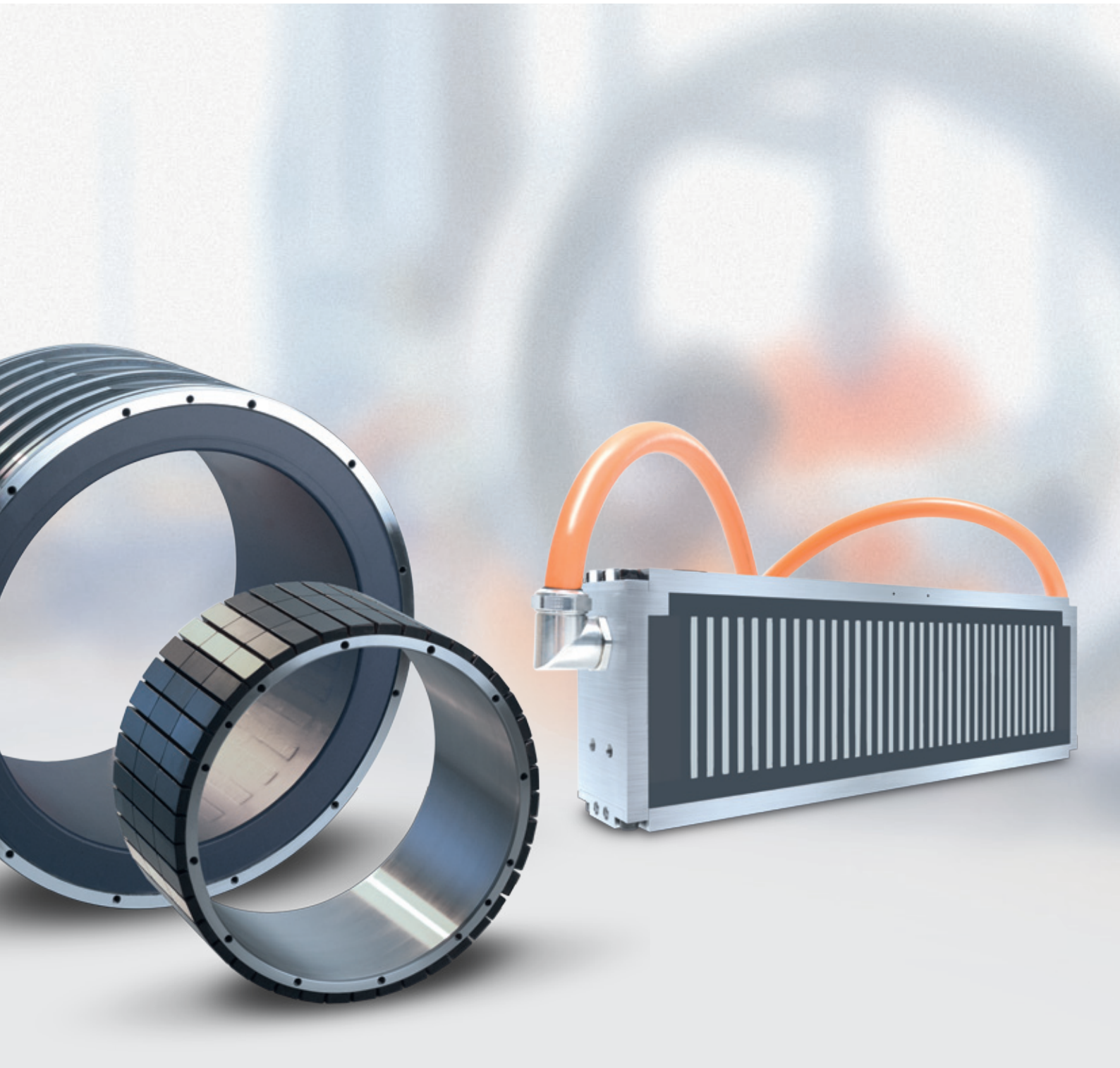
