

Tips: the company has the right to change the shape, color and technical parameters of the sample products without prior notice.

Please visit [www.tzkkjt.com](http://www.tzkkjt.com) for more details.



Kaikun Rotary Joint

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Tengzhou Kaikun Rotary Joint Manufacturing Co., Ltd.

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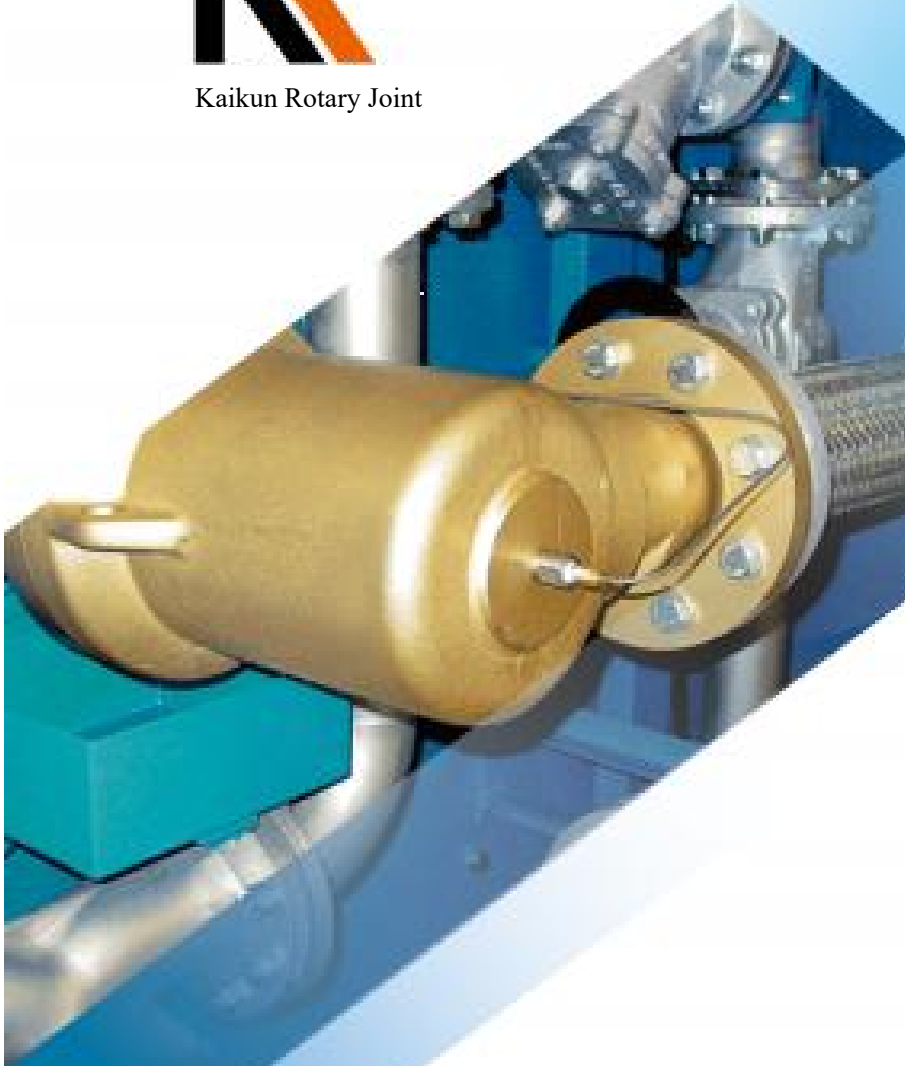
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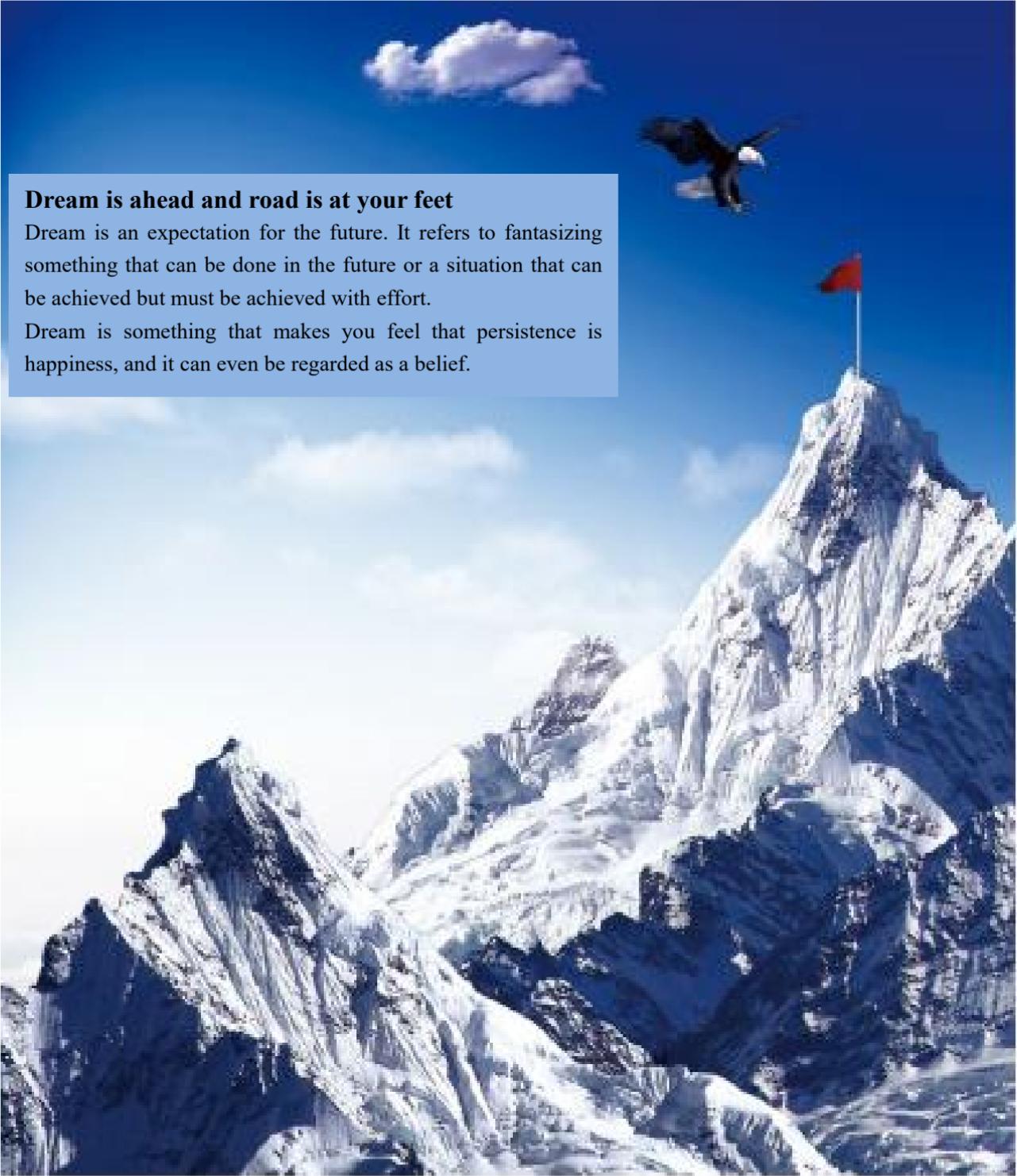


Kaikun Rotary Joint



**TENGZHOU KAIKUN ROTARY JOINT  
MANUFACTURING CO., LTD.**

**Excellent Quality Is Trustworthy**



**Dream is ahead and road is at your feet**

Dream is an expectation for the future. It refers to fantasizing something that can be done in the future or a situation that can be achieved but must be achieved with effort.

Dream is something that makes you feel that persistence is happiness, and it can even be regarded as a belief.

Climb the peak bravely and create brilliance again

## Company Profile

Tengzhou Kaikun Rotary Joint Manufacturing Co., Ltd. is a comprehensive manufacturer of rotary joint sealing products integrating research, development, manufacturing and sales. The Company has been adhering to the belief of creating value for customers over the years, and constantly strengthened R&D investment to make the product quality continuously rise. The product categories of the Company have been continuously improved, forming a product scale of ten categories, nearly 1,000 specifications and models.

Main products: all kinds of rotary joints, metal seals, metal hoses, metal and non-metal compensators, walking beam heating furnace accessories, sintering ash discharge valves, walking furnace automatic slag removal technology, etc. Products cover metallurgy, electric power, rubber, chemical, food, paper making, printing and dyeing industries.

The Company is located in Tengzhou City, one of the top 100 cities in China, which is the hometown of "Scientific Sage" Mozi and Luban. The Company is one of the earliest enterprises in the industry through the quality system certification, with advanced production technology, sophisticated CNC machining equipment, perfect detection tools. In addition, the Company has extensive business cooperation with more than 100 iron and steel enterprises, iron and steel design institutes, electric power research institutes and some colleges and universities in China for many years, and has achieved good results in product research and development technology matching.

The Company regards quality as life. It has built and perfected a complete set of quality assurance system, with the development aim of "continuous scientific research and innovation, continuous improvement, and insisting on customer first", and expects to continue to maintain long-term friendly cooperative relations with the majority of user units and scientific research and design institutes, achieving a win-win situation for enterprises and customers. We sincerely welcome colleagues from all walks of life to visit the Company for guidance and negotiation. We hope to sincerely cooperate with you, hand in hand to create brilliant!





**Kaikun Rotary Joint**

**Communicate with you sincerely  
Carefully create products that  
satisfy you**

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Metallurgical industry

High-speed type

High-pressure type

General type

Hose and compensator

Type selection and maintenance



Special rotary joint for forming machine



Special rotary joint for forming machine



Special rotary joint for vulcanizing machine



Special rotary joint for vulcanizing machine



New H-type high-speed and high-pressure joint



Special rotary joint for crimping machine



Rotary joint for dryer



Rotary joint for boiler industry



High speed rotary joint for heat conduction oil



Rotary joint for cooling water



Special rotary joint for printing and dyeing



Rotary joint for high speed paper machine



Special rotary joint for pancake machine



Special high-speed rotary joint for machine tool



Universal rotary joint



Special rotary joint for glass



Rotary joint for rubber and plastic forming machine



Crane pipe rotary joint



D-type rotary joint



Special rotary joint for battery membrane production



Rotary joint for heat conduction oil



Rotary joint for continuous casting machine



Hydraulic oil rotary joint



2-way rotary joint



Rotary joint for food machinery industry



Rotary joint for aerospace



Rotary joint for food machinery industry



Rotary joint for construction and agriculture industries



Rotary joint for oil and gas industry



3-way rotary joint



Rotary joint for pharmaceutical industry



Rotary joint for pharmaceutical industry



Rotary joint for pharmaceutical industry



Rotary joint for construction and agriculture industries



Rotary joint for oil and gas industry



Rotary joint for aerospace



Rotary joint for renewable energy industry



Rotary joint for renewable energy industry



Rotary joint for renewable energy industry



Rotary joint for renewable energy industry



Rotary joint for renewable energy industry



Rotary joint for food machinery industry



Rotary joint for food machinery industry



Rotary joint for food machinery industry



4-way rotary joint



6-way rotary joint



8-way rotary joint



12-way rotary joint



24-way rotary joint



High pressure multi-channel rotary joint



High pressure multi-channel rotary joint



High pressure multi-channel rotary joint



Stainless steel flange connection



Carbon steel flange connection



Rotary joint for printing machine



Rotary joint for printing machine



Rotary joint for printing machine



Stainless steel high-speed rotary joint



High-speed rotary joint



Stainless steel internal thread connection



Stainless steel high-speed rotary joint



Stainless steel internal thread connection



Tower crane internal and external thread connection



High pressure straight rotary joint



High pressure straight rotary joint



High pressure straight rotary joint



Special rotary joint for continuous casting machine in steel mill



Special rotary joint for continuous casting machine in steel mill



Rotary joint for KKHK series



Rotary joint for KKHK series



Special rotary joint for continuous casting machine in steel mill



Special rotary joint for continuous casting machine in steel mill



Customized rotary joint with special shape



Rotary joint for KKHK series



Cooling water rotary joint for HDHS series



Cooling water rotary joint for  
HDHS series



H-type rotary joint



Rotary joint for printing machine



Q-type high temperature steam hot  
oil rotary joint



QD-type rotary joint



QD-F type rotary joint



QS-GF type rotary joint



QS-X type rotary joint



QS-XF type rotary joint



DD-type rotary joint



DS-G type rotary joint



DS-GF type rotary joint



DD-F type rotary joint



DS-X type rotary joint



DS-XF type rotary joint



TENGZHOU KAIKUN ROTARY JOINT MANUFACTURING CO., LTD.

# M

etallurgical Industry



## Rotary joint for converter series

Rotary joints for converter series are installed at the trunnion of converter in iron and steel production enterprises, connecting converter with various channels and pipelines, and transmitting cooling, bottom blowing, top blowing and other media needed by steel converter. It ensures uninterrupted water supply and ventilation in the production process of converter, realizes cooling of trunnion, backing ring, furnace crown and other parts of converter, and can simultaneously blow argon (nitrogen) air bottom and the bosh air cooling, which is an important component to ensure continuous and safe production of converter.

Metallurgical industry



Water cooling and combined blowing rotary joint  
for KK120T converter



Water cooling and combined blowing  
rotary joint for KK50T



Water cooling and combined blowing rotary  
joint for KK80T converter



Water cooling rotary joint for KK120T  
converter



Water cooling and combined blowing rotary joint for KK120T converter



Water cooling rotary joint for KK120T-180T converter



Special rotary joint for KK50T converter



Water cooling rotary joint for KK40T converter



Water cooling and combined blowing rotary joint for KK100T converter



Water cooling and combined blowing rotary joint for KK80T converter



Water cooling rotary joint for KK100T converter



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

Rotary joint for KK100T converter non drive vehicle



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 80$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

Rotary joint for KK100T converter drive vehicle



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

Rotary joint for KK100T converter non drive vehicle



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

Combined blowing rotary joint for KK180T converter



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

Special rotary joint for KK210T converter



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

KK40T non-elbow combination rotary joint



Water cooling and pneumatic slag retaining rotary joint for KK120T converter



Water cooling rotary joint for KK30T converter



Water cooling and combined blowing rotary joint for KK180T converter



KK65T converter with water cooling, combined blowing rotary joints and gear box, main controller and encoder assembly



Water cooling rotary joint for KK120T converter



Combined blowing rotary joint for KK120T converter



Combined blowing rotary joint for KK120T converter



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

KK80T non-drive side water cooling rotary joint



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

Special rotary joint for KK50T converter water cooling and combined blowing



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

KK160T movable end bottom blown stainless steel rotary joint



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

KK160T transmission side water cooling stainless steel rotary joint



Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

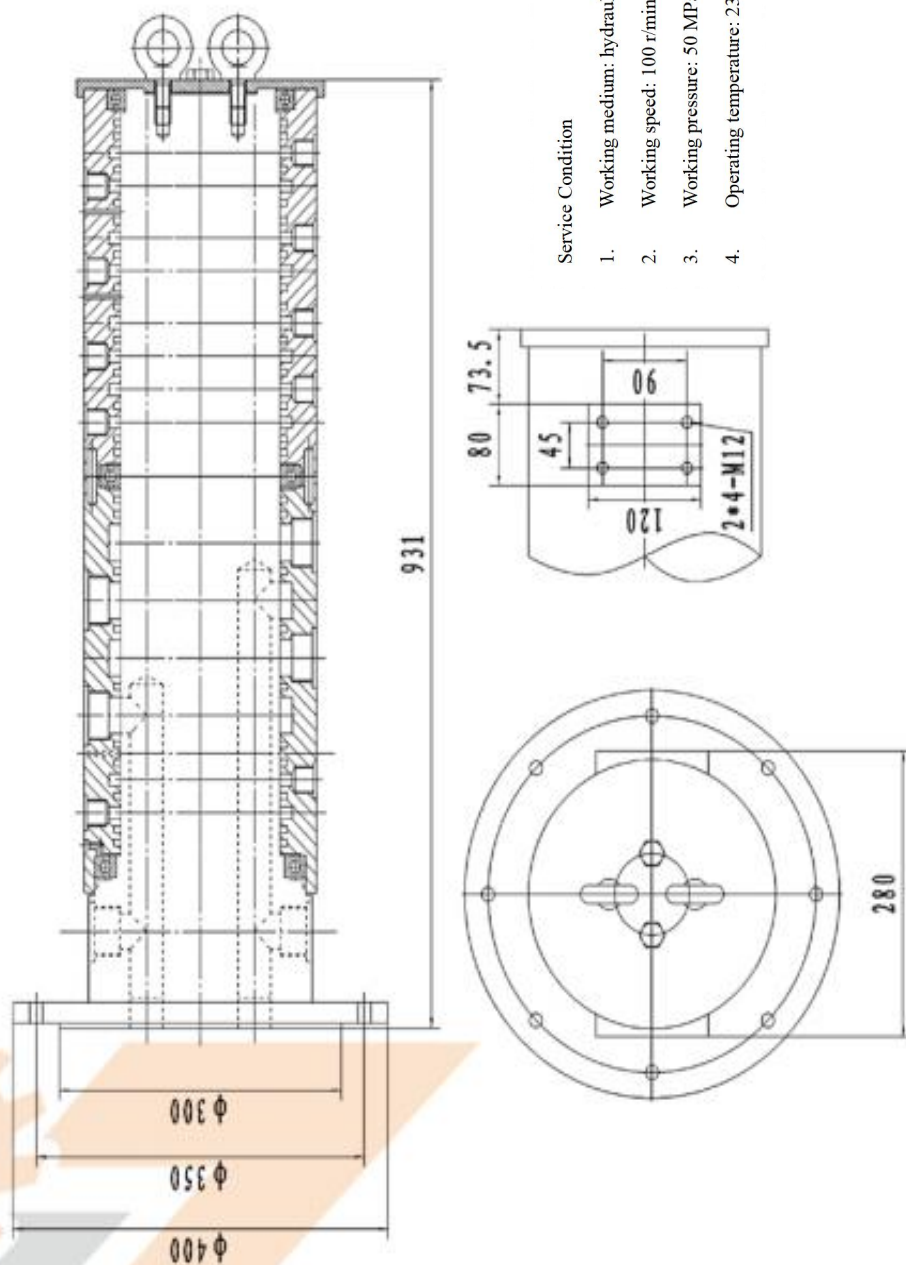
Special rotary joint for KK210T converter



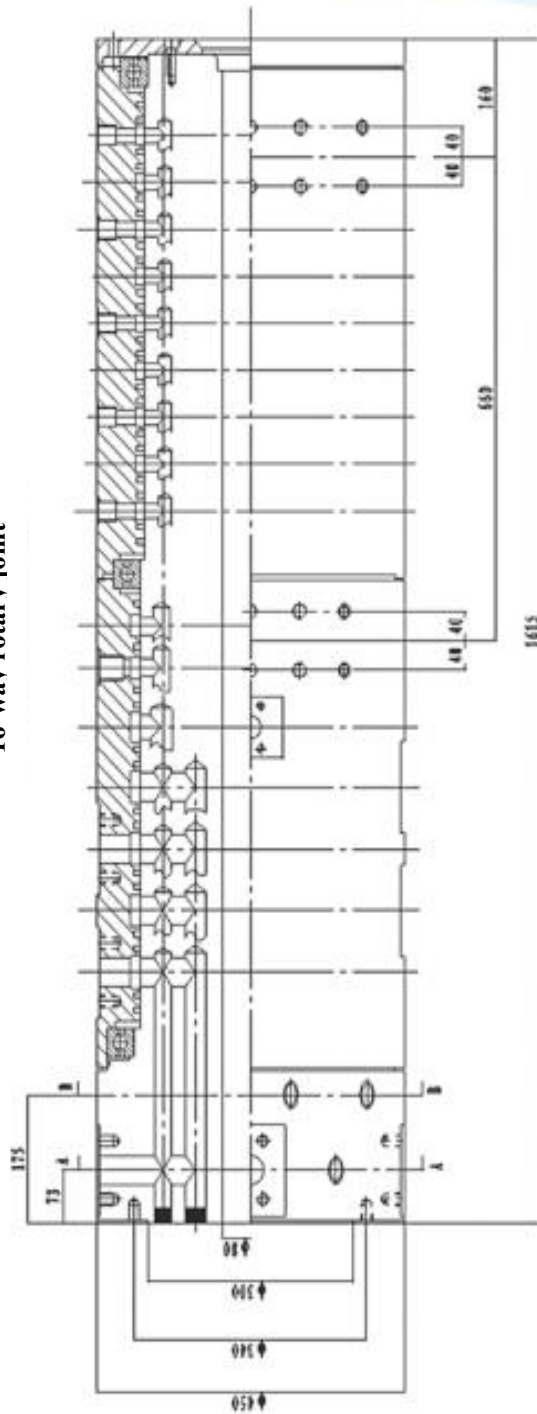
Maximum operating pressure: 50 Mpa  
Rotating speed:  $\leq 50$  r/min  
Temperature:  $\leq 230^{\circ}\text{C}$

KK25T non-drive side water cooling rotary joint

14-way rotary joint

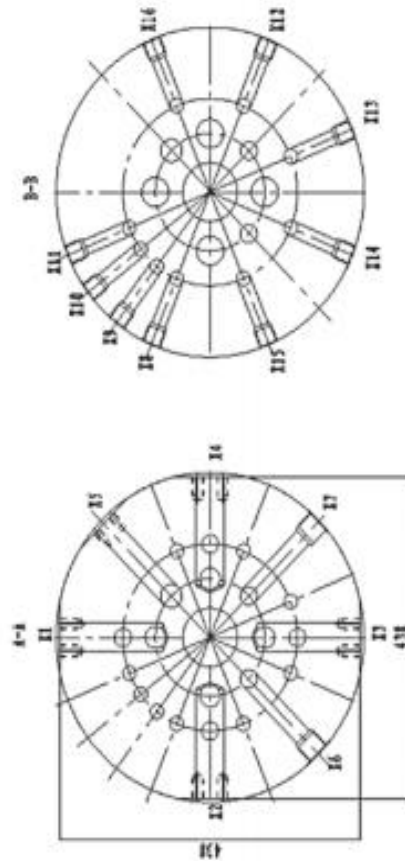


## 16-way rotary joint



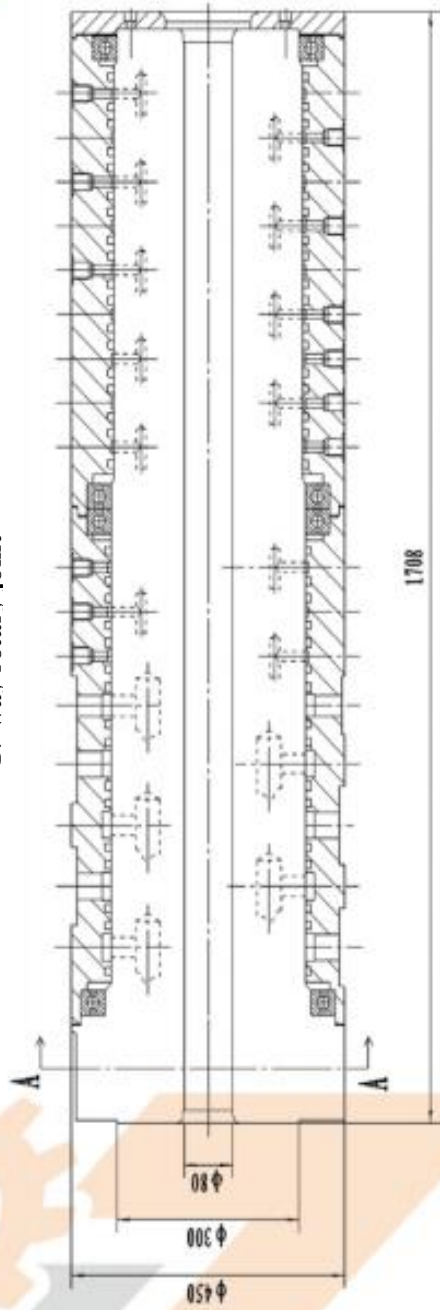
### Service Condition

1. Working speed: 2 rpm
2. Medium temperature: 230 °C
3. Working pressure: 50 MPa
4. Working medium: hydraulic oil

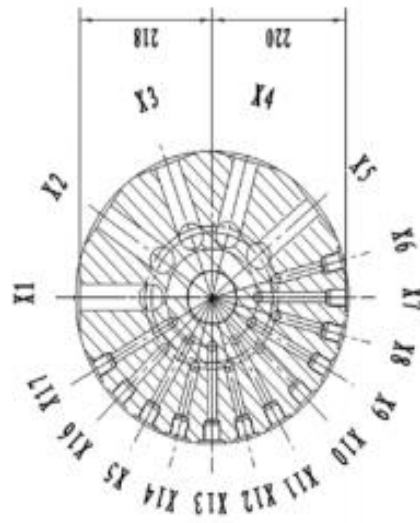


Metallurgical industry

### 17-way rotary joint

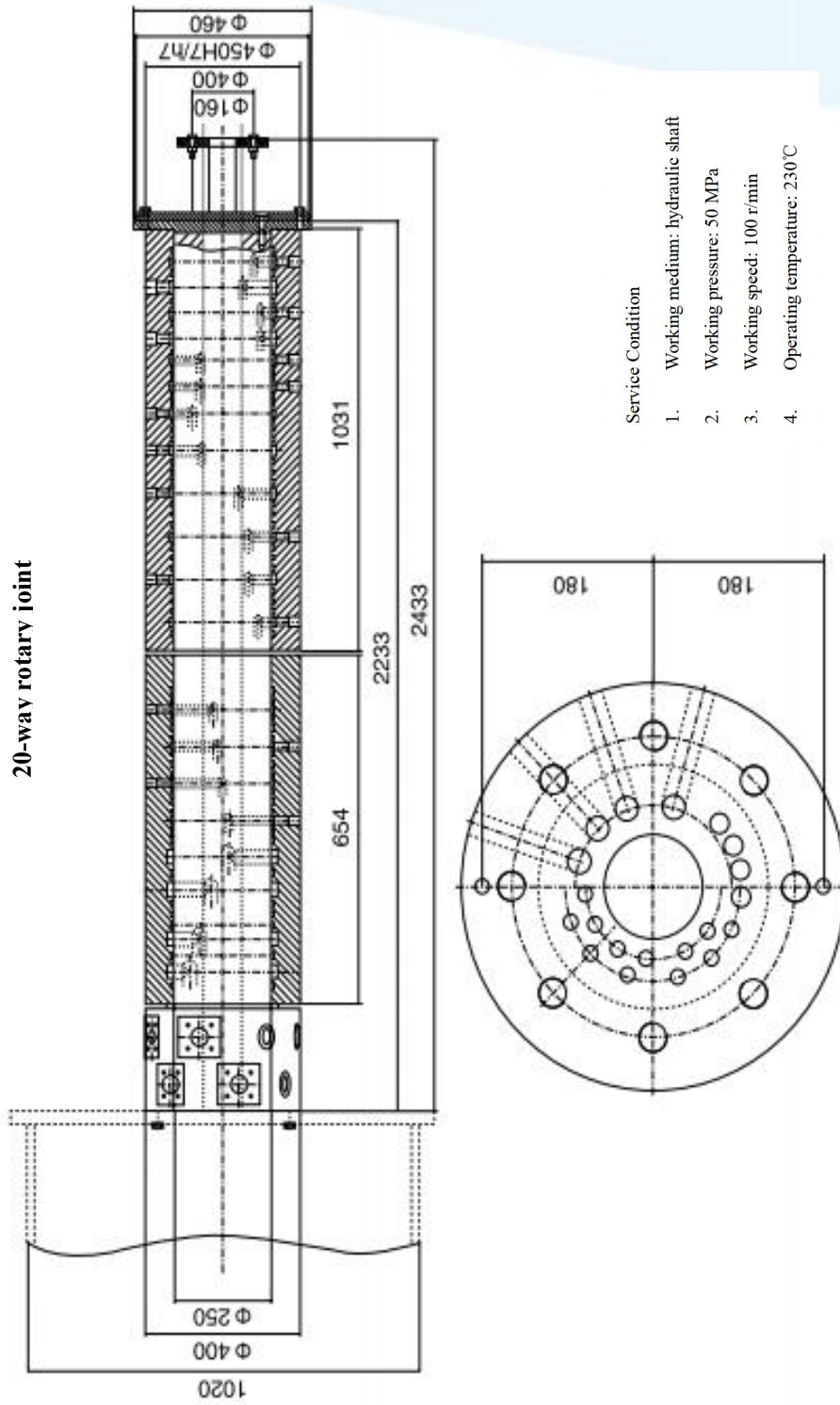


A--A



#### Service Condition

1. Working speed: 2 rpm
2. Medium temperature: 230 °C
3. Working pressure: 50 MPa
4. Working medium: hydraulic oil



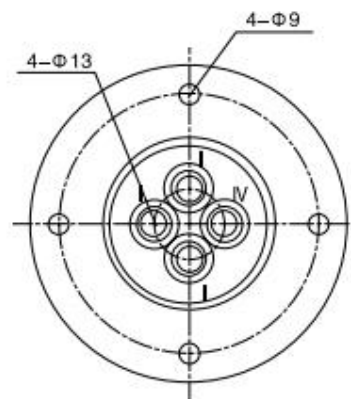
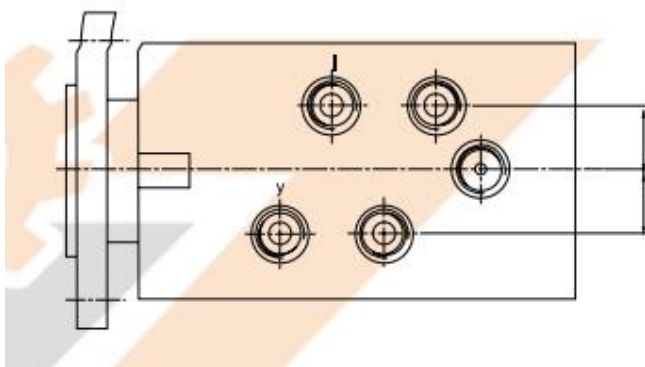
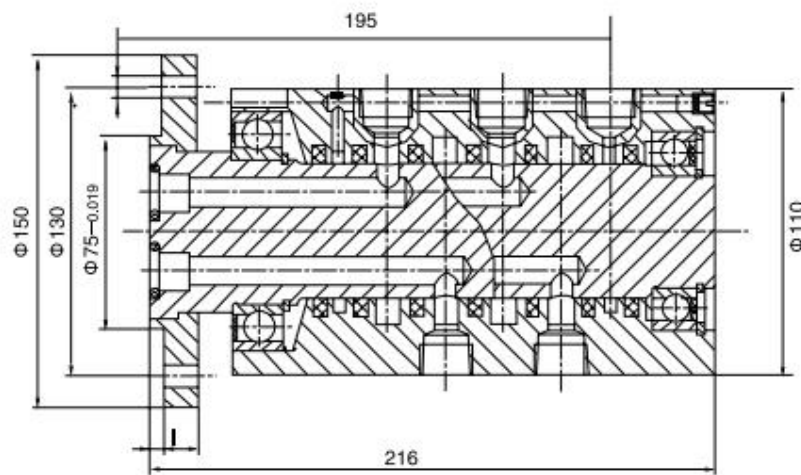
### Rotary joint for crimping machine

#### Service Condition:

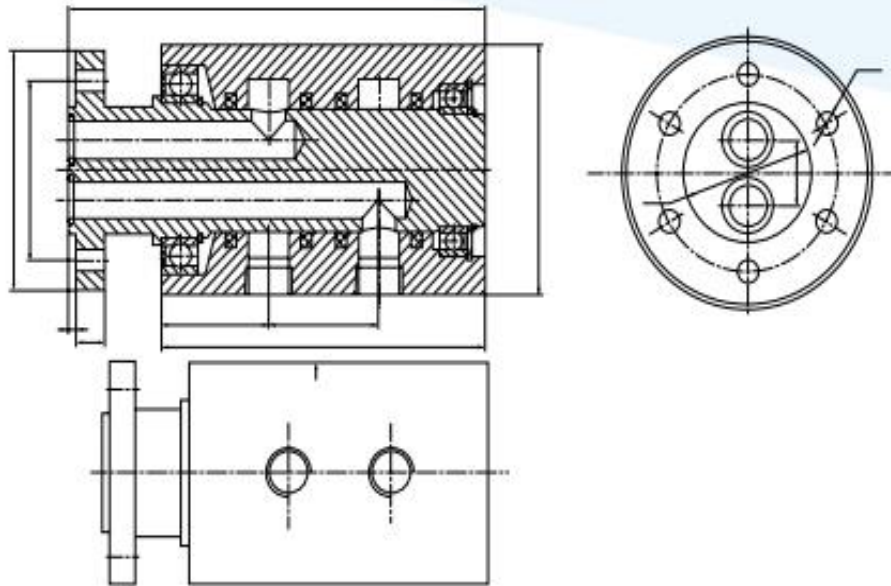
1. Pressure: 50 Mpa
2. The maximum temperature shall not exceed the joint housing temperature ( $230^{\circ}\text{C}$ ) under any conditions
3. Rotating speed: 350 r/min
4. Medium: gas



4-way rotary joint

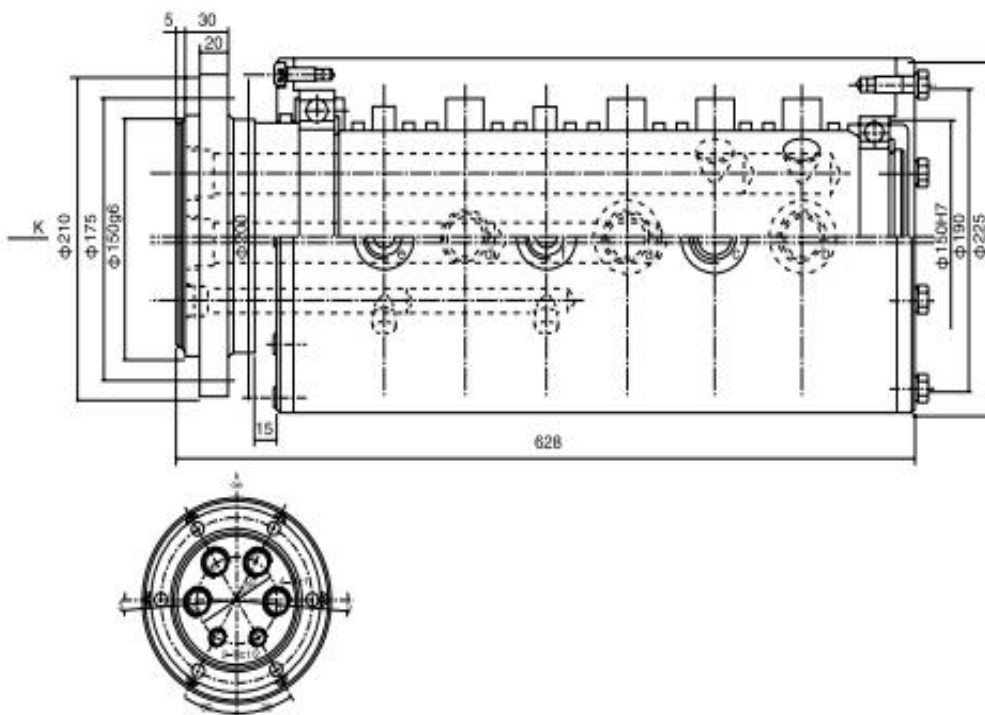


2-way rotary joint



Metallurgical industry

6-way rotary joint



### Special rotary joint for KKH refining furnace



#### Structural Characteristics

It adopts international advanced SVE seal with certain compensation and longer service life, flexible rotation, reliable sealing, small rotation distance, being an ideal substitute for imported products.

