

## TORQUE SYSTEMS

# MDM Parts Set Product Guide

There is virtually no limit to our unique motor solutions. For applications with limited space that require maximum torque, we offer Direct Drive Sets (frameless motors). Unlike any other Direct Drive Set out there, ITT's unique design offers a molded stator and polymer shrink wrapped rotor.

ITT Torque Systems engineers design the MDM Parts Set Series to meet the needs of users and customers in need of a compact, reliable high-performance servo motor solution.



# ITT

ENGINEERED FOR LIFE

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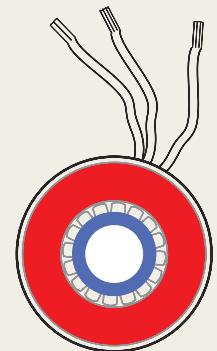
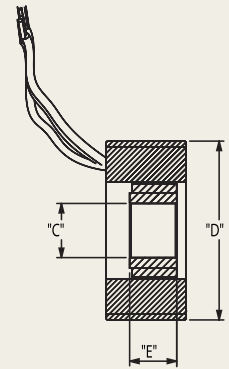
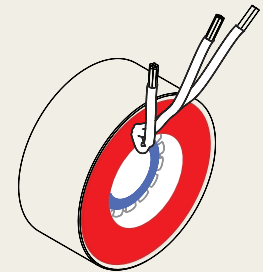


FEATURES	BENEFITS	APPLICATIONS
MDM 5000 Technology - Cut-core/ Segmented Stator Technology	High Torque Density, High Efficiency, Small Foot Print, Reduced Weight. Stator Molded with Thermally Conductive Epoxy, Fail-Safe Banding over Nickel Plated Rotor Magnets to Withstand Harsh Environment	Military and Commercial ROVs, AUVs, UAVs, Land Vehicles, Antenna Pedestal, Turrets and Others; Deep Sea, Land, Outer Space, High Shock and Vibration, Extreme temperatures
Maximum Rate and Position Accuracy Direct Drive With High Magnetic Pole Count	No Backlash, High Servo Stiffness, Smooth Operation	Medical Imaging, Pick and Place, Remote Equipment, High Precision Robotics, Pumps and Others
Flexible Winding Options, Mechanical Options	Customer Friendly	ALL
ROHS Compliant	Environmentally Friendly	ALL

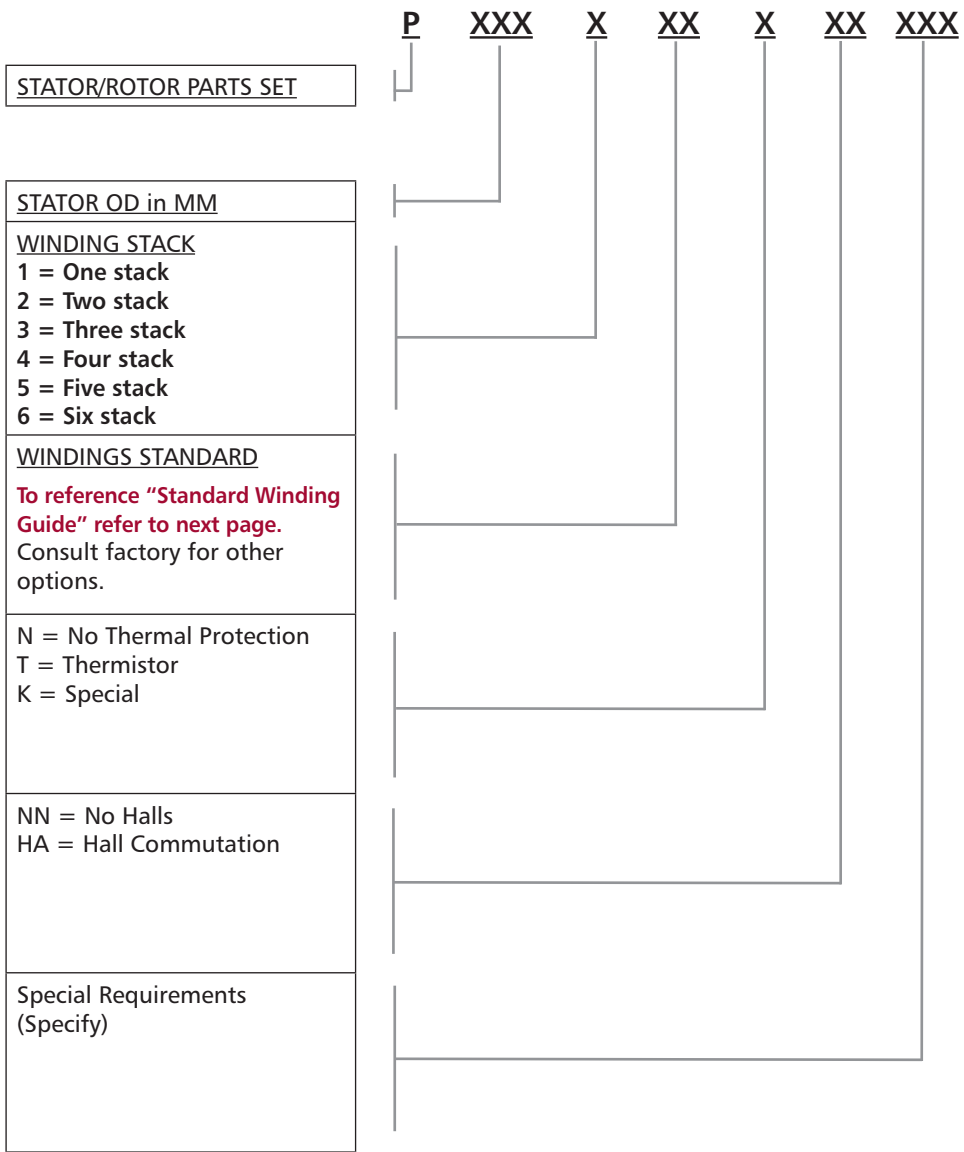
Platform Number	Performance			Mechanical Dimension		
	Cont. Stall Torque Nm	Peak Torque Nm	Max Speed RPM	Cmax	D	Without Hall "E"
P0551	0.55	2.5	8000	16	55	21
P0552	0.89	4.4				40
P0553	1.25	5.9				60
P0554	1.5	7				81
P0631	0.55	2.3	8000	28.95	60.35	15
P0632	1	5				28
P0633	1.3	6.6				42
P0634	1.7	8.9				55
P0635	2	11				69
P0636	2.2	13				82
P0651	0.83	4.1	8000	18	65	20.3
P0652	1.2	6				29.5
P0653	1.9	9.5				49.3
P0654	2.2	10.5				58.5
P0761	1.05	6.2	8000	23	75.95	20
P0762	1.8	11				36
P0763	2.5	14				55
P0764	3	17.5				71
P0765	4	22				90
P0766	4.5	25.3				106
P0811	1.1	5.1	8000	32	81.28	20
P0812	2.1	10.1				37
P0813	2.8	16				58
P0814	3.8	20.1				73
P1051	5.2	12	6000	30.066	105	32
P1052	9	21.9				63
P1053	12	29.8				95
P1054	15	37.6				126
P1271	2.3	7.9	6000	63.50	127	13
P1272	4.4	16.9				23
P1273	6	24.9				33
P1274	8.2	32.8				45
P1275	9.8	41.8				55
P1276	11.7	48.6				65
P1431	7.3	28	6000	38.05	143	26
P1432	14	47.5				51
P1433	19	71				76
P1434	24	96				101
P1435	29	110				126

