



**KOLEKTOR**

# ELECTRIC MOTORS & DRIVES SOLUTIONS FOR MARINE INDUSTRY

PERMANENT MAGNET BRUSHLESS MOTORS FOR  
PROPULSION AND AUXILIARY APPLICATIONS

**KOLEKTOR** Mobility

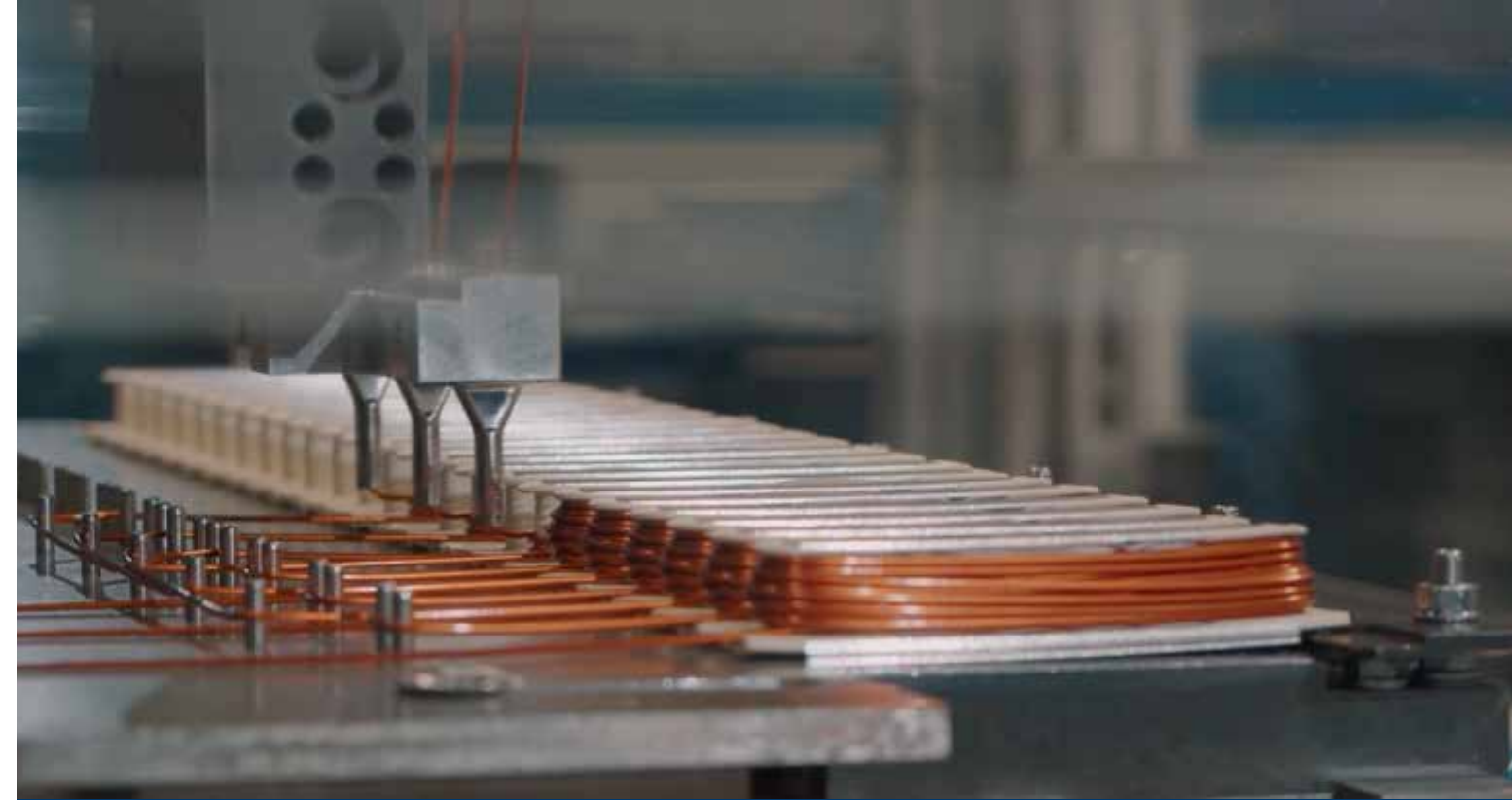


With **60 years of tradition** and experience in the development and manufacturing of components and systems for **e-mobility**, we are positioned among the most reliable global technology and know-how providers of comprehensive solutions in the field of **brushless permanent magnet synchronous motors**.

