



MODULMAX

Power your projects



FAYMONVILLE

TRAILERS TO THE **MAX**



BÜLLINGEN (BE) - since 1988
30.000 m²

With an **experience of over 50 years**, Faymonville is one of the biggest manufacturers of semi-trailers for special and heavy haulage.

Faymonville provides their customers with optimal solutions and systems for any transport need outside the usual norms.

Quality, flexibility, productivity, creativity and **service** are the company's keywords. The range of products and services is constantly enlarged in tight collaboration with our customers.



GOLENIOW (PL) - since 2006
21.000 m²

The **high level of innovation** and the excellent manufacturing quality of the products are secured by optimized production processes and own modern production plants in Büllingen (Belgium), Lentzweiler (Luxembourg) and Goleniow (Poland). A service station has been opened in Noginsk (near Moscow, Russia) and Poland (next to the factory in Goleniow).



NOGINSK (RU) - since 2014
3.120 m²



LENTZWEILER I (LU) - since 2003
20.250 m²

LENTZWEILER II (LU) - since 2015
16.000 m²



The Faymonville Modul**MAX** is a series of combinable *road-going transport modules* (with 2-6 axle lines) and accessories that can achieve a *total payload of up to 5000 t*.

The Modul**MAX** offers seamless *interoperability* with identical vehicles from other manufacturers (S-ST, G-SL).

This variety of combination options as well as the user-friendly operating concept makes the Modul**MAX** a *guarantor of flexibility* and *economy* for the most complex of *heavy-duty transport jobs*.

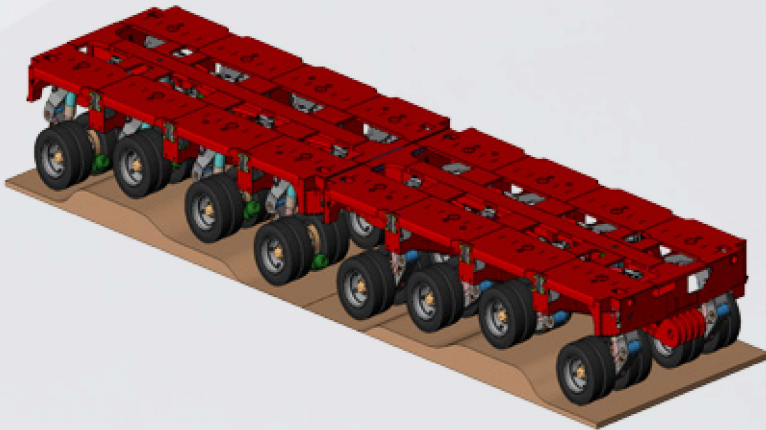
Main characteristics

- Axle loads of up to 45 t per axle line
- Hydraulic axle compensation with a stroke of up to 650 mm
- Pivot-mounted bogie with 60° steering angle

1. Technological aspects of the ModulMAX

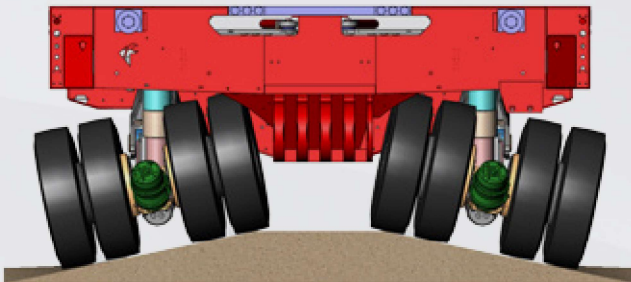
■ *Axle compensation*

Each wheel set is equipped with a hydraulic suspension cylinder. Depending on the individual transport application, the cylinders will be connected to 3- or 4-suspension groups. This combination of cylinders makes sure that the weight is distributed equally on all axles. Road inclinations (lengthwise and crosswise) can easily be compensated due to the important stroke on those cylinders.



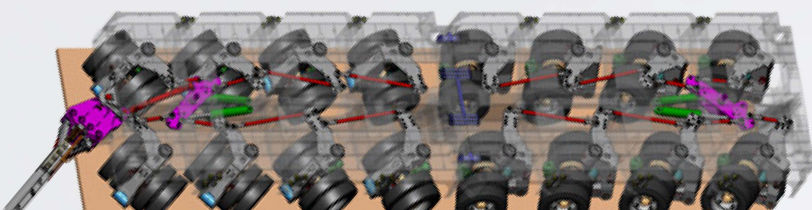
■ *Swinging axle – function principle*

One axle line consists of 2 independent wheel-sets with swinging axles. The swinging axle can manage important ground unevenness due to its swinging bearing. They ensure optimum ground contact and equal tire pressure under the most difficult circumstances and keep the platform almost in a horizontal level.



