



EZ-CLAMP



Rotary Joints

高品質 高速旋轉接頭



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公司簡介

EZ-CLAMP COMPANY LTD. 專業生產各類型旋轉接頭以符合工業界不同需求，秉持『誠信負責，品質至上，以客為尊，永續經營』的理念，以多角化經營，不斷開發一系列新型旋轉接頭及新市場，不斷創新研發深孔加工機種，使產品多元化，對顧客提升產能，降低生產成本，提高產品附加價值均具正面意義。

現代科技的日新月異及分秒必爭的社會趨勢下，"EZ-CLAMP"多年來不斷創新技術并積極研發、生產一系列旋轉接頭規格精確、超高品質、目前現有產品之性能，以及提供合理價位，合乎業者需求，減低生產業者之產品設備成本，并能提高工作效率。

展望未來，產業競爭激烈，技術革新月異，今後"EZ-CLAMP"努力的方向，將投注更大的人力物力在研究發展部門外，以期待開發更好性能的旋轉接頭和深孔加工機高科技之產品及設備，進而提升業者對"EZ-CLAMP"產品的信心，而最終的目的就是為了能滿足您在旋轉接頭及深孔機系統需求，也期望能在產業界的發展繼續略盡棉薄之力。

Brief introduction of the company

EZ-CLAMP COMPANY LTD. specializes in producing all kinds of rotary connectors to meet the different demands in the industry. Taking nsibility, quality, respect for the customers, and permanent managementthe company continually develops a series of new rotary connectors and markets with multi-angle management and ceaselessly innovates and develops deep-hole processing machines, which makes the products multi-variation. And it is positive to promote the production capacity, to reduce the production cost and to increase the added value of the products.

With fast changing modern technology and under the trends that every second must account, the EZ-CLAMP has ceaselessly innovated the technology and actively developed and produced a series of rotary connectors with precise specification, first grade quality and the performance of the existing products and provides reasonable price which can meet the demand of the field, reduce the product equipment cost of the manufacturers and improve the work efficiency.

Looking forward to the future, the competition is fierce and the technology reform is changing with each passing day. The next target of the EZ-CLAMP is to plunge more manpower and material resource into the research and development department to develop rotary connectors with better performance and more products and equipment of deep-hole processing machine hi-tech and further heighten the clients' confidence to the products and meet your demand for the rotary connectors and deep-hole machine system and we also look forward to making a humble contribution to the development of the field.

EZ-CLAMP

旋轉接頭用途略述

造紙、閥類工業

- 紙烘乾機、車光機滾輪、紙漿機

纖維、印染工業

- 滾輪式烘乾機、印花機

造漆、油墨、印刷工業

- 冷卻系統印刷機、管式磨粉機三式活滾輪

造膠、橡膠工業

- 車光機滾輪、攪拌機滾輪、壓出機冷卻引取裝置

化學、藥品工業

- 粒狀磨粉機

食品工業

- 捏合機、混合機、研磨滾輪、迴轉爐

汽車工業

- 引擎試驗裝置

機械工業

- 油壓機、空壓機、液壓機轉盤、磨床冷卻螺桿、印刷機、離合器、真空裝置減速齒輪裝置、軟管卷筒裝置

其他企業

- 滾筒乾燥機及各式冷卻系統

THE INDUSTRIAL USE

PAPER & PULP

Paper manufacturing, corrugated cardboard, long and circular net paper machines, super and machine calenders, hoop reels, digesters, corrugate machines, coaters.

FIBER & SPINNING

Vacuum driers, sizing machines, dyeing adjusters.

PRINTING, PAINT, OIL-INK

Offset rotary and photogravure presses, dry laminator blenders.

RUBBER & PLASTICS

Calender rolls, extruders, mixing rolls, rotary and laminating presses, injection molding machines, intensives and banbury mixers, foaming machines, film manufacturing machines.

CHEMICAL & MEDICINAL

Conical and double drum driers, test rolls, ball mills, laminators.

FOOD

Kneaders, blenders, grinding rolls, Rotary kilns (oil refinery use)

AUTOMOBILE

Engine test devices.

MACHINERY

(Oil hydraulic pressure, air pressure, water hydraulic pressure, machining) screw (for cooling), press (for clutch), reducing gear, hose reel, turntable, Grinder, vacuum equipment.

MISCELLANEOUS

Applicable for rotating body for drying. Heating, cooling.

