

Features

1. Compact Design.
2. Rotary torque is not affected by pressure and temperature.
3. Operating Pressure Range from -100kPa ~ 1MPa, suitable to use with positive and negative pressure.
4. The ports are design in spirals type, easy for tubings.




Specification

Ports		2	4	6	8	
Fluids		Air				
Operating Pressure Range MPa (kgf/cm ²)		-0.1~1.0 (1.0~10.2)				
Operating Temperature Range ^① °C		-10 ~ 80 (No Freezing)				
Lubrication ^②		Not Required				
Guided Structure		Bearing support at both end				
Allowable Rotation Per Minute r.p.m.		600	500	400	400	
Initial Rotation torque	N·m	M5X0.8	< 0.15	< 0.2	< 0.3	< 0.3
		Rc1/8	< 0.18	< 0.3	< 0.35	< 0.4
Allowable Radial Load	N	M5X0.8	≤ 25	≤ 45	≤ 60	≤ 60
		Rc1/8	≤ 40	≤ 60	≤ 80	≤ 80
Effective Cross Sectional Area	mm ²	M5X0.8	4.9			
		Rc1/8	15.9			
Port		Rc	M5X0.8 , 1/8			
Weight		kg	0.15 ; 0.22	0.30 ; 0.45	0.45 ; 0.55	0.55 ; 0.75

Note: ① 80 °C Includes the temperature rise during operating; ② Use only Class 1 Turbine Oil ISO VG32 for lubricant, if required.

Order Code

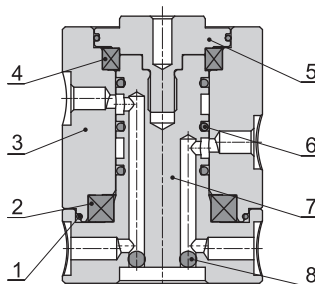
KQR	4	M5	FA
Series	Path No. ^①	Port Rc	Accessories
	2 2 Way	M5 M5X0.8	Blank None
	4 4 Way	01 1/8	FA Flange
	6 6 Way		
	8 8 Way		

Order Example

Path no.: 4; Port: M5X0.8.
Order Code: KQR4-M5
Path no.: 6; Port: Rc1/8; With Flange.
Order Code: KQR6-01FA

Note: ① For 8 ways and above, the sizes of center hollow holes are different or the fluids that is other than air, please contact HITOP to quote.

Structure



Main Parts

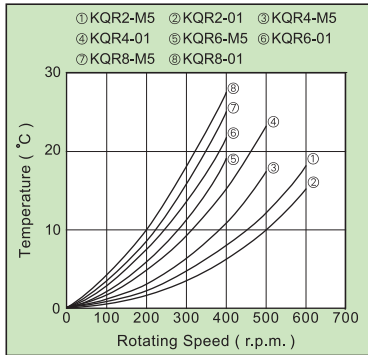
No.	Parts	Materials
1	O Ring	Rubber (NBR)
2	Deep groove ball bearing	Stainless Steel
3	Mounting Body	Aluminium
4	Deep groove ball bearing	Stainless Steel
5	Upper Cover	Stainless Steel
6	O Ring	Rubber (NBR)
7	Joint	Aluminium
8	Steel ball	Carbon Steel

Rotary Joint - Air

KQR 2 - 8 Series

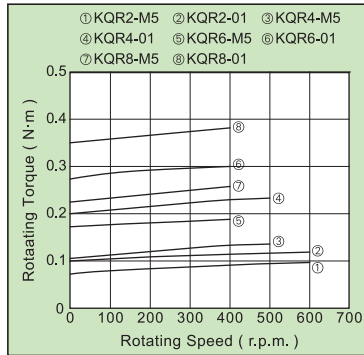
Characteristic

• Temperature rise at different speeds



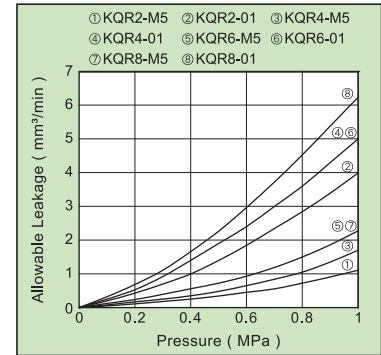
Note: ① The operating temperature will cold down by the supply of compressed air; this graph is showing temperature rises with no air supply condition.
 ② this graph is plotted based on lab test value, for reference only.