■ *Hydraulic forced-steering*

Every modular bogie has at least one integrated hydraulic steering system. The customer can choose between standard- or counter-steering. The steering is controlled either by a gooseneck or by a drawbar. The freely accessible steering rods between the wheel sets enable an easy and safe adaptation of steering angles. Remote steering by wireless or cable remote control is part of the basic configuration. Compared to knuckle steered axles, the driving height on swinging axles has no impact on the axle track.





2. Bogies

S Module

- Heavy duty platform trailer with 36.000kg axle load per axle line
- Best ratio between payload and deadweight
- Highest suspension stroke on the market: 650mm
- Steering angle -60/+60°
- Wheel set mounted on pivot bearing with adjustable conical roller bearings
- Prime brand swivel axles, rims and tires
- Available in selfpropelled version (APMC and SPMC see p.15+16)
- Split bogies available for 3-file combination (1+1/2)
- **100% Interoperability** with existing trailers from other brands

Trailer type	<i>S-ST</i>
Available bogies	2,3,4,5 and 6-axle
Technical axle load at 1 km/h	36.000 kg
Tare weight (for 4-axle bogie)	13.120 kg
Width	3.000 mm
Height (drive position)	1.190 mm
Axle compensation	-325/+325 mm
Axle distance	1.500 mm
Steering angle	-60/+60°
Tires	8 x 215/75 R17.5





G Module

■ G-ST:

Heavy duty version with 36.000 kg axle load, driving height 1.120mm (-300/+300mm), compatible with G-MT bogies

■ G-MT:

Weight optimized module (15% lighter than G-ST), 25.000kg axle load, driving height 1.120mm (-300/+300mm), compatible with G-ST

- Steering angle -60/+60°
- Wheel set mounted on pivot bearing with adjustable conical roller bearings
- Prime brand swivel axles, rims and tires
- Available in selfpropelled version (APMC and SPMC see p.15+16)
- Split bogies available for 3-file (1+1/2) combination on G-ST and G-MT.
- **100% Interoperability** with existing trailers from other brands

Trailer type	G-ST	G-MT
Available bogies	2,3,4,5 and 6-axle	
Tech. axle load	36.000 kg (1 km/h)	25.000kg (5km/h)
Tare weight (for 4-axle bogie)	13.400 kg	11.400kg
Width	3.000mm	3.000mm
Height (drive position)	1.120 mm	1.120mm
Axle compensation	-300/+300 mm	-300/+300mm
Axle distance	1.500 mm	1.500 mm
Steering angle	-60/+60°	-60/+60°
Tires	8 x 215/75 R17.5	8 x 215/75 R17.5



G Module SL

- Highest bending moment on the market
- Highest point load above wheel arches (50.000kg)
- Highest point load above cross members (80.000kg)
- 45.000kg axle load per axle line.
- Reinforced lamellar bolt coupling.
- Steering angle $-60/+60^{\circ}$
- Wheel set mounted on pivot bearing with adjustable conical roller bearings
- Prime brand swivel axles, rims and tires
- Available in selfpropelled version (APMC and SPMC see p.15+16)
- Split bogies available for 3-file (1+1/2) combination.
- **100% Interoperability** with existing trailers from other brands.

Trailer type	G-SL
Available bogies	2,3,4,5 and 6-axle
Technical axle load at 0.5 km/h	45.000 kg
Tare weight (for 4-axle bogie)	14.000 kg
Width	3.000 mm
Height (drive position)	1.175 mm
Axle compensation	-300/+300 mm
Axle distance	1.500 mm
Steering angle	$-60/+60^{\circ}$



3. Drawbar equipment

Modular platform trailers can be pulled or pushed by a drawbar. The drawbar system offers high maneuverability under the most difficult circumstances and it is the easiest way to operate a modular trailer. A trailer equipped on each edge with a drawbar can easily change its main driving direction if needed.

As a general rule one could say the trailers with 18 axles lines or more should be pulled by a drawbar system instead of a gooseneck. In order to increase the payload, reduce axle loads or to improve the bending moment usage, drawbar trailers can be assembled in 3-file (1+1/2) and 4-file (1+1) side by side combination.



