

## Efficiency of motors

Standard IEC 60034-30-1 defines and harmonizes worldwide the efficiency classes IE1, IE2, IE3 and IE4 for low-voltage three-phase motors in the power range from 0,12 kW to 1000 kW (2p=2, 4, 6, 8).

IE1 = Standard Efficiency

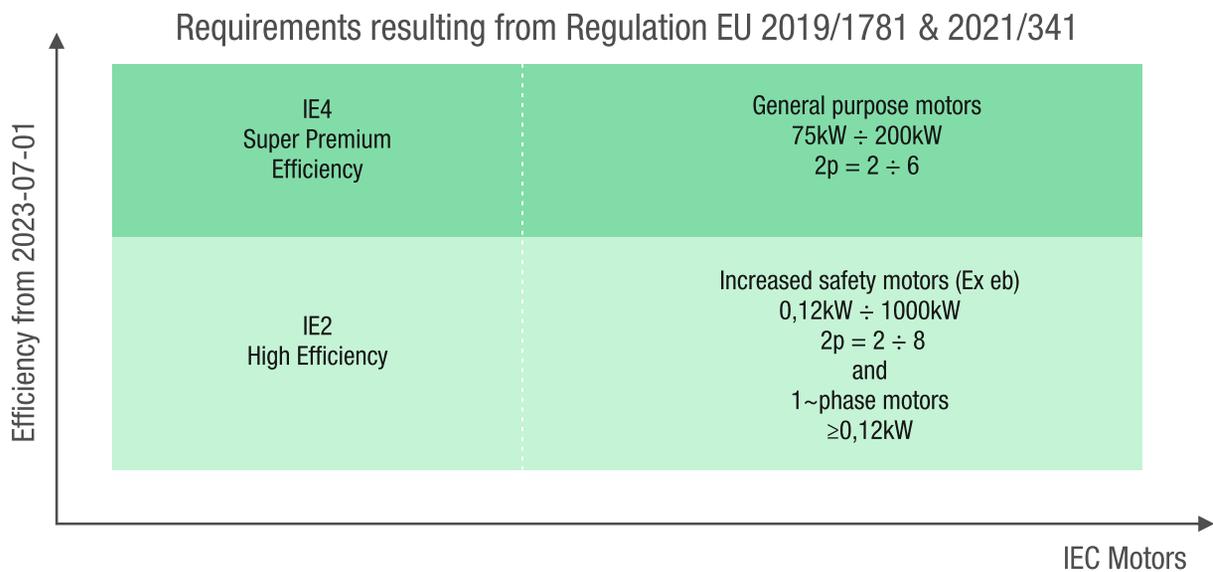
IE2 = High Efficiency

IE3 = Premium Efficiency

**IE4 = Super Premium Efficiency**

From 1<sup>st</sup> July 2023, general purpose three-phase induction motors in the range from 75 kW up to 200 kW (2p=2, 4, 6) shall have minimum efficiency class of IE4 resulting from Regulation EU 2019/1781 & 2021/341.

Cantoni Group complies with the new requirements - IE4 Super Premium Efficiency motors are available in the offer. However, the range of IE4 motors offered by Cantoni Group is wider than required by Regulation, and available upon request.



When switching from IE3 to IE4 efficiency level in some of the biggest motor types it was not possible to maintain the same external dimensions as previously available in 3SIE (IE3) motors.

This technical issue is summarized in the below table:

Rated output power	No of poles	Motor type in 3SIE (IE3)	Motor type in 4SIE (IE4)
132kW	2	3SIE315M2A	4SIE315M2A with longer housing as used in 3SIE315M2C
160kW	2	3SIE315M2B	4SIE315M2B with longer housing as used in 3SIE315M2C
200kW	2	3SIE315M2C	4SIE315L2C based on 3SIE315L2C
160kW	4	3SIE315M4B	4SIE315M4B with longer housing as used in 3SIE315M4C
200kW	4	3SIE315M4C	4SIE315L4C based on 3SIE315L4C
160kW	6	3SIE315M6D	4SIE315L6C based on 3SIE315L6C