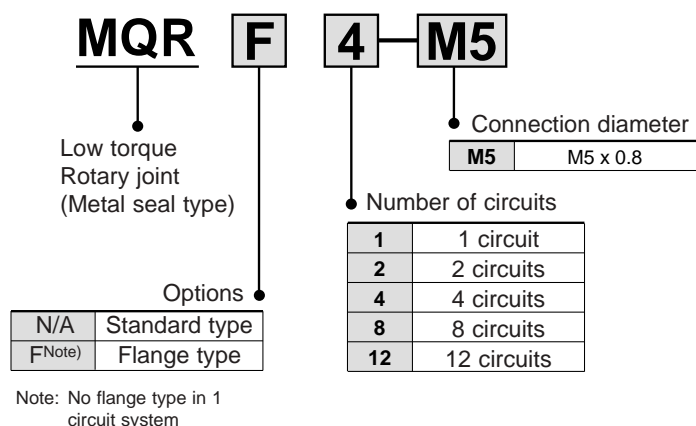


Low torque Metal seal type Rotary joint

Series MQR

1 circuit, 2 circuits, 4 circuits, 8 circuits, 12 circuits

How to Order



Options / Mounting bracket

Number of circuits	Flange part number
2 circuits	MQR2-F
4 circuits	MQR4-F
8 circuits	MQR8-F
12 circuits	MQR12-F



Specifications

Model	MQR1-M5	MQR2-M5	MQR4-M5	MQR8-M5	MQR12-M5
Number of circuits	1	2	4	8	12
Operating fluid	Air / Inert gas				
Seal structure	Metal seal				
Guide structure	Bearing supported	Bearing supported at both ends			
Port size	Male R1/8	M5 x 0.8			
	Female M5 x 0.8				
Flow rate characteristics	C[dm ³ /(s·bar)]		b	Cv	
	0.50		0.40	0.17	
Lubrication	Not required				
Min. operating pressure	-100kPa				
Max. operating pressure	1.0MPa				
Ambient temperature and operating fluid temperature ^{Note 1)}	-10 to 80°C				
Allowable torque ^{Note 2)}	0.003 N·m or less	0.03 N·m or less	0.05 N·m or less	0.10 N·m or less	0.20 N·m or less
Allowable rotation speed	3000 min ⁻¹ (r.p.m.) ^{Note 3)}	2000 min ⁻¹ (r.p.m.)	1500 min ⁻¹ (r.p.m.)	900 min ⁻¹ (r.p.m.)	600 min ⁻¹ (r.p.m.)
Allowable radial load (allowable coupling axis reaction) ^{Note 4)}	1N	15N	30N	40N	50N
Weight	0.025kg	0.16kg	0.39kg	0.76kg	1.26kg

Note 1) The temperature 80°C includes temperature rise during rotation.

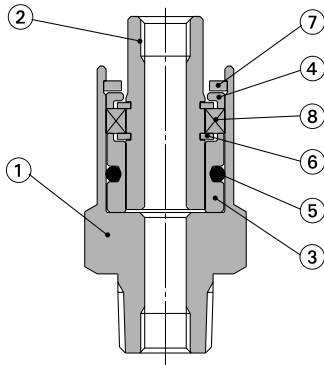
Note 2) The rotational torque does not change with the supply pressure or with non-use (remains within allowable torque), but it does change with the rotational speed. (Refer to page 2).

Note 3) If using at a speed above 600 min⁻¹ (r.p.m.), ensure rotation is in the direction in which the joint is fastened.

Note 4) Rubber / resin couplings are recommended due to their excellent absorption of off center, shocks, and vibrations.

Construction

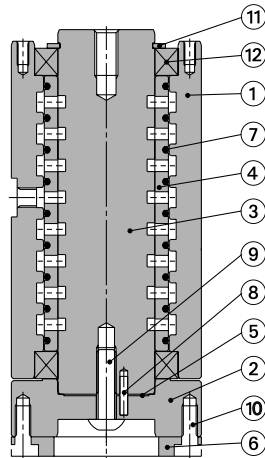
MQR1-M5



Components / (MQR1 - M5, 1 circuit)

No.	Name	Material	Remarks
1	Body	Stainless steel	
2	Spool	Special stainless steel	
3	Sleeve	Special stainless steel	
4	Plate	Aluminium	
5	O-ring	H-NBR	
6	Retaining ring	Carbon steel	
7	Retaining ring	Carbon steel	
8	Radial bearing		

