

NOVA Series

NOVA 30-50-B4 P50 WK

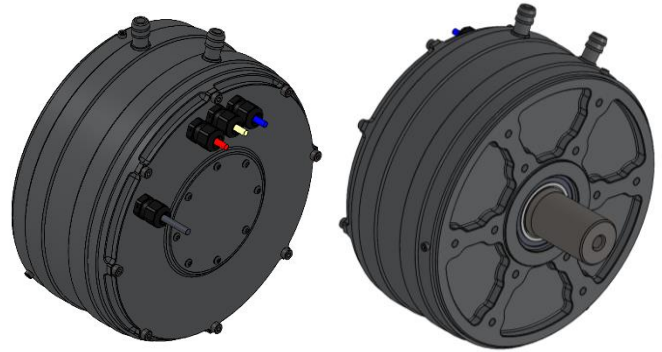
Inrunner BLDC motor with closed housing

Overview

The NOVA 30 Water-Cooled ("WK") is from our family of super rugged inrunner BLDC motors and has been specifically designed for mission critical applications.

Features

- Super robust housing for applications in the harshest environments
- Designed for high shock and vibration loads
- Best power-to-weight-to-robustness ratio in its class
- Wear-free position and temperature sensors included in standard



Specifications

Part number	02-043.050.01-000-098	
Peak output power	30	kW
Peak torque (max. 5s) ⁽¹⁾	80	Nm
Max. speed	5,000	rpm
Voltage range	30-120	V
Speed constant (kV)	37	rpm/V
Diameter (ex. water inlet)	197	mm
Length	93	mm
Weight	6,380	g
Phase cable length	100	mm
Sensor cable length	400	mm
Recommended phase cable extension	16	mm ²
	5	AWG
Protection class	IP53	
Mounting	Front	
Direction of rotation	Both	
Cooling	Water cooled	
Ambient temperature range	-20 to +60	°C
Max. temperature of stator (as measured by sensor)	+100	°C
Position sensor types	Hall effect sensor with UVW-commutation signals	
Temperature sensor	NTC 47 kΩ	
Number of poles	50	
Number of windings	4	
Recommendations for water cooling	Flow of 7 liters-per-minute at max. 40°C inlet temp.; coolant pressure shall not exceed 2 bar/ 29 PSI.	

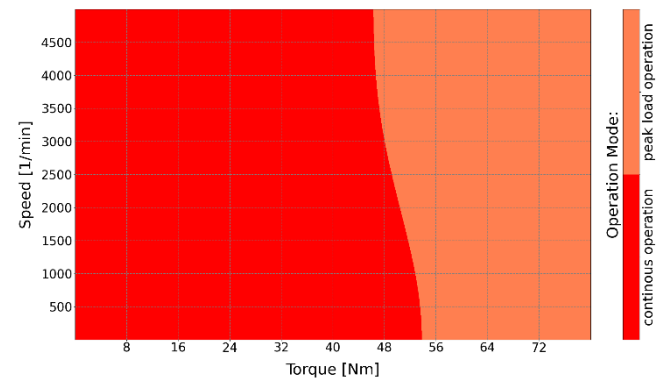
Notes:

⁽¹⁾ Peak torque with sensor-guided ESC. If using sensorless ESC, peak torque may be 10-20% lower.

Complementary Products

- Plettenberg ESCs: MST 140-200, MST 140-250 WK
- Third party ESC from Allocortech
- Plettenberg gold connectors: GC6-00 / GC6-90

Heatmap



Note: Assuming water temperature of 40°C and 7 l/min flow.

