



Kögel Novum

Robust, flexible, individual



Special Edition



Redesigned details, innovative technology:
the new Kögel Novum (picture above).
Opened up: the sliding roof test

Novum from Burtenbach

Kögel's standard curtainsider has also completed the Novum generational change. The optimised outer frame profile and the improved body not only increase the Cargo's robustness but also simplify handling. We pursued this theme in Part 3 of our Top Trailer-Test.



Kögel has pursued a strict "slimmed-down" strategy for several years. This trend could already be detected in the case of "Cargo" four years ago at our previous Trailer-Test for standard curtainsiders and was consistently continued two years later with the Mega-Test for the "Mega" volume colleague.

Now, in 2018, the Burtenbach company has streamlined its trailers even further by adapting the "Cargo", "Mega" and "Light" models to the new "Novum" vehicle generation. Therefore it came as no surprise to us that Kögel would enter this year's Top Trailer-Test with the new weight-optimised Novum version of Cargo.

The standard model weighs in at around 5,920 kg. As a comparison: at our last Cargo test in 2014, this was approx. 6,000 kg. Thus the generational change has been accompanied by a payload increase of over 80 kg – important kilos which are sure to please transport companies.

A further advantage: Together with a new air and lighting console at the front wall, which transfers forces along the side member to the frame, the new external frame profile, which increases the accessibility of the VarioFix lashing points and the variable slat pockets, the Kögel Cargo of the Novum generation comes with comprehensive standard equipment.

An additional plus point: the high level of individualisation, which allows the vehicle to be precisely adapted to the respective requirements of the forwarding companies.

Rear portal

Even at first glance, Cargo's rear portal makes a very positive impression. This is because Kögel is one of the few manufacturers using Thiriet Integrale as locks. Thiriet is the inventor of the door lock whereby the lock is released when the lever is opened.

With this feature, Kögel has invested in a unique selling point – the other test candidates entered the competition with conventional push-lever-keystroke models, so-called “two-hand locks”.

Our measurement of opening pressures showed that the right integral lever on the inside requires a force of around 5 DnN; in the case of the left inside lever, this was around 5.8 DnN. The right outside integral required a force of 5.8 DaN and the integral on the left required a force of 3.5 before fully opening – a result which underlined the initial positive impression of the rear portal because these are impeccable values. The force required to open the doors is low.

The locking technology of Kögel's Cargo is first class: the Burtenbach company has fitted the model with four hinges; the door panels can be pulled out upwards and the sealing arrangement is faultless because no rivets are required.

The rear section is rounded off by the reinforced Kögel steel impact buff-



Robust, flexible, easily accessible: the Cargo convinces with good workmanship and useful components

er which protects it from damage at the ramp as well as an 8-millimetre-thick lateral steel bracket fitted at the end plate of the frame.

Side tarpaulins

The side tarpaulins are tensioned laterally at the rear with PWP tender and on the front wall with Kögel rotary levers. At the rear, the Burtenbach company has fitted the tarpaulin tensioner with a metal sheet for lifting, which simplifies handling significantly – an additional advantage. The vertical tarpaulin tensioner has been constructed on the basis of the eccentric principle (top dead centre). However, points are deducted due to the fact that the lashing gear at the rear is open and is thus subject to negative environmental influences.

In this respect we make the same recommendation as we did in the case of Kässbohrer: simply allow the tarpaulin – ex works – to run slightly over the gear. This would prevent the gear becoming wet or dirty. A more pleasing feature on the other hand was the low lifting capac-

ity of the side tarpaulins – because these could be pulled with a satisfactory force of 10 DaN. The installation of the expansion shaft at the top flange was also simple.

A further plus point of the Burtenbach trailer: the distance of the strap loop from the winding shaft is a conveniently short 4.5 cm, and at the rear only slightly longer at 7 cm, which is an improvement on the previous Trailer-Test two years ago where a distance of more than 12 cm was measured.

The PWP tenders are protected from docking damage by the corner pillars at the rear.

Roof tarpaulins

The construction of the roof tarpaulins also made a good impression on the test team right from the start. Extremely few dekanewtons were required to set up the end run beam of the Versus Omega roof technology – our measuring equipment showed a mere 4.8 DaN. The end run beam is locked by means of a conventional wire-bolt construction.



Part 3 - Kögel Novum

The pull rod is a rigid version, which is 320 cm in length, and is installed on the left above the impact protection cross beams in Burtenbach. The advantage: as it is not telescopic, there are no problems

with removal; however the rod is at risk of theft as it is not stored in the loading area.

