

An efficient future within a hand's reach



LOW VOLTAGE

IE4/IE5 synchronous reluctance motor
*magnet free



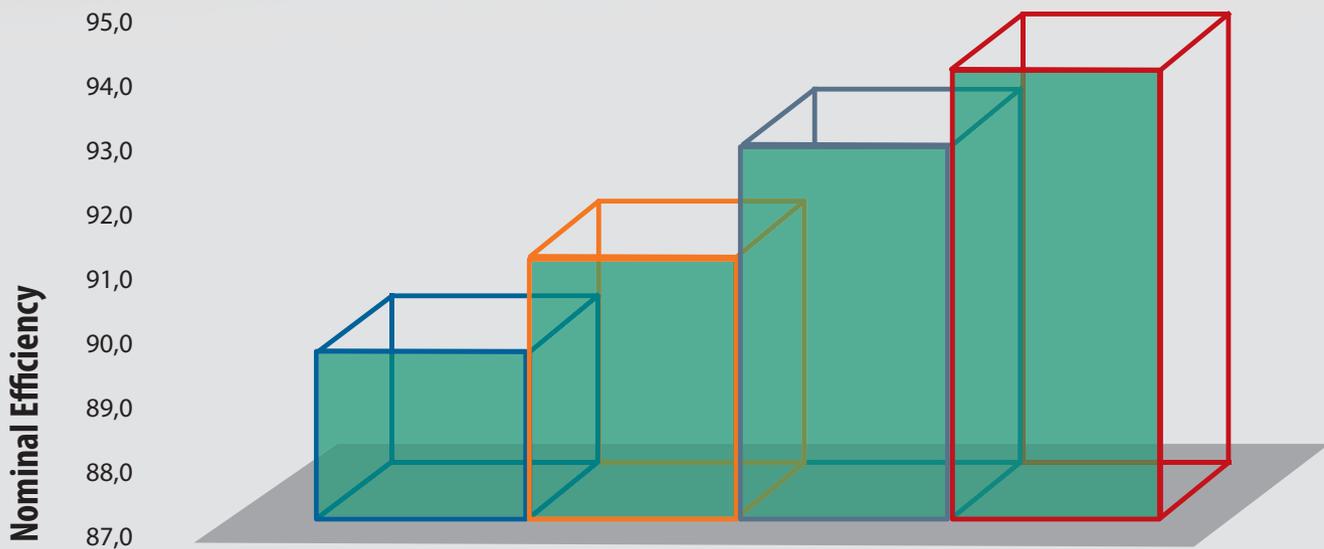
KONČAR
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Lowest energy bill with maximum availability

Synchronous reluctance motors are a new range of standardized electric motors developed by KONČAR MES for utilities and industrial consumers to improve their system performance and efficiency while having a positive impact on the environment. These motors delivered with a frequency converter to customers make a complete package which enhances the performance. An innovative rotor construction reduces losses and allows using a higher density of power in the motor construction. These motors are delivered with efficiency in accordance with IE4/IE5 efficiency level.

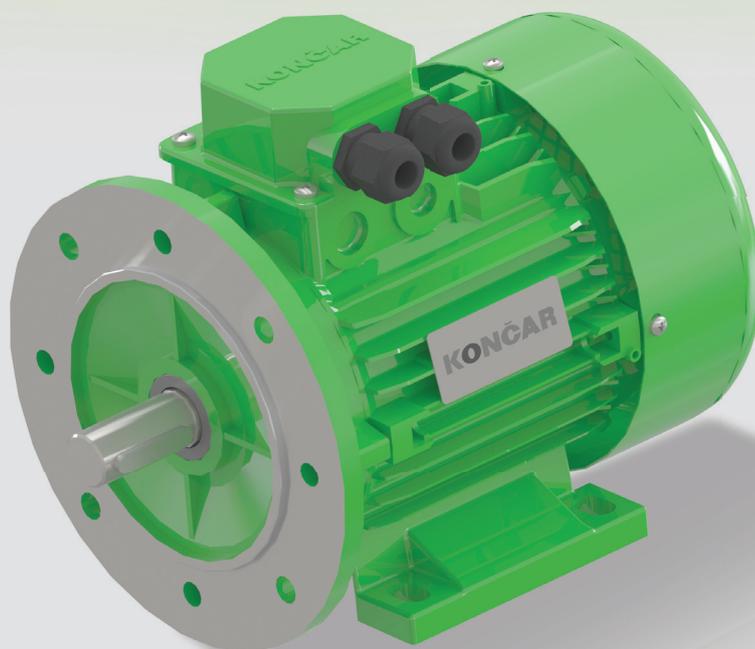
Stepping towards a more efficient future



