

## SPECIALS



We offer Suspension Solutions for E-Drive Axles.



We offer customer specific solutions for Light Commercial Vehicles. We can design an efficient and a fit for function solution in co-operation with the OEM manufacturer in order to achieve the best solution for a specific application.



All VDL Weweler Truck & Bus auxiliary axles benefit from Ø127mm axle beams. The axle beams are gradually formed and torsional stiff, ideal for combining with VDL Weweler two bag air suspension solutions with flexible trailing arms.

### ADVANTAGES

There is no requirement for anti-roll bars or Panhard rods. This results in a light weight solution with only two pivot points which also contributes to simplified axle alignment. The position and the axle drop is optimized for each application. The axle track and load capacity are application and customer specific.

### STANDARD PARTS

Wheelends and brakes are customer specific and standard OEM components can be integrated. VDL Weweler wheelend components are available as an option: 17,5" , 19,5" and 22,5".

### AXLE LOADS

Axle loads design capacities range from 4 T. to 10 Tons. All solutions are equipped with customer specific VDL Weweler air suspension systems and can be equipped as an option with an integrated lift device. Steering systems are ETS (Electronically controlled and hydraulically powered), meaning no mechanical linkages are required.

**VDL Weweler**  
Ecofactorij 10  
7325 WC Apeldoorn  
The Netherlands  
☎ +31 (0)55 538 51 00  
✉ info@vdlweweler.nl  
🌐 [vdlweweler.nl](http://vdlweweler.nl)



### "Thank you for your attention"

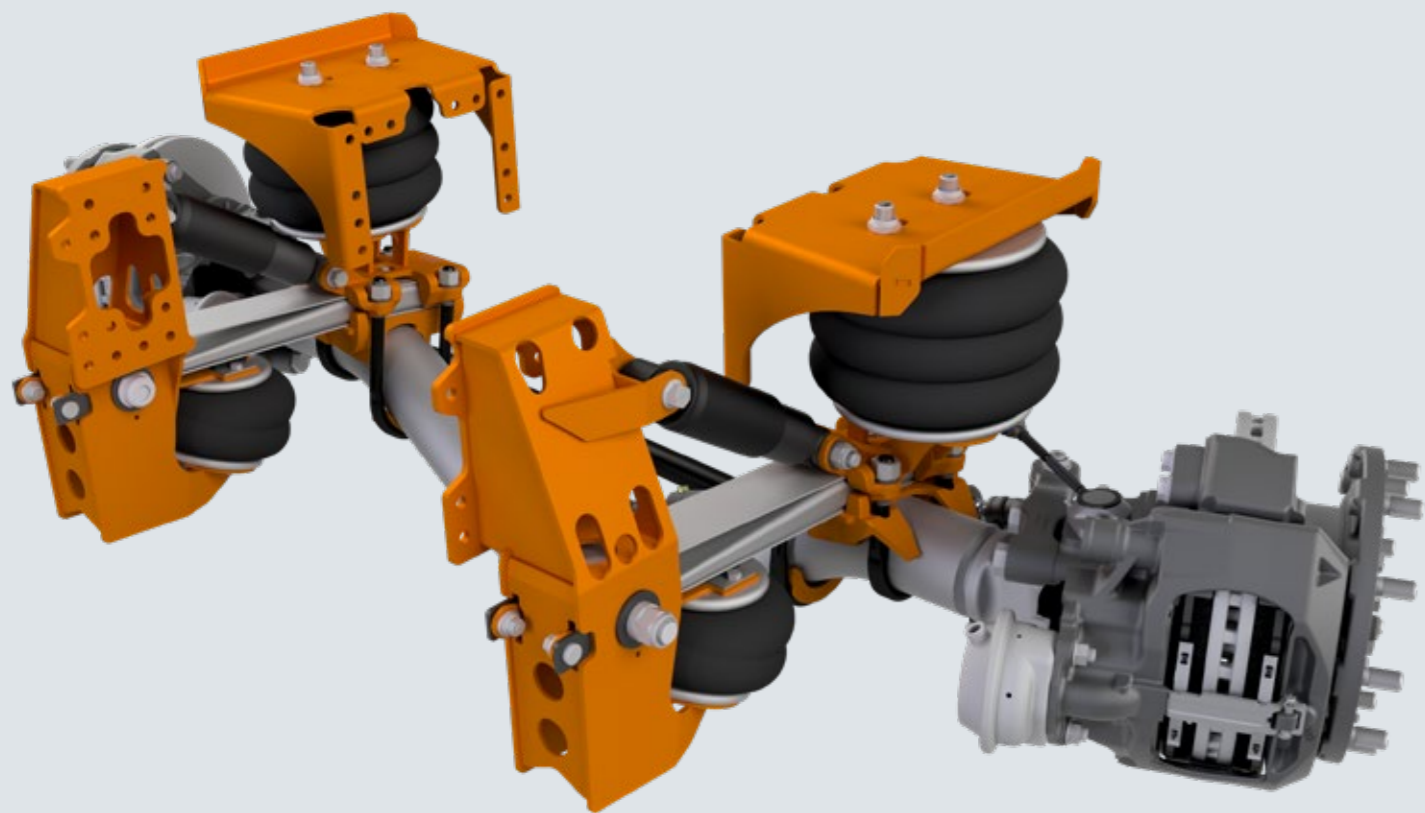
"Bedankt voor uw aandacht"  
"感谢您的关注"  
"Gracias por su atención"  
"Tack för din uppmärksamhet"  
"आपके ध्यान देने के लिए धन्यवाद"  
"Danke für Ihre Aufmerksamkeit"  
"Grazie per l'attenzione"  
"Merci pour votre attention"  
"Dankie vir jou aandag"