• Rotating torque at different speeds



Note: ① this graph is plotted based on lab test value, for reference only.

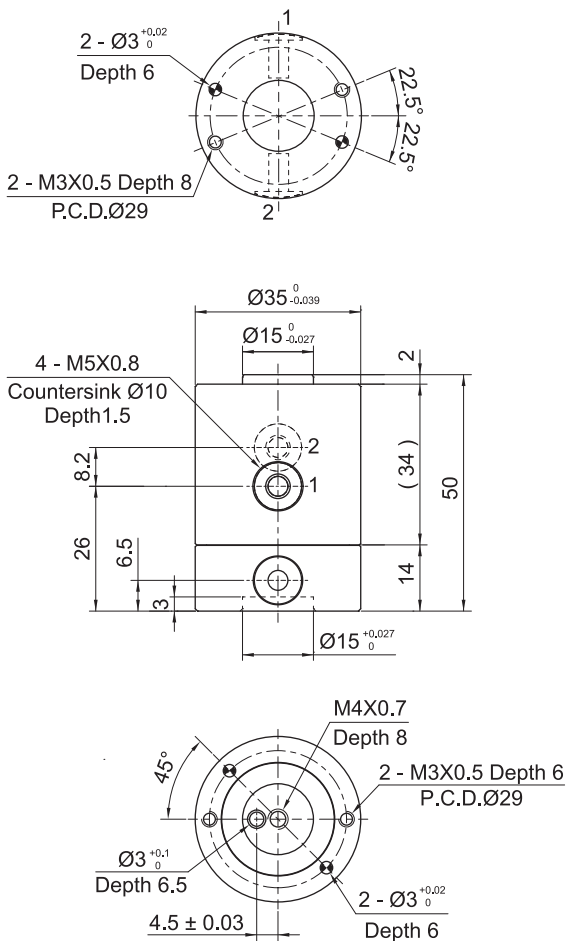
• Allowable leakage at different pressures



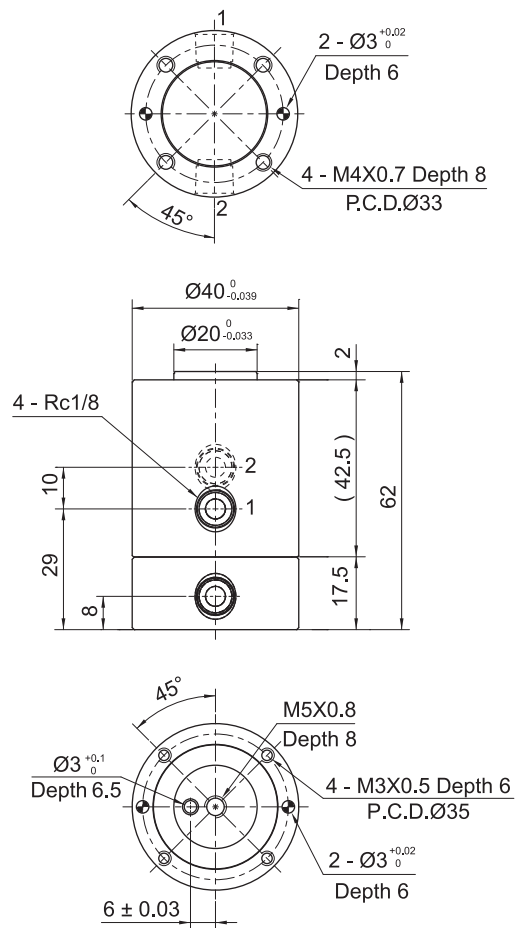
Note: ① this graph is plotted based on lab test value, for reference only.

Ext. Dimensions [mm]

