



DATASHEET IW 2000 (19")

The DeepDrive IW 2000 in-wheel motor propels mid-size electric vehicles with 19" rims.

The integrated SiC MOSFET inverter, the automotive standard wheel hub unit and the easy-to-use CAN-interface make it plug & play for most electric mobility applications.

The novel motor topology delivers best-in-class efficiency, lowest weight, and inaudible noise emissions.

KEY FEATURES

- 2,000 Nm peak torque
- 180 kW peak power
- up to 480 V battery supply
- 96.2 % peak efficiency
- 34 kg weight incl. inverter
- CAN-Interface for torque & speed control
- controller-integrated, precise and fast slip control
- inaudible noise emissions
- drum brake and disc brake options available



Illustrative picture of available sample –
customer specific brake package possible



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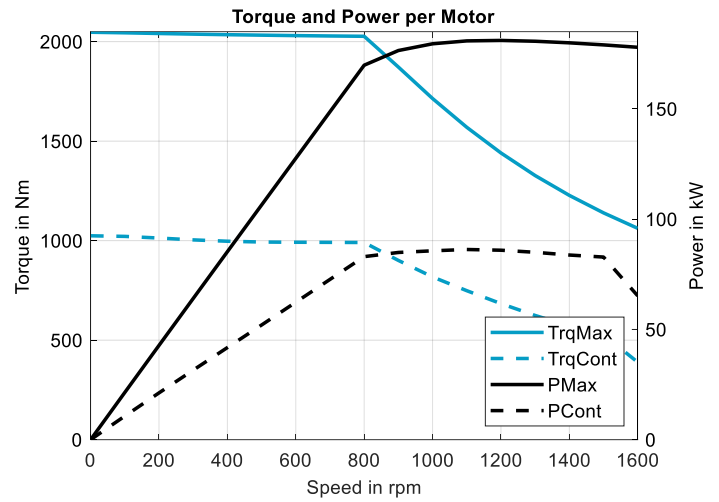
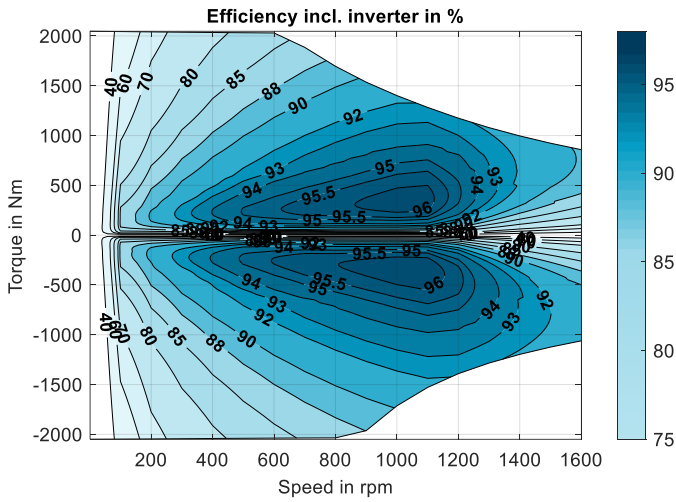
PRODUCT DATA

NAME	SYM.	Value	CONDITIONS / COMMENTS
DC-voltage	U_{dc}	200 ... 480 Vdc	Nominal 380Vdc
LV-Supply voltage	U_{LV}	8.5 ... 16.5 Vdc	Nominal 12Vdc
LV-Supply current	I_{LV}	1.5 A	in operation, $U_{LV}=12$ V
Peak torque (30s)	M_{30s}	2,000 Nm	$T_{Mag}=40^{\circ}C$
Cont. Torque	M_{Cont}	1,000 Nm	$T_c=40^{\circ}C$, $Q_c=8$ l/min
Peak power (30s)	P_{30s}	180 kW	$T_{Mag}=40^{\circ}C$, $U_{dc}=380$ V
Cont. power	P_{Cont}	70 kW	$T_c=40^{\circ}C$, $Q_c=8$ l/min, $U_{dc}=380$ V
DC-current (30s)	$I_{DC,30s}$	500 A	$T_{Mag}=40^{\circ}C$, $U_{dc}=380$ V, $P_{mech}=180kW$
DC-current cont.	$I_{DC,cont.}$	200 A	$T_c=40^{\circ}C$, $Q_c=8$ l/min, $U_{dc}=380$ V
Coolant temperature	T_c	-40 ... 75°C	derating >65°C
Coolant flow rate	Q_c	8 l/min	derating may occur at <8 l/min
Coolant type	water-glycol 50/50		
Pressure drop	Δp	250 mBar	$Q_c=8$ l/min, $T_c=40^{\circ}C$
Speed	n_{max}	1,800 1/min	appr. 240 km/h, $U_{dc}=650$ V
Mass excl. bearing	m	34 kg	Incl. inverter
Diameter	D_{max}	432 mm	Rotor diameter, see drawing
Length	l_{max}	160 mm	incl. inverter, see drawing
EMC Class	EMC	Class 3	Class 5 option available
Peak efficiency	η_{max}	96.2%	$T_{Mag}=40^{\circ}C$, $T_{Cu}=40^{\circ}C$, $U_{dc}=650$ V
WLTP efficiency	η_{WLTP}	92.2%	Vehicle weight 2.200kg



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EFFICIENCY MAP AND OPERATING LIMITS



Conditions: $T_{mag}=40^{\circ}C$, $T_{cu}=40^{\circ}C$, $T_c=40^{\circ}C$, $U_{dc}=380$ V

DRAWING & CAD ENVELOPE-MODEL

[on request]