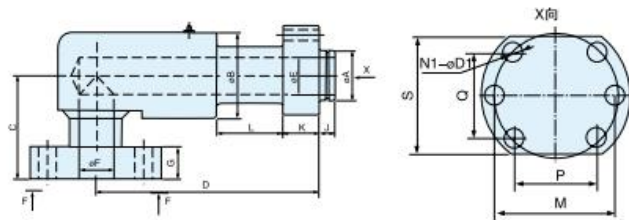
#### Technical Parameters

Maximum pressure: 210 bar

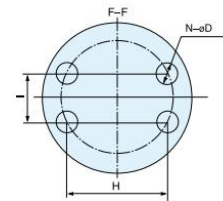
Maximum temperature: 150°C

Maximum speed of revolution: 150 r/min

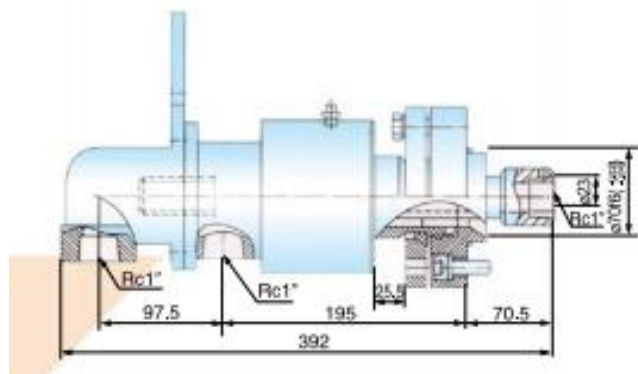
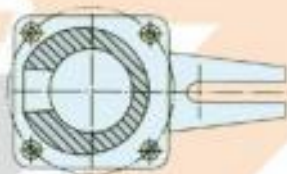
Working medium: hydraulic oil, water, ethylene glycol, etc.



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N-Ø D	N1-Ø D	P8	Q	S
KKIH-5	7	12	14	31	5	5	4	123.	58.	21.	5	9	115	4-Ø2	6-Ø18	1.4	81.4	10
0	0	0	5	0	2	2	5	8	7	5	0	0		5		6	1	
KKIH-4	6	12	13	26	4	4	4	96.3	44.	154	5	5	69.	4-Ø2	4-Ø22	9.3	69.3	10
0	0	0	9	8	0	0	0		5		0	0	3	2			1	0



### Rotary joint for KKJR25-00 heating furnace

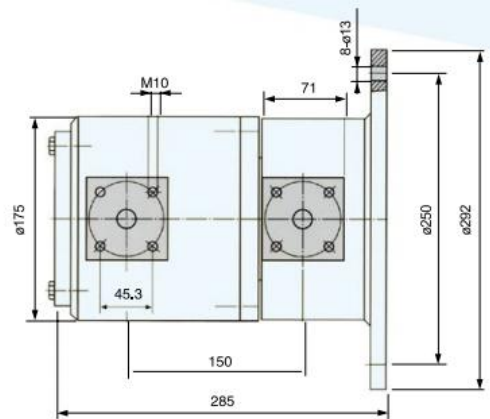


#### Technical Parameters

Working pressure: 16 bar Working speed: 300 r/min

Operating temperature: ≤100°C Working medium:

### Special hydraulic rotary joint for KKNP blast furnace gun



#### Service Condition

Maximum pressure: 325 bar Maximum

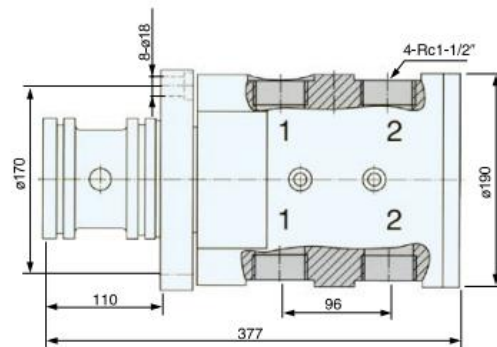
temperature: 150°C

Maximum speed of revolution: 15 r/min Oil

inlet: 2-SAE1/2"

The suitable fluid: hydraulic oil, water, ethylene glycol

### Special rotary joint for KKJ uncoiler



#### Service Condition

Maximum pressure: 125 bar Maximum

temperature: 80°C

Maximum speed of revolution: 300 r/min

The suitable fluid: hydraulic oil

Oil inlet: 2-DN40 Oil return port: DN15

## Rotary joint for continuous casting and continuous rolling series

### Product Introduction

Rotary joints for continuous casting and continuous rolling series are mainly used for cooling continuous casting rolls in continuous casting and continuous rolling production lines of iron and steel enterprises, which play a role in protecting continuous casting rolls and improving the quality of slab and bar products in iron and steel enterprises. This series of products are all high-quality sealing materials and mechanical sealing structure, with stable product performance and long service life. KKA-KKN series products are suitable for various continuous casting production lines in China. Rotary joints for continuous casting and continuous rolling series have been proved to be completely substitutable for imported similar products for production and use.

### Special rotary joint for KKA series steel continuous casting machine



#### Structural Characteristics

Rotary joints for KKA series are designed in line with the characteristics of modern connecting equipment, continuous casting machine rolls. It penetrates most of the joint shape into the roller, only exposing the pipe connecting flange. The sealing structure design of the rotary joint adopts a balanced mechanical seal design, and the sealing elements are made of high temperature and wear-resistant materials. The original axial tandem type is changed into a unique inverted built-in seal type, reducing the axial length, and making the shell structure become a whole, which is more conducive to the disassembly and maintenance of the joint.

#### Service Condition

Axial expansion and contraction: 10 mm

Offset angle: 0.1°

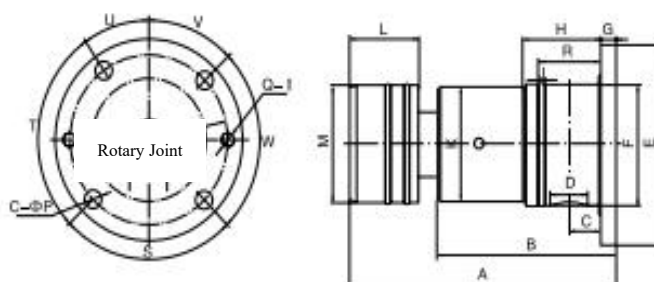
Maximum operating pressure: 1.2 MPa

Test pressure: 1.8 MPa

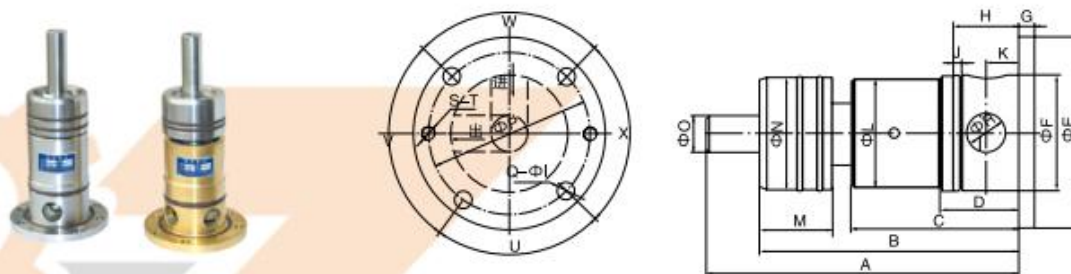
Maximum working temperature: 230°C

Maximum speed of revolution: 60r/min

Medium: water and coolant



Type	A	B	C	D	E	F	G	H	R	J	K	L	M	N	O	P	Q	I	S	T	U	V	W
KKA-20D-01	131.5	83	11.5	20	100	60e8	8	36	34	4.8	57	37.5	59h6	84	4	9	2	M8	90	90	45	55	80
KKA-20D-02	142	95	17	20	100	60e8	8	41	34	4.5	58	37.5	59h6	84	4	9	2	M8	90	100	35	45	90
KKA-20D-03	136	95	14.2	20	100	60e8	8	48	34	4.5	58.5	37.5	59h6	84	4	9	2	M8	90	90	45	55	80



Type	A	B	C	D	E	F	G	H	R	J	K	L	M	N	O	P	Q	I	S	T	U	V	W	X
KKA-20S01	156.5	135.5	87	40	100	60e8	8	34.8	20	4.8	15	57	37.5	59h6	19h9	84	4	9	2	M8	80	100	90	90

## Special rotary joint for KKB series steel continuous casting machine

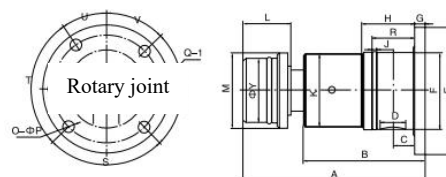


### Structural Characteristics

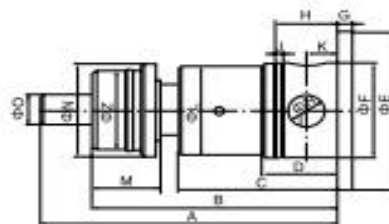
Rotary joints for KKB series are designed in line with the characteristics of modern connecting equipment continuous casting machine rolls. It penetrates most of the joint body into the roller, only exposing the pipe connecting flange plate, which is beneficial to the space arrangement between the flow and the flow in the roller conveyor. The sealing structure design of the rotary joint adopts a balanced mechanical seal design, and the sealing elements are made of high temperature and wear-resistant materials. The original axial tandem type is changed into a unique inverted built-in seal type, reducing the axial length, and making the shell structure become a whole, which is more conducive to the disassembly and maintenance of the joint.

### Service Condition

Axial expansion and contraction: 10 mm      Maximum working temperature: 120°C  
Offset angle: 0.1°      Maximum speed of revolution: 60 r/min  
Maximum operating pressure: 1.2 MPa      Applicable medium: water and coolant  
Test pressure: 1.8 MPa

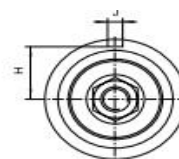
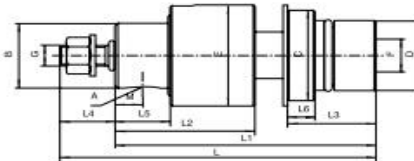


Type	A	B	C	D	E	F	G	H	R	J	K	L	M	N	O	P	Q	I	S	T	U	V	W
KKB-20D01	131.5	83	11.5	20	100	60e8	8	36	34	4.8	57	37.5	59h6	84	4	9	2	M8	90	90	45	55	80
KKB-20D02	142	95	17	20	100	60e8	8	41	34	4.5	58	37.5	59h6	84	4	9	2	M8	90	100	35	45	90
KKB-20D03	136	95	14.2	20	100	60e8	8	48	34	4.5	58.5	37.5	59h6	84	4	9	2	M8	90	90	45	55	80



Type	A	B	C	D	E	F	G	H	R	J	K	L	M	N	O	P	Q	I	S	T	U	V	W	X
KKB-20S-01	156.5	135.5	87	40	100	60e8	8	34.8	20	4.8	15	57	37.5	59h6	19h9	84	4	9	2	M8	80	100	90	90
KKB-20S-02	195	134.5	87	41	100	60e8	8	34	20	4.5	17	57	37.5	59h6	19h9	84	4	9	2	M8	80	100	90	90

## KKC series rotary joint for continuous casting

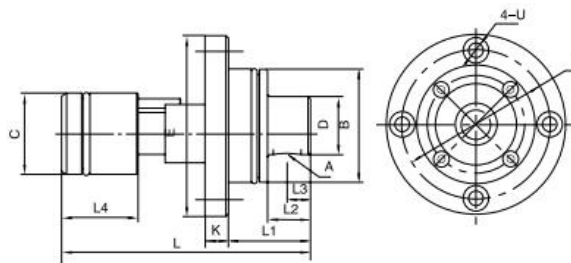


### Structural Characteristics:

Mechanical seal is used inside the joint, and the sealing elements are made of high temperature resistant, wear-resistant and automatic lubricating materials. Automatic compensation for the wear of sealing elements, embedded thread connection is adopted for installation, and the machining requirements of installation end face and installation hole are above Ra1.6 to ensure reliable installation and sealing.

Type	A	B	C	D	E	F	G	H	J	K	L	L1	L2	L3	L4	L5	L6
KKC-12D-01	12	25	34.5	27	39	12.7	M8	17	4	9.1	103	85	46	29	18	18.2	9

## KKD series rotary joint for continuous casting



Type	A	B	C	D	E	F	K	L	L1	L2	L3	L4	U
KKD-12D-01	12	49	35	25	78	64	10	107.5	35.5	18.5	10	33	6.5

## Special rotary joint for KKE series steel continuous casting machine

### KK-20D-01



#### Structural Characteristics:

Bearing cover and roller inside the rubber ring seal, easy maintenance and suitable for poor water quality environment, no metal hose, large circulation area, simple maintenance without disassembling the bearing cover, the maximum 10mm axial compensation roller thermal expansion

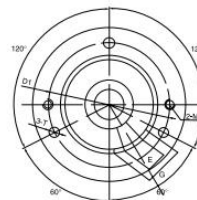
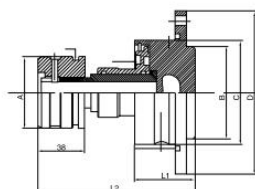
#### Service Condition

Coaxial:  $\leq 0.1$  mm  
temperature:  $230^{\circ}\text{C}$

Angular deviation:  $\leq 1^{\circ}$

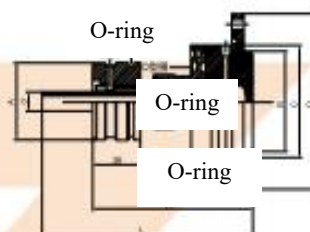
Pressure: 10 bar Maximum working

Maximum speed of revolution: 25 r/min



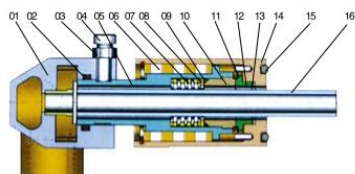
Type	A	B	C	D	L1	L2	T	E	G
KKE-20D-01	58h8	74.4	84	133	51	128	9	27	40

### KKE-20S-01



Type	A	B	C	D	L1	L2	L	D1	d	T	E	G
KKE-20S-01	58h8	74.4	84	133	51	128	170	114	14	9	27	40

## Special rotary joint for KKF type steel continuous casting machine



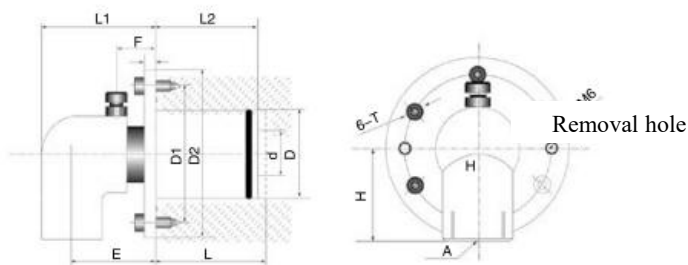
### Service Condition

Maximum pressure: 1.5MPa Maximum temperature: 230°C

Maximum speed of revolution: 200rpm Applicable Medium: water, hydraulic fluid, and coolant

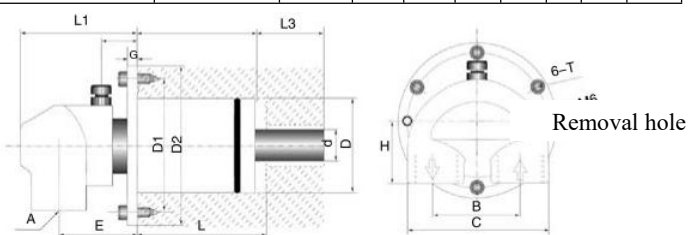
### Structural Characteristics

Rotary joints for KKF series are designed in line with the characteristics of modern connecting equipment continuous casting machine rolls. It penetrates most of the joint body into the roller, only exposing the pipe connecting elbow, which is beneficial to the space arrangement between the flow and the flow in the roller conveyor. The sealing structure design of the rotary joint adopts a balanced seal design. The original axial tandem type is changed into a unique inverted built-in seal type, reducing the axial length, and making the shell structure become a whole, which is more conducive to the disassembly and maintenance of the joint.



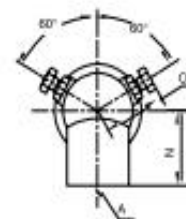
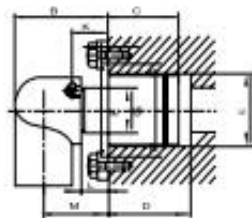
### KKF type

Type	Specifications	A	Mounting holes D (H8)	Mounting hole L	d	D1	D2	E	F	G	H	T
KKF-15D01	15	Rc1/2	46	62	16	72	88	48	22	6	45	M6
KKF-20D01	20	Rc3/4	46	62	17.5	72	88	48	22	6	45	M6
KKF-20D02	25	Rc1	46	62	17.5	72	88	53	22	6	60	M6
KKF-25D01	25	Rc1	59	82	25	83	95	55	24	8	60	M6



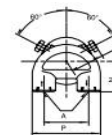
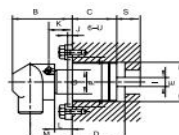
### KKF-S type

Type	Specifications	A	B	C	d	Mounting holes D (H8)	Mounting hole L	D1	D2	L1	L2	L3	E	F	G	H	T
KKF-15S01	15	Rc1/2	51	85	14	46	62	72	88	73	60	49	49	23	6	39	M6
KKF-20S01	20	Rc3/4	51	85	14	46	62	72	88	73	60	49	49	23	6	39	M6
KKF-20S02	25	Rc3/4	51	85	19	59	82	83	95	73	76	63	49	23	6	39	M6
KKF-25S01	25	Rc1	65	106	28	71	94	98	112	99	85	48	68	26	6	52	M6



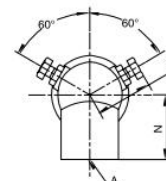
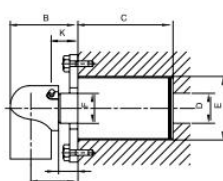
**KKH series rotary joint for**

Type	A	B	C	Mounting hole		F ( $\varnothing$ )	G ( $\varnothing$ )	J	K	L	M	N	O	Wt. (kg)
				D	E(H8)									
KKH-15D-01	Rc1/2	59	60	62	46	32	72	4	17	10	44	38	33	0.65
KKH-20D-01	Rc3/4	63	60	62	46	32	72	4	17	10	44	42	33	0.67
KKH-25D-01	Rc1	67	60	62	46	32	83	4	17	10	44	46	33	0.7
KKH-25D-03	Rc1	67	76	82	59	32	98	5	17	10	44	46	33	1.6



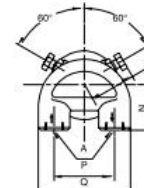
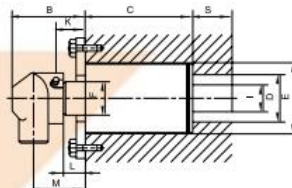
**KKH series rotary joint for continuous casting**

Type	A	B	C	Mounting hole		F ( $\varnothing$ )	G ( $\varnothing$ )	I ( $\varnothing$ )	J	K	L	M	N	O	P	Q	S	Wt.(kg)
				D	E(H8)													
KKH-15S-01	Rc1/2	66	60	62	46	72	32	13	4	17	10	42	39	33	51	85	48	0.9
KKH-20S-01	Rc3/4	66	60	62	46	72	32	13	4	17	10	42	39	33	51	85	48	0.9
KKH-25S-01	Rc1	66	76	82	59	83	32	19	4	17	10	42	39	33	51	85	63	1.8
KKH-25S-03	Rc1	97	82	84	71	98	54	28.5	5	23	16	66	46	44	64	105	51	4



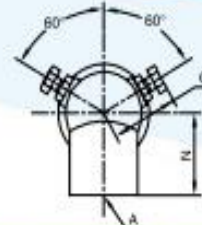
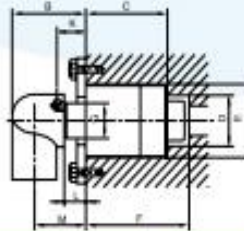
**KKI series rotary joint for continuous casting**

Type	A	B	Mounting hole			F ( $\varnothing$ )	K	L	M	N	O	Wt.(kg)
			C	D	E(H8)							
KKI-15D-01	Rc1/2	45	53.5	19	40	25	17	10	31	41	33	0.7
KKI-20D-01	Rc3/4	67	67.5	28	46	32	17	10	44	38	33	1.4
KKI-25D-01	Rc1	67	67.5	28	46	32	17	10	44	46	33	1.4
KKI-25D-03	Rc1	67	98.5	38	59	35	17	10	44	46	33	2



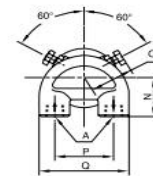
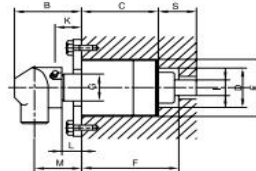
**KKI series rotary joint for continuous casting**

Type	A	B	C	D	E(H8)	F ( $\varnothing$ )	I ( $\varnothing$ )	K	L	M	N	O	P	Q	S	Wt.(kg)
KKI-15S-01	Rc1/2	66	67.8	28	46	32	13	17	10	42	39	33	51	85	48	0.9
KKI-20S-01	Rc3/4	66	67.8	28	46	32	13	17	10	42	39	33	51	85	48	0.9
KKI-25S-01	Rc1	66	98.5	38	59	32	19	17	10	42	39	33	51	85	63	1.8
KKI-25S-03	Rc1	97	101	48	71	54	28.5	23	16	66	46	44	64	105	51	4



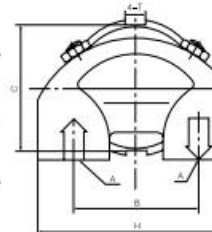
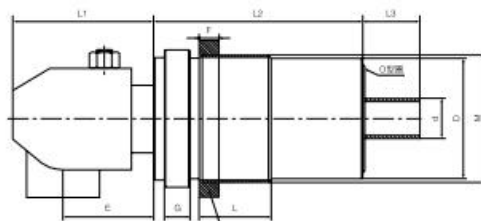
**KKJ series rotary joint for**

Type	A	B	Mounting hole				F (∅)	K	L	M	N	O	Wt.(kg)
			C	D	E(H8)	F							
KKJ-20D-01	Rc3/4	67	56.2	32	46	70	32	17	10	44	46	33	1.4
KKJ-25D-01	Rc1												
KKJ-25D-03	Rc1	67	81	41	59	102	38	17	10	44	46	33	1.4



**KKJ series rotary joint for continuous casting**

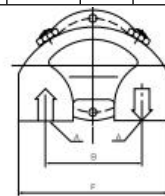
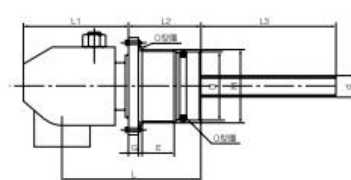
Type	A	B	C	D	E(H8)	F	G (∅)	I (∅)	K	L	M	N	O	P	Q	S	Wt.(kg)
KKJ-20S-01	Rc3/4	66	56	32	46	70	32	13	17	10	42	39	33	51	85	57	1.8
KKJ-20S-03	Rc3/4	66	80.8	41	59	102	38	19	17	10	42	39	33	51	85	57	2.3
KKJ-25S-01	Rc1	97	82.5	54	71	103	52	28.5	23	16	66	46	44	64	105	55	3.2



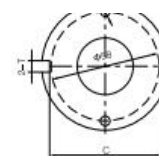
Knurled nut

**KKK-20S type rotary joint**

Type	A	B	C	D	d	E	F	G	L	L1	L2	L3	M	H	T
KKK-20S-01	Rc3/4	60	60	57	19	44	9	12	34	68	100	28	60×2	85	10



2-M6 removal hole



**KKL-20S type rotary joint**

Type	A	B	C	D	d	E	F	G	L	L1	L2	L3	M	T
KKL-20S-01	Rc3/4	60	60	42	14	18	85	6	86	65	45	85	45×1.5	6

## Rotary joint for KKM type continuous casting machine



### Structural Characteristics

Sealed lubricating wick structure, pre-loaded grease, life-long lubrication, coated square seal with low wear and long service life, rubber ring seal, easy maintenance, suitable for poor water quality environment, surface treatment of outer pipe with less wear and longer service life, can be designed according to user requirements

### Working Parameters

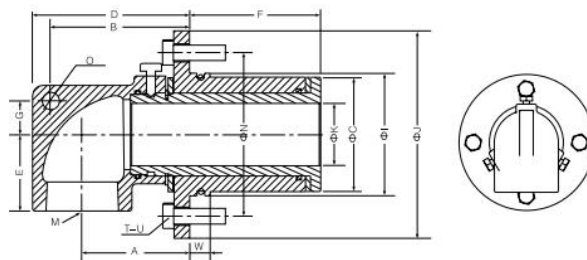
Maximum speed of revolution:

250 rpm

Maximum temperature: 230°C

Maximum pressure: 1 Mpa

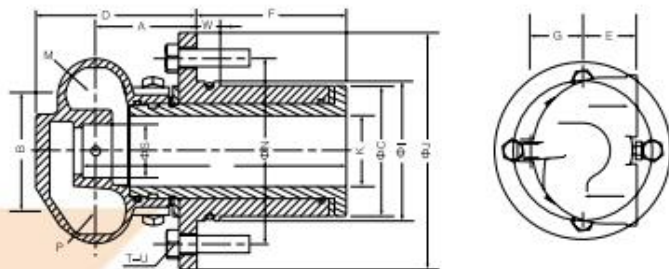
Applicable Medium: water, coolant, and compressed air



### KKMD unidirectional embedded type

Type	Specifications	Size(K)	M	A	B	C	D	E	F	G	I	J	O	T	U	N	W
KKM-20D-01	G01	3/4"	1/2"-1"	45.5	58	41.5	68	44.5	35	13	46.05	90	11	4	M8	60	13
KKM-25D-01	G02	1"	1/2"-1"	49	61.5	50.8	71	44.5	51	13	58.62	120	11	6	M8	83	13
KKM-40D-01	G03	1-1/2"	1-1/4"-1-1/2"	65.5	84.5	70	95.5	45	81	20.5	74.96	127	11	4	M10	100	12.6

### KKMS bidirectional inner tube fixed embedding type



### KKMD unidirectional embedded type

Type	Specifications	Size(K)	M	A	B	C	D	E	F	G	I	J	O	T	U	N	W
KKM-20D-01	G01	3/4"	1/2"-1"	45.5	58	41.5	68	44.5	35	13	46.05	90	11	4	M8	60	13
KKM-25D-01	G02	1"	1/2"-1"	49	61.5	50.8	71	44.5	51	13	58.62	120	11	6	M8	83	13
KKM-40D-01	G03	1-1/2"	1-1/4"-1-1/2"	65.5	84.5	70	95.5	45	81	20.5	74.96	127	11	4	M10	100	12.6

## KKN-S type rotary joint



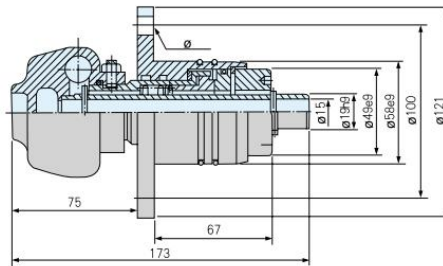
### Structural Characteristics

Mechanical seal is used inside the joint, and the sealing elements are made of high temperature resistant, wear-resistant and self-lubricating materials. Automatic compensation for the wear of sealing elements, embedded flange connection is adopted for installation, and the machining requirements of installation end face and installation hole are above Ra1.6 to ensure reliable installation and sealing.