流體介質 Fluidic	最大壓力 Pressure Max bar	最大溫度 Temperatura Max °C	最大轉速 RPM Max s/min
 水 Water	50	100	3000(R038--R100) 1500(R114--R200)
 蒸汽 Steam	10	180	1000(R038--R200)
 油 Oil	10	200	3000(R038--R100) 1500(R114--R200)
 空氣 Air	10	100	1500(R038--R100) 1000(R114--R200)

旋轉接頭是將流體介質傳輸到旋轉動態傳輸機構，經由精細密封面裝置，來達到無洩漏且的傳輸的功能和效用。旋轉接頭運用運域覆蓋行業很廣泛，因此產品使用範圍包括機床、紡織、印染、印刷、橡膠、造紙、化學、食品加工等等。

流體介質包括水、蒸氣、油、空氣等等。而旋轉接頭產品內的零件中，連接密封件裝置是采用特殊耐磨、耐熱、耐腐蝕材質，經過精密加工組裝後達到品質好、壽命長且無洩漏的旋轉接頭，來對不同行業及使用條件下讓客戶選擇使用，滿足客戶加工設備上的工作條件，減低業者之產品成本，來達到使用旋轉接頭產品實質上的效益。

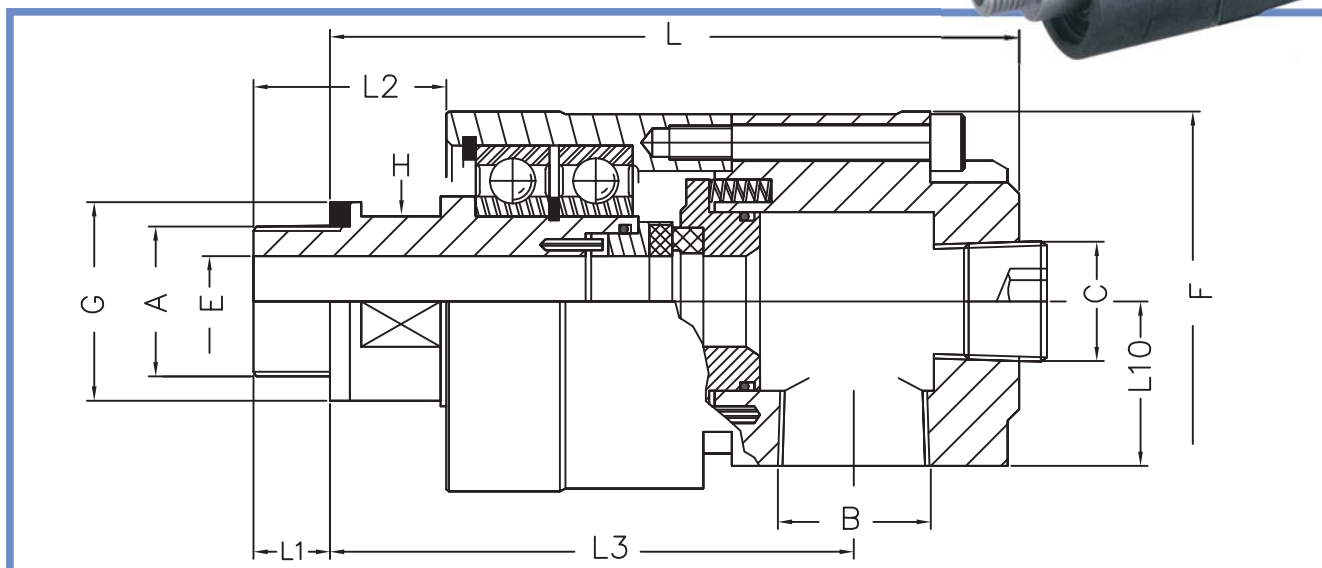
如上圖所圖標（P3）和P4，客戶可依工作流體物質種類、壓力、溫度、轉速、產品材質，連接方式來選擇訂購。

The rotary joint used to deliver the fluid medium to the rotary dynamic transmission organ and to pass through precision sealing equipment .which can achieve non-leak and perfect transmission function and efficacy.The application of the rotary joints covers a wide area in the field,therefore, the use scope of the products includes machine tool, textile,printing and dyeing,printing,rubber,paper making,chemistry and food processing etc.

The fluid medium includes water,steam,oil and air etc.In the parts of the rotary connectors products,it is employed special abrasion-resistant,heating-resistant and corrosion-resistant material to connect the sealing equipment.After precision processing assembly,a high quality,long life span and non-leakage rotary joints are produced.The customers in different fields and different fields and different work conditions can make their own choice to the products to meet the demand of work conditions of processing equipment.The joints can reduce the products cost of the clients to achieve the actual efficiency by using the rotary joints.