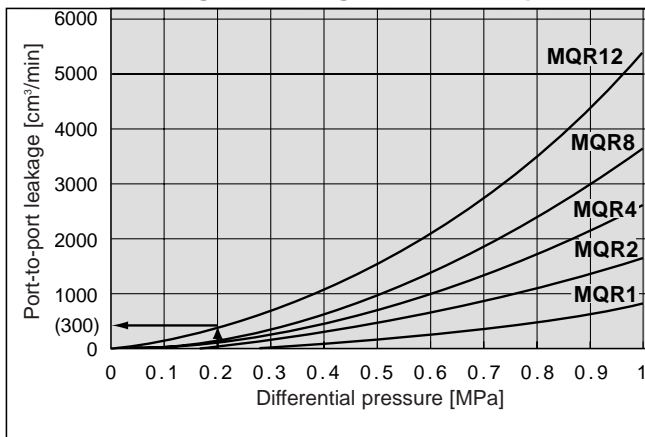
MQR2 to 12-M5



Components / (MQR2 to 12 - M5, 2 to 12 circuits)

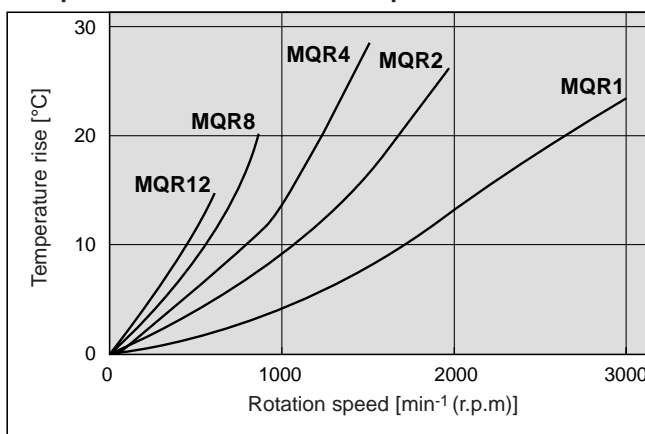
No.	Name	Material	Remarks
1	Body	Aluminum	
2	Adapter plate	Aluminum	
3	Spool	Special stainless steel	
4	Sleeve	Special stainless steel	
5	Gasket	H-NBR	
6	Flange	Aluminum	
7	O-ring	H-NBR	
8	Spring pin	Carbon steel	
9	Bolt	Carbon steel	Not in 2 circuit model
10	Bolt	Carbon steel	
11	Retaining ring	Carbon steel	
12	Radial bearing	—	

Allowable leakage according to differential pressure

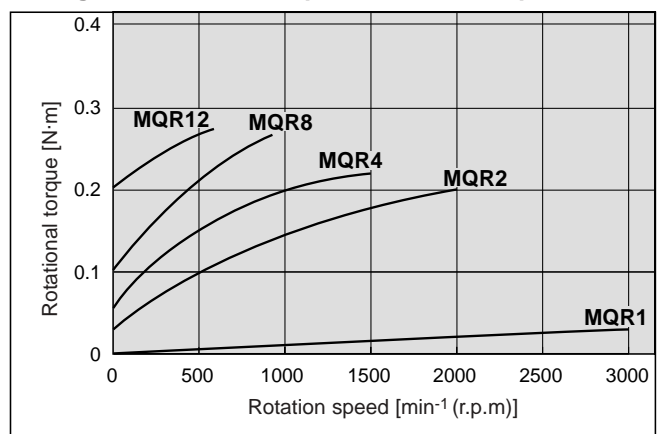


e.g.: If adjacent ports are connected to positive vacuum pressure of -0.1 MPa and 0.1 MPa in MQR12, then differential pressure is 0.2 MPa, and leakage is 300 (cm³/min).

Temperature rise with rotation speed



Change in rotational torque with rotation speed



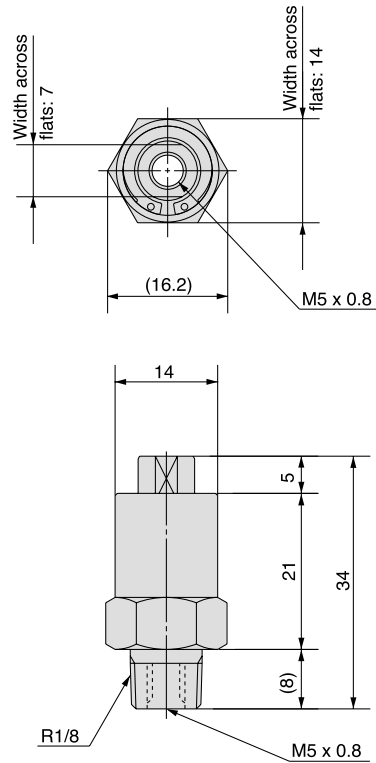
Note 1: Value when no pressure applied. Temperature rise is reduced by supply of air.