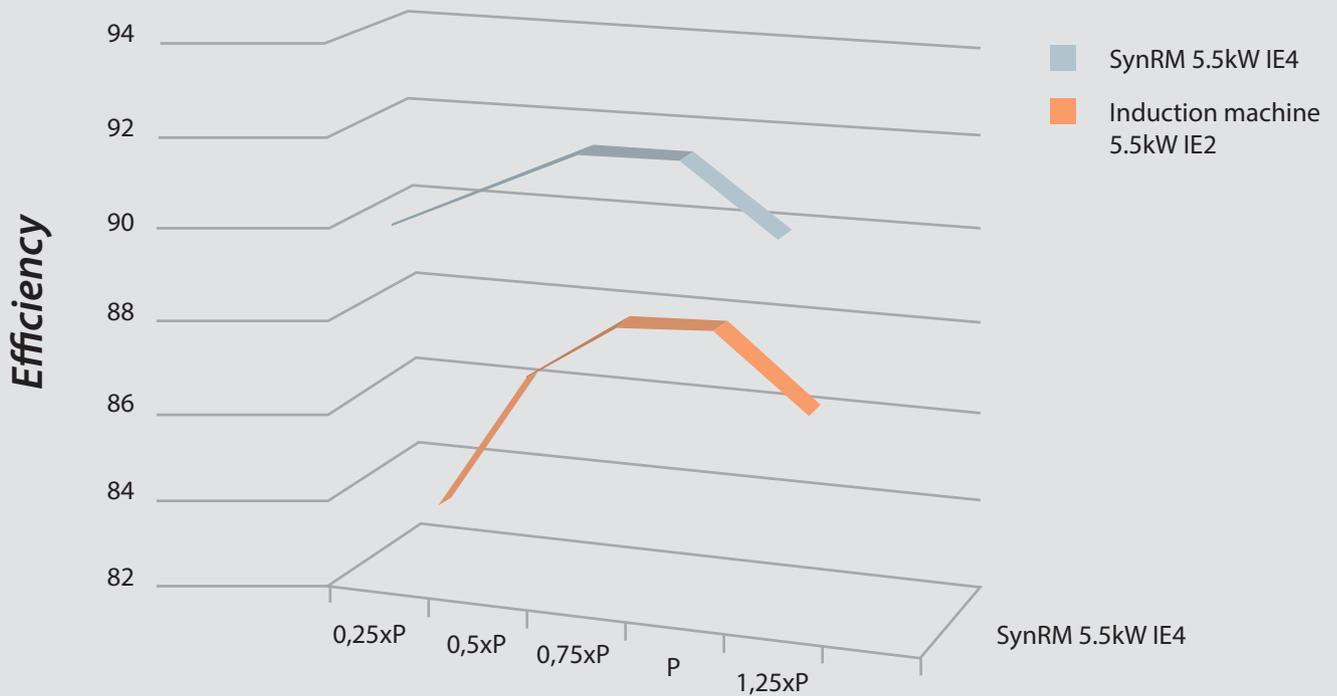
Efficiencies for 11kW acc. to IEC 60034-30-1

IE2 - IE3 - IE4 - IE5

Characteristics			
SynRM motor without permanent magnets		KSR 80- 225	
Designed for VSD operation		Yes	
Classes of efficiency		IE4/IE5	
Power ratings		0,75-45kW	
Voltage and frequency		3-phase 400-480V 50/60Hz for VSD	
Speed range		1000/1500/3000 rpm	
Insulation class		F	
Protection index		IP55	
Mounting		B3, B5, B35, B14 and B34	



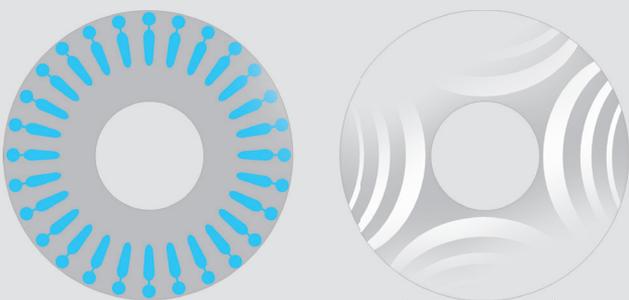
KSR series have a higher efficiency at partial load than standard induction machine. This characteristic has more effect on efficiency of a system, especially for variable loads like pumps, fans etc.



Size of an IE2 asynchronous motor is the same as of an IE4 synchronous reluctance for the same power. Main difference is in the rotor, as a rotor of synchronous reluctance

motor has no winding i.e. no aluminum. Due to the mentioned such motor type does not have winding losses in the rotor and have lower moment of inertia.