The opening of the sliding roof required a force of 23.7 DaN at the first effort. After we had removed the rainwater from the roof, the force up to the package locking was further reduced to around 22.2 DaN. This is an acceptable

level, although some manufacturers have models where opening is somewhat easier.

Kögel achieves the obligatory EN-12642XL roof reinforcement using tarpaulin technology. Stiffeners are integrated in the roof tarpaulin fabric, such as those we know from the side tarpaulin. However, in order to open the sliding roof from front to back, an additional end carriage, which was not installed in our test trailer, must be booked as an option at Kögel.

Technical Data: Kögel Cargo



Measuring the lifting capacity of the side tarpaulins: "pleasing result"

Permissible fifth-wheel load: 12,000 kg
Permissible aggregate load: 24,000 kg
(8,000 kg per axle)
Permissible total weight: 36,000 kg
Tare weight
Basic version: 5,920 kg
Floor load-bearing capacity
(in accordance with DIN EN 283 with test axle load):
..... 7,200 kg
Wheelbase: 6,390 mm
Axle spacing: 1,310 mm
Total length: 13,950 mm
Total width: 2,550 mm
(manufacturer's details)

Axles

Trailer axle KTA with "double suspension" consisting of rubber bearings in combination with an elastic spring link.
Brake ventilation system: specially designed ventilation slots in the wheel end to prevent overheating.

Brake/air suspension system

Wabco modulator TEBS-E 2S/2M, with RSS and 24 N brake light supply. Wabco park and shunt valve on the left behind the axle unit. Without axle lift. Pneumatic air suspension valve, Wabco Tasc lifting/lowering valve with RTR. Optional Wabco SmartBoard. Air supply 3 x 40 litre. Air suspension bellows: 300 mm cross-section.

Floor

30-millimetre-thick plate floor, multi-glued plywood. Floor peripherally grouted.

Body

Quick locking device for side tarpaulin for the front section with ratchet. Clamping device for side tarpaulin with mounting shaft and ratchet. Meets rigid bodywork requirements of EN 12642 XL (VDI 2700). Front wall with aluminium volume corner posts at mounting height, riveted with hollow aluminium profiles, with bolted/riveted frames. Double-wing rear wall door portal around 2,630 mm in length, each door with 2 espagnolette locks. 4 integrated espagnolette locks (2 on the left and 2 on the right), from Thiriet. Screwed down steel corner posts at the rear at portal height.

Electrical equipment/electronics

Light carrier made of steel, arranged above the underride guard. Kögel Luxima, consisting of the following: LED licence plate illumination, LED limiting lights and reflector at the front, blinking LED side marker lights, Superseal light connectors. 2 Luxima clearance lights with arm, installed at multi-chamber tail light. 2 Luxima LED multi-chamber lights. 2x7-pole socket (1xISO1185/1xISO3731; 24V-N/24V-S) and 15-pole socket ISO 12098 – no adapter box, not ADR-conform.

Chassis and body

As already mentioned, the Burtenbach company presented its new Novum version of Cargo at the Trailer-Test. Our team immediately detected noticeable changes in the external frame and body compared with the last Trailer-Test two years ago. Kögel is concentrating more than ever before on an optimal construction kit with specified and optimised modules, assemblies and components. The advantage: a very high level of individualisation of the vehicles of the Novum generation, which is how Kögel is responding to the broad variety of market requirements.

An essential change is the stable and torsion resistant welded frame with full-width cross beams for high payloads and concentrated loads. In addition, even more stability is provided by a new slimmer yet stronger rear cover plate as well as the new air and lighting console on the front wall, which transfers forces along the side member to the frame.

In the basic design, the front wall including the front volume corner posts, the rear corner posts and the rear wall door portal, are made of aluminium. The corner posts have been standardised so that pallets can be more easily placed along the front wall when loading at the side. A further novelty is the fact that the size of the drop side spacing has now been standardised for all NOVUM generation vehicles. This means that differently sized slats are a thing of the past. The slat pockets can be arranged flexibly using a perforated profile on the corner posts and in the slat storage console.

With the standardised trailer axle (KTA), Kögel has integrated a maintenance-friendly and reliable axle unit in the new Cargo. The KTA's "double sus-

pension” consisting of smooth rubber bearings in combination with a trailing arm of spring steel provides not only an improvement of the driving properties of the trailer but also ensures a lower level of abrasion.

