40A-15A LH	AC4015048101			
		RJ-ACWX-1 40A-15A RH	AC4015018101		RJ-ACWX-2 40A-15A RH	AC4015038101			
		RJ-ACWX-1 40A-20A LH	AC4020028101		RJ-ACWX-2 40A-20A LH	AC4020048101			
		RJ-ACWX-1 40A-20A RH	AC4020018101		RJ-ACWX-2 40A-20A RH	AC4020038101			
		RJ-ACWX-1 50A-20A LH	AC5020028101		RJ-ACWX-2 50A-20A LH	AC5020048101			
		RJ-ACWX-1 50A-20A RH	AC5020018101		RJ-ACWX-2 50A-20A RH	AC5020038101			
		RJ-ACWX-1 50A-25A LH	AC5025028101		RJ-ACWX-2 50A-25A LH	AC5025048101			
		RJ-ACWX-1 50A-25A RH	AC5025018101		RJ-ACWX-2 50A-25A RH	AC5025038101			
		RJ-ACWX-1 65A-25A LH	AC6525028101		RJ-ACWX-2 65A-25A LH	AC6525048101			
		RJ-ACWX-1 65A-25A RH	AC6525018101		RJ-ACWX-2 65A-25A RH	AC6525038101			
		RJ-ACWX-1 65A-32A LH	AC6532028101		RJ-ACWX-2 65A-32A LH	AC6532048101			
		RJ-ACWX-1 65A-32A RH	AC6532018101		RJ-ACWX-2 65A-32A RH	AC6532038101			
		RJ-ACWX-1 65A-40A LH	AC6540028101		RJ-ACWX-2 65A-40A LH	AC6540048101			
		RJ-ACWX-1 65A-40A RH	AC6540018101		RJ-ACWX-2 65A-40A RH	AC6540038101			
		RJ-ACWX-1 80A-40A LH	AC8040028101		RJ-ACWX-2 80A-40A LH	AC8040048101			
		RJ-ACWX-1 80A-40A RH	AC8040018101		RJ-ACWX-2 80A-40A RH	AC8040038101			
		RJ-ACWX-1 80A-50A LH	AC8050028101		RJ-ACWX-2 80A-50A LH	AC8050048101			
		RJ-ACWX-1 80A-50A RH	AC8050018101		RJ-ACWX-2 80A-50A RH	AC8050038101			
		Flange Connection	ACFWX-1		RJ-ACFWX-1 25A-8A	AC2508008101	ACFWX-2	RJ-ACFWX-2 25A-8A	AC2508208101
					RJ-ACFWX-1 25A-10A	AC2510008101		RJ-ACFWX-2 25A-10A	AC2510208101
RJ-ACFWX-1 40A-15A	AC4015008101			RJ-ACFWX-2 40A-15A	AC4015208101				
RJ-ACFWX-1 40A-20A	AC4020008101			RJ-ACFWX-2 40A-20A	AC4020208101				
RJ-ACFWX-1 50A-20A	AC5020008101			RJ-ACFWX-2 50A-20A	AC5020208101				
RJ-ACFWX-1 50A-25A	AC5025008101			RJ-ACFWX-2 50A-25A	AC5025208101				
RJ-ACFWX-1 65A-25A	AC6525008101			RJ-ACFWX-2 65A-25A	AC6525208101				
RJ-ACFWX-1 65A-32A	AC6532008101			RJ-ACFWX-2 65A-32A	AC6532208101				
RJ-ACFWX-1 65A-40A	AC6540008101			RJ-ACFWX-2 65A-40A	AC6540208101				
RJ-ACFWX-1 80A-40A	AC8040108101			RJ-ACFWX-2 80A-40A	AC8040308101				
RJ-ACFWX-1 80A-50A	AC8050108101	RJ-ACFWX-2 80A-50A	AC8050308101						

ACX type uses a stainless steel bellows assembly utilizing a hot oil-lubricated seal ring.

In the ACZ type, the head connecting port is directed opposite (180°) to the position shown in the brochure.

		Simplex			Duplex, Stationary Internal Pipe		
		Type	Name	Our Code	Type	Name	Our Code
Thread Connection		ACLZ		AZ*****	ACZ		AZ*****
	Y	ACLYZ		AZ*****02	ACYZ		AZ*****02
	X	ACLXZ		AZ*****01	ACXZ		AZ*****01
Flange Connection		ACLFZ		AZ*****	ACFZ		AZ*****
	Y	ACLFYZ		AZ*****02	ACFYZ		AZ*****02
	X	ACLFXZ		AZ*****01	ACFXZ		AZ*****01

		Duplex, Rotatory Internal Pipe					
		Rotor Without Key Seat			Rotor With Key Seat		
		Type	Name	Our Code	Type	Name	Our Code
Thread Connection		ACWZ-1		AZ*****	ACWZ-2		AZ*****
	Y	ACWYZ-1		AZ*****02	ACWYZ-2		AZ*****02
	X	ACWXZ-1		AZ*****01	ACWXZ-2		AZ*****01
Flange Connection		ACFWZ-1		AZ*****	ACFWZ-2		AZ*****
	Y	ACFWYZ-1		AZ*****02	ACFWYZ-2		AZ*****02
	Z	ACFWX-1		AZ*****01	ACFWX-2		AZ*****01

