

# Small-scale options

**Tight size and weight limits no longer constrain specification of tail-lifts for small vans and trucks. Steve Banner introduces six models**

**R**ules governing how much weight employees can be expected to lift unaided, and the general duty of care that businesses owe to them, mean that more and more light commercials may have to be fitted with tail-lifts. So says Jess Penny, general manager of sales and marketing, at Clowne, Derbyshire-based tail-lift and crane manufacturer Penny Hydraulics.

"You cannot expect people to keep heaving heavy items in and out of vans, day after day," she observes. The Manual Handling Operations Regulations 1992, the Management of Health and Safety At Work Regulations 1999, the risk that musculoskeletal injuries will force workers to take sick leave for weeks on end and the danger that those affected will sue for compensation in the civil courts should prompt light commercial vehicle owners to take action.

Motor parts wholesaler and retailer Euro Car Parts has taken the message on board. Back in 2014, fleet manager Daniel McKeown contacted Penny Hydraulics because he was looking for equipment that would enable large, heavy barrels of lubricant to be lifted in and out of the company's Peugeot Experts. Penny came up with LoadLift 250, a hydraulic lift with a compact platform (see table, p48, for model specifications). It is more than capable of hoisting the barrels; a stowage bracket



with tie-downs and a steady for the top of the barrel form part of the design, and the platform can be swung to one side and folded away just inside the van's rear doors when not in use. Access is not obstructed.

More recently, Euro Car Parts has had the lift fitted just inside the side loading door of the Peugeot Boxers it operates. Over 75 units had been installed at the time of writing. "They are helping us work more safely and productively," says McKeown.

Another operator opting for Penny tail-lifts - this time on Transit Customs - is Hill-Rom. The tail-lifts enable easier loading of the weights it uses to test the motorised hospital beds it supplies.

Any tail-lift fitted to a light commercial needs to be as low in mass as possible, without compromising its capability or durability, to avoid eating too much into the vehicle's limited payload. As Jess Penny says: "We've done a lot of detailed engineered work on all our lifts

to keep the weight low, including the use of alloy and mesh platforms."

Mesh platforms have the added benefit of enabling air to pass through them, reducing wind resistance compared to solid platforms when fitted to dropside bodies. It is a point emphasised by Dhollandia, which offers versions of its column lift with air-permeable platforms constructed of steel mesh or composite grids.

Like Penny Hydraulics, Bär Cargolift has been fighting the flab and it launched a new cantilever tail-lift at last year's IAA Commercial Vehicle Show, in Hanover.

A careful analysis and optimisation of lifting mechanism components has resulted in a 25kg saving compared with the previous model, says the company, while changes to the aluminium platform have saved a further 10kg. "We're doing a lot of work with aluminium and with high-strength steel, too," says Bär's marketing



communications manager Sandra Gruber. "The demand for more payload means there's a trend in favour of aluminium platforms."

**GREEN OPTIONS**

Tail-lifts have a contribution to make towards minimising the environmental impact of commercial vehicles, a point recognised by Palfinger. Last year it unveiled a cantilever electro-mechanical lift (above) that does away with hydraulic oil. For that reason, there is no need to replace valves or seals, no need to worry about oil changes and no waste oil to dispose of either, says the manufacturer. (An alternative retrofit option that accomplishes a similar goal comes from Bär Cargolift; its biodegradable hydraulic oil triples the oil change interval.)

Also on the Palfinger unit is a kinetic energy recovery system that goes into action when the tail-lift is lowered to help keep the truck's batteries topped up. What this means in effect is that the lift retrieves up to 63% of the energy it uses and battery capacity is boosted by 50%, Palfinger contends. It claims that the savings the lift generates mean that it can pay for itself in no more than four years.

The lift has been on a nine-month trial in Bremen, Germany, on trucks operated by Gesundheit Nord. It provides the Bremen-Mitte hospital with logistics services that include moving food and laundry between buildings. The three units that went into action were raised and lowered a total of 31,840 times during

the trial and proved trouble-free. "We didn't expect them to stand up quite so well to our tough operating conditions," says healthcare logistics manager Michael Dierking. The electro-mechanical lift is also quieter in operation than its hydraulic counterparts, Palfinger adds.

**SUPERSIZED PLATFORMS**

While a big tail-lift platform can add weight, paradoxically it can also save it. That is because it may be possible to use it as the rear closure and do away with the back doors. Big platforms are in fashion among truck and trailer operators, reckons Gruber from Bär. "We're seeing a trend away from tuck-away lifts in favour of retractable lifts as a consequence," she remarks.

In comparison to the split platform that folds over on itself and tucks away beneath the rear of the vehicle, retractable platforms - which remain horizontal and in one piece - have a drawback, however. Because they are mounted beneath the vehicle, they require a long rear overhang to accommodate them, and neither they nor tuck-aways are suitable for low-height chassis.

Bär's new tail-lift can be fitted with a SmartControl radio-operated

remote (below). Its RadioKey function automatically locks all of the lift's controls if the operator has to leave the vehicle for some reason, or if the lift is static for more than a minute. The idea is to prevent unauthorised tampering that might result in injury or theft of part of the load.

Tail-lift manufacturer Del also appreciates the merits of using a tail-lift's platform as the rear closure, and often combines these with a fold-down top door to bridge any gap between the edge of the platform and the body's roof. Also launched at IAA was its British-designed and made column lift that can offer a 100kg payload saving, says the manufacturer. The tail-lift, top door and rear door frame are combined in a single package. It also sells tuck-aways (as pictured on p47).

Another new model responds to conditions on the ground - in congested city centres - by enabling swift unloading without compromising safety. Zepro's Z3N cantilever has double-acting tilt cylinders for faster loading and unloading, and a platform opening speed of 10° per second. Hopefully that will be rapid enough to ensure the truck can discharge its cargo and be off down the road faster than a traffic warden can issue a ticket. **TE**

BRAND	MODEL	SIZE (mm)	CAPACITY (kg)	WEIGHT (kg)
Penny Hydraulics	Loadlift 250	600x554	250	100
Dhollandia	DH-VO.07.K1	2250x1300	500	155
Bär Cargolift	BC 750 S2L	2100x1610	750	160
Palfinger	MBB C 1000 E	1850x2500	1000	485
Del	FC500	2152x1373	500	215
Zepro	Z3N	2160x1450	750	190

