

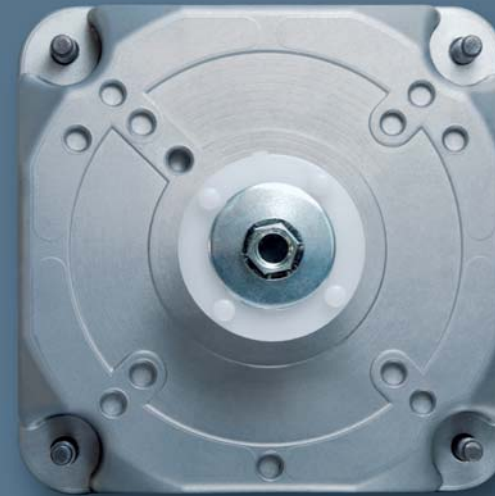
From Q-motor to **iQ**-motor.

Customers from all branches of industry – household appliance, heating engineering, cooling and refrigeration technology to name but a few – place their trust in the new iQ-motor, a simple yet ingenious drive and fan solution made by ebm-papst! Quadratic, practical and considerably more intelligent and efficient than conventional shaded-pole motors, the iQ-motor has raised the bar among "standard" motors. If you require more information, please do not hesitate to contact us. We will be happy to help.

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## Same on the outside – better on the inside!

*Typical of ebm-papst: we have taken a standard motor and a principle that for decades has enjoyed success in countless applications and made it more intelligent, energy-efficient and environmentally friendly! Features of the shaded-pole motor (Q-motor) such as outstanding running smoothness, low maintenance and a long service life have made asynchronous motors a standard component in small axial fans. Our objective was to significantly improve the inner mechanism of the Q-motor by incorporating EC technology – while keeping the exterior design identical. Conventional Q-motors can now be replaced with the new “iQ”-motors if the fans fail or if a more energy-efficient solution is required.*

### Simple to replace, extremely efficient

During the development of the iQ-motor, our engineers took giant strides towards reducing energy costs and fulfilling environmental protection requirements. “Integrated” EC technology has significantly increased the overall standard of motor technology: the new iQ-motors achieve greater levels of efficiency and pay for themselves within a very short period due to the enormous energy savings.

### Example:

40 fans with an impeller diameter of 200 mm and 34° inclination are installed in a small supermarket. The annual savings potential of iQ-motors compared to conventional shaded-pole motors:

**Energy savings:** 70% = 7.5 MWh  
**Savings for the environment:** 4.4 tonnes CO<sub>2</sub>  
**Cost savings:** 800.00 €

at an assumed electricity cost of 10.7 Eurocent/kWh

The process of converting from a Q-motor to the new technology is extremely uncomplicated because the exterior design is identical. Axial impellers with diameters of 154–254 mm are mounted to the iQ-motor in the same way. The same applies to the mounting flange, the wall ring and the guard grille.

### A new standard for countless applications

New ebm-papst iQ-motors have a maximum power output of 10 watts and are suitable for the following applications:

- Pellet ovens
- Vending machines
- Compressor cooling systems
- Underfloor convactor heaters
- Refrigerated display cases
- General condenser applications such as bottle coolers
- Industrial use (air cooling and transport)

### Technical data

Motor	Voltage Volt	Frequency Hz	Speed rpm	Input capacity Watt	Temperature °C	Weight kg
iQ-Motor	115 or 230	50/60	1,300	2–24	–30 to +40	0.6

### iQ-motor combined with different axial impellers (speed 1,300 rpm)

mm	Air flow		Motor power consumption		Air flow		Motor power consumption	
	m <sup>3</sup> /h*	W	m <sup>3</sup> /h*	W	m <sup>3</sup> /h*	W	m <sup>3</sup> /h*	W
Impeller diameter	Blade pitch 22 degrees		Blade pitch 28 degrees		Blade pitch 34 degrees			
154	150	2.4	210	2.9	235	3.2		
172	220	3	300	3.8	340	5		
200	315	3.5	440	6	515	9.4		
230	485	9.5	720	15	800	24		
254	650	15	–	–	–	–		

\* free air flow with wall ring

### General overview of iQ-motor data

**Material:** Die-cast aluminum housing  
**Conveying direction:** “V” and “A” (depending on axial impeller used)  
**Direction of rotation:** Anticlockwise, viewing the shaft end  
**System of protection:** IP42  
**Insulation class:** “F”  
**Mounting position:** Any  
**Mode of operation:** Continuous operation (S1)  
**Bearings:** Maintenance-free ball bearings  
**Motor protection:** Protected by electronics

**Electrical connection:** Mains cable  
**Protection class:** I (II possible)  
**Approvals:** VDE and UL in progress  
**Mounting attachment parts:** Guard grille and wall ring are attached to the projecting thread ends on the A side  
**Axial impeller attachment:** A plastic adapter with catching peg and M4 screw are used to secure the impeller on the motor shaft