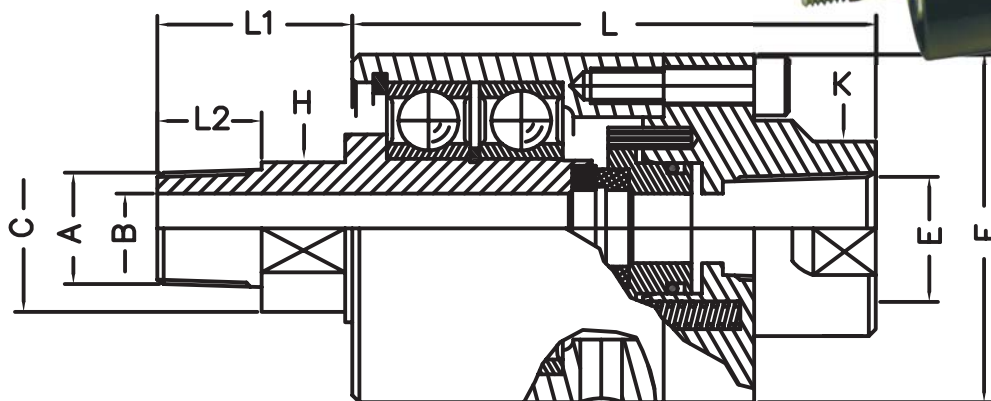
If there are some problem in terms of technology,please consult with our company or our agents.

															R038	B	2	F	1	L
規格型號 Specification/type															▲					
R038 R012 R034 R100																				
R114 R112 R200																				
密封面材質 the materials of sealing surface															▲					
A. 碳化矽對石墨碳精 Silicon carbide and Graphite gas carbon																				
B. 碳化矽對碳化矽 Silicon carbide and Silicon carbide																				
C. 碳化鎢對碳化鎢 Tungsten carbide and Tungsted carbide																				
密封圈材質 the materials of the sealing ring																▲				
1. NBR																				
2. SI																				
3. EPDM																				
4. VITON																				
5. TEFLON																				
迴路型式 passage																	▲			
E. 單迴路 Single passage																				
F. 雙迴路 固定式 Double passage stable pattern																				
G. 雙迴路、旋轉式 Double passage rotary pattern																				
結構材質 The materials of configuration																			▲	
1. 標準 (鋁合金對合金鋼) Standard(Aluminum alloy and Steel alloy)																				
2. 鋁合金對不銹鋼 SUS 304 Aluminum alloy and Stainless Steel SUS 304																				
3. 不銹鋼 SUS 304 Stainless Steel SUS 304																				
結構方式 Connection methods																				▲
R. G (ISO 228) RH																				
L. RC (ISO 7) RH																				
N. NPT RH																				
Q. K型法蘭																				
K type flange																				
S. F型法蘭																				
F type flange																				



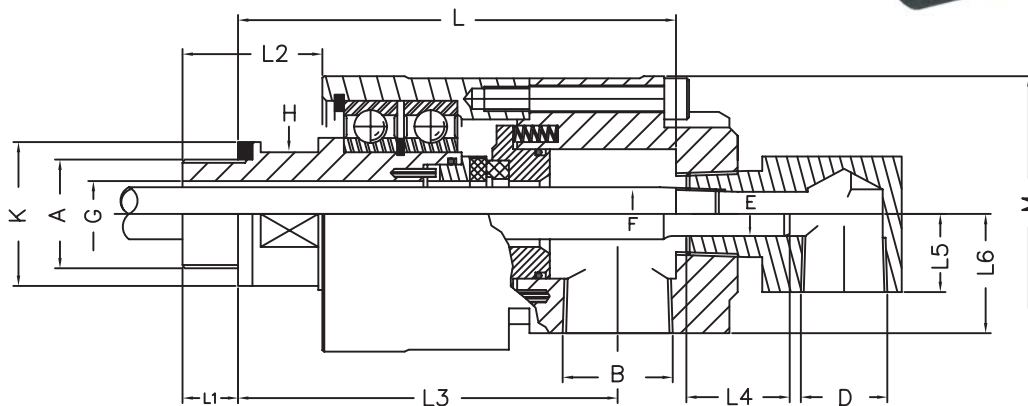
TYPE	A (ISO228)	B (ISO7)	C (ISO7)	D	F	G f8	H	L	L ₁	L ₂	L ₃	L ₁₀	Weight Kg
R038	G3/8-A	RC3/8	RC1/4	10	50	24	19	96	8.5	25	76.5	23	0.9
R012	G1/2-A	RC1/2	RC3/8	13	56	29	24	105	11.5	30	82	24	1.1
R034	G3/4-A	RC3/4	RC1/2	16	67	35	30	121.5	13.5	34	92.5	29	1.9
R100	G1-A	RC1	RC3/4	25	82	41	36	148.5	15.5	39	111	35	3
R114	G1 1/4-A	RC1 1/4	RC1	32	93	52	46	166	17.5	46	124	39	4
R112	G1 1/2-A	RC1 1/2	RC1 1/4	38	108	60	55	185.5	19.5	50	140	46	6.2
R200	G2-A	RC2	RC1 1/2	48	120	68	60	212.5	22.5	55	161	50	8.3

