Techno Trailers

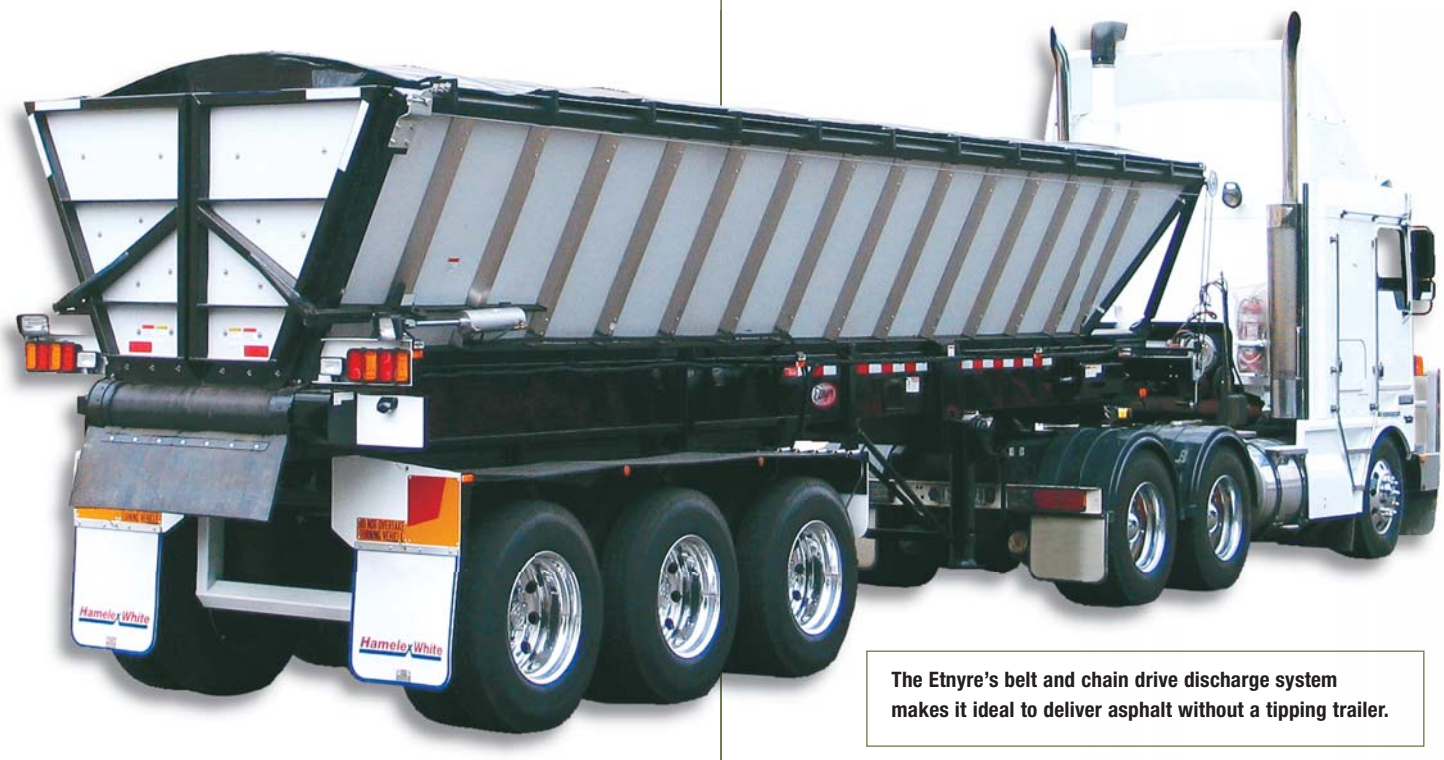
MaxiTRANS is constantly adapting to meet new demands with technical innovation

The Brisbane Truck Show isn't of course just confined to trucks. But with all the current focus on exhaust emissions and engine technology you could be forgiven for thinking that technical innovation stops when you leave the truck manufacturer's display.

