



# WECM EC motor

Product Presentation

2022 – July

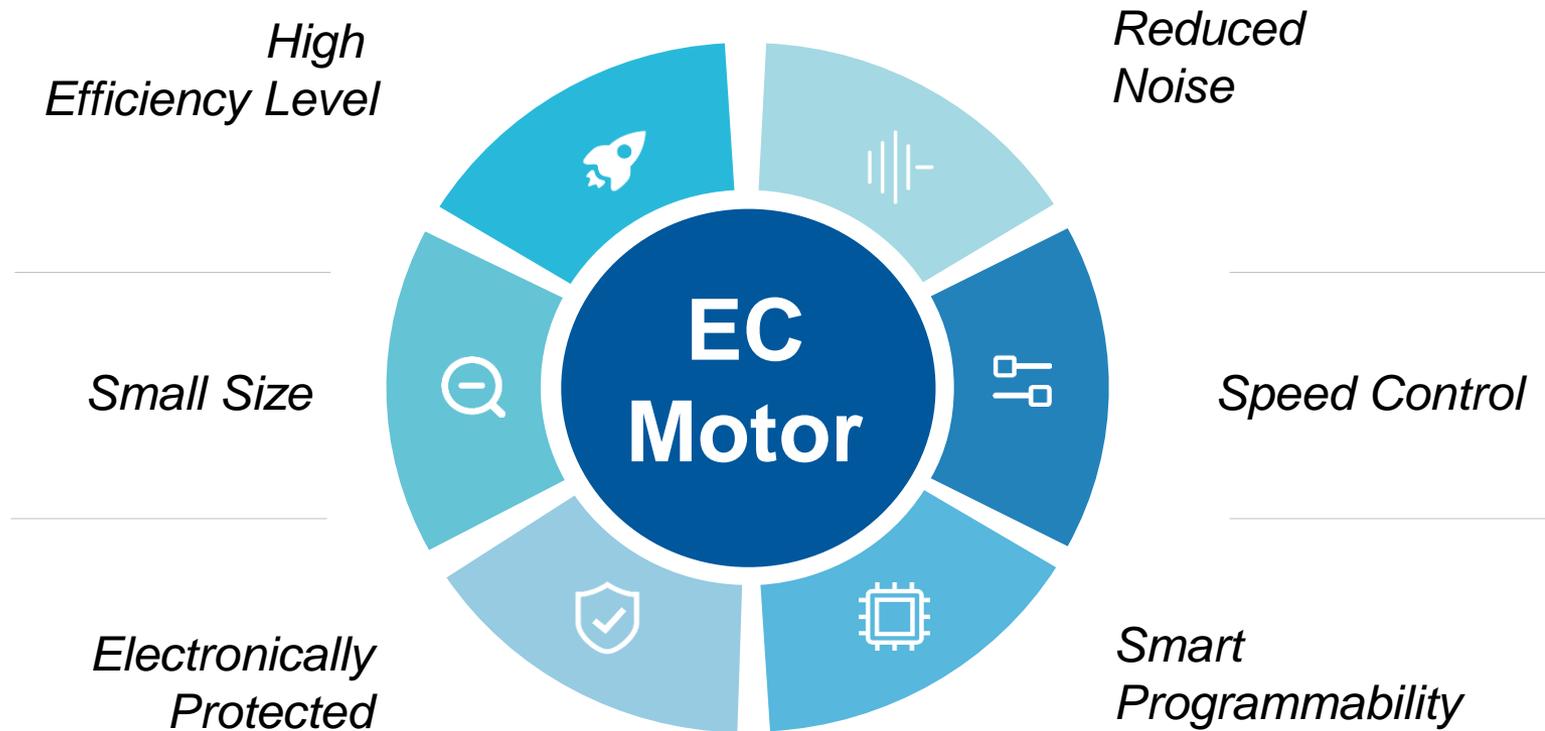


## What is **WECM**?

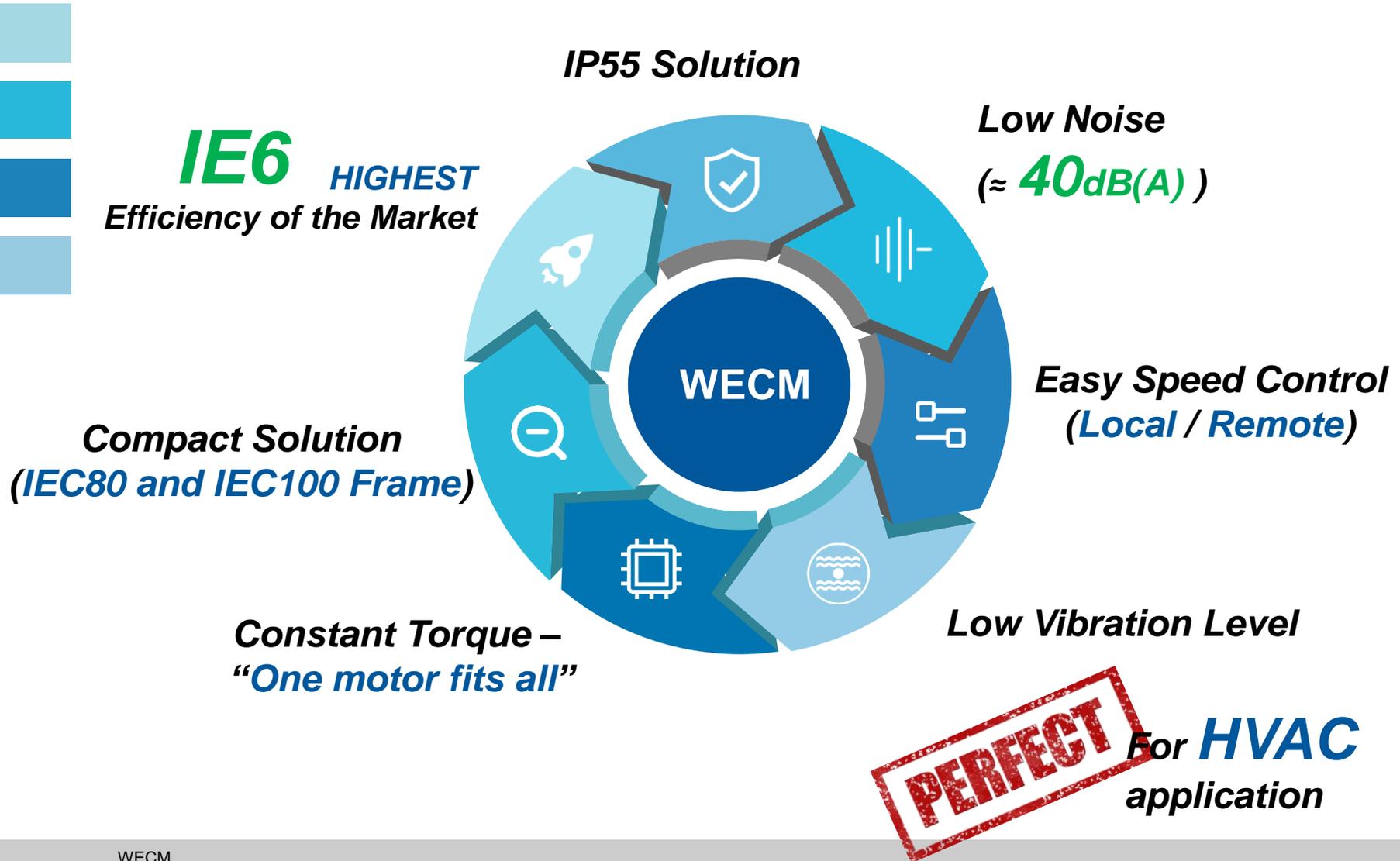
This is **WEG Electronically Commutated Motors**, consisting of a Brushless **Permanent Magnet Motor** with **integrated electronic inverter**.



# Why EC motor?



# Why WECM?



# WEEM – Standard Features

***Current product stage – Single phase INPUT (< 1.1 kW)***

Characteristic	WEEM
Input Voltage	220-277 V
Output power	0.12 to 1.1 kW
Nominal Speed	1500, 1800 and 3000RPM
Frame	IEC80 Aluminum
Mounting	Foot
Ambient temperature	-20 to 40°C in TENV (up to 0.65kW) -20 to 60°C in TEAO (≥ 5m/s airflow)

# WEEM – Standard Features

***Current product stage – Three phase INPUT (< 4 kW)***

Characteristic	WEEM
Input Voltage	380-480 V
Output power	0.12 to 4 kW
Nominal Speed	1500, 1800 and 3000RPM
Frame	IEC80 Aluminum (up to 1,5kW) IEC100 Aluminum (up to 4kW)
Mounting	Foot
Ambient temperature	-20 to 40°C in TEAO ( $\geq 10\text{m/s}$ airflow) TENV or 60°C - de-rating

# WEEM – Standard Features

## Electronic Protection

- Overload
- Over temperature
- Locked-Rotor

## Customized software

- Adapted exactly for the customer needs

## Continuous Speed Adjustment

- 200 to 1500/1800rpm
- 200 to 3000rpm

## Fire Mode

- Override
- Maximum Speed Mode

## Direction of Rotation

- CW / CCW selectable

# Optional Mounting – WECM (IEC80 and IEC100)



Foot mounting



Pad mounting (4x90° or 3x120°)