- ※ 單回路旋轉接頭可依工作情形來選擇連結方式。
- ※ 傳輸介質入口可依工作情况自由選擇側邊或後端進入。
- ※ 密封面及密封圈為特殊材料所制成的，抗磨損、壽命長、耐腐蝕、不泄漏。
旋轉接頭內部有2個精密軸承，運轉平穩持久、堅固靈敏，磨擦力小，故可高速運轉。
- ※ 內部密封件磨損的狀況可由產品外觀目測得知，可以預防機械停機或機械損壞，來達到預防的效果和減少損失。
- ※ 密封件磨損更換維修簡易，不用重新購置新品，節省成本。
- ※ Single passage rotary joint can choose the connection method according to the work condition.
- ※ The entrance of the transmission medium can freely enter from the side or the back according to the work conditions.
- ※ Sealing surface and sealing ring are made of special materials with abrasion resistant, long life span, corrosion resistant and non-leakage.
- ※ There are two precise bearing inside the rotary joint. It can run stably and permanently and is very hard and flexible. The coefficient of the abrasiveness is very small, so it can run at a high speed.
- ※ The abrasive condition of inner sealing parts can be known by the visual observation of the product appearance, which can avoid stopping the machine or impairing the machine to achieve the prevention effect and to reduce the loss.
- ※ It is easy to replace and maintain the worn sealing parts. It is unnecessary to purchase the new ones, so it can save the cost.



TYPE	A (ISO228)	B (ISO7)	D (ISO7)	E h13	F (ISO7)	G f8	H	K	M	L	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	Weight Kg
R038	G3/8-A	RC3/8	RC1/4	6	M6×1.0	10	19	24	50	85	8.5	25	76.5	20	16	23	0.9
R012	G1/2-A	RC1/2	RC3/8	10	RC1/8	13	24	29	56	93	11.5	30	82	20	17	24	1.2
R034	G3/4-A	RC3/4	RC1/2	13	RC1/4	16	30	35	67	106.5	13.5	34	92.5	24	19	29	2.1
R100	G1-A	RC1	RC1/2	16	RC3/8	25	36	41	82	128	15.5	39	111	26	22	35	3.4
R114	G1 1/4-A	RC1 1/4	RC3/4	22	RC1/2	32	46	52	93	146	17.5	46	124	32	24	39	4.6
R112	G1 1/2-A	RC1 1/2	RC3/4	26	RC3/4	38	55	60	108	165.5	19.5	50	140	38	29	46	7.3
R200	G2-A	RC2	RC1 1/4	32.2	RC1	48	60	68	120	192	22.5	55	161	38	36	50	9.7

- ※ 此型之旋轉接頭可分為雙迴路固定式和雙迴路旋轉式。
- ※ 密封面及密封圈為特殊材料所制成的，抗磨損、壽命長、耐腐蝕、不泄漏。
- ※ 內部密封件磨損的狀況可由產品外觀目測得知，可以預防機械停機或機械損壞，來達到預防的效果和減少損失。
- ※ 內有獨立管路，可作不同工作情況需求做選擇，來發揮最大的效益。
- ※ 外殼與轉軸由精密軸承支撐，使旋轉轉動時靈動輕巧，摩擦力小，流體介質可包括水、油、空氣等，運用行業甚廣。
- ※ 密封件磨損更換維修簡易，不用重新購置新品，節省成本。
- ※ Single passage rotary joint can choose the connection method according to the work condition.
- ※ The entrance of the transmission medium can freely enter from the side or the back according to the work conditions.
- ※ Sealing surface and sealing ring are made of special materials with abrasion resistant, long life span, corrosion resistant and non-leakage.
- ※ There are two precise bearing inside the rotary joint. It can run stably and permanently and is very hard and flexible. The coefficient of the abrasiveness is very small, so it can run at a high speed.
- ※ The abrasive condition of inner sealing parts can be known by the visual observation of the product appearance, which can avoid stopping the machine or impairing the machine to achieve the prevention effect and to reduce the loss.
- ※ It is easy to replace and maintain the worn sealing parts. It is unnecessary to purchase the new ones, so it can save the cost.



TYPE	A (ISO228)	B (ISO7)	C (ISO7)	D	F	G f8	H	L	L ₁	L ₂	L ₃	L ₁₀	Weight Kg
R038	G3/8-A	RC3/8	RC1/4	10	50	24	19	96	8.5	25	76.5	23	0.9
R012	G1/2-A	RC1/2	RC3/8	13	56	29	24	105	11.5	30	82	24	1.1
R034	G3/4-A	RC3/4	RC1/2	16	67	35	30	121.5	13.5	34	92.5	29	1.9
R100	G1-A	RC1	RC3/4	25	82	41	36	148.5	15.5	39	111	35	3
R114	G1 1/4-A	RC1 1/4	RC1	32	93	52	46	166	17.5	46	124	39	4
R112	G1 1/2-A	RC1 1/2	RC1 1/4	38	108	60	55	185.5	19.5	50	140	46	6.2
R200	G2-A	RC2	RC1 1/2	48	120	68	60	212.5	22.5	55	161	50	8.3

