



# High-Speed Induction Motors

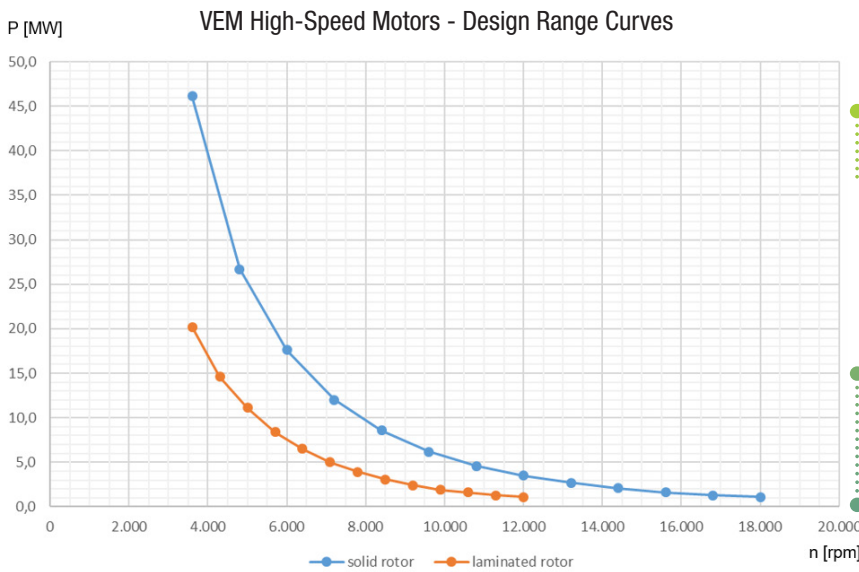
ELECTRIC DRIVES  
FOR EVERY DEMAND

High-speed motors are electrical machines that operate at rated speed beyond 3,600 rpm (60 Hz). Thus they are always operated with frequency converters. Thorough system engineering is required to ensure smooth operation of the high-speed drive system.

- **most compact dimensions** for high power output
- practically **maintenance free operation** for long periods of time
- direct and **easy speed adjustment** over a wide speed range
- **higher efficiency** compared to both motor/ gear systems and steam or gas turbines
- clean and sustainable operation with **minimized carbon footprint**
- **TCO (Total Cost of Ownership) lower** compared to other solutions
- **less installation space** required for the motor than any other drive solution



## Wide range of power and speed ratings available



- curve shows current design range
- higher power/ speed combination on request
- 2 rotor designs to optimize technical parameters, depending on power/ speed
- laminated rotor in the range between 1 MW/ 12,000 rpm and 20 MW/ 3,600 rpm
- solid rotor in the range between 1 MW/ 18,000 rpm and 46 MW/ 3,600 rpm

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VEM GmbH  
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As of 08/2022

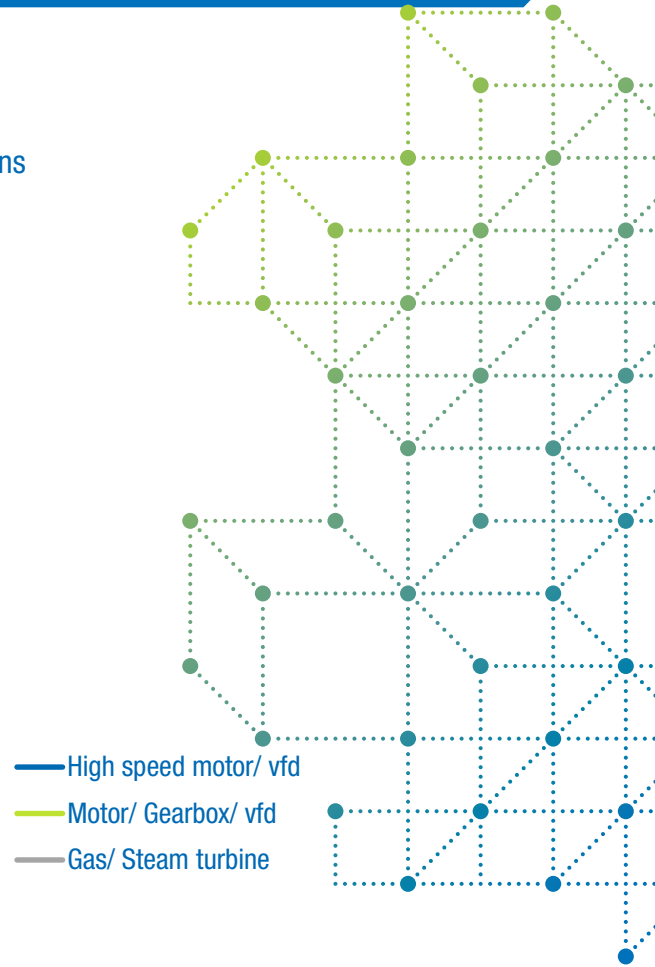
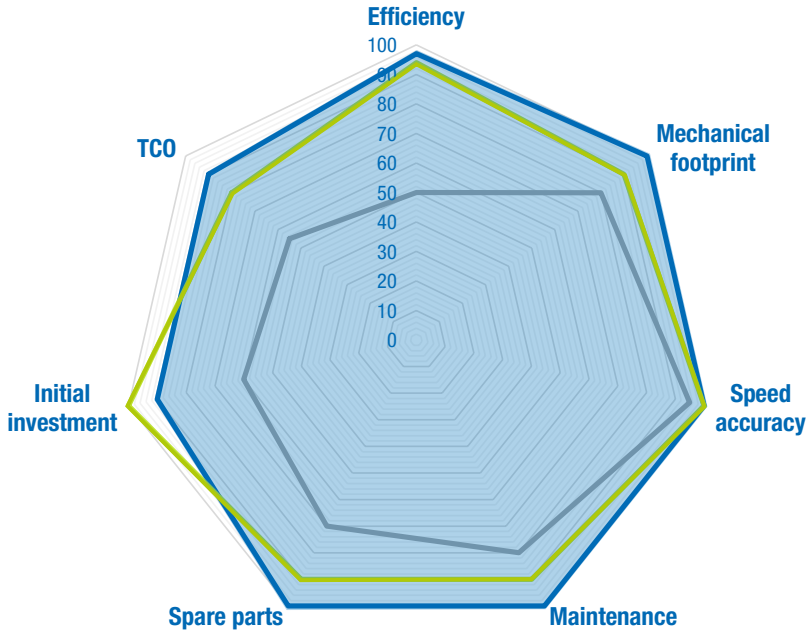


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## Advantages at a glance

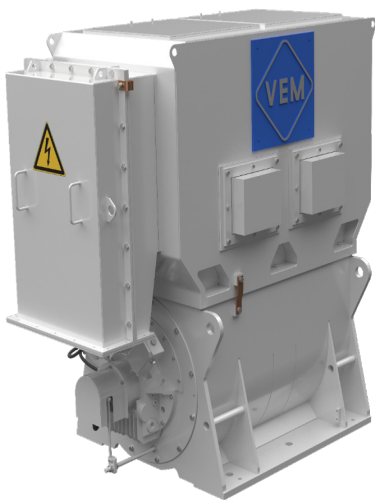
Comparison drives for high speed applications  
100 = best value/ lowest costs



## VEM high speed competence

VEM high-speed motors are able to operate compressors, high-speed pumps and other applications requiring a high-speed drive system without additional gear boxes. Thus they can replace typical motor/ gear box systems or steam and gas turbines.

VEM provides high-speed drive systems based on VEM high-speed motors and matching converters for high frequencies.



## VEM Sales – Contact partner at a glance



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