Floor

In Burtenbach, great importance is attached to solid floor work. We noticed this in the tests because of the high technical level of the floor work on the Cargo trailer. Traditionally, Kögel uses side members – or more precisely two Omega profiles, which at the same time serve as holders for the floor plates. Of course, this three-part floor is difficult to cut to size but has the advantage that only small segments have to be replaced.

The Arnold screw heads are inserted by robots, however, not always evenly – which does not have a recognizable disadvantage because the machine knows how to do its job.

The screw joints themselves are not sealed; however, the good workmanship renders this unnecessary. The floor sealing towards the edge is faultless. The screw fittings do not cause the phenolic resin cover layer to open up. The distance of the screw fittings to the external frame is acceptable – with a measured value of around 5 cm. Our conclusion with regard to the floor: no complaints – everything “okay”.

Lighting system

Kögel's front wall cross beam is one of the most generous models for height and width. However, the ISO connections are all switched next to each other horizontally and to us the distance between the 7- and 15-pole sockets seems rather too short. This may cause problems when coupling light and air, especially if the driver does not have delicate fingers.

The cable routing to the frame, which has been well thought-out and safely arranged by Kögel, was much more positively received by the test team. This runs from the front wall in a cable duct on the right inside of the left longitudinal beam.

The positive impression was retained when we looked underneath the trailer because the cable routing in the chassis of our Cargo was perfect. All cables under the chassis were well protected. Certain-



Kögel front wall cross beam: good cable routing; however, insufficient distance between the connections.

ly, no expense was spared at Burtenbach with the cable ties for secure fastening on the vehicle. No abutting edges or room for manoeuvre be detected.

The pre-fabricated lighting unit from Trucklite leads to a modern tail light system in the rear – in full Kögel-Luxima LED design. In this respect, Kögel has come up with something special and integrated its company logo in the tail lights – an attractive novelty which the manufacturer will present at the IAA.



Ram protection, front wall: “consistent overall appearance”

The connection at the rear carrier is without fault. Everything is firmly in place; no loose cables were detected by the test team. The width spacing between the underride guard and the lighting column was an acceptable 5 cm. The light test was passed without errors.

Braking system

The braking system is largely assembled from Wabco components. A Wabco TEBS-E 2S/2M including RSS acts as a modulator. It is praiseworthy that Kögel is now installing the 24N stop light supply. This was not always the case. This is namely required as driving evidence in the case of ABS cables that are not plugged in or are defective. The Wabco park and shunt valve was fitted on the left behind the axle unit.

The air suspension valve works pneumatically; the Wabco-Tasc lifting-lowering valve has the RTR function. As an option, the Burtenbach company fitted the Cargo with a modern Wabco SmartBoard, which enables the driver to obtain important information about axle load, mileage, tyre pressure, brake lining wear or EBS error messages. In addition, the EBS-E and air suspension functions such as OptiLevel and OptiTurn can be activated via the module.

With regard to air supply, we made a rare find under the trailer: three storage tanks – two tanks with air for the braking system and one tank with air for the suspension. Each of the three storage tanks has a capacity of 40 l.



Part 3 - Kögel Novum

The air suspension bellows have a cross section of 300 mm; the cables of the compressed air system have been installed without fault. As with the power supply, all cables are routed in such a way that they are sufficiently protected. The same applies to the cabling of the ABS sensors.

The test trailer did not have an axle lift; this, however, was not a component of our tender procedure.

Load-securing

The Test-Cargo also trumped on the theme of load-securing; it is obvious that the subject of safety has traditionally been taken seriously by the Burtenbach company because the Daimler 9.5 version of the semi-trailer has lashing points in abundance. In addition, the external frame profile greatly increases the accessibility of the VarioFix lashing points, allowing the cargo to be lashed to the VarioFix perforated steel external frame with the tarpaulin closed and also in combination with the optionally available drop sides.

When using belts with claw hooks, the drop sides need to be open to attach them. The drop sides can remain closed

when attaching belts with flat hooks. In addition to the 13 pairs of DIN/EN lashing rings included as standard – in the case of the Novum trailer with grip hooks at the sides for easier handling – each side has 64 elongated slots in the VarioFix external frame. The tensile force is approx. 2,500 per lashing ring.

It is also important to know that all hooks, which range from the 2,000 DaN class right through to the heavy-duty versions with a RUD size greater than 10, can be threaded into the lashing rings.

The Cargo earned a further plus point in the angular manoeuvrability test, where lashing down is possible up to an angle of 30 degrees. The test team was also positively impressed by the eight stake pocket bars which Kögel has installed flush-mounted along the loading platform. The stakes themselves were procured from the Italian manufacturer Autocar, a company renowned for its good workmanship and ease of operation of its products. This was also confirmed in the test. We measured a maximum opening force of 0.8 DaN at the centre stake. This is a really good value.

