

# IQ

## retrofit efficiency

### From Q to iQ. Quadratic. Practical. Intelligent

With the new iQ motor ebm-papst has broken the barrier restraining engineers from improving efficiencies in existing refrigeration equipment.



In developing the iQ motor, we have taken giant strides towards reducing the energy costs, lowering waste heat and fulfilling the environmental protection developments. Integrated EC technology has significantly increased the overall standard of a motor technology; the new iQ - motors achieve greater levels of efficiency resulting in shorter and shorter payback periods both for the end user and the environment.

### It pays to switch

Switching over to the new motor technology is worthwhile whenever an old shaded-pole motor should be replaced or energy-savings are desired. The switch pays off for both the environment and the user, as this shows:

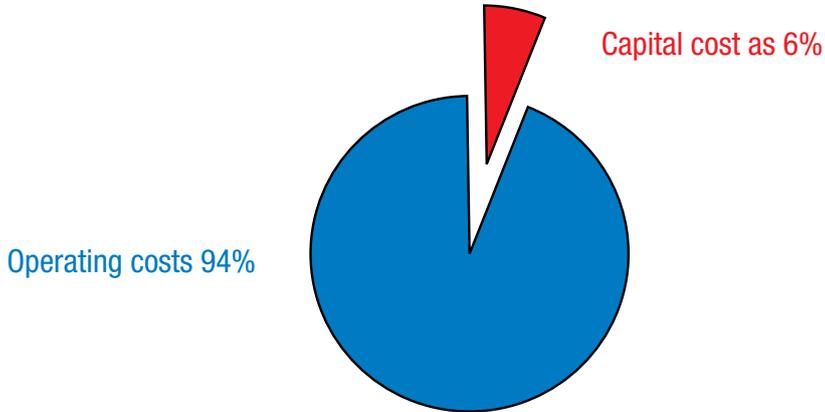
In a small supermarket, 40 fans are used that have 200 mm impellers and a 34° pitch.

- + The energy savings is 70%, which corresponds to 7.5 MWh per year.
- = For the environment, this value means that 4.4 fewer tonnes of carbon dioxide.
- = For the user there are profits as well: assume an electricity price of 0.14\$ per kWh, then save 622 \$ a year.

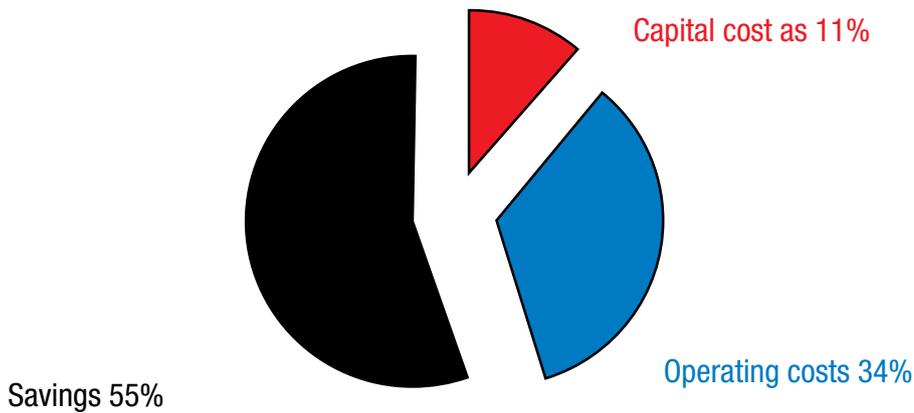
For further information please  
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Capital cost as % of whole life costs AC motor



EC savings, Capital and Operating cost as a % of whole life costs of an AC Q motor



An analysis of EC fans for refrigeration applications is shown here. The operating costs of a Q motor are the unknown and hidden costs – these massively out way the initial capital cost outlay.

Moving to high efficiency motors gives life time savings as shown. The longer the life of these savings the better it is to the bottom line.

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