



New trailer technologies, chilled storage solutions, steering systems and telematics provided food for thought at TCS&D 2013, reports John Challen

In from



Above: Light Grille uses an array of light beams to monitor a trailer door opening and prevent cargo from causing damage

Temperature-controlled storage and distribution professionals gathered in Peterborough in mid September for the TCS&D 2013 show. With several major names attending, it proved a useful opportunity to reconsider vehicle specifications in light of new developments – and to learn how to improve the efficiency and reliability of existing fleets.

Schmitz Cargobull, for example, took the wraps off its latest semi-trailer, heading a new line-up of aluminium, fixed-roof curtainsiders. Key features include an aluminium front bulkhead, with galvanised steel front and rear corner posts – a specification favoured by domestic operators, because it allows free side loading. It also includes wraparound curtains and a front ratchet tensioner.

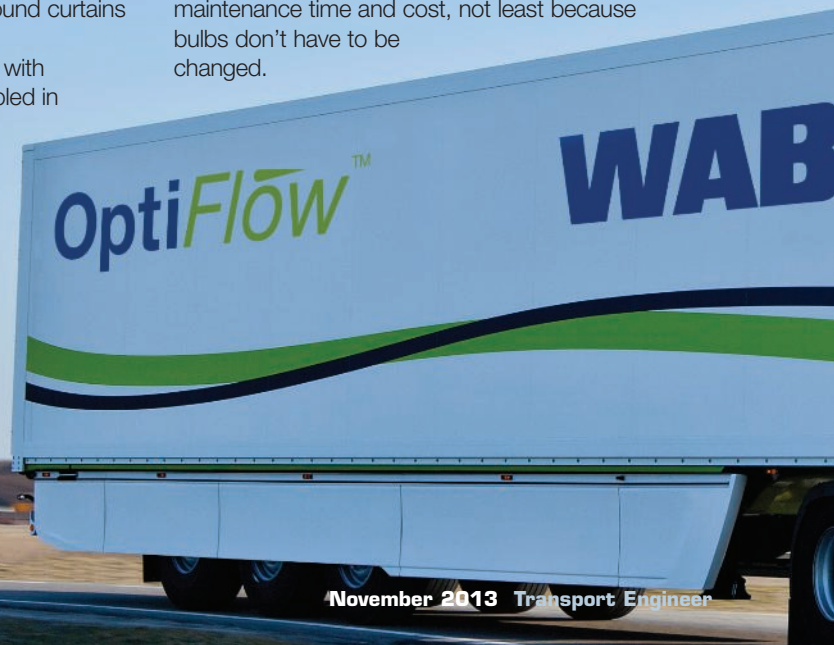
The launch trailer is 13.6m-long, fitted with Schmitz Cargobull's Rotos axles (assembled in Altenberge and currently on 70% of new Schmitz trailers) and rides on 385/65 R 22.5 tyres. It also has full-height aluminium, mono-hinged double doors and two roof-mounted load restraint tracks, with 13 pairs of straps. Schmitz expects most domestic fleets to specify two side-posts per side without rigging boards. However, the company emphasised that it also offers three

side-posts per side with rigging boards, so providing full EN 12642 XL certification.

More new trailer-based technology was revealed by Carrier Transcold, which used TCS&D 2013 to unveil its latest high-efficiency temperature-controlled units, including the Supra 1150 system. This refrigerator joins the Supra 1050 and 1250, and is aimed at urban distribution, recognising that multiple door openings are common. Of note on the new model are new fans, claimed to increase airflow by 24% – so allowing quicker temperature recovery after unloading – while also improving air management. A 7mm condenser and small compressor are also now used to improve fuel efficiency. With the 1150, Carrier Transcold's systems now cover rigid trucks with load space volumes from 30m³ to 90m³.

