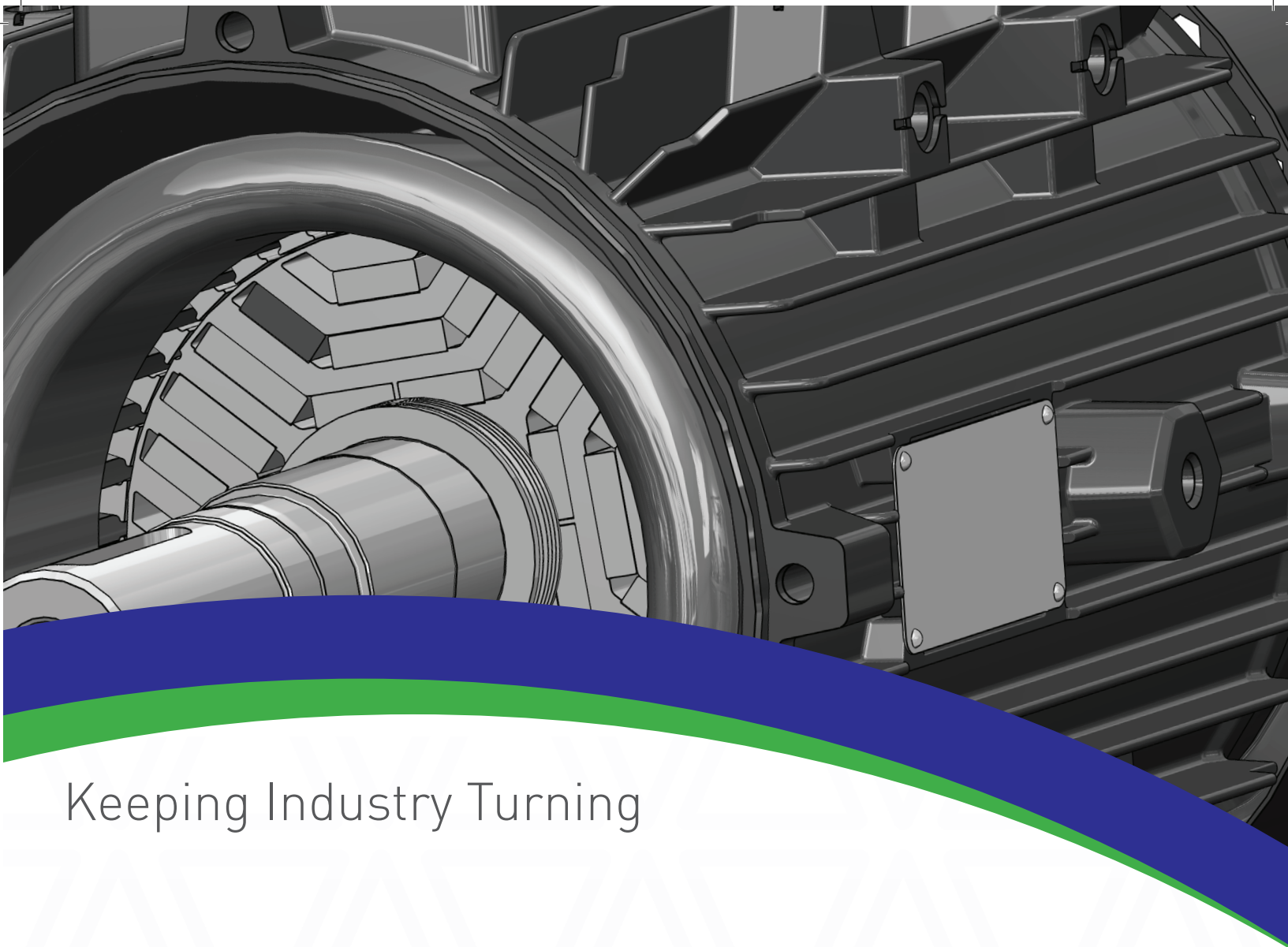




Keeping Industry Turning

WERM(A) IE5

Ferrite Assisted Synchronous Reluctance Motor

**BROOK
CROMPTON** 
Keeping Industry Turning

2433

WOLONG
Power your future

WERM(A) IE5

Product Overview

Frame Size:

80 - 315

Output Range:

0.55kW - 315kW

Mountings:

B3, B5, B35, V1

Duty:

S1

Bearings:

160 and below - sealed for life bearings

180 and above - regreasing

Efficiency Level:

IEC TS-60034-30-2 IE5

Construction:

56 - 160 Aluminium (WERMA)

80 - 315 Cast Iron (WERM)

Protection:

IP55

Cooling Method:

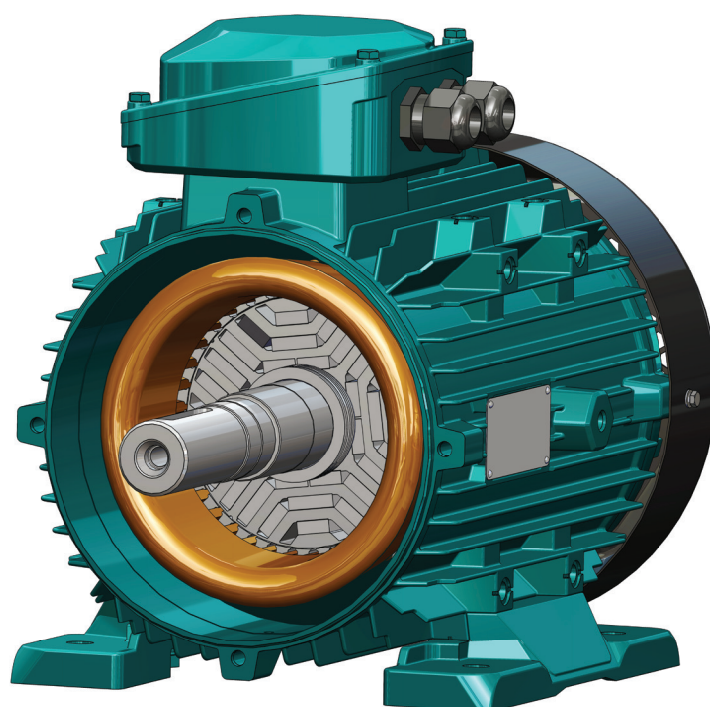
IC411, IC416

Advantages:

Higher output power in smaller frame sizes.

C3 Corrosion Protection Level

Lower risk of demagnetisation over time.



WERM(A) IE5

Keeping Industry Turning Greener

Emphasis is increasing on the efficiency of electric motors to reduce our energy consumption to help us all achieve the carbon emission targets worldwide.

Electric motors consume a significant portion of global energy, with estimates ranging from 40 - 50% of total electricity consumption. Electric motors are instrumental to our everyday lives, from simple air handling units to pumps to industrial manufacturing machines. The European Union reports that 380 million electric motors were in use in the EU in 2020. Generating this electricity causes a substantial amount of CO₂ emissions, which contributes to global warming.

Real case studies (details on page 6 & 7) have shown that the WERM Synchronous Reluctance Motor can reduce up to 15% of energy consumption compared to standard IE3 Induction Motor.

How much CO₂ emissions can you expect to reduce? This will depend on each application, load and motor running hours. Let's consider an example of an air handling unit located in a large fresh produce warehouse fitted with a 30kW IE3 Induction Motor on a direct drive running 12 hours a day.

An IE3 30kW Induction Motor is around 93% efficient. The motor will draw around 32kWh for 100% load. Over 12hrs of running it consumes 384kWh of energy. This will produce 79.488kg CO₂ emission, based on the UK average emissions for grid electricity is currently around 0.207kg CO₂e per kWh.