The smooth locking mechanism has been implemented in such a way that the risk of injury during the closing process can be mostly minimised. As an option, the new Cargo can be fitted with different

loading safety packages for each stake section. The new textile lattice, Kögel FastFix, for example, could also be seen in one of the stake fields. Traditional lattices made from wood, aluminium or steel are heavy, difficult to handle, difficult to secure and prone to damage. In addition, the risk of personal damage from falling lattices is ever present. The new textile lattice should solve this problem.

The FastFix lattice can be inserted and removed fast and simply at the stakes using the tried and tested tension lock. This consists of flexible belt material and thus fits into every vehicle toolbox; the risk of damage is drastically reduced.

The Novum generation Kögel Cargo has load-securing certification according to DIN EN 12642 Code XL. Two years ago – at our last Trailer-Test – the lateral bracing of the front wall was not featured in the Kögel trailer programme. This is now possible with the reworked Novum.

Conclusion

In recent years, Kögel has implemented massive product maintenance of its curtainsider vehicles so that with the launching of the new external frames and boxes, which are already well-known from the Kögel-Light^{Plus} trailers, the company has once again taken a major technical leap forward. This was evident in the test because in the handling category the Cargo is now right at the front, a position it has always held in the field of workmanship.

Also of interest is the modular construction kit principle, which Kögel continues to promote with its new generation. This adds a very high level of individualisation to the vehicle.

With its appearance at the Top Trailer-Test 2018, the Kögel trailer confirmed the hitherto clearly recognisable trend, that the difference in quality between the seven European manufacturers is becoming narrower. A wide range of very high-quality vehicle solutions is now available to transport companies, the level of individualisation possibilities is increasing – despite large-scale production.

The advantage: transport companies are no longer dependent on a few manufacturers but can benefit from a large market offer of more efficient and tailor-made transport solutions.

Philipp Bönders



Tarpaulin tensioner with lifting plate (left); no constraints: Kögel load-securing system

NOVUM GENERATION



Kögel has created a modern, future-proof platform for the international transport of goods with the new NOVUM Generation of trailers!

- ✓ **Strong** engineering art for **maximum stability**
- ✓ Quite **simply** more **payload**
- ✓ **Simple load-securing** in a trice

NOVUM – Profitability taken one step further!



YOUR BENEFITS AT A GLANCE

PROFITABILITY RE-EXAMINED!

Reinforced body

The new air and light panel on the front wall transmits the force that the body is exposed to when driving along directly into the frame via the side member. This provides support for the front wall to the front and extends the service life of the body.

Identical slat length

The stake fields having the same size ensures flexible deployment of the lattices.

Diversity

Many variants of the Kögel platform trailers Cargo, Mega and Light^{plus} of the NOVUM Generation are already available.

New external frame

Improved access provided by the Vario-Fix steel perforated external frame being relocated to the inside and simple load-securing as a result of an optimised lashing angle.

Safe loading process

Complete mounting surface for safe and simple loading and unloading from the side. Individual adaption of the slat mounts is possible at any time.

