HIGH DYNAMIC ELECTRICAL MACHINES

MDD Series

Direct Drive Torque Motors/Generators

VASCAT

MDD DIVISION

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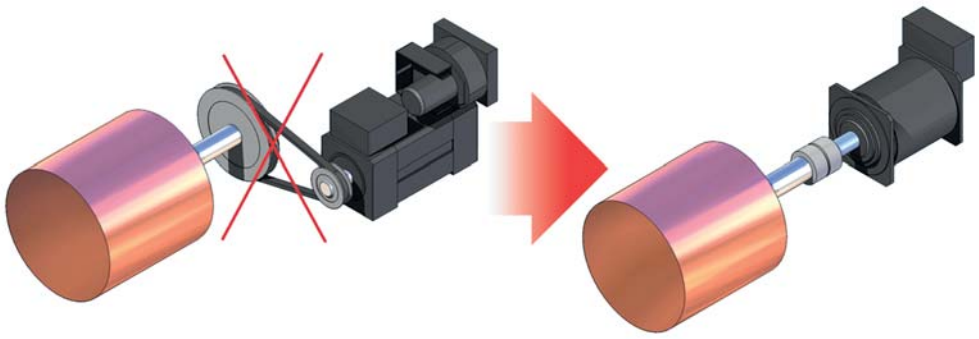
What is a Direct Drive torque motor?

- Synchronous permanent magnet multipole servomotor
- Same technology as standard brushless servomotors but using higher number of poles
- Motor design is optimized to work at low speeds and providing high torque
- This results in a very high torque density motor which can assume gear functions



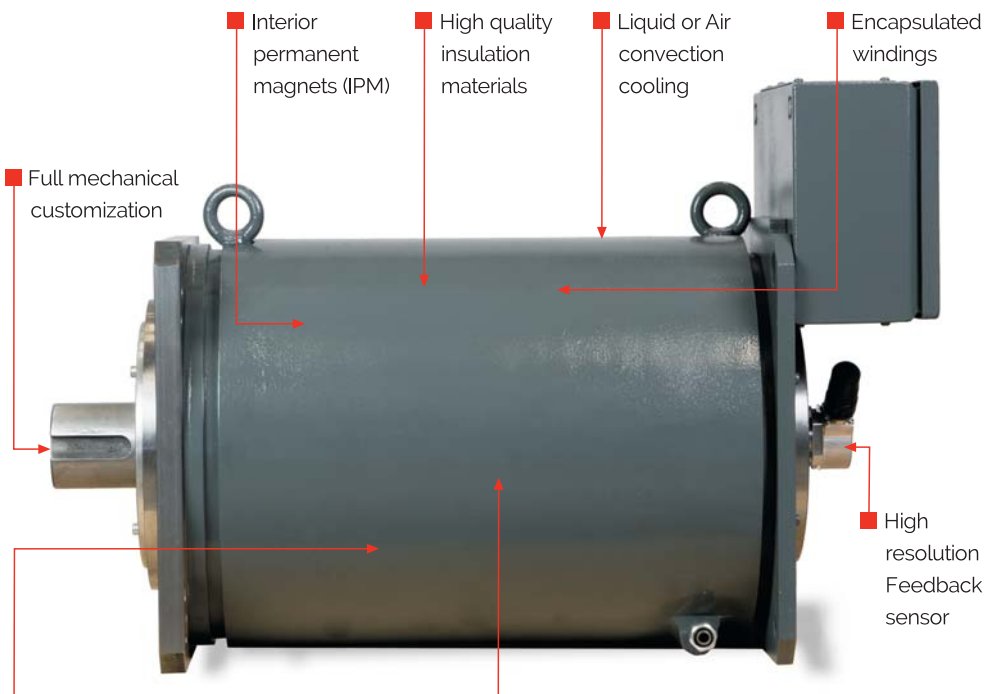
Main advantages

- Compact design
- No maintenance
- Quiet operation
- Energy savings
- Less vibrations
- Higher stiffness
- Reduced downtime
- Zero backlash
- Improves accuracy
- Higher dynamics

Constructive details

Main features

- High torque at low speeds
- Excellent power density
- Low-noise
- Superior dynamics and precision
- Complete motor or frameless kit



