

Small is useful

Modern 3.5-tonners are notoriously tight on payload. That poses a challenge for tipper bodybuilders and their customers. Fit too heavy a body and start adding ancillary equipment such as bin lifts and waste cages, and you will be able to carry next to nothing, reports Steve Banner

A body with a steel floor, aluminium drop-down sides and an alloy tailboard mounted on a comparatively light Citroen Relay or Peugeot Boxer chassis offers a good payload, but its carrying capacity is limited. "As things stand, a straightforward 3.5-tonne tipper can transport no more than 1.0 to 1.2 tonnes legally," says Matthew Terry, managing director of London-based bodybuilder Tipmaster.

Those wanting to carry an extra 100kg to 120kg - or maintain the aforementioned payload on a heavier chassis - may be obliged to opt for an all-alloy body with a welded aluminium floor, according to Terry. Such a floor should have sufficient strength for most applications.

An all-alloy body will cost up to 20% more than its steel and alloy sibling, but its ability to shift more weight should mean that it eventually pays for itself, if the vehicle is being acquired on a finance agreement spread over several years. "If you can legally carry 100kg more, and you go to a tip ten times a week, then you will have transported a tonne more than you would have been able to otherwise," he points out.

How about an all-steel tipper body? Tipmaster can build them - "they tend to be liked by ground workers and scrap metal merchants," Terry says - but he always stresses to customers the limits on such a body's

carrying capabilities. He adds: "We've constructed all-steel insulated bodies with tarmac chutes for 3.5-tonners. However, the legal payload is likely to be no more than 700kg." Steel bodies require painting and will eventually corrode. Aluminium bodies do not, which gives them a particular advantage for those regularly carrying damp loads.

Eastleigh, Hampshire-based VFS, which is owned by Italian bodybuilder Scattolini, has been busy promoting the advantages of all-aluminium tipper bodies at 3.5 tonnes. At the Commercial Vehicle Show earlier this year, it was displaying one complete with a waste cage and a tool box constructed using an aluminium frame and 17mm gel-coat panels with a foam core. The entire package weighs less than 500kg, says sales and marketing director, Ashley Morris. However, all that alloy means there is a financial penalty, he admits: in this case, 14% over a steel body.

LIGHTWEIGHT BODIES

Alloy tipper bodies hold a particular appeal for businesses running 3.5-tonne tippers with seven-seater crew cab bodies, says Morris. Their appeal goes beyond that; when Toyota launched its Authorised Converter programme in 2017, one of the first vehicles to be included was a 4x4 Hilux Extra Cab equipped with a body with alloy sides and floor with 1-tonne capacity, offered by TGS Group of Bristol. As is quite common, the body's corner posts are removable, turning tipper into flatbed.

Light tippers almost always require reinforcing with a sub-frame to ensure that the chassis does not start to twist when the body is elevated. Down there, underfloor scissor-type tipping gear is favoured, and is driven by an electro-



“If you can legally carry 100kg more, and you go to a tip ten times a week, then you will have transported a tonne more than you would have been able to otherwise”

Matthew Terry



more than 1.0- to 1.2-tonnes in a tipper will need to step above the 3.5-tonne O licence threshold, says Terry from Tipmaster.

“We’re seeing a lot of interest in 5.0- and 6.0-tonners, because of the extra capacity they can offer, and in the IVECO Daily 7.2-tonner,” he adds.

“Operate a Fuso Canter 7.5-tonner with an all-alloy tipper body, and you can achieve a payload approaching 4.0 tonnes, even with a tail-lift.”

The drawback, of course, is that the operator will have to obtain an O licence, and recruit a driver with the appropriate driving licence entitlement plus a driver Certificate of Professional Competence.

At the other end of the scale, there are places where even a 3.5-tonner may struggle to reach. Aware that this is the case, last year saw bodybuilder Ingimex unveil the Tip-Up. Based on a 3.2-tonne Volkswagen Transporter T32 chassis, it can shift 1,000kg (shown top left). Its lighter sibling the T30 3.0-tonner still hauls 800kg. Both variants come with a steel floor and alloy sides.

Ingimex has not long invested £1.8m in its Telford, Shropshire factory. And VFS has set up a new 15,000m² conversion centre in Wakefield, West Yorkshire. Both companies are doing so with the knowledge that, whatever happens, householders will still want drives laid and extensions built, and that whoever handles the work will arrive in a 3.5-tonne tipper. [TE](#)

hydraulic power pack – SPX is one of the best-known manufacturers – with the control box kept in the cab and mounted on a remote control. On that topic, operators should ensure that a battery protection device is fitted. Raising and lowering the body several times a day,

plus using a tail-lift, risks draining the battery and being unable to restart the vehicle. Tipping gear and extras weigh around 500kg.

Most light commercial manufacturers

run authorised converter schemes, and they invariably include a tipper whose body is usually constructed in the UK. The bodybuilder’s warranty will mirror the chassis manufacturer’s. The package will be built to a standard specification, with type approval rules limiting the extent of variations. However, the tipper will usually be available off the peg: an important consideration if the customer needs vehicles quickly.

Using high-strength steel rather than aluminium is another option to reduce the body’s weight. It is a route that VFS, among others, is pursuing and is achieving a 100kg weight saving on a 3.5-tonner by doing so (pictured above). As with aluminium, high-strength steel imposes a price penalty when compared with mild steel; but their relative strengths mean that less of the former can be used than the latter.

Any firm wanting to carry significantly



REAR-ENDED

Virtually all light tippers sold in the UK are end-tippers.

Three-way tippers are available, but have never been popular despite their obvious advantages. “They are 50kg to 60kg heavier than standard tippers and cost 15% to 20% more,” says Matthew Terry at Tipmaster.

PROPER SAFETY

Prior to performing any work on a chassis cab chassis that requires the tipper body to be raised, technicians must deploy the sturdy body props that were fitted with the tipper. If an unsupported body suddenly comes down on a technician the consequences will be at best a serious injury; at worst, a fatality.