• KQR2-M5

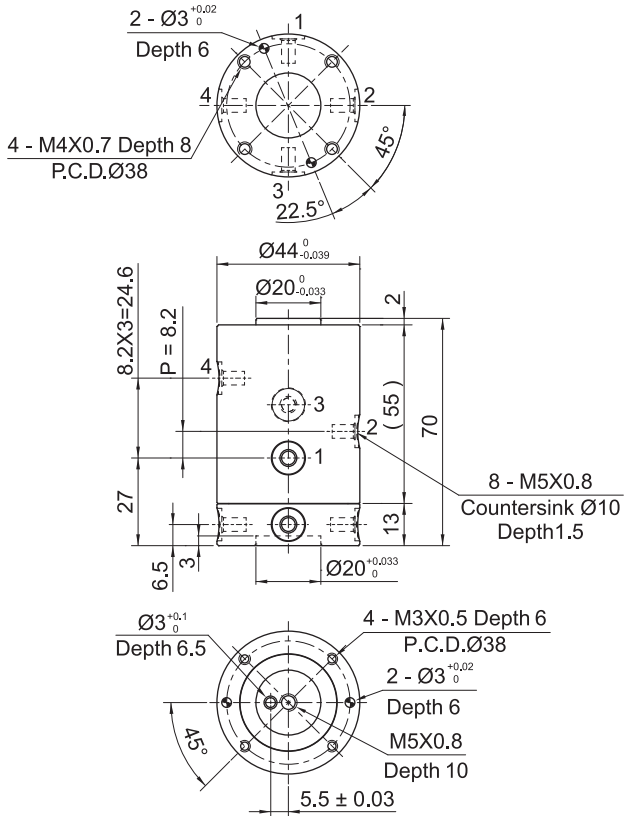


• KQR2-01

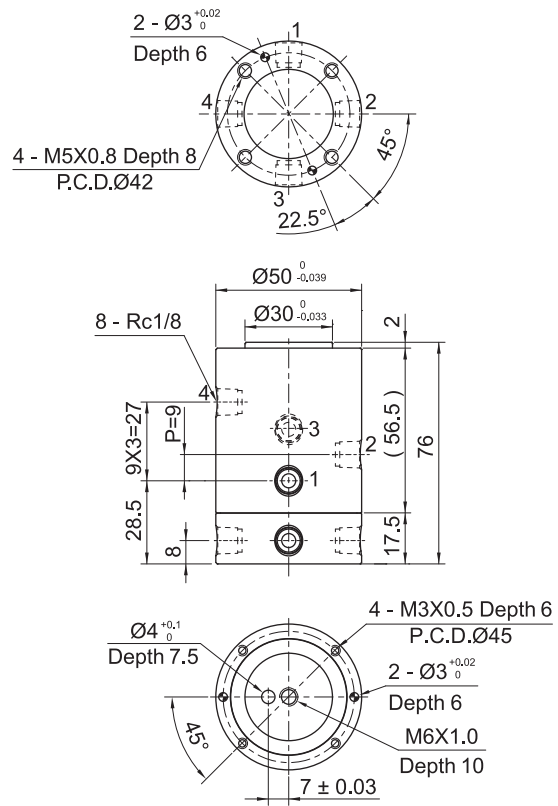


Ext. Dimensions [mm]

