

Member of **(senata** Group



Our Drive - Your Success

Drive Technology for Intralogistics

ABM Excellence in Engineering



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Highly efficient, with maximum precision, durable and reliable.



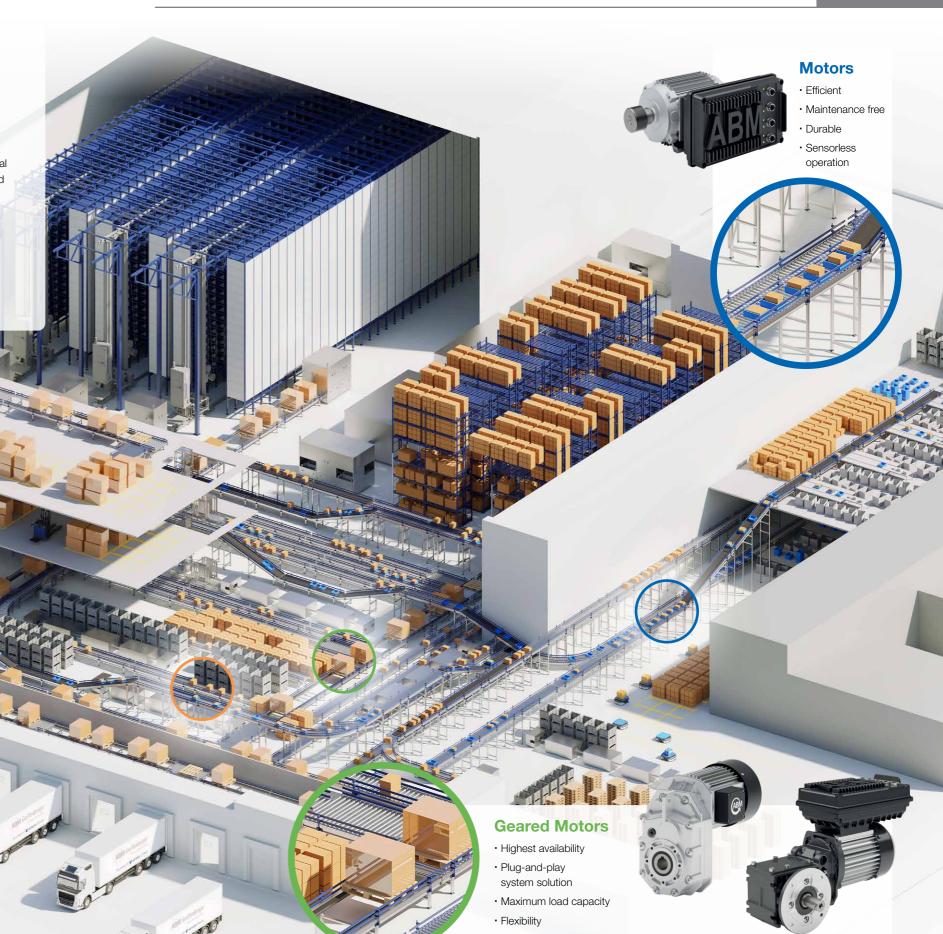
As a complete supplier, ABM develops and manufactures drive systems for stationary and mobile applications in intralogistics, consisting of motors, gearboxes and inverters.

The intelligent modular system offers the right solution for every application.

For us, performance is not only defined by torque, but above all in terms of measurable customer benefit, we also develop individual system solutions. Due to the high level of vertical integration at ABM, the developers have a profound understanding of each individual component. All components are therefore perfectly matched to each other.

Whether in automated logistics systems with conveyor technology, hoists, forklifts or driverless transport systems

- ABM delivers convincing solutions.





Inverter

- Asynchronous- and Sinochron[®] Motors
- Digitization & Connectivity
- · Compact & modular
- Smart operation



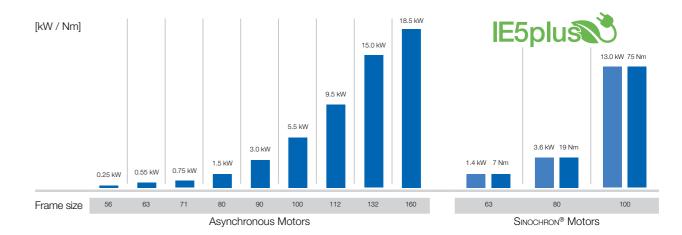
Key Data & Options - Asynchronous Motors

Motor Type	1- or 3-phase asynchronous motor	
Rated Output	0.09 – 18.5 kW	
Rated Voltage	115 - 575 V	
Frequency	Variable	
Number of Poles	2 - 8 pole	
Protection Class	Up to IP66	
Cooling	Self- & Non-ventilated, Forced Ventilation	
Mounting Options	Foot and Flange Mounting	
Options	Brake & Encoder Mounting	

Key Data & Options - Sinochron® Motors

Torque (ventilated) Output (unventilated)	1.3 – 75 Nm 0.12 – 6.0 kW
Torque (unventilated)	0.75 – 20 Nm
Output Speed	500 – 6.000 rpm
Protection Class	IP54, IP55

Performance Motors



Ideal for tight spaces.