### Service Condition

Maximum pressure: 18 bar    Maximum temperature: 230°C

Maximum speed: 80 r/min    Applicable medium: cooling water



## KKN-D type rotary joint



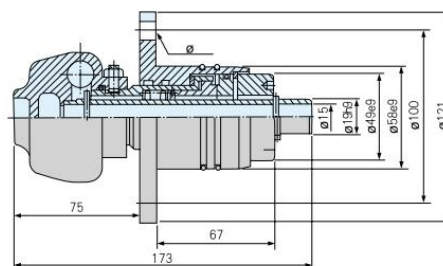
### Structural Characteristics

Mechanical seal is used inside the joint, and the sealing elements are made of high temperature resistant, wear-resistant and self-lubricating materials. Automatic compensation for the wear of sealing elements, embedded flange connection is adopted for installation, and the machining requirements of installation end face and installation hole are above Ra1.6 to ensure reliable installation and sealing.

### Service Condition

Maximum pressure: 18 bar    Maximum temperature: 230°C

Maximum speed: 80 r/min    Applicable medium: cooling water



## Sealing ring for continuous casting and continuous rolling series



### Product Introduction

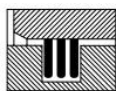
The sealing ring is to use its own group tightness to seal the equipment. When several rings are used at the same time, it has the characteristics of labyrinth seal, which is stable and reliable. It is widely used in the grease seal of rolling bearings and sliding bearings under harsh conditions such as high temperature and corrosion, and can prevent the infiltration of water spray. Because of its good sealing performance, it has been widely used in various industries and fields, especially in iron and steel enterprises, such as continuous casting machine, exhaust pipe of internal combustion engine, engine and many other aspects.

### Operation Parameters

The suitable fluid: Steam, water, oil, weak acidic gas, etc.

### Legend of laminated ring FDA (single ring)

FDA-K = for holes (3 rings = 1 set)



-The rotation speed of the shell or ring carrier is not limited.

FDA-KZ = Hole shaft combined seal (5 rings = 1 set)



- The maximum rotation speed of the shell is 10 m/s.  
- The maximum rotation speed of ring carrier and FDA-KZ ring is 4 m/s.

### Legend of laminated ring FDA (double ring)

FDC-KSS double ring for sealing hole (2 rings = 1 set)



-The rotation speed of the shell or ring carrier is not limited.

FDC-ZSS double ring for sealing shaft (1 ring = 1 set)



-The rotating speed of the housing is not limited.  
- The maximum rotation speed of shaft and FDB-ZA ring is 10 m/s

### Operation Parameters

The suitable fluid: Steam, water, oil, weak acidic gas, etc.

FDA-Z = for shafts (3 rings = 1 set)



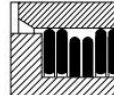
-The rotating speed of the housing is not limited.  
- The maximum rotation speed of shaft and FDA-Z ring is 4 m/s.

FDA-ZK Hole shaft combined seal (5 rings = 1 set)



- The maximum rotation speed of the shell is 10 m/s.  
- The maximum rotation speed of shaft and FDA-Z ring is 4 m/s.

KDC-KSSZ hole shaft seal compound double ring (3 rings = 1 set)



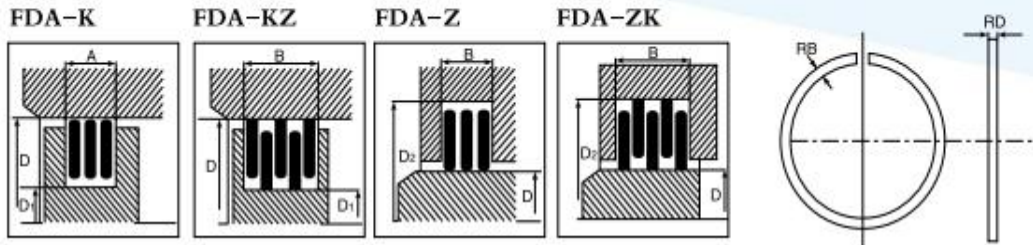
-The rotating speed of the housing is not limited  
- The maximum rotation speed of ring carrier and FDB-ZA ring is 10 m/s.

FDC-ZSSK shaft hole seal compound double ring (3 rings = 1 set)



-The rotating speed of the housing is not limited  
- The maximum rotation speed of shaft and FDB-ZA ring is 10 m/s

## Laminated Ring FDA (single ring)



Hole shaft Ø-D	Ring RB RD		Slot width A B		Slot bottom D1	Slot bottom D2
15-24.5	1.0	0.65	2.2	3.6	(D)-2.6	(D)+2.6
25-29.5	1.2	0.65	2.2	3.6	-3.0	+3.0
30-35.5	1.5	0.65	2.2	3.6	-3.6	+3.6
36-42.5	1.8	0.65	2.2	3.6	-4.2	+4.2
43-48.5	2.2	0.72	2.4	4.0	-5.0	+5.0
49-51.5	2.4	0.72	2.4	.0	-5.4	+5.4
52-59.5	2.6	0.72	2.4	4.0	-5.8	+5.8
60-69.5	2.8	0.82	2.7	4.5	-6.2	+6.2
70-74.5	3.1	0.82	2.7	4.5	-6.8	+6.8
75-79.5	3.3	0.82	2.7	4.5	-7.2	+7.2
80-89.5	3.5	0.82	2.7	4.5	-7.6	+7.6
90-99.5	3.8	0.82	2.7	4.5	-8.2	+8.2
100-104.5	4.1	0.82	2.7	4.5	-8.8	+8.8
105-109.5	4.3	0.98	3.3	5.5	-9.2	+9.2
110-119.5	4.6	0.98	3.3	5.5	-9.8	+9.8
120-129.5	5.0	0.98	3.3	5.5	-10.8	+10.8
130-149.5	5.5	0.98	3.3	5.5	-11.8	+11.8
150-170.0	6.0	1.0	3.4	5.6	-13.0	+13.0
150-170.0	*6.0	1.5	5.1	8.2	-13.0	+13.0
171-199.0	7.0	1.0	3.4	5.6	-15.0	+15.0
171-199.0	*7.0	1.5	5.1	8.2	-15.0	+15.0
200-259.0	8.0	1.2	4.1	6.6	-18.0	+18.0
200-259.0	*8.0	1.5	5.1	8.2	-18.0	+18.0
260-319.0	9.0	1.5	5.1	8.2	-20.0	+20.0
320-399.0	10.0	1.5	5.2	8.3	-22.0	+22.0
400-439.0	11.0	1.5	5.2	8.3	-24.0	+24.0
440-600.0	12.0	1.5	5.2	8.3	-26.0	+26.0
440-600.0	*12.0	2.5	8.3	13.5	-26.0	+26.0
601-699.0	14.0	2.5	8.3	13.5	-32.0	+32.0
700-799.0	16.0	2.5	8.3	13.5	-36.0	+36.0
800-899.0	18.0	2.5	8.3	13.5	-40.0	+40.0
900-999.0	20.0	2.5	8.3	13.5	-44.0	+44.0
1000-1300.0	22.0	2.5	8.4	13.6	-48.0	+48.0

Raw material: Spring strip steel, 1Cr18Ni12Mo2Ti, with the highest temperature of 600℃.

Single piece laminated ring FDA, FDA-K or FDA-Z wrapped in a circle is used for grease sealing of rolling bearing and sliding bearing and preventing water from seeping in.

The compound ring group FDA-KZ and FDA-ZZ can greatly improve the sealing performance when the grease is thinned by heat and the water spray is strong. The compound ring group can adapt to a higher speed range. When installing FDA-K or FDA-KZ layout, pull the circumferential groove inward as much as possible compared with FDA-Z or FDA-ZZ layout. There is a large gap between the FDA-K ring and the FDA-Z ring in the working position. The carrier of the ring can be made of steel, cast iron or synthetic materials.

All dimensions are millimeter (mm).

Tolerance (mm)				
D	15-104.5	105-149.5	150-439.01	440-1300.0
RB	+0.10 -0.10	+0.10 -0.20	+0.15 -0.30	+0.20 -0.40
RD	+0.04 -0	+0.05 -0	+0.06 -0	+0.07 -0
A-B	+0.10 -0	+0.15 -0	+0.20 -0	+0.25 -0
D1	+0 -0.20	+0 -0.25	+0 -0.30	+0 -0.40
D2	+0.20 -0	+0.25 -0	+0.30 -0	+0.40 -0

The slot width tolerance must be ensured during thermal expansion.

When the rotational speed is greater than 1000 rpm, widen the slot width by 10%.

## Laminated Ring FDB

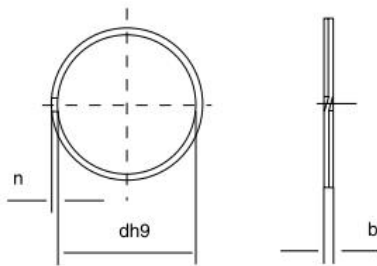
Used for bearing sealing of continuous casting equipment.

Raw material: 1Cr18Ni12Mo2Ti; The ambient temperature can reach + 500 °C.

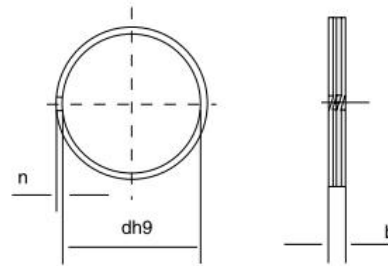
FDB-ZS

For shaft

FDB-ZSS



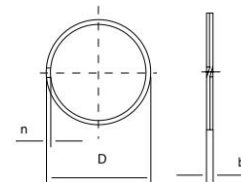
Z (Single set of 1 piece)



Z (Single set of 2 pieces)

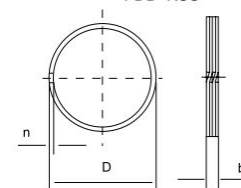
S/N	Type	Laminated ring for shaft d	Laminated ring for hole D	n	b
1	Z	Φ 50		2.4 ± 0.10	1.45 <sup>+0.08</sup> <sub>0</sub>
2		Φ 60		2.4 ± 0.10	1.45 <sup>+0.08</sup> <sub>0</sub>
3		Φ 120		5 <sup>+0.10</sup> <sub>-0.20</sub>	3.92 <sup>+0.1</sup> <sub>0</sub>
4		Φ 130		5.5 <sup>+0.10</sup> <sub>-0.20</sub>	3.92 <sup>+0.1</sup> <sub>0</sub>
5		Φ 160		6 <sup>+0.15</sup> <sub>-0.30</sub>	4 <sup>+0.12</sup> <sub>0</sub>
6		Φ 170		6 <sup>+0.15</sup> <sub>-0.30</sub>	4 <sup>+0.12</sup> <sub>0</sub>
7		Φ 200		8 <sup>+0.15</sup> <sub>-0.30</sub>	3.92 <sup>+0.1</sup> <sub>0</sub>
8	K		Φ 75H7	3.3 ± 0.15	1.65 <sup>+0.1</sup> <sub>0</sub>
9			Φ 108H8	5 ± 0.15	4 <sup>+0.12</sup> <sub>0</sub>
10			Φ 108H8	5 ± 0.15	3.9 ± 0.1

FDB-KS for holes



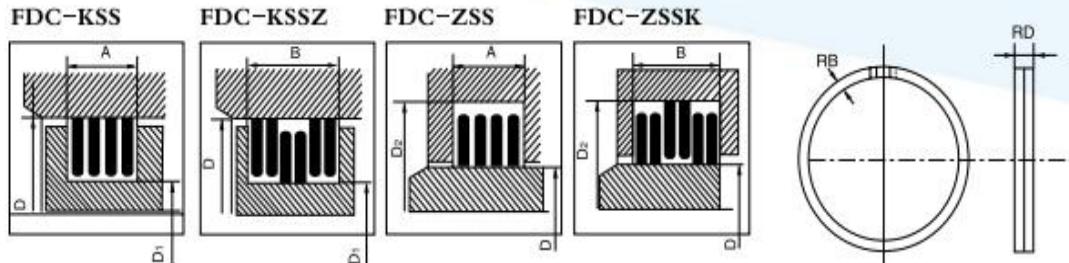
K (Single set of 1 piece)

FDB-KSS



K (Single set of 2 pieces)

## Laminated Ring FDA (double ring)



Hole shaft $\varnothing$ -D	Ring		Slot width		Slot bottom D1	Slot bottom D2
	RB	RD	A	B		
15-24.5	1.0	1.3	2.9	4.3	(D)-2.6	(D)+2.6
25-29.5	1.2	1.3	2.9	4.3	-3.0	+3.0
30-35.5	1.5	1.3	2.9	4.3	-3.6	+3.6
36-42.5	1.8	1.3	2.9	4.3	-4.2	+4.2
43-48.5	2.2	1.45	3.2	4.8	-5.0	+5.0
49-51.5	2.4	1.45	3.2	4.8	-5.4	+5.4
52-59.5	2.6	1.45	3.2	4.8	-5.8	+5.8
60-69.5	2.8	1.65	3.6	5.4	-6.2	+6.2
70-74.5	3.1	1.65	3.6	5.4	-6.8	+6.8
75-79.5	3.3	1.65	3.6	5.4	-7.2	+7.2
80-89.5	3.5	1.65	3.6	5.4-7.6	-7.6	+7.6
90-99.5	3.8	1.65	3.6	5.4	-8.2	+8.2
100-104.5	4.1	1.65	3.6	5.4	-8.8	+8.8
105-109.5	4.3	1.96	4.3	6.4	-9.2	+9.2
110-119.5	4.6	1.96	4.3	6.4	-9.8	+9.8
120-129.5	5.0	1.96	4.3	6.4	-10.8	+10.8
130-149.5	5.5	1.96	4.3	6.4	-11.8	+11.8
150-170.0	6.0	2.0	4.4	6.5	-13.0	+13.0
150-170.0	*6.0	3.0	6.5	9.6	-13.0	+13.0
171-199.0	7.0	2.0	4.4	6.5	-15.0	+15.0
171-199.0	*7.0	3.0	6.5	9.6	-15.0	+15.0
200-259.0	8.0	2.4	5.3	7.8	-18.0	+18.0
200-259.0	*8.0	3.0	6.5	9.6	-18.0	+18.0
260-319.0	9.0	3.0	6.5	9.6	-20.0	+20.0
320-399.0	10.0	3.0	6.6	9.8	-22.0	+22.0
400-439.0	11.0	3.0	6.6	9.8	-24.0	+24.0
440-600.0	12.0	3.0	6.6	9.8	-26.0	+26.0
440-600.0	*12.0	5.0	10.6	15.9	-26.0	+26.0
601-699.0	14.0	5.0	10.8	16.2	-32.0	+32.0
700-799.0	16.0	5.0	10.8	16.2	-36.0	+36.0
800-899.0	18.0	5.0	11.0	16.5	-40.0	+40.0
900-999.0	20.0	5.0	11.0	16.5	-44.0	+44.0
1000-1300.0	22.0	5.0	11.0	16.5	-48.0	+48.0

### Application:

In contrast to an FDA single ring wound once, an FDC sheet ring is wound twice. The ring is outstanding for its strong tightening force, which is suitable for higher rotating speed without buffer opening. The ring should be selected if the sealing performance requirements are high, and it is suitable for dusty and polluted environment.

Double rings can also be used as protective sealing devices for radial shaft sealing rings. When installing FDA-K or FDA-KZ layout, pull the circumferential groove inward as much as possible compared with FDA-Z or FDA-ZZ layout.

The slot width tolerance must be ensured during thermal expansion.

When the rotational speed is greater than 1000 rpm, widen the slot width by 10%.

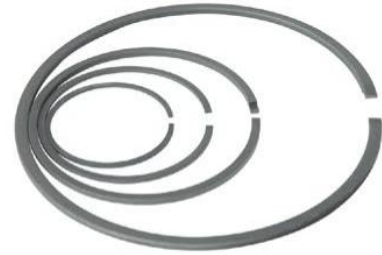
Tolerance (mm)				
$\varnothing$	15-104.5	105-149.5	150-439.0	440-1300.0
RB	+0.10 -0.10	+0.10 -0.20	+0.15 -0.30	+0.20 -0.40
RD	+0.08 -0	+0.1 -0	+0.12 -0	+0.14 -0
A-B	+0.10 -0	+0.15 -0	+0.20 -0	+0.25 -0
D1	+0 -0.20	+0 -0.25	+0 -0.30	+0 -0.40
D2	+0.20 -0	+0.25 -0	+0.30 -0	+0.40 -0

All dimensions are millimeter (mm).

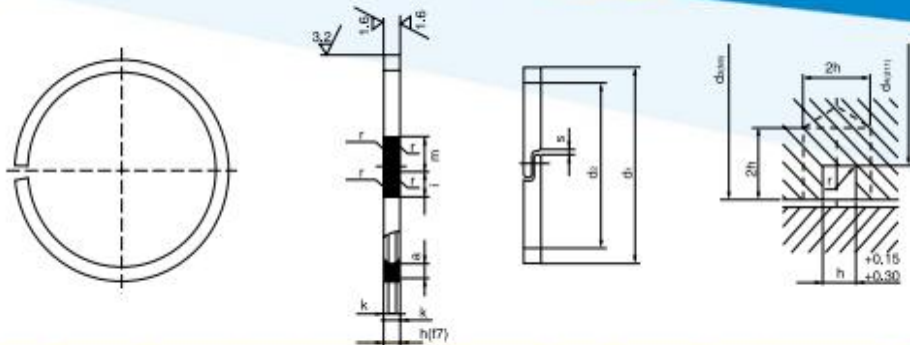
## R Piston Ring

### Structural Characteristics

The piston ring seal is to put the open elastic ring into the slot, and make its outer ring cling to the inner shell of the roller conveyor by using the expansion tightness of the piston ring itself, so that there is no relative movement between the outer diameter shells of the piston ring. One end surface of the piston ring is attached to one side of the piston ring slot due to the action of medium pressure, resulting in relative movement. Lubricating and plugging with liquid or grease to achieve sealing effect is the main seal of roller conveyor of continuous casting and rolling mill imported from abroad.



Nominal diameter	Closing size	Opening -0.5 +0.5	Thickness	Unilateral height	Nominal dimension	Closing size	Opening -0.5 +0.5	Thickness	Unilateral height
50	+0.3	5	2.0	4	150	+0.4	9	3	6.5
55	+0.3	5	2.5	4	155	+0.4	9	3	6.5
60	+0.3	5	2.5	4	160	+0.4	9	3	6.5
65	+0.3	5	2.5	4	165	+0.4	9	4	6.5
70	+0.3	6	2.5	4	170	+0.4	10	4	6.5
75	+0.3	6	2.5	4	175	+0.4	10	4	7
80	+0.3	6	2.5	4	180	+0.4	10	4	7
85	+0.3	6	2.5	4.5	185	+0.4	10	4	7
90	+0.3	7	3	4.5	190	+0.4	10	4	7
95	+0.3	7	3	4.5	195	+0.4	10	4	8
100	+0.3	7	3	4.5-5	200	+0.4	12	4	8
105	+0.3	7	3	4.5-5	205	+0.5	12	4	8
110	+0.4	7	3	5	210	+0.5	12	4	8
115	+0.4	7	3	5	215	+0.5	12	4	8.5
120	+0.4	8	3	5	220	+0.5	12	4	8.5
125	+0.4	8	3	5	225	+0.5	12	4	8.5
130	+0.4	8	3	6	230	+0.5	12	4	8.5
135	+0.4	8	3	6	235	+0.5	12	4	8.5
140	+0.4	8	3	6	240	+0.5	14	4	8.5
145	+0.4	9	3	6	245	+0.5	14	4	8.5-10



d1	d2	d3	d4	a	Toll.a	h	s	k	r	I	m	Tight Torce daN	Mass kg						
50	44	48	42	3	±0.08	2.5	1.5	0.3	0.5	4	8.3	2.6	0.01						
55	49	53	47								9	2.2	0.01						
60	54	58	52								9.7	1.8	0.011						
65	59	63	57								10.4	1.6	0.012						
70	63	68	61	3.5							11	2.1	0.014						
75	68	73	66								11.7	1.8	0.015						
80	73	78	71								12.3	1.6	0.016						
85	78	83	76								12.9	1.4	0.018						
90	82	87.5	79.5	4.5	±0.1	3	2	0.5	0.5	5	13.6	2.2	0.025						
95	87	92.5	84.5								14.1	1.9	0.027						
100	91	97.5	88.5								14.7	2.5	0.032						
105	96	102.5	93.5								15.2	2.2	0.033						
110	100	107.5	97.5	5							15.8	3	0.039						
115	105	112.5	102.5								16.5	2.5	0.041						
120	110	117	107								±0.12	4	3	0.5	0.75	6	17	2.9	0.057
125	115	122	112														17.5	2.6	0.059
130	119	127	116	18.1	3.2	0.067													
135	124	132	121	18.6	3	0.07													
140	128	137	125	19.2	3.6	0.079													
145	133	142	130	19.7	3.4	0.082													
150	138	147	135	20.2	3.1	0.085													
155	142	152	139	6.5	21	3.8	0.095												
160	147	157	144		21.4	3.5	0.098												
165	151	162	148		21.9	4.1	0.109												
170	156	167	153		22.4	3.8	0.112												
180	166	176.5	162.5	7	±0.15	5	4	0.75	0.75	8	23.5	4.1	0.149						
190	176	186.5	172.5								24.5	3.6	0.158						
200	185	196.5	181.5								25.5	4	0.178						
210	195	206.5	191.5								26.5	3.6	0.187						
220	204	216.5	200.5								27.5	4	0.209						
230	214	226.5	210.5								28.5	3.7	0.219						
240	223	236	219								8.5	29	4.5	0.291					
250	233	246	229									30	4.2	0.303					
260	242	256	238	30.5								4.5	0.334						
270	252	266	248	31.5								4.2	0.348						
280	262	276	258	9							32.5	3.9	0.361						
290	270	286	266								33	4.9	0.414						
300	280	296	276								10	34	4.6	0.429					

## Special rotary joint for evaporation cooling system of KKW walking beam heating furnace



### Structural Characteristics

Kaikun sphere rotary joint is a key equipment applied to the new technology of evaporation cooling system of walking beam heating furnace in iron and steel works. It connects the cooling components and fixed components which move periodically on the heating furnace to the main parts of the flexible pipe, and realizes the synchronous and continuous movement with the moving device of the heating furnace under certain pressure, temperature and flowing medium conditions. After years of operation practice, it has been proved that the product is reasonable in design, flexible in rotation and reliable in sealing, which has been highly praised by users. This project fills the domestic blank and reaches the international level of similar products.

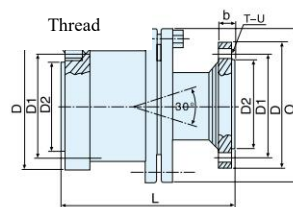
### Structural Characteristics

Operating temperature:  $T \leq 250^{\circ}\text{C}$

Working pressure:  $P \leq 1.6 \text{ MPa}$ ;  $P \leq 4.0 \text{ MPa}$

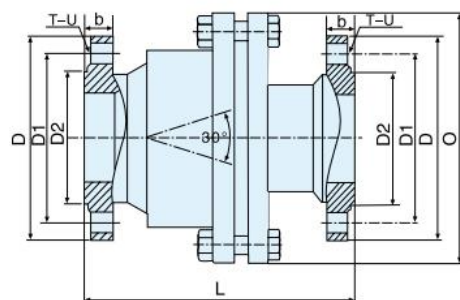
Flange standard: JBT82.1-94

Maximum swing angle of rotating shaft:  $30^{\circ}$



Dn	L	O	D	D1	D2	b	Thread	T-U	Working pressure MPa
80	265	270	195	160	135	26	8-M16	8-Ø19	2.5
100	300	280	260	190	160	28	8-M20	8-Ø23	2.5
125	369	335	270	220	188	30	8-M22	8-Ø25	2.5
150	369	380	300	250	218	30	8-M22	8-Ø25	2.5

## Special rotary joint for evaporation cooling system of KKWF walking beam heating furnace



Dn	L	O	D	D1	D2	b	T-U	Working pressure MPa
80	265	270	195	160	135	26	8-Ø19	2.5
100	300	280	260	190	160	28	8-Ø23	2.5
125	369	335	270	220	188	30	8-Ø25	2.5
150	369	380	300	250	218	30	8-Ø25	2.5



TENGZHOU KAIKUN ROTARY JOINT MANUFACTURING CO., LTD.

# H

## High-speed type

High precision bearing    Ensure high speed without vibration  
Balanced inlet sealing material



## KKGS type rotary joint

### Structural Characteristics

KKGS type rotary joint is our patented product developed on the basis of H-type rotary joint. It adopts the design of external multi-spring and balanced seal, which makes the medium flow more smoothly, and the spring does not contact the medium, which can adapt to worse water quality, and makes the elasticity compensation evenly to save itself from scaling. In addition, its internal parts in contact with the medium are made of stainless steel or treated with anti-corrosion, so it not only inherits the advantages of H-type such as small volume, light weight and small frictional resistance moment, but also has more reliable sealing and longer working life. It can be used for single circulation of pipe plugging and compound circulation of inner pipe in elbow center.

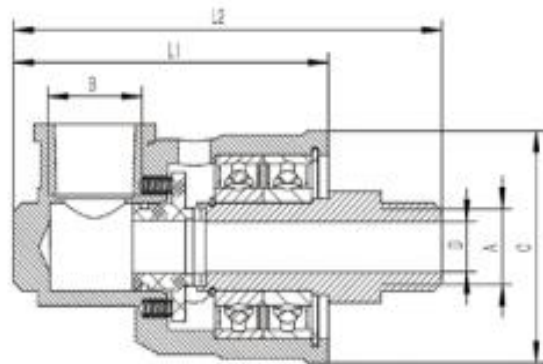
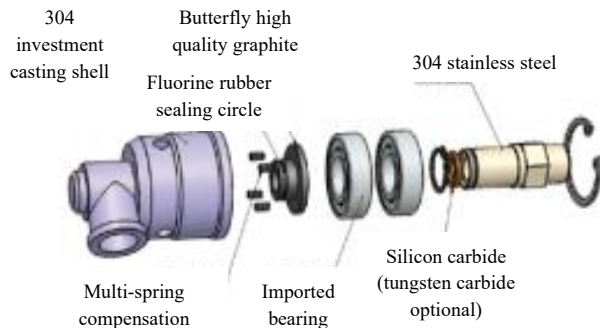
### Service Condition

Applicable medium: coolant, hot water, cold water, oil, compressed air and low pressure steam.

Maximum pressure: 2.0 Mpa

Maximum temperature: 120°C (different sizes of caliber have different specifications)

Maximum speed of revolution: 2,000 rpm-3,000 rpm



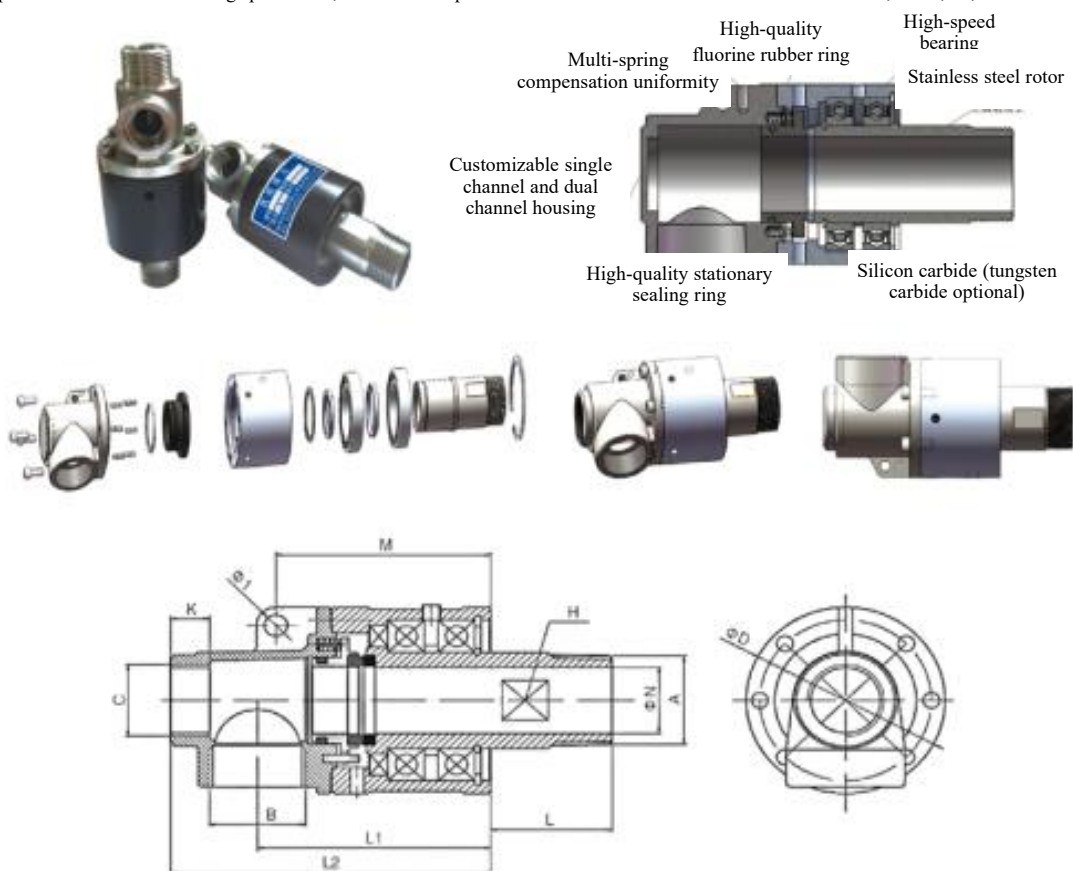
Specifications	Type	A	B	C	D	L1	L2
15	KKGS-15A	R1/2"	RC1/2"	53	12	78	106
20	KKGS-20A	R3/4"	RC3/4"	58	18	88	118
25	KKGS-25A	R1"	RC1"	67	22	102	140
32	KKGS-32A	R1 1/4"	RC1 1/4"	72	28	116	150

## KKGS (separation type) high speed rotary joint

### Structural Characteristics

KKGS type rotary joint is our patented product developed on the basis of H-type rotary joint. It adopts the design of external multi-spring and balanced seal, which makes the medium flow more smoothly, and the spring does not contact the medium, which can adapt to worse water quality, and makes the elasticity compensation evenly to save itself from scaling. In addition, its internal parts in contact with the medium are made of stainless steel or treated with anti-corrosion, so it not only inherits the advantages of H-type such as small volume, light weight and small frictional resistance moment, but also has more reliable sealing and longer working life. It can be used for single circulation of pipe plugging and compound circulation of inner pipe in elbow center.

Operation Parameters: Rotating speed:  $\leq 3,000$  RPM Temperature:  $\leq 150$  °C Pressure:  $\leq 3$  MPA medium: air, water, oil, etc.



High-speed type

Specifications	Type	A	B	C	D	N	L	L1	L2
15	KK-W 15A	R1/2"	Rp1/2"	Rp3/8"	56	13	34	62	82
20	KK-W 20A	R3/4"	Rp3/4"	Rp1/2"	64	17.5	34	73	100
25	KK-W 25A	R1"	Rp1"	Rp3/4"	72	23	42	83	110
32	KK-W 32A	R1-1/4"	Rp1-1/4"	Rp1"	87	31	53	102	140
40	KK-W 40A	R1-1/2"	Rp1-1/2"	Rp1-1/4"	94	38	60	150	196
50	KK-W 50A	R2"	Rp2"	Rp1-1/4"	117	49	66	202	252

## KKGS-50 type high speed rotary joint

It uses 304 stainless steel or anode aluminum shell material to meet different customer needs and use environment. Carbon crystalline graphite and SIC ceramic (or cemented carbide ceramic can be selected) rotary seal has better compensation effect, better wear resistance, longer service life and wider application range.

