



The Three-Ball-System

CLEVER

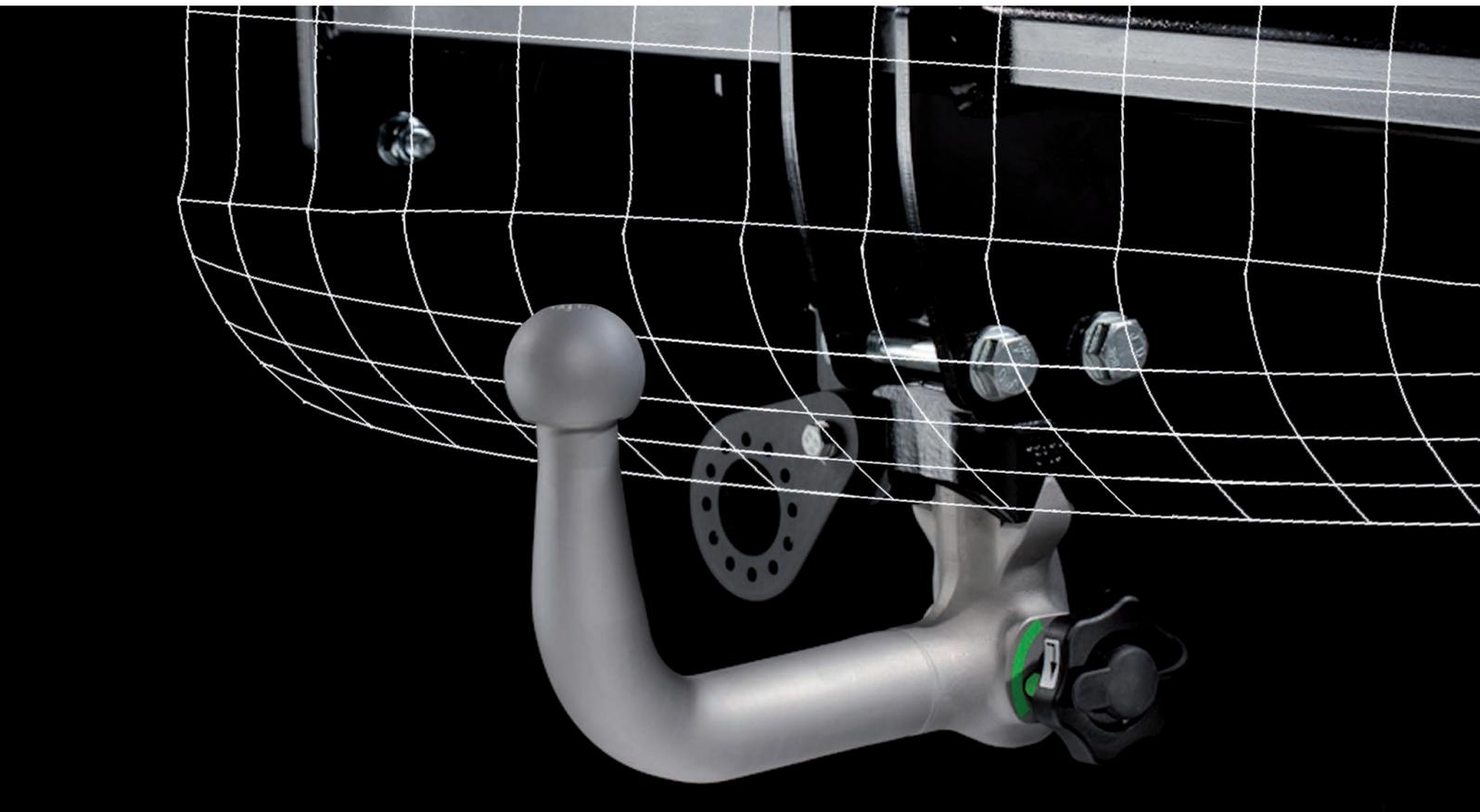
The three-ball-system is a clever version of a vertically removable tow bar. The first impression which you receive when this tow bar is the ease of operation, with simple fastening and removal of the tow ball. The sophisticated lock mechanism makes the application easy and safe.



ADVANTAGES OF THE SYSTEM

The facts speak for themselves.

The main advantage of this vertically removable tow bar is that it can be installed without a bumper cutting, so it doesn't affect the rear design of your vehicle. Additionally, the space requirement of the tow bar is surprisingly small. Due to its efficient packaging depth it can be easily installed, even in restricted spaces.









CLEVER - INDIVIDUAL SOLUTION

An individual tow bar for individual cars.

This forged design is configured and produced according to the individual requirements of your vehicle. As a result, this tow bar is suitable for large scale production. As a weight-optimised variant with I - section design it becomes the ultimate in lightweight construction.



CLEVER - MODULAR SOLUTION

Flexible system.

The concept of this tow ball is ideal if you require a small or medium-sized production volume. By means of a modular construction system the tow ball can easily be adapted to your vehicle. Therefore your project can be realised within a short time period.







THE CONSTRUCTION SYSTEM

Cleverly combined - perfectly connected.

Based on an intelligent structured, modular product system, we can efficiently implement the individual needs of our customers. Have a look at the options and decide which one fits with your needs, or let us advise you.