Decentralized drive  
and motor



FF or FC flange mounting

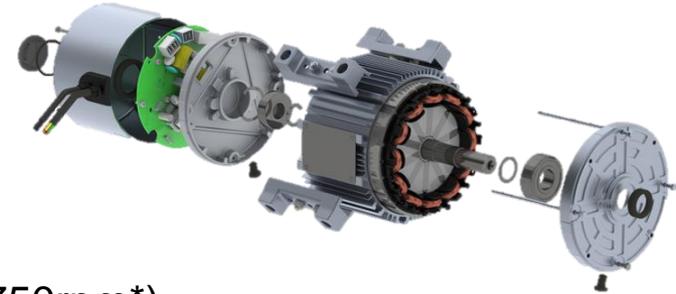


FF or FC flange + foot mounting



# WEEM – Flexibility

- IE6
- High Speed (6000rpm)
- Low Speed / High Torque (up to 2,2kW < 750rpm\*)
- Decentralized Motor and Inverter (high temperature)
- Only PM motor
- Acceleration / Deceleration ramp.
- Low Temperatures (below -20°C)
- High temperatures (higher +60°C)
- Emergency mode
- Dedicated software with different parameters (as Safe Speed, Acceleration / Deceleration ramp or other requirement)
- Others



***One motor fits all***

\*Customer needs to inform the certification needed to define the right product

# WECM – Inverter Control

## Single Phase

- DC voltage: 2 to 10V DC
- DC current: 4 to 20mA DC
- Frequency: 10 to 95%
- 10VDC power source
- Speed feedback
- Direction of rotation CW/CCW (selectable)
  - Maximum speed limitation (external controller)

## Single Phase Option (another motor)

- Modbus RTU
  - Speed control
  - Alarms
  - Measures

## Three Phase

- Modbus RTU
  - Speed control
  - Alarms
  - Measures
- DC voltage: 2 to 10V DC
- DC current: 4 to 20mA DC
- Frequency: 10 to 95%
- 10VDC power source
- 24VDC power source
- Speed feedback
- Direction of rotation CW/CCW (selectable)
  - Alarm relay (NO & NC)
  - Maximum speed limitation (external controller)

# WECM – Compliance



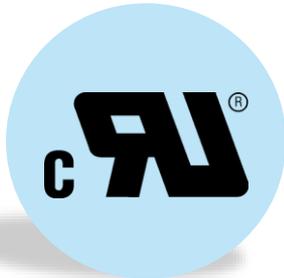
*IEC 61800-3: 2004*

*IEC 60034-1: 2010  
+ AC:2010*

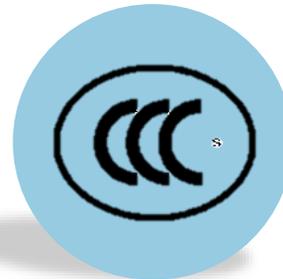
*IEC 61800-5-1: 2007 Adjustable  
speed electrical power drive systems  
- Part 5-1: Safety requirements -  
Electrical, thermal and energy*

*RoHS (EU)  
2017/2102  
(amending  
directive  
2011/65/EU)*

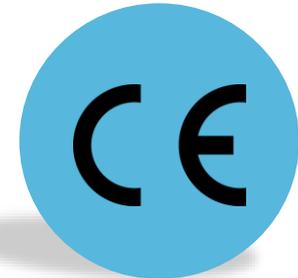
## Market Certifications



**UL certification**  
*(Single Phase - 1800rpm)  
(Three Phase – all range)*



**IEC product – CCC  
certification**



**CE – EMC and Safety  
requirements**

# WEEM – Road Map

**Available**

**Single Phase** – 220-277V

**Frame** = IEC80

**Power** = up to 1.1kW

**Speed** = 1500,1800,3000RPM



**Available only 1800rpm**



**Available all range**



**Available all range**

**Complete EC family up to 7.5kW**

# WEEM – Road Map



***Samples: Ready***

***Three Phase – 380-480V***

***Frame = IEC100***

***Power = 2,2 up to 4kW***

***Speed = 1500,1800,3000RPM***



***November 2022 - all range***



***Available - all range***



***Available - all range***

**Complete EC family up to 7.5kW**

# WECEM – Road Map



***Samples: Ready***

***Three Phase – 380-480V***

***Frame = IEC80***

***Power = up to 1.5kW***

***Speed = 1500,1800,3000RPM***



***November 2022 - all range***



***September 2022 - all range***



***September 2022 - all range***

**Complete EC family up to 7.5kW**

Danke Grazie با تشکر از شما Gracias

Terima kasih

ありがとう

고맙습니다

Дзякуй  
спасибо  
Tak 谢谢

kiitos  
Aliquam

Cảm ơn bạn

Obrigado

ขอบคุณ

Tack شكرا Thank you Merci תודה

Go raibh maith agat