Frame

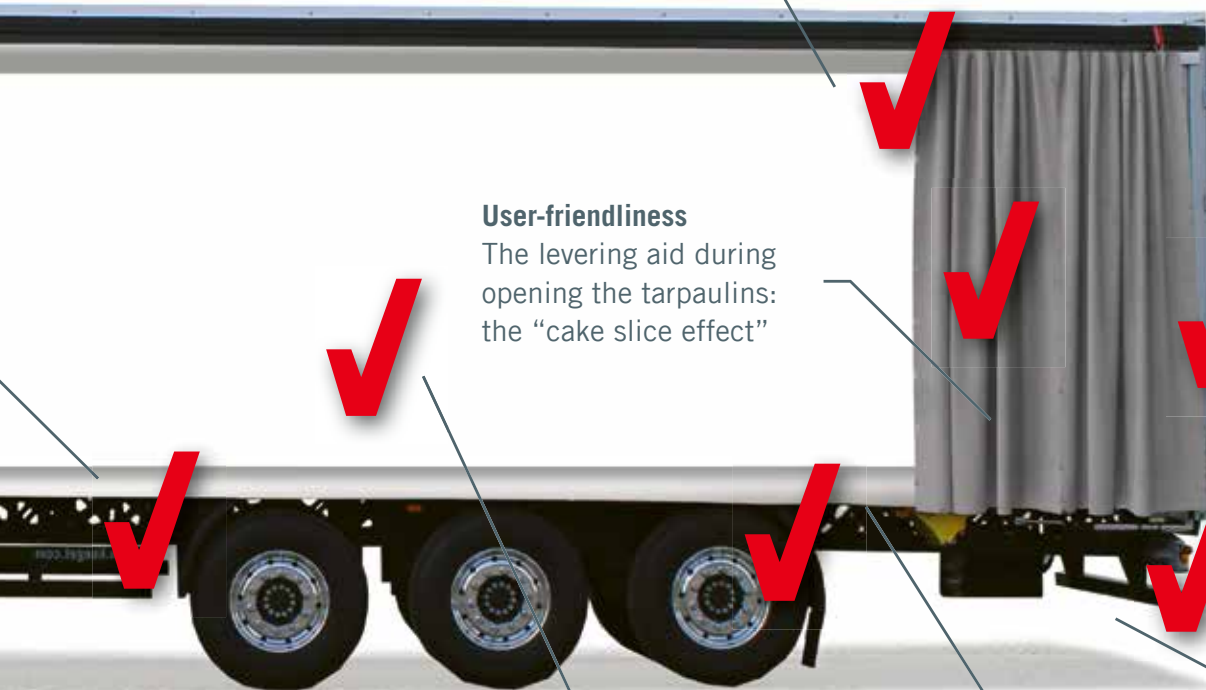
Sturdy, twist-resistant welded ladder-type frame with full-width cross beam for high payloads and concentrated load.





Strong & Go body

Optional equipment.
Reinforced roof and side tarpaulins.
Load-securing with beverages with a single row of slats, Daimler Directive 9.5 without slats is possible.



User-friendliness

The levering aid during opening the tarpaulins: the "cake slice effect"

Door locks

Rapid and simple opening with one hand is possible.

Durability

A new connection plate on the rear, 40 mm thinner and stronger, ensures even more stability.



Kögel FastFix textile lattice

Space-saving storage, just 495 grams per textile lattice, improved safety.

Simple handling

T-shaped lashing brackets simplify the handling. Increased tensile force of 2,500 kilograms.

KÖGEL STRONG & GO BODY



- ✓ **Rapid, simple and safe** handling during loading and unloading
- ✓ **Improved safety** for driver and load
- ✓ Optional equipment for **all NOVUM** Trailers

What is the Kögel Strong & Go body?

The new Kögel Strong & Go body consists of the innovative body of the NOVUM Generation in combination with a **Kögel integral roof tarpaulin and a side tarpaulin with strap stiffeners**, which comply with Daimler Directive 9.5.

Which trailers is the Kögel Strong & Go body available for?

The Kögel Strong & Go body is available as an option for all variants of the Kögel platform trailers: **Cargo, Mega and Light^{plus}** of the **NOVUM** Generation.

What benefits does the Kögel Strong & Go body offer?

Thanks to this solution, lattices are no longer required to comply with the Daimler Directive 9.5 for the transport of pallet cages and strapped loads. For certified beverage transport, only one row of lattices at the height of the first beverage crate stipulated by VDI 2700 Sheet 12 is required for single-level and double-level beverage crates on standard pallets with the Strong & Go body, instead of three or four rows with the normal body.

This means that Kögel not only complies with the requirements of the sector for shorter loading times, but that they also grant the drivers **faster, simpler and safer handling during loading and unloading**.

In addition, safety is improved for the driver and the load, since falling slats and damage to the goods from the slats is excluded.



Kögel Strong & Go

Time is money. This means that loading and unloading must be fast. The new Kögel Strong & Go body meets this requirement with a flick of the wrist (so to speak).

The transport industry is faced with continually growing demands: flexible and smooth handling, minimum loading times as well as maximum safety when loading the freight. The profile of requirements for loading and unloading is extensive; innovative solutions are called for.

The new Kögel Strong & Go body ensures optimal load handling without complications. This is because the vehicle delivers on its promise: a strong body and significantly reduced loading times. Its great advantage: the goods are in and out of the trailer quickly, safely and easily.

Time is money

Everyone knows the saying: "Time is money". However, very few people are aware of its origin, which was a tip from an old

businessman to a young one. And what the publisher, printer and co-founder of the United States of America, Benjamin Franklin, knew 270 years ago is more than ever of relevance in the logistics and freight transport industry today. Free loading space is a waste of resources and unnecessary organisation is an efficiency killer. Every minute of a tour stoppage, every detour costs time and money. Transport chains must nowadays be short and efficient.