**100 YEARS**  
VDL WEWELER



# TRUCK & BUS AUXILIARY AXLE SOLUTIONS

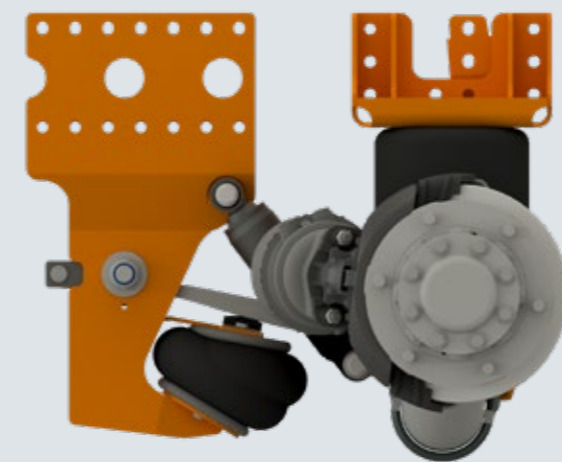
STRENGTH THROUGH COOPERATION



## OPTIONS FOR CUSTOMER SPECIFIC SOLUTIONS

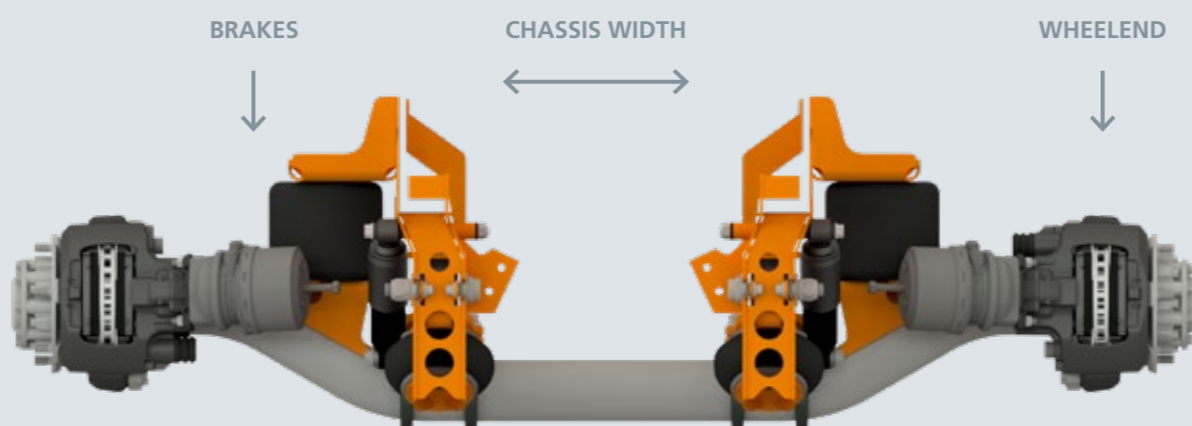
**HANGER BRACKET**

- Bolt Pattern
- Height
- Axle lift integrated

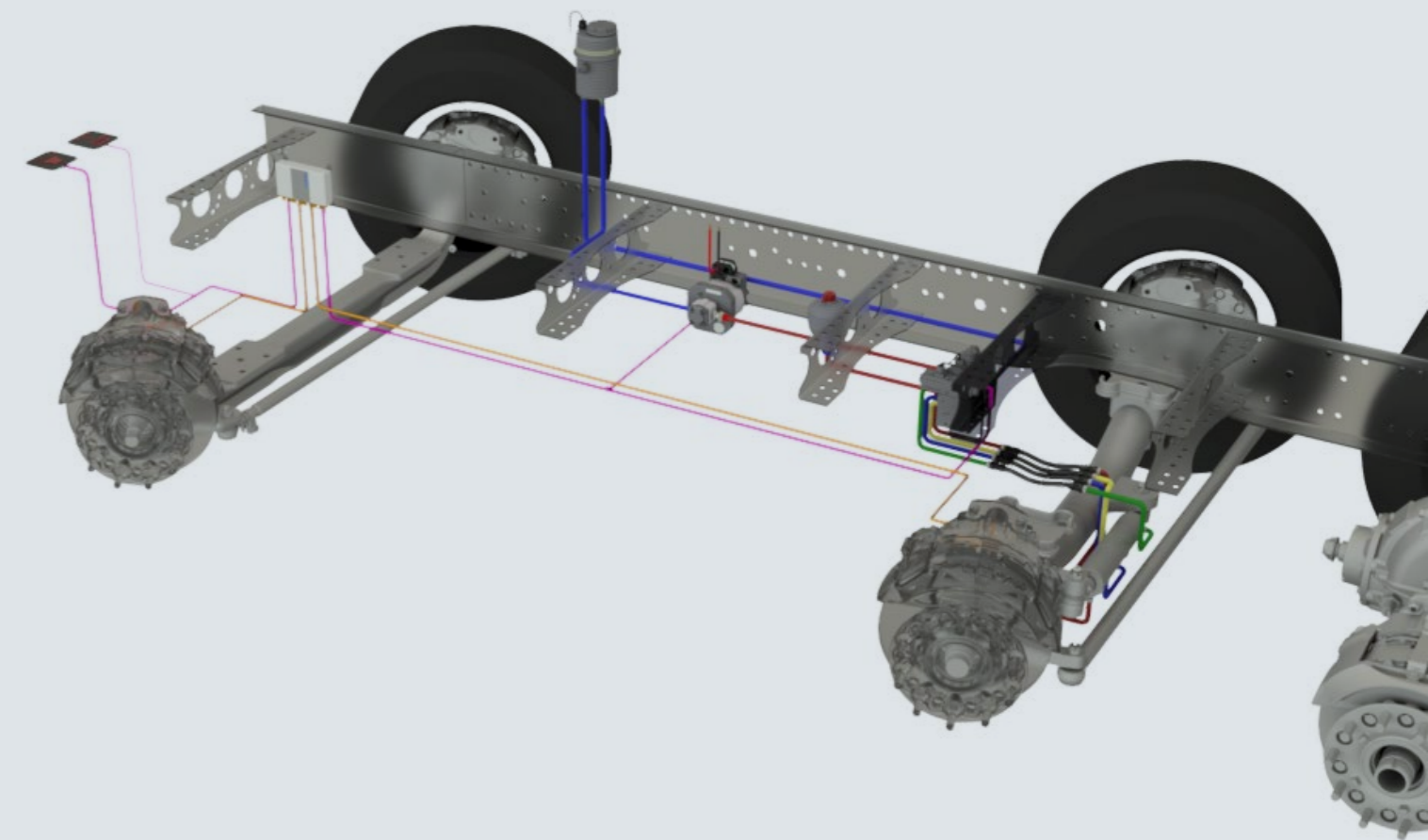


**BELLOW SUPPORT:**

- Bolt Pattern
- Height



## ETS ELECTRONIC TRUCK STEERING



## TRUCK & BUS AUXILIARY AXLE SOLUTIONS

**VDL Weweler offers several designs of auxiliary pusher and tag axle solutions, steered and non-steered. The solutions are completely pre-assembled with axle, suspension, wheelends and brakes. Optional electronic steering system or axle lift systems are available. All designs are build with standard components to optimize parts variation. VDL Weweler will do the design and development for you.**

### CUSTOMER SPECIFIC

Depending on the requirements VDL Weweler will do the design for you and the Auxiliary Axle Solutions can be adapted to the specific requirements of the customer.

### IATF CERTIFIED

VDL Weweler is IATF certified and working according the required processes.

