



KOLEKTOR



PERMANENT MAGNET SYNCHRONOUS MOTORS, DRIVES AND E-PUMPS

ABOUT US

HEADQUARTERS | **Idrija, Slovenia, EU**

2688 employees

EUR **393 million** in turnover

13 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 2025

www.kolektor.co





Mission

To resolve the technological challenges of the future.



Vision

We will be among the leaders in individual market niches, thereby supporting customer growth and development.

KEY MILESTONES

1963

Year of foundation - start of production of commutators



KOLEKTOR

1995

Independent marketing under KOLEKTOR brand name

2003

Start of electronics (BLDC) development



2005

Start of production of hybrid components



2006-08

Start of production of magnetic components



2013

Start of production of BLDC drives for marine & nautics



2015

Start of R&D activities on hydraulics (e-pumps)



2016

M&A of Micromotor from Switzerland



2017

Opening of
Competence center
for Magnetic Materials



2019

Development of
high volume
production technology
and equipment



2018

Start of high quantity
production of
outboard marine drives



2020

SOP of high volume
electrical drive system
for automotive customer



2023

Celebrating
60 years
of Kolektor



2023

Electrical drive system
for hybrid transmission
e-pump (BEV vehicle)



2024

Low voltage-high power
motor-generator for
hybrid marine yachts



2026

Traction drive
for robotic
applications



GROWTH BASED ON COMPETENCES

SYSTEMS



COMPONENTS



AND HIGH VERTICAL INTEGRATION

TECHNOLOGIES

Plating & Metalization

Copper forming & Precision stamping

Reel-2-Reel Stamping & Molding

Thermoset & Thermoplast
polymer molding

Compounding
magnetic material

Welding & Bonding

Electronic Manufacturing
Services

COMPETENCES

Product development
acc to IATF 16949

Automotive spice

Product Lifecycle Management

