

Frameless Torque Motor



Actuator Solutions with High Torque Density and High Efficiency

Discover cutting-edge technology behind our frameless torque motors, designed for unparalleled performance in advanced applications. Engineered with precision, efficiency, and reliability, these motors suit industries demanding top-tier solutions. Our range includes various frameless motors in multiple sizes, ensuring compatibility with diverse applications. Additionally, our motors feature torque densities exceeding industry standards, delivering superior power and efficiency!



Key Features

- 1 Unique HALBACH Array Design**
Boost flux density, reducing losses & improving performance
- 2 Low Inductance and Inertia**
Enable rapid response and better control in dynamic applications
- 3 Durability**
Ensure long-lasting performance with robust construction in harsh conditions
- 4 High Torque Density**
Deliver maximum power with minimal size
- 5 High Efficiency**
Introduce thin stator lamination grade to minimize losses
- 6 Customizability**
Tailored solutions to meet specific industry requirements

Applications

Humanoid Robots	Medical Devices	Aerospace	Semiconductor
Collaborative Robots	Drones	Satellites	Agriculture

Technical Specifications

Design	DRM-38x14	DRM-44x15	DRM-50x9	DRM-50x14	DRM-60x12	DRM-69x18	DRM-70x12	Unit
Outer Diameter	38	44	50.7	50	60.7	69	70.7	mm
Inner Diameter	18	27	25	30	32	42	40	mm
Axial Length	14	15.5	9.2	14.8	12.4	18.9	12.8	mm
Rated Torque	0.24	--	0.288	0.54	0.799	1.262	1.01	Nm
Peak Torque	0.836	0.864	0.588	1.96	1.611	4.638	2.11	Nm
Rated Voltage	48	48	48	48	48	48	48	V
Rated Current	4.7	--	2.8	7.0	7.1	8.6	7.7	A _{rms}
Peak Current	17.1	7.9	5.6	26.0	14.4	33.0	16	A _{rms}
Rated Speed	9500	--	4040	6200	3872	3250	3535	rpm
Maximum Speed	10190	4320	5016	6900	4631	3660	5239	rpm
Resistance L-L	0.499	1.074	1.046	0.265	0.354	0.203	0.279	Ω
Inductance L-L	0.415	0.414	1.011	0.193	0.549	0.323	0.562	mH
Pole / Slot	14 / 12	20 / 18	20 / 18	20 / 18	20 / 18	20 / 18	20 / 18	--
Mass	80	92	88	118	174	304	241	g
Gearbox	--	--	14	--	17	--	20	--
Rotor Inertia	0.022	0.073	0.041	0.110	0.123	0.327	0.269	kg·cm ²

Design	DRM-86x19	DRM-94x08	DRM-94x19	DRM-115x23	DRM-138x27	DRM-158x24	DRM-175x28	DRM-200x31	Unit
Outer Diameter	86.3	94	94	115.1	138.8	158.8	175	200	mm
Inner Diameter	49	51	51	64	90	102	115	148.5	mm
Axial Length	19.5	8.2	19	23	27.5	24	28	31	mm
Rated Torque	2.27	1.64	3.76	4.35	7.72	10.1	13.07	19.04	Nm
Peak Torque	4.47	4.67	9.36	8.72	15.99	20.3	26.15	37.54	Nm
Rated Voltage	48	48	48	48	48	48	48	48	V
Rated Current	16.8	8.1	8.1	24	43.8	59.0	59	59	A _{rms}
Peak Current	32	24.2	21	48	88	115.0	116	113	A _{rms}
Rated Speed	3535	2000	900	2357	2622	2823	2218	1513	rpm
Maximum Speed	3863	2600	1100	2869	2961	3038	2342	1625	rpm
Resistance L-L	0.066	0.341	0.514	0.033	0.012	0.008	0.008	0.008	Ω
Inductance L-L	0.051	0.673	1.378	0.256	0.052	0.043	0.069	0.050	mH
Pole / Slot	20 / 18	20 / 18	20 / 18	20 / 18	30 / 27	30 / 27	30 / 27	40 / 36	--
Mass	525	329	657	1174	1604	1928	2650	2966	g
Gearbox	25	--	--	32	40	45	50	58	--
Rotor Inertia	1.00	0.555	1.208	2.25	10.68	15.27	22.50	1.00	kg·cm ²