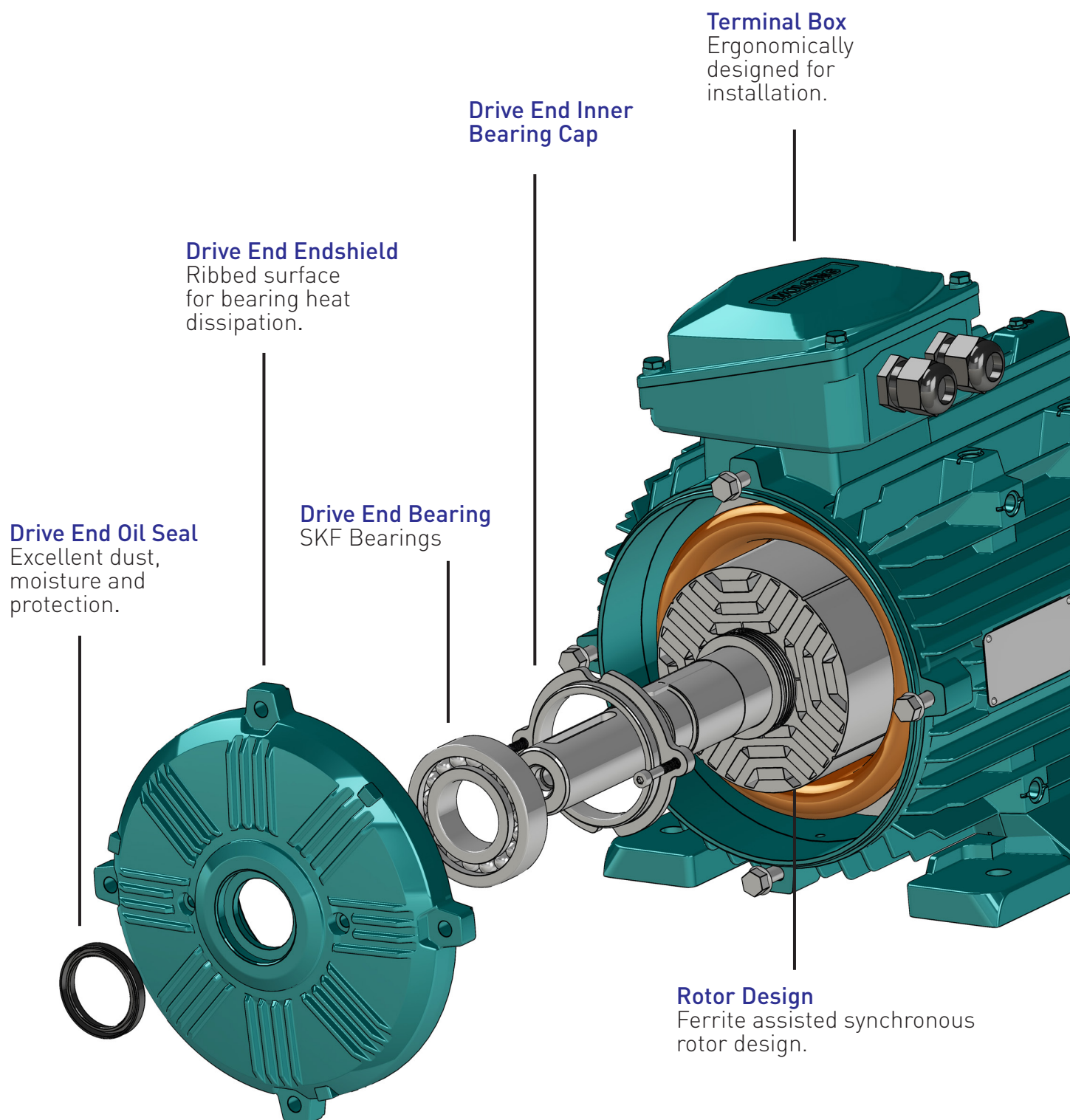
WERM Solution:

The Brook Crompton WERM(A) IE5 Synchronous Reluctance Motor will deliver greater control of the air handling unit and still consume 15% less energy. The total energy consumed would be 326kWh, this will produce 67.565kg CO₂ emission. The return on investment is typically between 6 to 24 months.

This motor plays a key role in the enhanced energy performance of our customers equipment, significantly reducing power consumption and running costs while maintaining the same high levels of reliability and greater throughputs.

WERM(A) IE5

Exploded view



Non-Drive End Bearing

SKF Bearings.

Non-Drive End Oil Seal

Excellent dust, moisture and protection.

Non-Drive End Endshield

Ribbed surface for bearing heat dissipation.

Fan/Fan Cover

Aerodynamic design, advanced air flow distribution over frame and low noise achieved with smaller fan design.

Preload Washer

Stator Feet

Flexi-mount on aluminium frame.