Another trailer manufacturer making inroads is Chereau, which displayed several innovations designed to help refrigerated transport operators improve safety and efficiency. The first was Air Efficient-C, an internal ventilation system that focuses on cooling the trailer body sides, thereby enabling even temperatures (Chereau is claiming $\pm 1^{\circ}\text{C}$) between the front and rear of the vehicle. The unit also allows temperatures to be pulled down more rapidly after loading/unloading operations – and Chereau claims reductions in fuel consumption and CO₂ emissions of up to 9%.

Chereau also showcased its Flex-C LED, a rear light cluster designed to be "virtually unbreakable" and to last the life of a semi-trailer. The system, which is watertight and robust, has a single electrical connection, and is claimed to reduce vehicle maintenance time and cost, not least because bulbs don't have to be changed.



the cold

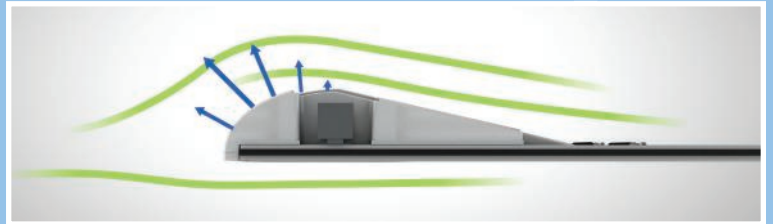
But TCS&D 2013 offered plenty beyond trailers. Wabco illustrated how it, too, is concerned with improving fuel economy, indicating its intention to move beyond braking, stability and transmission components. The firm believes its Optiflow sidewings are the technology that will help it meet this goal. Designed to cover trailers' wheels, the wings will, says the company, lead to fuel benefits of up to 1.6 litres per 100km. This is achieved by improved airflow around and behind the truck. Made from the polymer polydicyclopentadiene (PDCPD), the wings are lighter than polycarbonate or plastic items, and also promise to be more resistant to vibration and damage.

Wings and doors

Elsewhere, SMI introduced thermally efficient rear doors, as it looks to help temperature-controlled logistics operators save energy and reduce carbon. Key to the improvements is the company's Tempro lightweight curtain, formed of a flexible thermal fabric that helps reduce losses of chilled air, and prevents ambient air from reaching the cold section.

There are three variants. Back-Stop provides a 100% energy saving when the doors are open, and 75% on driver entry, with a four-piece thermal door providing sectioned protection. Truck-Stop can be used in place of traditional plastic curtains, and features numerous strips that help with vehicle entry and exit. Finally, Carrier-Barrier has been designed for smaller delivery vans.

Moving on, another company looking to broaden its portfolio is BPW. The axle and suspension



manufacturer used TCS&D to announce its entry into the world of telematics. Dubbed a "smart trailer monitoring system" by BPW, TControl features a 'cool management' setting, which enables fleet managers to monitor fleets, with warnings and alerts specific to refrigerated vehicles. It can, for example, warn when fuel in the refrigeration unit is running low, when critical temperatures are breached, or when doors or couplings are incorrectly fixed. It also records loading and unloading times, tyre pressures and brake system status, allowing managers to keep a remote eye on drivers.

Elsewhere, Hormann revealed its latest safety solutions for loading bays. The company's Light Grille uses an array of light beams to monitor a door opening to 2.5m. Should one of the beams be broken by protruding cargo, it automatically stops the doors from closing.

Finally, IMS unveiled an electrohydraulic steering trailer system from VSE. The computer-controlled system is designed for urban delivery vehicles and claims to improve low-speed manoeuvrability at depots and retail outlets. It works with a sensor integrated within the kingpin and connected to a steered axle behind. When reversing, it measures the angular deviation between the tractor and the trailer. A signal is then processed by an electronic unit that controls the air valves, which, in turn, force a slight braking action to either the left or right wheel of the castor axle, causing it to steer where intended. Maximum angle that can be recognised is 20°, and the system operates at up to 5mph. IMS says it is currently nearing the end of a trial using a 13.6m trailer and argues that the technology eliminates turntables, cables and rods. **TE**

Above and centre: Optiflow sidewings cover semi-trailers' wheels. They will, says Wabco, lead to fuel savings of up to 1.6 litres per 100km

