

# SUPER PREMIUM EFFICIENCY IE4 SYNCHRONOUS MOTORS



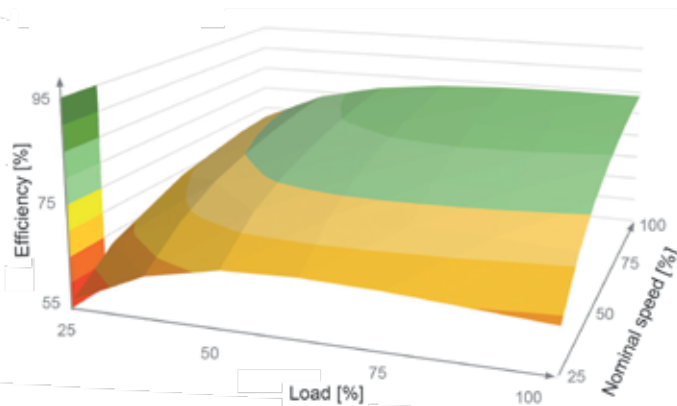
- Compliant with the most stringent efficiency regulations
- Considerable TCO reduction
- High efficiency, even in applications with partial load and partial speed.



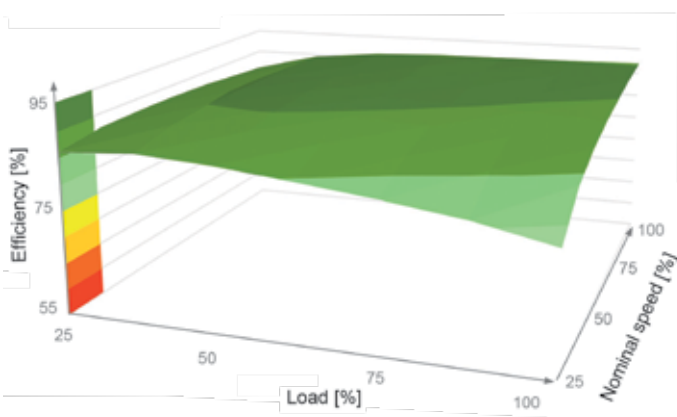
## Efficiency, load and speed of IE4 motors compared to IE3 motors

IE4 synchronous motors are considerably more efficient than IE3 asynchronous motors and reduce energy costs.

