

## NOVA Series

# NOVA 15-20-B4 P30 LW

Inrunner BLDC motor with closed housing

### Overview

The NOVA 15 Light-Weight ("LW") is from our family of super rugged inrunner BLDC motors and has been designed for a wide range of mission critical applications.

### Features

- Super robust housing for applications in the harshest environments
- Best power-to-weight-to-robustness ratio in its class
- Wear-free position and temperature sensors included in standard
- Optimized shaft for Plettenberg propeller coupling

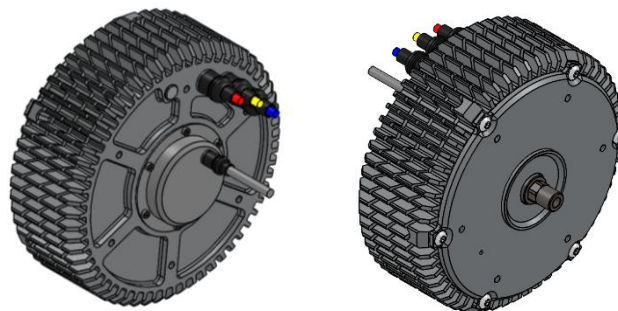
### Specifications

|  |   |
|--|---|
| Part number  | 02-044.020.12-000-339                           |
| Peak output power                                  | 6 kW  |
| Peak torque (max. 5s) <sup>(1)</sup>               | 16 Nm   |
| Max. speed   | 8,000 rpm                                       |
| Voltage range                                      | 15-36 V   |
| Speed constant (kV)                                | 255 rpm/V                                       |
| Diameter   | 138 mm  |
| Length   | 53 mm   |
| Weight   | 1,500 g   |
| Phase cable length                                 | 100 mm  |
| Sensor cable length                                | 400 mm  |
| Recommended phase cable extension                  | 10 mm <sup>2</sup><br>7 AWG                     |
| Protection class                                   | IP54  |
| Mounting   | Front & back                                    |
| Direction of rotation                              | Both  |
| Cooling  | Air 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                                    | 30  |
| Number of windings                                 | 4   |
| Phase resistance <sup>(2)</sup>                    | 7 mΩ  |
| Phase inductance <sup>(2)</sup>                    | 9 μH  |
| Peak thrust  | 31 kg with 32x10.6" prop                        |

#### Notes:

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

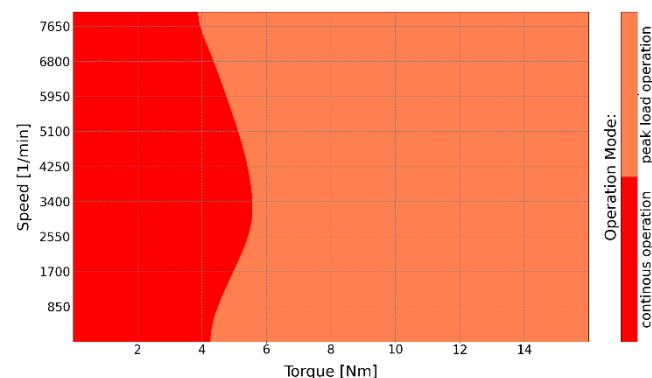
<sup>(2)</sup> Phase-to-phase value



### Complementary Products

- Plettenberg propeller coupling: PC LW 6K 10
- Plettenberg gold connectors: GC6-00 / GC6-90

### Heatmap



Note: Assuming 25°C ambient temperature and 10 m/s airflow at MSL.

### Options & Customization

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

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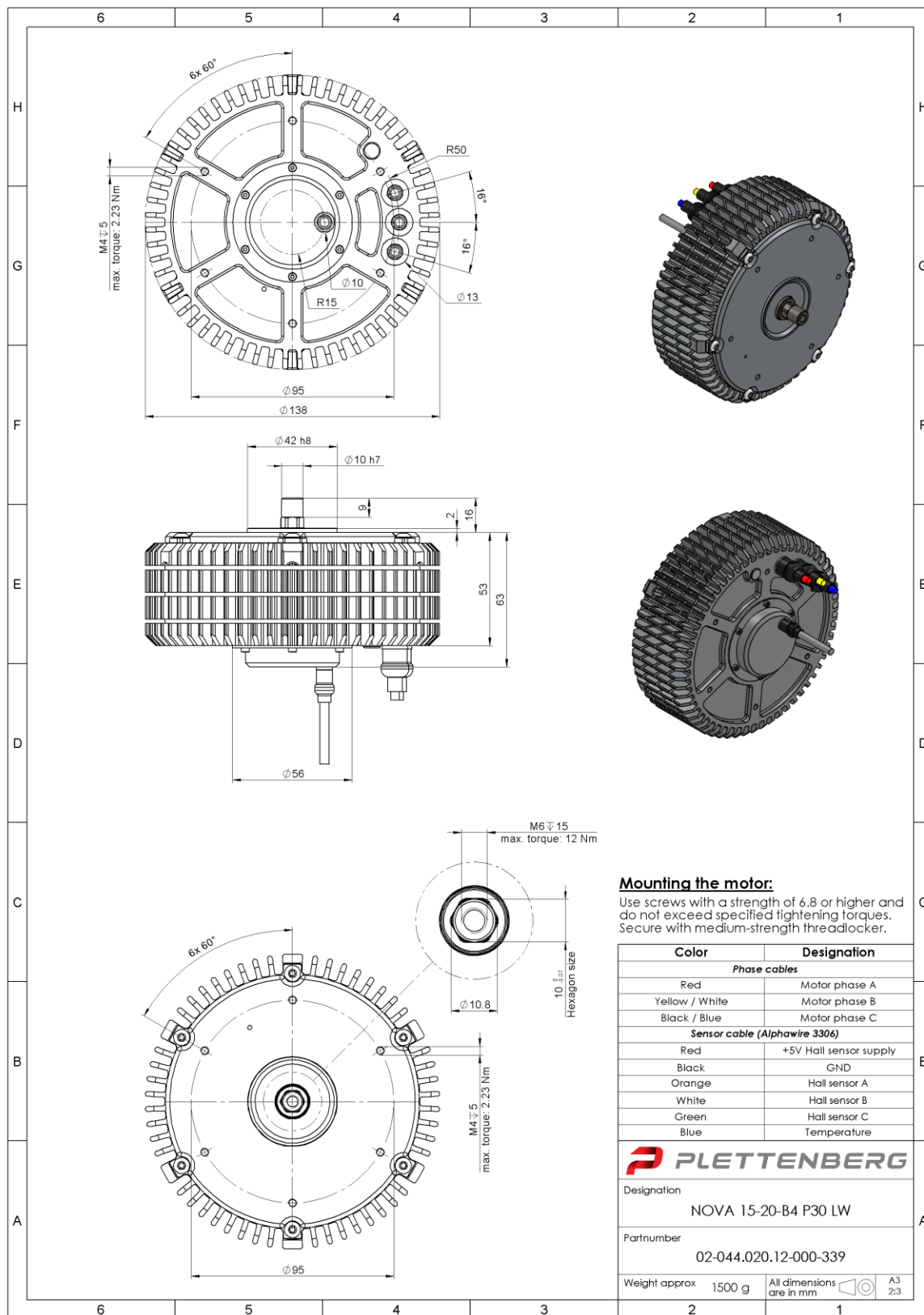
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