

EVERLINE®
EV5300 SERIES
UAV PROPULSION MOTORS



FOR HEAVY-LIFT UAVs

- | Payload-Carrying UAVs
- | Mapping & Survey
- | Industrial Inspection
- | OEM Production Programs
- | Defense UAV Platforms



DEFENSE
COMPLIANT



HIGH
EFFICIENCY



FULL
POWER RANGE



UAV
OPTIMIZED



Everline® EV5300 Series motors provide heavy-lift propulsion solutions for payload-carrying UAVs, industrial inspection aircraft, mapping and survey platforms, flight-test aircraft, defense UAVs, and OEM development programs. Built around a 300 KV, 5315-class motor architecture, the EV5300 Series supports propulsion evaluation for larger UAV platforms requiring increased thrust, payload capability, and power.

HEAVY-LIFT UAV PROPULSION

The low-KV, high-torque EV5315-300 supports operation with larger propellers for heavy-lift UAV applications requiring increased thrust, payload capacity, and stable flight performance.

CONSISTENT 5315 MOTOR PLATFORM

Standardized mechanical and electrical characteristics simplify aircraft integration and propulsion-system development. Common platform features include 62 × 44.7 mm dimensions, a 12N14P configuration, 6 mm bolt-mounted shaft interface, 362 g motor weight, and 600 mm lead-wire length.

PERFORMANCE DATA FOR MOTOR SELECTION

Published performance data includes measured thrust, electrical power, current, RPM, and efficiency across multiple tested propeller configurations. These results support aircraft sizing, motor selection, and preliminary engineering evaluation.

ENGINEERED FOR OEM UAV PROGRAMS

The EV5300 Series is available for evaluation as a standard propulsion platform and can be reviewed for OEM production requirements including alternate KV ratings, cable lengths, connector options, labeling, documentation packages, and application engineering support.

FEATURES & SPECIFICATIONS

- 300 KV, 5315-class motor platform
- 62 × 44.7 mm motor dimensions
- 12N14P configuration
- 6 mm bolt-mounted shaft interface
- 362 g motor weight
- 600 mm lead-wire length
- 14 AWG (2.5 mm²) lead wires
- 8S–12S operating range
- Up to 2,500 W maximum power capability
- Published thrust, power, current, RPM, and efficiency data
- OEM customization and application support available
- Defense-program support available

APPLICATIONS

- Heavy-Lift UAVs
- Payload-Carrying Aircraft
- Mapping & Survey Platforms
- Industrial Inspection UAVs
- Research & Development Programs
- Flight-Test Aircraft
- OEM Development Programs
- Defense UAV Platforms

Everline® EV5300 Series motors provide a common heavy-lift propulsion architecture that supports aircraft integration, system evaluation, and scalable UAV development. Published performance data and consistent platform characteristics provide a practical foundation for propulsion-system evaluation and OEM aircraft development.

For additional information or assistance with your UAV propulsion application, contact Pelonis Technologies.

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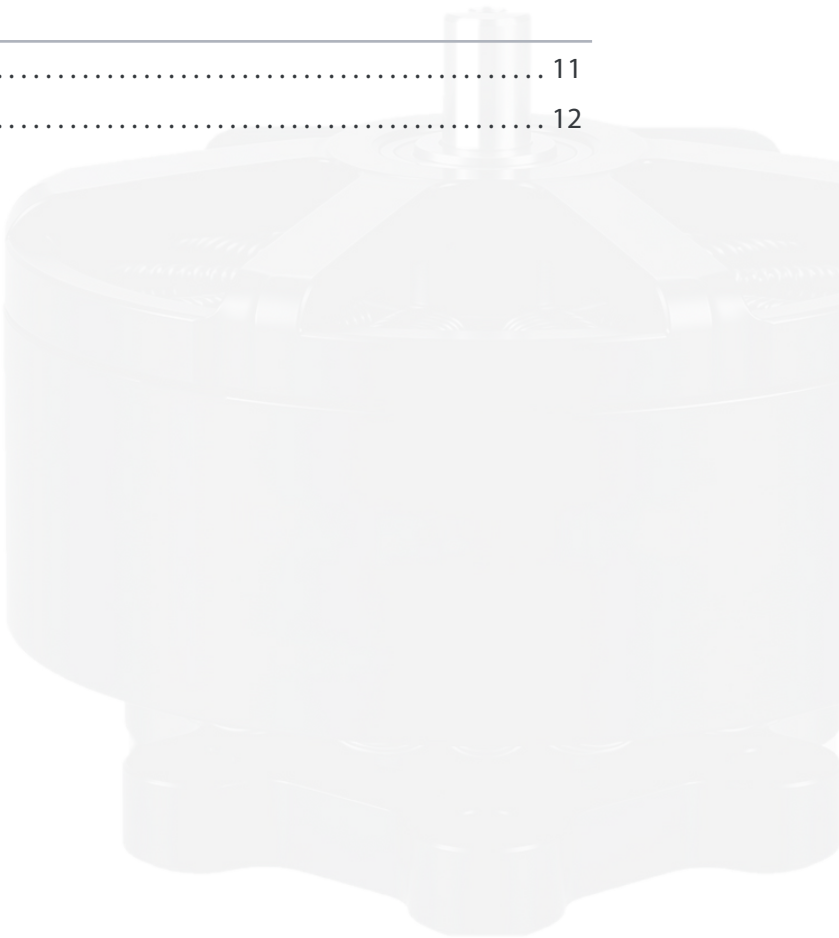
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EV5300 SERIES OVERVIEW