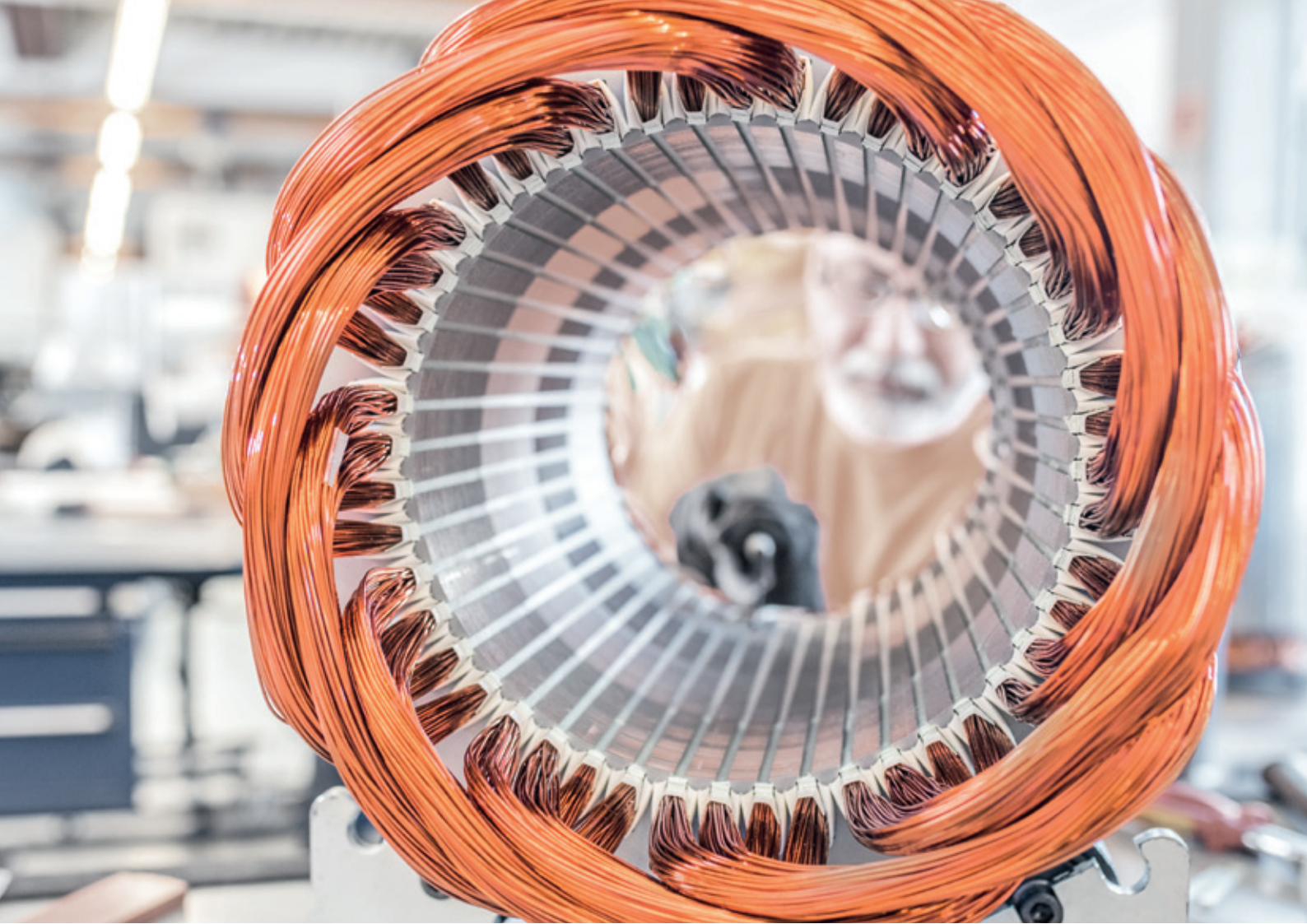


