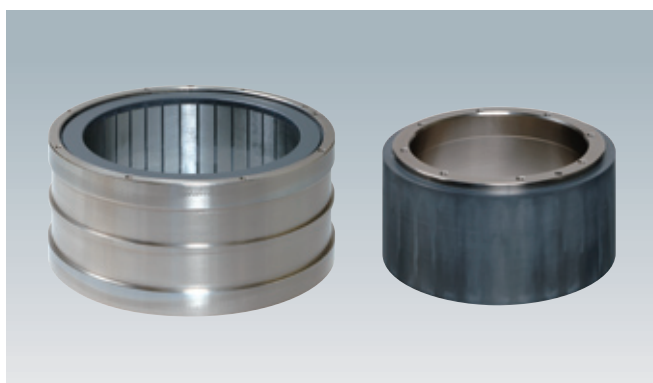


**Liquid-cooled and inner-rotor type built-in direct-drive motor,
which is optimal for an axis to rotate a table or spindle head**



Smooth rotation

Combination of low-ripple direct-drive motor and high-gain control enables smooth rotation.

Highly accurate positioning

Compared to the conventional rotary axis using a deceleration gear, this direct-drive motor has higher accuracy as it does not cause gear wear or backlash.

Space-saving design

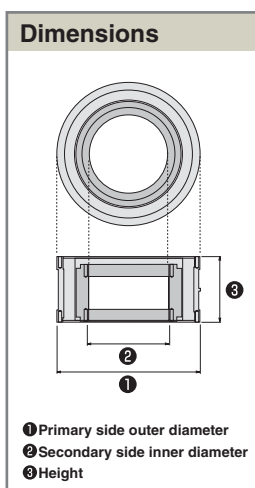
Does not protrude from the motor.
Owing to the hollow structure, piping can be simplified.

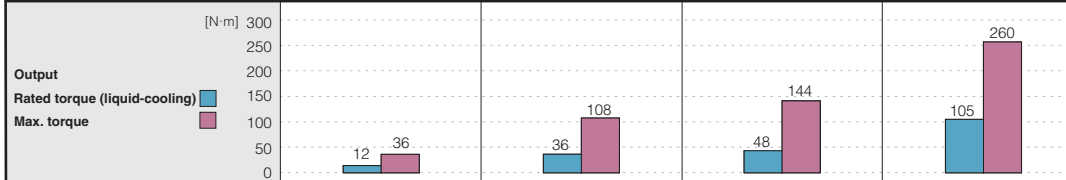
Maintenance-free

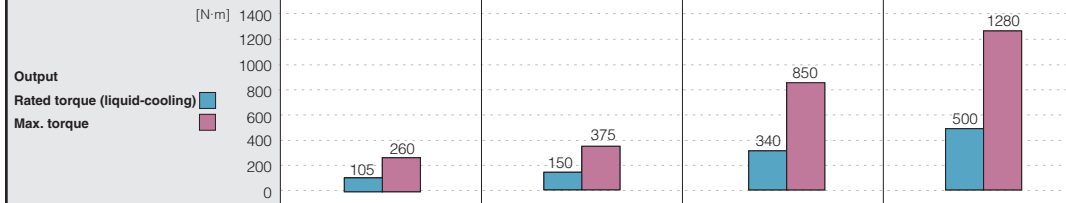
Free from maintenance, as there is no gear wear or backlash.

TM-RB Series

Explanation of type	
Primary side [coil side]	
TM-RBP ①②③	
Secondary side [magnet side]	
TM-RBS ①②③	
① Rated torque	
Symbol	Rated torque
012	12 N·m
036	36 N·m
048	48 N·m
105	105 N·m
150	150 N·m
340	340 N·m
500	500 N·m
② Stator dimensions	
Symbol	Dimension
C	DIA 130 mm
E	DIA 180 mm
G	DIA 230 mm
J	DIA 330 mm
③ Rated rotation speed	
Symbol	Rotation speed
10	100 r/min
20	200 r/min



Direct-drive motor type	Primary side type	TM-RBP012C20	TM-RBP036E20	TM-RBP048G20	TM-RBP105G10
	Secondary side type	TM-RBS012C20	TM-RBS036E20	TM-RBS048G20	TM-RBS105G10
Compatible drive unit	1-axis type	MDS-D-V1-40	MDS-D-V1-80	MDS-D-V1-80	MDS-D-V1-160
	2-axis type	MDS-D-V2-4020 MDS-D-V2-4040 MDS-D-V2-8040	MDS-D-V2-8040 MDS-D-V2-8080 MDS-D-V2-16080	MDS-D-V2-8040 MDS-D-V2-8080 MDS-D-V2-16080	MDS-D-V2-16080 MDS-D-V2-160160
	Regenerative resistor type	MDS-D-SVJ3-10	MDS-D-SVJ3-20	MDS-D-SVJ3-20	MDS-D-SVJ3-35
Output					
Rated output		252	754	1005	1100
Max. rotation speed		500	500	500	250
Motor inertia		22	127	280	395
Protection level		IP 00	IP 00	IP 00	IP 00
Dimensions	① Primary side outer diameter	DIA 130	DIA 180	DIA 230	DIA 230
	② Secondary side inner diameter	DIA 56	DIA 100	DIA 130	DIA 130
	③ Height	76	91	80	105
Mass	Primary side (coil)	3.9	7.1	10	13
	Secondary side (magnet)	1.7	3.7	5	7

Direct-drive motor type	Primary side type	TM-RBP105G20	TM-RBP150G20	TM-RBP340J20	TM-RBP500J20
	Secondary side type	TM-RBS105G20	TM-RBS150G20	TM-RBS340J20	TM-RBS500J20
Compatible drive unit	1-axis type	MDS-D-V1-160	MDS-D-V1-160	MDS-D-V1-320	MDS-D-V1-320W
	2-axis type	MDS-D-V2-16080 MDS-D-V2-160160	MDS-D-V2-160160	-	-
	Regenerative resistor type	-	-	-	-
Output					
Rated output		2199	3141	7120	10471
Max. rotation speed		500	500	400	400
Motor inertia		395	510	2778	3538
Protection level		IP 00	IP 00	IP 00	IP 00
Dimensions	① Primary side outer diameter	DIA 230	DIA 230	DIA 330	DIA 330
	② Secondary side inner diameter	DIA 130	DIA 130	DIA 205	DIA 205
	③ Height	105	130	154	191
Mass	Primary side (coil)	13	16	33	41
	Secondary side (magnet)	7	9	20	26

* The detector should be procured by the user.

Compatible detector (rotary encoder) <recommended for direct-drive motor>

Model (manufacturer)	MPRZ Series (MHI)	RCN223M/227M (Heidenhain)	RCN727M/827M (Heidenhain)	RU77 (Sony MS)
Detection type	Absolute	Absolute	Absolute	Absolute
Resolution [pulse/rev]	8 million	8 million / 134 million	134 million	8 million to 32 million
Hollow shaft diameter [mm]	ø27.1, 58.0, 90.0, 120.0	ø20	ø60, 100	ø20

CAUTION !

1. The system accuracy is not always guaranteed even if the above value is applied.
2. One of the above-mentioned detectors should be procured by the user. Be sure to ask the relevant manufacturer about the specifications of the detector beforehand.

System Configuration and Circuit