Even a brief walk around the exhibits from the various trailer manufacturers showed that technology isn't just the domain of the truckers. As Stuart McMurtrie Group Marketing Manager of MaxiTRANS explained to PowerTorque, there are lots of new ideas that can significantly impact on profitability and they come from the trailer manufacturers.

Principally manufactured in Ballarat (Victoria) and Auckland (NZ), the Company's Freighter and Maxi-CUBE products are market leaders, supplying T-Liners, flat tops, container skels, dry freight and temperature controlled vans throughout Australia. With the acquisition of the Brisbane-based tipper manufacturer, Lusty EMS, in July 2003, the MaxiTRANS product range was broadened to include high quality aluminium tipping trailers and with the subsequent acquisition of HamelexWhite in March 2004, MaxiTRANS became the largest tipper manufacturer in Australia. HamelexWhite manufactures both aluminium and steel tippers at its Hallam (Melbourne) facility and has a product range and customer base that is largely complementary to those of Lusty EMS.

In order to expand the various group interests into the realm of rigid truck



The Etnyre's belt and chain drive discharge system makes it ideal to deliver asphalt without a tipping trailer.

Side tippers are stable in quarry work. (lower) MaxiTRANS is currently looking at aerodynamic performance to improve airflow and benefit fuel economy.

bodies, MaxiTRANS purchased certain assets of Peki Transport Equipment, operating the acquired business under the name Peki Pty Ltd. As an adjunct to manufacturing, the group diversified its activities into that of the supply of wholesale and retail parts by forming a joint venture with Colrain. This led to the group subsequently acquiring the minority shareholding in Colrain in 2006.

This diversity of manufacturing brings with it a healthy competitive nature between the individual divisions but also results in a sharing of technology where it can be applied to other areas.

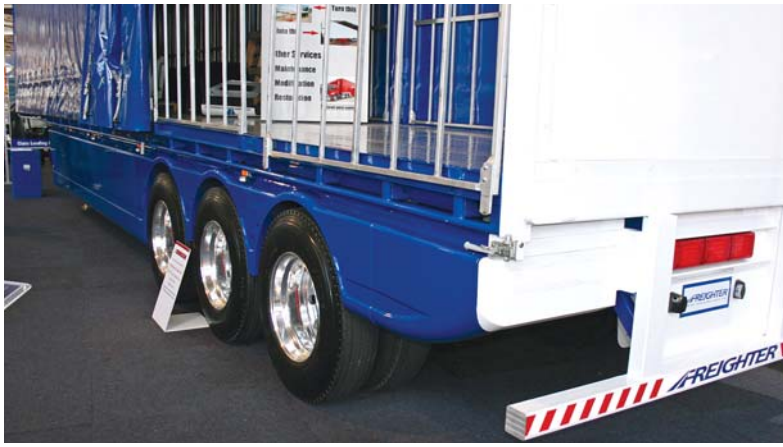
On display at the Peki stand was the Peki Lite Body System mounted on a Mercedes Benz Sprinter truck and offering a 4.3m low tare weight body of around 500 kgs with a two tonne payload. This saves up to 800 kg when compared to other body construction methods.

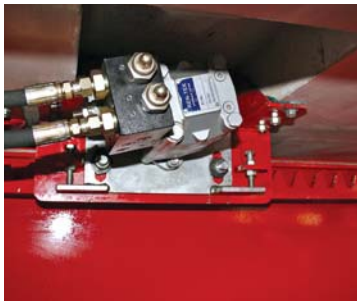
Available in standard lengths of 4.3, 4.9 and 5.5 metres, the Peki Lite body uses an unique extruded framing system that can be adapted to suit almost any chassis dimensions. The combination of strength and low tare weight comes from the use of special panels manufactured by permanently welding a glass reinforced Polypropylene (PP) skin each side of a honeycomb PP core. The wall and ceiling panels are translucent, providing excellent interior ambient light.

Moving up in size and over on the Lusty EMS stand was the latest design of aluminium tipper with a roll top tarp and fitted with side opening doors than enable palletised loads to be carried when bulk loads are not available. Called the Multi Loader, it's available in 19m and 26m B-double combinations and the side mounted aluminium doors open easily by releasing four latches on each side and operating the cam hinge at the corners of the trailer. The doors can be opened without having to adjust the tarp or tailgate.

