

# Ecodesign directive

1-July 2021

Here's some general information about the coming changes in the requirements. We hope it could be useful.

If you have any questions you are always welcome to contact us.



JENS S.

# Why?

*Did you know that...  
Electric motors counts for ~50%  
of EU:s total energy consumption*

Electric motors are the single largest electricity consumer. Therefore there are EU-legislations that dictates the efficiency of these.

According to regulations EG no. 640/2009, Directive 2005/32/EG



# What does it mean?

Three phase motors Continuous duty up to 1000V 50/60 Hz		Year/date for introduction of minimum requirement		
Motor power	Duty type	From 01/01/ 2017	From 01/07/ 2021	2023
		2,4,6 pole	2,4,6,8 pole	
$\geq 0.12 < 0.75 \text{ kW}$	VSD	-		
	DOL	-	IE2	IE3
$\geq 0.75 < 75 \text{ kW}$	VSD	IE3		
	DOL	IE2	IE3	IE3
$\geq 75 \leq 200 \text{ kW}$	VSD	IE3		
	DOL	IE2	IE3	IE4
$> 200 < 375 \text{ kW}$	VSD	IE3		
	DOL	IE2	IE3	IE3
$\geq 375 \leq 1000 \text{ kW}$	VSD	-		
	DOL	-	IE3	IE3

Changes in the new requirements vs.  
current requirements:

- ✓ 8-Pole motors are included
- ✓ Motors with power  $\geq 0.12 \text{ kW} < 0.75 \text{ kW}$  should be IE2 classed.
- ✓ The exception with IE2 for variable speed drive operation disappears.

The most common exceptions from the  
new requirements:

- ✓ Other duty than S1, S3 ( $\geq 80\%$ ), S6 ( $\geq 80\%$ )
- ✓ Motors with integrated variable speed drive
- ✓ Ex-motors
- ✓ Submersible motors



Reduced energy consumption=

**1100 kWh/year**

Which is roughly 1/3 of an average apartment consumption

Did you know that...

The ROI time for an IE3 motor in this example is less than 2 years.

*The example refers to the difference between IE2 and IE3 for a continuously driven 7.5 kW motor*



Reduced CO<sub>2</sub> emissions=

**0,34 tonnes/year**

That is equivalent to 2500 km of car driving

# Profits

# Product impact

*Don't forget...*

*You can always ask our product technicians if you have any questions. You'll find contact details on the next page.*

## How does this impact the products I buy from Jens S?

If you buy a product which is affected by the new regulations you can with greatest certainty expect the **WEIGHT** of the motor to increase.

How much is impossible to say but 10-20% weight increase is a good estimate.

In some cases it could also have an impact on the motor **DIMENSIONS**.

Usually the motor is a bit longer but in some cases it could also mean that you need to go up one frame size.

An IE2 or IE3 motor usually has a slightly higher **SPEED**.

In most applications this doesn't matter but in some process applications or fan/pump applications it could be a good idea to make sure it doesn't cause any problems..

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## Contacts



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