The Everline® EV5300 Series is built around a 300 KV, 5315-class motor platform developed for heavy-lift UAVs, payload-carrying aircraft, industrial inspection systems, mapping platforms, and OEM development programs. The platform supports larger propellers and higher-thrust applications requiring increased payload capability.

Model Number	KV	Application	Best-Fit Mission	Features
EV5315-300	300 KV	Heavy-Lift UAV Propulsion	Heavy-lift propulsion for payload-carrying UAVs, industrial inspection aircraft, mapping platforms, and OEM development programs.	Large 5315-class platform with published 8S performance data across multiple 13-inch and 15-inch propeller configurations.

QUICK REFERENCE & PRODUCT COMPARISONS

Payload / Endurance / Speed Comparisons					
Model Number	Payload Rating	Endurance Rating	Speed Rating	Published Test Coverage	Best-Fit Application
EV5315-300	★★★★★	★★★★★	★★★☆☆	Multiple 8S propeller configurations	Heavy-Lift / Payload UAV

NOTE: Ratings provide relative application guidance based on the overall motor platform and are not determined solely by maximum tested thrust, speed, or efficiency.

Weight / Power / Current / Thrust Comparisons					
Model Number	Weight	Maximum Power	Peak Current	Maximum Tested Thrust	Best-Fit Application
EV5315-300	362 g	2,500 W	52 A	5,719 g	Heavy-Lift / Payload UAV

NOTE: Maximum thrust values are based on tested operating conditions and should not be directly compared without considering aircraft design, battery selection, propeller selection, airflow conditions, voltage configuration, and ESC setup.

MISSION-BASED APPLICATION GUIDE

EV5315-300 propulsion recommendations by UAV application.

UAV Application	Why EV5315-300 Fits	Propeller & Data Notes
Heavy-Lift UAVs	High-torque platform optimized for larger propellers and maximum thrust capability.	The 15 × 7 × 3 at 8S configuration produces up to 5,719 g maximum tested thrust.
Payload-Carrying Aircraft	Supports increased payload capacity and additional thrust margin for larger UAV platforms.	The 13 × 10 × 3 at 8S configuration produces up to 3,650 g maximum tested thrust.
Industrial Inspection UAVs	Supports cameras, sensors, communications equipment, and other industrial payloads.	The 13 × 8 × 3 at 8S configuration provides balanced thrust and efficiency for preliminary evaluation.
Mapping & Survey Platforms	Provides multiple tested propeller options for aircraft sizing and propulsion-system evaluation.	The 13 × 8 × 2 at 8S configuration produces up to 2,700 g maximum tested thrust.
Research & Development Programs	Published configuration data supports propulsion evaluation, aircraft development, and system testing.	Compare thrust, current, RPM, electrical power, and efficiency across the available Propeller Performance Datasheets.
OEM Development Programs	Heavy-lift propulsion platform suitable for OEM evaluation, integration review, and production planning.	Review the available motor, propeller, and battery test configurations during preliminary system development.

RECOMMENDATION:

Start with aircraft size, total aircraft weight, mission profile, payload requirements, battery selection, propeller envelope, current limits, and target flight performance. Then evaluate the EV5315-300 using the appropriate propeller configuration for engineering evaluation and propulsion testing.

NOTE: Mission recommendations are intended as a starting point for propulsion evaluation. Final propeller selection should be validated through application-specific aircraft testing.