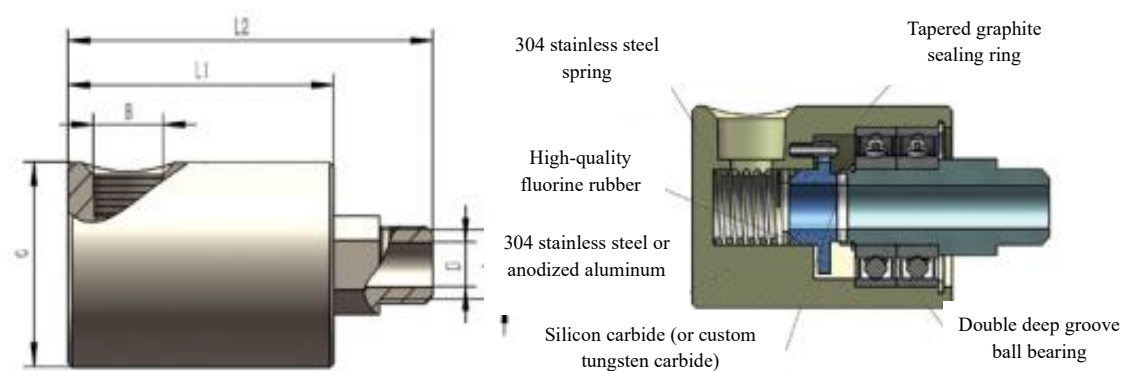
Operation Parameters:

Rotating speed:  $\leq 3,000$  RPM

Temperature:  $\leq 150^{\circ}\text{C}$

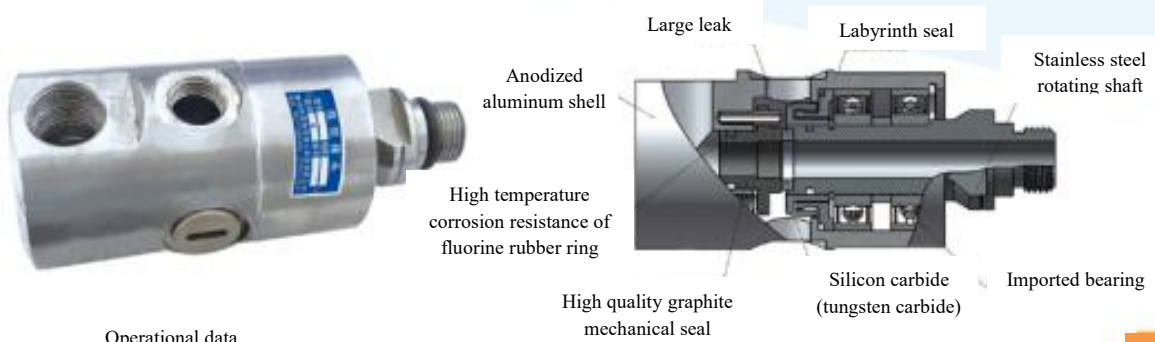
Pressure:  $\leq 1.5$  MPA

medium: air, water, oil, etc.



Specifications	Type	A	B	C	D	L1	L2
08	KKGS-50-08A	R1/4" /G1/4"	RC1/4"	40	6	55	79
10	KKGS-50-10A	R3/8" /G3/8"	R3/8"	43	9	69	95
15	KKGS-50-15A	R1/2" /G1/2"	RC1/2"	53	12	75	103
20	KKGS-50-20A	R3/4"	RC3/4"	58	18	81	112
25	KKGS-50-25A	R1"	RC1"	68	22	91	126
32	KKGS-50-32A	R1 1/4"	RC1 1/4"	78	28	100	145
40	KKGS-50-40A	R1 1/2"	RC1 1/2"	90	36	114	175

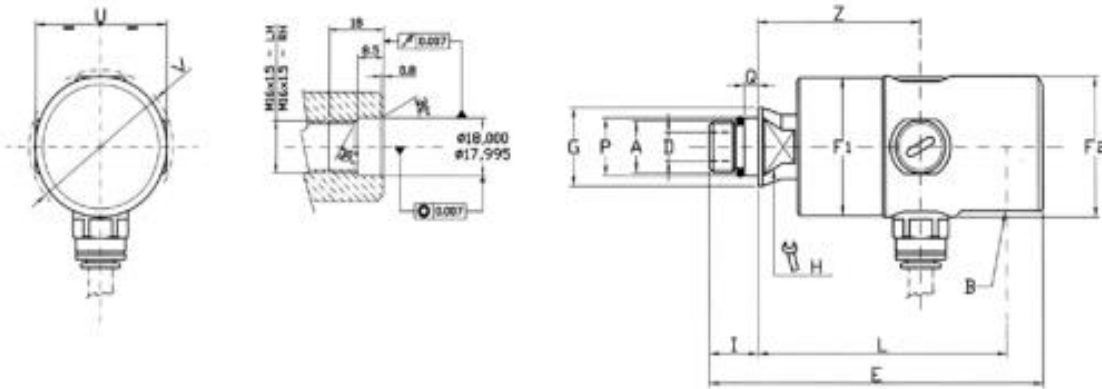
## KK1016 series "closed seal" continuous coolant application rotary joint



### Operational data

Maximum pressure	1.015 PSI	70 bar
Water base, coolant	145 PSI	10 bar
MQL (oil mist)	12.000 RPM	12.000 min <sup>-1</sup>
Maximum flow rate	21.6 gpm	82 l/min
Maximum temperature	71 °C	>71 °C
Filtration	ISO 4406 class 17/15/12, max 60 microns	

High-speed type



Type	90° joint															
	A	B	ØD	E	ØF1	ØF2	ØG	H	I	L	ØP	Q	U	ØV	Z	KG.
KK1016-04	M16x1.5RH	G1/4"	5	91	34	34.4	24.5	17	16	66	18	4.5	35	38	41	0.3
KK1016-05	M16X1.5LH															
KK1016-06	M16x1.5RH	G1/4"	9	110	43	44	24.5	17	16	82	18	4.5	43.6	47.5	53.5	0.5
KK1016-07	M16x1.5LH															

## Rotary joint for KKLX84 series



Single channel coolant or MQL

Closed seal, automatic line into similar applications

Full flow design does not produce drunken chips and burr blockage

Bearing support with threaded rotor for easy installation

Imported deep groove ball bearing ensures smooth operation

The internal air path barrier can realize certain dry operation

Silicon carbide and tungsten carbide balanced sealing structure can meet harsh operating environment and have better service life.

The anode aluminum shell has better anticorrosion effect

### Operational data

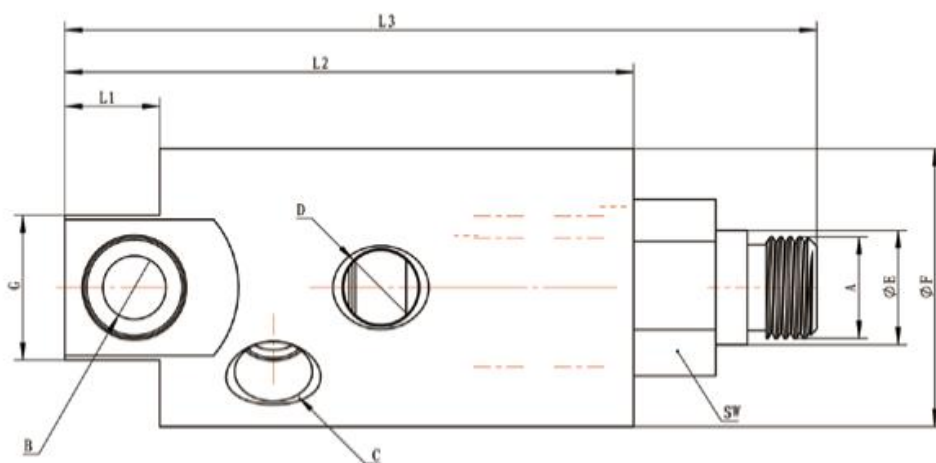
Maximum pressure

water and coolant 105 bar

MQL (oil mist) 10 bar

Maximum rotation speed 1,500 Rpm

Maximum temperature 80°



Specification and type	A	B	C	D	E	F	G	L1	L2	L3
KKLX84-01	M16*1.5R	PT1/4"	PT1/8"	PT1/8"	18	43	23	14	90	120
KKLX84-02	M16*1.5L	PT1/4"	PT1/8"	PT1/8"	18	43	23	14	90	120
KKLX84-03	M16*1.5R	PT3/8"	PT1/4"	PT1/4"	18	43	23	14	90	120
KKLX84-04	M16*1.5L	PT3/8"	PT1/4"	PT1/4"	18	43	23	14	90	120



TENGZHOU KAIKUN ROTARY JOINT MANUFACTURING CO., LTD.

# H

High pressure type



## KKGY-60 type high pressure rotary joint

Its shell is made of 304 stainless steel, which has excellent corrosion resistance and oxidation resistance, and has a wide range of application fields and circulation media. Its sealing material is OBS PTFE imported from Germany, and fluorine rubber has better compensation effect, better wear resistance, corrosion resistance and high temperature resistance, longer service life and wider application range.

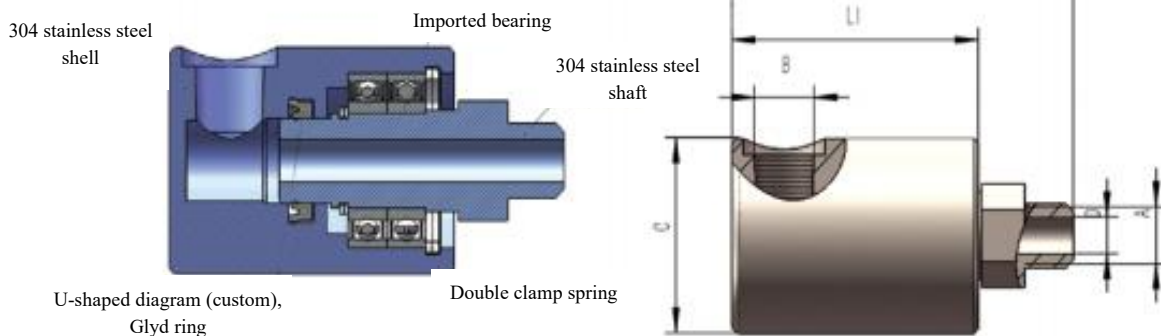
Scope of Application

Maximum speed of revolution:  $\leq 150$  RPM

Maximum temperature:  $\leq 150^{\circ}\text{C}$

Maximum pressure:  $\leq 40$  MPA

Circulation medium: air, water, hydraulic oil, etc.



Specifications	Type	A	B	C	D	L1	L2
08	KKGY-60-08A	R1/4" /G1/4"	RC1/4"/G1/4"	45	6	61	86
10	KKGY-60-10A	R3/8" /G3/8"	R3/8"	45	9	66	90
15	KKGY-60-15A	R1/2"/G1/2"	RC1/2"	52	12	71	98
20	KKGY-60-20A	R3/4"	RC3/4"	58	18	76	104
25	KKGY-60-25A	R1"	RC1"	68	22	87	122
32	KKGY-60-32A	R1 1/4"	RC1 1/4"	78	28	95	138
40	KKGY-60-40A	G1 1/2"	RC1 1/2"	88	36	100	140

## KKGY type high pressure rotary joint

KKGY type rotary joint is specially used for the fluid medium between rigid pipes, reciprocating or low-speed rotary movement, with high wear resistance, flexible rotation, strong support capacity, connection size can be customized according to customer requirements, Germany OBS seal with reliable sealing performance.

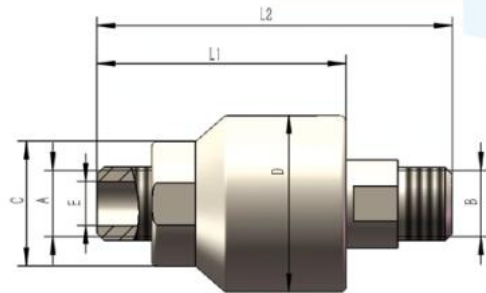
### Scope of Application

Maximum speed of revolution: 0-100 RPM

Maximum pressure: 25 MPA

Maximum temperature: 200° C

Applicable medium: gas, water, oil, air, etc.



High-pressure type

Specifications	Type	A	B	C	D	E	L1	L2
15	KKGY-15A	R1/2"	R1/2"	34	48	12	68	97
20	KKGY-20A	R3/4"	R3/4"	40	55	16	78	112
25	KKGY-25A	R1"	R1"	45	63	22	84	123
32	KKGY-32A	R1 1/4"	R1 1/4"	60	78	28	90	134
40	KKGY-40A	R1 1/2"	R1 1/2"	64	88	36	90	136

## KKZTDN Type High Pressure Rotary Joint

It rotates flexibly and is specially used for the active connection of fluid medium between steel pipes to play reciprocating or low-speed rotating movement, with high wear resistance, flexible rotation and strong support ability. It adopts the products of German OBS for reliable sealing.

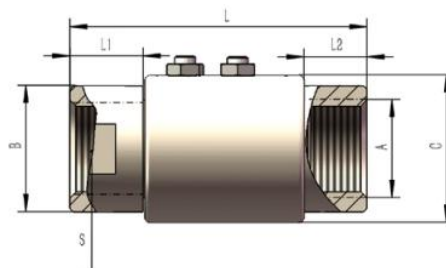
Scope of Application

Maximum speed of revolution: 50RPM

Maximum pressure:  $\leq 40\text{MPa}$

Maximum temperature:  $\leq 200^\circ\text{C}$

Applicable medium: air, oxygen, hydrogen, water, hydraulic oil, etc.



Specifications	Type	A	B	C	L1 L2	L	S
10	KKZTDN-10	RC3/8"	28	28	19	64	24
15	KKZTDN-15	RC1/2"	30	33	14	72	26
20	KKZTDN- 20	RC3/4"	36	42	18	85	32
25	KKZTDN-25	RC1"	44	53	24	100	40
32	KKZTDN-32	RC1 1/4"	54	64	32	115	50

## KK155/157 Series Rotary Joint



### Operational data

Maximum water pressure * Type	55-555	750PSI	50bar
Maximum water pressure * Type	655	200PSI	14bar
Maximum saturated steam pressure (intermittent)	14PSI	1bar	
Maximum thermal oil pressure	100PSI	6,6bar	
Maximum speed, straight thread rotor: Type	55-255	3.500RPM ; 3.000RPM	3.500min <sup>-1</sup> ; 3.000min <sup>-1</sup>
	355	3.000RPM	3.000min <sup>-1</sup>
	525-555	2.500RPM	2.500min <sup>-1</sup>
	655	750RPM	750 min <sup>-1</sup>
Maximum temperature	120t℃	>120℃	

\*Only cold water (up to 50 °C ) pressure is allowed to exceed 8bar.

### 55 Series Torque Value

DN	Diameter	Nm
10	0.25	0.34
15	0.35	0.50
20	0.50	0.68
25	1.25	1.80
32	1.25	1.80
40	2.50	3.40
50	3.00	4.07

General purpose 55 series rotary joint  
DN10-50

Single channel and binary-channel design

Self-supporting spinner

Radial direction shell connection

Balance type mechanical seal

3 leaks

Wrought brass shell

Stainless steel rotor

Special option:

Threaded connection type leak

Splash proof bearing

Nickel plating and/or low torque design

See page 52 for lubrication guide

High-pressure type

Sealing assembly - standard

Graphite/copper, water medium application type

Optional

Graphite/ceramics, hot oil, hot water and saturated steam

Multifunctional application

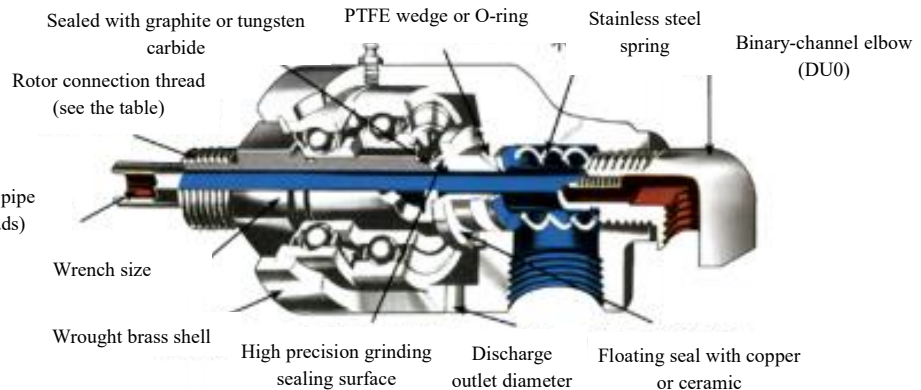
Sealing assembly - EL. S (long life sealed type)

Tungsten carbide/ceramic, applied in harsh conditions (inferior water),

Maximum temperature: 90℃

Binary-channel design with fixed supply pipe The single channel spinner is equipped with a pipe plug instead of an elbow

Non-rotary type supply pipe  
(See the table for threads)



KK155 & 157 Series Single Channel Rotary Joint Technical Specifications

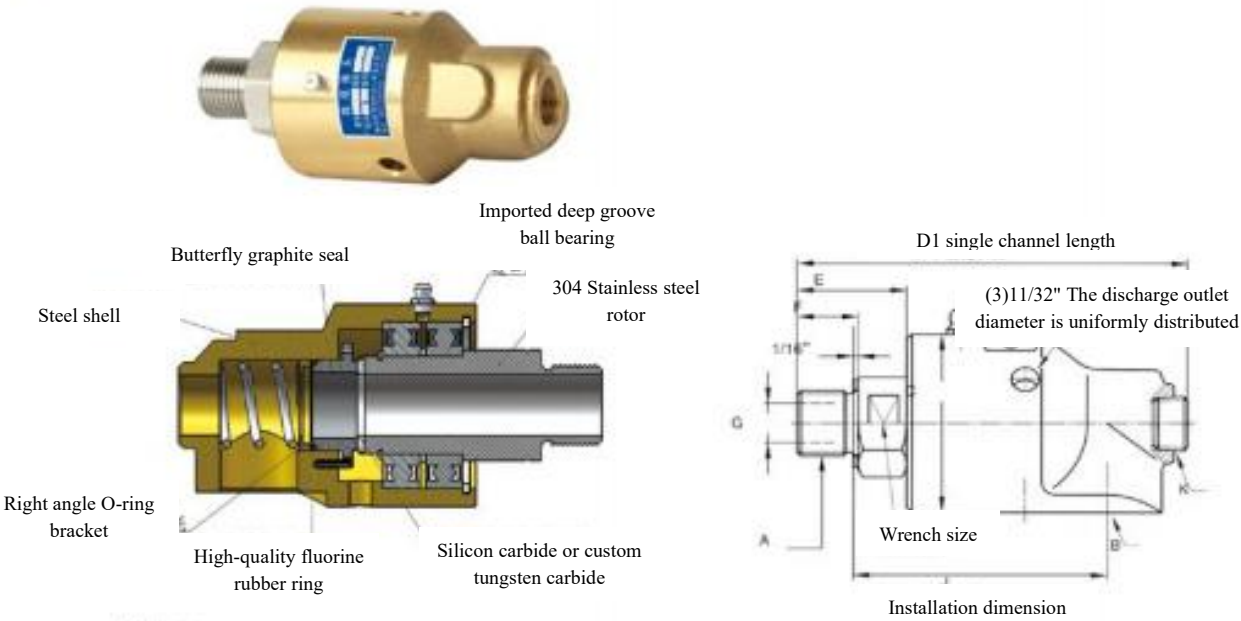


Table Look-up Description

Select the screw connector specification and the swivel connection thread. Find the technical specifications for the binary-channel elbow on the oppo

Order type	
B NPT	155 Series General Purpose
KK155-000-094	
3/8"	KK155-000-095

## Five-channel High Pressure Low-speed Joint



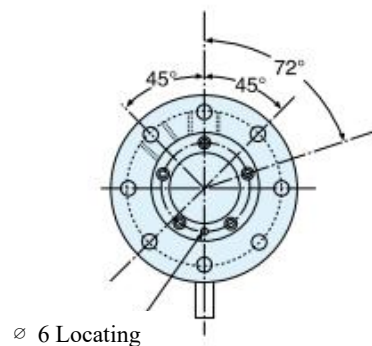
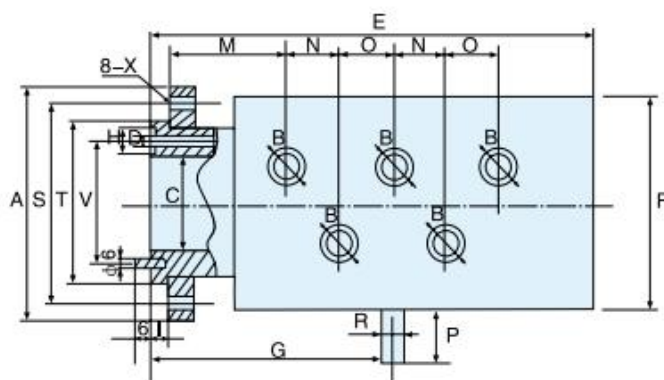
Operation Parameters:

Maximum working pressure: 50Mpa

Maximum speed of revolution: 0-150rpm

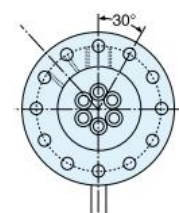
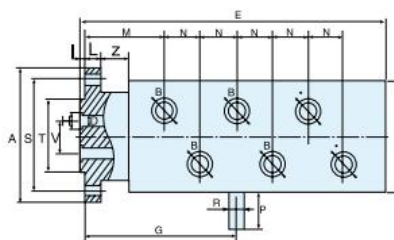
Maximum temperature: 220℃

Medium: water, compressed air and hydraulic oil



Type	A	B	C	D	E	F	G	H	I	M	N	O	P	R	S	T	V	X	kg
KK0501-10	195	G3/8	80	10	270	178	158	16	15	92	24	29	30	12	165	235	102	13	28

## Six-channel High Pressure Low-speed Joint



Type	A	B	D	E	F	G	H	I	L	M	N	P	R	S	T	V	Z	X	kg
KK0601-10	108	G3/8	8	258	89	151.5	12.6	5	12	64.5	29	30	10	90	60	27	21	8.5	7.5

## KK0203 High Pressure Low-speed Rotary Joint



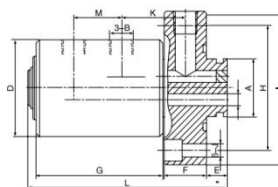
### Operation Parameters

Maximum temperature: 220°C

Maximum pressure: 25Mpa

Maximum speed of revolution:  
0-150rpm

Medium: water, hydraulic oil, air  
and coolant



Specifications	A	B	C	D	E	F	G	H	I	J	K	L	M
KK2003-10	Ø40	RC3/8	Ø8	Ø68	15	30	90	88	Ø108	Ø9.5	46	142	34
KK2003-11	Ø45	RC1/2	Ø11	Ø73	15	35	110	86	Ø18	Ø11.5	52	168	42
KK2003-15	Ø55	RC1/2	Ø15	Ø88	15	35	117	112	Ø38	Ø13.5	55	176	44

## KK0204 High Pressure Low-speed Rotary Joint



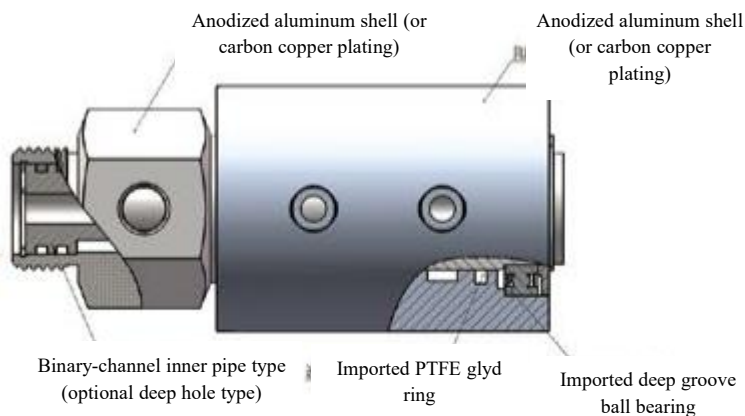
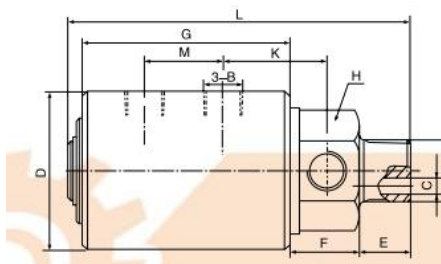
### Operation Parameters

Maximum temperature: 220°C

Maximum pressure: 25Mpa

Maximum speed of revolution: 0-150 rpm

Medium: water, hydraulic oil, air and coolant



Specifications	A	B	C	D	E	F	G	H	M	K	L
KKGY20-10R	R3/4	RC3/8	Ø7	Ø68	22	30	90	46	34	45	148
KKGY25-10R	R1	RC3/8	Ø9	Ø68	22	30	90	46	34	45	182
KKGY32-15R	R1-1/4	RC1/2	Ø12	Ø78	25	40	110	54	42	57	182
KKGY40-15R	RC1-2	RC1-1/2	Ø15	Ø88	28	40	117	65	44	57	193

## KKHK Type Rotary Joint

### Structural Characteristics

KKHK type rotary joint is our patented product developed on the basis of H-type rotary joint. It adopts the design of external multi-spring and balanced seal, which makes the medium flow more smoothly and the elasticity compensation evenly to save itself from scaling. The seal friction pair (dynamic and stationary sealing ring) is easy to replace, reducing the use cost of users. In addition, its internal parts in contact with the medium are made of stainless steel or treated with anti-corrosion, so it not only inherits the advantages of H-type such as small volume, light weight and small frictional resistance moment, but also has more reliable sealing and longer working life.

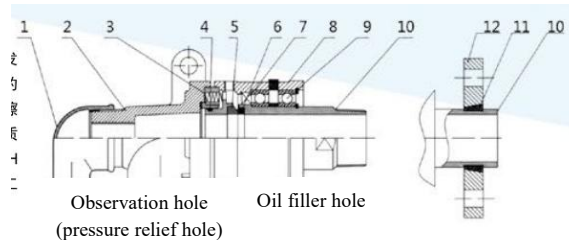
### Service Condition

Applicable medium: coolant, hot water, cold water, oil, compressed air and low pressure steam.

Maximum pressure: 1.8Mpa

Maximum temperature: 120°C

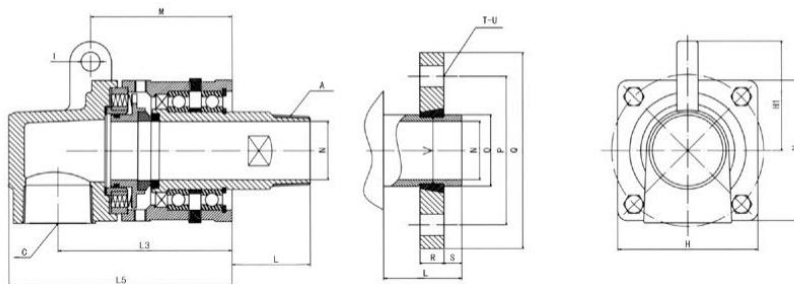
Maximum speed of revolution: 200rpm-3000pm (different caliber sizes have different maximum speeds of revolution)



1. Elbow 2. Triplet 3. Spring 4. Fluorine rubber ring 5. Stationary sealing ring (graphite and SIC)
6. Dynamic sealing ring (SIC and cemented carbide) 7. Oil seal 8. Shell 9. Ball bearing 10. Rotating tube 11. Semi-ring dimension clamp spring 12. Quick-change flange



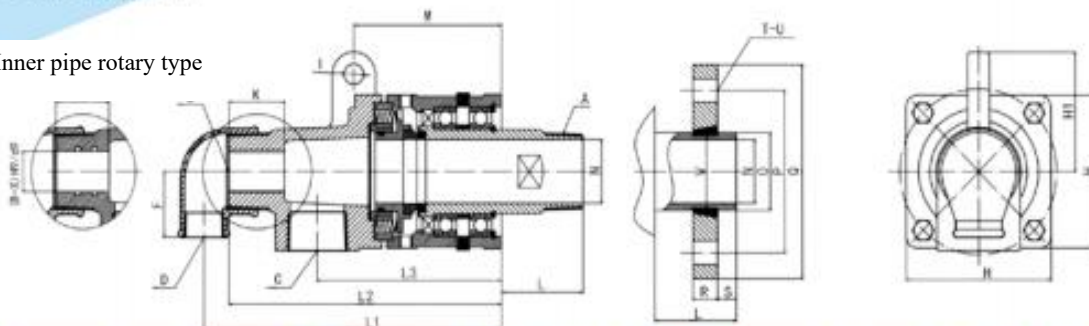
KKHD/KKHD-F



Specifications	Type	A	C	I	M	H	H1	L	L3	L5	N(Ø)	Quick-change flange connection	O (Ø)	P (Ø)	Q (Ø)	R	S	T	U (Ø)	V (Ø)
25	KKHK-D25	R1	Rc1	10	82	74	56	48	99	123	23	-F	34	85	115	16	10	4	14	31
32	KKHK-D32	R1-1/4	Rc1-1/4	12	93	87	66	53	113	139	31	-F	44	100	140	18	12	4	18	41
40	KKHK-D40	R1-1/2	Rc1-1/2	12	98	96	71	60	122	160	38	-F	49	110	150	18	12	4	18	46
65	KKHK-D65	R2-1/2	Rc2-1/2	12	80	150	99	73	165	216	64	-F	78	145	185	20	18	4	18	74
80	KKHK-D80	R3	Rc3	14	82	165	105	75	175	222	75	-F	90	160	200	20	20	8	18	86
100	KKHK-D100	R4	Rc4	16	100	205	133	107	210	285	98	-F	118	180	200	22	22	8	18	113

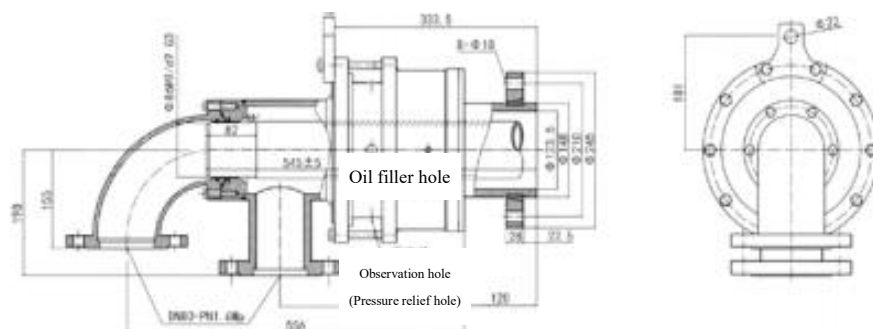
KKHK-G/KKHK-GF  
KKHK-X/KKHK-XF

Inner pipe rotary type



Specifications	Type	A	B	C	D	F	I	M	H	H1	K	L	L1	L2	L3	N(°)	Inner pipe rotary type	B-X	Flange connection	O (°)	P (°)	Q (°)	R	S	T	U (°)	V (°)
25	KKHK-G25-10	R1	Rp3/8	Rc3/4	Rc1/2	33	10	82	74	56	23	A8	158	143	99	23	KKHK-X25-10	16	-F	34	85	115	16	10	4	14	31
32	KKHK-G32-15	R1-1/4	Rp1/2	Rc1	Rc1/2	38	12	93	87	66	30	53	182	167	113	31	KKHK-X32-15	19	-F	44	100	140	18	12	4	18	41
40	KKHK-G40-20	R1-1/2	Rp3/4	Rc1-1/4	Rc3/4	43	12	98	96	71	40	60	202	183	122	38	KKHK-X40-20	25	-F	49	110	150	18	12	4	18	46
50	KKHK-G50-25	R2	Rp1	Rc1-1/2	Rc1	51	16	119	118	92	45	66	240	220	140	49	KKHK-X50-25	31	-F	60	125	165	20	15	4	18	56
65	KKHK-G65-32(40)	R2-1/2	Rp1-1/4(Rp1-1/2)	Rc1-1/2	Rc1-1/4(Rc1-1/2)	62	12	80	150	99	46	73	267	239	165	64	KKHK-X35-32(40)	40(46)	-F	78	145	185	20	18	4	18	74
80	KKHK-G80-40(50)	R3	Rp1-1/2(Rp2)	Rc2	Rc2	72	14	85	165	105	55	75	293	261	175	75	KKHK-X80-40(50)	46(55)	-F	90	160	200	20	20	8	18	86
100	KKHK-G100-65	R4	Rp2-1/2	RC2-1/2	RC2-1/2	90	16	100	205	133	60	107	365	312	210	96	KKHK-X100-65	73	-F	118	180	220	22	22	8	18	113

KKHK-XF (KKHK-GF) 125-80





TENGZHOU KAIKUN ROTARY JOINT MANUFACTURING CO., LTD.

