



NEW ECODESIGN REQUIREMENTS

(EU) 2019/1781 *



EUROPEAN UNION'S ECODESIGN REGULATION

From July 1, 2023, the next stage of the European Union's Ecodesign legislation for electric motors and variable speed drives will come into effect.



Minimum Energy Performance Standard (MEPS)

MEPS were originally introduced in 2009 through Commission Regulation (EC) 640/2009, implementing the Ecodesign Directive 2005/32/EC. The efficiency classifications (IE codes) are as follows:

IE1 standard efficiency

IE2 is high efficiency

IE3 is used for motors with **premium** levels of efficiency

IE4 refers to **super-premium** efficiency levels

IE5 describes **ultra-premium** efficiency ratings

Regulation 640/2009 was repealed and replaced by the new Regulation (EU) 2019/1781 whereby more demanding requirements for electric motors and variable speed drives were introduced.

Minimum Efficiency of Electric Motors and Variable Speed Drives

Regulation scope		Year and minimum efficiency requirements (2015 onwards)						
		2015	2017	2018 - 2020	2021	2022	2023	Onwards
AC induction motors <= 1000 V								
0.75-7.5 kW	3 phase, 2/4/6 poles	IE2	IE2+VSD/IE3					
7.5-375 kW	3 phase, 2/4/6 poles	IE2+VSD/IE3						
0.12-0.75 kW	3 phase/Brake, all poles				IE2			
0.75-1000kW	3 phase 2/4/6/8 poles				IE3			
0.75-1000 kW	ATEX*/Brake, all poles				IE3			
75-200 kW	3 phase, 2/4/6 poles						IE4	
0.12kW & above	1 phase, all poles						IE2	
0.12-1000 kW	Ex eb, all poles						IE2	
Variable speed drives		2015	2017		2021	2022	2023	Onwards
0.12-1000 kW				2018 - 2020	IE2			

The table above shows the evolution of the efficiency Regulations.

#Explosion protected motors excluding Ex eb



WHAT'S CHANGING?

Motors new to the European market with rated outputs between

75kW and 200kW**

Motors with ratings of 75kW - 200kW inclusive, with 2, 4 or 6 poles will be required to achieve IE4 efficiency levels

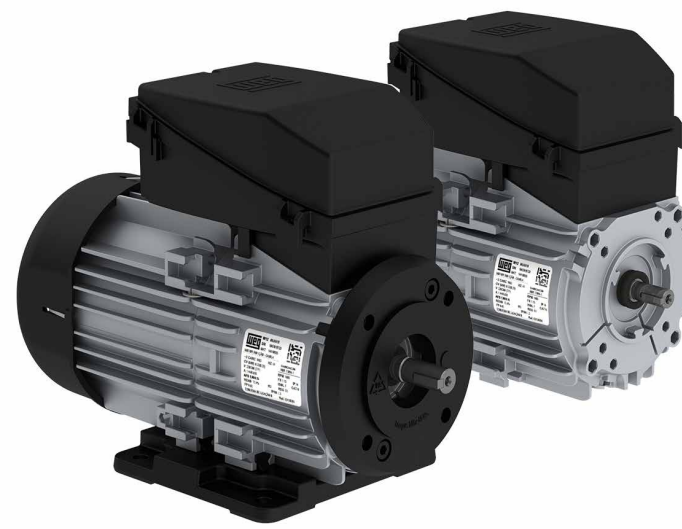


0.12kW and 1000kW

Increased safety Ex eb motors (2, 4, 6 & 8 poles) are required to meet IE2 efficiency levels for the first time

0.12 kW and above

Single-phase motors with outputs of 0.12kW and above will also be required to meet IE2 efficiency levels



Clearer efficiency information

Product information requirements for motors and variable speed drives has also changed - it is mandatory to provide additional information on efficiency levels at different speeds, loads, and levels of torque, to allow engineers to optimise efficiency system-wide across all processes.

* European Regulation transposed into UK law through the Statutory Instrument 2012/745

** Excluding Brake motors and Explosion protected motors



For further information about WEG's energy efficient motor range visit weg.net