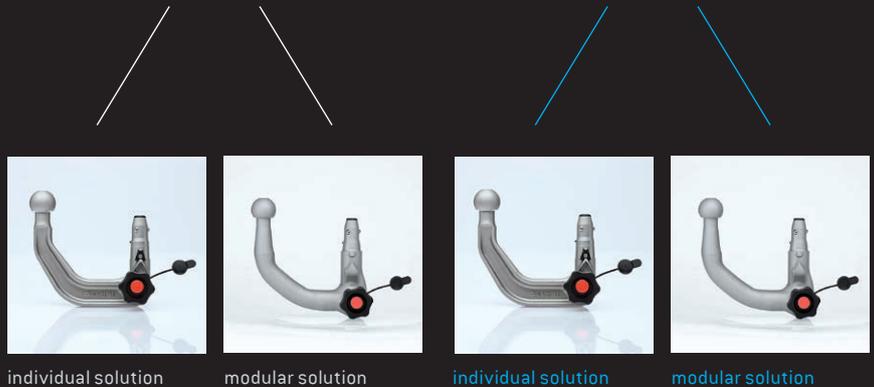
① Bolted shaft sleeve

The bolted shaft sleeve is a cast sleeve, which is the optimal solution for all standard mounting spaces, and is the perfect fit for all TriMotive tow bars. In addition to this, if it is damaged it can easily be removed and replaced by a new sleeve.



② Welded shaft sleeve

The welded shaft sleeve is a steel sleeve and is best suited for complicated installation spaces. Limited spaces are no challenge for it as it can be adapted to suit vehicle packaging requirements.



individual solution

modular solution

individual solution

modular solution

CLEVER - ALWAYS A CLEAN MATTER

A tow bar which you can drag through the mud.

The long term corrosion resistance of the tow bar has been methodically tested using a variety of techniques. Environmental changes, imposed for 720 hours, show the success of the corrosion resistance. The system is completely sealed at the shaft sleeve and at the attached tow ball suspension rod. If the tow ball is removed, an automatic hinged lid ensures that no dirt or dust can penetrate at this point. This innovative mechanism is patent-protected by us. The tow bar lock is also equipped with a dust cap. Furthermore all materials used, including the synthetic materials, are climate and age resistant.





OPERATION

It's as simple as that!

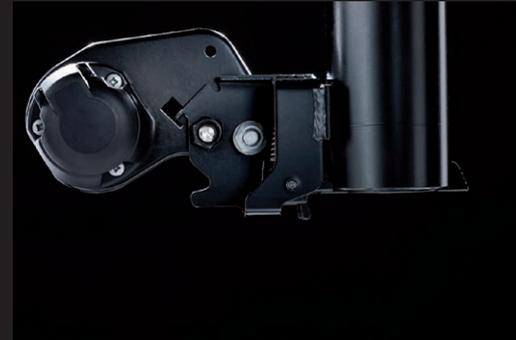
The tow bar can be operated comfortably and easily. Upon insertion of the tow ball into the shaft sleeve, the tow bar system automatically locks. Simply turn the key, remove it and you are ready. To remove the tow ball simply unlock it, and turn the hand wheel in the direction of the arrow. This process is facilitated by the good ergonomics and tactile material of the hand wheel.

The ease of handling is fascinating. Intelligent product components combine for safe and simple operation.

Patent protected systems



The patented socket support is angled downwards for use and the patent protected hinged lid folds away from the sleeve. This allows the tow ball to be installed.



When not in use the socket support is easily pivoted upwards. When the tow ball is removed a lid automatically folds down, protecting the interior of the sleeve against contamination.

SECURITY

Due to an extensive safety package, trailers and bicycle carrier systems are well catered for within this system. Without compromise, all contingencies are provided for [Carlos TC & BC tested].

Operating assistance



In order to optimise the handling security of the tow bar, various visual operating assistances were developed. The red-green display and the directional arrow on the hand wheel are intended as a guide to the correct use of the tow bar.

Turnkey



The tow bar key offers double security: it serves as protection against theft and ensures that the system does not open during the use. To ensure correct handling, the key can only be removed if the tow ball is installed correctly. A cap protects the lock against contamination.

Hand wheel



Before the hand wheel can be operated, it has to be pulled out and rotated in the direction of the arrow. This ensures that the tow ball remains safely in the shaft sleeve if the vehicle runs aground on uneven terrain during the ride, and the hand wheel is moved during this process.

PRODUCT PERFORMANCE FIGURES

Easily operated, unmistakable in its flexibility and incredible robust under difficult environmental conditions, with impressive technical values.

Strength values

D-values	up to 16 kN
maximum towing weight	3500 kg
maximum vertical weight	175 kg



TECHNICAL DATA

Facts and figures

Facts	Figures
D-values	up to 16 KN
Maximum towing weight	3500 Kg
Maximum vertical weight	175 Kg
Min. packaging depth (x-direction)	70 mm
Efficient lightweight construction (multi-material-design)	✓
Guaranteed corrosion protection	> 720 h
Tested under extreme conditions for use in grit, mud and salt water	✓
No readjusting required in riding operation	✓
Maintenance-free (lifetime lubrication)	✓
Folding socket support	✓
Fulfils the standards of the CARLOS and the ECER 55 guideline	✓
Easy and safe operation	✓
Suitable for Line Fit and Dealer Fit	✓
Made in Germany	✓

Safety features	Effect
Hand wheel protection	Cannot be opened during operation
Red-green display at the hand wheel	Offers safety for the operation
Extremely stable locking system (three-ball-system, key)	Cannot be opened during operation



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