



**EU REQUIREMENTS FOR ENERGY EFFICIENCY OF INDUSTRIAL
DRIVES**

SUMMARY OF COMMISSION REGULATION (EU) 2019/1781

1. Introduction

Commission Regulation (EU) 2019/1781 sets ecodesign requirements for electric motors and variable speed drives (VSD) used in industrial applications. The aim is to reduce energy consumption and improve the efficiency of motor systems in line with EU energy efficiency goals. The regulation came into effect on July 1, 2021, with extended provisions applicable from July 1, 2023.

2. Efficiency limits by equipment rating

Three-phase low-voltage motors (up to 1000 V AC):

- 0.12 to 0.75 kW: minimum efficiency class IE2
- 0.75 to 1000 kW: minimum efficiency class IE3

Variable Speed Drives (VSD):

- Must comply with the EN 61800-9-2 standard
- Efficiency is assessed in combination with a reference IE2 motor

3. FMK Motorized Industrial Drives – Compliance with Requirements

FMK Motorized standard industrial models:

- Equipped with motors meeting IE3 efficiency class
- Example: 1.5 kW motor achieves up to 87.4% efficiency

Solutions with speed control:

- IE2 motor combined with a compliant VSD
- → Fully meets requirements when equipped with dynamic speed regulation

FMK motorized s.r.o



FMK Motorized products are designed in line with the regulation and optimized for both continuous and variable load operation.

Note:

The regulation does not apply to devices intended for:

- Mobile applications
- Explosion-risk environments (ATEX)
- Operations with non-standard duty cycles

4. Conclusion

FMK Motorized industrial products fully comply with the energy efficiency requirements of Regulation (EU) 2019/1781. By using IE3 motors (or IE2 with VSD), we ensure high performance, lower power consumption, and long-term cost savings. All models are ready for deployment under the current EU legislative framework as of July 1, 2023.