### IE3 Asynchronous Motor



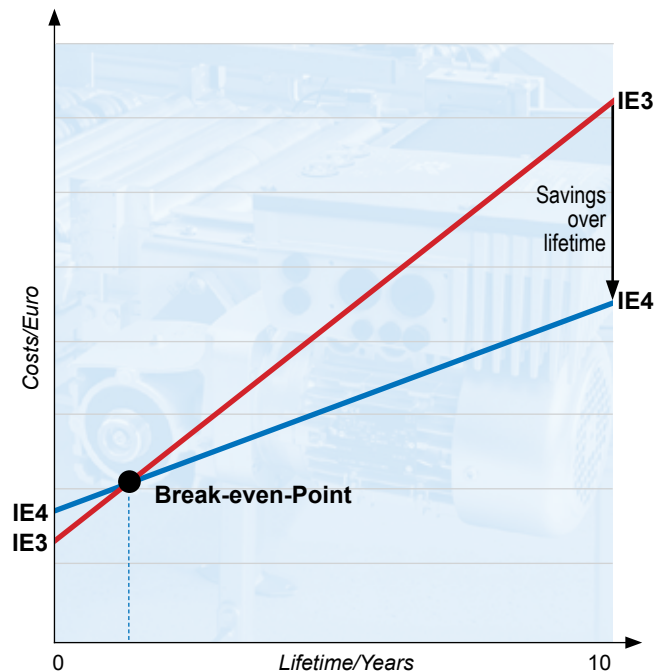
### IE4 Synchronous Motor



3D diagram: efficiency, load and speed

## Total Cost of Ownership (TCO)

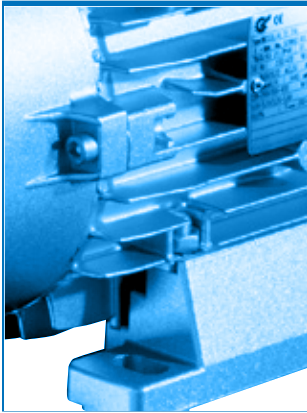
IE4 synchronous motors show their full potential in applications that perform multi-shift operations in partial load and/or speed. Post & parcel, airport, warehouse and food & beverage industries are eligible for significant cost savings with IE4 synchronous motors.



Sample TCO Calculation

IE4 synchronous motors achieve high savings over the life cycle and an early break even point with only a small additional investment.

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## Mounting styles

- IEC B3 metric foot mount
- IEC B14 metric face flange mount
- IEC B5 metric flange mount
- NEMA C-face flange mount
- NEMA foot mount
- Integral motor for NORD gear units

## International certifications

- CE mark in accordance with the Low Voltage Directive for European Union (EU)
- Underwriters Laboratories Recognised per UL standard 1004
- Canadian Standards Association CSA mark
- China Compulsory Certification
- Eurasian Conformity

## International certifications

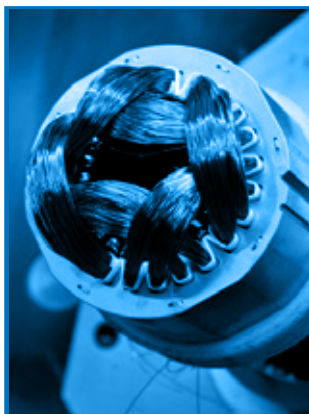
- EU: IE1 – IE4 according to IEC 60034-30
- US: ee labeling acc to EISA 2007 (Dept. of Energy)
- CA: CSA energy verified acc to EER 2010
- CN: CEL acc to GB 18613
- KR: KEL acc to REELS 2010
- BR: Alto Rendimento acc to Decreto n° 4.508
- AU: MEPS acc to AS/NZS 1359.5

## Inverter duty

- Conformance with NEMA MG 1-2009 Section 31.4.4.2 Voltage Spikes
- Speed range 5:1 constant torque
- Speed range 10:1 constant torque
- Speed range 20:1 constant torque
- Speed range 1000:1 constant torque

## Standard construction features

- Dual mode use: 50 Hz and 60 Hz
- Shaft lip seals on both ends of the motor shafts
- Stator to endbell connections sealed to exclude moisture
- Double coated magnetic wire insulation
- Moisture resistant varnish dipped windings with improved varnish materials
- Inorganic insulating components for tropical protection
- Conduit box sealed with gaskets
- Corrosion resistant alloy materials
- Threaded cable entry holes



## Environmental protection

- IP55 protection class standard
- Totally Enclosed Fan Cooled (TEFC/IC411)
- Insulation Class F standard
- Bureau Veritas certified

## Options

- Motor quick connectors
- IP66 protection class
- Insulation class H
- Thermal winding protection (thermistor/thermostat)
- Protection canopies (single, double, for textile industry)
- Space heater
- Brake (IP55 and IP66)
- Corrosion and/or dust protection
- (Lockable) hand release lever



## Sealed Surface Conversion System

- Easy to clean surfaces
- Resistance to acids and alkalis (wide pH range)
- Cannot flake
- Corrosion-proof – no contact corrosion and no infiltration of corrosion even if surface is damaged
- Confirms to FDA Title 21 CFR 175.300
- Free from chromates
- IP69K – High pressure cleaning

## Headquarters:

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## Global Vision, Local Support

NORD makes its wide product range easily available through a global network that includes representation in over 60 countries. By providing all of our customers with prompt delivery and expert support services, we are firmly committed to exceeding customer expectations and being responsive to the ideas and specifications of every customer, anywhere in the world.