# G

eneral purpose



## General Series Rotary Joint

### H-type Rotary Joint

#### Structural Characteristics

H-type rotary joint is mainly designed for cooling system, and it has the advantages of small size, light weight and small frictional resistance moment. Its ball bearing ensures the coaxially of the rotating tube, and the friction pair materials are available in various material pairs such as impregnated graphite, bronze, silicon carbide, tungsten carbide, etc. according to different media environments, which are sufficient to resist the influence of rust, scale and other impurities on the sealing surface. In addition, its sealing surface is like a mirror surface after finishing process, which makes the seal more reliable and has a longer service life, and is widely used.

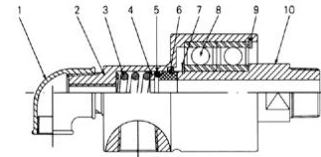
#### Service Condition:

Applicable medium: coolant, hot water, cold water, oil, and compressed air

Maximum pressure: 1.6Mpa

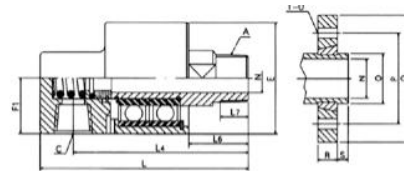
Maximum temperature: 90°C

Maximum speed of revolution: 200rpm-3000rpm (different caliber sizes have different maximum speeds of revolution)



1. Elbow 2. Shell 3. Spring
4. Spring gasket 5. Supplementary sealing circle
6. Sealing ring 7. Shaft retaining ring 8. Bearing 9. Hole retaining ring 10. Rotating tube

HD / HDF



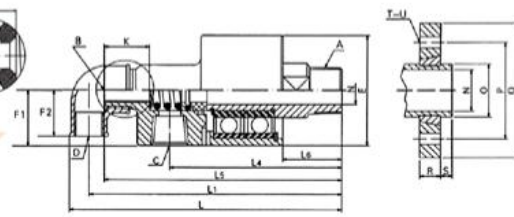
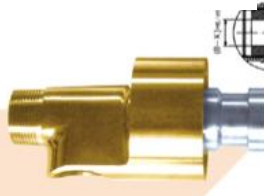
Note: In column L, the dimension on the left is the threaded connection's dimension, and the dimension on the right is the flange connection's dimension.

Specifications	Type	A	C	E(Ø)	F1	L	L4	L6	N(Ø)	Flange connection	0(Ø)	P(Ø)	Q(Ø)	R	S	T	U(Ø)
6	HD-6	R1/8	RC1/8	39	18	76	66	22	5	-	-	-	-	-	-	-	-
8	HD-8	R1/4	RC1/4	39	18	76	66	22	5	-	-	-	-	-	-	-	-
10	HD-10	R3/8	RC3/8	55	25	104/118	89/103	29/43	9	-F	20	60	90	14	6	4	14
15	HD-15	R1/2	RC1/2	55	25	105/118	90/103	30/43	12	-F	26	65	95	14	8	4	14
20	HD-20	R3/4	RC3/4	62	28	114/131	94/111	29/46	16	-F	32	75	105	14	8	4	14
25	HD-25	R1	RC1	74	33	124/140	102/119	32/49	20	-F	36	85	115	16	10	4	14
32	HD-32	R1-1/4	RC1-1/4	90	40	155/170	127/142	41/56	30	-F	46	100	140	18	12	4	14
40	HD-40	R1-1/2	RC1-1/2	95	41	161/178	131/148	41/58	35	-F	52	110	150	18	12	4	18
50	HD-50	R2	RC2	122	56	220/226	182/188	60/66	48	-F	60	125	165	20	15	4	18
65	HD-65	R2-1/2	RC2-1/2	156	72	251/259	206/214	68/76	62	-F	75	145	185	20	18	4	18
90	HD-90	R3-1/2	RC3-1/2	175	76	345	285	80	82	-F	100	150	175	15	20	6	14

HSG / HSGF

HSX / HSXF

Inner pipe rotary type



Note: In column L, the dimension on the left is the threaded connection's dimension, and the dimension on the right is the flange connection's dimension.

Specifications	Type	A	B	C	D	E(Ø)	F1	F2	K	L	L1	L3	L4	L6	N (Ø)	Inner pipe rotary type	B-X	Flange connection	0 (Ø)	P (°)	Q (Ø)	R	S	T	U (Ø)
15	HS-G15-6	R1/2	G1/8	RC1/2	RC1/2	55	25	25	15	156/169	143/156	125/138	90/1033	30/43	12	HS-X15-6	10	-F	26	65	95	14	8	4	14
20	HS-G20-8	R3/4	G1/4	RC3/4	RC1/2	62	28	30	32	173/190	158/175	139/156	94/111	29/46	16	HS-X20-8	12	-F	32	75	105	14	8	4	14
25	HS-G25-10	R1	G3/8	RC3/4	RC1/2	74	33	33	26	181/197	166/182	144/161	102/1193	32/49	20H	S-X25-10	16	-F	36	85	115	16	10	4	14
32	HS-G32-15	R1-1/4	G1/2	RC1-1/4	RC1/2	90	40	38	32	218/233	203/218	181/196	127/1424	41/56	30	S-X32-15	20	-F	46	100	140	18	12	4	18
40	HS-G40-20	R1-1/2	G3/4	RC1-1/2	RC3/4	95	41	43	36	231/248	213/230	188/205	131/148	41/58	35H	S-X40-20	25	-F	52	110	150	18	12	4	18
50	HS-G50-25	R2	G1	RC1-1/2	RC1	122	56	51	45	304/310	283/289	255/261	182/188	60/66	48H	S-X50-25	32	-F	60	125	165	20	15	4	18
65	HS-G65-32	R2-1/2	G1-1/4	RC2	RC1-1/4	156	72	62	53	353/361	325/333	291/299	206/214	68/76	62	S-X65-32	40	-F	75	145	185	20	18	4	18
90	HS-G90-50	R3-1/2	G2	RC2	RC2	175	76	72	66	462	426	401	285	80	82	HS-X90-50	59	-F	100	150	175	15	20	6	14

## KKP Type Rotary Joint



### Structural Characteristics

This series adopts the balanced seal structure and has the advantages of small size, light weight and low frictional torque, etc. Its biggest advantage is that the internal seals can be replaced smoothly without removing the whole joint under the condition of non-stop operation, which facilitates the maintenance and repair of the equipment.

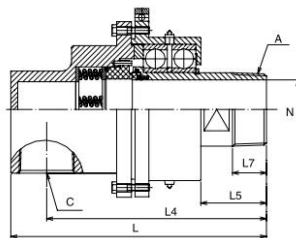
### Scope of Application

Maximum speed of revolution: 2000 r/min

Maximum temperature: 230℃

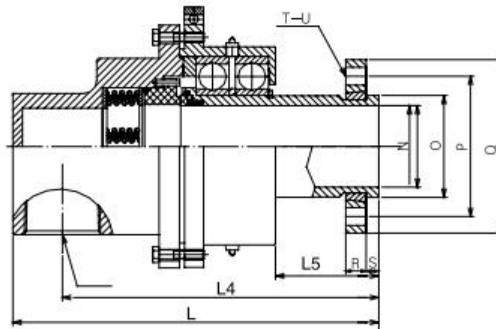
Maximum pressure: 3MPa

Applicable medium: low pressure steam, hot oil, hot water, cold water, air and hydraulic oil



### KKPD type rotary joint

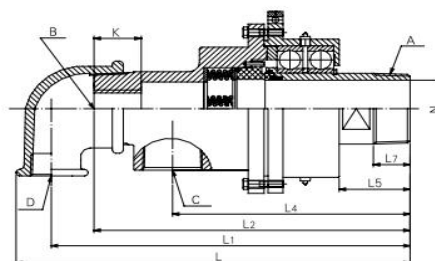
Type	A	A	C	D	K	L	L4	L5	L7	N
KKPD32	R1-1/4	M42*2	RC1-1/4	RC1/2	38	189	160	50	25	32
KKPD40	R1-1/2	M48*2	RC1-1/2	RC1	38	210	178	50	25	38
KKPD50	R2	M60*2	RC2	RC1-1/2	40	270	230	60	28	48
KKPD65	R2-1/2	M76*3	RC2-1/2	RC2	47	308	260	75	30	64
KKPD80	R3	M90*3	RC3	RC2	50	346	290	80	35	76
KKPD100	R4	M120*4	RC4	RC3	50	460	388	93	38	98



### KKPD-F type rotary joint

Type	C	D	K	L	L4	L5	N	0	P	Q	R	S	T	U
KKPD32	RC1-1/4	RC1/2	38	189	160	50	32	45	70	90	12	9	4	11
KKPD40	RC1-1/2	RC1	38	210	178	50	38	50	75	96	12	9	4	11
KKPD50	RC2	RC1-1/2	40	270	230	60	48	65	95	120	16	10	4	14
KKPD65	RC2-1/2	RC2	47	308	260	75	64	80	110	126	16	10	6	14
KKPD80	RC3	RC2	50	346	290	80	76	90	130	160	16	12	6	14
KKPD100	RC4	RC3	50	460	388	93	98	120	165	195	16	15	6	14

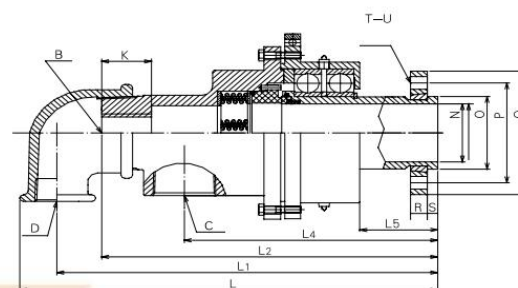
## KKPS-G Type Rotary Joint



In the figure, B stands for thread (inner pipe fixed type) for KKPS-G type rotary joint or the inner diameter of packing (inner pipe rotary type) for KKPS-X type rotary joint

Type	A	A	B	B	C	D	K	L	L1	L2	L4	L7	N
KKPS32-15	R1-1/4	M42*2	G1/2	19	RC1	RC1/2	38	225	205	189	152	25	32
KKPS40-20	R1-1-2	M48*2	G3/4	25	RC1	RC1	38	248	226	210	160	25	38
KKPS50-25	RC2	M60*2	G1	31	RC2	RC2	40	292	280	270	215	28	48
KKPS65-32	R2-1/2	M76*2	G1-1/4	40	RC1-1/2	RC1-1/2	47	365	320	308	242	30	64
KKPS80-50	R3	M90*3	G2	46	RC2	RC2	50	428	396	346	290	35	76
KKPS100-65	R4	M120*4	G2-1/2	73	RC3	RC3	50	516	465	460	358	38	98

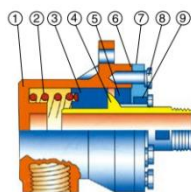
## KKPS-GF Type Rotary Joint



In the figure, B stands for thread (inner pipe fixed type) for KKPS-GF type rotary joint or the inner diameter of packing (inner pipe rotary type) for KKPS-XF type rotary joint

Type	B	B	C	D	K	L	L1	12	L4	L7	N	P	0	Q	R	S	T	U
KKPS32-15	G1/2	19	RC1	RC1/2	38	225	205	189	152	25	32	70	45	90	12	9	4	11
KKPS40-20	G3/4	25	RC1	RC1	38	248	226	210	160	25	38	75	50	96	12	9	4	11
KKPS50-25	G1	31	RC2	RC2	40	292	280	270	215	28	48	95	65	120	16	10	4	14
KKPS65-32	G1-1/4	40	RC1-1/2	RC1-1/2	47	365	320	308	242	30	64	110	80	136	16	10	6	14
KKPS80-50	G2	46	RC2	RC2	50	428	396	346	290	35	76	130	90	160	16	12	6	14
KKPS100-65	G2-1/2	73	RC3	RC3	50	516	465	460	358	38	98	165	120	195	16	15	6	14

## QD-type Rotary Joint



## Scope of Application

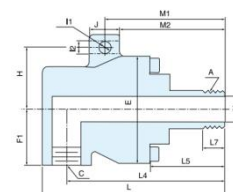
Maximum speed of revolution: 300RPM

Maximum temperature: 220°C

Maximum pressure: 1.8MPa

Applicable medium: saturated steam, superheated vapor and superheated water

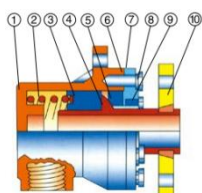
## QD-F type rotary joint



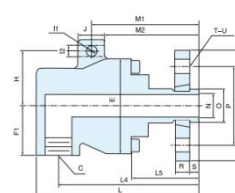
1. Shell
2. Spring
3. Oil-free bearing
4. Outer tube
5. Spherical surface sealing ring
6. Sealing gasket
8. Bolt
9. Front guide ring

## QD type unidirectional circulation type - threaded connection

Specifications	Type	A	C	E	F1	H	11	L2	J	L	L4	L7	M1	M2	N
20	QD20	R3/4	Rc3/4	96	48	48	12	12	25	141	118	20	89	-	18
25	QD25	R1	Rc1	75	50	55	12	12	26	180	135	22	-	95	25
32	QD32	R1-1/4	Rc1-1/4	120	63	70	14	14	26	194	152	25	-	94	30
40	QD40	R1-1/2	Rc1-1/2	130	70	78	16	16	32	220	187	30	-	125	38
50	QD50	R2	Rc2	160	80	80	18	18	35	239	194	32	133	-	48



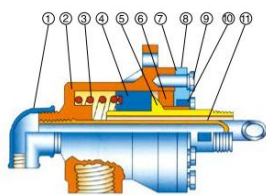
1. Shell
2. Spring
3. Oil-free bearing
4. Outer tube
5. Spherical surface sealing ring
6. Sealing gasket
8. Bolt
9. Front guide ring
10. Semi-ring flange



## QD-F type Unidirectional circulation type-quick-change flange connection

Specifications	Type	C	E	F1	H	11	12	J	L	L4	L5	M1	M2	N	O	P	Q	R	S	T	U
20	QD-F20	Rc3/4	96	48	48	12	12	25	156	133	55	104	-	18	27	75	105	16	8	4	14
25	QD-F25	Rc1	75	50	55	12	12	26	180	165	47	-	95	25	33.5	85	115	16	8	4	14
32	QD-F32	Rc1-1/4	120	63	70	14	14	26	198	156	62	-	98	30	42	100	140	18	12	4	18
40	QD-F40	Rc1-1/2	130	70	78	16	16	32	220	187	69	-	125	38	48	110	150	18	12	4	18
50	QD-F50	Rc2	160	80	80	18	18	35	244	199	70	138	-	48	60	125	165	20	15	4	18

### QS-G Type Rotary Joint



### Scope of Application

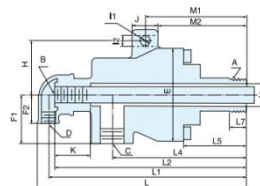
Maximum speed of revolution: 100rpm

Maximum temperature: 220°C

Maximum pressure: 1.8MPa

Applicable medium: saturated steam, superheated steam and superheated water

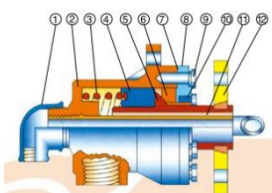
### QS-GF type rotary joint



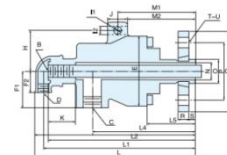
1. Elbow
2. Shell
3. Spring
4. Oil-free bearing
5. Outer tube
6. Spherical surface sealing ring
7. Sealing gasket
8. Bottom cover
9. Bolt
10. Front guide ring
11. Inner pipe
12. Semi-ring flange

### QS-G type Bidirectional circulation inner pipe fixed type - threaded connection

Specifications	Type	A	B	C	D	E	F1	F2	H	I1	I2	J	K	L	L1	L2	L4	L5	L7	M1	M2	N
20	QS-G20-8	R3/4	G1/4	Rc3/4	Rc1/2	96	48	30	48	12	12	25	35	195	180	166	118	40	20	89	-	18
25	QS-G25-10	R1	G3/8	RC3/4	Rc1/2	75	40	40	55	12	12	26	35	240	225	215	165	47	22	-	95	25
32	QS-G32-15	R1-1/4	G1/2	Rc1	Rc1/2	120	63	38	70	14	14	26	47	250	235	219	152	58	25	-	94	30
40	QS-G40-20	R1-1/2	G3/4	RC1-1/4	Rc3/4	130	70	43	78	16	16	32	45	291	273	254	187	69	30	-	125	38
50	QS-G50-25	R2	G1	Rc1-1/2	Rc1	160	80	51	80	18	18	35	36	311	291	270	194	65	32	133	-	48



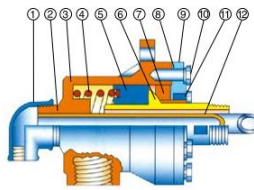
1. Elbow
2. Shell
3. Spring
4. Oil-free bearing
5. Outer tube
6. Spherical surface sealing ring
7. Sealing gasket
8. Bottom cover
9. Bolt
10. Front guide ring
11. Inner pipe
12. Semi-ring flange



### QS-GF type Bidirectional circulation inner pipe fixed type-quick-change flange connection

Specification s	Type	B	C	D	E	F 1	F 2	H	I1	I2	J	K	L	L1	L2	L4	L 5	M1	M2	N	O	P	Q	R	S	T	U
20	QS-GF20-8	G1/ 4	RC3/4	Rc1/ 2	96	48	30	4 8	1 2	1 2	2 5	3 5	21 0	19 5	17 1	13 3	55	10 4	-	1 8	27	75	10 5	1 6	8	4	1 4
25	QS-GF25-1 0	G3/ 8	RC3/4	Rc1/ 2	75	40	40	5 5	1 2	1 2	2 6	3 5	24 5	22 5	21 5	16 5	47	-	95	2 5	33. 5	85	11 5	1 6	8	4	1 4
32	QS-GF32-1 5	G1/ 2	Rc1	Rc1/ 2	12 0	63	38	7 0	1 4	1 4	2 6	4 7	25 4	23 9	22 3	15 6	62	-	98	3 0	42	10 0	14 0	1 8	1 2	4	1 8
40	QS-GF40-2 0	G3/ 4	RC1-1/ 4	Rc3/ 4	13 0	70	43	7 8	1 6	1 6	3 2	4 5	29 5	27 1	25 3	18 7	69	-	12 5	3 8	48	11 0	15 0	1 2	1 2	4	1 8
50	QS-GF50-2 5	G1	Rc1-1/2	Rc1	16 0	80	51	8 0	1 8	1 8	3 5	3 6	31 5	29 5	27 4	19 9	70	13 8	-	4 8	60	12 5	16 5	2 0	1 2	4	1 4

## QS-X Type Rotary Joint



### Scope of Application

Maximum speed of revolution: 100rpm

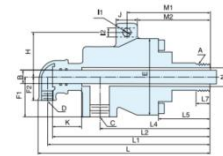
Maximum temperature: 220℃

Maximum pressure: 1.8MPa

Applicable medium: saturated steam, superheated steam and superheated water

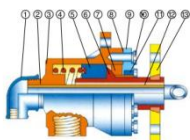
- |                                   |                   |
|-----------------------------------|-------------------|
| 1. Elbow                          | 2. Sealing circle |
| 3. Shell                          | 4. Spring         |
| 5. Oil-free bearing               | 6. Outer tube     |
| 7. Spherical surface sealing ring | 8. Sealing gasket |
| 9. Bottom cover                   | 10. Bolt          |
| 11. Support ring                  | 12. Inner pipe    |

## QS-XF Type Rotary Joint

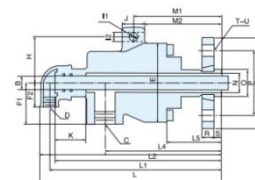


### QS-X type Bidirectional circulation inner pipe rotation type- threaded connection

Specifications	Type	A	B	C	D	E	F1	F2	H	I1	I2	J	K	L	L1	L2	L4	L5	L7	M1	M2	N
20	QS-X20-8	R3/4	12	Rc3/4	Rc1/2	96	48	30	48	12	12	25	35	195	180	166	118	40	20	89	-	18
25	QS-X25-10	R1	16	Rc3/4	Rc1/2	75	40	40	55	12	12	26	35	240	225	215	165	47	22	-	95	25
32	QS-X32-15	R1-1/4	20	Rc1	Rc1/2	120	63	38	70	14	14	26	47	250	235	219	152	58	25	-	94	30
40	QS-X40-20	R1-1/2	25	Rc1-1/4	Rc3/4	130	70	43	78	16	16	32	45	291	273	254	187	69	30	-	125	38
50	QS-X50-25	R2	31	Rc1-1/2	Rc1	160	80	51	80	18	18	35	36	311	291	270	194	65	32	133	-	48



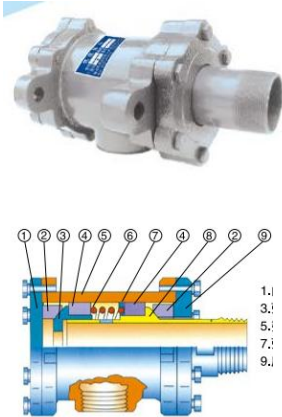
- |                                   |                   |
|-----------------------------------|-------------------|
| 1. Elbow                          | 2. Sealing circle |
| 3. Shell                          | 4. Spring         |
| 5. Oil-free bearing               | 6. Outer tube     |
| 7. Spherical surface sealing ring | 8. Sealing gasket |
| 9. Bottom cover                   | 10. Bolt          |
| 11. Support ring                  | 12. Inner pipe    |
| 13. Quick-change flange           |                   |



### QS-XF type Bidirectional circulation inner pipe rotation type-quick-change flange connection

Specifications	Type	B	C	D	E	F1	F2	H	I1	I2	J	K	L	L1	L2	L4	L5	M1	M2	N	O	P	Q	R	S	T	U
20	QS-GF20-8	12	Rc3/4	Rc1/2	96	48	30	48	12	12	25	35	210	195	171	133	55	104	-	18	27	75	105	16	8	4	14
25	QS-GF25-10	16	Rc3/4	Rc1/2	75	40	40	55	12	12	26	35	240	225	215	165	47	-	95	25	33.5	85	115	16	8	4	14
32	QS-GF32-15	20	Rc1	Rc1/2	120	63	38	70	14	14	26	47	254	239	223	156	62	-	98	30	42	100	140	18	12	4	18
40	QS-GF40-20	25	Rc1-1/4	Rc3/4	130	70	43	78	16	16	32	45	291	273	254	187	69	-	125	38	48	110	150	18	12	4	18
50	QS-GF50-25	31	Rc1-1/2	Rc1	160	80	51	80	18	18	35	36	315	295	274	199	70	138	-	48	60	125	165	20	12	4	18

### QD Type Rotary Joint



### Scope of Application

Maximum speed of revolution:  $\leq 100\text{rpm}$

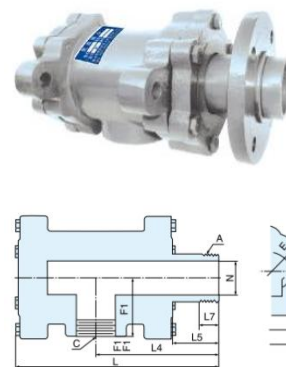
Maximum temperature:  $\leq 220^{\circ}\text{C}$

Maximum pressure:  $\leq 1.8\text{MPa}$

Applicable medium: saturated steam, superheated steam and superheated water

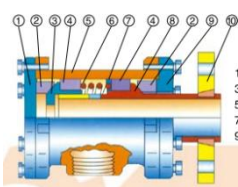
- |                  |                      |
|------------------|----------------------|
| 1. Blank cap     | 2. Spherical surface |
| 3. Spring seat   | sealing ring         |
| 5. Shell         | 4. Oil-free bearing  |
| 7. Spring gasket | 6. Spring            |
| 9. Bottom cover  | 8. Outer tube        |

### QD-F Type Rotary Joint

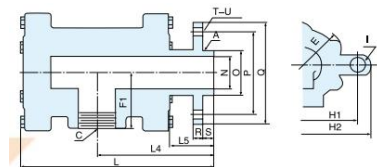


### QD type Rotary joint unidirectional circulation type-threaded connection

Specifications	Type	A	C	E	F1	H1	H2	I	L	L4	L5	L7	N
65	QD-65	R2-1/2	RC2-1/2	190	85	220	270	20	318	195	80	40	64
80	QD-80	R3	Rc3	230	110	300	255	26	367	220	85	45	75
100	QD-100	R4	Rc4	261	120	300	354	26	367	265	87	45	97



- |                  |                              |
|------------------|------------------------------|
| 1. Blank cap     | 2. Spherical surface sealing |
| 3. Spring seat   | ring                         |
| 5. Shell         | 4. Oil-free bearing          |
| 7. Spring gasket | 6. Spring                    |
| 9. Bottom cover  | 8. Outer tube                |
|                  | 10. Semi-ring flange         |



### QD-F type rotary joint One-way circulation type-quick-change flange connection

Specifications	Type	C	E	F1	H1	H2	I	L	L4	L5	N	O	P	Q	R	S	T	U
65	QD-F65	RC2-1/2	190	85	220	290	20	328	205	90	64	75	145	185	20	18	4	18
80	QD-F80	Rc3	230	110	300	355	26	379	232	97	75	90	160	200	20	20	8	18
100	QD-F100	Rc4	261	120	300	354	26	365	267	90	97	112	180	220	22	22	8	18

### QS-G Type Rotary Joint



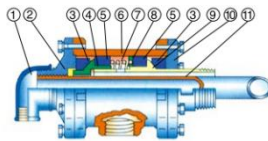
Scope of Application

Maximum speed of revolution:  $\leq 100\text{rpm}$

Maximum temperature:  $\leq 220^\circ\text{C}$

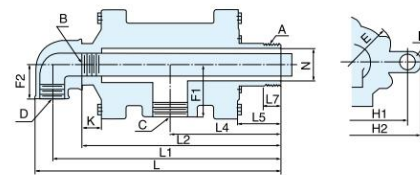
Maximum pressure:  $\leq 1.8\text{MPa}$

Applicable medium: saturated steam, superheated steam and superheated water



1. Elbow seat gasket 2. End cover 3. Spherical surface sealing ring 4. Spring 5. Oil-free bearing 6. Shell 7. Spring 8. Spring 9. Outer tube 10. Bottom cover 11. Inner pipe

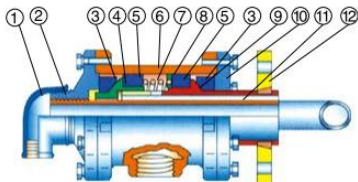
### QS-GF Type Rotary Joint



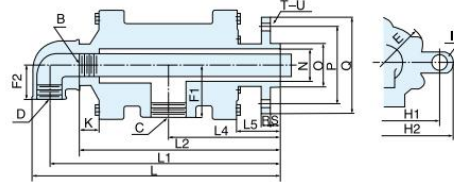
### QS-G type rotary joint

### Bidirectional circulation inner pipe fixed type-threaded connection

Specifications	Type	A	B	C	D	E	F1	F2	H1	H2	I	K	L	L1	L2	L4	L5	L7	N
65	QS-G65-32	R2-1/2	G1-1/4	Rc2	Rc1-1/4	100	85	62	220	270	20	40	402	376	354	195	80	40	64
80	QS-G80-40	R3	G1-1/2	Rc2-1/2	Rc1-1/2	230	110	72	300	355	26	40	476	441	411	220	85	45	75
100	QS-G100-65	R4	G2-1/2	Rc2-1/2	Rc2-1/2	261	120	90	300	354	26	30	510	467	429	265	87	45	98



1. Elbow Spring seat 2. End cover 3. Spherical surface sealing ring 4. Spring 5. Oil-free bearing 6. Shell 7. Spring 8. Spring gasket 9. Outer tube 10. Bottom cover 11. Inner pipe 12. Quick-change flange



### QS-GF type rotary joint

### Bidirectional circulation inner pipe fixed type-quick-change flange connection

Specifications	Type	B	C	D	E	F1	F2	H1	H2	I	K	L	L1	L2	L4	L5	N	O	P	Q	R	S	T	U
65	QS-GF65-32	40	Rc2	Rd-1/4	190	85	62	220	270	20	40	41	38	36	20	90	64	75	145	185	20	18	48	18
80	QS-GF80-40	46	Rc2-1/2	Rc1-1/2	230	110	72	300	355	26	40	48	45	42	23	97	75	90	160	200	20	22	88	18
100	QS-GF100-65	73	RC2-1/2	Rc2-1/2	261	120	90	300	354	26	30	51	46	43	26	90	98	112	180	220	22	22	88	18

## QS-X Type Rotary Joint



### Scope of Application

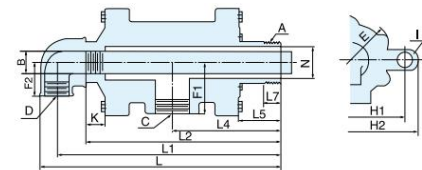
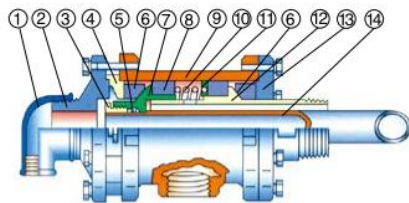
Maximum speed of revolution:  $\leq 100\text{rpm}$

Maximum temperature:  $\leq 220^\circ\text{C}$

Maximum pressure:  $\leq 1.8\text{MPa}$

Applicable medium: saturated steam, superheated steam and superheated water

## QS-XF Type Rotary Joint

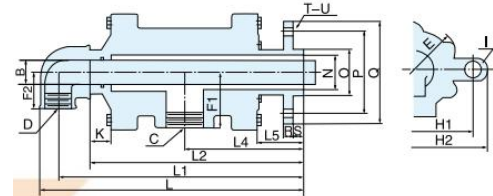
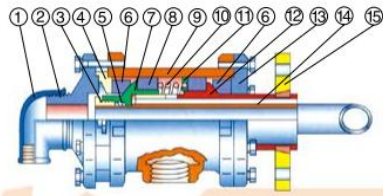


1. Elbow 2. End cover 3. Spherical surface sealing ring 4. Middle cover 5. Gland packing  
6. Spherical surface sealing ring 7. Spring seat 8. Oil-free bearing 9. Shell  
10. Spring 11. Spring gasket 12. Outer tube 13. Bottom cover 14. Inner pipe

### QS-X type rotary joint

### Bidirectional circulation inner pipe rotation type- threaded connection

Specifications	Type	A	B	C	D	E	F1	F2	H1	H2	I	K	L	L1	L2	L4	L5	L7	N
65	QS-G65-32	R2-1/2	40	Rc2	Rc1-1/4	190	85	62	220	270	20	40	402	376	354	195	80	40	64
80	QS-G80-40	R3	46	RC2-1/2	Rc1-1/2	230	110	72	300	355	26	40	476	441	411	220	85	45	75
100	QS-G100-65	R4	73	RC2-1/2	RC2-1/2	261	120	90	300	354	26	30	510	467	429	265	87	45	98