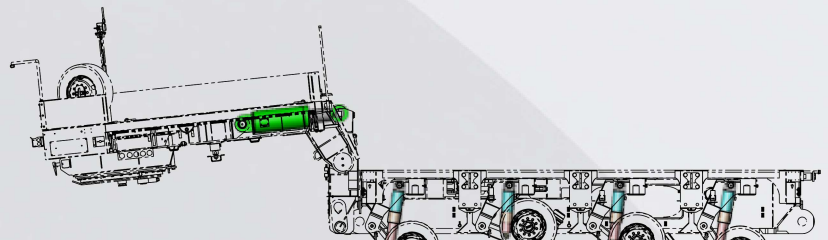
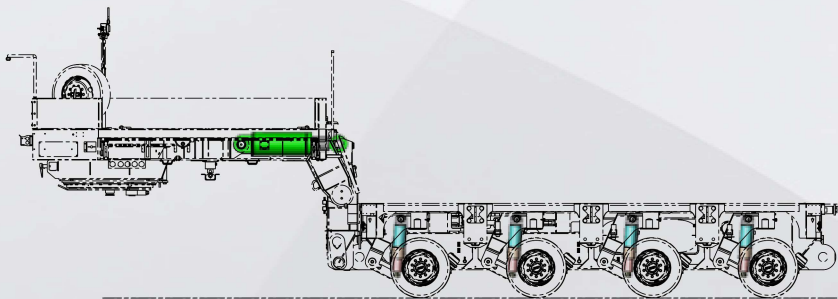
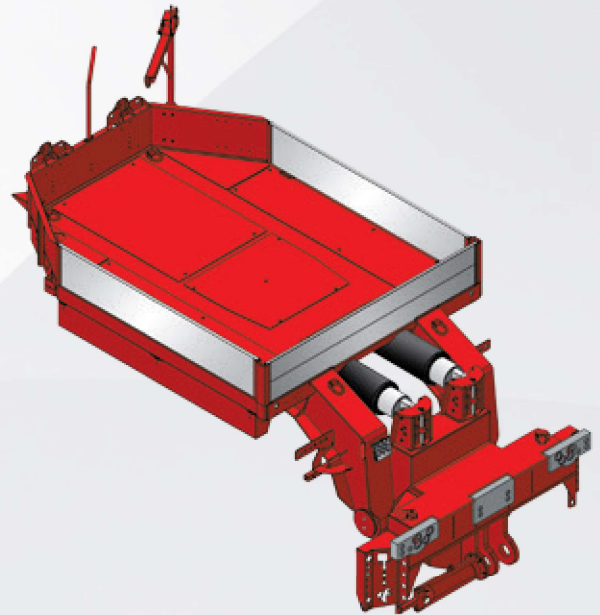


4. Gooseneck

Alternatively to the drawbar, modular trailers can be connected to hydraulic goosenecks.

A load transfer from the axle lines to the gooseneck is guaranteed by connecting the gooseneck cylinders with the front axle line cylinders. Thus, there is no need to apply additional ballast weight to the truck tractor in order to generate sufficient traction force. The ratio between fifth-wheel load and axle load is hydraulically and mechanically adjustable in a large range.

Goosenecks are generally equipped with 2 pairs of steering cylinders in order to supply the trailers' front and rear steering system. The rear gooseneck clearance and the coupling height can be adapted to the most common truck-tractors.





5. Turntables

Turntables are available for the transport of long and heavy loads. The front turntable is a pure mechanical system. Depending on the requirements, one can choose on the front bolster either a 1-point or a 2-point bearing by means of removable sliding shoes.

The rear turntable is generally equipped with a hydraulic self tracking device in order to steer the rear dolly automatically.

In addition to the standard 2-file turntable, tailor-made turntables for 3-file and/or 4-file trailers with load repartition frames are available upon request.



6. Dropdecks

Dropdecks are available in various designs and payload classes. The customer can choose within a large range of versatile and standardized dropdecks or even go for a tailor-made solution that meets exactly his needs.

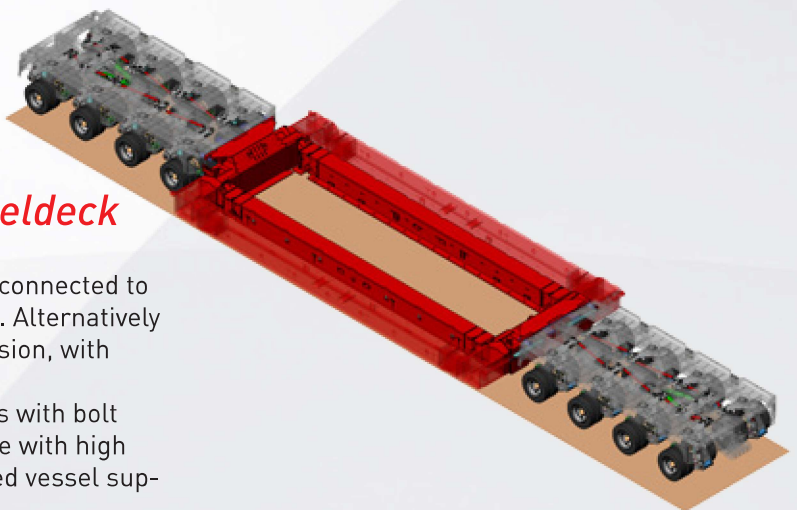
Faymonville is your reliable partner for the design and construction of your new dropdeck, even in connection with all other brands of modular trailers.

