KURCHS

COMMERCIAL UAV PROPULSION

# 6215 200KV

## Heavy-lift propulsion for large multirotor and industrial UAV platforms.

Measured thrust, electrical load and efficiency are presented from the supplied dynamometer files, with the installation data needed for engineering review.

24N28P | 376 g | 12S




| MAXIMUM THRUST | PEAK EFFICIENCY | BATTERY CONFIGURATION | MOTOR MASS |
|---|---|---|---|
| **12,324 g** | **9.63 g/W** | **12S** | **376 g** |
| 100% throttle / HQ18X10X3 | 30% throttle | 1.12A (20V) | Ø69.4×59.5mm |

Values are based on supplied dynamometer files. Aircraft results vary with propeller, battery, ESC and airframe configuration.

PRODUCT SPECIFICATIONS

## The essential numbers, in one place.



SELECTED CONFIGURATION

# 24N28P / 200KV

selected KV available in the supplied data set.

MAXIMUM TEST POWER

## 3,945 W

Measured test value for this configuration.

MAXIMUM CURRENT

## 83.36 A

Recorded in the supplied test data.

| | | | |
|---|---|---|---|
| MOTOR MODEL | Kurchs 6215 | CONFIGURATION | 24N28P |
| KV | 200KV | BATTERY CONFIGURATION | 12S |
| MAX POWER | 3,945 W | MAX CURRENT | 83.36A |
| MOTOR DIMENSIONS | Ø69.4×59.5mm | WEIGHT | 376 g |
| MOUNT | 4-M4mm | RECOMMENDED PROPELLER | HQ18X10X3 |
| NO-LOAD CURRENT | 1.12A (20V) | PHASE RESISTANCE | 55.1 mOhm |
| SHAFT | 6mm | SOURCE PAGE | 24 |

Basic values use the supplied product specification. Performance data is kept separate and reflects the listed test propeller and throttle range.

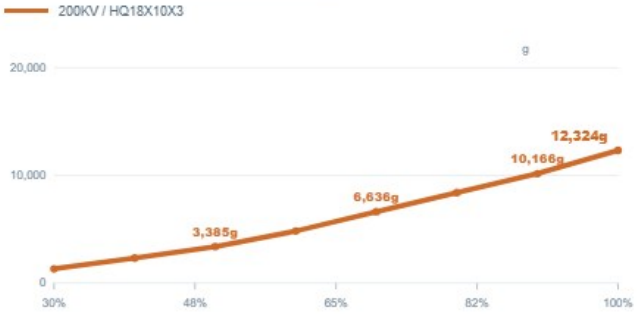
MEASURED PERFORMANCE

# Measured performance across the tested range.

| COMPARED PROFILES | DATA MODE | THROTTLE RANGE |
|---|---|---|
| 1 | Selected KV | 30-100% |

## Thrust comparison

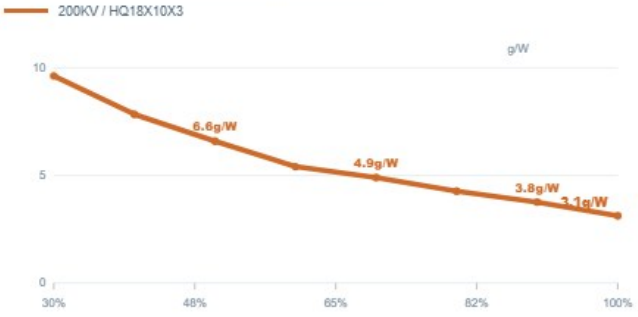
Each curve uses the test propeller listed in the legend.




200KV max: 12,324 g

## Efficiency comparison

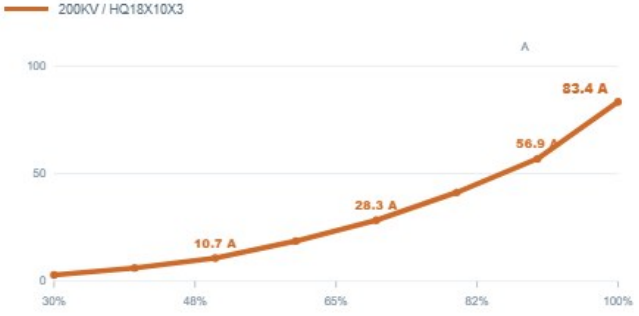
Peak values are taken directly from the supplied test rows.




200KV peak: 9.63 g/W

## Current comparison

Measured current draw through the supplied throttle range.