Electromagnetic FEA Simulations

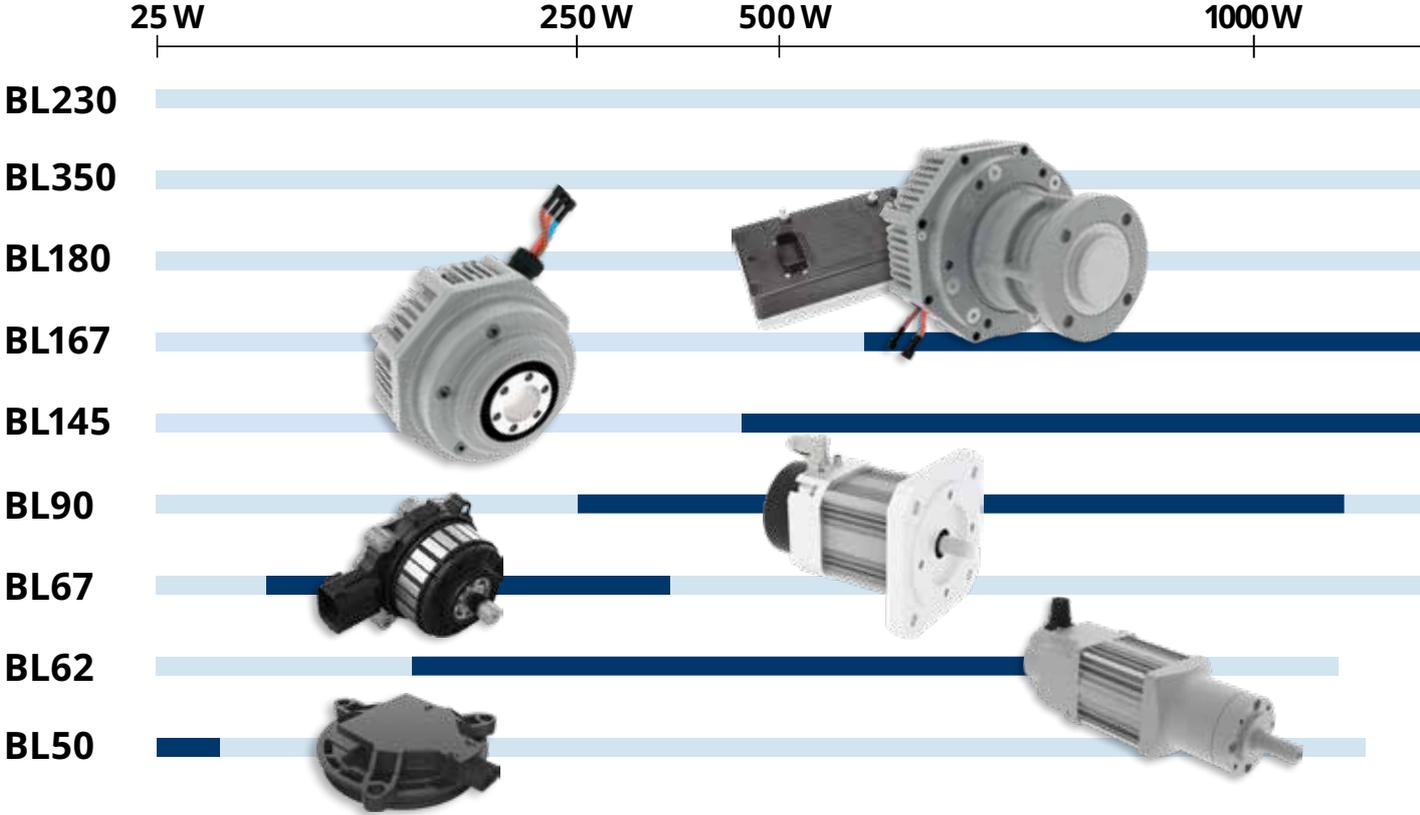
Mechanical & Thermal FEA Simulations

CFD Simulations

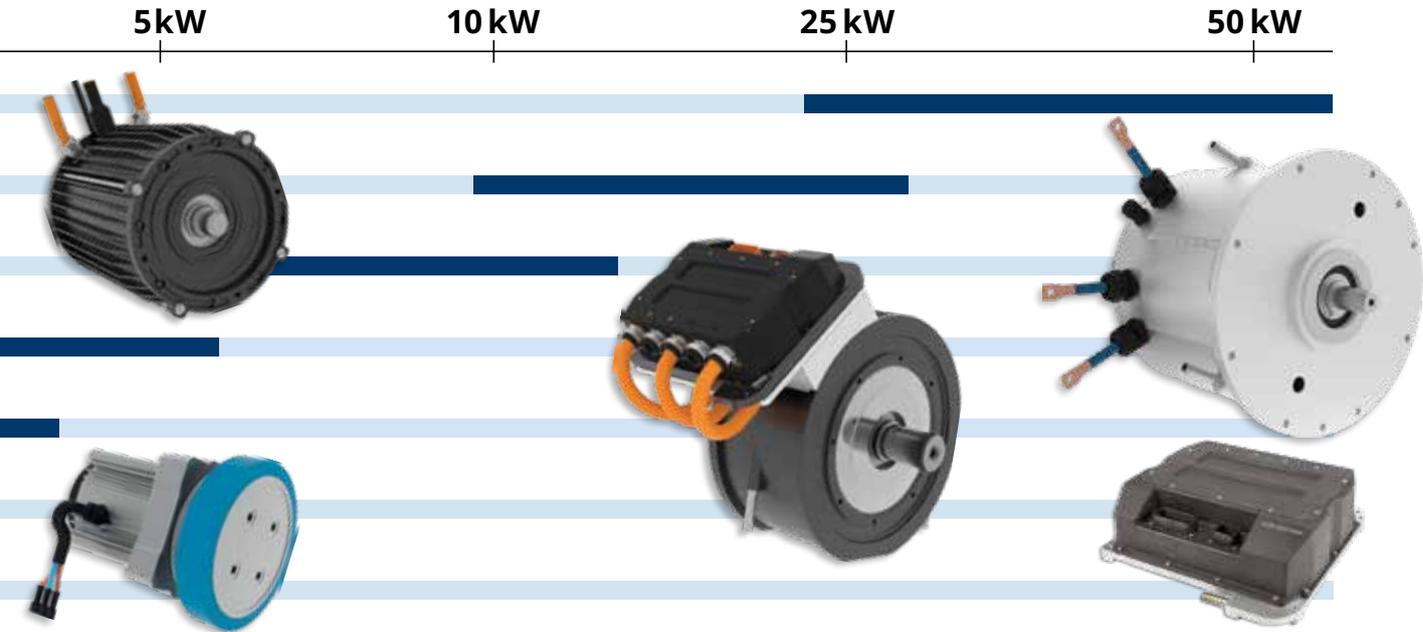
Embedded SW and HW Development

Production & Validation

INTERNAL PERMANENT MAGNET SYNC



CHRONOUS MOTORS AND DRIVES



The mechanical power values represent long-term operation of the motor (S1 operating point) at room temperature in the test environment.

The final values that can be achieved by the motor depend on its installation in the final application and the system for dissipating heat from the motor to the environment.

Short-term loads (S1, S2 operating point) may be 2-3 times the nominal values (S1) shown in the graph.

FOR A DIVERSE RANGE OF APPLICATIONS

PASSANGER CAR



TRUCK & TRAILER



BUS



**DEFENSE &
SECURITY**



**RAIL ELECTRIFIED
SOLUTIONS**



**TRANSPORT
& LOGISTICS**

CONSTRUCTION



AGRICULTURE



MARINE



MAINTENANCE & CLEANING



INDUSTRIAL AUTOMATISATION



WAREHOUSE AUTOMATISATION



AND INDUSTRIES / MARKETS

MATERIAL HANDLING



BUILDING AUTOMATISATION



HOSPITALITY ROBOTICS



MEDICAL MOBILITY



HOUSEHOLD APPLIANCES



MEDICAL ROBOTICS



SYSTEM APPLICATIONS

E-TRANSMISSION



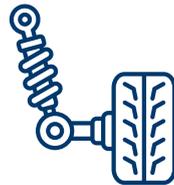
E-AXLE & E-PTO



COMBUSTION
ENGINE (H2, ICE)



STEERING &
BRAKING

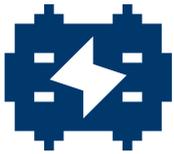


SUSPENSION



THERMAL
MANAGEMENT

**BATTERY
MANAGEMENT**



**POWER ACTUATORS
INTERIOR & EXTERIOR**



ADAS



**MOBILE
HYDRAULICS**



**OUTDOOR
MOBILE MACHINES**



**INDOOR MOBILE
MACHINES**

SYSTEM APPLICATIONS

**INDUSTRIAL
ROBOTS**



**AUTOMATION
EQUIPMENT**



**PERSONAL ASSIS-
TANCE EQUIPMENT**



**SERVICE /
MOBILE ROBOTS**



**PROPULSION &
AUXILIARIES**



**CONVERTERS
(DC-DC)**

CHARGERS & INVERTERS



INDUSTRIAL PRINTERS



E-BIKE



....

YOUR APPLICATION

....

