

KinetiMax HPD Brushless DC Outer-Rotor Motors

High Power Density, Frameless Stator-Rotor Sets

62 to 125 mm diameter, 0.16 to 6.30 Nm continuous torque, up to 1188 Watts output



The KinetiMax HPD range of outer-rotor brushless DC motors comes in frameless stator-rotor part sets. Available in six frame sizes and three stack-heights each, the HPD series enables you to select an optimum configuration with an exact performance fit for your application.

These compact kit motors offer an ideal solution especially where total motor length is crucial in space-constrained applications.

Their large stator ID makes integration of larger ball-bearings possible, and the large clear aperture ID permits cabling to pass through the motor.

The HPD's excellent high torque-to-weight ratio is essential in applications where weight is critical. And with an efficiency ranging from 81% to 91% in a wide speed-torque range, our KinetiMax HPD frameless motors are ideal for battery-fed applications, where they help maximize the running time per battery charge.

Their low cogging torque combined with high peak torque improves motor behaviour in servo applications.

Features & Benefits

- Winding selection for other Voltages
- Rated torque 0.16 to 6.30 Nm
- High torque-to-weight ratio
- Excellent efficiency from 81% up to 91% over a wide range around the nominal working point

Options & Accessories

- Hall commutation sensor board
- Temperature sensor mounted on stator

Typical Applications

- Automated Guided Vehicles (AGVs)
- Robotics (arms, joints)
- Handheld Hydraulic Power Tools
- Material Handling Systems
- Medical equipment
- Rotary Actuators
- Gimbals
- Etcetera....

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KinetiMax HPD Specifications

