



Dynamic & Efficient

## Motors with Housings up to IE5

**More Surface Area for sustained Cooling and Power Output.**

Power units for electric vehicles must be eco-friendly, efficient, powerful and have low maintenance cost. The powerful ABM traction motors excel with a **very high efficiency factor**. Compared to standard motors they are **substantially more compact** and even under heavy working conditions **exceptionally robust, durable and maintenance free**.

**Perfect for high peak loads and continuous output:**

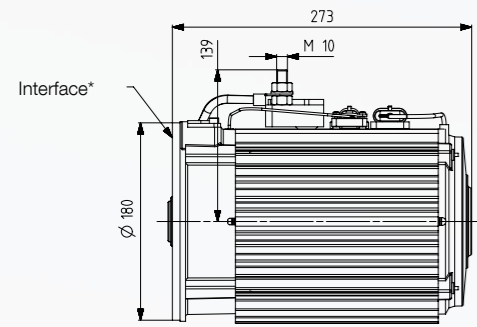
Our motors guarantee with their ring type cooling ribs **ideal convection**. Installation perpendicular to the driving direction on the rear axle assures that the cooling ribs dissipate the heat reliable and assure **optimum air cooling**. Voltage supply and speed-/torque control is provided by an external inverter.

- Maximum power density and efficiency up to IE5
- High overload capacity
- Dynamic acceleration from standstill
- Sustainable by energy recuperation
- Ecology sensitive without the use of rare earth magnets (Asynchronous motors)
- Plug-and-play
- Designed for mounting to commercially available axes
- Application specific motor selection
- Series with various options
- Temperature monitoring and motor speed recording
- Reliable, durable and compact



### Frame Size 100

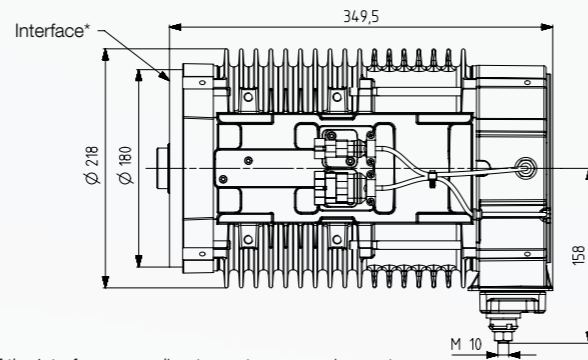
AC traction drive with speed sensor and temperature monitoring.  
 Battery voltage up to 800 V with appropriate protection class. Maximum motor output up to 26 kW.  
 Available as B9 motor without end shield as well as flange or foot designs.



\*Design of the interface according to customer requirements

### Frame Size 112

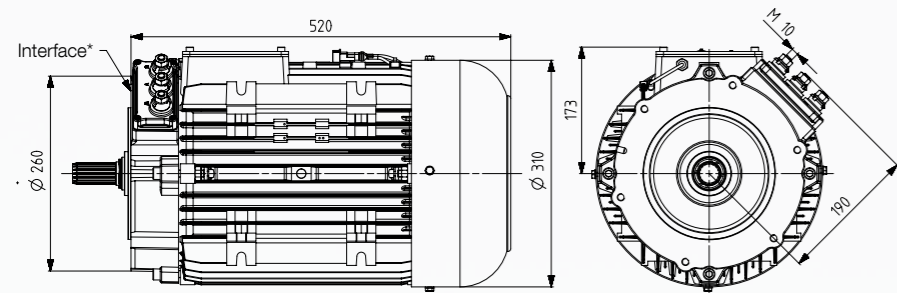
AC traction drive with speed sensor, temperature monitoring and ring rib housing.  
 Battery voltage up to 800 V with appropriate protection class.  
 Maximum motor output up to 53 kW.  
 Available as B9 motor without end shield as well as flange or foot designs.