We offer our business partners a wide range of in-house technical knowledge and manufacturing expertise.

Beside desing & manufacturing our services include collaboration and support for business partners in the initial project phases, focusing on defining the technical, quality and validation requirements for the product.

The development and validation of the product are based on the V-model of electro-mechanical system and embedded software development, integration, and verification.



Over **20 years of experience**



Product **development** of systems



**In house production** of **electronics, motor components** and **systems**



**Strong competencies** in motor control, motor design and industrialisation technologies

# E-MOTOR SOLUTIONS FOR NAUTIC & MARINE APPLICATIONS

**TROLLING**



**OUTBOARD**



**INBOARD**



**AUXILLARY**



# APPLICATIONS / FUNCTIONS OF MOTORS

- **MAIN PROPULSION**
- **ELECTRIC GENERATOR**
- **TRUSTERS**
- **WINCHES AND LIFTS**
- **STABILIZATION SYSTEMS**
- **HYDRAULIC OIL PUMP**
- **WATER PUMP**
- **LINEAR MOTOR / ACTUATOR**

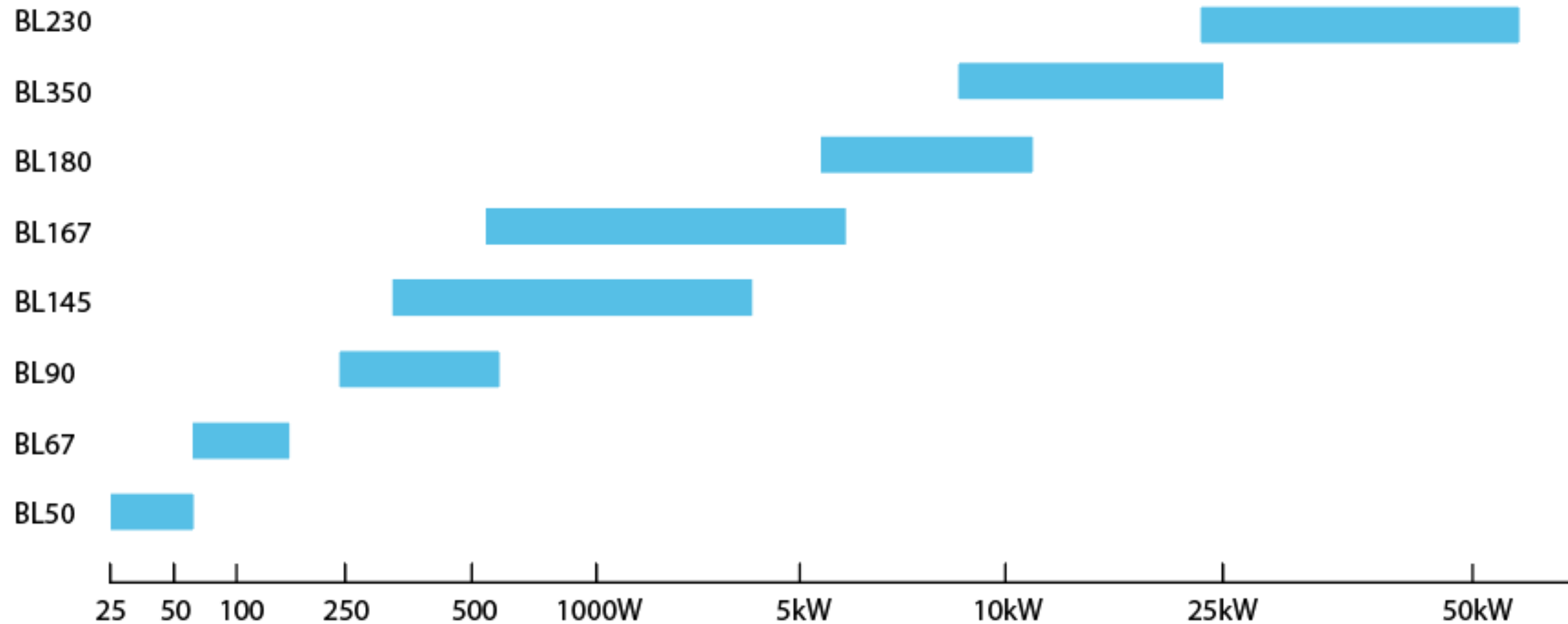


# PERMANENT MAGNET BRUSHLES MOTORS

- **IN-HOUSE SIMULATIONS & DESIGN**
- **SCALABLE DESIGNS**
- **SURFACE MOUNTED MAGNETS**
- **OVERMOLDING CAPABILITIES**
- **GEARBOX INTEGRATIONS**
- **DIFFERENT ENCODERS**
- **ELECTRO-MAGNETIC BREAKS**
- **VARIOUS WINDING TECHNOLOGIES**
- **AUTOMATED PRODUCTION**



# PRODUCT GROUPS MOTORS AND DRIVES



## Continuous mechanical power

The chart enumerates typical characteristics associated with each motor group. Variations in motor length, corresponding to distinct values of Nominal torque, are discernible within each motor group.