200KV max: 83.36 A

## Power comparison

Measured input power stays aligned with each plotted test point.




200KV max: 3,945.40 W

SELECTED OPERATING PROFILE

# One KV. Every supplied test point.

## 200KV

SELECTED

HQ18X10X3

| MAX THRUST | PEAK EFFICIENCY | MAX CURRENT | TEST PROPELLER |
|---|---|---|---|
| **12,324 g** | **9.63 g/W** | **83.4 A** | **HQ18X10X3** |

MEASURED RANGE

**30%-100%**

| Selected KV | Throttle | Voltage | Current | Thrust | RPM | Power | Efficiency |
|---|---|---|---|---|---|---|---|
| 200KV HQ18X10X3 | 30% | 47.96 V | 2.86 A | 1,321 g | 2,548 | 137.20 W | 9.63 g/W |
| | 40% | 47.94 V | 6.16 A | 2,317 g | 3,311 | 295.50 W | 7.84 g/W |
| | 50% | 47.91 V | 10.72 A | 3,385 g | 3,971 | 513.60 W | 6.59 g/W |
| | 60% | 47.85 V | 18.68 A | 4,834 g | 4,706 | 893.80 W | 5.41 g/W |
| | 70% | 47.76 V | 28.34 A | 6,636 g | 5,502 | 1,353.40 W | 4.90 g/W |
| | 80% | 47.67 V | 41.29 A | 8,402 g | 6,145 | 1,968.10 W | 4.27 g/W |
| | 90% | 47.55 V | 56.88 A | 10,166 g | 6,720 | 2,704.60 W | 3.76 g/W |
| | 100% - PEAK | 47.33 V | 83.36 A | 12,324 g | 7,347 | 3,945.40 W | 3.12 g/W |

**Complete test set:** All 8 supplied measured points are shown for this KV.

**Missing values:** blank entries remain blank; no data is interpolated.

ENGINEERING ANSWERS

# Designed around real operating conditions.

POWER DEVELOPMENT

## 83.4 A measured peak

Power draw increases through the measured throttle range. The curve below keeps electrical load visible instead of reducing the product to one maximum figure.




PEAK EFFICIENCY

**9.63 g/W**

PEAK POWER

**3,945 W**

01

THERMAL DESIGN

### Class H winding supports sustained output.

High slot-fill copper and controlled winding resistance reduce avoidable heat build-up during longer missions.

**Peak efficiency: 9.63 g/W at 30%.**

02

ROTATING STABILITY

### Balanced construction supports smooth RPM.

The rotor assembly and matched bearings are designed to keep rotation stable through changing throttle demand.

**Measured range: 30%-100%.**

03

CURRENT DELIVERY

### Electrical data is shown with the thrust data.

Voltage, current and power remain visible alongside thrust so buyers can check the complete power path.

**Maximum recorded current: 83.36 A.**

04

EFFICIENCY AT THE PEAK

### Maximum output comes with a different efficiency point.

The page separates the highest efficiency point from the highest throttle point instead of presenting only the peak thrust value.

**Highest throttle point: 100% · 3.12 g/W.**

STRUCTURE AND FIT

# Every layer has a functional role.

01 / ROTOR

### CNC Rotor Bell and Top Plate

Machined aluminum rotor construction with controlled balance.

02 / STATOR

### Stator and Magnets

Class H copper winding paired with high-flux curved magnets.

03 / BASE

### Machined Base Flange

Mounting interface for repeatable alignment and installation.