Precautions for Use

1. Use caution not to allow foreign matter to enter the sealed area.
 2. When installing a joint that has a fluid leakage inspection hole, be sure to direct the inspection hole downward.
 3. For joints having a fluid leakage inspection hole: When fluid leaks from the inspection hole, it is time to replace the joint.
 4. For screw-in connection types: The screw must be allowed to tighten freely against the direction of rotation.
The left-hand screw is used when the roll or drum rotates clockwise (when viewed from the rotary joint installation position); the right-hand screw is used when the roll or drum rotates counterclockwise.
 5. Avoid installing piping that would cause the rotary joint to bear the weight of the valve, etc.
 6. Use a flexible tube for connecting the rotary joint and piping.
Do not bind the joint by connecting it directly to the steel pipe.
 7. Do not give the rotation stopper on the rotary joint any excessive restraint for stopping the rotation of the joint.
 8. Lubrication is required where ball bearings are used for high-temperature operation.
Supply grease at regular intervals (the interval differs depending on the operation frequency).
 9. Do not operate the rotary joint at the maximum rotation speed under the maximum allowable working pressure.
 10. When supplying grease, remove the plug, and then top off grease.
 11. Do not leave the rotary joint at rest for long periods of time. This may cause fluid leaks due to the formation of rust.
 12. In the event of any failure, repair or replace the rotary joint promptly.
- ⚠ Continued operation with fluid leakage may cause major accident.

Causes of Failure

A sign of failure often appears as a premature fluid leakage from the sealing part. This can be found by checking whether any fluid is leaking from the inspection hole in the main body or through the gap between the rotor and casing. In many cases, the failed joint can be re-used by repairing or replacing certain parts. Please take appropriate measures before the internal parts are damaged.

Main causes of failure are as follows:

- 1) Natural wear and abnormal wear on sealing surface or bearing area
- 2) Undue restraint of joint body
 - The rotation stopper is restrained.
- 3) The center of the machine is improperly aligned with the center of the rotary joint.
 - The end face of the axis of rotation of the machine is not at a right angle to the shaft.
 - The mating part (spigot) is improperly assembled.
 - The center of the mounting screw of the machine to be connected to is incorrectly aligned.
 - The screw direction is incorrect.
 - In the case of flange connection, bolts are not evenly tightened.(After installation, be sure to operate it at low speed and make sure that centering is achieved).
- 4) The piping ahead of the joint is improperly installed.
 - The joint is connected to a steel pipe.
 - The flexible tube does not have adequate flexibility.
 - The bending direction of the flexible tube is inappropriate.
 - The joint is directly subjected to the weight of a valve, trap or other part.
- 5) The internal pipe is not appropriate.
 - The internal pipe and siphon pipe are too heavy and held just by the screw at the joint head.
 - The internal pipe is off-center.
- 6) Use of improper product type.
 - The diameter is too small.
 - The working temperature is too high.
 - The working pressure is too high.
 - The number of RPMs is too high.
 - Operated with an improper type of fluid.
 - Operated with no fluid running.
- 7) Problem with flowing fluid
 - Foreign matter remains in the flow path such as piping, roll, etc.
 - Improper solvent medium is deposited in fluid.
 - The design of the piping installation is not appropriate.
- 8) Others --- If a failure is detected, DO NOT disassemble the joint yourself. Contact us for repairs.

Frequently Asked Questions

Q: What is the difference between "RH/LH" (representing the screw direction of the rotor of the screw-in type rotary joint) and "R/L" (stamped on the rotary joint)?

A: There is no particular difference between "RH/LH" and "R/L". "RH" and "LH" are the abbreviation of "Right Hand" and "Left Hand", respectively. "R/L" is simply used instead of "RH/LH" on the faceplate of the product.

Q: What is the difference between AC Series and NC Series?

A: They are both high-temperature types but with different structure. The AC Series is a lubricating type using a ball bearing, while the NC Series is a non-lubricating type using a carbon bearing in a spherical sealing structure.

Q: What should I do to let a screw tighten freely against the direction of rotation?

A: When installing the joint, use a screw whose direction is opposite to the direction of rotation of a rotating body to which the joint is connected.

Q: Fluid is leaking from the inspection hole.

A: It is time to repair or replace the joint.

Q: Is it possible to use RXH type to run steam as fluid?

A: The standard products of RXH type cannot be used to run steam as a fluid. For this purpose, use AC Series or NC Series.

Q: A leakage occurred shortly after installation.

A: Check installation and use conditions. Impurities in the fluid and improper installation are two common causes of many leakage failures. Use of an improper product type may also cause leakage.

When this is a new order to us

Please specify the following information in your order.

○ If you are currently using our joint

A: In the case of a joint listed in this brochure

Model, size (and, in the case of duplex type, internal pipe size), and screw direction (when using a screw-in type)

B: In the case of a special product

Model, size, screw direction (when using a screw-in type)

Serial number, date of manufacture

Model names contain "OC", "ONC", "OKC", "RXS", etc.

For flange connection types, it is not necessary to specify the screw direction.

For screw-in types, please specify the screw direction.

Please select a left-hand screw when the roll or drum rotates clockwise (when viewed from the rotary joint installation position) and a right-hand screw when the roll or drum rotates counterclockwise.

○ When this is a new order to us

1. Fluid for use, pressure, temperature, number of revolutions and description of the machine to be connected
2. Direction of rotation of the machine to be connected (Direction of rotation when viewed from the joint installation position)
3. Connection type: Screw-in connection (screw direction) or flange connection
4. Connection piping port: Screw-in connection or flange connection
5. Size
6. Structure: Simplex type or duplex type (with stationary internal pipe or rotational internal pipe)
7. Frequency of operation and working shifts
8. Working environment (e.g., use in clean room)
9. Other special requests

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The contents of this catalog subject to change without notice.

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