BL50 - PMBL Drive

Efficient BLDC drive with integrated MCU

High power density

Gas & media tight electronics



Nominal DC voltage [V]	12
Nominal supply DC current [A]	6
Nominal phase current [A]	6,5
Nominal torque [Nm]	0,035
Nominal speed [RPM]	16000
Nominal mechanical power [W]	59
Nominal efficiency [%]	90
IP protection class	IP6K4K
Weight [kg]	0,35
Gearbox ratio	n/a

Peak phase current [A]	18
Peak torque [Nm]	0,095
Peak torque speed [RPM]	16000
Peak mechanical power [W]	
Electromagnetic brake [V]	n/a
Encoder sensor type & voltage	n/a
Temperature sensor	n/a
Motor control unit	YES
MCU communication protocol	LIN

BL62 - PMBL Drive

Designed for small mobile robots

Integrated Motor control unit

Adjustable gearbox ratio



Nominal DC voltage [V]	48	Peak phase current [A]	35
Nominal supply DC current [A]	16,6	Peak torque [Nm]	3
Nominal phase current [A]	18	Peak torque speed [RPM]	4000
Nominal torque [Nm]	1,5	Peak mechanical power [W]	1256
Nominal speed [RPM]	4300	Electromagnetic brake [V]	24
Nominal mechanical power [W]	676	Encoder sensor type & voltage	n/a
Nominal efficiency [%]	85	Temperature sensor	n/a
IP protection class	IP65	Motor control unit	YES
Weight [kg]	3,5	MCU communication protocol	CAN
Gearbox ratio	n/a		

BL67/20 - PMBL Drive

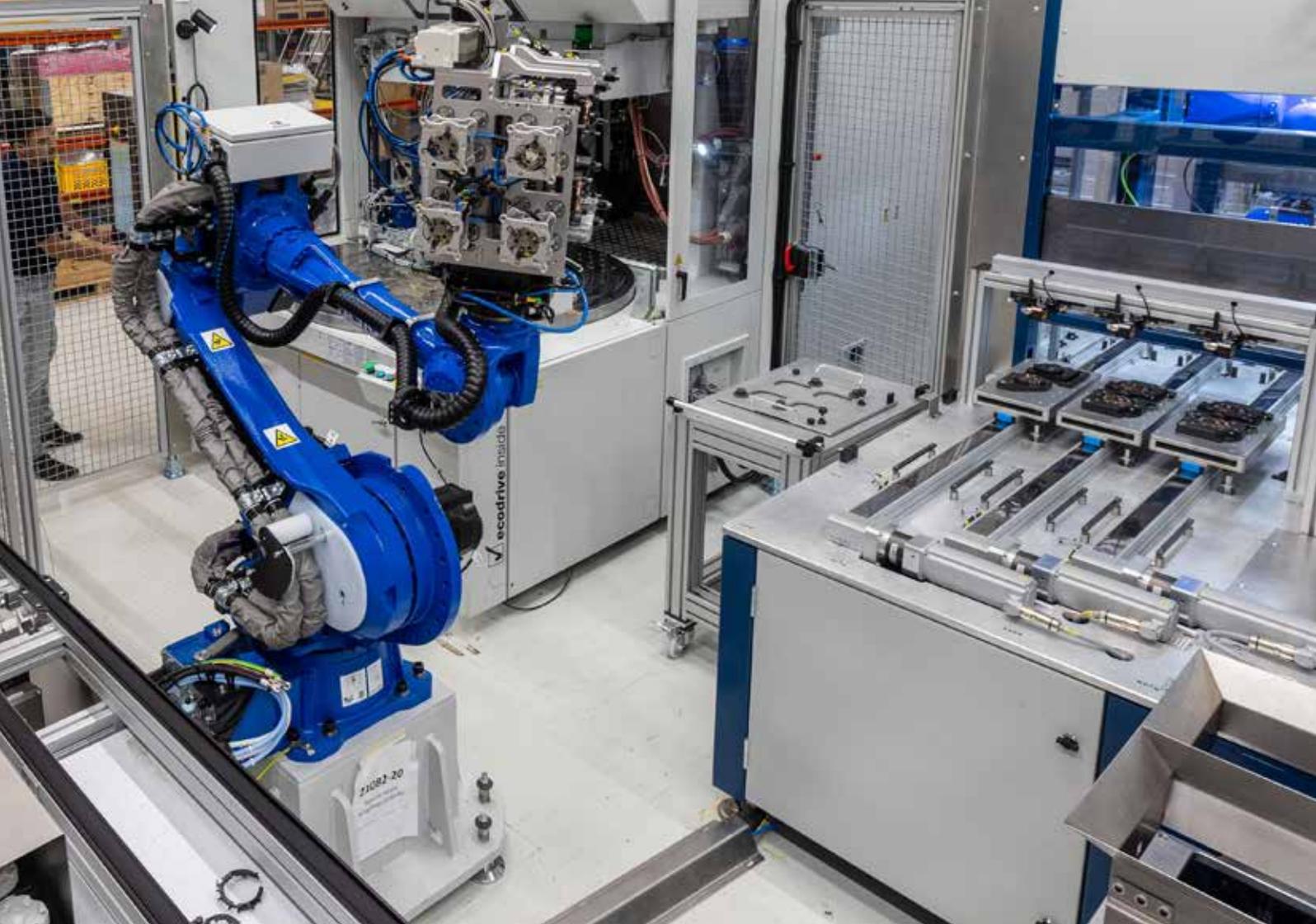
High power density

Ideal for e-pump integration

Gas & media tight electronics



Nominal DC voltage [V]	12	Peak phase current [A]	50
Nominal supply DC current [A]	13,4	Peak torque [Nm]	1
Nominal phase current [A]	29	Peak torque speed [RPM]	4000
Nominal torque [Nm]	0,7	Peak mechanical power [W]	419
Nominal speed [RPM]	1850	Electromagnetic brake [V]	n/a
Nominal mechanical power [W]	136	Encoder sensor type & voltage	n/a
Nominal efficiency [%]	85	Temperature sensor	n/a
IP protection class	IP67 & IP6k9k	Motor control unit	YES
Weight [kg]	645	MCU communication protocol	CAN
Gearbox ratio	n/a		