\*Design of the interface according to customer requirements

### Frame Size 160

AC traction drive with speed sensor and temperature monitoring.  
 Battery voltage up to 800 V with appropriate protection class. Maximum motor output up to 87 kW.  
 Available as B9 motor without end shield as well as flange or foot designs.



\* Design of the interface according to customer requirements

### Options

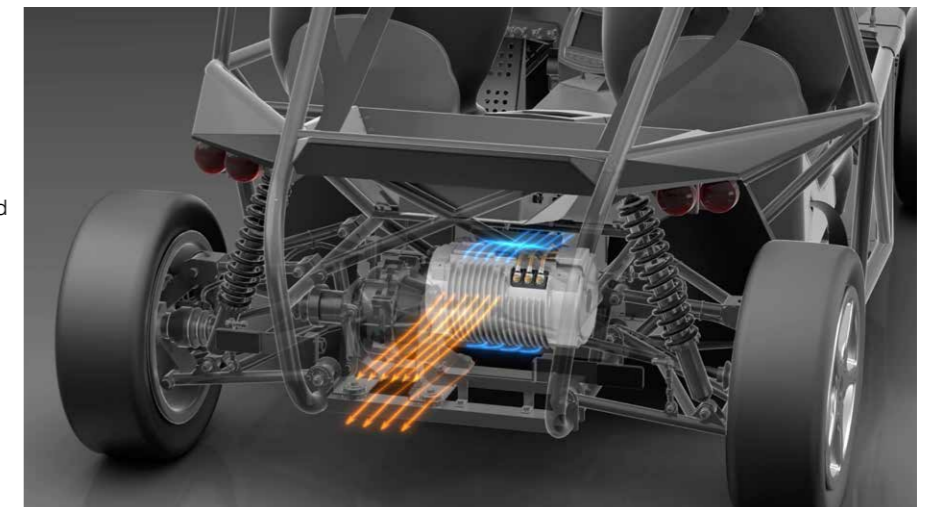
- Interface for various gearbox types
- Electromechanical holding brake for parking and emergency stopping
- Temperature monitoring
- Motor speed recording
- UL version
- Protection class up to IP6K9K
- Higher output speeds and torques available upon request
- Various cooling modes available

### Application Examples

- Electric vehicles for on and off road
- Municipal vehicles
- GSE such as baggage tow tractors, pushback tractors, belt loaders and airport ground support vehicles
- Construction and agricultural machinery
- AGV
- Electric boats
- Auxiliary units such as hydraulic pumps, compressors, blowers, e.g. in lorries, buses and work machinery

### Optimal Air Cooling with Ring Ribs

- Dirt-proof
- Installation on the rear axle perpendicular to driving directions
- Reliable at high load peaks and continuous load
- Designed for stop-and-go operation
- High acceleration from standstill
- High dynamic load cycles by thermal winding monitoring



### Technical Data

Motors with Housings	Frame Size 100	Frame Size 112	Frame Size 160
Motor Data (Asynchronous Version)			
Peak-Output [kW]	26	53	87
Max. S2-30 RPM Output [kW]	5	19	30
Torque S2-5 min [Nm]	45	130	260
Max. Output Speed for S2-5 min [RPM]	4200	3350	3200
Max. Output Speed [RPM]	9000	8000	6000
Typical Battery Voltage [V <sub>DC</sub> ]	36 – 48	72 – 80	80 – 96
Protection Class	with appropriate protection class up to 800 V <sub>DC</sub> from IP54 (terminal connections IP00) up to IP6K9K		
Isolation Class	F/H		
Weight [kg]	27	43	114

The provided data represent typical motor size values for ventilated motors and various lengths.

**Note: To achieve efficiency class IE5 , we also offer synchronous motors (PM motors).**



## Dynamics for every Application - and Task

# We drive the World

A dense network of international subsidiaries and sales offices in all major industrial countries ensure close contact with our customers around the world – and guarantee an excellent standard of service.

**Kindly contact us for further detailed information.**



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