Case Studies

WERM5 30kW 1500rpm VS. 30kW IE3 Induction Motor

Industry

Supermarket



* images for illustration purpose only

Application

Air Handling Unit



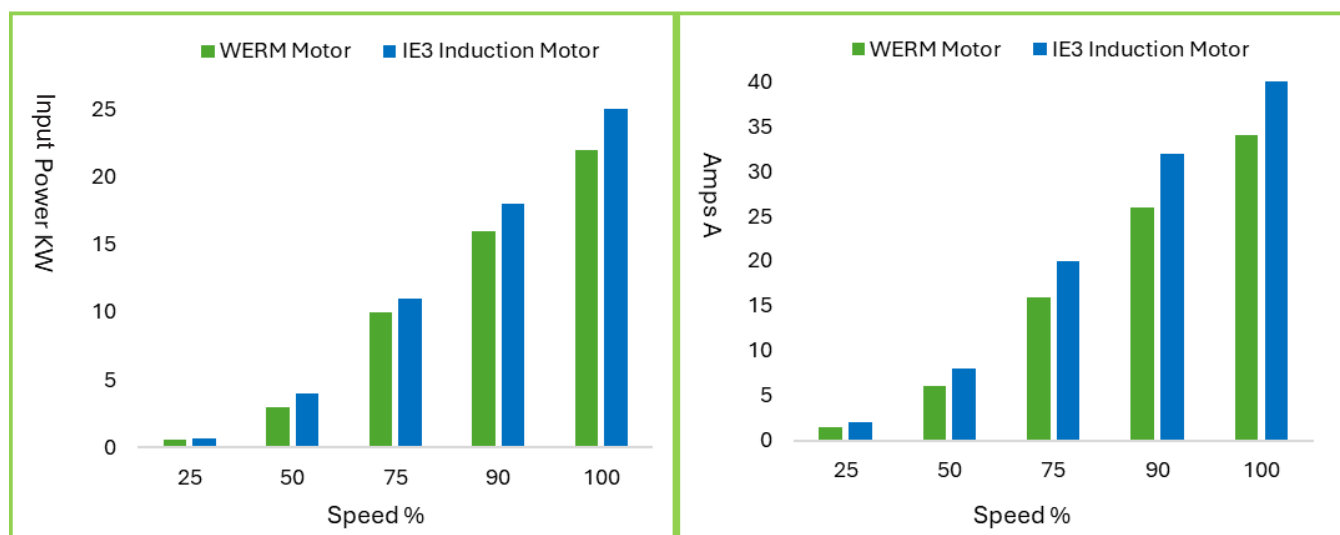
Solution

WERM5 30kW 1500rpm IE5 Ferrite Assisted Synchronous Reluctance Motor.

Energy Saving Results

- > 14 - 31% energy savings
- > Reduction in kW and amps

- > Within 12 months return on investment
- > 10 - 15% carbon reduction



Case Studies

WERMA 7.5kW 1500rpm VS. 7.5kW IE3 Induction Motor

Industry

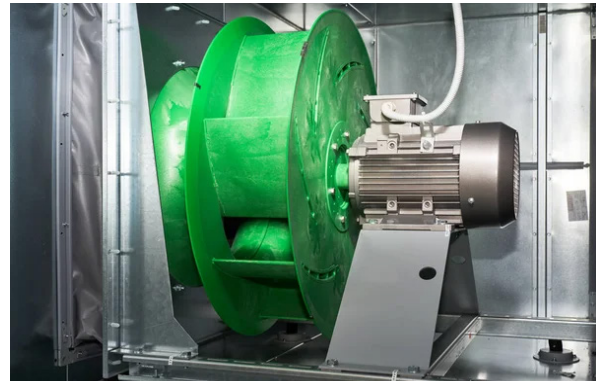
Automotive Manufacturers



* images for illustration purpose only

Application

Air Handling Unit



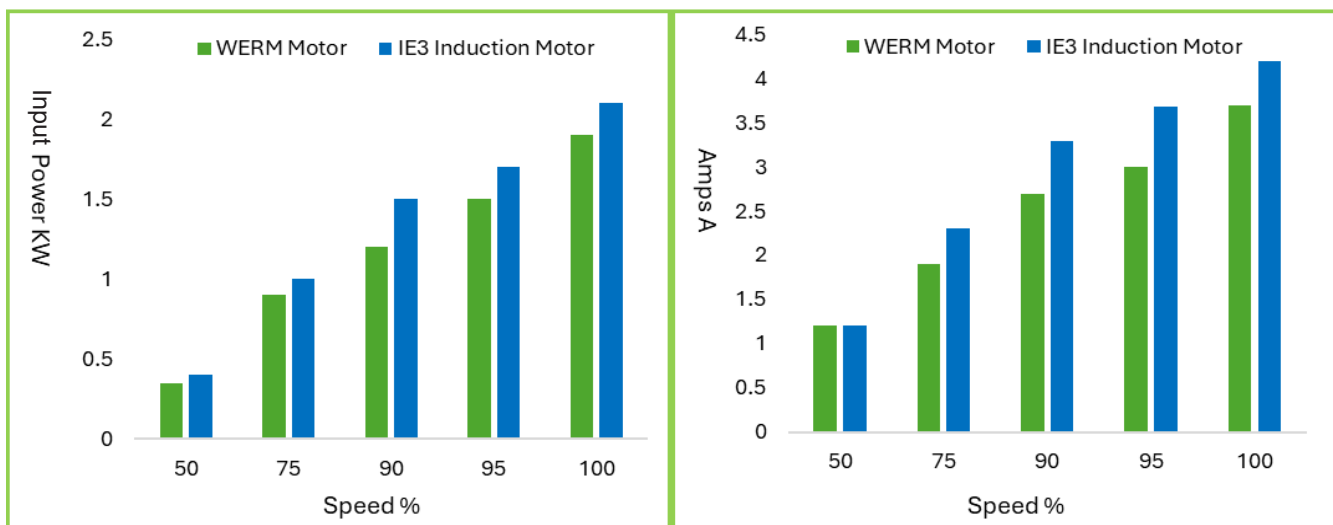
Solution

WERM5 7.5kW 1500rpm IE5 Ferrite Assisted Synchronous Reluctance Motor.

Energy Saving Results

- > 7 - 15% energy savings
- > Reduction in kW and amps

- > Within 24 months return on investment
- > 5 - 10% carbon reduction





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