- ※ 本型外殼採用鋁合金材質，重量輕、體積小、容易安裝。
- ※ 零件中所使用不銹鋼彈簧不生銹、不阻礙、擾動、流體流動順暢。
- ※ 旋轉接頭內部有2個軸承，轉動平穩、堅固靈活、磨擦係數小。
- ※ 兩個密封面的材質是由特殊材料所製，保證長期運轉和抗磨損。
- ※ This kind of rotary joint can be divided into parts: duple passage stable specification and double passage rotary specification.
- ※ Sealing surface and sealing ring are made of special materials with abrasion resistant, long life span, corrosion resistant and non-leakage.
- ※ The abrasive condition of inner sealing parts can be known by the visual observation of the product appearance, which can avoid stopping the machine or impairing the machine to achieve the prevention effect and to reduce the loss.
- ※ There is separate circuit inside the connector. One can make choice according to different work requirements to exert the benefit to the utmost.
- ※ The shell and bearing are supported by the precision bearing, which can facilitate the rotation and reduce the friction force. The fluid mediums include water, oil and air etc and are used widely.
- ※ It is easy to replace and maintain the worn sealing parts, it is unnecessary to purchase the new ones, so it can save the cost.

雙迴路 內管固定式

接頭使用圖示

迴轉式滾輪、汽缸、大滾輪中之流體，如蒸氣，水、油等同時在同側供給和排出之工作條件下使用。

如上圖（蒸氣中）軟管輸送由旋轉接頭之軸心進入經由內管排出流體。

• **主要使用範例：**

紙烘乾機、塑膠車光機、染整烘幹機。

如下圖（水熱煤油）用軟管輸送由內管進 經由迴轉接頭之軸心排出流體

• **主要使用範例：**

塑膠壓出機、塑膠冷却引取滾輪、橡膠精縛機。

DOUBLE PASSAGE

FOR STATIONARY SYPHON PIPE

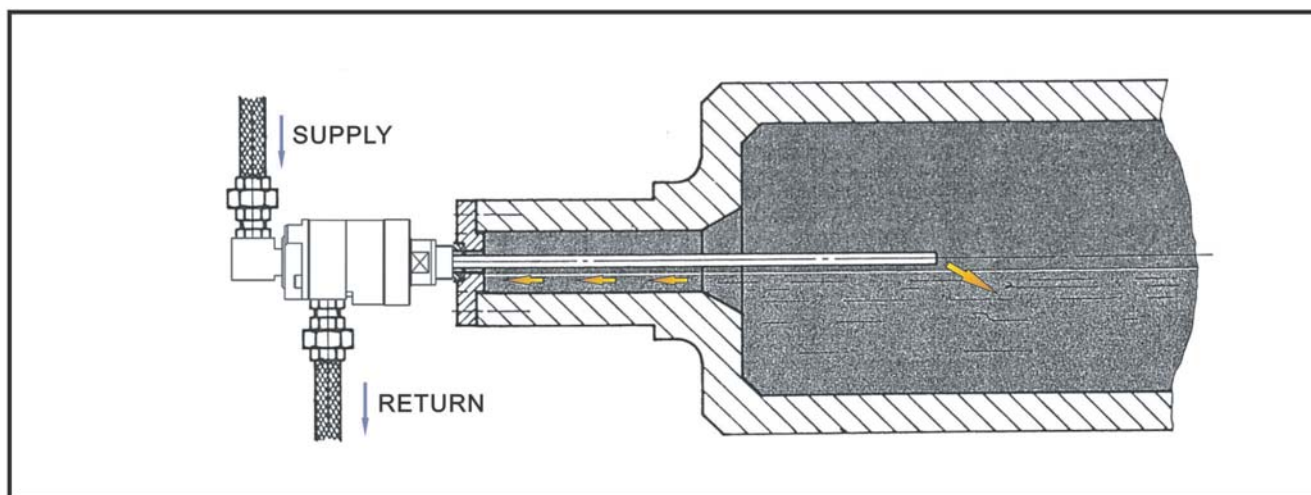
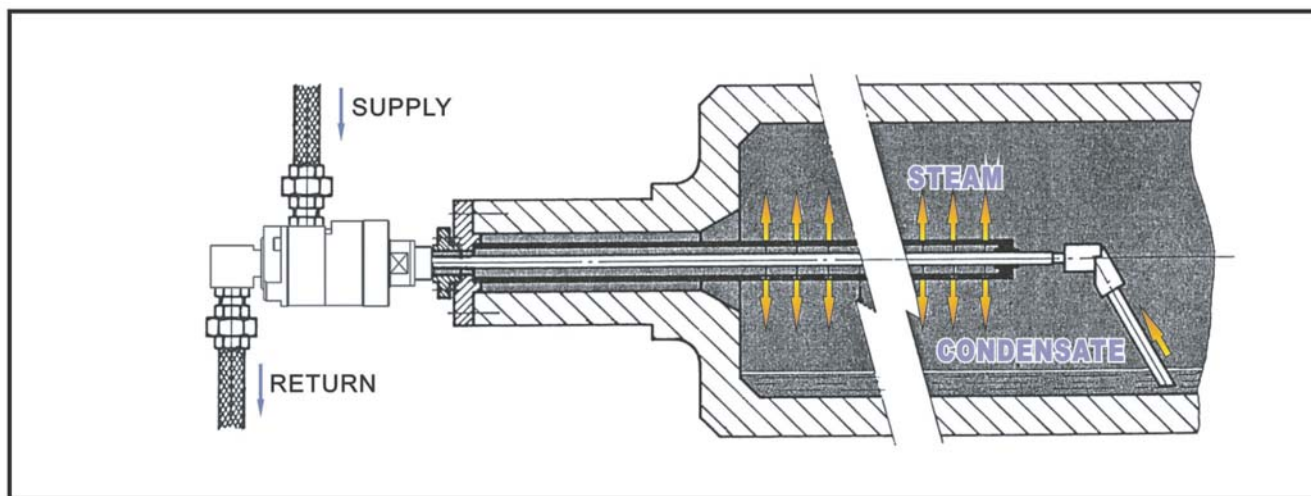
THE ROTARY PARTS(SUCH AS ROLLER, DRUM, CYLINDER...ETC) PROVIDE STEAM, WATER, OIL LIQUID: AND THESE(STEAM, WATER, OIL LIQUID) ARE BEING DRAINED OUT AT THE SAME SIDE.