ecodrives inside

21082-20

BL90/30 - PMBL Motor

Ready for AGV/AMR vehicles
Scalable power range
Integrated brake and encoder



Nominal DC voltage [V]	24	Peak phase current [A]	25
Nominal supply DC current [A]	30,8	Peak torque [Nm]	50
Nominal phase current [A]	14	Peak torque speed [RPM]	150
Nominal torque [Nm]	30	Peak mechanical power [W]	785
Nominal speed [RPM]	200	Electromagnetic brake [V]	24
Nominal mechanical power [W]	628	Encoder sensor type & voltage	SSI + Incremental AB (4096 PPR)
Nominal efficiency [%]	85	Temperature sensor	KTY 81/110
IP protection class	IP54	Motor control unit	NO
Weight [kg]	7,17	MCU communication protocol	n/a
Gearbox ratio	1 : 10,33		

BL90/45 - PMBL Motor

Extreme compactness

Integrated MCU possible

Adjustable gearbox ratio



Nominal DC voltage [V]	48	Peak phase current [A]	45 (S2=10 sec)
Nominal supply DC current [A]	6,3	Peak torque [Nm]	85
Nominal phase current [A]	45	Peak torque speed [RPM]	120
Nominal torque [Nm]	20	Peak mechanical power [W]	1068
Nominal speed [RPM]	115	Electromagnetic brake [V]	24
Nominal mechanical power [W]	241	Encoder sensor type & voltage	SSI 4096 PPR / AB 32 PPR
Nominal efficiency [%]	80	Temperature sensor	KTY 81/110
IP protection class	IP54	Motor control unit	NO
Weight [kg]	9,27	MCU communication protocol	n/a
Gearbox ratio	1 : 8,786		

BL90/57 - PMBL Motor

Ready for ASRS systems

High power density

Customizable design (gearbox,..)



Nominal DC voltage [V]	48
Nominal supply DC current [A]	1,4
Nominal phase current [A]	4,7
Nominal torque [Nm]	3,5
Nominal speed [RPM]	150
Nominal mechanical power [W]	55
Nominal efficiency [%]	85
IP protection class	IP54
Weight [kg]	3,83
Gearbox ratio	n/a

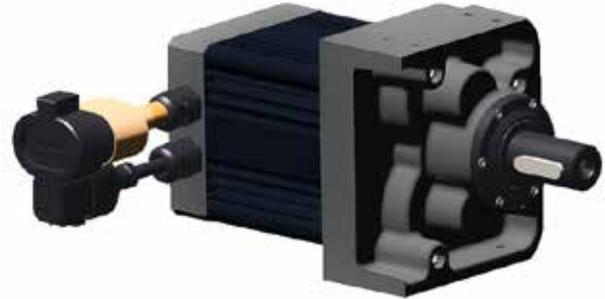
Peak phase current [A]	20
Peak torque [Nm]	13,8
Peak torque speed [RPM]	80
Peak mechanical power [W]	116
Electromagnetic brake [V]	n/a
Encoder sensor type & voltage	n/a
Temperature sensor	PTC 1000
Motor control unit	NO
MCU communication protocol	n/a

BL90/60 - PMBL Motor

High torque

Integrated compact gearbox

Customizable voltage (24, 48)



Nominal DC voltage [V]	96	Peak phase current [A]	12,5
Nominal supply DC current [A]	9,3	Peak torque [Nm]	140
Nominal phase current [A]	6,2	Peak torque speed [RPM]	50
Nominal torque [Nm]	90	Peak mechanical power [W]	733
Nominal speed [RPM]	80	Electromagnetic brake [V]	n/a
Nominal mechanical power [W]	754	Encoder sensor type & voltage	n/a
Nominal efficiency [%]	85	Temperature sensor	STS1 1000 3 L360 520 U129
IP protection class	IP65	Motor control unit	NO
Weight [kg]	5,5	MCU communication protocol	n/a
Gearbox ratio	1 : 21,5		

BL90/70 - PMBL Drive

Efficient BLDC drive with integrated MCU

Ready for e-pump installation

Customizable voltage (24, 48)



Nominal DC voltage [V]	24
Nominal supply DC current [A]	83,2
Nominal phase current [A]	TBD
Nominal torque [Nm]	9
Nominal speed [RPM]	1800
Nominal mechanical power [W]	1696
Nominal efficiency [%]	85%
IP protection class	tbd
Weight [kg]	TBD
Gearbox ratio	n/a

Peak phase current [A]	TBD
Peak torque [Nm]	TBD
Peak torque speed [RPM]	TBD
Peak mechanical power [W]	TBD
Electromagnetic brake [V]	n/a
Encoder sensor type & voltage	n/a
Temperature sensor	PTC 1000
Motor control unit	YES
MCU communication protocol	CAN