ENGINEERING OVERVIEW

The Everline® EV5300 Series uses a 5315-class, low-KV motor platform developed for heavy-lift UAV applications. Published performance data supports evaluation of thrust, electrical power, current, RPM, efficiency, and propeller compatibility across payload, mapping, industrial inspection, and OEM aircraft programs.

Common Platform Attributes	EV5315-300
Stator Class	5315
KV	300 KV
Dimensions	62 × 44.7 mm
Configuration	12N14P
Shaft Interface	6 mm / Bolt-mounted
Weight	362 g
Cable Length	600 mm
Cells	8S–12S
Maximum Rated Speed	13,320 RPM
Idle Current (20 V)	2.2 A
Maximum Power	2,500 W
Peak Current	52 A
Resistance	42 mΩ
Lead Wires	14 AWG (2.5 mm ²)

NOTE: The EV5300 Series uses a 5315-class architecture with a 12N14P configuration and supports operation with 8S–12S battery systems. Motor and propeller selection should be based on aircraft size, payload requirements, battery configuration, propeller envelope, operating voltage, thermal considerations, current limits, and required flight performance.



EV5315-300

Heavy-Lift UAV Propulsion Motor

The EV5315-300 is a 300 KV, 5315-class propulsion motor designed for heavy-lift UAV applications requiring high thrust, larger propeller support, and efficient operation across 8S–12S battery systems.

Applications

- Heavy-lift UAVs
- Payload-carrying aircraft
- Industrial inspection UAVs
- Mapping and survey platforms
- OEM development programs

SPECIFICATIONS

Part Number	: EV5315-300
Stator Size	: 5315
KV	: 300 KV
Dimensions	: 62 × 44.7 mm (2.44 × 1.76 in)
Configuration	: 12N14P
Shaft Interface	: 6 mm / Bolt-mounted
Weight	: 362 g
Cable Length	: 600 mm
Cells	: 8S–12S
Maximum Rated Speed	: 13,320 RPM
Idle Current (20 V)	: 2.2 A
Maximum Power	: 2,500 W
Peak Current	: 52 A
Resistance	: 42 mΩ
Lead Wires (AWG)	: 14 AWG (2.5 mm ²)

* For detailed specifications and motor performance curves, please refer to the complete product specification sheet.

PROPELLER SELECTION GUIDE

The Everline® EV5300 Series has been tested across multiple propeller configurations to support heavy-lift UAV propulsion evaluation, aircraft optimization, and propulsion-system development. This guide provides a quick-reference overview of recommended EV5315-300 configurations based on application objectives. Detailed thrust, RPM, current, power, efficiency, and performance curve data are available in the individual Propeller Performance Datasheets. Recommendations are intended for preliminary configuration screening and should be validated through application-specific aircraft testing.

RECOMMENDED CONFIGURATIONS		
Mission Profile	Recommended Configuration	Maximum Tested Thrust
Mapping & Survey UAV	EV5315-300 + 13 × 8 × 2 @ 8S	2,700 g
Industrial Inspection UAV	EV5315-300 + 13 × 8 × 3 @ 8S	3,179 g
Payload-Carrying UAV	EV5315-300 + 13 × 10 × 3 @ 8S	3,650 g
Heavy-Lift UAV	EV5315-300 + 15 × 7 × 3 @ 8S	5,719 g

* Maximum thrust values shown are based on published bench-test performance data.

PROPELLER CLASS GUIDELINES	
Propeller	Typical Use Case
13-Inch Class	Mapping, survey, industrial inspection, and payload propulsion evaluation
15-Inch Class	Heavy-lift propulsion and maximum-thrust evaluation

NOTE: The EV5300 Series propulsion platform includes performance data across multiple tested motor, propeller, and battery configurations covering mapping and survey aircraft, industrial inspection UAVs, payload-carrying platforms, and heavy-lift applications. Detailed Propeller Performance Datasheets include measured thrust, RPM, electrical power, current, efficiency, and normalized performance curves for engineering evaluation and propulsion-system optimization.