Each dropdeck is delivered with our FALCO-software, an open tool to survey axle loads and bending moments.

■ *KBV: Hydraulic widenable vesseldeck*

Crossbeams, hydraulically extendable in width, connected to the platform trailer by means of coupling heads. Alternatively crossbeams are available in an overdrivable version, with hooks and quick coupling device.

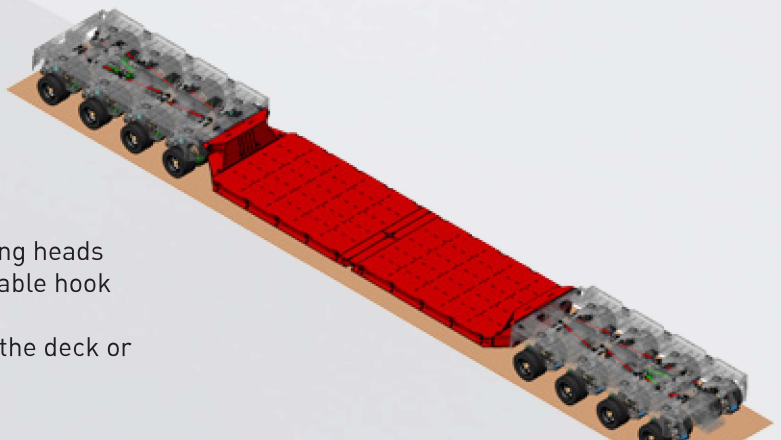
Telescopic and non-telescopic elongation beams with bolt couplings on each end and lower seating surface with high point loads. Extendable cross saddles and hinged vessel supporting element.

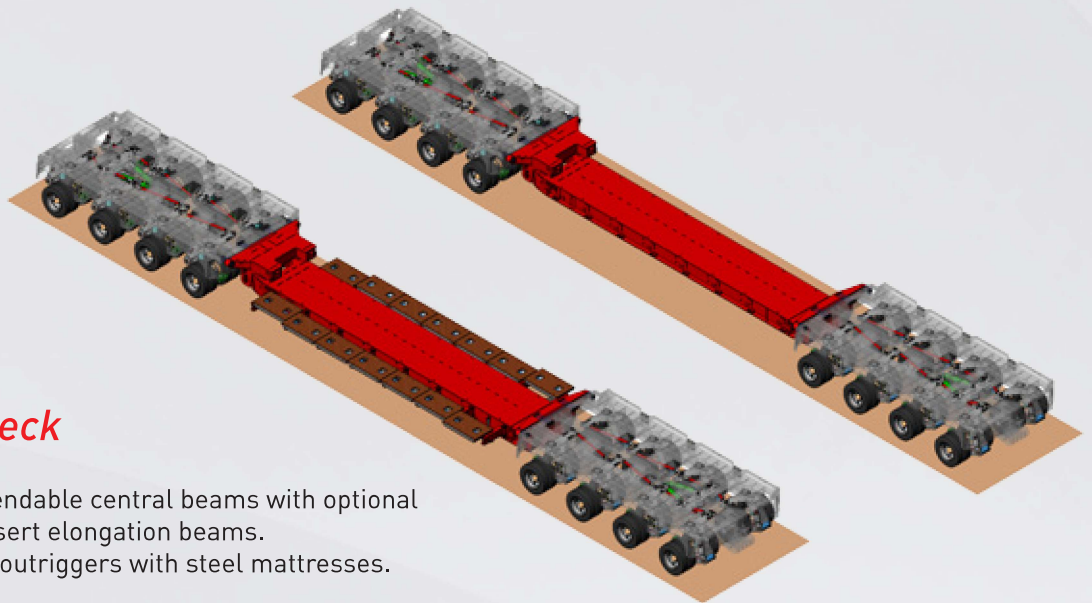


■ *Flat bed deck*

Beamconstruction height down to 250mm. Coupling heads firmly welded to the deck or alternatively overdrivable hook system with quick coupling device.

Lower bolt coupling in the drop deck to prestress the deck or to insert elongation pieces.



