

# INTERNATIONAL EFFICIENCY REGULATIONS FOR ELECTRICAL MOTORS

Country		Voltage/ Frequency	Power range	Number of poles	Regulation/ Guideline	Regulation for minimum efficiency	Forecast / Remarks
European Union, Switzerland and Turkey		50 - 1000 V 50 / 60 Hz	0.75 - 375 kW	2 - 6	EG 640/2009 EG 4/2014 2009/125/EG Ökodesign	IE3	No update planned
USA		< 600 V 60 Hz	1-500 HP (0.75-375 kW)	2 - 8	EISA 2007 EISA 2014	NEMA Premium (IE3)	Extend regulation to additional frame sizes like NEMA 42-48-56
Canada		< 600 V 50 / 60 Hz	1-500 HP (0.75-375 kW)	2 - 8	EER 2017	NEMA Premium (IE3)	No update planned
Mexico		< 600 V 60 Hz	1-500 HP (0.75-375 kW)	2 - 8	NOM-016-EN- ER-2010	NEMA Premium (IE3)	No update planned
China		< 1100 V	0.75 - 375 kW	2 - 6	GB 18613-2012 GB 25958-2010	Grade 3 (IE2)	IE3 Introduction has been postponed, the use of a better efficiency class is pos- sible on a voluntary basis
Brasil		< 1000V 50 / 60 Hz	0.75 - 185 kW	2 - 8	Lei No 10.295 Decreto No 4.508 Porttaria No 553	Alto Redimento (IE2)	IE3 "Alto Rendimento plus" from June 2019
Australia/ New- Zealand		< 1100 V 50 Hz	0.73 - 185 kW	2 - 8	AS/NZS 1359.5 : 2004	MEPS 2 "E2"	The E2 values accord- ing to AS/NZS 1359.5 are not in any case equal to IE2 values according to IEC standards!
South Korea		< 600 V 60 Hz	0.75 - 375 kW	2 - 8	REELS 2010	IE2: 0,75-37 kW IE3: 37-375 kW	IE3: 0,75 - 37kW from October 2018
India		< 1000 V 50 Hz	0.37 - 375 kW	2 - 6	IS 12615	IE2 from January 2018	no update planned
Singapore		< 1000 V 50 Hz	0.75 - 375 kW	2 - 6	MEPS according to NEA	Energy Conservation Act (ECA)	IE3 from October 2018
Colombia		< 600 V 60 Hz	0.18 – 373 kW	2 - 8	Resolution no. 1012:2015	IE1	IE2 starting from August 2018 IE3 > 7.5 kW starting from August 2020
Saudi Arabia		< 1000 V 60 Hz	0.75 - 375 kW	2 - 6	SASO IEC 60034-30:2013	IE3 for solo motors	no update planned