THE FIGURE 1. STEAM IS BEING SENT INTO THE ROTARY JOINT, PASSING THROUGH INTERNAL PIPE, THEN LIQUID IS BEING DRAINED OUT.

• **EXAMPLE:** PAPER MAKING DRYER
PLASTIC MAKING CALENDER
DYEING MACHINE DRYER

THE FIGURE 2. THERMAL OIL MEDIA BEING SENT INTO THE INTERNAL PIPE AND LIQUID BEING DRAINED OUT THROUGH THE MAIN SHAFT OF THE JOINT.

• **EXAMPLE:** PLASTIC MAKING EXTRUDER
PLASTIC COOLING ROLLER
RUBBER MACHINE



單迴路

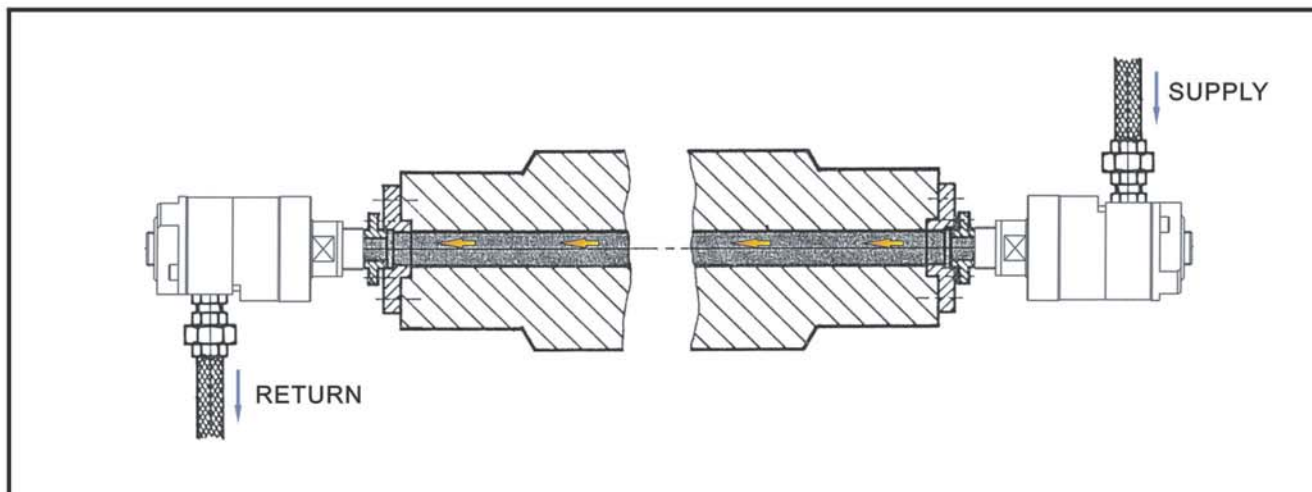
迴轉式滾輪汽缸、大滾輪中之流體如
 冷却水、油、飽和蒸汽從右端進入，左端
 排出的場合下使用。

- 主要使用範圍： 鐵質機械滾輪
 制紙用車光機滾輪
 塑膠機冷却引取滾輪

SINGLE PASSAGE

COOLING-WATER, OIL OR SATURATED VAPOUR PASSES
 THROUGH THE ROTARY PARTS(SUCH AS ROLLER, DRUM,
 CYLINDER...ETC) THEN LIQUID IS DRAINED OUT THROUGH
 THE OTHER SIDE.

