

Moving with the times



Operators are gradually coming around to the benefits of the moving floor trailer. Traditionally, moving floor trailers have served bulk transport businesses that specialise in waste and biomass. Now more general haulage fleets are adding them in ones and twos because moving floors also offer versatility. They can carry loose bulk material as well as palletised dry goods.

However, money and safety – the other drivers for change – are slower-moving. Bulk hauliers carrying animal feed, coal, crops, food and sand, consider the moving floor trailer to be heavy and expensive, serving only to reduce margins.

Also in aggregate and asphalt markets the tipper is recognised as proven technology that works. However, its use is heavily policed, with quarries and delivery sites having to create a flat surface to raise the body from the chassis and no-go zones around it in case it tips sideways. Here, a burgeoning health and safety culture wants a seamless change from raised bodies to those firmly attached to the chassis – without a financial penalty.

As a result, manufacturers of trailers that incorporate a floor of moving planks, sometimes coupled with a

Moving floor trailers are seen as the logical replacement for tippers, and manufacturers are preparing for this succession by streamlining production, marketing innovations and lowering tare weight.

Kevin Swallow reports

moving bulkhead or sweep, are upping their game to produce something more commercially viable than a tipper. For example, Knapen Trailers, based in Deurne, Holland, builds three types of moving floor trailers: fixed sidewalls, sidewalls that open up for side loading, and custom-built trailers.

Knapen managing director Peter Joosten explains that last year the company expanded its factory by

3,100m² to accommodate £1.3 million- (€1.5 million) worth of bespoke welding robots designed by the company.

“Now, 90% of the welding for sidewall planks, I-beams and chassis is done by pre-programming automated robots. We used to weld large segments by hand, which demanded the highest concentration from the welder and a lot of quality control,” he says, adding: “Now all welded connections in the upper construction and the floor frame are welded automatically. This gives consistently high quality.”

Knapen Trailers launched its new generation of moving floor products, called Next (pictured above right) at the IAA, Frankfurt, Germany, in 2016. Next is designed for 50-tonne operations, the legal limit for a five-axle articulated combination in Holland, and which is said to be the highest in Europe.

TRAILERS TO RIGIDS

Martrans, which is part of the Paneltex Group, has been building moving floor trailers for the aggregate and asphalt markets since 2010. This year it built its first moving floor on a rigid for Mark Armstrong, which owns ABH of Mansfield. Geoff Howard, fleet sales manager at Martrans, states that the specification derives from the trailer design. He explains: “The rigid design includes a sleeper cab and an 8x2 rear-steer chassis with a Keith Walking Floor that is capable of carrying a 19.3-tonne payload. If you choose a day cab, air suspension, under-body exhaust system and not the cab-mounted stack on an 8x4 chassis, you can improve that payload,” he says.



Innovations for the Next trailer include redesigned rear doors and bumpers, a light protection plate for unloading, new side protection on the chassis, lighting, a new larger platform to stand on when operating the roll-over sheet, and a reduced tare weight.

The lightest model of trailer is the aluminium K200-Light, weighing just 6,950kg, with 92m³ volume and 35-tonne load capacity. For the UK market, Knapen Trailers produces the Next K-200 (specifications as K200-light), and a 97m³ capacity, 7.5-tonne trailer with high-tension steel chassis, the Next K100-UK.

While the majority of moving floors are sourced from leading suppliers Keith Walking Floor and Cargo Floor, Knapen Trailers has launched its own, called the Dura-Floor. "This is a floor plank with a 2mm stainless steel lining that is wear resistant for waste, garbage and

aggregate. Building our own moving floor decreases the user's cost," Joosten adds.

Knapen Trailers is not the only company targeting the aggregate and asphalt market. This year, STAS, the Belgian trailer manufacturer, launched a new UK-based subsidiary and a new moving floor trailer specifically for the aggregate and asphalt sectors, called AggregateStar (pictured top left). The new face of the UK business, located at Altham, Lancashire, is managing director Graham Macmillan.

He says: "STAS has significantly reduced the kerbweight to make AggregateStar a competitive, robust and functional product that is cheaper to operate and longer lasting. The demonstration trailer weighs 6,900kg unladen on an 11m chassis with a 38m³ volume."

He adds: "Using a moving floor allows loads to be discharged on inclines and rough terrain, as well as under power cables and bridges."

To mitigate the risk of grit clogging the floor, STAS now uses the Cargo Floor HD Sealless beams that interlock, said to significantly reduce ingress of small stones, residue and dust.

"Combined with an aluminium monocoque, it keeps the weight down, so it's significantly lighter than a standard

moving trailer. This innovation means that a safer, stronger moving floor trailer weighs within 500kg of a tipping trailer," claims Macmillan.

One of the biggest players in the waste sector is France's Legras Industries. In 2015 it invested more than £2.6m (€3m) into its production plant at Epernay, introducing an automated production line capable of building between three and five trailers per day.

Steve Milnes is an area manager based in the UK for Legras.

He explains: "Legras makes its own moving floor so Legras is able to build the entire trailer."

Both the lightweight aluminium trailer and heavier waste transfer trailer come with full-length chassis, and so far Legras has not embraced the monocoque chassis favoured by others. Milnes explains: "Usually the monocoque design has no chassis at the front or rear of the trailer to reduce weight. This makes the trailer less robust than one with a full chassis. There is lot of body flex, which creates wear and tear."

Finally, Dutch-based Kraker Trailers launched its new generation of moving floor trailer, the K-Force, last year. Its bolted - rather than welded - chassis and floor design weighs in at 7,350kg and offers 28.6-tonne and 90m³ capacity. A heavy-duty off-road unit for waste is new.

All of this activity expresses suppliers' confidence in the market's potential. [TE](#)

FURTHER INFORMATION

Hanson's guide to the benefits of moving floor trailers – <https://is.gd/simesi>

Their road construction advantages, from Martrans – <https://is.gd/uxudiq>

How they work, by Knapen – <https://is.gd/wilevi>

Tippers can cope with inclines of 7° or more.

Stability guide – <https://is.gd/dekoko>

