

# NOVA 15-25-B12 P30 LW

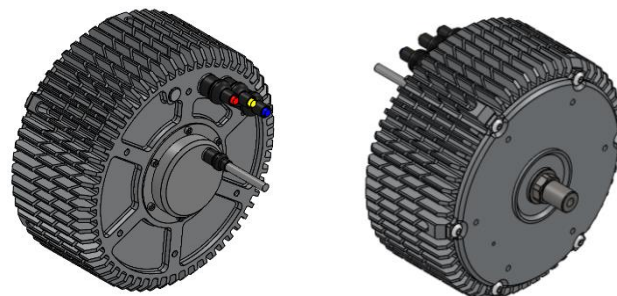
Inrunner BLDC motor with closed housing

## Overview

The NOVA 15 Light-Weight ("LW") is from our family of super rugged inrunner BLDC motors and has been specifically designed for mission critical applications, including uncrewed systems and aerospace.

## Features

- Super robust housing for applications in the harshest environments
- Designed for high shock and vibration loads
- Qualified to MIL-STD 810H
- 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	02-044.025.12-000-342	
Peak output power	7	kW
Peak torque (max. 5s) <sup>(1)</sup>	20	Nm
Max. speed	8,000	rpm
Voltage range	40-120	V
Speed constant (kV)	64	rpm/V
Diameter	138	mm
Length	65	mm
Weight	1,860	g
Phase cable length	100	mm
Sensor cable length	400	mm
Recommended phase cable extension	4	mm <sup>2</sup>
	12	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	12	
Peak thrust	40 kg with 36x12" prop	

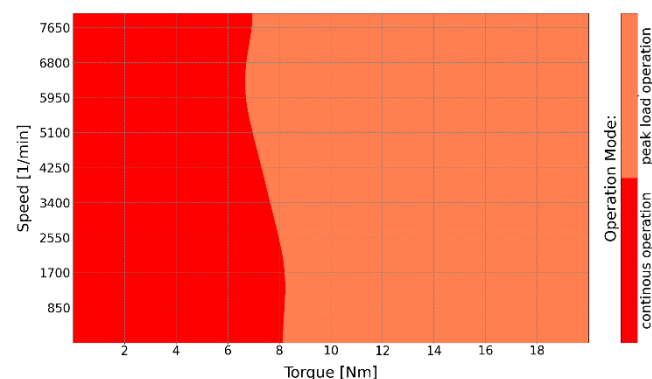
### Notes:

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

## Complementary Products

- Plettenberg propeller coupling: PC LW 6K 12
- Plettenberg ESCs: MST 60-260, MST 60-290, MST 60-130, MST 80-240, MST 80-350, MST 140-200
- Third party ESC from Allocortech
- Plettenberg gold connectors: GC6-00 / GC6-90

## Heatmap



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

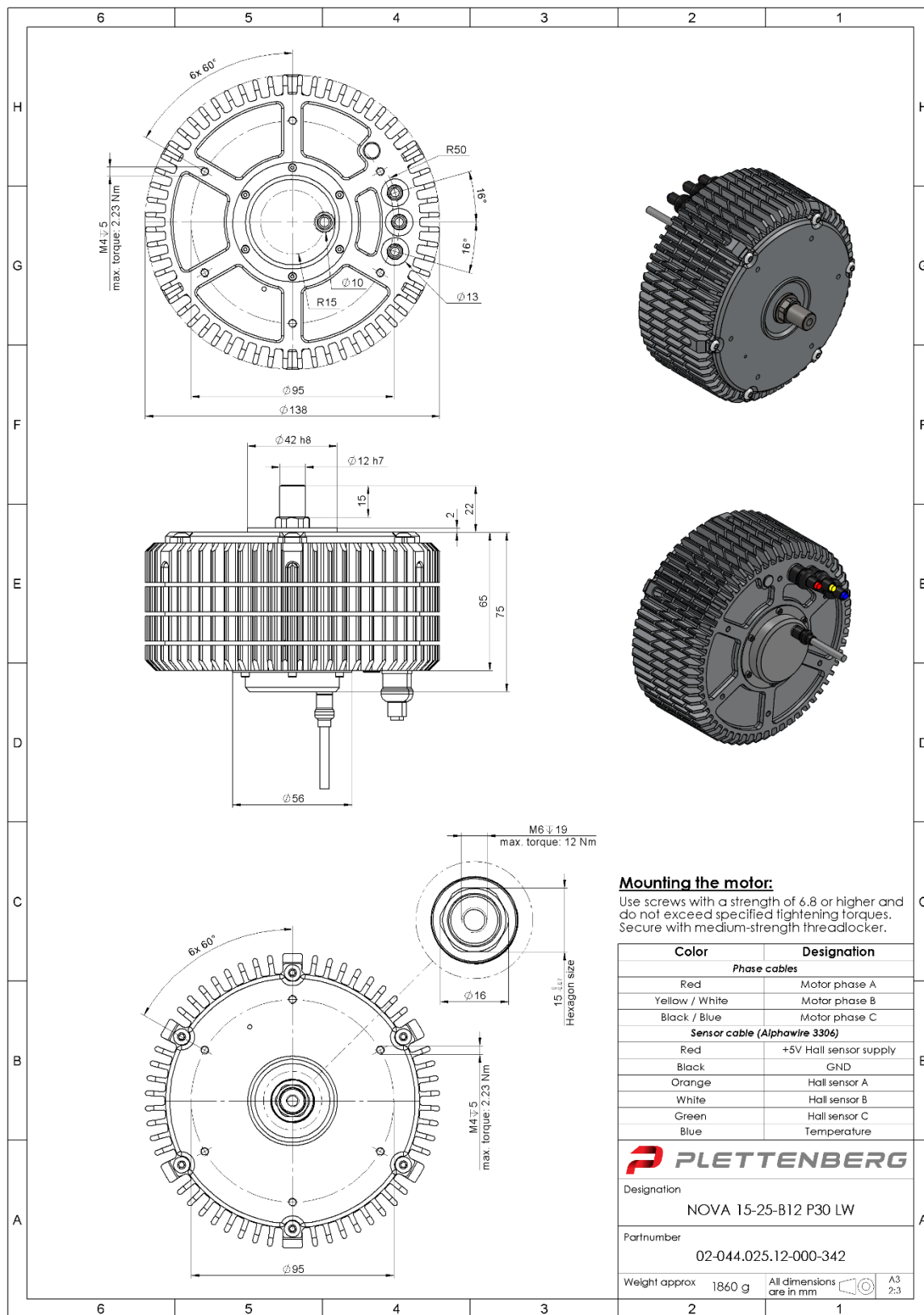
## Options & Customization

- 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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