- EXAMPLE: STEEL-MAKING ROLLER
 PLASTIC COOLING SYSTEM ROLLER
 PAPER CALENDER ROLLER



雙迴路內管迴轉式

迴轉式滾輪汽缸、大滾輪中之流體
 如冷却水、油、飽和蒸汽從右端進入，
 左端排出的場合下使用。

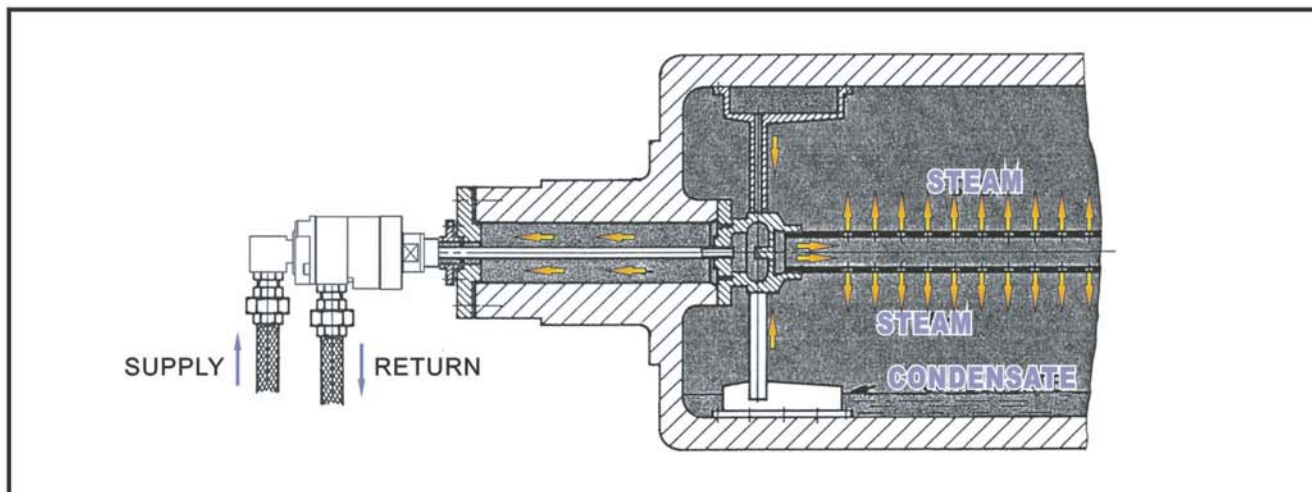
- 主要使用範圍： 造紙烘乾機
 迴轉式烘乾機
 袖珍型烘乾機

DOUBLE PASSAGE

ROTATING SYPHON TYPE

STEAM, WATER VAPOUR, OR THERMAL OIL MEDIUM
 PASSES INTO THE ROLLER, DRUM, CYLINDER THROUGH
 THE INTERNAL PIPE.
 THEN LIQUID IS BEING DRAINED OUT THROUGH THE
 SYPHON.

- EXAMPLE: PAPER-MAKING DRYER.
 ROTATING DRYER
 DRYER IN MAIN SIZE



安裝及訂購事項**Installation and purchase order items**

訂購旋轉接頭，請明示標明各種條件：

- A、流體介質、最高壓力、最高溫度、每分鐘轉速。
- B、旋轉接頭規格型式和寸法。
- C、連結方式（法蘭或管牙）。
- D、旋轉方向（右螺旋 RH 或 左螺旋 LH）。
- E、迴路型式（單迴路或雙迴路）。
- F、使用機械種類及其它指定條件。

When ordering the rotary joints, please mark the different conditions distinctly:

- A、Fluid medium, highest pressure, highest temperature, rotary speed per second
- B、The specification and size of the rotary joints.
- C、Connection type (flange or solenoglyphic tooth)
- D、The direction the rotation (right helicoids or left helicoids)
- E、Passage pattern (single passage or double passage)
- F、The machine type and other listed conditions.

