

GreenCard

What VAN
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With the 'green' bandwagon careering completely out of control it's not surprising that the refrigeration sector of the LCV market is having to look to electricity for answers



Electrically-driven fridge units look set to become a lot more popular among operators of temperature-controlled panel vans. So says Eurofrigo UK managing director, Dave Richards.

Earlier this year his company launched two battery-driven refrigeration systems — the B2500XT and B2500 Skyline — in Britain. Fit one and you'll find your fuel consumption improves by up to eight per cent when compared with the performance of an identical vehicle on similar work but fitted with a fridge unit driven directly off the engine, Richards claims.

Reliability

"Electric fridge units enjoy reliability advantages too," he contends. "With no open compressor, drive belts or pipework, they're less prone to failure and gas leaks."

"Because the refrigeration circuits in battery-driven systems are manufactured, sealed, charged up

and tested at the factory, this ensures that they are leak-free and thus more environmentally friendly from day one," he continues. "What's more, one of our electric units only takes eight hours to install compared to around 20 hours for a conventional direct-drive unit."

More Than Zero

So far, so good; but there are drawbacks as Richards readily admits. While Eurofrigo's packages are suitable for chilled applications, they cannot as yet handle fully frozen work.

"They've only got 70 per cent of

the capacity of a direct-drive system, but 100 per cent of that capacity is continually available the minute the ignition is switched on," he says. "Just 60 to 70 per cent of a direct-drive unit's capacity is on tap when the engine is just ticking over; and in heavy traffic that's what it's going to



be doing a lot of the time."

The B2500s are about £150 more expensive than their direct-drive opposite numbers, he concedes, but that's offset by the faster installation times referred to earlier, Richards contends.

As a consequence the total retail, fitted price the bodybuilder charges the end-user should be a lot closer to the direct-drive price than one might expect it to be at first glance.

Low Maintenance

"Our maintenance costs are lower too," he states. "With a direct-drive you're talking about £45 to £55 a month compared with £25 to £35 for an electric."

"That's because an electric usually only requires an annual inspection. A direct-drive typically has to be looked at two or three times a year." It's also worth noting that a stand-by comes as standard with the 2500s.

One of the

key difficulties with an electric unit is, of course, the extra burden it places on the van's electrical system.

Power Point

"While small vans aren't usually a problem, in some cases you may have to fit a second battery to a 3.5-tonner, or a significantly uprated alternator with a bigger-capacity battery, or a secondary alternator with a secondary charging system," he says. Such measures cost money, can cause additional complications and there isn't always space to fit a second battery on a modern light commercial.

When installed in a vehicle such as a Mercedes-Benz Sprinter a B2500 requires an inverter to be fitted because it runs at 240 volts and light commercials are equipped with a 12 volt electrical system.

Eurofrigo is already enjoying some success with major fleet operators, says Richards. "So far we've supplied 150 units to Sainsbury's and we've got a batch of ten going to Greencore," he says.

It delivers sandwiches and a variety of other prepared foods to

retailers and food service providers. "Asda is using some too," he adds.

Battery-driven refrigeration systems have been around for several years and Eurofrigo isn't the only business promoting them.

Electric Carrier

In 2006 Carrier Transicold launched the Neos 100, designed for vans with a load area capacity of up to 6.0m³. As with B2500, the refrigeration circuit is completely closed at the time of installation.

So what do fridge bodybuilders make of the use of battery-driven units in larger vans?

"Their big plus-point is that they operate when the engine isn't running," says Chris Berridge, managing director of Hull-based Paneltex. "By contrast, a direct-drive unit speeds up and slows down in line with what the engine is doing."

"Their drawback is that they pull so much power off the vehicle's electrical system," he continues. "In my view they should only really be used if you can fit a second battery to run them. 'Do that and they'll probably work well.' There will certainly be no risk of flattening the starter battery."



uart Shreeve, managing director of Norwich-based fridge van converter Somers, has considerable reservations about their use in panel van conversions. He doubts that they'll lead to an improvement in fuel economy given the power they draw, or that they're necessarily quicker and cheaper to fit than a direct-drive system.

Direct-Drive

He's continuing to fit direct-drive units from Carrier Transicold, Hubbard and GAH instead. "They're perfectly reliable if you have them serviced regularly," he observes. "If

you don't, then you'll get trouble."

While Jarvis MacDonald, managing director of Westbury, Wiltshire-based bodybuilder and converter Trumac, believes that electric units are suitable for small car-derived vans, he feels they'll find bigger light commercials more of a challenge. He's concerned about the amount of power they draw and warns that the van may need strengthening in places — the roof in particular — to take the weight of some of the components.

"Overall though our units are a little bit lighter than a direct-drive," says Richards.



Shortages

A rather more pressing concern than whether to stick with direct-drive or go electric, say many bodybuilders, is the difficulty they're experiencing in getting hold of vans to convert. Long lead times resulted in severe shortages of light commercials earlier this year, says Shreeve.

"As a consequence we'll probably produce 300 to 350 conversions this year, about the same number that we did in 2006," he says. "Vehicles are coming through now, but it's still not easy to obtain Ford Transits."

"We had an order from a customer in the Channel Islands for two Ford Transits earlier this year," says MacDonald. "They were due to be delivered to us in May for the conversion work to be carried out, but we didn't see them until September."

Other models remain in short supply too. "It's difficult to get hold of Volkswagen Crafters and Mercedes-Benz Sprinters in particular," he says.

"You used to be able to pick an Iveco Daily straight off the shelf, but that's no longer the case,"



the past 18 months.

"We've had to produce a variety of new mouldings in line with the new body shapes," says Shreeve.

"That's taken a lot of time."

Shreeve observes.

Is that prompting some fridge van operators who wouldn't have previously considered LDV's Maxus to put it on their shopping list given that the factory is quoting a four-week delivery time?

"There's certainly more interest in Maxus, though not a huge amount," Shreeve replies. "It's a pity really because it represents good value for money and has got a decent payload capacity."

"We're doing a lot more LDVs and Citroëns," says MacDonald.

While Paneltex is finding it a struggle to obtain heavy truck chassis, the situation is easier with lighter vehicles, says Berridge.

"A lot of the work we do is for big fleet operators and they seem to be able to get what they need," he says. Paneltex lists home delivery specialist Ocado among its clients. As a consequence its output of light fridge vehicles looks set to hit 600 this year, an improvement on 2006's performance.

New Model Army

Bodybuilders and converters have, of course, been affected by the large number of new vans launched over

the past 18 months. Old or new, fridge vans are being put to a wide variety of uses. Egg distributor Steven Rimmer is now running a Mercedes-Benz Sprinter equipped with a temperature-controlled conversion courtesy of Leeds-based GRP to help him deliver fresh palletised eggs to a variety of customers in the Southport and Liverpool area. Clients include hotels, schools, nursing homes and convenience stores.

Fitted with a Carrier Transicold Viento 350 fridge unit, his latest Mercedes can swallow four Euro pallets — some major clients specify palletised deliveries only — holding 24,000 eggs. Designed to keep the cargo at 15°C the load area has an alloy floor and both a nearside and an offside door.

Verdict

Following changes to the legal requirements for the transportation of perishable goods, many more operators are having to look at some sort of load area refrigeration. Fortunately there are plenty of specialist converters out there. This is not something that falls within the DIY remit. Electrically-driven fridge units seem to offer the answer for certain applications, but they are by no means suitable for all operators. ♦