Drive Technology

Individual solutions for every application





Integration of direct drive solutions for every case and application

With over 90 years of experience in development, design and production of motors, and as reliable partner in the tool machine industry, KESSLER provides its customers with an extensive product range of high tech spindles and spindle systems for different operations, branches and applications. Moreover, KESSLER has wide expertise of motors and structural components as well as rotary tables and spindle heads for the highly efficient and precise 5-axis process.

The KESSLER energy GmbH operates parallel to the Franz Kessler GmbH with optimized assembly lines for the manufacturing of motors. Hereby the KESSLER Group achieves a higher level of competences for drive technologies in new application cases as well.

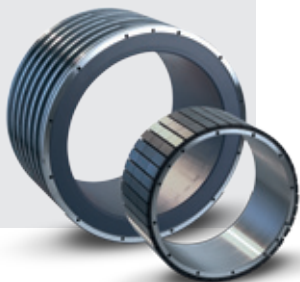
Profile – KESSLER energy

- **Energy efficient motors**
with highest power density and degree of efficiency
- **Short delivery times** (less than 6 weeks for dimension type up to 530)
- **Manufacturing costs efficient in series**
- Standard motors with **minimum construction height and minimum torque ripple**
- Standard motors **100% mounting compatibility**
- **Special motor – assembly kits and motor assembly group**
according to customer requirements
- Standard **motor sizes up to a diameter of 3 meters**
- **Torque ripple less 1%**
- **Integration** of direct drives for every application
- Series for highest **torque applications** (KESSLER HTM) and highest **speed applications** (KESSLER STM)
- **Application examples:** direct drive for coin punching press, sport motorboats, elevator technology and automotive drives

KESSLER energy Product Range

Standard Motors

- Asynchronous motors
- Synchronous motors
- Torque motors
- Linear motors



Special Motors

- Asynchronous motors
- Synchronous motors
- Torque motors
- Linear motors



Systems

- Integrated motor systems with bearings and measurement system according customer requirement