BL145/25 - PMBL Motor

Pancake design

Scalable power range

Integrated brake and encoder



Nominal DC voltage [V]	48
Nominal supply DC current [A]	9
Nominal phase current [A]	20
Nominal torque [Nm]	35
Nominal speed [RPM]	100
Nominal mechanical power [W]	367
Nominal efficiency [%]	85
IP protection class	IP54
Weight [kg]	6,97
Gearbox ratio	1 : 8,786

Peak phase current [A]	45
Peak torque [Nm]	100
Peak torque speed [RPM]	100
Peak mechanical power [W]	1047
Electromagnetic brake [V]	24
Encoder sensor type & voltage	SSI + Incremental ABZ
Temperature sensor	KTY 81/110
Motor control unit	NO
MCU communication protocol	n/a



E by SIPLACE

SIPLACE

BL145/25 - PMBL Motor

Pancake design

Customizable voltage (24, 48)

Adjustable gearbox ratio



Nominal DC voltage [V]	48
Nominal supply DC current [A]	10,4
Nominal phase current [A]	20
Nominal torque [Nm]	4,5
Nominal speed [RPM]	900
Nominal mechanical power [W]	424
Nominal efficiency [%]	85
IP protection class	IP54
Weight [kg]	6,97
Gearbox ratio	n/a

Peak phase current [A]	45
Peak torque [Nm]	11
Peak torque speed [RPM]	900
Peak mechanical power [W]	1037
Electromagnetic brake [V]	24
Encoder sensor type & voltage	SSI + Incremental ABZ
Temperature sensor	KTY 81/110
Motor control unit	NO
MCU communication protocol	n/a

BL145/50 - PMBL Motor

High power density

Customizable voltage (24, 48, 700)

Ready for e-pump installation



Nominal DC voltage [V]	800	Peak phase current [A]	13
Nominal supply DC current [A]	4,7	Peak torque [Nm]	20
Nominal phase current [A]	6,5	Peak torque speed [RPM]	3000
Nominal torque [Nm]	10	Peak mechanical power [W]	6280
Nominal speed [RPM]	3000	Electromagnetic brake [V]	n/a
Nominal mechanical power [W]	3140	Encoder sensor type & voltage	SSI + sin/cos
Nominal efficiency [%]	85%	Temperature sensor	KTY 81/110
IP protection class	IP67	Motor control unit	NO
Weight [kg]	5,85	MCU communication protocol	n/a
Gearbox ratio	n/a		

BL167/25 - PMBL Motor

Pancake design

Customizable voltage (24, 48)

High torque gearbox



Nominal DC voltage [V]	24	Peak phase current [A]	45
Nominal supply DC current [A]	31,2	Peak torque [Nm]	120
Nominal phase current [A]	38	Peak torque speed [RPM]	70
Nominal torque [Nm]	100	Peak mechanical power [W]	880
Nominal speed [RPM]	50	Electromagnetic brake [V]	24
Nominal mechanical power [W]	524	Encoder sensor type & voltage	SSI / SIN/COS / Incremental ABZ
Nominal efficiency [%]	7%	Temperature sensor	KTY 81/110
IP protection class	IP43	Motor control unit	NO
Weight [kg]	15,5	MCU communication protocol	n/a
Gearbox ratio	1 : 42		

BL167/50 - PMBL Motor

High power density

Customizable voltage (48, 96, 700)

Integrated brake and encoder



Nominal DC voltage [V]	48
Nominal supply DC current [A]	96,3
Nominal phase current [A]	90
Nominal torque [Nm]	15
Nominal speed [RPM]	2500
Nominal mechanical power [W]	3925
Nominal efficiency [%]	85
IP protection class	IP54
Weight [kg]	8,25
Gearbox ratio	n/a

Peak phase current [A]	250
Peak torque [Nm]	40
Peak torque speed [RPM]	2000
Peak mechanical power [W]	8374
Electromagnetic brake [V]	n/a
Encoder sensor type & voltage	sin/cos single end
Temperature sensor	KYT81/110
Motor control unit	NO
MCU communication protocol	n/a

BL180/90 - PMBL Motor

Traction motor

Air-cooled

Integrated brake and encoder



Nominal DC voltage [V]	96	Peak phase current [A]	350
Nominal supply DC current [A]	154	Peak torque [Nm]	64
Nominal phase current [A]	215	Peak torque speed [RPM]	4000
Nominal torque [Nm]	40	Peak mechanical power [W]	26795
Nominal speed [RPM]	3000	Electromagnetic brake [V]	n/a
Nominal mechanical power [W]	12560	Encoder sensor type & voltage	n/a
Nominal efficiency [%]	85	Temperature sensor	KTY 81/110
IP protection class	IP66	Motor control unit	NO
Weight [kg]	27,4	MCU communication protocol	n/a
Gearbox ratio	n/a		

BL180/45 - PMBL Motor

Compact traction motor

Customizable voltage (48, 96, 700)

Customizable design (gearbox,..)



Nominal DC voltage [V]	96	Peak phase current [A]	175
Nominal supply DC current [A]	77	Peak torque [Nm]	35
Nominal phase current [A]	110	Peak torque speed [RPM]	4000
Nominal torque [Nm]	20	Peak mechanical power [W]	14654
Nominal speed [RPM]	3000	Electromagnetic brake [V]	n/a
Nominal mechanical power [W]	6280	Encoder sensor type & voltage	n/a
Nominal efficiency [%]	85	Temperature sensor	KTY 81/110
IP protection class	IP66	Motor control unit	NO
Weight [kg]	22	MCU communication protocol	n/a
Gearbox ratio	n/a		

BL230/80 - PMBL Drive

High power density traction drive

Water-cooled

Customizable design (gearbox,..)