Detailed Propeller Performance Datasheets Available Upon Request

Motor, Propeller & Battery Test Configurations • 8S Testing • Thrust, RPM, Current, Power & Efficiency Data

OEM CUSTOMIZATION OPTIONS

The Everline® EV5300 UAV Propulsion Motor Series can be evaluated as a standard propulsion platform and then reviewed for production-program requirements, including customization, documentation, integration support, and support for Pelonis Technologies' thermal-management solutions, including Air-G Micro Fans, Air-G Micro Blowers, and Ultra-Thin Flexible Heaters. Built around a 300 KV, 5315-class motor architecture, the EV5300 platform supports heavy-lift UAVs, payload-carrying aircraft, industrial inspection systems, mapping and survey platforms, flight-test aircraft, defense UAVs, and OEM development programs.

Customization	Description
KV / winding review	Custom winding requirements or alternate KV targets for production programs.
Cable length	Customer-specific lead-length requirements.
Connector options	Connector termination preferences for OEM assemblies.
Shaft / mounting review	Evaluate application-specific shaft and mounting requirements subject to feasibility review.
Documentation package	Provide Datasheets, performance tables, drawings, and application notes for design review.
Prototype-to-production support	Support prototype evaluation, design reviews, quotation development, and production planning.
Thermal system review	Battery heating, ESC cooling, avionics cooling, payload cooling, and electronics thermal management.
Defense program support	Supply-chain, documentation, and application-review support for government and defense UAV programs.

INTEGRATED UAV THERMAL MANAGEMENT SOLUTIONS

An integrated UAV subsystem approach combines propulsion, battery thermal management, avionics cooling, and payload cooling to support improved performance, reliability, and mission endurance. Everline® EV5300 Series motors provide heavy-lift propulsion, while Ultra-Thin Flexible Heaters, Air-G Micro Fans, and Air-G Micro Blowers help manage critical thermal requirements across UAV platforms. Together, these technologies support reliable operation in heavy-lift, industrial inspection, mapping, payload-carrying, defense, and OEM aircraft applications.

Product Area	UAV Use Cases	Customer Benefits
Everline® EV5300 Propulsion Motors	Heavy-lift multirotors, payload-carrying UAVs, industrial inspection aircraft, mapping and survey platforms, and OEM development programs.	Heavy-lift propulsion solution for payload-carrying, industrial, defense, and OEM UAV platforms.
Ultra-Thin Flexible Heaters	Battery warming, avionics heating, camera and payload heating, and cold-weather operation.	Supports cold-weather operation, battery performance, and environmental reliability.
Air-G Micro Fans	Flight computer cooling, electronics bay airflow, payload electronics cooling.	Improves thermal management of flight-control and onboard electronic systems.
Air-G Micro Blowers	Directed ESC cooling, sensor cooling, avionics and communications equipment cooling.	Provides focused airflow for payloads, sensors, and avionics in compact areas.



GLOSSARY

Terms and Definitions.

TERM	DEFINITION
KV	Motor speed constant expressed in RPM per volt under no-load conditions. Higher KV generally supports increased rotational speed, while lower KV can support different propeller and operating-voltage requirements.
Thrust	Measured force generated by a motor and propeller combination under specified test conditions.
Efficiency	Propulsion efficiency expressed as grams of thrust per watt of electrical power input.
High-Output	Propulsion configuration designed to provide increased thrust, power capability, or operating speed for demanding UAV applications.
ESC	Electronic speed controller used to drive the BLDC motor.
RPM	Revolutions per minute; a measure of motor rotational speed.
BLDC	Brushless DC motor technology commonly used in UAV propulsion systems.
12N14P	Motor configuration consisting of 12 stator slots and 14 rotor poles.
8S–12S	Supported battery cell range for the EV5315-300 propulsion platform. Published Propeller Performance Datasheets currently represent selected 8S configurations.
S (Cell Count)	Number of lithium battery cells connected in series. Example: 8S indicates an eight-cell series battery configuration.
Diameter × Pitch × Blade Count	Standard propeller reference format. Example: 15 × 7 × 3 indicates a 15-inch diameter, 7-inch pitch, three-blade propeller.
UAV	Unmanned Aerial Vehicle (UAV), including multirotor, inspection, mapping, payload-carrying, and research aircraft.
LiPo	Lithium polymer battery technology commonly used in UAV power systems.
Payload	Mission-specific equipment carried by the UAV, including sensors, cameras, communications equipment, and specialized systems.
Propeller Reference	Specific propeller configuration used during published performance testing.
Torque	Rotational force generated by the motor. Torque helps determine the motor's ability to drive propellers under load.
Heavy-Lift UAV	UAV platform designed to carry larger payloads requiring increased propulsion-system thrust capability.
OEM	Original equipment manufacturer integrating Everline® motors into its own UAV platform.



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