All dimensions are in MM

Note: All performance ratings are at 25 degrees C Ambient with housed motor mounted to a heat sink and max total winding temperature of 155 degrees C



# MDM 5000 DIRECT DRIVE PARTS SET ORDERING GUIDE



**Example Part Number Setup: P1053-EO-N-HA-S**



## STANDARD WINDING GUIDE

### Winding Designators: Back EMF Constant (V<sub>peak</sub>/Krpm)

N0 = 5	X0 = 7.5	T0 = 10	U0 = 12.5	P0 = 15	A0 = 20	R0 = 25	B0 = 30	C6 = 34
C0 = 40	D0 = 50	E0 = 60	F5 = 65	F0 = 70	G0 = 80	H0 = 90	J0 = 100	K0 = 120
L0 = 140	M0 = 160	V0 = 180	W0 = 200	SA = 240	SB = 280	SC = 320	SD = 360	SE = 400

### MDM-S 5000 Direct Drive Parts Set Winding Option

P0551	N0, X0, T0, P0, U0, A0, R0, B0, C0
P0552	N0, X0, T0, P0, U0, A0, R0, B0, C0
P0553	N0, X0, T0, P0, U0, A0, R0, B0, C0, E0, F0, K0
P0554	A0, B0, C0, D0,
P0631	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0
P0632	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0, F0, K0
P0633	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0, G0, K0, V0
P0634	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0, E0, J0, K0
P0635	X0, T0, P0, U0, A0, R0, B0, C0, D0, E0, K0
P0636	T0, P0, U0, A0, R0, B0, C0, D0, E0, J0
P0811	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0, E0
P0812	T0, P0, U0, A0, R0, B0, C0, D0, E0
P0813	T0, P0, U0, A0, R0, B0, C0, D0, E0, J0, K0
P0814	T0, P0, U0, A0, R0, B0, C0, D0, E0, J0, K0
P1271	T0, P0, U0, A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0
P1272	T0, P0, U0, A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA
P1273	A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1274	B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1275	C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1276	D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P0651	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0
P0652	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0
P0653	X0, T0, P0, U0, A0, R0, B0, C0, D0
P0654	T0, P0, U0, A0, R0, B0, C0, D0, E0, G0, J0
P0761	N0, X0, T0, P0, U0, A0, R0, B0, C0, D0, E0, F0, G0
P0762	T0, P0, U0, A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0
P0763	T0, P0, U0, A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0
P0764	A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0
P0765	A0, R0, B0, C0, D0, E0, F0, G0, J0, K0
P0766	A0, R0, B0, C0, D0, E0, F0, G0, J0, K0
P1051	T0, P0, U0, A0, R0, B0, C6, C0, D0, E0, J0, K0, L0
P1052	A0, R0, B0, C0, D0, E0, F5, J0, K0, L0, M0
P1053	B0, C0, D0, E0, J0, K0, L0, M0
P1054	C0, D0, E0, J0, K0, L0, M0
P1431	A0, R0, B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1432	B0, C0, D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1433	D0, E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1434	E0, F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
P1435	F0, G0, J0, K0, L0, M0, V0, W0, SA, SB, SC, SD, SE
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