安 裝**Installation**

正確的旋轉接頭的安裝方法，要多方面配合和選擇適合工作條件的旋轉接頭，不僅可以使旋轉接頭性能發揮最大效益，且壽命更長久，對提高工作效率有很大的幫助，如果不按照規範安裝，往往使旋轉接頭產品不能達到密封效用，同時很快會使內部零件磨損和報廢，且安裝的方法規範是每一個用戶必須具備的條件。

- 1、首先選擇適合工作條件下的旋轉接頭規格型號產品為首要目標。
- 2、調整旋轉接頭與設備旋轉裝置旋轉中心保持同一中心。
- 3、設備裝置轉動時，一般接頭的外殼必須要止轉，應該需要柔性的而不是剛性的限制轉動，且它的方向自由度應要獲的充分的條件。
- 4、使用在連接旋轉接頭一般都是金屬軟管，選擇金屬軟管長度必須同時考慮到安裝上的自由度，不可過度的緊拉和過度的彎曲金屬軟管，來達到止轉的功效。
- 5、防止在安裝旋轉接頭時敲打及巨大外力施予在接頭上，造成接頭毀損和內部密封件毀壞，而造成嚴重的損失。

The correct installation method of rotary joints needs much adaptation and chooses rotary joints with the suitable work conditions, which not only can make the performance of the rotary joints exert the efficiency to the utmost.

Whats more the life-span will lasts and it is helpful to improve the work efficiency. If installed wrongly, it will make the rotary joints not achieve the sealing efficacy and make the inner parts worn and useless. So the users must master the correct installation method.

1. The first target is to choose the rotary joint specification and type under the suitable work condition.
2. Adjust the rotary joint and stand in a line with the rotary center of the equipment rotary installation.
3. When the equipment installation runs, the shell of the normal connectors must stop running. It should restrict its running in a gentle way not in a rigid way and direction of degree of freedom requires adequate conditions.
4. It is always the metal hose that is used to connect the rotary joint. When choosing the length of the metal hose, you must take the installation of degree of freedom into account. The metal hose must not be over strained and over bent to stop the running.
5. When installing, one should avoid hitting and exerting strong outside force to the joint, which will damage the joint and inner sealing parts.

單位換算表

● 體積 (L^3)

立方公分 (cm^3)	立方吋 (in^3)	公升 (l)	美制加侖 (gal)	立方尺 (ft^3)	立方公尺 (m^3 (SI))
1	0.061024	0.001	0.00026418	0.0435315	0.051
16.387	1	0.016387	0.004329	0.0005787	0.0416387
10000	61.02374	1	0.26418	0.035315	0.001
3785.3	231	3.7853	1	0.13368	0.0037853
28316.8	1728	28.3168	47.4805	1	0.028317
1000000	61023.74	1000	264.18	35.3147	1

● 壓力 ($ML^{-1} T^{-2}$) (FL^{-2})

(atm)	(bar)	公斤重 / 平方公分 (Kgf/cm ²)	磅重 / 平方吋 (1bf/in ²) Psi	(Hg)(0° C)		水柱(H ₂ O)(15° C)		巴斯卡 Pa(SI)
				mm	In	m	ft	
1	1.01325	1.033227	14.6960	760.000	29.9214	10.3416	33.929	101325
0.986926	1	1.019716	14.5038	750.062	29.5301	10.2063	33.485	100000
0.967841	0.980665	1	14.2234	735.559	28.9591	10.0091	32.838	98066.5
0.068046	0.068948	0.070307	1	51.715	2.0360	0.70370	2.3087	6894.76
0.001315789	0.001333224	0.001359510	0.0193368	1	0.0393702	0.0136073	0.044643	133.322
0.0334209	0.0338638	0.0345315	0.49115	25.400	1	0.34563	1.13394	3386.39
0.096782	0.098064	0.099997	1.42231	73.554	2.8959	1	3.2808	9806.31
0.029499	0.029890	0.030479	0.43352	22.419	0.88265	0.30480	1	2988.99

- 1 bar = $10^6 \text{ dyn/cm}^2 = 10^5 \text{ pa}$, 1 $lbf/in^2 = 1 \text{ psia}$ (1 lbf/in^2)
 1 $kgf/cm^2 = 1 \text{ atm}$, 1 pa (SI) = 1 N/m^2 , 1 mmHg = 1 Torr (托)

法蘭規格型式

● K TYPE FLANGE

TYPE	G	K G7	M H8-f8	N	O	D	W	B	NO	d	Viti Filetage vis
RO34	19	30	28	32	8	75	55	12	4	9	M8
R100	25	35	33	37	8	80	60	12	4	9	M8
R114	32	45	43	48	8	100	75	12	4	11	M10
R112	38	50	48	53	10	105	80	15	4	11	M10
R200	48	65	63	69	10	130	100	15	4	11	M10

● F TYPE FLANGE

TYPE	G	K G7	F	D	W	B	NO	d	Viti Filetage vis
RO34	19	30	8	75	55	12	4	9	M8
R100	25	35	8	80	60	12	4	9	M8
R114	32	45	8	100	75	12	4	11	M10
R112	38	50	10	105	80	15	4	11	M10
R200	48	65	10	130	100	15	4	14	M10



AGENT



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