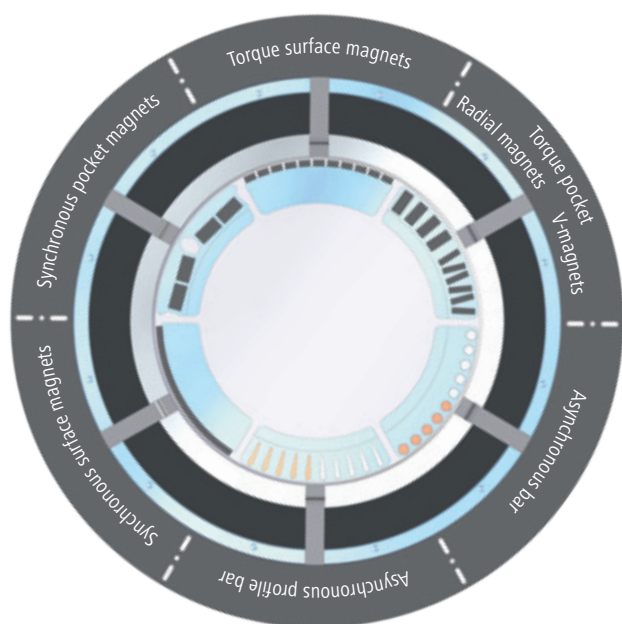




Automatic solenoid-rotor bonding

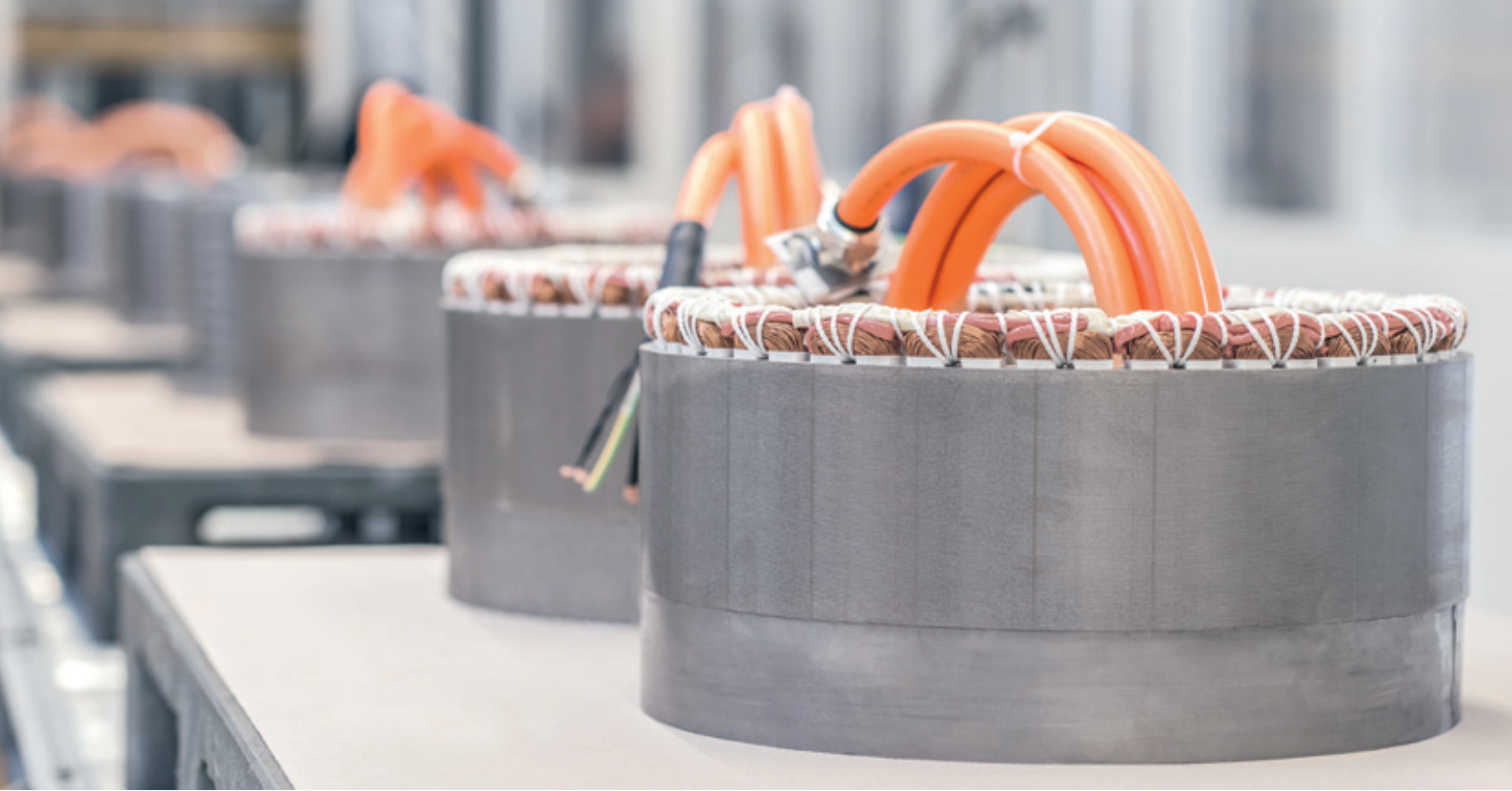
Direct drive technology by KESSLER

With **over 90-year experience** in motor technology KESSLER energy designs and manufactures every range of performance according to customer requirements.