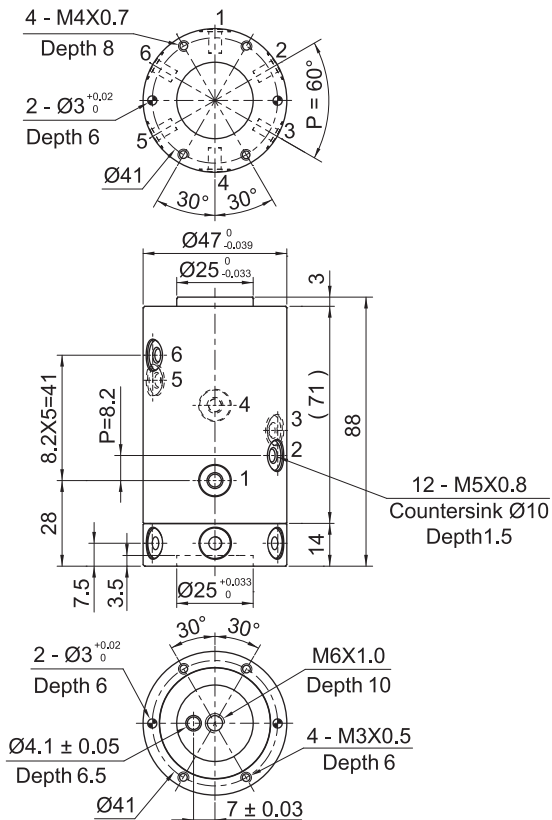
• KQR4-M5



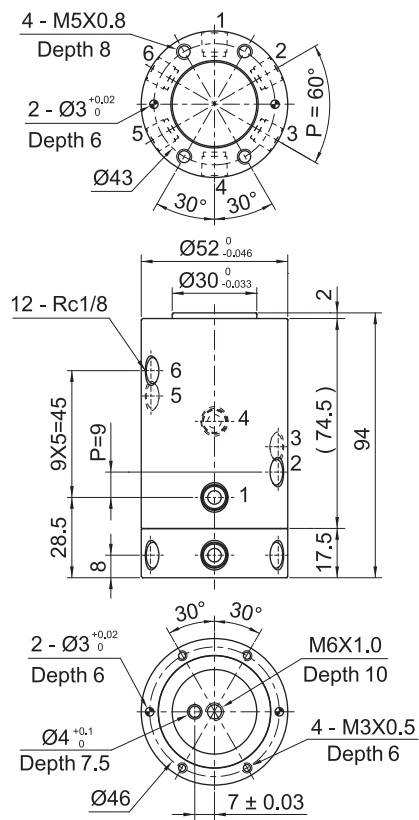
• KQR4-01



• KQR6-M5



• KQR6-01

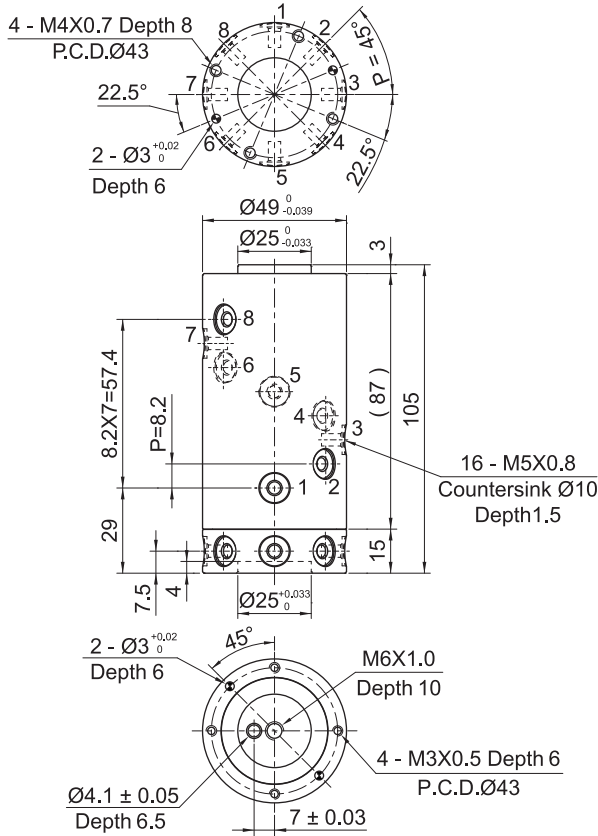


Rotary Joint - Air

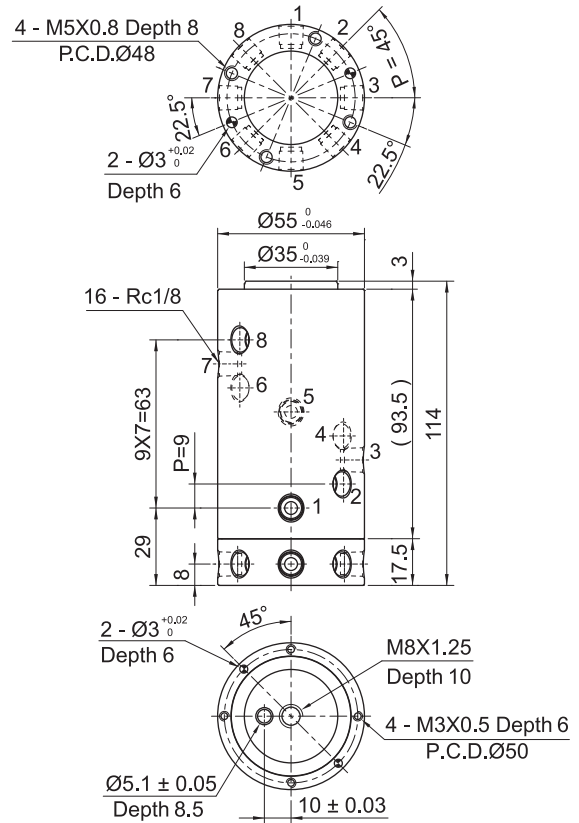
KQR 2 - 8 Series

Ext. Dimensions (mm)