NOVUM – the new generation from Kögel

At Kögel NOVUM stands for innovation and marks the generational change in the field of tarpaulin trailers. This can be briefly and concisely summarised as follows: increased payload, maxi-

mum user comfort and a well thought out frame and body concept with a high level of individualisation. This modern body of the progressive NOVUM generation complies with DIN EN 12642 Code XL even in the basic version without the use of lattices.

Up-to-date solutions required

With its brand new Kögel Strong & Go body, Kögel meets the growing challenges in the transport industry. The body is available as an option for all variants of the Kögel platform vehicle: Cargo, Mega and Light^{plus} of the NOVUM generation. With the system solution "Strong & Go", a Kögel integral roof tarpaulin strengthened with stiffening belts and a side tarpaulin which complies with the Daimler Directive 9.5, vehicles of this generation



Strong & Go body optional equipment. Strengthened roof and side tarpaulins. Load securing for beverages with one row of lattices, Daimler Directive 9.5 without lattices possible.

can be combined. Kögel Strong & Go is practically the perfect solution because lattices are no longer required to comply with the Daimler Directive 9.5 for the transport of pallet cages and strapped loads. An additional advantage: For certified beverage transport, the clever Strong & Go body means that only one row of lattices at the height of the first beverage crate stipulated by VDI 2700 Sheet 12 is required for single-level and double-level beverage crates on standard pallets, instead of three or four rows with the normal body of the NOVUM generation. Furthermore, a row of Kögel FastFix special textile lattices provides a simple, fast and user-friendly alternative to traditional lattices made from wood, aluminium or steel.

An effect with a huge impact

The omission of the upper row of lattices simplifies handling significantly and reduces loading and unloading times. An additional advantage: falling lattices are no longer a safety risk and damage to the goods from the slats can also be ruled out. The new Kögel Strong & Go body is therefore absolutely safe – for the cargo, the driver and the vehicle.

Conclusion

The Kögel Strong & Go body stands for significantly optimised load handling and maximum stability. Safe and simple loading and unloading can be carried out even faster, thus saving time and money.



Light, safe and easy to handle: the Kögel FastFix textile lattice is an ideal alternative to conventional lattices made from wood, aluminium or steel.

The innovative solution – for all variants of the Kögel platform vehicles Cargo, Mega and Light^{plus} of the NOVUM generation. Partial load securing is also possible (see box).

Partial load securing in two variants:

Head sling lashing or head lashing

In this partial securing method, a lashing strap is looped as a sling around the sides and behind the cargo and fastened to the lashing points on both sides, either at the lashing points in the Vario Fix steel perforated external frame or at the 13 pairs of lashing brackets (as standard).

Optional partial load securing system with steel combination anchor rails and load-securing beams

Using only two beams, a load of 27 tonnes can be secured to the rear. In both variants, the sliding tarpaulin can be opened at the side for unloading without first entering the loading platform.

KÖGEL

The beginning of the next generation ...

NOVUM
KÖGEL
NEW
OF TRAILERS

KÖGEL
NOVUM
NEW

Your Plus – Handling ✓
Quick and easy side loading thanks to standard drop side spacing. Differently sized slats are now a thing of the past

Your Plus – Load-securing ✓
Easy lashing in the VarioFix perforated steel external frame, even when the tarpaulin is closed, and available in combination with optional drop sides

Your Plus – Individualisation ✓
High degree of customisation thanks to a wide variety of equipment variants

NOVUM – Profitability taken one step further!

TRAILER
INNOVATION
WINNER
CATEGORY
CONCEPT
2019



A real Kögel IAA highlight: the new refrigerated box trailer "Cool – Pur-Ferro quality"

Burtenbach Innovations

Numerous investments in new technologies, a high level of growth, significant increases in turnover and many innovative vehicle solutions – at the moment everything is running smoothly at Burtenbach. Kögel presented this and other company highlights at its IAA pre-press conference in Munich.

The trailer constructor from Burtenbach could not have chosen a better backdrop – the Allianz Arena in Munich – for its pre-press conference because Kögel is successful in the international commercial vehicle sector just as Bayern Munich is successful at football.

The highlight of the major review and technology show: introduction of new vehicle solutions, which will be presented at the IAA commercial vehicle fair in Hanover in the autumn. The product portfolio which was presented ranged from light tipper trailers in alu-steel design, to a trimmed-down container chassis through to smart refrigeration boxes as well as weight-optimised curtainsiders such as the new Cargo or the Light^{plus} Coil from the Novum series.