Highest energy and power density

	Torque [Nm]	Speed [rpm]
Torque pocket V-solenoids	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Torque radial pocket solenoids	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Torque surface solenoids	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Synchronous pocket solenoids	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Synchronous surface solenoids	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Asynchronous copper rod	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Asynchronous aluminium rod	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Asynchronous copper bar	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]
Asynchronous aluminium bar	■■■■■■■ M[Nm]	■■■■■■■ n[rpm]

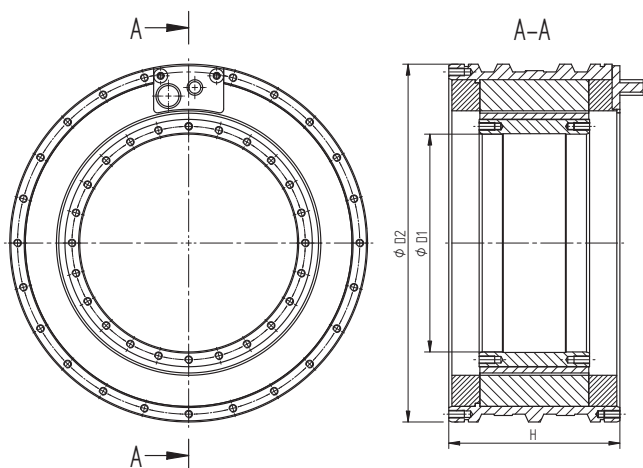


Extract from the KESSLER HTM torque motor series

Type	M Nominal Torque (Nm)*	M Max. Torque	D2 (mm)	D1 (mm)	Stator Height (mm)
290-100	730	1,470	310	190	150
360-100	1,020	2,050	385	265	160
420-100	1,510	3,030	450	300	160
530-100	2,320	4,650	565	420	160
680-100	4,210	8,440	505	735	160

Further motor sizes on request.

∅ D2 = Stator external diameter, ∅ D1 = Rotor inner diameter, *watercooled



Advantages

- High dynamic drive concept
- Optimized electrical magnetically design
- Up to 30% more torque in same space than comparable to market available standard
- Thermal optimized cooling property
- Energy efficient performance
- Best practice use versus current gearbox applications
- Cost optimized design
- Highest thrust per square centimeter comparable to commercially available torque motors
- Very high filing factor by optimized winding processes

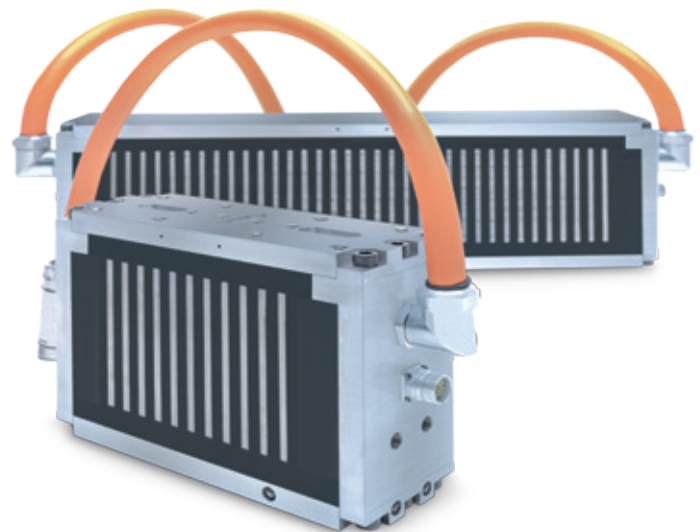
KESSLER SLM linear motor series

Type	Nominal force F_n (N)	Height (mm)	Width (mm)	Length (mm)
100 x 160	610	34	116	178
150 x 160	910	34	166	178
100 x 320	1,220	34	116	338
150 x 320	1,820	34	166	338
100 x 480	1,830	34	116	498
150 x 480	2,730	34	166	498

Further motor sizes on request.