• KQR8-M5

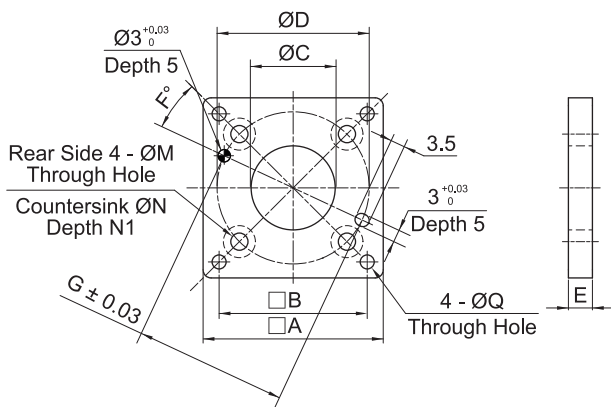


• KQR8-01

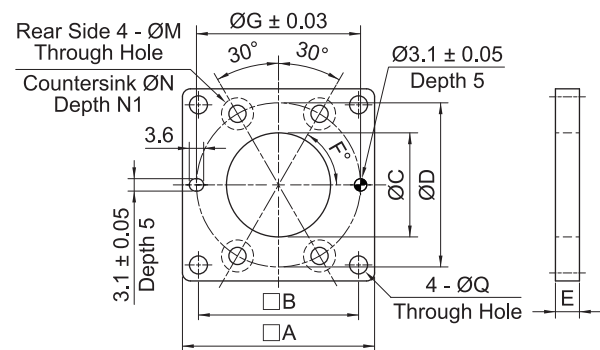


Flange Dimension (mm)

• FA02/04/08 (FA02A/04A/08A)



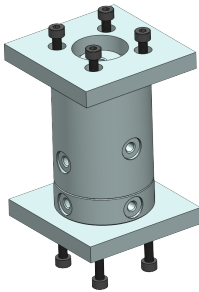
• FA06 (FA06A)



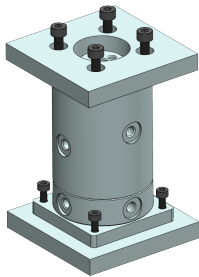
Air Ways	Port	A	B	C	D	E	F	G	M	N	N1	Q	Model
2	M5X0.8	36	29	16	29	6	45	29	3.3	6	3.5	3.5	FA02
	Rc1/8	42	34	21	33	6	45	33	4.3	8	4.5	3.5	FA02A
4	M5X0.8	45	37	21	38	6	22.5	38	4.3	8	4.5	3.5	FA04
	Rc1/8	52	42	31	42	7	22.5	42	5.3	9	5.5	4.5	FA04A
6	M5X0.8	48	40	26	41	7	60	41	4.3	8	4.5	4.5	FA06
	Rc1/8	54	44	31	43	7	60	43	5.3	9	5.5	5.5	FA06A
8	M5X0.8	50	41	26	43	7	45	43	4.3	8	4.5	4.5	FA08
	Rc1/8	58	48	36	48	7	45	48	5.3	9	5.5	5.5	FA08A