The Kögel parent company, Humbaur, also took this opportunity to present its latest transport concepts in the field of light box bodies for the City-Logistic sector.

Positive results

The most important news from Kögel: all indicators point to growth. Thus 12,087 trailer orders were received by the Burtenbach company between January and June 2018. This represents an increase of 48.13 percent compared with the corresponding previous year period.

The overall outlook for this year is around 18,000 trailer units. On the West European trailer market, the total number of received orders (up to and including June 2018), was around 5,638 trailer vehicles. This represents a growth rate of 34.14 percent. Sales on the German, Spanish and Belgian markets enjoyed strong above-average growth.

On the second important sales market – Eastern Europe – 6,449 orders were received for trailer units. This is an increase of 62.9 percentage points and Kögel expects total trailer sales in this market to reach 10,000 for 2018.

A further highlight in this year: investment in a new robot-controlled welding system.

The mounting and screwing down of the floor panels is also now carried out fully automatically by a robot system. With this new acquisition, the responsible managers in Burtenbach expect a significant increase in efficiency as well as improved productivity.

Light construction for heavy loads

A premiere at the IAA 2018 was the completely redesigned Kögel Light^{plus} Coil. The special feature of this vehicle: the lightweight steel-bodied chassis frame of the Light^{plus} Coil, which was optimised for an increased payload, has a frame neck height of 120 millimetres. According to the manufacturer, the reduction by 60 millimetres compared with the previous model, (Light Coil), has increased useable interior height. High stability and lon-



gevity, despite reduced material deployment, is ensured through the use of high quality fine-grained steel.

In the standard 7,200 long coil trough, coils and split strips with a diameter of 900 to 2,100 mm and a maximum line load of 27 t can be transported 1.5 metres apart. As a load-securing standard, the coil trough includes two pairs of stake pockets, one pair of stake pockets at the front of the trough and one pair at a distance of approx. 2,050 mm to accommodate square tube rungs.

The exhibition piece, which Kögel will be presenting at the IAA, also has the optionally available eight pairs of stake pockets in the coil trough and eight pairs of stake pockets in the external frame. As an option, two stake pockets can be installed as front wall replacement.

In the basic version, the VarioFix perforated steel external frame has 13 pairs of lashing rings, of which five pairs with a tensile force of 2,500 kg per ring and eight pairs with 4,000 kg tensile force per ring are located in the area of the centre of gravity of the payload. 16 coil tank covers should ensure fast and safe covering and uncovering of the coil trough.

The floor load-bearing capacity of the Coil tank covers has been designed for high forklift axle loads of up to 5,460 kg. The Light^{plus} Coil also has load-securing certification according to DIN EN 12642 Code XL.

An added advantage: the lightweight Kögel trailer comes with the benefits of the Novum generation. These include the new air and lighting console at the front wall, which transfers forces along the side member to the frame, the new external frame profile, which significantly increases the accessibility of the VarioFix lashing points, and the variable lattices of the sliding and corner posts.

In the basic design of the Kögel Light^{plus} Coil, the front wall, including the front volume corner posts, the corner posts at the rear as well as the rear wall door portal is manufactured from aluminium.

Individual equipment

The Light^{plus} Coil trailer, which was exhibited in Hanover, is equipped with an optionally available ice-free system. The system consists of a long inflatable air tube, which is installed underneath the

roof tarpaulin. In an inflated state, the tube presses the tarpaulin upwards to form a slightly pointed roof, so that accumulated water, snow and ice are removed comfortably and simply.

Drivers thus fulfil their obligation to remove water and ice from the tarpaulin roofs of the vehicles, thereby preventing serious accidents caused by falling ice.

In order to ensure simple and fast securing of the sliding roof when open, the model which was exhibited at the fair is fitted with the new Kögel EasyFix stopper. The EasyFix system not only retains the roof securely in position, it also enables simple closing of the roof after successful loading without reversing the securing process.

According to the Burtenbach company, these components increase efficiency and safety during loading and unloading. In order to increase traffic safety and avoid turning-off accidents, the lightweight trailer is equipped with optionally blinking side marking lamps.

Further individual equipment includes an axle lift, Kögel Luxima multi-channel tail lights, Luxima LED reversing lights, rubber impact buffer, a mounting for lattices, mounting for stakes and a steel ramp plate.

The complete vehicle frame of the Kögel Light^{plus} Coil is protected from corrosion by the Nano Ceramic plus KTL coating with subsequent UV coating.