The Sinochron® motor fits compactly into the conveyor system.

Energy efficient & dynamic

Motors

Advantages Asynchronous Motors

- Energy efficiency: High efficiency
- Corrosion protection: extruded aluminum profile
- Several ratings per frame size
- Maintenance-free & durable (> 50,000 h)

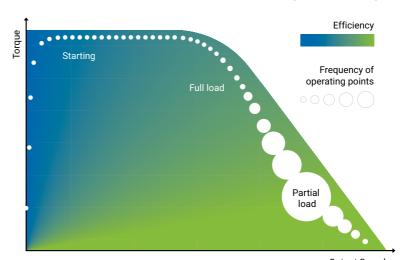


Advantages SINOCHRON® Motors

- · Compact with high power density
- · Particularly economical due to efficiencies of over 90%
- · Highest availability due to sensorless control
- Dynamic due to high overload capabillity
- · As a direct drive also suitable for use in cold storage



Quick return on investment due to highest energy efficiency of Sinochron® Motors

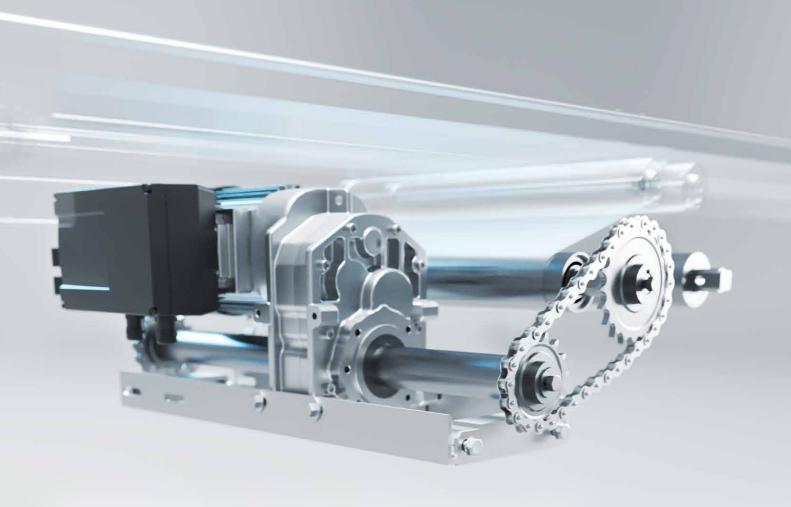


- Optimum efficiency in the partial load range, high power density and compact dimensions
- Energy saving
- Excellent control properties
- Highly dynamic and efficient performance through sensorless control of the drive. Saves significant costs and ensures a quick return on investment

Output Speed

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With a high level of solution expertise, ABM focuses on your specific drive task: maximum availability as well as sustainability.

Robust & maintenance-free

Geared Motors

Advantages

- Highest availability
 Designed for service life
- · Maximum energy efficiency
- · Flexibility

Various mounting options (helical, parallel shaft & angular gearboxes) Variable mounting dimensions (flange and shaft designs)

Aluminum die-cast Housing
 Fasy handling due to light weight

Easy handling due to light weight High surface and corrosion protection





- · Plug-and-play system solution
- · High quality gearing

Maximum load capacity & low-vibration running

· High power density

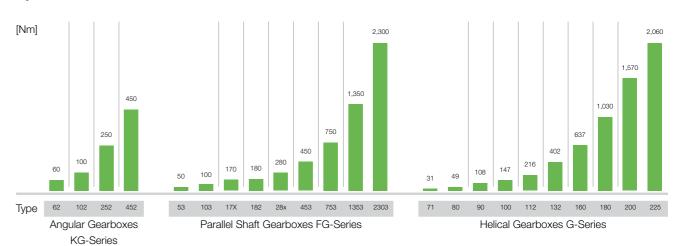
Compact design for confined installation situations

· Modular design reduces complexity

Key Data & Options

	Angular Gearbox KG-Series	Parallel Shaft Gearbox FG-Series	Helical Gearbox G-Series
Motor Type	1- or 3-phase asynchronous motor / SINOCHRON® motor		
Rated Output	0.09 – 11 kW	0.03 – 7,5 kW	0.09 – 11 kW
Torque	60 – 450 Nm	50 – 2,300 Nm	30 – 2,060 Nm
Output Speed	15 – 300 rpm	2.2 – 400 rpm	2.5 – 700 rpm
Reduction Ratio	4.84 – 70.44	6.96 – 2022	2.55 – 510.07
requency	50 / 60 Hz or variable for inverter operation		
Number of Poles	2 – 8-pole / two-speed		
Protection Class	Up to IP66		
Mounting	Shaft mount, flange and Foot version Hollow and solid shafts Parallel key Clamping set	Shaft mount and Flange version Hollow and solid shafts Parallel key Clamping set	Flange and Foot version Solid shafts Parallel key