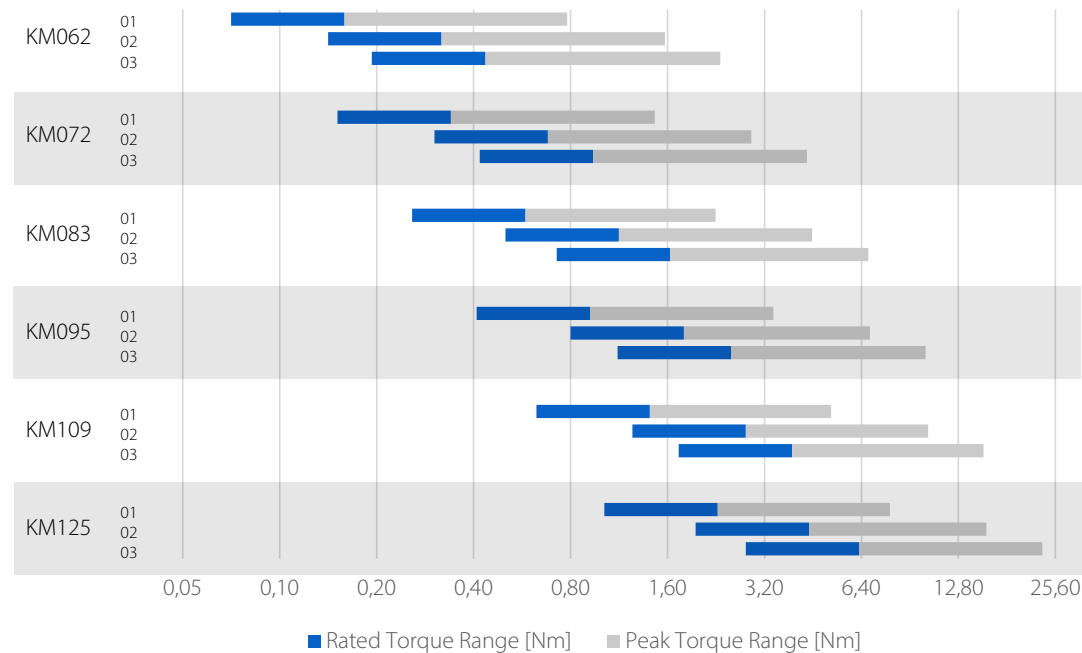


		KM062			KM072			KM083		
Stack height		01	02	03	01	02	03	01	02	03
Winding Identification		E	E	E	E	C	C	C	C	C
Nominal supply voltage DC Bus ¹	Volt	18	24	36	24	18	24	18	24	30
Rated Output Power	Watt	87	120	150	151	203	246	231	308	367
Rated Speed	RPM	5200	3600	3300	4250	2850	2500	3800	2600	2150
Rated Torque	Nm	0.159	0.318	0.435	0.340	0.680	0.940	0.580	1.130	1.630
Peak Torque	Nm	0.71	1.43	2.14	1.31	2.61	3.92	2.00	4.00	6.00
Rated Current RMS (phase)	A	4.1	4.1	3.8	5.7	9.9	9.1	12.7	12.4	11.9
No load Speed (@ nominal supply voltage)	RPM	5488	3659	3659	4727	3070	2729	4621	3081	2567
Rotor Inertia (x10-6)	kgm ²	44	61	79	93	131	169	189	266	343
Max Winding Temperature	°C	160			160			160		
Number of pole pairs		15			15			15		
Weight	kg	0.10	0.16	0.22	0.17	0.27	0.37	0.27	0.41	0.56
External diameter [Z] ²	mm	61.7	61.7	61.7	72.3	72.3	72.3	83.3	83.3	83.3
Internal diameter [Y] ²	mm	37.5	37.5	37.5	44.3	44.3	44.3	51.1	51.1	51.1
Overall length [X] ²	mm	20.9	26.8	32.8	24.2	31.2	38.2	27.6	35.7	43.7

⁽¹⁾ Data is based upon one standard DC bus supply voltage for one winding type. Several additional windings are available per frame size and stack length.

⁽²⁾ See the dimensions in the drawing on the next page.

KinetiMax HPD Performance Comparison - Rated torque [Nm]

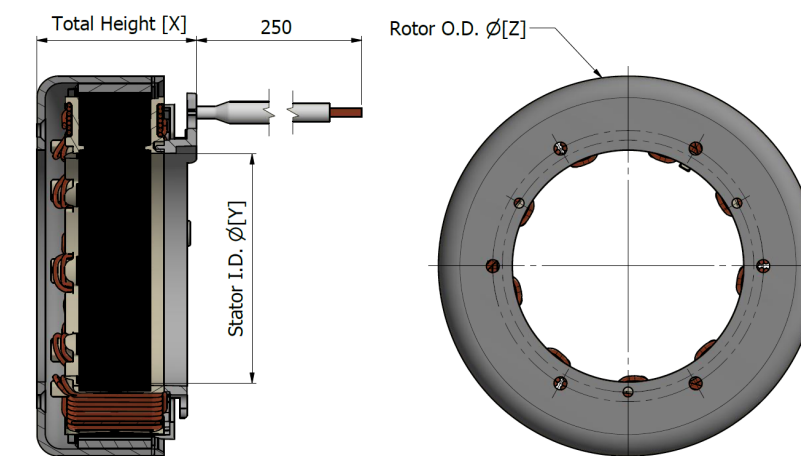


KinetiMax HPD Specifications

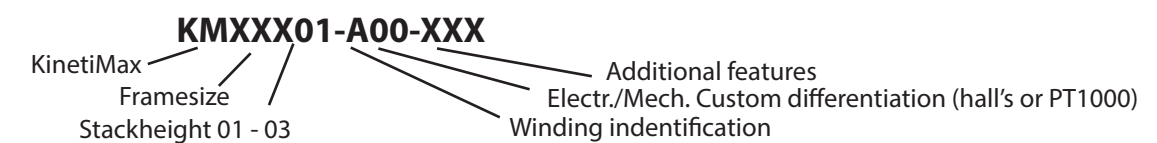


KM095			KM109			KM125				
01	02	03	01	02	03	01	02	03		Stack height
C	C	C	C	C	C	C	C	C		Winding Identification
18	24	16	24	30	42	30	42	48	Volt	Nominal supply voltage DC Bus ¹
323	431	528	458	645	776	719	991	1188	Watt	Rated Output Power
3350	2285	2000	3100	2200	1900	3000	2150	1800	RPM	Rated Speed
0.920	1.800	2.520	1.410	2.800	3.900	2.290	4.400	6.300	Nm	Rated Torque
3.00	6.00	9.00	4.53	9.06	13.59	6.83	13.67	20.50	Nm	Peak Torque
15.4	15.1	14.1	17.9	17.8	16.6	22.2	21.3	20.3	A	Rated Current RMS (phase)
3527	2352	2352	3572	2233	2084	3396	2377	1811	RPM	No load Speed (@ nominal supply voltage)
344	483	627	685	960	1246	1307	1879	2440	kgm ²	Rotor Inertia (x10-6)
160			160			160			°C	Max Winding Temperature
15			15			15				Number of pole pairs
0.40	0.62	0.79	0.57	0.94	1.27	0.85	1.41	1.91	kg	Weight
95.0	95.0	95.0	109.0	109.0	109.0	125.0	125.0	125.0	mm	External diameter [Z] ²
58.5	58.5	58.5	67.1	67.1	67.1	76.9	76.9	76.9	mm	Internal diameter [Y] ²
31.2	40.0	49.1	36.4	47.6	58.5	41.4	54.7	65.5	mm	Overall length [X] ²

KinetiMax HPD Dimensions (mm)



Model Numbering



Allied Motion Solution Centers

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