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Torque Motors/Generators

From 55 to 7,000 Nm

Frame sizes from 132 to 315 mm

MOTOR TYPE		Power (kW)	Nominal torque (Nm)	Nominal speed (rpm)	Maximum speed (rpm)	Nominal current (A)
MDD-SN-132-	S	2,2-5,9	55	375-1410	1710	4,5-11,1
	M	2,1-8,2	83	240-1335	1605	4,5-15,2
	L	2,5-10,2	110	218-1470	1710	5,3-18,2
	P	3,6-11,1	135	255-1485	1710	7,4-19,8
MDD-SN-180-	S	5,2-8	139	360-1704	1920	10,7-14,7
	M	5,3-12	217	234-1512	1704	11,1-21,7
	L	5,5-12,5	311	168-1704	1920	12-23,1
	P	5,6-24,7	404	132-1296	1536	12,4-45,6
	X	5,5-29,3	479	110-1056	1284	12,3-54,7
	Y	5,4-34,4	567	91-888	1092	12,5-65
MDD-SN-250-	K	17,2-24,2	437	375-810	1148	32,8-43,5
	S	18,2-34,7	639	272-705	862	35,8-64,0
	M	18,1-40,3	795	218-712	862	35,6-73,7
	L	18,4-48,1	979	180-675	960	36,5-88,1
	P	18,3-58,1	1164	150-750	900	37,2-104,9
	Q	18,9-68,7	1377	131-810	960	38,4-123,1
	X	18,4-73,8	1511	116-698	855	37,5-135,7
	Y	17,6-74,3	1599	105-623	773	35,7-137,5

MOTOR TYPE		Power (kW)	Nominal torque (Nm)	Nominal speed (rpm)	Maximum speed (rpm)	Nominal current (A)
MDD-SW-132-	S	3,5-14,7	111	300-1380	2010	9,1-32,7
	M	3,4-18,2	171	188-1095	1605	9,3-40,4
	L	4,1-26,8	299	173-1170	1710	11-59,0
	P	6-33,3	284	203-1170	1170	15,5-73,9
MDD-SW-180-	S	8-32	265	288-1272	1920	20,7-75,3
	M	8,2-45,5	422	185-1128	1704	22-107,3
	L	8,4-67,9	579	138-1284	1920	22,4-158,4
	P	8,3-71,1	733	108-1020	1936	22,7-166,5
	X	7,8-73,2	892	84-852	1284	23,2-170,6
	Y	7,6-73,9	1047	70-720	1092	23,2-174,4
MDD-SW-250-	K	26,2-63	835	300-735	1147	62,6-146,5
	S	26,4-79,0	1140	221-682	1080	63,8-187,2
	M	26,7-107,1	1447	176-735	1155	64,7-251,6
	L	26,1-129,2	1752	143-735	1155	65,4-303,3
	P	26,6-145,7	2056	124-705	1095	65,4-339,6
	Q	25,9-145,2	2360	105-608	960	66,0-342,9
	X	26,1-148,5	2661	64-547	855	66,2-345,4
	Y	26,0-148,0	3005	83-488	772,5	67,2-347,8
MDD-SW-315-	K	67,6-168,5	3469	186-492	810	174,1-412,5
	S	67,8-226,0	3997	162-588	942	175,4-541,0
	M	69,3-232,3	4500	147-522	834	175,5-556,2
	L	67,4-277,3	4987	129-582	948	174,9-671
	P	67,5-328,7	5511	117-654	1026	175,7-772,7
	Q	67,8-337,8	5994	108-594	942	175,2-800,4
	X	67,3-339,6	6492	99-546	870	175,1-807,4
	Y	65,9-341,8	6991	90-510	804	175,1-807,1

MDD SN Series

- Cooling type: IC 410 (Air-cooled)
- Protection degree: IP 54
- Nominal speed: 105 – 1704 rpm
- Maximum speed: up to 1920 rpm
- Nominal power: 2,2 – 75 kW
- Nominal torque: 55 – 1600 Nm

MDD SW Series

- Cooling type: IC 97 W (Water-cooled)
- Protection degree: IP 54
- Nominal speed: 83 – 1380 rpm
- Maximum speed: up to 2010 rpm
- Nominal power: 3,5 – 342 kW
- Nominal torque: 111 – 7000 Nm

MDD DIVISION

TÜVRheinland® CERT ISO 9001

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Main industry sectors for MDD Motors/Generators

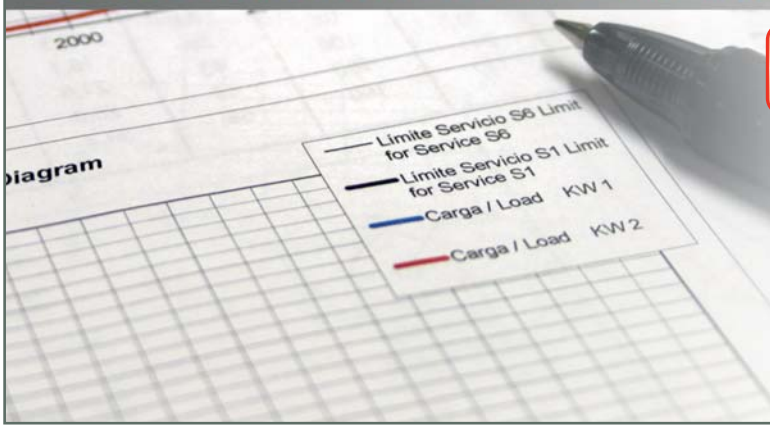
Renewable energies

Converting and printing machines

Testing systems

Metal processing lines

INNOVATIVE SOFTWARE TOOLS



Engineering Tools

- Application calculation spreadsheets
- Motor sizing program
- Interactive motor datasheets
- 2D drawings and 3D models for all motors

Available at www.vascat.com (free on-line access)

VASCAT

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