

Based on our high torque frameless motor technology, this water-cooled PMSM outer runner was developed. A high efficiency motor with a very high power density of **>1.2 kW/kg** is obtained by implementing water cooling in combination with an optimized electromechanical design.

The sensor-less motor can be driven with off the shelf inverters suitable to support PMSM motors. This configuration provides a cost efficient overall solution.

Furthermore the motor can be adapted to customer specific mechanical and electrical requirements



Technical Data						
Kt [Nm/Apk]	0.94					
Kemf [Vpk/rad/s]	1.09					
R phase @ 20°C [Ω]	0.133					
L phase [mH]	0.87					
Dimensions [mm]	Ø113 x 192 (excluding shaft)					
Mass [kg]	7.8					
rpm	torque[Nm]	Mechanical power [W]	Electrical power [W]	Voltage line-line [V_pk]	Line current [A_pk]	Efficiency
0	50.0	0	3012	36.2	96.0	0.0%
500	50.0	2618	5740	103.4	97.3	45.6%
1000	45.0	4712	6912	160.9	81.1	68.2%
1500	40.0	6283	7815	210.9	66.6	80.4%
2000	35.0	7330	8403	255.9	54.0	87.2%
2500	30.0	7854	8628	298.7	43.2	91.0%
3000	30.0	9425	10253	355.7	43.3	91.9%
3400	25.0	8901	9541	385.1	34.1	93.3%
3840	25.0	10053	10748	433.5	34.1	93.5%

Preliminary values. No rights can be derived from this specification.
Patent protected.