

# GKN POWDER METALLURGY E-MOTOR TECHNOLOGY

# TFM 2400

## OVERVIEW

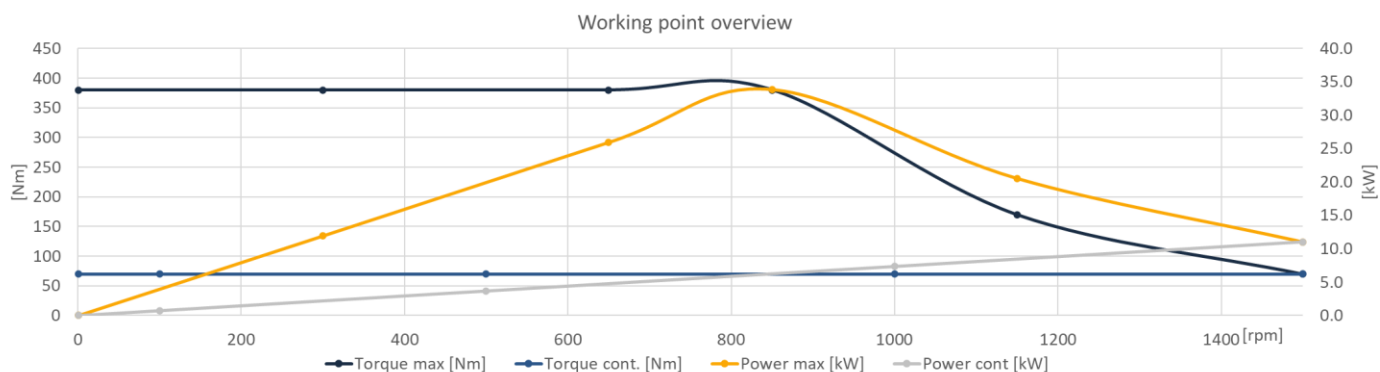
Dimensional specs for the motor					
	Value [nominal]	min. Value	max. Value	Dimension	Comments
outer Ø	280			mm	nominal outer Ø is without flanges
innerØ	140			mm	shaft diameter
length	100			mm	nominal length including torque support, sealings, etc.
total weight	15	13	17	kg	

Technical specs					
	Value [nominal]	min. Value	max. Value	Dimension	Comments
Voltage level	96	86	120	V	customization of voltage level (e.g. <b>400V</b> ) possible
Current	120	0		Arms	customization of currents possible
Supply Power	11			kW	
Ambient temperature	20	-10	50	°C	
Motor Temperature			120	°C	
Protection Class	IP66	IP65	IP66		
# Phases	3				
Coil type	Copper				
Magnet class	NdFeB				
Inverter integrated	No				no integrated inverter
Cooling potential	Aircooled	0	10	% of nominal power	

Max. Motor working points						
Speed [rpm] *	Torque [Nm]**	Power [kW]**	time to operate [s]	Motor Efficiency [%]	Torque density [Nm/l]	Power density [kw/l]
1	380	0.0	5		0.6	0.00
300	380	11.9	5	80%	0.6	0.02
650	380	25.9	5	87%	0.6	0.04
850	380	33.8	5	89%	0.6	0.06
1150	170	20.5	5	90%	0.3	0.03
1500	70	11.0	5	90%	0.1	0.02
100	300	3.1	30	64%	0.5	0.01
300	300	9.4	30	83%	0.5	0.02
850	290	25.8	30	92%	0.5	0.04
1150	170	20.5	30	90%	0.3	0.03
1500	70	11.0	30	90%	0.1	0.02

Continuous Motor working points						
Speed [rpm]	Torque [Nm]	Power [kW]	time to operate [s]	Motor Efficiency [%]	Torque density [Nm/l]	Power density [kw/l]
1	70	0.01	cont.		0.1	0.00
100	70	0.73	cont.	80%	0.1	0.00
500	70	3.67	cont.	91%	0.1	0.01
1000	70	7.33	cont.	93%	0.1	0.01
1500	70	11.00	cont.	90%	0.1	0.02

\* customization of speeds (e.g. up to 2000rpm) possible;  
**\*\* motor specific performance @ 20°C & 96V; a derating may be necessary depending on power supply & electronics and thermal limitations**



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