• **SK Range** (3 Bend Axle Beam - Non-Steered):



• **SKS Range** (3 Bend Axle Beam - Steered):



• **ST Range** (4 Bend Axle Beam - Non-Steered):



• **STS Range** (4 Bend Axle Beam - Steered):



• **SRS Range** (Straight Axle Beam - Steered):



### CHASSIS SPECIFIC

The design of the auxiliary axle package can be adjusted to the specific needs of the customer. The bolt pattern needs to fit the chassis for direct package assembly. Customer specific variations are possible in regards to the hanger bracket height, axle lift type, drop height of the bend axle and chassis width. The brakes and wheelends can be OEM specifically integrated. Making it a complete package for a single assembly operation at the OEM assembly line. Variations in vehicle wheel base or axle position is easy to set by software programming while all hardware components remain unchanged. The ETS is fully redundant and fail safe while the hydraulic cylinder is equipped with a locking-in-centre position.

### STEERING PERFORMANCE

The steering performance is vehicle speed related. From 0 - 25 km/h the tag axle is allowed to steer the maximum defined angle. From 25 to 45 km/h the maximum turning angle is reduced step by step by the software and at 45 km/h the steering movement stops and the axle is locked in the mid position.

### FAIL SAFE

The system is of the so called Fail-Safe type. When a failure is detected in the system it will enter in a safe mode (non steering) with the axle returned to the mid position and hydraulically locked with help of a constant pressurized centering system.

The steering system is fulfilling the steering regulation R79 Annex 6 and the EMC regulation R10-05. The Power Pack consist of an E-motor 2kW. These axle solutions are pre-assembled and in case of ETS the sensor and hydraulic cylinder are set in the correct zero-position ready for plug and play.

### NEW GENERATION ETS

- The next generation ETS is called MK3
- The development is made in linde with the Automotive Spice
- MK3 is ISO26262 certified
- MK3 is available with a maximum functional safety level ASIL-C
- Several standardised diagnosing formats are possible, ODX, OTX, UDS
- The ETS will also be in line with the cyber security regulation UN R155/R156 and ISO21434
- The ECU controller is suitable for Chassis mounting