No aluminum winding

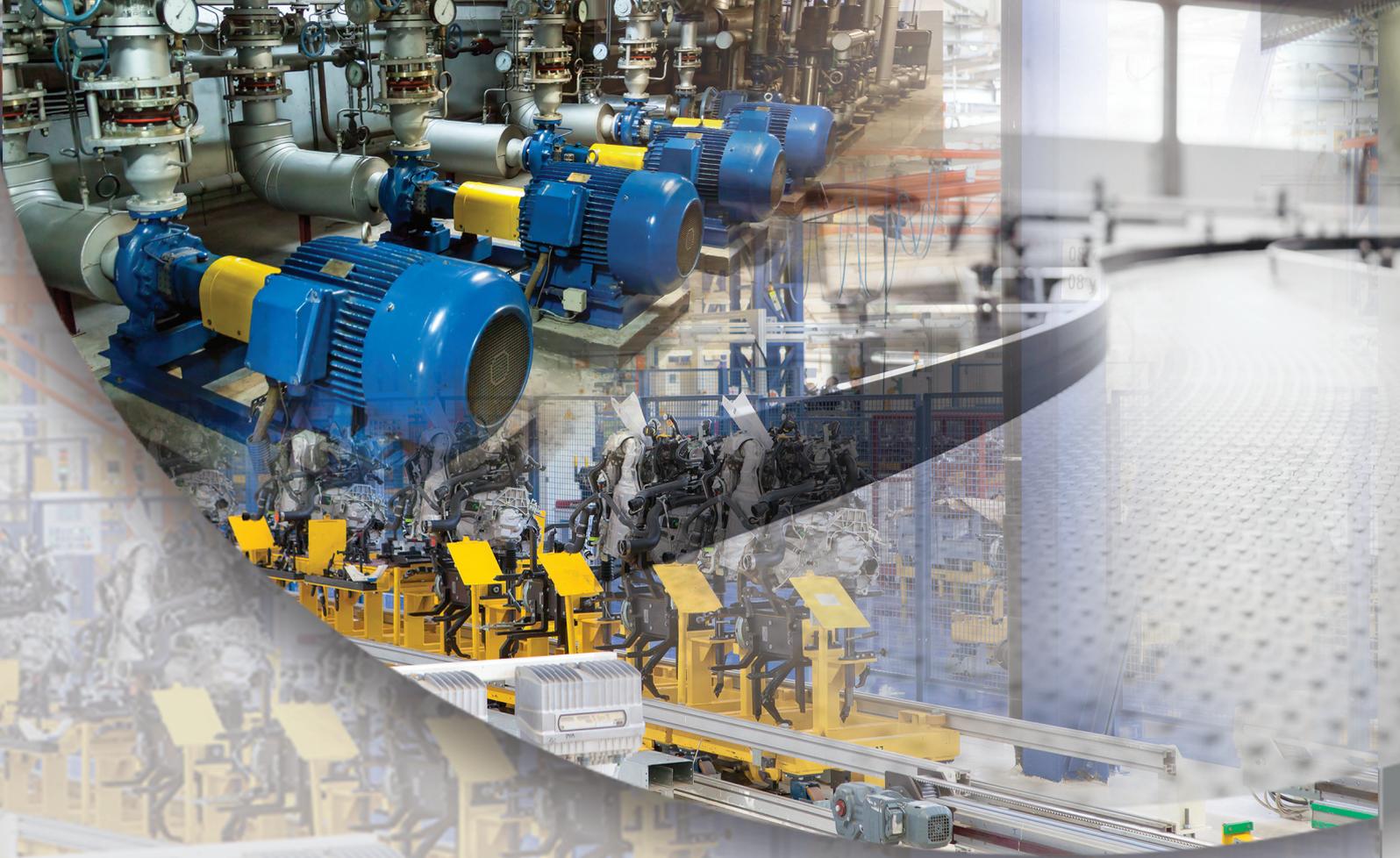


kgm² ↓

Protor → 0 W

Because of high thermal reserve, as a consequence of increased efficiency, motors can be designed for High output.

It is the same reason why standard motor have high additional overload capability of 20% for continuous duty (S.F. = 1.2).



Target Applications

Pumps, fans and compressors in the process and water industries • Conveyor technology • Energy efficient and dynamic conveyor technology operation for bulk products and packaged goods • Machinery construction • New opportunities for machine builders as a result of simple speed control and synchronous speed operation

Benefits for the customer

- High efficiency – comparable to efficiency class IE4 or IE5
- Reduces energy losses by up to 40 percent compared to conventional solutions
- Return on investment – in many cases less than two years
- Guaranteed total system efficiency and optimized process control
- Simple and service friendly design without magnets
- Reliable due to cooler bearings and no rotor windings
- Fully interchangeable with induction motors due to IEC/Cenelec compliance
- Longer bearing service intervals due to low operating temperature

KSR in short: reliable and robust as an induction motor, with performances high as of a motor with permanent magnets – motor of the future



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