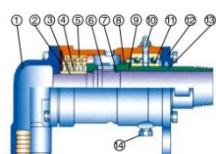
1. Elbow 2. End cover 3. Spherical surface sealing ring 4. Middle cover 5. Gland packing  
6. Spherical surface sealing ring 7. Spring seat 8. Oil-free bearing 9. Shell  
10. Spring 11. Spring gasket 12. Outer tube 13. Bottom cover 14. Inner pipe 15. Quick-change flange

### QS-XF type rotary joint

### Bidirectional circulation inner pipe rotation type-quick-change flange connection

Specification s	Type	B	C	D	E	F1	F2	H1	H2	I	K	L	L1	L2	L4	L5	N	0	P	Q	R	S	T	U
65	QS-XF65-32	40	Rc2	Rc1-1/4	190	85	62	220	270	20	40	412	386	364	205	90	64	75	145	185	20	18	48	18
80	QS-XF80-40	46	RC2-1/2	Rc1-1/2	230	110	72	300	355	26	40	488	453	423	232	97	75	90	160	200	20	20	88	18
100	QS-XF100-65	73	RC2-1/2	RC2-1/2	261	120	90	300	354	26	30	512	469	437	267	90	88	112	180	220	22	22	88	18

## DD-type rotary joint



### Scope of Application

Maximum speed of revolution:  $\leq 500\text{RPM}$

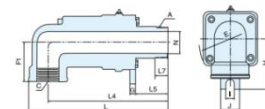
Maximum temperature:  $\leq 220^{\circ}\text{C}$

Maximum pressure:  $\leq 1.8\text{MPa}$

Applicable medium: saturated steam, superheated steam and superheated water

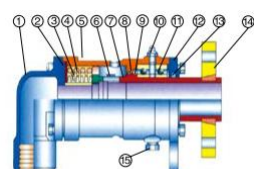
1. Elbow
2. Gasket
3. Protective sleeve
4. Ripple compensator
5. Shell
6. Sealing ring
7. Positioning sleeve
8. Sealing circle
9. Hollow shaft
10. Grease nozzle
11. Bearing
12. Gland
13. Dustproof ring
14. Oil drain plug

## DD-F Type Rotary Joint

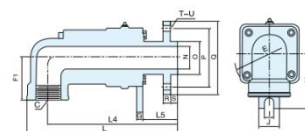


### DD type Unidirectional circulation type-threaded connection

Specifications	Type	A	C	E	F1	G	H	I	J	L	L4	L5	L7	N
10	DD-10	R3/8	RC3/8	79	40	8	55	14	34	164	149	36	16	10
15	DD-15	R1/2	RC1/2	79	40	8	55	14	34	175	158	42	20	14
20	DD-20	R3/4	Rc3/4	89	45	10	65	18	38	197	177	45	22	18
25	DD-25	R1	Rc1	110	55	10	70	14	40	256	231	63	25	25
32	DD-32	R1-1/4	Rc1-1/4	119	78	11	82	18	48	264	234	57.5	28	32
40	DD-40	R1-1/2	Rd-1/2	125	83	10	92	20	50	288	256	60	30	38
50	DD-50	R2	Rc2	167	88	10	95	18	42	308	270	66	32	48
65	DD-65	R2-1/2	RC2-1/2	186	110	14	120	20	50	359	314	72	42	64
80	DD-80	R3	Rc3	207	115	16	130	24	54	404	348	94	45	75
100	DD-100	R4	Rc4	277	120	20	160	28	80	705	623	118	50	98



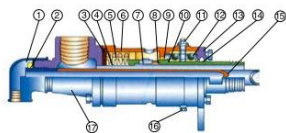
1. Elbow
2. Gasket
3. Protective sleeve
4. Ripple compensator
5. Shell
6. Sealing ring
7. Positioning sleeve
8. Sealing circle
9. Hollow shaft
10. Grease nozzle
11. Bearing
12. Gland
13. Dustproof ring
14. Semi-ring flange
15. Oil drain plug



### DD-F type One-way circulation type-quick-change flange connection

Specifications	Type	C	E	F1	G	H	I	J	L	L4	L5	N	O	P	Q	R	S	T	U
15	DD-F15	Rc1/2	79	40	8	55	14	34	185	170	57	14	26	65	95	14	8	4	14
20	DD-F20	Rc3/4	89	45	10	65	18	38	201	181	49	18	29	75	105	16	8	4	14
25	DD-F25	Rc1	110	55	10	70	14	40	257	233	64	25	40	85	115	16	10	4	14
32	DD-F32	Rc1-1/4	119	78	11	82	18	48	266	236	59.5	32	44	100	140	16	12	4	18
40	DD-F40	Rc1-1/2	125	83	10	92	20	50	299	267	71	38	48	110	150	18	12	4	18
50	DD-F50	Rc2	167	88	10	95	18	42	320	282	68	48	60	125	165	20	15	4	18
65	DD-F65	RC2-1/2	186	110	14	120	20	50	359	314	72	64	75	145	185	20	18	4	18
80	DD-F80	Rc3	207	115	16	130	24	54	385	329	75	75	90	160	200	20	20	8	18
100	DD-F100	Rc4	277	120	20	160	28	80	705	623	118	98	120	190	235	23	20	8	18

### DS-G Type Rotary Joint



#### Scope of Application

Maximum speed of revolution:  $\leq 500\text{RPM}$

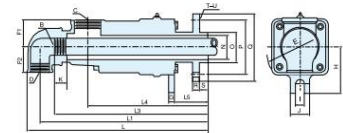
Maximum temperature:  $\leq 220^{\circ}\text{C}$

Maximum pressure:  $\leq 1.8\text{MPa}$

Applicable medium: saturated steam, superheated steam and superheated water

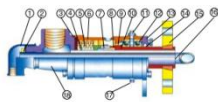
- |                       |                       |
|-----------------------|-----------------------|
| 1. Elbow              | 2. Locking nut        |
| 3. Gasket             | 4. Protective sleeve  |
| 5. Ripple compensator | 6. Shell              |
| 7. Sealing ring       | 8. Positioning sleeve |
| 9. Sealing circle     | 10. Hollow shaft      |
| 11. Grease nozzle     | 12. Bearing           |
| 13. Gland             | 14. Dustproof ring    |
| 15. Inner pipe        | 16. Oil drain plug    |
| 17. Triplet           |                       |

### DS-GF type rotary joint

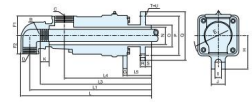


### DS-G type Bidirectional circulation inner pipe fixed type-threaded connection

Specifications	Type	A	B	C	D	E	F1	F2	G	H	I	J	K	L	L1	L3	L4	L5	L7	N
15	DS-G15-6	R1/2	G1/8	RC1/2	Rc1/2	79	29	25	8	55	14	34	15	217	204	91	56	42	20	14
20	DS-G20-8	R3/4	G1/4	Rc3/4	Rc1/2	89	34	30	10	65	18	38	15	244	229	215	175	45	22	18
25	DS-G25-10	R1	G3/8	Rc3/4	Rc1/2	110	42	33	10	70	14	40	28	303	288	273	223	63	25	25
32	DS-G32-15	R1-1/4	G1/2	Rc1	Rc1/2	119	44	38	11	82	18	48	47	311	294	279	224	57.5	28	32
40	DS-G40-20	R1-1/2	G3/4	Rc1-1/4	Rc3/4	125	60	43	10	92	20	50	48	353	335	316	253	60	30	38
50	DS-G50-25	R2	G1	Rc1-1/2	Rc1	167	54	51	10	95	18	42	49	358	338	317	254	66	32	48
65	DS-G65-32	R2-1/2	G1-1/4	Rc2	Rc1-1/4	186	70	62	14	120	20	50	59	422	394	369	295	72	42	64
80	DS-G80-40	R3	G1-1/2	RC2-1/2	Rc1-1/2	207	72	72	16	130	24	54	71	501	465	443	338	94	45	75



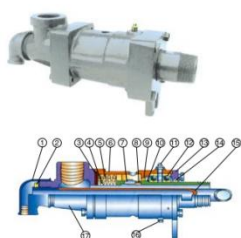
- |                       |                       |
|-----------------------|-----------------------|
| 1. Elbow              | 2. Locking nut        |
| 3. Gasket             | 4. Protective sleeve  |
| 5. Ripple compensator | 6. Shell              |
| 7. Sealing ring       | 8. Positioning sleeve |
| 9. Sealing circle     | 10. Hollow shaft      |
| 11. Grease nozzle     | 12. Bearing           |
| 13. Gland             | 14. Dustproof ring    |
| 15. Semi-ring flange  | 16. Inner pipe        |
| 17. Oil drain plug    | 18. Triplet           |



### DS-GF type-quick-change flange connection

Specifications	Type	B	C	D	E	F1	F2	G	H	F2	J	K	L	L1	L3	L4	L5	N	0	P	Q	R	S	T	U
15	DS-GF15-6	G1/8	Rc1/2	Rc1/2	79	29	25	8	55	25	34	15	222	209	196	161	47	14	26	65	95	14	8	4	14
20	DS-GF20-8	G1/4	Rc3/4	Rc1/2	89	34	30	10	65	30	38	15	248	233	219	179	49	18	29	75	105	16	8	4	14
25	DS-GF25-10	G3/8	Rc3/4	Rc1/2	110	42	33	10	70	33	40	28	304	289	274	224	64	25	40	85	115	16	10	4	14
32	DS-GF32-15	G1/2	Rc1-1/4	Rc1/2	119	44	38	11	82	38	48	47	311	296	281	226	59.5	32	44	100	140	18	12	4	18
40	DS-GF40-20	G3/4	Rc1-1/2	Rc3/4	125	60	43	10	92	43	50	48	364	346	327	264	71	38	48	110	150	18	12	4	18
50	DS-GF50-25	G1	Rc1-1/2	Rc1	167	54	51	10	95	51	42	49	370	350	329	266	68	48	60	125	165	20	15	4	18
65	DS-GF65-32	G1-1/4	Rc2	Rc1-1/4	186	70	62	14	120	62	50	57	422	394	369	295	72	64	75	145	185	20	18	4	18
80	DS-GF80-40	G1-1/2	Rc2-1/2	Rc1-1/2	207	72	72	16	130	40	54	71	483	446	414	319	72	72	90	160	200	20	20	8	18

### DS-X Type Rotary Joint



#### Scope of Application

Maximum speed of revolution:  $\leq 500\text{r/min}$

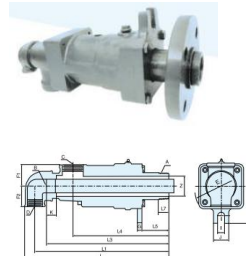
Maximum temperature:  $\leq 220^\circ\text{C}$

Maximum pressure:  $\leq 1.8\text{MPa}$

Applicable medium: saturated steam, superheated steam and superheated water

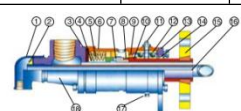
- |                       |                       |
|-----------------------|-----------------------|
| 1. Elbow              | 2. Locking nut        |
| 3. Gasket             | 4. Protective sleeve  |
| 5. Ripple compensator | 6. Shell              |
| 7. Sealing ring       | 8. Positioning sleeve |
| 9. Sealing circle     | 10. Hollow shaft      |
| 11. Grease nozzle     | 12. Bearing           |
| 13. Gland             | 14. Dustproof ring    |
| 15. Inner pipe        | 16. Oil drain plug    |
| 17. Triplet           |                       |

### DS-XF Type Rotary Joint

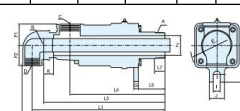


### DS-X type Bidirectional circulation inner pipe rotation type- threaded connection

Specifications	Type	A	B	C	D	E	F1	F2	G	H	I	J	K	L	L1	L3	L4	L5	L7	N
15	DS-X15-6	R1/2	10	RC1/2	Rc1/2	79	29	25	8	55	14	34	15	217	204	91	56	42	20	14
20	DS-X20-8	R3/4	12	Rc3/4	Rc1/2	89	34	30	10	65	18	38	15	244	229	215	175	45	22	18
25	DS-X25-10	R1	16	RC3/4	Rc1/2	110	42	33	10	70	14	40	28	303	288	273	223	63	25	25
32	DS-X32-15	R1-1/4	20	Rc1	Rc1/2	119	44	38	11	82	18	48	47	311	294	279	224	57.5	28	32
40	DS-X40-20	R1-1/2	25	Rc1-1/4	Rc3/4	125	60	43	10	92	20	50	48	353	335	316	253	60	30	38
50	DS-X50-25	R2	31	RC1-1/2	Rc1	167	54	51	10	95	18	42	49	358	338	317	254	66	32	48
65	DS-X65-32	R2-1/2	40	Rc2	Rc1-1/4	186	70	62	14	120	20	50	59	422	394	369	295	72	42	64
80	DS X80 40	R3	46	RC2-1/2	Rc1-1/2	207	72	72	16	130	24	54	71	501	465	443	338	94	45	75



- |                       |                       |
|-----------------------|-----------------------|
| 1. Elbow              | 2. Filler             |
| 3. Gasket             | 4. Protective sleeve  |
| 5. Ripple compensator | 6. Shell              |
| 7. Sealing ring       | 8. Positioning sleeve |
| 9. Sealing circle     | 10. Hollow shaft      |
| 11. Grease nozzle     | 12. Bearing           |
| 13. Gland             | 14. Dustproof ring    |
| 15. Semi-ring flange  | 16. Inner pipe        |
| 17. Oil drain plug    | 18. Triplet           |



### DS-XF type bidirectional circulation inner pipe rotation

Specifications	Type	B	C	D	E	F1	F2	G	H	Y2	J	K	L	L1	L3	L4	L5	N	O	P	Q	R	S	T	U
15	DS-XF15-6	10	RC1/2	Rc1/2	79	29	25	8	55	25	34	15	222	209	196	161	47	14	26	65	95	14	8	4	14
20	DS-XF20-8	12	Rc3/4	Rc1/2	89	34	30	10	65	30	38	15	248	233	219	179	49	18	29	75	105	16	8	4	14
25	DS-XF25-10	16	Rc3/4	Rc1/2	110	42	33	10	70	33	40	28	304	289	274	224	64	25	40	85	115	16	10	4	14
32	DS-XF32-15	20	Rc1-1/4	Rc1/2	119	44	38	11	82	38	48	47	311	296	281	226	59.5	32	44	100	140	18	12	4	18
40	DS-XF40-20	25	RC1-1/2	Rc3/4	125	60	43	10	92	43	50	48	364	346	327	264	71	38	48	110	150	18	12	4	18
50	DS-XF50-25	31	RC1-1/2	Rc1	167	54	51	10	95	51	42	49	370	350	329	266	68	48	60	125	165	20	15	4	18
65	DS-XF65-32	40	Rc2	RC1-1/4	186	70	62	14	120	62	50	57	422	394	369	295	72	64	75	145	185	20	18	4	18
80	DS-XF80-40	46	RC2-1/2	Rc1-1/2	207	72	72	16	130	40	54	71	483	446	414	319	72	72	90	160	200	20	20	8	18

## KKGD Type Rotary Joint with Hot Oil for High Temperature

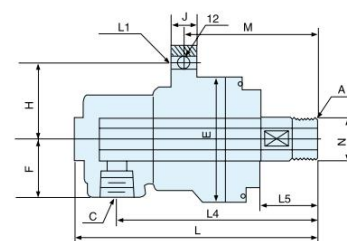


### Structural Characteristics

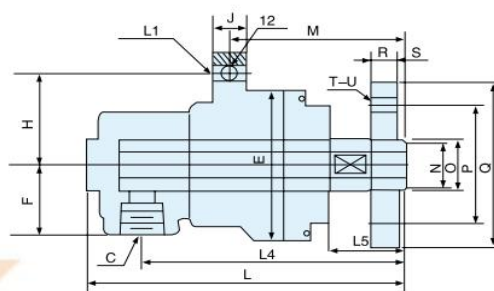
Maximum speed of revolution: 300r/min      Maximum temperature: 350°C

Maximum pressure: 2.0MPa      Applicable medium: heat conduction oil

It's powered by Taiwan technology, adopts oil-free bearing for double support, double spherical surface for sealing, automatic adjustment of gravity center, automatic compensation, to make the relative rest of the spring, plus the lubrication of the thrust bearing in the hot oil, thus reduce the friction during operation, so that not affected by the rotational force and the rotation accuracy and rotation speed are increased by two times, the compensation of the sealing surface is more stable, and the selection and processing technology of high-temperature resistant materials have a reliable guarantee, and have a longer service life during operation.



Specifications	Type	A	C	E	F	H	11	12	J	L	L4	L5	M	N
20	KKGD20	R3/4	Rc3/4	86	42	55	10	10	25	182	152	40	104	18
25	KKGD25	R1"	Rc1"	96	46	60	10	10	25	202	158	48	112	23
32	KKGD32	R1-1/4"	Rc1-1/4"	116	55	72	14	14	30	224	190	50	125	32
40	KKGD40	R1-1/2"	Rc1-1/2"	125	62	76	14	14	30	252	196	65	143	38
50	KKGD50	R2"	Rc2"	145	72	88	14	14	30	285	245	68	150	48

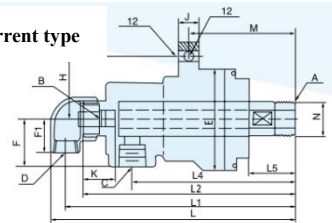


Specifications	Type	C	E	F	H	11	12	J	L	L4	L5	M	Q	P	N	0	R	S	T	U
20	KKGD-F20	RC3/4	86	42	55	10	10	25	182	152	40	104	105	75	18	27	16	12	4	14
25	KKGD-F25	Rc1"	96	46	60	10	10	25	202	158	48	112	115	85	23	33.5	16	12	4	14
32	KKGD-F32	Rc1-1/4"	116	55	72	14	14	30	224	190	50	125	140	100	32	42	18	14	4	18
40	KKGD-F40	Rc1-1/2"	125	62	76	14	14	30	252	196	65	143	150	110	38	48	18	14	4	18
50	KKGD-F50	Rc2"	145	72	88	14	14	30	285	245	68	150	165	125	48	60	20	16	4	18

## KKGS Type Rotary Joint with Hot Oil for High Temperature



Double current type



### Service Condition

Fluid: Hot oil for high temperature Steam for overheat Maximum pressure: 20kg/cm<sup>2</sup> Maximum temperature: 343℃ Maximum speed of revolution: 200rpm

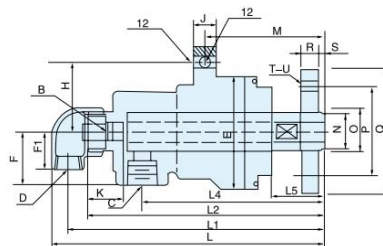
Note: Different specifications with different pressure and speed of revolutions.

It's powered by Taiwan technology, adopts oil-free bearing for double support, double spherical surface for sealing, automatic adjustment of gravity center, automatic compensation, to make the relative rest of the spring, plus the lubrication of the thrust bearing in the hot oil, thus reduce the friction during operation, so that not affected by the rotational force and the rotation accuracy and rotation speed are increased by two times, the compensation of the sealing surface is more stable, and the selection and processing technology of high-temperature resistant materials have a reliable guarantee, and have a longer service life during operation.

### KKGS/KKGS-X

Specifications	Type	A	B	C	D	E	H	F	F1	K	I1	I2	J	L	L1	L2	L4	L5	M	N
20	KKGS20-8	R3/4	G1/4 12	Rc3/4	Rc1/2	86	55	46	30	34	10	10	25	235	220	202	152	40	104	18
25	KKGS25-10	R1"	G3/8 16	Rc3/4	Rc1/2	96	60	50	33	34	10	10	25	254	239	224	158	48	112	23
32	KKGS32-15	R1-1/4"	G1/2 19	Rc1"	Rc1/2	116	72	60	38	45	14	14	30	276	264	249	190	50	125	32
40	KKGS40-20	R1-1/2"	G3/4 25	Rc1-1/4"	Rc3/4	125	76	65	43	45	14	14	30	312	295	282	196	60	143	38
50	KKGS50-25	R2"	G1" 31	Rc1-1/2"	Rc1"	145	88	75	51	55	14	14	30	354	321	312	245	68	150	48

Note: At section B, the upper line is the fixed dimension of the inner tube, the lower line is the rotating dimension of the inner tube.



Specifications	Type	B	C	D	E	H	F	F1	K	I1	I2	J	L	L1	L2	L4	L5	M	Q	P	R	S	N	O	T	U
20	KKGS-F20-8	G1/4 12	Rc3/4	Rc1/2	86	55	46	30	34	10	10	25	235	220	202	152	40	104	105	75	16	12	18	27	4	14
25	KKGS-F25-10	G3/8 16	Rc3/4	Rc1/2	96	60	50	33	34	10	10	25	254	239	224	158	48	112	115	85	16	12	23	33.5	4	14
32	KKGS-F32-15	G1/2 19	Rc1"	Rc1/2	116	72	60	38	45	14	14	30	276	264	249	190	50	125	140	100	18	14	32	42	4	18
40	KKGS-F40-20	G3/4 25	RC1-1/4"	RC3/4	125	76	65	43	45	14	14	30	312	295	282	196	60	143	150	110	18	14	38	48	4	18
50	KKGS-F50-25	G1" 31	Rc1-1/2"	Rc1"	145	88	75	51	55	14	14	30	354	321	312	245	68	150	165	125	20	16	48	60	4	18

Note: At section B, the upper line is the fixed dimension of the inner tube, the lower line is the rotating dimension of the inner tube.

## KKDN Type Rotating Tube Joint



### Structural Characteristics

Special rotary joint for metallurgy is specially used for the active connection of fluid medium between steel tubes to play reciprocating or low-speed rotating movement, with high wear resistance, flexible rotation and strong support ability. It adopts the products of German Dichtomatik for reliable sealing.

### Scope of Application

Maximum speed of revolution: 50RPM

Maximum pressure: 5.0MPa

Maximum temperature: 200°C

Applicable medium: air, oxygen, hydrogen, water

## Example of structure style

### Service Condition

Our KKDN type rotating tube joint can be widely used in various places, suitable for a variety of media, such as water, sewage, hydraulic oil, other oils, chemicals, coal gas and living materials such as milk, gravy, chocolate, etc.

Rotating tube joints can be combined with elbow tubes or corner components to form flexible tubing with different structural styles.

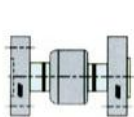
We offer original assembled flexible tubing that can be filled with seals of different materials according to the needs and temperatures of the application.

We can adopt double sealing inside and outside of the rotating tube joint according to customer requirements to ensure "foolproof".

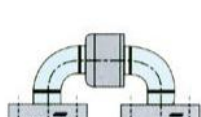
KKDN type rotating tube joint can be combined with any type of threaded joint or flanged joint. We recommend ordering the required connectors along with the rotating tube joints.

Rotating tube joints with flange

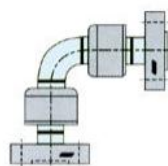
All rotating tube joint parts are available in the following structure style:



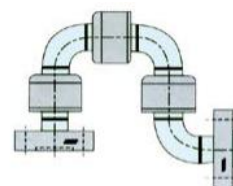
Example 1



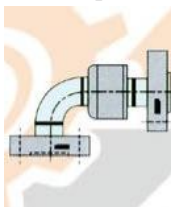
Example 2



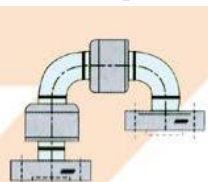
Example 3



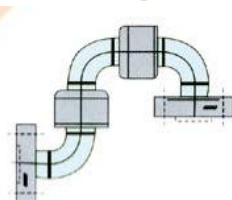
Example 4



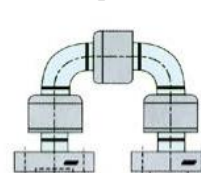
Example 5



Example 6



Example 7



Example 8

## KKDN Type Rotary Joint



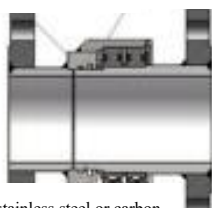
The KKDN type rotary joint is specially used for the connection of rigid tube to play reciprocating or low-speed rotating movement. Our company respectively adopts deep groove ball bearing structure and ball type structure, and the bearing type rotating concentricity is higher. And stability is better, the sealing material adopts imported PTFE, which realizes better sealing and wear resistance, and increases the service life of the joint

### Scope of Application

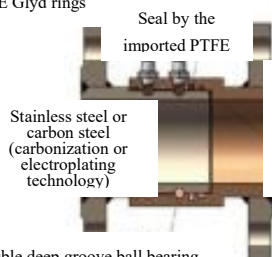
1. Maximum pressure: 20MPa
2. Maximum temperature: 300 °C (can be customized according to different needs)
3. Rotating speed: ≤50r
4. Sealing material with 0 type circles
  - ① General butyronitrile is less than 120 °C
  - ② Fluorine rubber with high-temperature type is less than 200 °C
  - ③ The customized sealing circle is less than 300 °C
  - ④ Medium: water, steam, oil, air
  - ⑤ Body material adopts stainless steel or carbon steel

Fluorine rubber O style ring (can be customized according to different temperature)

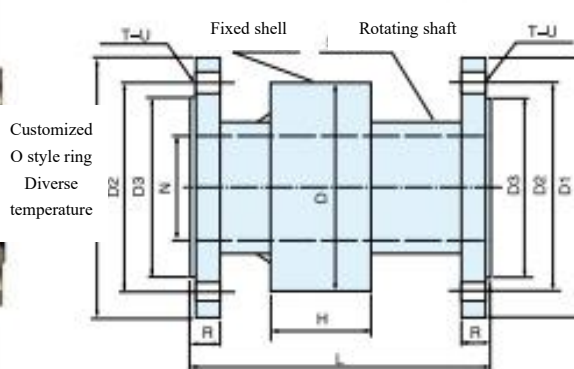
High pressure & wear resistant PTFE Glyd rings



Adopt stainless steel or carbon steel (carbonization or electroplating technology)



Double deep groove ball bearing The stability is better



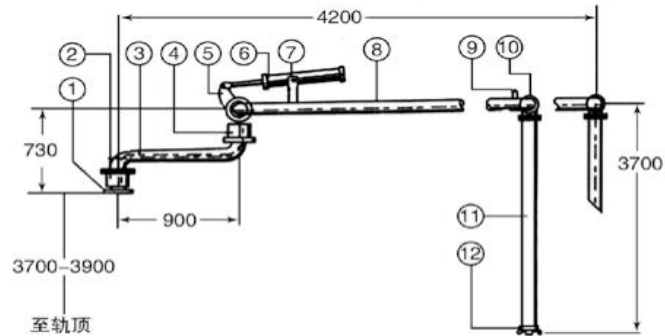
General type

Connection mode and dimension can be customized according to the customer requirements

Specification and type	D	D1	D2	D3	N	L	R	T	U
DN20	56	105	75	56	20	160	16	4	14
DN25	62	115	85	65	25	170	14	4	14
DN32	88	140	100	80	30	170	18	4	14
DN40	95	150	110	84	40	170	18	4	18
DN50	105	165	125	99	50	180	20	4	18
DN65	115	185	145	122	65	180	20	4	18
DN80	140	200	160	138	80	190	20	8	18
DN100	150	220	180	156	100	200	22	8	18
DN125	175	250	210	136	125	260	22	8	18
DN150	240	285	240	212	150	270	22	8	22
DN200	270	340	295	266	200	280	25	12	22
DN250	320	405	355	319	250	300	29	12	26
DN300	380	460	410	368	300	340	30	12	26
DN350	420	520	470	429	350	370	38	16	26

## Train Crane Tube

Name: Loading and unloading train crane tube without column Type: HL1403



- |                                       |                              |
|---------------------------------------|------------------------------|
| (1) Interface flange                  | (2) Lower-level gyrator      |
| (3) Inner arm                         | (4) Upper-level Gyrator      |
| (5) Gyrator of the middle part        | (6) Balancer                 |
| (7) Bracket                           | (8) Outer arm                |
| (9) Emptying valve                    | (10) Gyrator of the top part |
| (11) Vertical inserting aluminum tube | (12) Oil suction             |

Applicable places: Loading and unloading operations of the open at the top of the train filling cars.

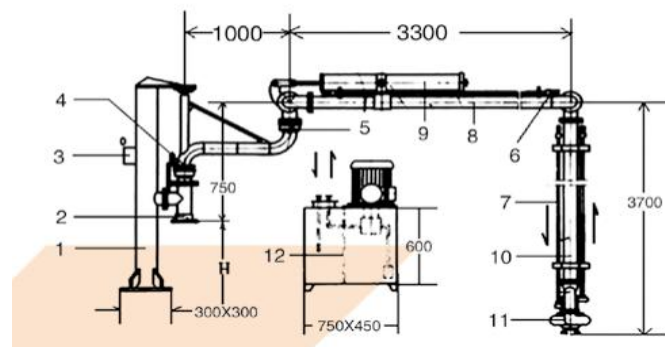
Applicable medium: Crude oil, refined oil, cooking oil, chemical medium, alcohol and other liquids

Working pressure: 0.6MPa-2.5MPa

Tube material: carbon steel (stainless steel)

Vertical tube: aluminum alloy (stainless steel)

Name: Unloading crane tube with the hydraulic oil immersed pump Type: HL1403



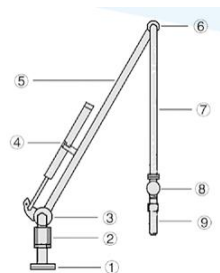
- |                            |                                 |
|----------------------------|---------------------------------|
| 1. Column                  | 7. Hydraulic tube               |
| 2. Foundation flange       | 8. Outer arm                    |
| 3. Hydraulic control valve | 9. Balancer                     |
| 4. Limiter                 | 10. Vertical tube               |
| 5. Gyrator                 | 11. Hydraulic oil immersed pump |
| 6. Hydraulic hose          | 12. Hydraulic pump station      |

## Drum Crane Tube

This crane tube is suitable for filling standard oil drums and bulk operations, the vehicle is not limited by the model, height and size, it is suitable for loading and unloading gas diesel, lubricating oil, cooking oil, alcohol and various chemical liquids.

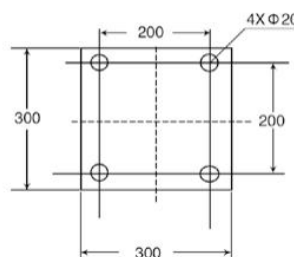
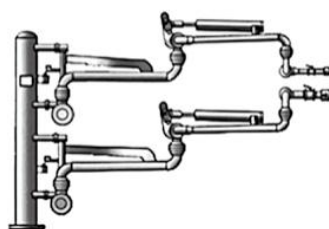
Features: Simple operation, flexible rotation, wide working surface, durable service.

- |                                    |                                 |
|------------------------------------|---------------------------------|
| 1. Interface flange                | 2. Horizontal rotary joint      |
| 3. Rotary joint of the middle part | 4. Balancing cylinder           |
| 5. Inner arm                       | 6. Rotary joint of the top part |
| 7. Outer arm                       | 8. Valve                        |
| 9. Portfolio of oil outlet         |                                 |



## Loading and Unloading Crane Tube of Liquefied Gas

Name: Lift truck crane tube Type: HL2543



Applicable places: The closed loading and unloading with double-tube is at the bottom of the car, and the connection with the tank car adopts loose flange or quick joint.

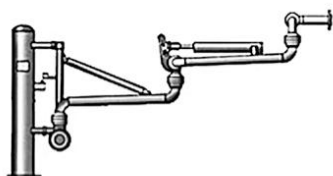
Applicable medium: Liquefied gas, liquid ammonia, propylene, etc.