Nominal DC voltage [V]	400
Nominal supply DC current [A]	166,3
Nominal phase current [A]	190
Nominal torque [Nm]	120
Nominal speed [RPM]	4500
Nominal mechanical power [W]	56520
Nominal efficiency [%]	85
IP protection class	IP20
Weight [kg]	48
Gearbox ratio	n/a

Peak phase current [A]	215
Peak torque [Nm]	140
Peak torque speed [RPM]	3500
Peak mechanical power [W]	51287
Electromagnetic brake [V]	n/a
Encoder sensor type & voltage	n/a
Temperature sensor	KTY 81/110
Motor control unit	YES
MCU communication protocol	CAN

BL350/50 - PMBL Drive

High power density motor-generator

Water-cooled

Customizable design (gearbox,..)



Nominal DC voltage [V]	60	Peak phase current [A]	750
Nominal supply DC current [A]	465,2	Peak torque [Nm]	150
Nominal phase current [A]	750	Peak torque speed [RPM]	1600
Nominal torque [Nm]	150	Peak mechanical power [W]	25120
Nominal speed [RPM]	1600	Electromagnetic brake [V]	n/a
Nominal mechanical power [W]	25120	Encoder sensor type & voltage	Digital Hall sensors (3x)
Nominal efficiency [%]	90	Temperature sensor	STS1 1000 3 L360 520 U129
IP protection class	IP44	Motor control unit	YES
Weight [kg]	120	MCU communication protocol	CAN
Gearbox ratio	n/a		



200W Oil E-pump

Compact smart e-pump

Gas & media tight electronics

Efficient BLDC drive with integrated MCU



Nominal DC voltage [V]	12, 24	Nominal pressure [bar]	12
Nominal supply DC current [A]	9 (@12V)	Nominal flow [l/min]	5
Nominal torque [Nm]	0,5	Nominal hydraulic power [W]	105
Nominal speed [RPM]	2500	Peak pressure [bar]	18
Nominal mechanical power [W]	131	Flow at peak flow [l/min]	4
Nominal efficiency [%]	80%	Peak hydraulic power [W]	105
IP protection class	IP6K4K		
Weight [kg]	0,55		
Motor control unit	YES		
MCU communication protocol	CAN		

300W Fuel E-pump

Efficient BLDC drive with integrated MCU
High power density
Gas & media tight electronics



Nominal DC voltage [V]	12, 24		
Nominal supply DC current [A]	12 (@12V)		
Nominal torque [Nm]	0,4	Nominal pressure [bar]	9
Nominal speed [RPM]	4000	Nominal flow [l/min]	6
Nominal mechanical power [W]	167	Nominal hydraulic power [W]	95
Nominal efficiency [%]	88%	Peak pressure [bar]	14
IP protection class	IP6K4K	Flow at peak flow [l/min]	4
Weight [kg]	0,6	Peak hydraulic power [W]	95
Motor control unit	YES		
MCU communication protocol	LIN		

250W Dual E-pump

Dual function (actuation & cooling)

Efficient BLDC drive with integrated MCU

High power density



Nominal DC voltage [V]	12, 24	Nominal pressure [bar]	20
Nominal supply DC current [A]	6 (@24V)	Nominal flow [l/min]	3,5
Nominal torque [Nm]	0,5	Nominal hydraulic power [W]	123
Nominal speed [RPM]	3000	Peak pressure [bar]	30
Nominal mechanical power [W]	157	Flow at peak flow [l/min]	2
Nominal efficiency [%]	85%	Peak hydraulic power [W]	123
IP protection class	IP6K4K		
Weight [kg]	0,8		
Motor control unit	YES		
MCU communication protocol	CAN		

1,5kW E-pump

Scalable power range

Standard connection for pump unit

Customizable electric connectors



Nominal DC voltage [V]	24, 48, 700
Nominal supply DC current [A]	18 (@48V)
Nominal torque [Nm]	4
Nominal speed [RPM]	2000
Nominal mechanical power [W]	837
Nominal efficiency [%]	82%
IP protection class	IP64
Weight [kg]	6,4
Motor control unit	YES
MCU communication protocol	CAN

Nominal pressure [bar]	30
Nominal flow [l/min]	10
Nominal hydraulic power [W]	525
Peak pressure [bar]	45
Flow at peak flow [l/min]	7
Peak hydraulic power [W]	525

2,5kW E-pump

High power density

Standard connection for pump unit

High power density



Nominal DC voltage [V]	24, 48	Nominal pressure [bar]	35
Nominal supply DC current [A]	26 (@48V)	Nominal flow [l/min]	15
Nominal torque [Nm]	8	Nominal hydraulic power [W]	919
Nominal speed [RPM]	1500	Peak pressure [bar]	53
Nominal mechanical power [W]	1256	Flow at peak flow [l/min]	11
Nominal efficiency [%]	84%	Peak hydraulic power [W]	919
IP protection class	IP64		
Weight [kg]	7,4		
Motor control unit	NO		
MCU communication protocol	n/a		

4kW E-pump

High power density

Standard connection for pump unit

High power density



Nominal DC voltage [V]	24, 48		
Nominal supply DC current [A]	41 (@48V)		
Nominal torque [Nm]	12	Nominal pressure [bar]	50
Nominal speed [RPM]	1500	Nominal flow [l/min]	25
Nominal mechanical power [W]	1884	Nominal hydraulic power [W]	2188
Nominal efficiency [%]	82%	Peak pressure [bar]	75
IP protection class	IP64	Flow at peak flow [l/min]	18
Weight [kg]	9,4	Peak hydraulic power [W]	2188
Motor control unit	NO		
MCU communication protocol	n/a		