Mounting

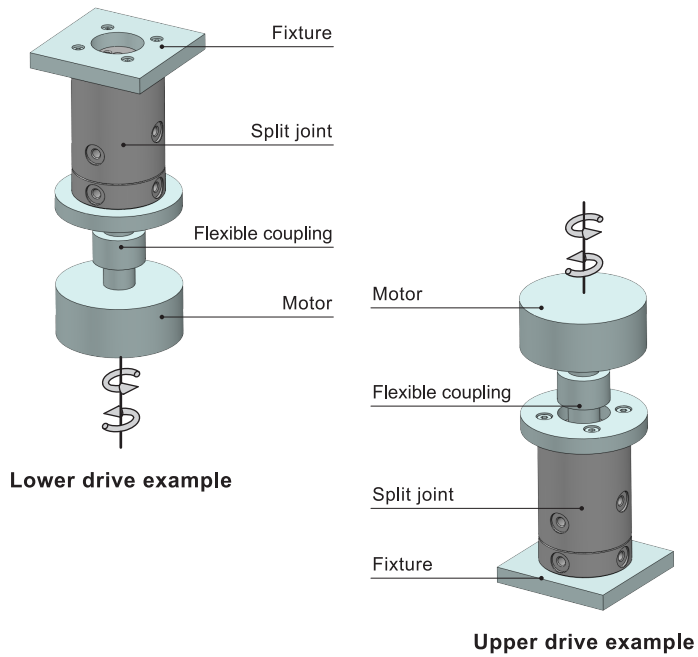
• Without Flange



• With Flange

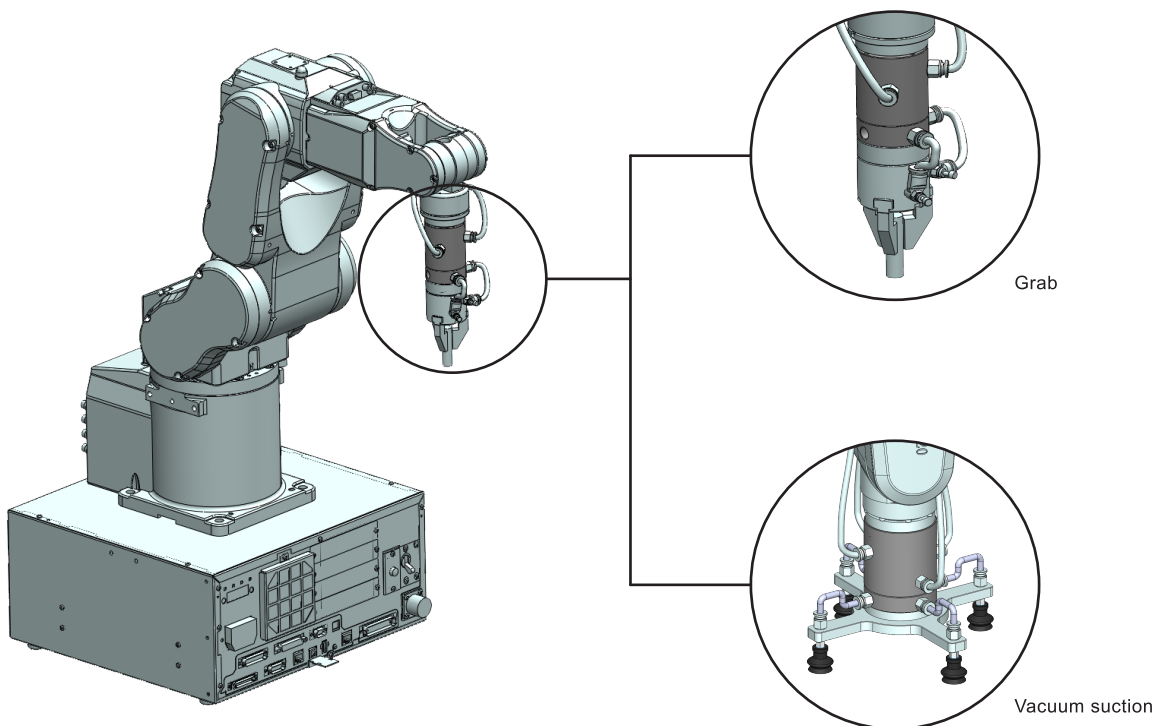


• Motor Mounting



Application

• Application to robot end effector



Note: Do not overload the power transmission, please use center hollow body to avoid overload.

Rotary Joint - Air

KQR 2 - 8 Series

Caution



Caution

1. If the moving part of the product might cause personal harm or damage to the machine, please install a protective cover to avoid direct contact with it.
2. All fixed parts and joints must be tighten firmly, especially operate in high speed.
3. The impact force or foreign particles which came from the air line may cause the rotary part stuck or burned, and for safety purposes safety coupler should be installed on motor mounting to prevent the rotary torque overload.
4. This product are not be used for emergency cut - off or safety protection purposes, please select the appropriate product.
5. This product are not to use as a pressure tank to maintain pressure.
6. For easy maintenance, please ensure adequate space is reserved.
7. For vacuum usage, please install the suction filter to prevent dust and foreign particles block the air ways.
8. This product is not designed for motor drive power transmission bearing.
9. Excessive unbalance load will cause damage to the product and equipment, please install safety coupler between motor and rotary pneumatic joint, To absorb the eccentricity of the joint of the driving motor and the impact force, Avoid direct load or axial load on the shaft. (Refer to Mounting Example).
10. Please do not rework, modified or do machining to the product.
11. Please do not hammered the rotary shaft and body to avoid the rotating shaft bending and damage to bearing.
12. The rotary shaft should be fixed, when the load is on the rotary shaft.
13. Avoid using different vacuum pressure between adjacent outlets, due to leakage between the ports, it will affects the low vacuum pressure increase (as shown below).
14. When two or more outlets are use with different vacuum pressure, the positive pressure air supply port should be set between the ports. (as shown below)