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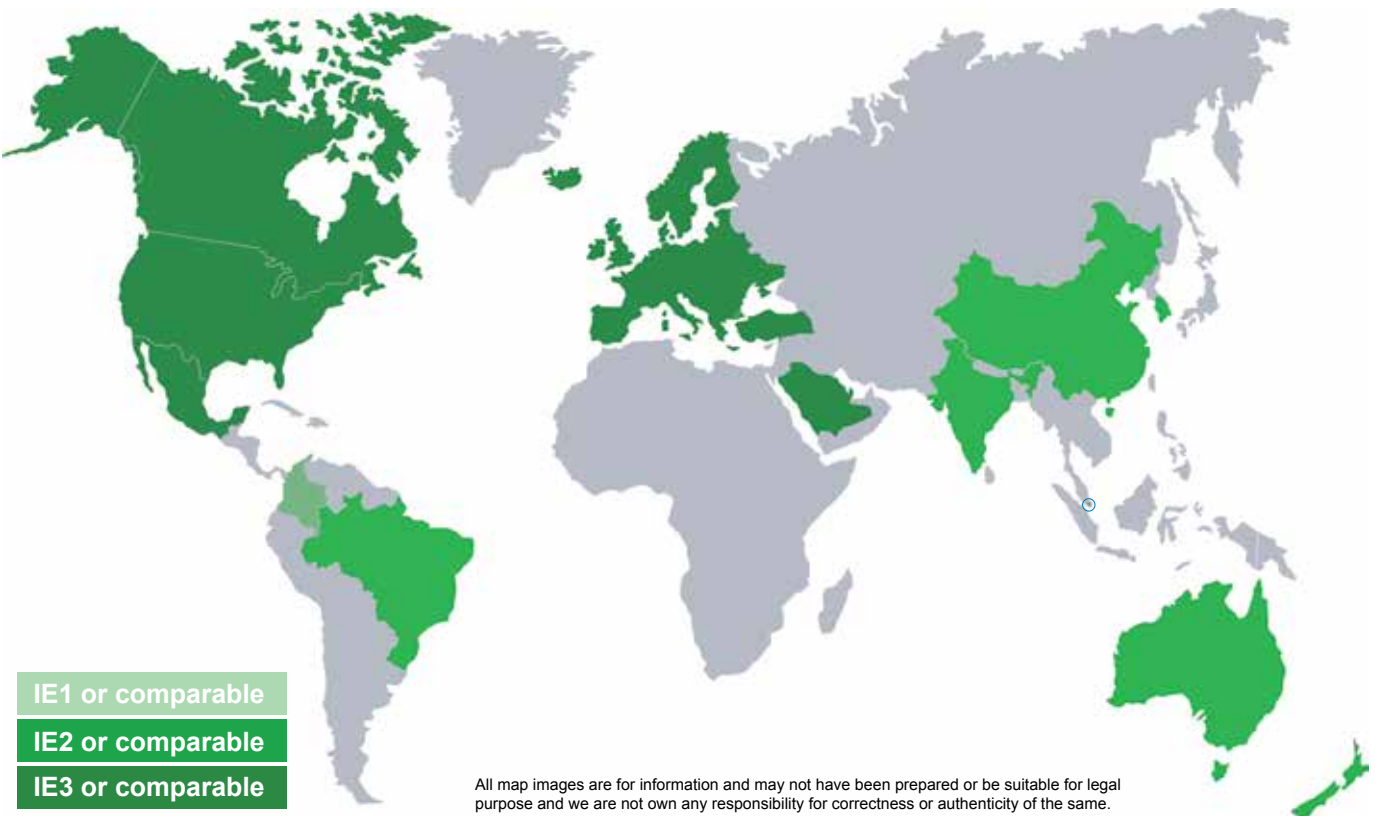
Electric drives in industrial applications consume up to 70 percent of the total energy required. For many companies, this offers great potential for optimisation.

NORD supplies a wide range of electric motors, which exceed all common global efficiency regulations and standards. Our motors are used in many applications because they are not just powerful and robust, but can also be combined with all NORD gear units.

Whether in agitators, conveyor systems, intralogistics or the food industry: NORD electric motors can be found wherever high performance is required. They operate reliably over many years with very high efficiency. This saves operating costs for our customers and at the same time helps protect the environment.

This brochure is intended to give you an overview of the worldwide requirements for energy efficiency of electric motors. Please note that the standards and guidelines are subject to constant change. Although we place great emphasis on correctness and accuracy, we can't replace a study of the possible guidelines or import regulations with this document.

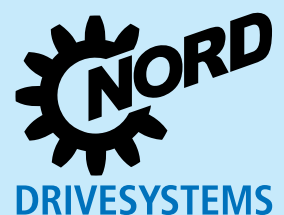
## INTERNATIONAL MINIMUM EFFICIENCY



### Headquarters:

**Getriebebau NORD GmbH & Co. KG**  
Getriebebau-Nord-Straße 1  
22941 Bargteheide, Germany  
T +49 (0) 4532 / 289-0  
F +49 (0) 4532 / 289-22 53  
info@nord.com, www.nord.com

Member of the NORD DRIVESYSTEMS Group



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### Global Vision, Local Support

NORD makes its wide product range easily available through a global network that includes representation in over 60 countries. By providing all of our customers with prompt delivery, and expert support services, we are firmly committed to exceeding customer expectations and being responsive to the ideas and specifications of every customer, anywhere in the world.