Series MQR

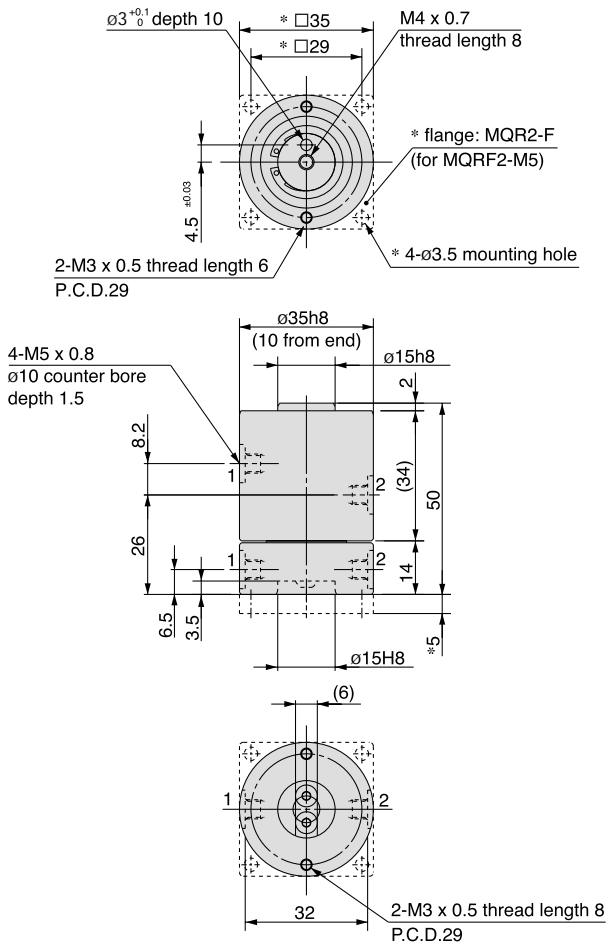
Dimensions/Standard Type, Flange Type

* symbol indicates flange dimensions

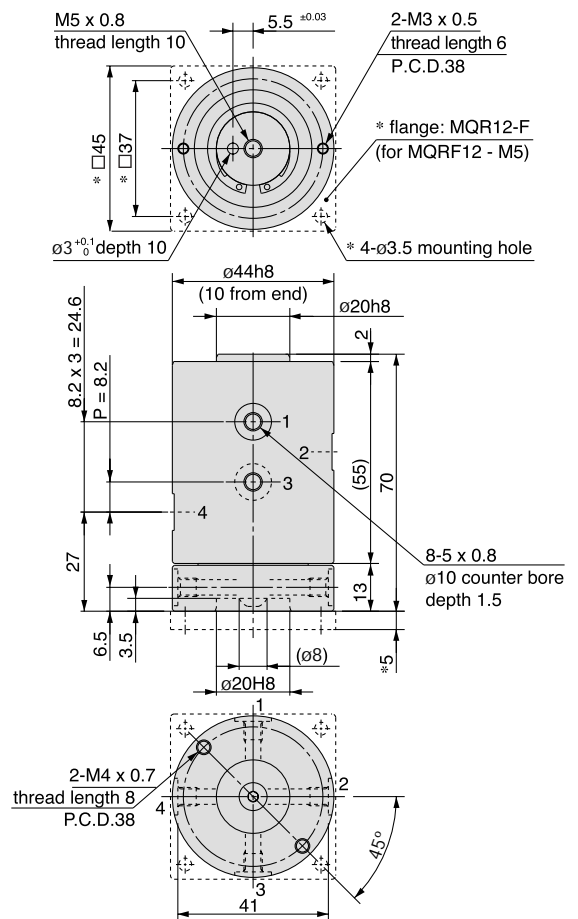
MQR1-M5



MQR2-M5



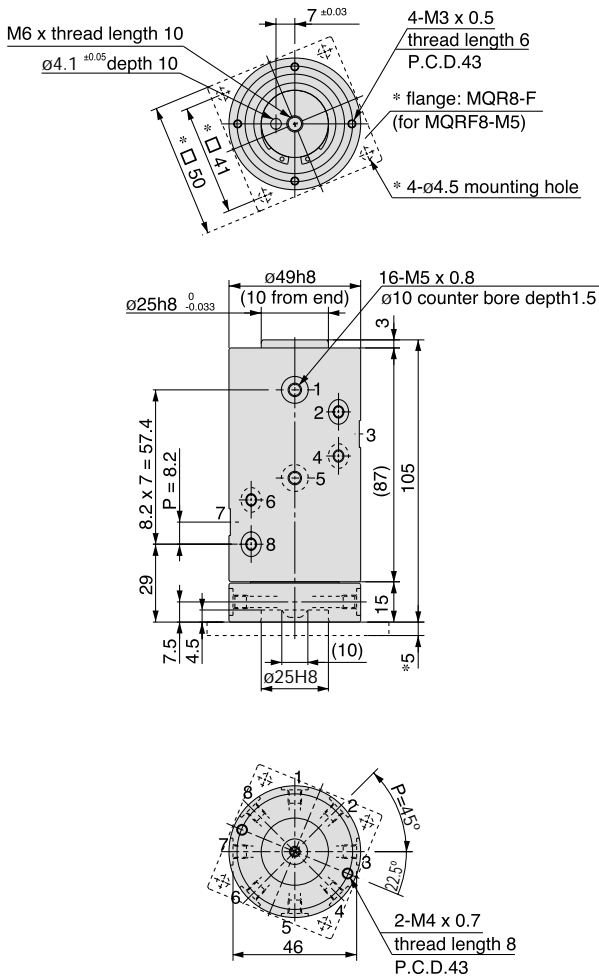
MQR4-M5



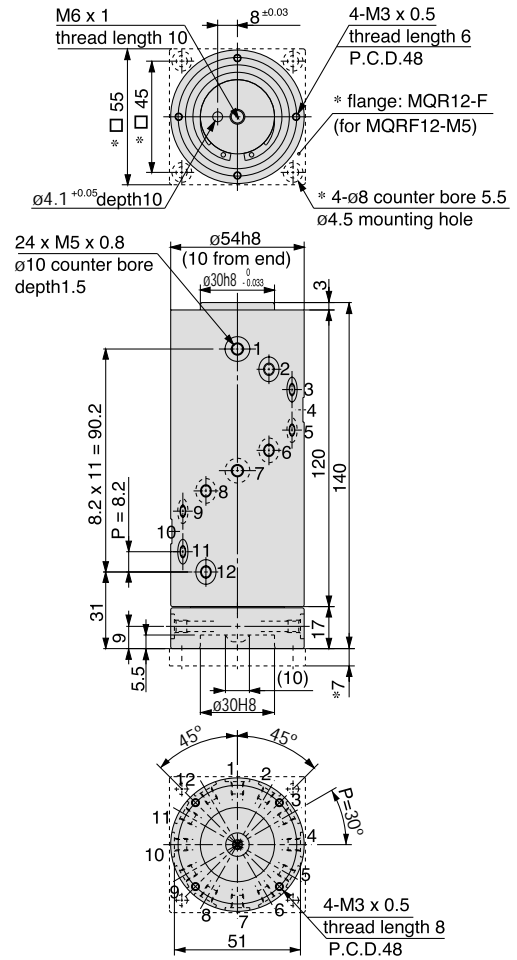