04 / BEARING

### Precision Bearing Stack

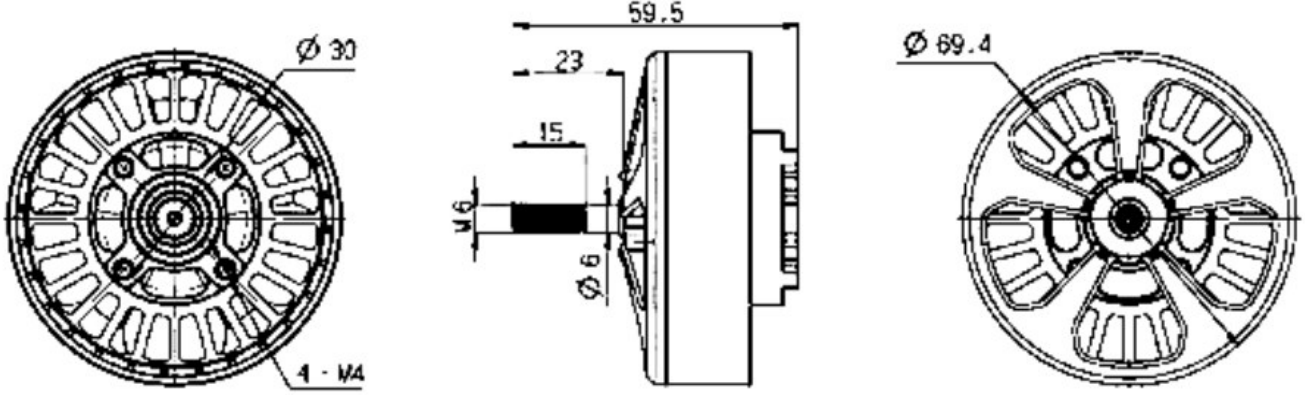
Low-friction bearing support for stable shaft rotation.

05 / FASTENER

### High-Strength Fastener

Reliable clamping for the rotating assembly.

## 工程图 / Engineering Drawing




| BODY SIZE | WEIGHT | MOUNT |
| --- | --- | --- |
| **Ø69.4×59.5mm** | **376 g** | **4-M4mm** |

COMPONENT CLOSE-UPS

# The motor is the sum of its interfaces.



01 / WINDING

### Class H Copper Stator

High slot-fill winding for stable electrical and thermal behavior.



02 / STRUCTURE

### CNC Rotor Bell

Machined aluminum structure with balance control.



03 / MAGNETISM

### Curved Rotor Magnets

High-flux magnets support torque and magnetic efficiency.



04 / ROTATION

### Precision Bearings

Low-friction support for smooth high-speed rotation.



05 / INSTALLATION

### CNC Base Flange

Stable mounting geometry for repeatable airframe installation.



06 / FASTENING

### High-Strength Fastener

Reliable clamping for rotor-stack alignment.



COMPANY PROFILE

# Who We Are

Kurchs is a professional manufacturer of drone brushless motors, integrating R&D, precision machining, assembly and testing. Focused on the power motor industry, we continuously improve product quality with a full in-house production chain from component machining to finished motor delivery.

Our factory covers brushless motor production, CNC machining, wire harness and injection molding, supporting stable supply for global commercial and industrial UAV customers.

R&D & Design | Precision Machining | Assembly & Testing | OEM / ODM

OEM / ODM CUSTOMIZATION

# Adapt the platform to your airframe.

## Available engineering scope

| | |
|---|---|
| **Motor configuration** | 24N28P / 200KV selected configuration. |
| **Propeller pairing** | HQ18X10X3 |
| **Mounting** | 4-M4mm |
| **Electrical system** | 12S · 1.12A (20V) |
| **Engineering files** | Dyno report and STEP / IGES files available on request. |

## 5-stage engineering workflow

**01 Requirements confirmation**
Airframe, propeller, voltage and target thrust are defined.

**02 Drawing and materials**
Mechanical interface and material requirements are reviewed.

**03 Sample making**
Evaluation samples are prepared for fit and performance testing.

**04 Dyno verification**
Thrust, current, RPM, power and efficiency are checked.

**05 Batch production**
Approved specifications move into scheduled production.

QUALIFICATION AND DELIVERY

# Compliance and shipping without guesswork.




CE / EMC




CE / LVD




RoHS

Certificate documents are available for destination-specific compliance review.



### Air Freight and Express

Prototype and urgent-order delivery via international express or air freight.



### Ocean Freight

FCL or LCL planning for volume production orders.



### Land and Railway

Cross-border multimodal delivery where the route is available.

SOURCING QUESTIONS

# The final checks before sampling.

### Which propeller and battery should I pair with 200KV?

The tested setup uses HQ18X10X3 with 12S. Final choice depends on airframe weight, target thrust and flight time.

### Are other KV versions shown?

No additional KV is listed for this configuration.

### What data is shown for this model?

The table lists measured voltage, current, thrust, RPM, power, efficiency and temperature where the supplied data records those fields.

### What is the test range?

The selected configuration is plotted from 30% to 100% throttle. No missing points are interpolated or invented.

### What sample and engineering files are available?

Evaluation samples are planned at 5-7 business days. Dyno data and STEP / IGES files are available within 24 hours after confirmation.

### What is the OEM / ODM MOQ?

Evaluation samples are available from 1-4 units. Custom OEM / ODM production starts at 50 units.