Design pressure: 4.0MPa

Applicable temperature: -50°C-+100°C

## Loading and Unloading Crane Tube at the Bottom of the Car

Name: Column style crane tube Type: HL2503



Applicable places: Loading and unloading at the bottom (side) of the tank truck, the interface can be downwards or sideways, and the connection with the tank truck adopts loose flange or quick joint

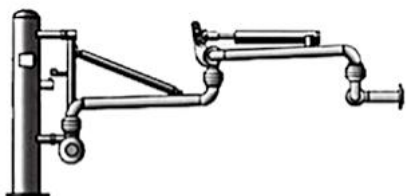
Applicable medium: Crude oil, residual oil, cooking oil, chemical medium, etc.

Applicable pressure: -0.08MPa-2.5MPa

Applicable temperature: -50°C-+180°C

### Crane Tube Series

Name: Column style crane tube    Type: HL2504



Applicable places: Loading and unloading at the bottom (side) of the tank truck, the interface can be downwards or sideways, and the connection with the tank truck adopts loose flange or quick joint

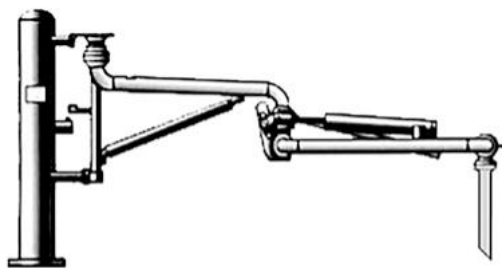
Applicable medium: crude oil, residual oil, cooking oil, chemical medium, etc.

Applicable pressure: -0.08MPa-2.5MPa

Applicable temperature: -50℃-+180℃

### Loading Crane Tube at the Top of the Car

Name: Column style crane tube    Type: HL1401



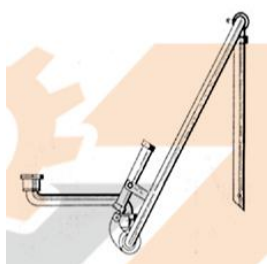
Applicable places: Loading at the top of the tank car, the interface is upwards

Applicable medium: Crude oil, refined oil, cooking oil, chemical medium, alcohol and other liquids

Applicable pressure: 0.6MPa-2.5MPa

Applicable temperature: -50℃-+180℃

Name: Crane tube without column    Type: HL1401



Applicable places: Loading operation at the open at the top of the tank truck

Applicable medium: Cooking oil, refined oil, chemical medium, alcohol and other liquids

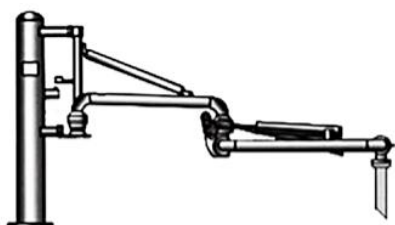
Working pressure: 0.6MPa-2.5MPa

Operating temperature: -50℃-180℃

Tube material: Carbon steel and stainless steel

### Loading Crane Tube at the Top of the Car

Name: Column style crane tube Type: HL1402



Name: Crane tube without column

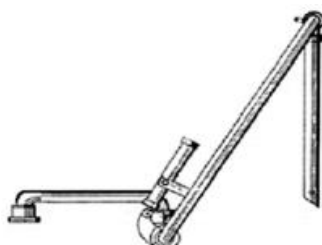
Applicable places: Loading at the top of the tank car, the interface is downwards

Applicable medium: Crude oil, refined oil, cooking oil, chemical medium, alcohol and other liquids

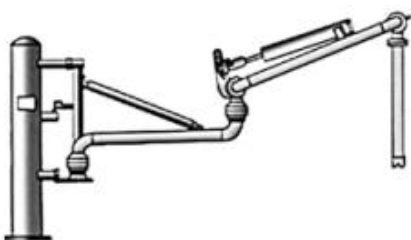
Applicable pressure: 0.6MPa-2.5MPa

Applicable temperature: -50℃-+180℃

Type: HL1402



Name: Column style crane tube Type: HL1403



Name: Column style crane tube

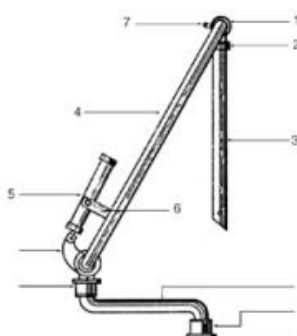
Type: HL1403

Applicable places: loading and unloading at the top of the tank car, the interface is downwards

Applicable medium: crude oil, refined oil, cooking oil, chemical medium, alcohol and other liquids

Applicable pressure: -0.08MPa-2.5MPa

Applicable temperature: -50℃-+180℃

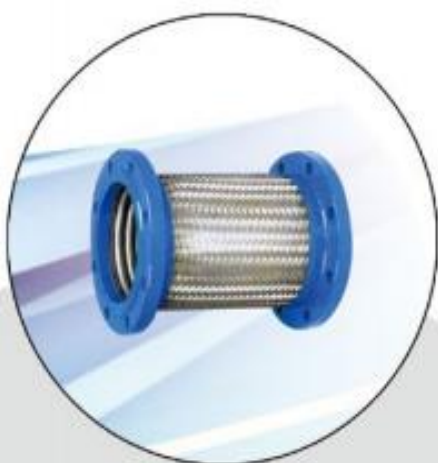


- |                               |                   |
|-------------------------------|-------------------|
| 1. Gyrator of the top part    | 2. Threaded joint |
| 3. Vertical aluminum tube     | 4. Vertical arm   |
| 5. Balancer                   | 6. Bracket        |
| 7. Negative pressure valve    | 8. Lug sheet      |
| 9. Gyrator of the middle part | 10. Inner arm     |
| 11. Horizontal gyrator        | 12. Flange        |



TENGZHOU KAIKUN ROTARY JOINT MANUFACTURING CO., LTD.

# Metal hose and corrugated compensator

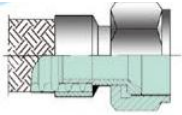


## Metal Hose Series

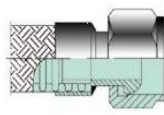


hose and compensator

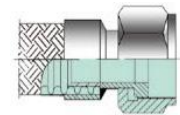
## General Joint Type



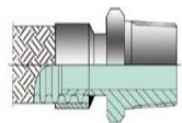
RLC type that connects with union nut, seals by the cone



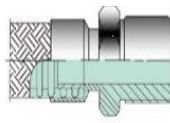
RLD type that connects with union nut, seals by the spherical outside surface



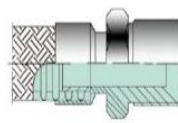
RLA type that connects with union nut, seals by the flat surface



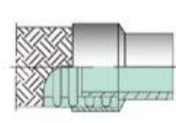
RLR type that connects and seals by the taper-thread



RLG type that connects and seals by the cylindrical tube thread



RLM type that connects and seals by the metric thread



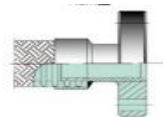
RLH type with the welding interface



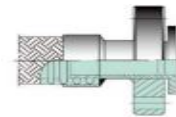
Q type that connects with nuts, seals by the spherical surface



P type that connects with nuts, seals by the flat surface

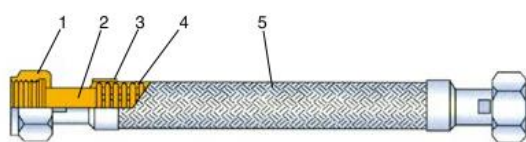
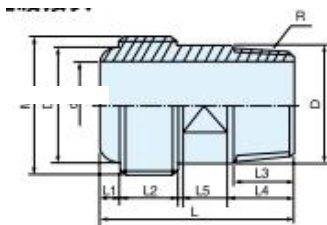


FG type that connects with the fixed flange



FS type that connects with the loose flange

## Transition Joint



1. Connecting nuts 2. Adapter tube 3. Lantern ring  
4. Corrugated tube 5. Knitting metal net

### Metal hose

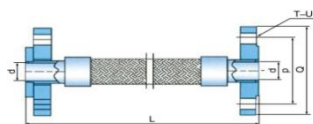
Specifications	D	D1	d	L	L1	L2	L3	L4	L5	M	R
6		5								14xM	1/4
8		6								16x1.5	1/4
10	18	14	7	50	5	12	12	15	16	18x1.5	3/8
12	18	18	9	50	5	12	12	15	16	20x1.5	3/8
14	22	20	11	55	6	12	16	15	16	22x1.5	1/2
15		2	12							24x1.5	
16	23	24	13	58	7	12	16	21	18	27x1.5	1/2
18		5	15							30x1.5	
20	29	29	16	62	7	14	18	21	18	33x2	3/4
22		8	18							36x2	
25	35	35	21	68	8	14	20	25	20	39x2	1
30		5	26							42x2	
32	44	43	28	72	8	16	22	25	20	48x2	1-1/4
38		4	30							56x2	
40	50	53	37	78	9	18	22	30	22	58x2	1-1/2
42		7	38							60x2	
48	62	63	45	85	10	20	26	30	22	68x2	2

## RL Type Metal Hose



Specifications	Type	Working pressure (Mpa)	Test pressure (Mpa)	Bursting pressure (Mpa)	Minimum bend radius (mm)		d	Thread dimension		L	Remarks
					Static	Dynamic		M	S		
6	RL6	2.5	3.7	10	40	80	4	14×1.5	17	Our specifications are 500mm, and we can also process them according to the customer requirements.	Generally, the hose with more than 40 Ø is connected by flanges, which can be specially processed. Less than Ø 40 can be matched with adapter joints at the same time.
8	RL8	2.5	3.7	10	50	110	8	16×1.5	19		
10	RL10	2.5	3.7	10	65	145	7	18×1.5	24		
12	RL12	1.6	2.4	6.4	70	160	9	20×1.5	24		
14	RL14	1.6	2.4	6.4	75	175	11	22×1.5	27		
15	RL15	1.6	2.4	6.4	80	180	12	24×1.5	30		
16	RL16	1.6	2.4	6.4	85	210	13	27×1.5	32		
18	RL18	1.6	2.4	6.4	110	220	15	30×1.5	36		
20	RL20	1.6	2.4	6.4	120	270	16	33×2	38		
22	RL22	1.6	2.4	4	135	320	18	36×2	40		
25	RL25	1.6	2.4	4	160	360	21	39×2	45		
30	RL30	1.6	2.4	4	170	390	25	42×2	50		
32	RL32	1.6	2.4	4	175	400	28	48×2	55		
38	RL38	1.6	2.4	4	200	480	34	56×2	64		
40	RL40	1.6	2.4	4	225	510	37	58×2	68		
42	RL42	1.6	2.4	4	250	550	37	60×2	68		
48	RL48	1.6	2.4	4	270	600	43	68×2	76		

## RF Style Metal Hose



Specifications	Type	Working pressure MPa	Test pressure	Bursting pressure (Mpa)	Minimum bend radius (mm)		d	Thread dimension				L	Remarks
					Static	Dynamic		Q	P	T	U		
20	RF20	1.6	2.4	6.4	120	270	16	105	75	4	14	Our specifications are 500mm, and we can also process them according to the customer requirements.	Generally, the hose with more than 40 Ø is connected by flanges, which can be specially processed. Less than Ø 40 can be matched with adapter joints at the same time. Flange corresponds the GB9119-88 standard
22	RF22	1.6	2.4	4	135	320	18	105	75	4	14		
25	RF25	1.6	2.4	4	160	360	21	115	85	4	14		
30	RF30	1.6	2.4	4	170	390	25	115	85	4	18		
32	RF32	1.6	2.4	4	175	400	28	140	100	4	18		
38	RF38	1.6	2.4	4	200	480	34	150	110	4	18		
40	RF40	1.6	2.4	4	225	510	37	150	110	4	185		
42	RF42	1.6	2.4	4	250	550	37	150	110	4	18		
48	RF48	1.6	2.4	4	270	600	43	165	125	4	18		
50	RF50	1.2	1.8	3.5	280	640	45	165	125	8	18		
65	RF65	1.2	1.8	3.5	360	700	65	185	145	8	18		
75	RF75	1.2	1.8	3.5	520	860	70	200	160	8	18		
100	RF100	1.2	1.8	3.5	610	1350	94	220	180	8	18		
125	RF125	1.2	1.8	3.5	710	1480	120	250	210	8	18		
150	RF150	1.2	1.8	3.5	830	1970	145	285	240	8	22		
200	RF200	1.2	1.8	3.5	940	2320	190	340	295	12	22		
250	RF250	1.2	1.8	3.5	1050	2829	240	405	355	12	26		
300	RF300	1.2	1.8	3.5	1230	3430	285	460	410	12	26		

## Series Products of Corrugated Compensation

### Product Introduction

Metal corrugated expansion joint (also known as corrugated compensator, abbreviated as expansion joint) is designed and manufactured according to the American Expansion Joint Manufacturers Association EJMA standard and GB/T12777-99 standard by the Tengzhou Kaikun. It is a device with compensation function composed of metal corrugated tubes and structural components. It can compensate for the thermal deformation of the tube, mechanical deformation and absorb various mechanical vibrations, which plays a role in reducing the deformation stress of the tube and improving the service life of the tube. Compared with tension expansion joints, sleeve expansion joints and spherical expansion joints with the same compensation ability, it has the advantages of small footprint, simple installation, low engineering cost, no structural leakage links, and no maintenance, it has been widely adopted and achieved rapid development.



External pressure (direct buried) axial type corrugated compensator



Rectangular non-metal corrugated compensator



Pressure balanced corrugated compensator with straight tube



Free compound type corrugated compensator



Corrugated compensator with lateral big rod



General axial type corrugated compensator



High-temperature axial type  
corrugated compensator



The using site of compensator  
with ducting system of 450m<sup>2</sup>  
sintering machine



The using site of bellows  
system of 450m<sup>2</sup> sintering  
machine



The installation site of  
compensator with gas tube of  
blast furnace



The using site of compensator  
with the main hot tube of blast  
furnace



The installation site of  
1780m<sup>3</sup> blast furnace



The installation site of the  
compensator with the main  
hot tube of 1260m<sup>3</sup> blast  
furnace



Pressure balanced compensator  
of the big curved tube  
manufactured by the  
compensator workshop of the  
company



The using site of the blast  
furnace compensator



The using site of the big rod  
compensator of blast furnace  
system

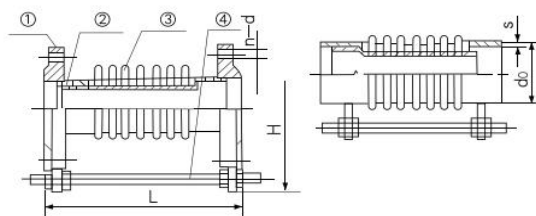


The using site of gas riser  
compensator



High-temperature compound  
hinged type corrugated  
compensator

## Single Axial Type (DZ) Corrugated Compensator



- ① Flange
- ② Tube Nipple
- ③ Corrugated tube
- ④ Rod

Design temperature: 480°C-750°C

Product code: DZ

Type mark: DZ

Corrugated tube type

Connection

method

### Pressure-diameter-compensation dosage

z	Corrugation quantity	Pressure grade (Mpa)					Effective area of corrugated tubes (cm <sup>2</sup> )	Maximum outer dimension (mm)	Length	
		0.25	0.6	1.0	1.6	2.5			Flange F DZ/DS(mm)	Adapter tube J DZ/DS, ZM(mm)
		Axial compensation dosage (mm) /stiffness N/mm								
32	8	25/21	22/26	20/26	18/63	15/98	16	225	160/250	264/280
	16	50/11	46/14	41/14	36/32	31/47			224/291	316/321
40	8	25/28	22/44	20/44	18/89	15/106	23	244	164/259	269/289
	16	50/14	46/22	41/22	36/45	31/55			230/304	319/334
50	8	25/30	22/51	20/70	18/70	15/138	37	259	172/276	282/306
	16	50/16	46/26	41/35	36/35	31/70			240/342	347/372
65	8	33/28	30/35	26/44	22/55	19/68	55	270	215/294	300/322
	12	42/16	38/22	38/32	34/40	29/50			260/334	340/362
80	8	40/20	36/26	34/33	28/41	24/54	81	284	240/338	344/366
	10	53/14	49/17	49/21	43/26	38/33			270/368	374/390
100	6	45/47	45/60	40/75	35/93	29/117	121	304	235/317	323/345
	10	76/26	74/32	64/40	57/50	49/63			305/381	387/409
125	5	48/38	42/47	38/59	34/74	29/92	180	334	282/314	316/342
	9	85/23	77/29	66/36	58/45	50/56			382/386	388/414
150	5	49/42	44/50	40/62	34/78	29/97	257	364	282/339	338/367
	8	79/34	71/43	64/51	54/59	46/65			356/399	402/427
200	4	52/49	46/55	42/68	38/78	34/111	479	442	280/348	348/372
	6	73/31	65/44	59/52	53/58	48/78			340/402	402/426
250	4	72/30	65/34	59/42	52/45	47/55	769	507	315/379	415/379
	6	108/16	97/21	87/35	79/39	71/47			393/459	493/399
300	4	72/51	65/55	59/59	52/65	47/71	1105	562	366/427	466/467
	6	108/32	97/35	87/37	79/41	71/45			464/525	564/565
350	4	72/58	65/62	59/67	52/74	47/81	1307	622	397/452	497/492
	6	108/38	97/41	87/44	79/48	71/47			509/564	609/604
400	4	72/54	65/58	59/62	52/68	47/75	1611	700	412/478	512/518
	6	108/36	97/39	87/43	79/47	71/52			522/588	622/628
450	4	108/32	97/35	87/37	79/41	71/45	1972	760	403/498	503/523
	6	162/20	145/22	131/23	118/25	106/28			503/658	603/648
500	4	108/59	97/64	87/68	79/75	71/82	2445	835	431/523	531/554
	6	162/34	145/37	131/39	118/43	106/48			531/665	631/742
600	4	108/74	97/80	87/85	79/94	71/103	3534	980	478/548	578/588
	6	162/42	145/45	131/49	118/53	106/60			658/678	758/781
700	4	108/67	97/72	87/77	79/85	71/95	4717	1110	490	590
	6	162/42	145/45	131/49	118/53	106/60			690	790
800	4	120/88	108/95	102/102	94/112	82/123	5822	1265	502	602
	6	183/67	164/72	156/77	144/85	125/93			610	710
900	4	120/84	108/90	102/97	94/107	82/117	7620	1186		698
	6	183/60	164/65	156/69	144/76	125/84				850

## Continued Table of Single Axial Type (DZ) Corrugated Compensator

Design temperature: 480℃-750℃

Product code: DZ

Type mark: DZ

Corrugated tube type

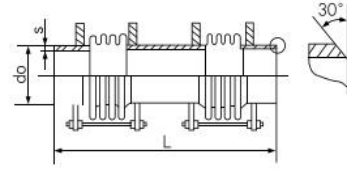
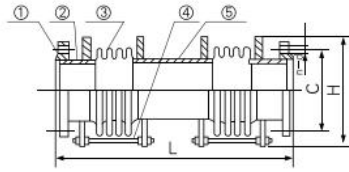
Connection

method

### Pressure-diameter-compensation dosage

Diameter	Corrugation quantity	Pressure grade (Mpa)					Effective area of corrugated tubes (cm <sup>2</sup> )	Maximum outer dimension (mm)	Length	
		0.25	0.6	1.0	1.6	2.5			Flange F DZ/DS(mm)	Adapter tube J DZ/DS, ZM(mm)
		Axial compensation dosage (mm) /stiffness (N/mm)								
1000	4	120/91	108/98	102/105	94/116		9043	1286		692
	6	183/59	164/65	156/71	144/81					855
1100	4	136/235	122/257	115/275			11029	1386		690
	6	200/180	180/117	171/125						890
1200	4	136/276	122/298	115/319			12688	1486		690
	6	200/197	180/213	171/228						890
1300	4	136/374	122/403	115/432			15066	1600		690
	6	200/300	180/324	171/347						890
1400	4	136/428	122/462	115/495			17194	1686		690
	6	200/311	180/336	171/359						890
1500	4	136/498	122/534	115/575			19384	1786		690
	6	200/344	180/371	171/397						890
1600	4	136/519	122/253				22363	1880		690
	6	200/349	180/376							890
1700	4	136/601	122/649				25092	1980		690
	6	200/397	180/428							890
1800	4	136/682	122/736				27978	2080		690
	6	200/417	180/450							890
1900	4	136/699	122/754				31021	2180		690
	6	200/454	180/490							890
2000	4	136/721	122/776				34735	2360		690
	6	200/478	180/516							890
2200	4	136/764	122/825				41656	2560		690
	6	200/496	180/540							890
2400	4	96/1110	67/8511				49205	2760		755
	6	154/823	107/6287							976
2500	4	96/1172	67/8856				53216	2860		755
	6	154/866	107/6640							976
2600	4	96/1197	67/3207				47383	2960		755
	6	154/887	107/2171							976
2800	4	78/1281	54/3244				66189	3160		755
	6	123/981	86/2466							976
3000	4	78/1367	54/3458				75623	3360		755
	6	123/1028	86/2602							976
3200	4	78/3358	54/3675				85738	3560		755
	6	123/2544	86/2758							976
3400	4	78/3590	54/3867				96432	3760		755
	6	123/2693	86/2875							976
3500	4	78/3644	54/3987				102014	3860		755
	6	123/2759	86/2898							976
4000	4	78/3088	54/6925				132929	4360		755
	6	123/2328	86/5211							976
4500	4	78/3455	54/7756				167204	4860		755
	6	123/2589	86/5832							976
5000	4	78/7128	54/8614				205486	5360		755
	6	123/5432	86/6514							976

## Compound Free Type (FZ) Compensator



① Flange    ② Tube Nipple    ③ Corrugated tube    ④ Small rod    ⑤ Middle adapter tube

Design temperature: 480℃-750℃

Product code: FZ

Type mark: FZ

Corrugated tube type

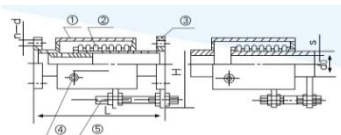
Connection

method

Pressure-diameter-compensation dosage

Nominal diameter (mm)	Pressure 0.6MPa		1.0MPa		1.6MPa		Effective area A (cm <sup>2</sup> )	Welding end tube dxt (mm)	Total length L (mm)	Weight kg F/H
	Axial displacement/axial stiffness (mm)/(N/mm)	Lateral displacement/lateral stiffness (mm)/(N/mm)	Axial displacement/axial stiffness (mm)/(N/mm)	Lateral displacement/lateral stiffness (mm)/(N/mm)	Axial displacement/axial stiffness (mm)/(N/mm)	Lateral displacement/lateral stiffness (mm)/(N/mm)				
100	30/210	96/8.0	28/252	86/9.6	26/302	78/12	154	Ø108x4	1000	30
		200/2.0		180/2.5		162/3.1			1500	36
		306/0.89		275/1.1		248/1.3			2000	41
		411/0.50		370/1.1		333/0.75			2500	47
125	33/170	83/18	31/204	78/21.6	29/245	75/25.9	180	Ø133x4	1000	39
		115/6.8		109/8.2		103/9.8			1500	43
		198/3.5		188/4.2		178/5.0			2000	51
		269/1.8		255/2.2		242/2.6			2500	62
150	32/290	65/21	30/348	61/25.2	27/417	58/30.2	299	Ø159x4.5	1000	42
		136/5.4		129/6.5		122/7.8			1500	53
		107/2.4		197/2.9		186/3.5			2000	63
		279/1.4		265/1.68		251/2.1			2500	74
200	48/326	72/47	43/391	68/56.4	40/469	65/70.5	531	Ø219x6	1000	72
		160/11		152/13.2		144/16.5			1500	89
		250/5.0		237/6.0		225/7.5			2000	106
		341/2.8		324/3.4		291/4.1			2500	106
250	46/400	127/20	43/480	114/25	38/576	108/30	774	Ø273x8	1500	121
		199/9.0		179/10.8		170/13.5			2000	150
		271/5.0		257/6.0		231/7.5			2500	178
		343/3.2		325/3.8		293/4.6			3000	206
300	59/336	134/25	56/403	127/30	50/486	121/36	1069	Ø325x8	1500	146
		213/11		202/13.2		192/15.8			2000	179
		292/6.0		277/7.2		263/8.6			2500	213
		372/3.8		353/4.6		335/5.4			3000	246
350	58/366	107/40	55/402	102/44	52/442	96/48	1263	Ø377x8	1500	171
		178/16		169/18		161/22			2000	208
		250/8.5		237/10		226/12			2500	245
		322/5.3		306/6.9		290/9.6			3000	282
400	57/415	92/58	54/448	87/63	51/492	83/69	1612	Ø426x8	1500	192
		154/23		142/25		135/27			2000	235
		215/12		204/13		196/15			2500	278
		278/7.7		264/9		250/11			3000	321
450	55/415	81/80	52/456	77/88	49/484	73/96	1995	Ø478x8	1500	218
		135/32		128/35		122/38			2000	268
		189/17		180/19		171/21			2500	319
		243/11		230/12		218/13			3000	370
500	90/746	36/241	72/895	32/260	58/984	29/281	2625	Ø529x10	1400	535
		68/89		62/96		56/104			1700	581
		102/42		92/45		83/49			2000	627
		126/28		113/30		102/32			2200	658
600	94/820	166/18	85/886	149/19	75/948	134/21	3590	Ø630x10	2500	704
		198/12		178/13		160/14			2800	750
		42/208		38/224		34/242			1500	648
		71/102		64/110		58/118			1800	702
		106/47		95/51		86/55			2200	775
		135/30		121/32		111/35			2500	830
		168/21		156/23		141/25			2800	884
		199/14		183/15		168/17			3200	957

## External Pressure Single Type (WZ) Compensator



- ① Outer tube
- ② Corrugated tube
- ③ Flange
- ④ Drain
- ⑤ Rod

Flange connection type

Adapter tube connection type

Design temperature: 480℃-750℃

Product code: WZ

Type mark: WZ

Corrugated tube type

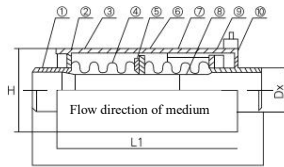
Connection

method

Pressure-diameter-compensation dosage

Diameter	Length	Corrugation quantity	Pressure grade (MPa)			Effective area of corrugated tubes (cm <sup>2</sup> )	Maximum outer dimension (mm)
			0.6	1.0	1.6		
			Axial compensation dosage (mm) /stiffness (N/mm)				
32	338	12	24/296	22/376	20/420	37	Ø240
	479	24	48/153	44/189	40/212		
40	413	12	39/184	35/223	31/280	55	Ø250
	630	24	77/92	70/112	62/140		
50	432	10	41/231	39/255	37/286	81	Ø270
	654	20	82/116	78/126	74/143		
65	488	10	41/231	39/255	37/286	82	Ø290
	756	20	82/116	78/126	74/143		
80	506	9	56/196	53/232	50/278	121	Ø308
	789	18	112/98	106/116	100/139		
100	532	8	61/167	57/218	54/256	180	Ø336
	789	16	122/84	114/109	108/128		
125	616	8	82/278	78/301	75/320	257	Ø368
	966	16	164/129	156/151	150/160		
150	950	8	124/125	112/154	89/330	535	Ø450
	1540	16	250/56	210/87	160/113		
200	950	8	130/155	100/126	70/409	779	Ø505
	1550	16	250/75	200/113	160/205		
250	1080	8	161/111	130/162	105/378	1075	Ø566
	1800	16	320/51	260/94	201/119		
300	1090	8	161/138	130/194	100/338	1269	Ø600
	1820	16	320/54	260/100	200/168		
350	1090	8	165/165	132/221	99/438	1619	Ø676
	1820	16	320/71	250/121	200/218		
400	1110	8	162/164	132/290	101/468	2008	Ø710
	1840	16	310/76	251/145	190/268		
450	1110	8	152/131	124/339	100/532	2428	Ø768
	1840	16	301/81	251/170	190/245		
500	1475	6	190/180	150/515	150/765	3473	Ø975
	2405	12	371/90	300/175	300/298		
600	1540	6	195/231	150/754	140/765	4766	Ø1090
	2540	12	391/121	290/364	280/480		
700	1540	6	200/222	155/601	150/832	6068	Ø1190
	2540	12	400/112	300/400	290/478		
800	1540	6	201/200	164/497	150/897	7528	Ø1290
	2540	12	400/135	321/451	299/583		
900	1605	6	220/206	230/635	220/765	9328	Ø1460
	2685	12	430/154	460/337	442/388		
1000	1605	6	220/356	230/615	220/763	11118	Ø1560
	2685	12	430/268	460/303	442/418		
1100	1605	6	210/273	230/654	221/754	13066	Ø1660
	2685	12	428/187	460/347	442/414		
1200	1605	6	210/308	230/757	221/832	15170	Ø1760
	2685	12	420/104	460/488	443/601		
1300	1605	6	220/356	230/864	221/864	17432	Ø1860
	2685	12	410/132	450/432	435/626		
1400	1605	6	212/398	231/645	226/889	19851	Ø1960
	2685	12	410/198	450/466	430/665		
1500	1605	6	201/321	230/978	220/984	22427	Ø2060
	2685	12	400/187	449/422	432/665		

## Unrestraint (WY) Corrugated Compensator



- |   |                               |   |                    |
|---|-------------------------------|---|--------------------|
| ① | Working adapter tube          | ⑥ | Guide sleeve       |
| ② | Main directional flange       | ⑦ | Second-rate        |
| ③ | Directional protective sleeve |   | directional flange |
| ④ | Corrugated tube               | ⑧ | Lining             |
| ⑤ | Thrust-augmenting nozzle      | ⑨ | Stop collar        |
|   |                               | ⑩ | Middle flange      |