Advantages

- Very compact design
- High dynamic for fast motions
- Optimized design for minimum torque ripple
- Nominal force (F_n) up to 10,000 N
- Max. speed up to 300 m/min
- Maintenance free drive concept
- Minimum power losses
- Temperature optimized motor design



Application examples



Synchronous motor for electrical vehicle

Motor specifications:

- Torque (S1): 800 Nm
- Speed (S1): 800 1/min
- Torque max.: 2,500 Nm



Synchronous motor for electrical sport motor bike

Motor specifications:

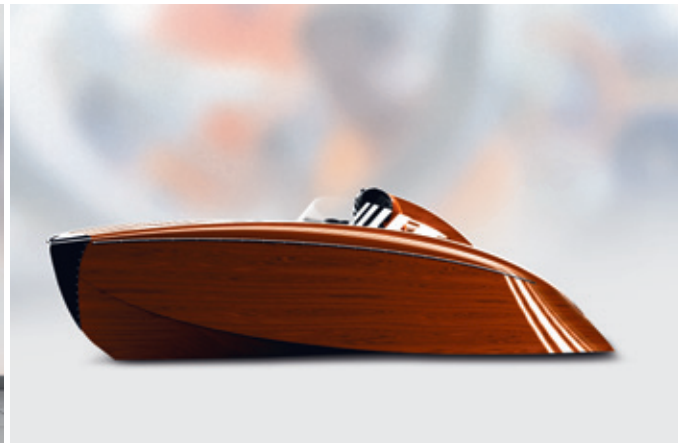
- Torque (S1): 100 Nm
- Speed (S1): 5,100 1/min
- Torque max.: 200 Nm



Linear motor for elevator

Motor specifications:

- Nominal force (Fn): 30,000 N
- Speed: 15 m/s

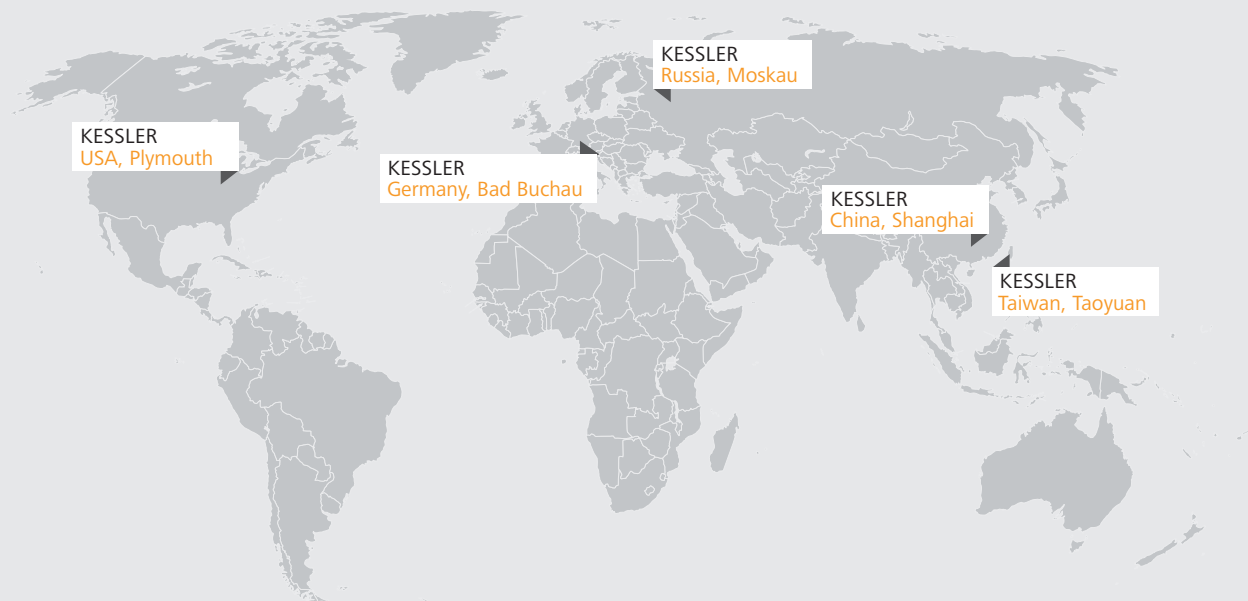


Synchronous motor for sport motor boat

Motor specifications:

- Torque (S1): 100 Nm
- Speed (S1): 5,100 1/min
- Torque max.: 200 Nm

Operating Worldwide for our Customers



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