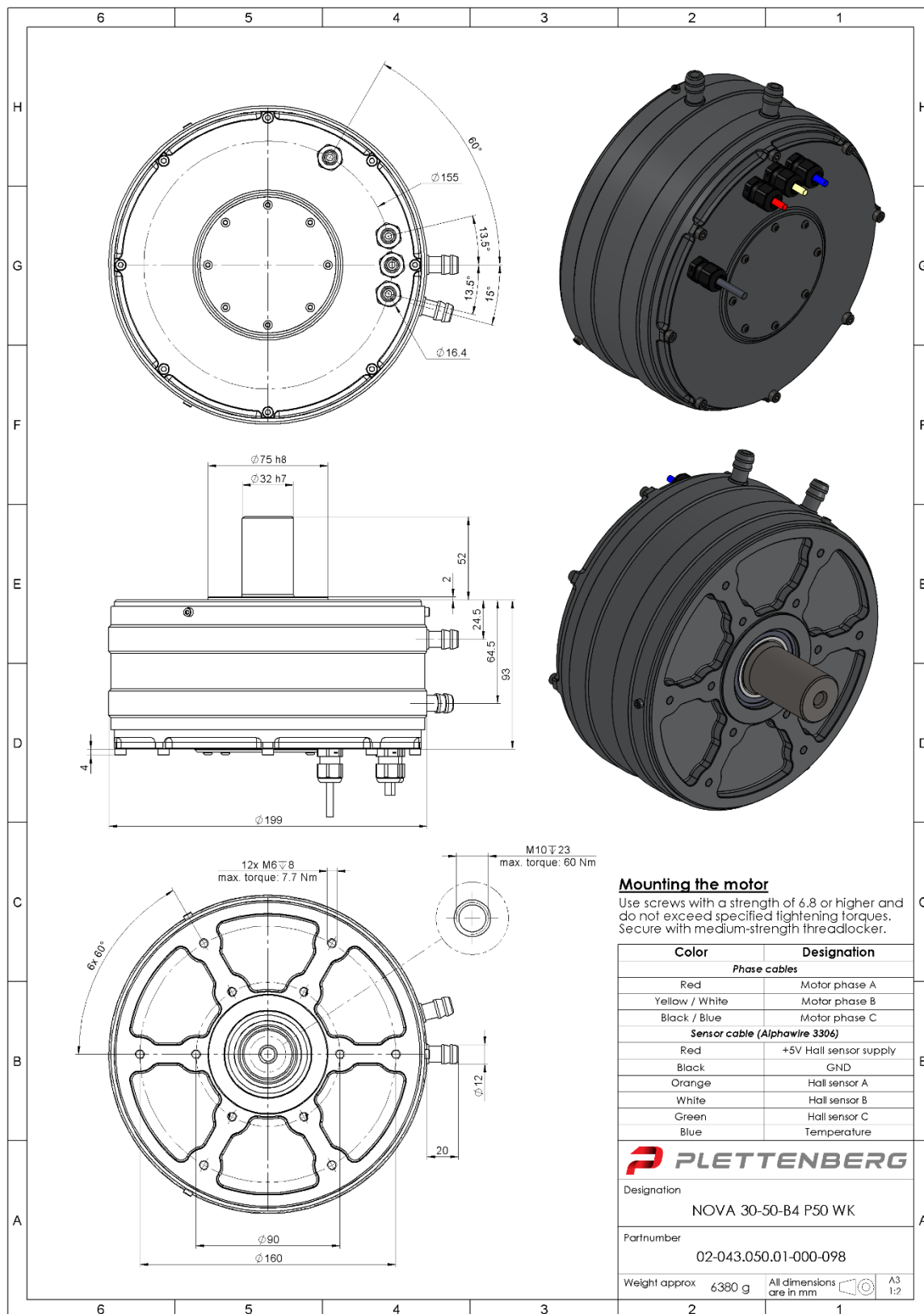
Options & Customization

- Custom winding/kV versions
- MIL-STD 810H or RTCA DO160 qualification
- MTBF/S report
- IP67 protection class
- Aerospace or MIL-DTL-38999 connectors
- Mechanical customization
- High/low temperature versions
- High RPM versions



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Plettenberg Elektromotoren GmbH & Co. KG

Rostocker Straße 30

34225 Baunatal, Germany

T: +49 (0) 56 01 97 96-0

www.plettenbergmotors.com / sales@plettenbergmotors.com

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