Dimensions/Standard Type, Flange Type

* symbol indicates flange dimensions

MQR8-M5

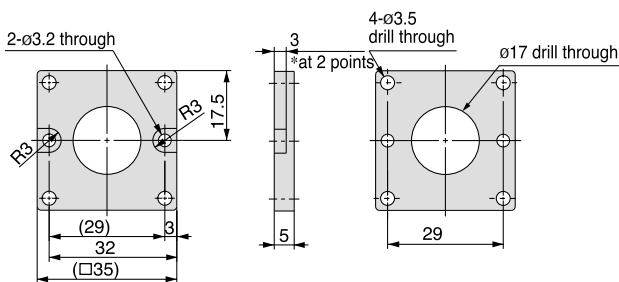


MQR12-M5

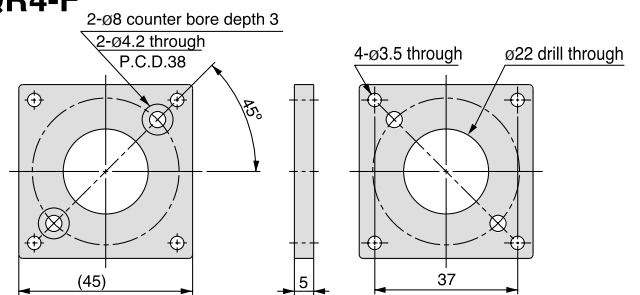


Mounting Brackets/Flanges

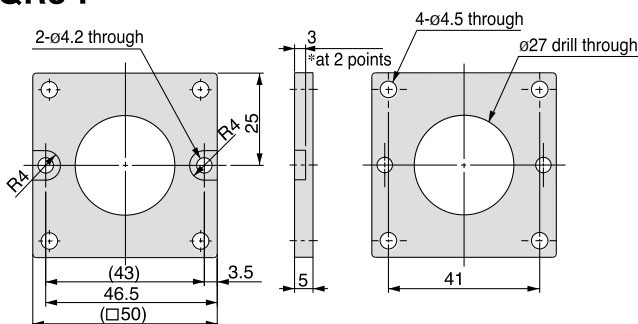
MQR2-F



MQR4-F



MQR8-F



MQR12-F

