



Supermarket finds gold at bottom of refrigerator

At the Dagli' Brugsen supermarket in Ørslev, Denmark employees have good reason to wear their food inspection smileys with pride. The store's electricity consumption has fallen by about 15% since Jensen Køleteknik installed energy-efficient fan motors from ebmpapst in both the shop and its storerooms. The investment will pay for itself in less than two years.

A penny saved is a penny earned. Margit Bay, the manager of of the Dagli'Brugsen has invested in energy-efficient fan motors from ebmpapst for the refrigerated display cases in the shop and for the freezers and refrigerators in the storerooms. Worth every cent, the investment cuts electricity consumption by at least 11,800 kWh a year – an annual savings of 2,245. There is also less need to cool the store itself, which saves at least 4,000 kWh annually.

“Small rural convenience stores like mine are constrained financially, so we have to save where we can. Cutting down our energy bill is an obvious choice – from day one I could already see the meter run more slowly and that's fabulous,” adds Margit Bay excitedly.



A Q and an iQ motor look interchangeable, but changing to iQ provides huge energy savings.



A total of 36 fan motors were changed: 22 in refrigerated display cases and freezers in the shop and 14 in storerooms. Changing them took only a couple of days from the time the first display case was emptied and ready until all the goods were back in place in both the shop and the storerooms.

Before the change, all the units had fans with Q motors – like the majority of convenience stores in Denmark. Q motors are found everywhere because they use an old, very cheap technology. But using these low-priced Q motors is an expensive solution. In contrast to iQ motors, which have a lifetime of 10-15 years, Q motors typically only last 2-3 years due to large energy losses that heat up the motors.

Energy efficient iQ motors have now been installed in the entire Ørslev store. Because they have the same dimensions as the old Q models, switching from one to the other is quick and simple. But don't be fooled by the iQ motor's discrete exterior – internally it's in a technological class of its own. The iQ is an intelligent motor that adapts its energy consumption to the task at hand, wasting no energy whatsoever. And the meter reflects this instantaneously.



Measurements show an 80% difference in energy consumption between a Q and an iQ motor.

Energy consumption before and after fan replacement

	No. of motors	Before	After
Freezer storeroom 1	2	75 W	31 W
Freezer storeroom 2	3	62 W	23 W
Cold storeroom	3	40 W	15 W
Cold storeroom (milk)	6	40 W	15 W
Shop refrigeration & freezers	22	20 W	3.7 W
Annual savings			11,800 kWh
Payback period			1.2 years

Advantages of iQ:

- Longer life
- Lower energy consumption
- No waste heat
- Lower CO₂ emissions

