

# 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 Eco-design directive	IE3	New Ecodesign Directive from 2021 or 2023 with reduction of exceptions (resolution of more stringent requirements is expected at the end of 2019).
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
China		< 1000 V	0.75 – 375 kW	2 – 6	GB 18613-2012 GB 25958-2010	Grade 3 (IE2)	IE3 Introduction has been postponed.
Brasil		< 1000 V 50 / 60 Hz	0.75 – 185 kW	2 – 8	Lei No 10.295 Decreto No 4.508 Portaria Interministerial Nº 1, DE 29 DE JUNHO DE 2017	Alto Rendimento Plus (IE3)	No update planned
Mexico		< 600 V 60 Hz	1 – 500 HP (0.75 – 375 kW)	2 – 8	NOM-016-ENER-2010	NEMA Premium (IE3)	No update planned
Colombia		< 600 V 60 Hz	0.18 – 373 kW	2 – 8	Resolution no. 1012:2015	IE2	IE3 > 7.5 kW starting from August 2020
Chile		< 690 V 50 Hz	0.75 – 7.5 kW	2 – 6	NCh 3086 of 2008	IE2	No update planned
Ecuador		60 Hz	0,746 – 373 kW	2 – 8	Resolución No. 17 524: 2017	IE2	No update planned
Australia New Zealand		< 1100 V 50 Hz	0.73 – 185 kW	2 – 8	AS/NZS 1359.5 : 2004	MEPS 2 "E2"	The E2 values according to AS/NZS 1359.5 are not in any case equal to IE2 values according to IEC standards!
India		< 1000 V 50 Hz	0.12 – 375 kW	2 – 8	Gazette of India No. 3144/2018	IE2	No update planned
South Korea		< 600 V 60 Hz	0.75 – 375 kW	2 – 8	MKE-2015-28	IE3	No update planned
Singapore		< 1000 V 50 Hz	0.75 – 375 kW	2 – 6	Energy Conservation Act (ECA) 2013	IE3	No update planned
Taiwan		< 600 V 60 Hz	0.75 – 200 kW	2 – 8	CNS 14400 (MEPS)	IE3	No update planned
Japan		< 1000 V 50 / 60 Hz	0.75 – 375 kW	2 – 6	JIS C 4213 (2014)	IE3	No update planned
Saudi Arabia		50 – 1000 V 60 Hz	0.75 – 375 kW	2 – 8	SASO 2893:2018	IE3	No update planned

Other import certifications



EAC (Abbreviation for EurAsian Conformity)  
Scope of Application: Russia, Belarus, Armenia, Kazakhstan and Kyrgyzstan



Self-certification (similar to EC) of compliance with Moroccan standards  
Scope of application: Morocco



Certificates state compliance with the standards and legislation applicable in the Ukraine  
Scope of application: Ukraine

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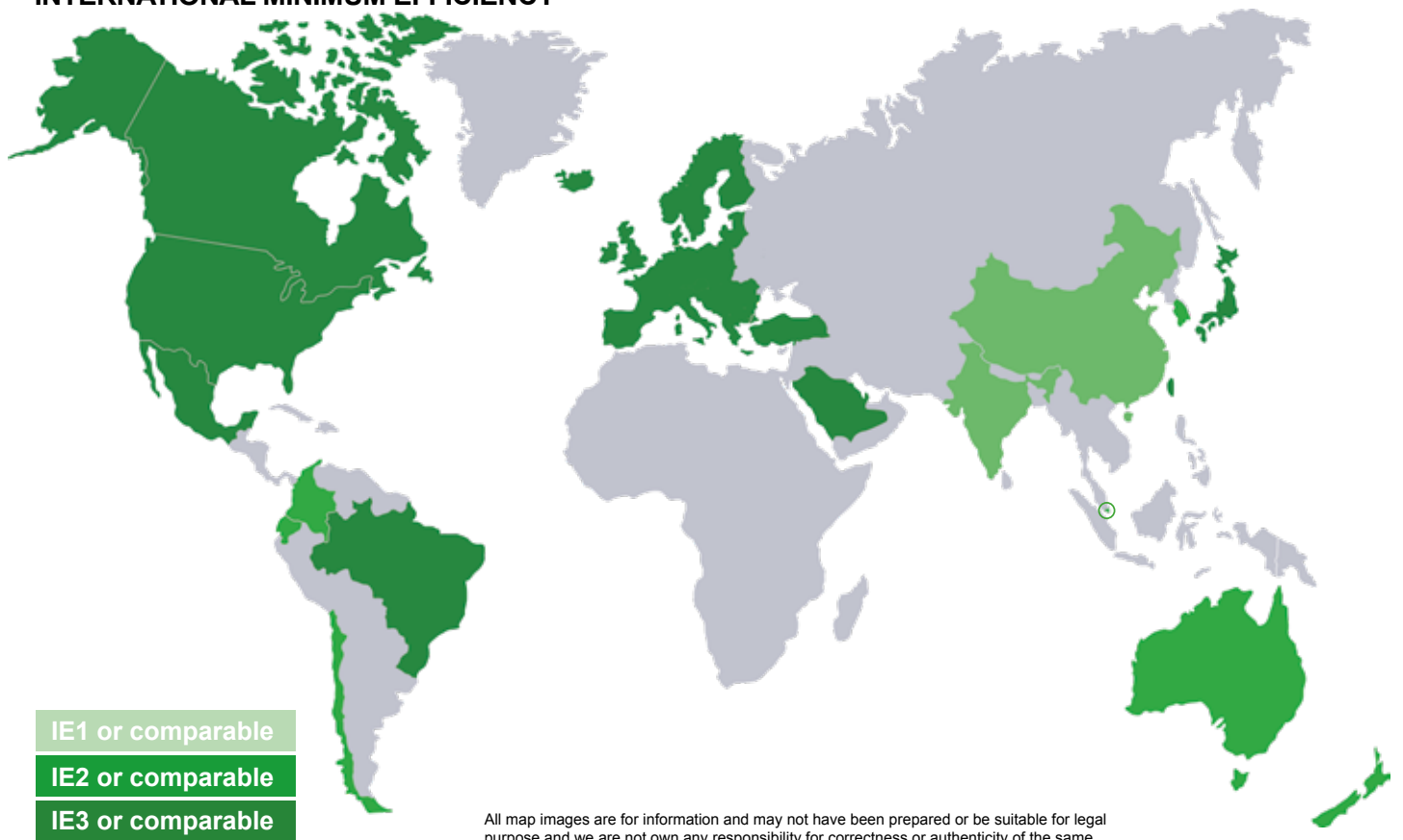
Electric drives in industrial applications consume up to 70 % of the total energy required. For many companies, this offers great potential for optimisation.

NORD DRIVESYSTEMS 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



### NORD DRIVESYSTEMS Group

- Family business from Bargteheide near Hamburg with more than 4.000 employees
- Drive solutions for more than 100 branches of industry
- 7 production locations worldwide
- Present in 98 countries on 5 continents
- More information: [www.nord.com](http://www.nord.com)

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**Member of the NORD DRIVESYSTEMS Group**