Design temperature: 480℃-750℃

Product code: WY

Type mark: WY

Corrugated tube type

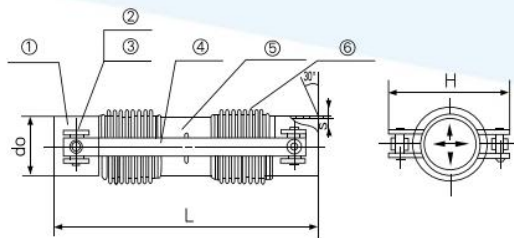
Connection

method

Pressure-diameter-compensation dosage

Diameter	Corrugation quantity	Pressure grade (Mpa)					Effective area of corrugated tubes (cm <sup>2</sup> )	Maximum outer dimension (mm)	Port dimension of the adapter tube do x S (mm)	Total length L (mm)
		0.25	0.6	1.0	1.6	2.5				
		Axial compensation dosage (mm) /stiffness (N/mm)								
32	8	13/153	12/318	12/318	12/635	10/1206	37	110	Ø38 x3.5	360
	16	26/76	24/158	24/158	24/138	20/603				444
	32	53/38	48/79	48/79	48/159	40/302				621
40	8	14/153	12/318	12/318	12/635	10/1230	37	115	Ø45 x 3.5	360
	16	27/76	24/158	24/158	24/318	20/603				445
	32	52/38	48/79	48/79	48/159	40/303				620
50	8	14/153	12/318	12/318	12/635	11/1310	37	120	Ø57 x 3.5	361
	16	27/76	24/158	24/158	24/318	23/655				445
	32	52/38	48/79	48/79	48/159	46/328				621
65	8	19/213	18/213	18/213	18/424	15/841	55	159	Ø73 x 4	377
	12	30/142	29/142	27/142	27/283	25/421				425
	24	60/71	58/107	54/107	54/142	50/211				581
80	8	30/179	30/179	30/358	29/358	27/650	81	162	Ø89 x 4	430
	10	54/143	37/143	37/286	37/286	32/325				466
	20	108/72	74/72	74/143	74/143	64/163				660
100	6	34/138	34/277	33/417	33/417	32/817	121	180	Ø108x4	410
	10	56/83	56/166	56/250	54/250	50/409				492
	20	112/42	112/83	112/125	108/125	100/205				712
125	5	37/136	36/272	36/408	35/408	33/801	180	221	Ø133 x 4	410
	9	66/76	65/151	65/227	63/227	60/401				412
	18	132/38	130/76	130/114	126/114	120/201				711
150	5	49/100	49/200	48/300	45/456	44/845	257	245	Ø159 x 4.5	433
	8	88/63	78/125	77/188	71/186	65/423				518
	16	159/32	156/63	154/94	142/143	130/211				756
200	4	58/95	56/193	56/288	56/480	55/800	479	327	Ø219 x6	475
	6	86/63	85/128	85/192	84/320	80/927				553
	12	172/32	170/64	170/96	168/160	160/200				800
250	4	75/170	74/343	63/588	53/930	50/1856	769	404	Ø273 x 8	500
	6	112/113	110/228	95/392	80/620	78/927				620
	12	220/57	220/114	190/196	160/310	156/464				984
300	4	73/250	72/503	65/830	57/1253	54/2142	1105	451	Ø325 x 8	584
	6	110/167	109/335	97/553	85/835	80/1071				713
	12	220/84	218/168	194/277	170/418	160/536				1116
350	4	79/263	78/523	72/840	64/1265	62/2684	1307	500	Ø377x 10	614
	6	119/175	117/348	107/560	97/843	90/1342				759
	12	238/88	234/174	214/280	194/442	180/671				1216
400	4	83/280	73/458	70/918	65/1373	63/3675	1611	537	Ø426x 10	625
	6	125/187	109/305	102/612	97/915	90/1838				771
	12	250/94	218/153	204/306	194/458	180/920				1225
450	4	98/203	96/405	82/690	69/2305	65/4350	1972	632	Ø478 x 10	620
	6	147/135	144/270	124/460	103/1537	90/2175				762
	12	294/68	288/135	248/230	206/769	180/1087				1200
500	4	102/212	100/423	84/728	70/2452	65/4256	2445	699	Ø529 x 10	624
	6	153/142	149/282	126/485	105/1635	90/2128				766
	12	306/71	298/141	252/243	210/818	180/1064				1216
600	4	123/265	121/530	86/1468	99/1740	95/2842	3534	806	Ø630 x 10	676
	6	185/177	184/353	148/978	140/1160	120/1420				848
	12	370/89	362/177	358/489	280/580	240/710				1382
700	4	128/287	126/573	87/1625	85/2972	84/4100	4717	915	Ø720x10	708
	6	192/192	188/382	168/1083	131/1982	120/2050				882
	12	384/96	376/191	336/542	262/991	240/11025				1422
800	4	128/310	126/620	84/1778	85/3183	84/6234	5882	1005	Ø820 x 10	724
	8	256/155	252/310	168/889	170/1591	168/3117				1071
	12	384/103	378/207	252/596	241/1061	236/1558				1538
900	4	151/378	149/758	118/1329	117/2575		7620	1137	Ø920x 10	792
	8	302/189	298/379	236/664	234/1288					1211
	12	453/126	447/253	351/443	354/825					1650
1000	4	140/423	140/845	115/2770	90/5038		9043	1227	Ø1020x10	800
	8	280/212	280/423	230/1385	180/2519					1200
	12	420/141	420/282	345/923	270/1679					1616

## Compound Hinge Type (FJ) Universal and Hinge Type (FW) Compensator



- ① End tube
- ② Vertical plate
- ③ Pin shaft
- ④ Pulling plate
- ⑤ Middle tube
- ⑥ Corrugated tube

Design temperature: 480℃-750℃

Product code: FJ, FW Type mark: FJ or FW

Corrugated tube type

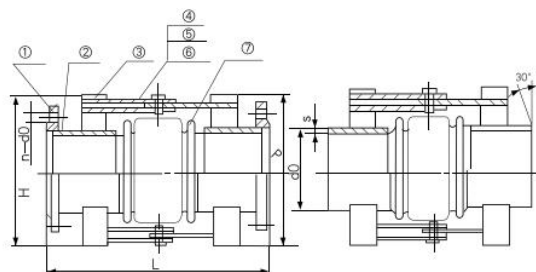
Connection method

Pressure-diameter-compensation dosage/length

S/ N	Diameter (mm)	Corrugation quantity (n)	Lateral compensation dosage (mm) / lateral stiffness (N/mm)					Maximum radial shape Dimension (mm)	Port dimension of the adapter tube		Product weight (Kg)				
			Total length (mm)						Flange Dimension		Total length (mm)				
			1200	1500	2000	2500	3000		Cn	-d	120 0	150 0	200 0	250 0	300 0
1	100	4+4	91/4	127/2	187//1	247/0. 6	300	Ø108×4		46	55	71	86		
2			Ø108 8-Ø18		56	65		81	96						
3			0133×14		66	83		101	118						
4	125	4+4	99/11	140/6	209/3	277/2	335	Ø210 8-Ø18		79	96	114	131		
5			Ø159×4.5		75	97		107	129						
6			Ø240 8-Ø23		91	113		123	145						
7	200	3+3	75/42	108/21	164/1 0	220/6	450	Ø219×6		102	124	161	198		
8			Ø295 12-Ø23		122	144		181	218						
9			Ø273×8		152	182		230	280						
10	250	3+3	76/68	116/33	182/1 4	244/8	525	Ø355 12-Ø25		183	213	261	311		
11			Ø325×8		242	307		372	437						
12			Ø410 12-Ø25		278	343		408	473						
13	350	3+3	95/96	160/38	225/2 0	291/13	662	Ø377×8		259	324	389	454		
14			Ø470 16-Ø25		306	371		436	501						
15			Ø426×8		333	408		483	557						
16	400	3+3	85/13 0	144/52	202/2 8	262/17	710	Ø525 16-Ø30		395	470	545	619		
17			Ø478×8		464	561		658	755						
18			Ø585 20-Ø30		544	641		738	835						
19	500	3+3	101/12 7	143/6 6	186/41	229/2 7	842	Ø529×8		563	662	761	860		
20			Ø650 20-Ø34		673	772		871	970						
21			Ø630×8			755		898	104 1	118 4					
22	600	3+3		98/182	143/9 3	187/65	232/3 8	976	Ø770 20-Ø41			916	105 9	120 2	134 5

S/ N	Diameter (mm)	Corrugation quantity (n)	Lateral compensation dosage (mm) / lateral stiffness N/mm					Maximum radial shape Dimension (mm)	Port dimension of the adapter tube (mm)	Product weight (Kg)				
			Total length (mm)							Total length (mm)				
			2000	2500	3000	3500	4000			2000	2500	3000	3500	4000
23	700	3+3	81/287	199/144	157/86	196/57		1074	Ø720x10	963	1134	1325	1476	
24	800	3+3	69/407	103/200	137/119	170/79		1174	Ø820x10	1331	1611	1890	2170	
25	900	3+3		103/369	139/213	176/139	212/98	1300	Ø920x10		1866	2210	2554	2898
26	1000	4+4		108//416	148/237	189/153	230/106	1420	Ø1020x10		2637	3134	3631	4128
27	1100	4+4		101/493	139/281	177/181	216/126	1570	Ø1120x10		2856	3402	3948	4094
28	1200	4+4		92/627	126/357	161/230	194/160	1680	Ø1220x14		3317	3940	4568	5196

## Single Hinged Type (DJ) Compensator



- ① Flange    ② End tube    ③ Vertical plate    ④ Vice pulling plate    ⑤ Pin shaft    ⑥ Main pulling plate    ⑦ Corrugated tube

Design temperature: 480℃-750℃

Product code: DJ

Type mark: DJ

Corrugated tube type

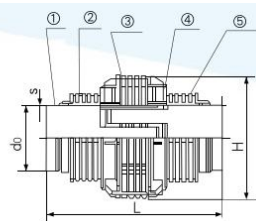
Connection method

Pressure-diameter-compensation

dosage/length

Diameter	Corrugation quantity	Pressure grade (Mpa)				
		0.25	0.6	1.0	1.6	2.5
		Length (mm) angular compensation dosage (mm)/ (degree) stiffness N M/ degree				
150	4	600/±6.1/12	600/±5.0/23	600/±4.3/36	600/±3.4/76	600/±3.0/87
200		600/±8.9/23	600/±6.4/50	650/±5.1/115	650/±4.3/115	700/±3.5/278
250		600/±6.8/36	600/±4.9/79	650/±3.6/200	650/±3.3/320	700/±3.9/489
300		650/±7.2/36	650/±4.9/109	650/±4.0/278	750/±3.5/秘 8	750/±3.2/594
350		650/±7.0/49	650/±3.9/109	700/±3.3/314	750/±2.8/765	800/±2.7/832
400		650/±5.5/78	660/±4.2/123	700/±3.5/502	750/±2.6/987	850/±3.0/1186
450		750/±5.0/98	750/±3.4/293	750/±2.9/754	850/±2.9/1675	1000/±2.2/1312
500		750/±5.1/121	750/±3.3/469	750/±2.2/987	850/±1.9/1532	1000/±2.3/2145
600		850/±6.1/187	850/±4.4/399	900/±3.2/1869	1000/±2.9/1150	1100/±2.0/2254
700		850/±5.9/185	850/±4.2/577	950/±3.8/3768	1100/±3.0/1507	
800		900/±5.5/455	900/±3.4/764	1000/±3.9/1665	1100/±2.6/2987	
900		900/±4.9/364	900/±3.3/1054	1000/±3.8/1562	1200/±2.2/3398	
1000		1000/±5.1/498	1000/±3.1/2020	1100/±2.9/5648	1200/±2.5/5064	
1100		1000/±4.2/765	1000/±3.1/2525	1100/±2.8/7589	1300/±2.6/7356	
1200		1000/±4.1/769	1000/±2.8/3386	1200/±3.1/9870	1400/±2.9/7598	
1400		1100/±3.1/1336	1100/±2.2/5648	1200/±2.2/16630		
1500		1100/±3.9/1864	1100/±2.1/6489	1300/±2.5/13353		

## Pressure Balanced Compensator with Straight Tube (ZP)



- ① Adapter tube
- ② Small corrugated tube
- ③ Big corrugated tube
- ④ Annular Plate
- ⑤ Armoring ring

Design temperature: 480°C-750°C

Product code: ZP

Type mark: ZP

Corrugated tube type

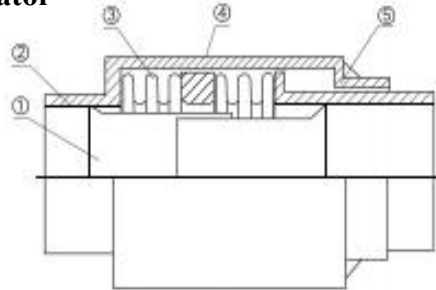
Connection

method

Pressure-diameter-compensation dosage/length

Diameter	Pressure grade (MPa)									
	0.25					0.6				
	Total corrugation quantity	Length (mm)	Axial compensation dosage (mm)	Axial stiffness (N/mm)	Maximum radial dimension (mm)	Total corrugation quantity	Length (mm)	Axial compensation dosage (mm)	axial stiffness (N/mm)	Maximum radial dimension (mm)
600	12	2000	88	550		12	2250	60	2210	
	18	2300	130	350	Ø1173	18	2600	89	1985	Ø1220
	24	2700	170	225		24	2950	110	1100	
700	12	2000	87	765		12	2250	55	4945	
	18	2300	124	498	Ø1331	18	2600	89	1298	Ø1365
	24	2700	168	375		24	2950	113	1789	
800	12	2000	99	530		12	2250	54	3645	
	18	2300	150	338	Ø1474	18	2600	76	4879	Ø1520
	24	2700	200	205		24	2950	91	3462	
900	12	2000	110	564		12	2250	56	2458	
	18	2300	160	316	Ø1634	18	2600	87	1098	Ø1670
	24	2700	220	265		24	2950	120	1356	
1000	12	2000	119	556		12	2250	58	2098	
	18	2300	170	359	Ø1808	18	2600	89	1987	Ø1840
	24	2700	221	265		24	2950	111	1501	
1200	12	2100	120	646		12	2400	66	3104	
	18	2450	168	432	Ø2170	18	2750	94	1375	Ø2130
	24	2900	231	232		24	3110	130	1569	
1400	12	2100	121	765		12	2460	73	2766	
	18	2450	184	465	Ø2430	18	2850	112	1845	Ø2380
	24	2900	231	359		24	3240	142	1864	
1500	12	2100	115	789		12	2460	54	4595	
	18	2450	160	569	Ø2576	18	2850	76	3564	Ø2530
	24	2900	212	446		24	3240	99	2025	
1600	12	2300	113	986		12	2660	85	2654	
	18	2700	160	645	Ø2740	18	3060	112	1254	Ø2688
						24	2450	151	1498	
1800	12	2350	115	960		12	2660	77	3452	
	18	2700	164	765	Ø3040	18	3606	112	2100	Ø2968
						24	3450	112	2100	
2000	12	2450	131	958		12	2660	81	3088	
	18	2950	190	765	Ø3340	18	3060	120	2977	Ø3288
						24	3450	162	1544	

## Direct Buried (ZM) Corrugated Compensator



Design temperature: 480°C-750°C

Product code: ZM

Type mark: ZM

Corrugated tube type

Connection

method

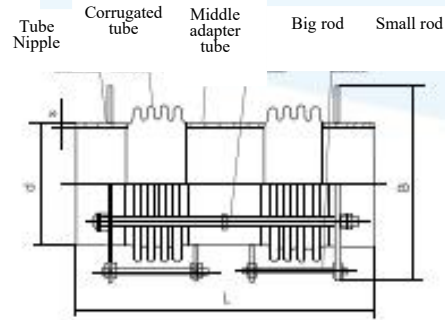
Pressure-diameter-compensation dosage

Diameter	Corrugation quantity	Pressure grade ( MPa)					Effective area of corrugated tubes (cm <sup>2</sup> )	Maximum outer dimension (mm)	Port dimension of the adapter tube doxS (mm)	Total length L (mm)
		0.25	0.6	1.0	1.6	2.5				
		Axial compensation dosage (mm) /stiffness (N/mm)								
32	8	13/153	12/318	12/318	12/635	10/1206	37	110	Ø38x3.5	360
	16	26/76	24/158	24/158	24/138	20/603				444
	32	53/38	48/79	48/79	48/159	40/302				621
40	8	14/153	12/318	12/318	12/635	10/1230	37	115	Ø45x3.5	360
	16	27/76	24/158	24/158	24/318	20/603				445
	32	52/38	48/79	48/79	48/159	40/303				620
50	8	14/153	12/318	12/318	12/635	11/1310	37	120	Ø57x3.5	361
	16	27/76	24/158	24/158	24/318	23/655				445
	32	52/38	48/79	48/79	48/159	46/328				621
65	8	19/213	18/213	18/213	18/424	15/841	55	159	Ø73x4	377
	16	30/142	29/142	27/142	27/283	25/421				425
	24	60/71	58/107	54/107	54/142	50/211				581
80	8	30/179	30/179	30/358	29/358	27/650	81	162	Ø89x4	430
	10	54/143	37/143	37/286	37/286	32/325				466
	20	108/72	74/72	74/143	74/143	64/163				660
100	6	34/138	34/277	33/417	33/417	32/817	121	180	Ø108x4	410
	10	56/83	56/166	56/250	54/250	50/409				492
	20	112/42	112/83	112/125	108/125	100/205				712
125	5	37/136	36/272	36/408	35/408	33/801	180	221	Ø133x4	410
	9	66/76	65/151	65/227	63/227	60/401				412
	18	132/38	130/76	130/114	126/114	120/201				711
150	5	49/100	49/200	48/300	45/456	44/845	257	245	Ø159x4.5	433
	8	08/63	78/125	77/188	71/286	65/423				518
	16	159/32	156/63	154/94	142/143	130/211				756
200	4	58/95	56/193	56/288	56/480	55/800	479	327	Ø219x6	475
	6	86/63	85/128	85/192	84/320	80/927				553
	12	172/32	170/64	170/96	168/160	160/200				800
250	4	75/170	74/343	63/588	53/930	50/1856	769	404	Ø273x8	500
	6	112/113	110/228	95/392	80/620	78/927				620
	12	220/57	220/114	190/196	160/310	156/464				984
300	4	73/250	72/503	65/830	57/1253	54/2142	1105	451	Ø325x8	584
	6	110/167	109/335	97/553	85/835	80/1071				713
	12	220/84	218/168	194/277	170/418	160/536				1116
350	4	79/263	78/523	72/840	64/1265	62/2684	1307	500	Ø377x10	614
	6	119/175	117/348	107/560	97/843	90/1342				759
	12	238/88	234/174	214/280	194/442	180/671				1216
400	4	83/280	73/458	70/918	65/1373	63/3675	1611	537	Ø426x10	625
	6	125/187	109/305	102/612	97/915	90/1838				771
	12	250/94	218/153	204/306	194/450	180/920				1225
450	4	98/203	96/405	82/690	69/2305	65/4350	1972	632	Ø478x10	620
	6	147/135	144/270	124/460	103/1537	90/2175				762
	12	294/68	288/135	248/230	206/769	180/1087				1200
500	4	102/212	100/423	84/728	70/2452	65/4256	2445	699	Ø529x10	624
	6	153/142	149/282	126/485	105/1635	90/2128				766
	12	306/71	298/141	252/243	210/818	180/1064				1216
600	4	123/265	121/530	86/1468	99/1740	95/2842	3534	806	Ø630x10	676
	6	185/177	184/353	148/978	140/1160	120/1420				848
	12	370/89	362/177	358/489	280/580	240/710				1382
700	4	128/287	126/573	87/1625	85/2972	84/4100	4717	915	Ø720x10	708
	6	192/192	188/382	168/1083	131/1982	120/2050				882
	12	384/96	376/191	336/542	262/991	240/11025				1422
800	4	128/310	126/620	84/1778	85/3183	84/6234	5822	1005	Ø820x10	724
	8	256/155	252/310	168/889	170/1591	168/3117				1071
	12	384/103	378/207	252/596	241/1061	236/1558				1538
900	4	151/378	149/758	118/1329	117/2575		7620	1137	Ø920x10	792
	8	302/189	298/379	236/664	234/1288					1211
	12	453/126	447/253	351/443	354/825					1650
1000	4	140/423	140/845	115/2770	90/5038		9043	1227	Ø1020x10	800
	8	280/212	280/423	230/1385	180/2519					1200
	12	420/141	420/282	345/923	270/1679					1616

## Big Rod (BHU) Corrugated Compensator

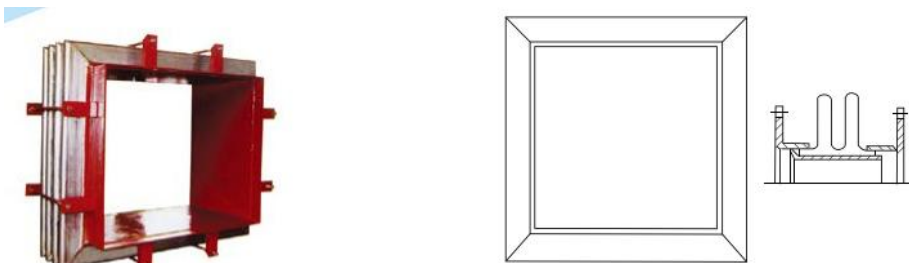


1.0Mpa



S/N	Nominal diameter DN (mm)	Total length (Lmm)						Maximum dimension of radial shape (B x F mm)
		1000	1500	2000	2500	3000	3500	
		Y <sub>0</sub> -lateral compensation dosage (mm)						
		KY <sub>0</sub> -lateral stiffness (N/mm)						
1	100	±91/81.2	±192/2.2	±283/1.2	±385/0.6			320x385
2	150	±67/22.1	±136/5.5	±214/2.4	±275/1.3			350x415
3	200	±56/68.8	±141/13.6	±233/5.6	±320/3.2			500x565
4	250		±125/24.4	±192/10.2	±265/5.4	±340/3.5		500x565
5	300		±120/30.2	+205/12.1	±274/6,5	±350/4.2		545x600
6	350		±105/49,2	±170/18.1	±255/9.3	±325/5.6		570x635
7	400		±80/70.6	±150/26.1	±220/13.4	±280/8.1		770x765
8	450		±60/127.7	±120/42.3	±170/20.8	±230/12.3		770x850
9	500		±60/170.4	±100/56.5	±155/27.8	±215/16_2		815x890
10	600		±65/505	±120/151	±185/71.2	±255/41.2	±325/26.6	900x985
11	700		±50/754.7	±110/224.2	±175/105.5	±230/60.7	±290/39.5	Ø975
12	800		±40/1030.6	±95/306.2	±150/143.8	±205/83.2	±260/54	Ø1070
13	900		±45/1367.6	±90/400.4	±145/191	±190/110.1	±240/71.6	Ø1175
14	1000		±50/922.4	±110/274.1	±175/128.7	±240/74.2	±305/48.3	Ø1300

## Rectangular (JX) Corrugated Compensator



Design temperature: 480°C-750°C

Product code: JX Type mark: JX

Corrugated tube

type	Connection method		Pressure-length × width-height-diameter-compensation dosage								
End surface dimension Lp x Ls(mm)	1000x800		1500x800		2000x800		2500x800		3000 x 800		
Corrugation quantity (n)	2	4	2	4	2	4	2	4	2	4	
Compensation dosage Xo(mm)	42	21	42	21	42	21	42	21	42	21	
Total length L (mm)	L <sub>0</sub>	310	470	310	470	310	470	310	470	310	470
	L <sub>2</sub>	360	520	360	520	360	520	360	520	360	520
	L <sub>3</sub>	410	570	410	570	410	570	410	570	410	570
	L <sub>4</sub>	460	620	460	620	460	620	460	620	460	620
Axial stiffness KX(kgf/mm)	0.0211 XL'	0.0106 XL'	0.0211 XL'	0.0106 XL'	0.0211 XL'	0.0106 XL'	0.0211 XL'	0.0106 XL'	0.0211 XL'	0.0106 XL'	

End surface dimension Lp x Ls(mm)		3500x800		4000x800		5000 x 800		4500x1120		3171 x2716	
Corrugation quantity (n)		2	4	2	4	2	4	2	4	2	4
compensation dosage X <sub>0</sub> (mm)		21	38	21	38	21	38	21	38	21	38
Total length L (mm)	L <sub>0</sub>	310	470	310	470	310	470	310	470	310	470
	L <sub>2</sub>	360	520	360	520	360	520	360	520	360	520
	L <sub>3</sub>	410	570	410	570	410	570	410	570	410	570
	L <sub>4</sub>	460	620	460	620	460	620	460	620	460	620
Axial stiffness KX(kgf/mm)		0.0211 XL'	0.0357 XL'	0.0211 XL'	0.0357 XL'	0.0211 XL'	0.0357 XL'	0.0211 XL'	0.0357 XL'	0.0211 XL'	0.0357 XL'

## Non-metal Compensator

Non-metal compensator is a flexible displacement compensator or fiber compensator, is widely used in electricity, metallurgy, steel, chemical, building materials and other industries, play a compensation role in exhaust, aeration, dust removal, ventilation and other tube systems, the displacement and noise caused by thermal expansion and contraction, vibration, stress, can be muffled, shock absorption, and can be used as the expansion joint of large-diameter tubes. Compared with metal compensator, it has the characteristics of inelastic thrust, simple tube design, large compensation amount, low weight, convenient installation and maintenance, and low price. It is an indispensable typical compensation element in industrial tubes.



### Type of Main Structure

Structure type		Code	Nominal diameter	Applicable pressure (KPa)	Applicable temperature	Connection mode
Circular	General	FHXY	Ø150-Ø5000	-25+50KPa	-40℃-650℃	Welding type
	Compound type	FHXYF				Flange type
Rectangular type	General	FHX	Ø200-Ø9000	-25+50KPa	-40℃-650℃	Welding type
	Compound type	FHXF				Flange type

### Product Purpose

1. Thermal power plant: Exhaust system and dust removal system of boiler and gas turbine.
2. Petrochemical industry: Exhaust system and of boiler and industrial furnace, desulfurization device of smoke exhaust.
3. Steel mills: Smoke exhaust and air supply system of blast furnace, converter and others.
4. Smelters: Exhaust and air supply system of combustion furnace and others.
5. Cement plant: Processing plant system of kiln dust and fume.
6. Devices: Dust collection port, absorption tower, air heater, entrances and exits for all equipment of blower.

## Type Selection and Maintenance



1. Install hose after the clamping with a vise



2. Install the rotary joint to the shaft



3. The hose is connected to the supply tube

### Type Selection

● According to the diameter of the liquid conveying tube to choose the single directional type, the fluid enters from one end of the equipment and flows out through the other end of the equipment via the rotary joint. As shown in Figure I

For example: Liquid conveying tube 1" can choose 1" (that is the 25 type), and so on.

● According to the diameter of the inner pipe to choose the bi-directional type, the fluid enters from the end indicated by the arrow and flows out from the end indicated by the arrow (in the inner tube) via rotary joint. As shown in Figure II

For example: It used to adopt equipment inner tube 3/4" can choose 1-1/2"-3/4"; (that is the 40-20 type)

It used to adopt inner tube 1" can choose 2"-1" (that is the 50-25 type), and so on

● The rotary joint and the conveying tube are not allowed to be rigidly connected, there must be a length of flexible tube for transition connection, you can choose the stainless steel metal hose produced by our company.

● Select and connect the hose to the rotary joint, and be careful not to force the hose part when installing the metal hose.

● The standstill locking and support points should not be assembled too tightly in order to automatically compensate.

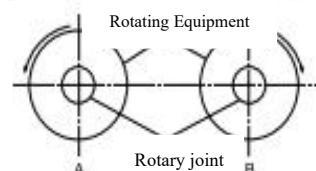
● After installation, it is better that the hose can be slightly shaken by hand.

● After installation, the entire rotary joint works in a free state within the allowable range.

● Try best to install the machine concentrically.



### Selection Method of Threaded Direction of Rotation of Rotary Joint



● The device rotates counter-clockwise, and the right-handed rotary joint is selected

● The device rotates clockwise, and the left-handed rotary joint is selected

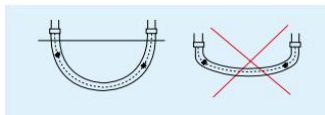
● In other cases, the left-handed and right-handed rotary joint should be determined according to the rotating direction of the shaft end thread of the device

### Maintenance

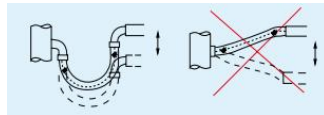
● The rotary joint equipped with an oil injection hole should be filled with lubricant regularly according to the using conditions, and lithium grease can be added at high temperatures.

● Replace the sealing ring immediately if a leak is found, and do not allow work with sickness to avoid damage to other components.

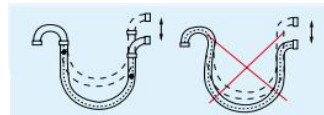
● When disassembling and replacing the seals, pay attention to protect the components, especially the sealing surface, and do not collide, scratch and let foreign objects in.



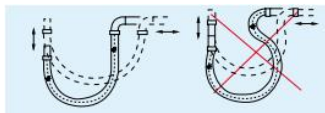
Adopt appropriate lengths and avoid improper stretching



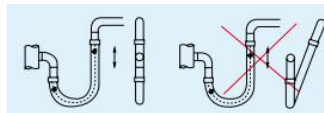
Big axial displacement shall adopt U type method



Please connect it with elbow tubes to avoid hose twisting.



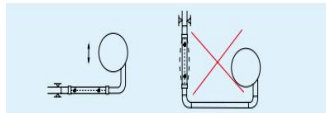
Please connect it with elbow tubes to avoid hose twisting.



Please operate on the same plane to avoid hose twisting.



Please connect it with elbow tubes to avoid hose twisting.

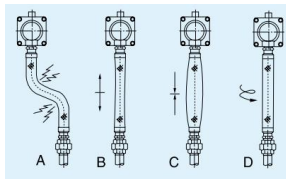


Select the correct vibration direction



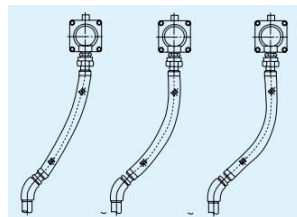
Select the correct vibration direction

#### Improper Tubing Often Occurs



- A. Too much bend
- B. Pull it too tightly
- C. Too much extrusion
- D. It has been twisted

#### The Advantages of Arc-shaped Tubing

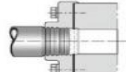


-30mm Original state of assembly +30mm

The use of arc-shaped (curved) tubing method helps to absorb the error of the hose due to assembly or borrowing production in the future, as shown on the left, the hose can still maintain a good assembly condition in some errors.



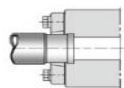
- (1) It is used for the drum with minor caliber



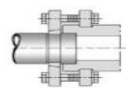
- (2) It is used for the drum with large caliber, is especially applicable to the renovation of old devices



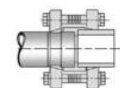
- (3) It is used for rollers running at high speed with minor caliber, and this edge connection has high rotation accuracy.



- (5) Adopt quick-change flange to the convenient connection, and the location is more accurate.

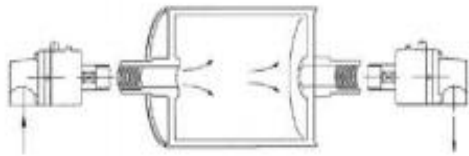


- (6) Adopt quick-change flange to the convenient connection, it is used for the drum with large caliber, is especially applicable to the renovation of old devices



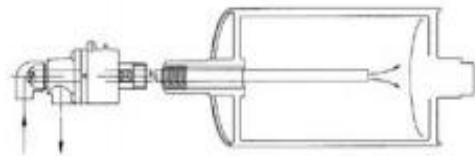
- (6) Adopt quick-change flange and adapter sleeve to the convenient connection to the drum with minor caliber.

## Working Sketch of TED Rotary Joint



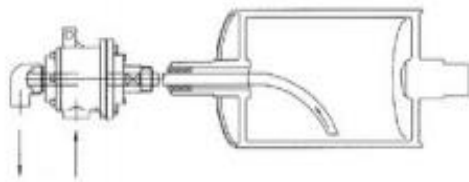
### ○ Single channel type

The cycle joint is installed at both ends of the drum is a through-flow type, and the fluid enters at one end and is discharged from the other end, without the need for an inner tube device.



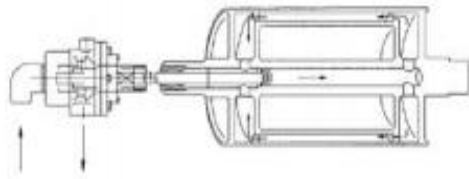
### ○ Double channel type (fixed inner tube)

A cycle joint is installed at one end of the drum, and at the same time there is a function of fluid entry and discharge at this end.



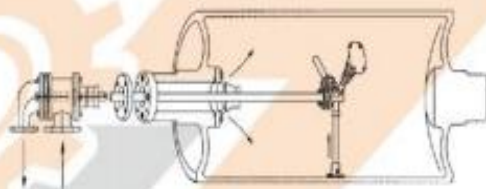
### ○ Double channel type (fixed inner tube)

The difference of this type is that there is a siphon in the drum to discharge condensate water, and this type is mostly used for steam.



### ○ Double channel type (rotating inner tube)

This type has a close connection between the inner tube and the inner fluid through-hole of the drum, to avoid fluid backflow and affect the efficiency of temperature increasing and decreasing of the drum, and the inner tube and the drum operate synchronously.



### ○ Double channel type (rotating inner tube)

Install a set of rotating siphon attached to the inner wall on the inside of the drum, and when the drum rotates, the internal siphon device operates synchronously with the drum, and the condensate water is discharged from the water collection port.