Output Overview



The forward bearing placement on the drive shaft increases the radial load capability of the gearbox



- · Absorption of higher external radical forces
- · Low distance between force application and bearing
- Robust and durable
- Eliminates requirement for additional support bearing
- · Economical and sustainable

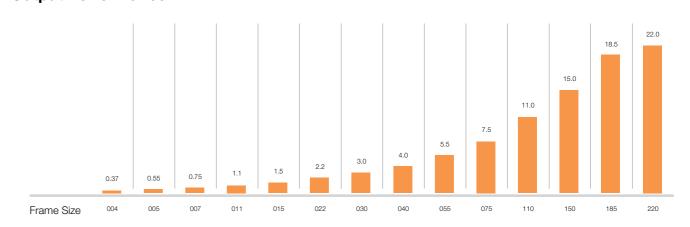
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Motor Type	Asynchronous Motor / Sinochron® Motor		
Recommended Motor Output	0.55 - 22 kW		
Mains Voltage	3 x 200 VAC -10 %480 VAC +10 % 280 VDC -10 %680 VDC +10 %		
Mains Frequency	50/60 Hz ± 6 %		
Rated current Output, eff. [IN at 4 kHz]	1.7 - 46 A		
Overload 60 sec.	150 %		
Overload 3 sec.	200 %		
Protective Function	Over- and undervoltage, I ² t-limitation, short circuit, ground fault, motor and frequency inverter temperature, tilt protection, stall detection, PID dry-running protect		
Housing	Two-piece die-cast aluminium housing		
Protection Class	IP 55 / IP 65		
Ambient Temperature	-40° C - + 50° C		
Vibration Class DIN EN 60721-3-3	3M7 (3g)		
EMV DIN-EN-61800-3	C2		
Energy Efficiency Class EN 61800-9-2	IE2		
Certificates and Conformity	RoHS, CE, UL		
Functional safety	STO		
Options	Bluetooth Fieldbus integrated: Modbus RTU or CANopen / PROFIBUS / PROFINET / EtherCAT / Sercos III / Ethernet IP		

Output Performance



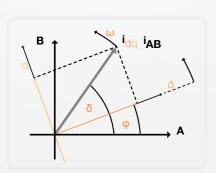


Modular & compact

Inverter

Advantages

- Optimum control characteristics for both asynchronous and SINOCHRON® Motors
- Pluggable connections
- Multiple inverters on one power supply (daisy-chain)
- Usable worldwide for all voltages



Maximum speed setting range (sensorless)

- · Innovative control technology
- · Precise and pinpoint control
- Speed setting range of 1:200

Field-oriented sensorless control for Asynchronous and Sinochron® Motors

- Optimized starting torques and higher efficiency
- High control quality for speed control
- Without encoder feedback:
 Reduces costs and maintenance





Application-specific & efficient

Individual Motor Design

Optimum operation in the defined application.

- · Dynamic due to high overload capacity
- Designed specifically for the application drives
- → Best technological and sustainable solution
- · Maximum energy efficiency
- Optimum performance and economy
- Reduction of the number of variants in combination with inverter



Individual & application-specific

Excellent Drive Solutions

The answer to your requirements and specifications.

- Optimized solutions flexible from modular system configurable
- Application and customized drive systems with measurable customer benefits
- Development partner with strong engineering and manufacturing competence
- Many years of specific know-how in the field of intralogistics
- · Cost-effective complete solutions



Process-safe & reliable

Ensuring the highest Plant Availability

High quality is our standard.

- Long-lasting (> 50,000 hours) and robust solutions
- · Highest performance and system availability
- Machine-to-Machine-Communication enables Predictive Maintenance
- Minimal warehousing costs due to reduction of the drive variants
- Plug-and-play in case of service due to pluggable connections



Dynamic & system integrated

System Solutions for Forklift Trucks

Competence in driving, lifting and steering.

- High performance with low energy consumption
- · Low maintenance
- · Durable and highest availability
- Compact design
- · Easy integration into the vehicle









Made for the Future

System Solutions for Automated Guided Vehicles

With our products we move real innovations.

- · Optimum drive configuration thanks to broad product portfolio
- Different gearbox designs and motor technologies
- Smooth, jerk-free starting and braking
- Fine resolution sensor technology for precise positioning
- Economica











Reliable & powerful

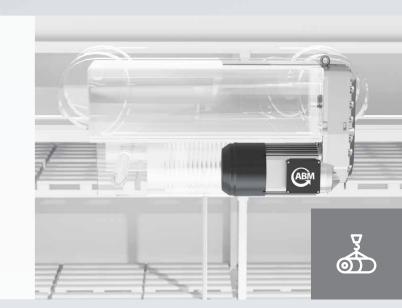
System Solutions for Lifting Technology

Complete System Solutions for your competitive edge.

- Safety without compromise
- Powerful and efficient
- Low maintenance
- · Sensitive positioning with frequent start-up and reversing
- · Wide selection of lifting and travel drives







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Member of **(senata** Group



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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