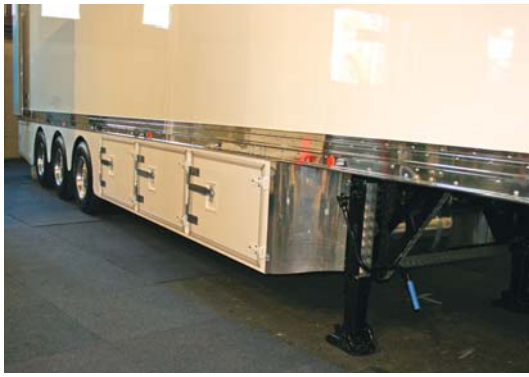
Lusty EMS is also now building steel tipper trailers. Complementing their already extensive product range of aluminium body and dog trailers, B-doubles, moving floors and flat top trailers, the new steel trailers are available in body and dog configuration or as side tippers and 25 metre B-doubles with tip over axle and chassis tip versions.

Following on from the success of the previous style of Lusty EMS moving floor trailer, a new design has been released that will provide quicker loading. Available in 45 and 48 foot configurations that have 92 and 100 cubic metre capacity respectively, operators can gain an extra 2-3 cubic metre capacity by incorporating low profile tyres or a wedge shape floor. The moving floor has an internal height of 2.8 metres, for a total height of 4.3 metres and is available with a single rear door or barn doors. Operators can choose from the option of Keith or Cargo moving plank style floors for high strength and low tare weight. There is also a heavy duty version for waste and heavier applications utilising the Keith V floor for extra strength and durability.





Air operated locking system on sliding A-trailer from Freighter MaxiCUBE Advance (on left), cable lock down on Freigher EzyLiner (above), stylish filler panels smooth airflow (on right).



A healthy competitive nature between the individual divisions also results in a sharing of technology

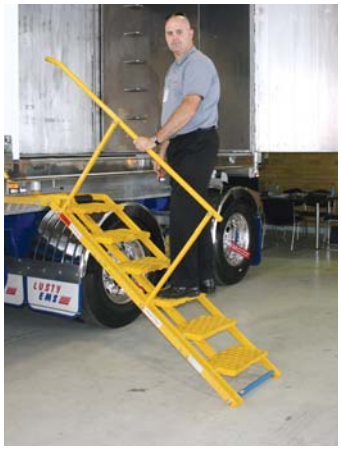
Freighter used the Brisbane show to release the EziLiner which is a buckle-less curtain sider concept trailer.

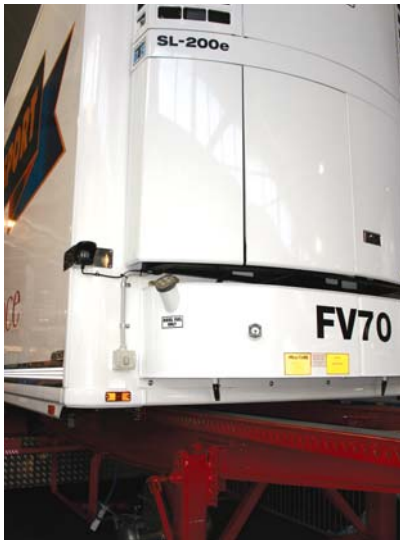
Since curtain sided trailers were first introduced into the Australian market in the 1970's there has been very little change to their original design and functionality. Exactly two years ago, Freighter introduced the Safe-T-Liner, the first Australian designed buckle-less curtain sided trailer with integral load restraint.