PRODUCT LIFECYCLE MANAGEMENT

REQUIREMENTS MANAGEMENT

Polarion Requirements



SYSTEM DESIGN

System design
Polarion
PTC/Creo

MECHANICAL DESIGN

Mechanical Construction
(PTC/Creo)

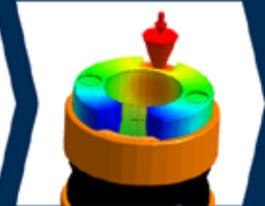


HARDWARE DESIGN

Electronic Hardware Design
(Altium Designer)

SOFTWARE DESIGN

Embedded Software Development
(Polarion, Matlab/Simulink, C compilers, Github)



SIMULATION

- Altair
- Ansys
- Creo Simulate
- Moldex
- Moldflow
- Matlab/Simulink
- LT Spice

TECHNICAL HIGHLIGHTS

IN-HOUSE SIMULATIONS & DESIGN

SCALABLE DESIGNS

SURFACE MOUNTED MAGNETS

OVERMOLDING CAPABILITIES

GEARBOX INTEGRATIONS

DIFFERENT ENCODERS

ELECTROMAGNETIC BREAKS

SEALING PROTECTIONS

VARIOUS WINDING TECHNOLOGIES

AUTOMATED PRODUCTION

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

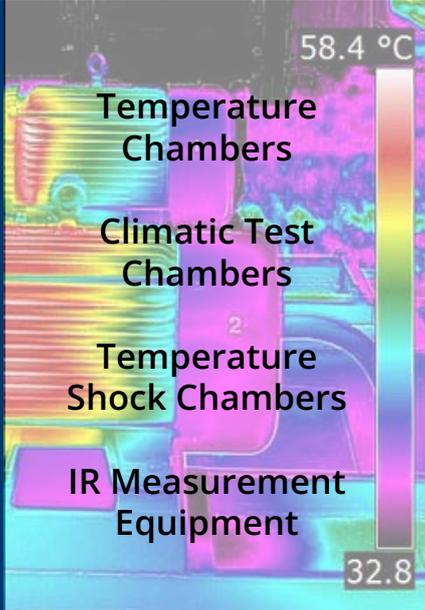
GAS & MEDIA TIGHT ELECTRONICS

SPEED OR TORQUE CONTROL

LIN & CAN COMMUNICATION

TESTING EQUIPMENT

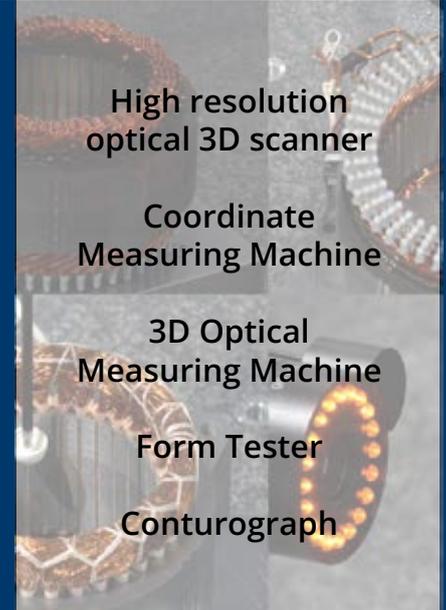
THERMAL TESTS



ELECTRIC & ELECTRONIC

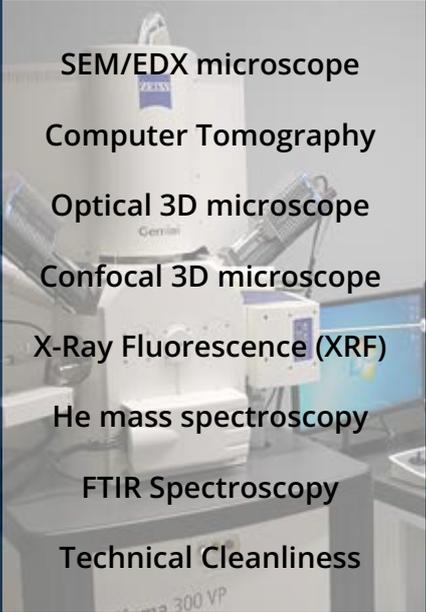


DIMENSIONAL MEASUREMENTS



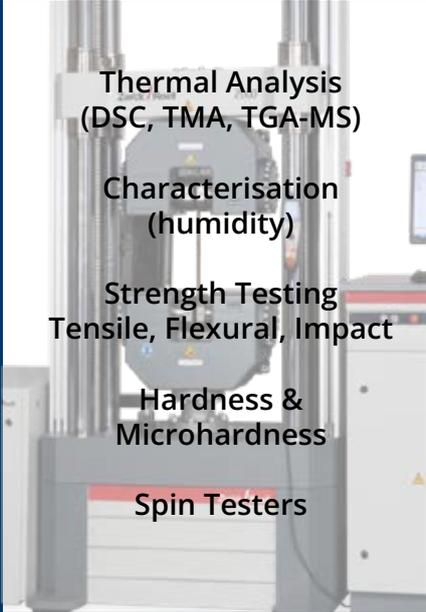
VALIDATION CAPABILITIES

ADVANCED ANALYSIS



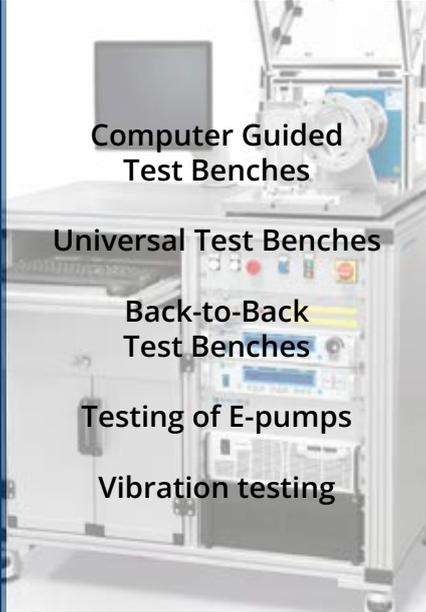
SEM/EDX microscope
Computer Tomography
Optical 3D microscope