Values in presentation correspond to measured motor characteristics at 23 C ambient temperature. Increased operational values for S1 and S2 can be achieved through enhanced heat dissipation from the assembled motor winding.





# MAIN PROPULSION MOTORS

MOTOR SIZE		Nominal Voltage	Nominal power	Peak power	Motor size / weight
<b>BL230</b>		400 V	50 kW	n/a	dia = 270 mm L = 220 mm  55 kg  (2)
<b>BL350</b>		60 V	25 kW	32 kW	dia = 420 mm L=200 mm  110 kg  (1)
<b>BL180</b>		96 V	6kW - 12 kW	10kW - 20kW	dia = 220 mm L= 250-300 mm  22 - 27 kg
<b>BL90</b>		24 V 48 V 96 V	600-1000 W	up to 1,5 kW	dia = 140 mm L = 220 mm  9 kg  (3)

(1) - with assembled motor control unit

(2) - with separated motor control unit

# AUXILIARY MOTORS

MOTOR SIZE		Nominal Voltage	Nominal power	Peak power	Motor size / weight
<b>BL90</b>		24 V 48 V 96 V	250-600 W	up to 1kW	dia = 140 mm L = 220 mm  9 kg  (3)
<b>BL67</b>		12 V 24 V	up to 200 W	up to 260 W	dia = 70 mm L=80 mm  0,8 kg  (4)
<b>BL62</b>		24 V 48 V	up to 400W	up to 800 W	dia = 70 mm L=230 mm  2,2 kg  (4),(3)
<b>DC LINEAR MOTORS</b>		24 V	up to 400 W	n/a	versus

(3) - with integrated gearbox, brake and encoder

(4) - with integrated motor control unit



# MOTOR CONTROLLERS

- IATF 16949 AND ISO 26262 CERTIFIED
- AUTOMOTIVE SPICE LEVEL 2
- IN-HOUSE EMS
- DC OR AC POWER SUPPLY
- LOW & HIGH INPUT VOLTAGES
- MOTOR INTEGRATED SOLUTIONS
- GAS & MEDIA TIGHT ELECTRONICS
- SPEED OR TORQUE CONTROL
- LIN & CAN COMMUNICATION





# ABOUT US

- HEADQUARTERS | **Idrija, Slovenia, EU**
- **3369** employees
- EUR **396 million** in turnover
- **18** legal entities
- **FIELDS** | passenger cars,  
commercial vehicles, industry
- Following the megatrend of the  
**green transition** to a **carbon-free society**

\*All information is related to the fiscal year 2023