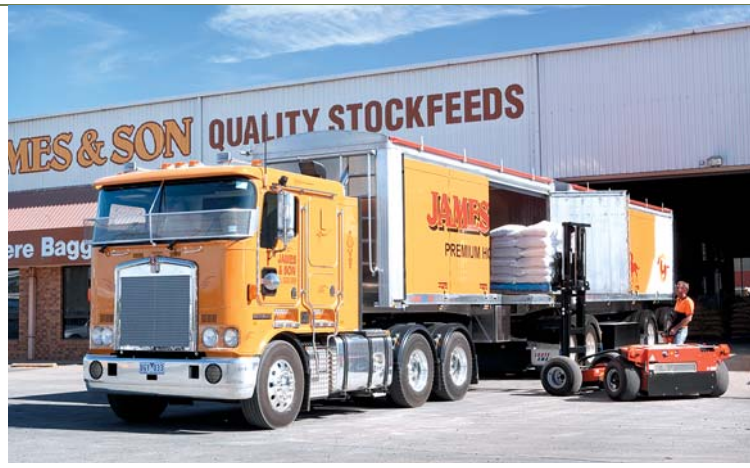
The EziLiner concept is a curtain sided trailer with conventional gates, but no straps or buckles. It utilises a high tensile, synthetic cable running through a series of arcs in the bottom of the curtain to generate vertical tension in the curtain. This engineering principle has been used successfully in large tension roof structures at sports stadiums and other public and private structures for many years

Cable tensioning is achieved by air-operated toggles that extend out from the trailer sides and then lock down against the cable, holding it captive and under tension. Tensioning up or releasing the tension is all controlled by an airswitch on the trailer, a matter of seconds rather than the several minutes it takes to connect and ratchet down straps and buckles.

Retract a Steps are the OH&S choice. MaxiCUBE Advance rollers and A-frame (lower).







James & Son is gaining from the versatility of the Multi Loader to carry both bulk and palletised goods. The trailer also carries a 3 tonne robotic forklift that is underslung from the chassis for travel.

Moving onto refrigerated vans and the need for a simple but effective roll-back system for A-trailers has resulted in Freighter Maxi-CUBE launching "The Advance". This is a thermally efficient and high payload van where the roll back body has the flexibility to be moved to the front or rear of the trailer even when fully loaded. The mechanism for operating the roll back uses a rack that is external to the chassis and a horizontal hydraulic drive motor that is powered by an electro hydraulic power pack. Its battery is automatically charged by the fridge plant. The forward skate roller runs on the upper main rail flange, while the rear skate roller runs on the lower main rail flange

The Hamelex-White display showed the new live-floor system with insulated walls that discharges hot asphalt through a conveyor chain drive and belt system and out of the rear of the trailer. Sloping side walls prevent material hang-ups and the system replaces the need to use a tipping trailer. This makes it ideal for use in tunnel construction or underneath power lines. It's a seriously clever system that speeds up discharge time and removes any risk of tipovers.

The Etnyre's belt floor is manufactured from light weight composite material that is chemical and heat resistant, while the eight chain guides are made of wear resistant high molecular weight polyethylene giving operators a low tare weight trailer with more payload. The system is built by Hamelex-White under licence from U.S. maker E.D. Etnyre & Co.

Also on show from Hamelex White was their new tri-axle aluminium chassis tipper trailer. At 9.8 metres in length, the tipper features an automatic axle lift that raises one axle when unladen, reducing tyre wear and aiding manoeuvrability. With a 27 metre cubic capacity, the chassis tipper can be used as a tri axle semi trailer, B-double or road train combination. Depending on the truck configuration, operations can achieve a 27 tonne payload with the chassis tipper trailer.

Stuart McMurtrie told PowerTorque that the company is also developing several aerodynamic aids that fill in space between the wheelbase and under the chassis in order to reduce wind drag and improve fuel economy. With several of the prototype systems on display there are some exciting options ahead in the quest to reduce wind drag.

Freighter's answer for improved aerodynamics was the Aero Liner. This was a styling exercise made of CNC modelled high density foam that is coated in urethane but the finished product will be manufactured from materials similar to those used by the auto industry for car bumper bars.

It's early days yet for MaxiTRANS to offer a full range of vortex fillers and underbody and side body panelling but there are obvious advantages from a safety aspect as the side panels prevent the risk of pedestrians or cyclists becoming trapped between the trailer wheels and the body. A common fitment in Europe on trailers and rigid bodies, it's probably only a matter of time before they become a requirement in Australia. ●