Confocal 3D microscope
X-Ray Fluorescence (XRF)
He mass spectroscopy
FTIR Spectroscopy
Technical Cleanliness

MATERIAL PROPERTIES



Thermal Analysis
(DSC, TMA, TGA-MS)
Characterisation
(humidity)
Strength Testing
Tensile, Flexural, Impact
Hardness &
Microhardness
Spin Testers

MOTOR TESTING



Computer Guided
Test Benches
Universal Test Benches
Back-to-Back
Test Benches
Testing of E-pumps
Vibration testing

Automotive



Industrial | Commercial vehicle | AGV

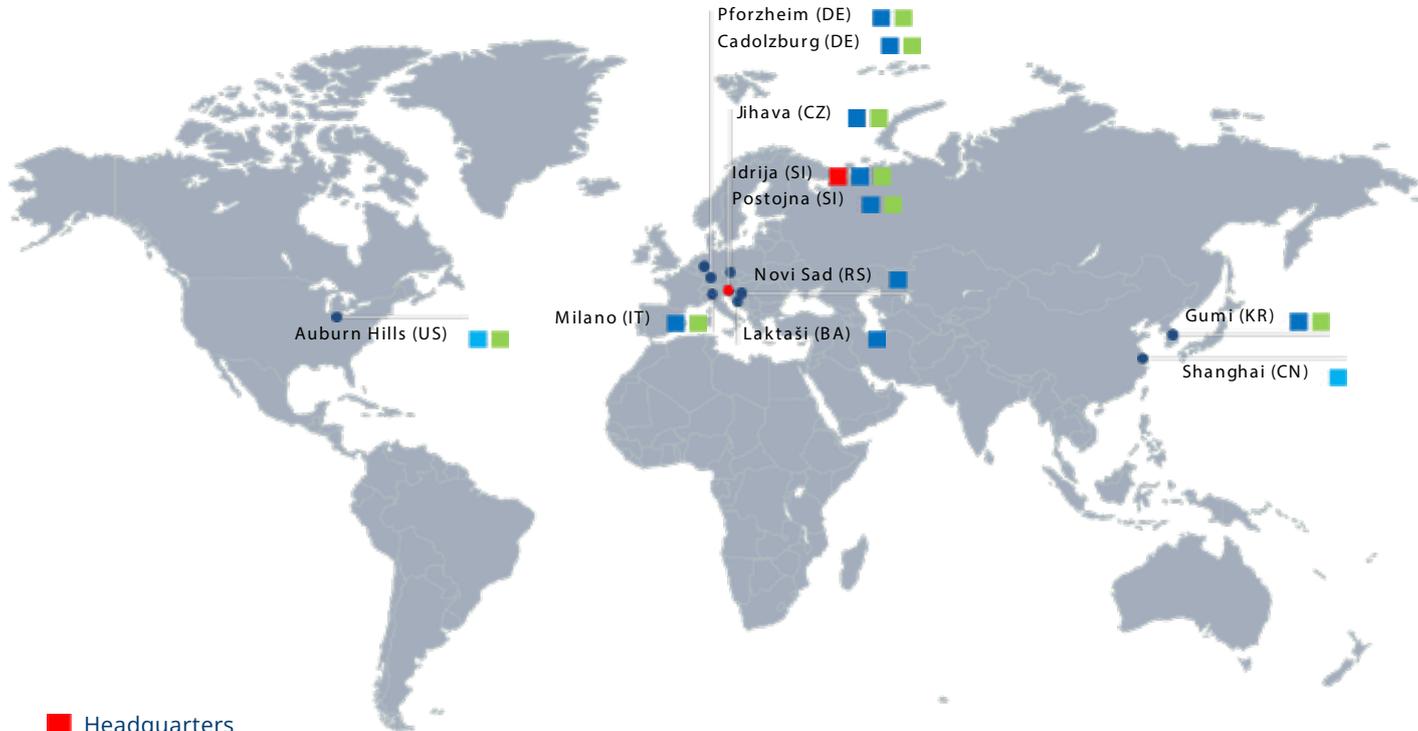


Marine | Nautics



Medical mobility





- Headquarters
- Production Facility
- Development Center
- Representation

RESPONSIBILITIES AND STANDARDS

“ A value and a driving force of our operations ”

SOCIAL

- Family Friendly Enterprise Certificate
- health and quality of life, and investing in sport and culture
- ISO 45001



ENVIRONMENT

- Energy policy
- Environmental management and sustainable development policy in Kolektor
- Policy statement on conflict minerals
- ISO 14001



BUSINESS

- Quality policy
- Product safety policy
- IATF 16949
- ISO 9001
- ISO 26262
- ISO 17025
- VDA
- AIAG q-Tools
- Automotive SPICE



INFORMATION

- Information Management and Security System
- ISO 27001







KOLEKTOR

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