Intelligent material mix

As a highlight for the construction industry, Kögel will present its payload-optimised tipper trailer at the IAA. The distinctive feature: a construction kit extension with side and rear walls made from aluminium. Thus not only different steel wall and tailgate strengths are possible for the 2-axle and 3-axle tipper trailer with a loading volume of 24m³, but also a Kögel novelty - walls and tailgates made from aluminium.

Through innovative joining technology, Kögel customers - depending on industry and requirements - can put together an individual tipper trailer with different wall and floor strengths and materials.

The 3-axle tipper trailer, which was presented at the IAA, shows the variant with a 4 mm trough-shaped body made from tempered Hardox 450 steel, side

walls of a highly wear-resistant 5 mm strong aluminium plate and a rear wall of highly wear-resistant 7 mm strong aluminium plate. This combination is particularly suitable for building materials such as crushed rock and gravel.

The advantage of the steel tank with light side walls and a light rear wall in comparison with a purely aluminium trough is based on the fact that the wear-prone floor requires maintenance every every two to three years, which is costly. Kögel therefore promotes an 'intelligent' material mix. At areas subject to heavy wear, high-quality steel is deployed at the side walls and the light aluminium at the rear wall with a low level of abrasion.

In comparison with a Kögel tipper trailer with 4 mm strong steel side walls and a 5 mm strong steel rear wall, the new aluminium side walls and the aluminium rear wall can lead to tare weight savings of up to 430 kg.

The fair exhibit will also reveal special equipment such as a toolbox, a control pedestal, a roll cover, an axle lift, aluminium rims, aluminium air tanks as well as blinking side marking lamps to increase traffic safety and avoid turn-off accidents - and much more.

Flexible container transport

At its IAA pre-press conference in Munich, the company from Burtenbach also presented its extended container chassis portfolio including a completely redesigned lightweight construction semitrailer container chassis with centre extension - the new Kögel Port 45 Tri-

plex. The container chassis, which will celebrate its premiere at the IAA, with a low tare weight of around 4,800 kg in the basic version, a technical gross tare weight of 41,000 kg and a fifth-wheel load of 14,000 kg, is suitable for the transport of 20, 30, 40 and 45 foot ISO containers as well as 40 and 45 foot Highcube containers.

The new Port 45 Triplex is currently rated as one of the lightest container chassis on the market. This enables a payload of over 36,200 kg and should thus ensure maximum economic efficiency in intermodal traffic. The weight is the result of a weight-optimised chassis. Elliptical lightweight construction perforations mean that stress is well distributed.

The low tare weight in the basic version can be reduced even further by means of weight-saving individual equipment such as rims and aluminium compressed air tank.

The newly developed front extension enables not only simple handling, but also manages without extensive and repair-prone mechanics. The recessed air-lighting console is protected in the front extension so that the free space at the connection lines to the tractor unit is increased. The centre extension can be pulled out by the tractor unit in four different positions - depending on application or transported container.

For a longer lifespan, the centre extension of the Port 45 Triplex features a low-maintenance guide on special plastic sliders and two extension rollers. The rear extension behaves in a similar fash-

ion. This can be set quickly to one of a total of seven possible positions using a hand crank.

Versatile usability

The basic version of the Port 45 Triplex with retracted frame is suitable for transporting a 20 foot ISO container flush-fitted to the rear. If the rear and centre extensions are used, two 20 foot ISO containers or one 30 foot ISO container or one 40 foot Highcube container or one 45 foot Highcube container with short tunnel can be accommodated. If all three extensions are in use, nothing further stands in the way of the transport of a 45 foot Highcube- Eurocorner container.

With a length of 12,150 mm from the king pin, the IAA exhibit is also already equipped for the upcoming modification of the 96/53/EC directive. The vehicle also features the option of the accommodation of a 40 and 45 foot ISO container as well as a 13.6 m long swap body flush-fitted to the rear and a heavy duty 20 foot ISO container at the centre.

A further Kögel IAA highlight in September: the "Kögel Cool - Pur-Ferro quality" in a further developed version. The detail-optimised refrigerated box trailer has not only been adapted to the special market requirements for transporting fresh and frozen food as well as pharmaceutical products, but has various options which also make it suitable for general use.

The numerous optional extras enable a high level of individualisation to be attained - especially tailored to meet the needs of customers.

Philipp Bönders



**Completely new development:
the lightweight construction
Kögel Port 45 Triplex
semitrailer container chassis**

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