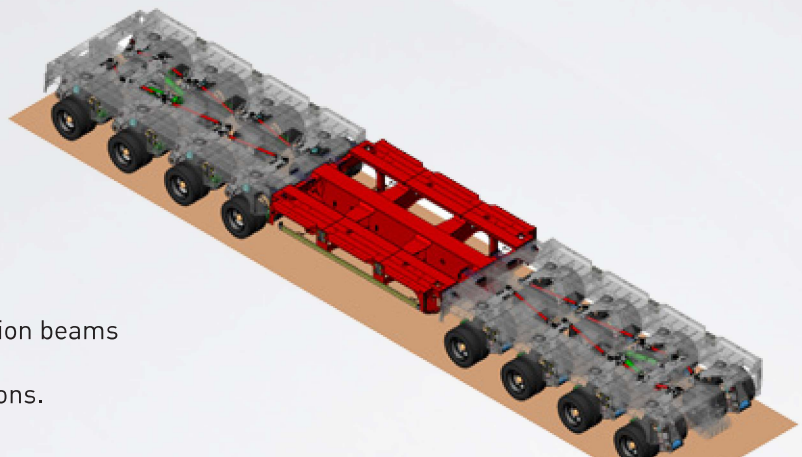


■ *BB: Excavator deck*

Extendable and non-extendable central beams with optional lower bolt coupling to insert elongation beams. Foldable and removable outriggers with steel mattresses. Quick coupling devices.

■ *Spacer deck*

Designed as a fully loadable platform or a combination of high-deck adapters and elongation beams or as a telescopic central beam for special applications.





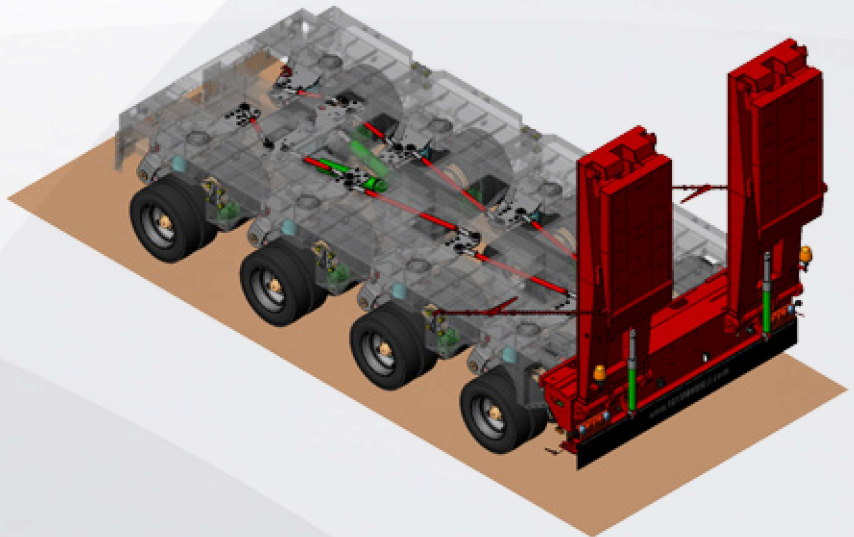
7. Accessories

Various accessories are available to adapt your modular trailer to its particular transport application:

- Powerpacks with Diesel engine from 10 kW to 36 kW
- Control panels
- Drawbars (2,0 m-5,0 m) with Ø50 mm or Ø90 mm towing eyelet
- Formed closed load stoppers
- Detachable hydraulic ramps
- Steering remote controls (with cable or wireless)
- Hydraulic coupling pin



Powerpack control panel





8. APMC

*The Faymonville APMC system is a unique trailer concept in the market.
APMC means: Assist & Self-propelled modular trailer with conventional steering.*

The system is offering 3 different modes:

- **ASSIST-MODE**
Additional traction unit to replace a truck-tractor
- **SPMT**
Self propelled trailer
- **TRAILER-MODE**
Conventional trailer on public road with disengaged drive axles

The APMC bogie is equipped with 2 or 3 self driven axles.

In SPMT MODE, each drive axle can generate sufficient traction force to move 150to. Thus 3 driven axle are able to move 450to!

In ASSIST-MODE, the system is generating additional traction force if needed.

Save at least 1 truck (8x4 or 8x6) during your heavy haulage transport and benefit from the SPMT-Mode on bridge crossings or even on narrow areas. The ASSIST-MODE is controlled by the truck driver by means of a remote control.

In TRAILER-MODE, the drive axles are simply disengaged and working as normal swivel axles. No need to lift or disconnect the drive axles from the suspension system. Improve your return on investment by using at least the APMC bogie on your daily business when there is not any application for the

APMC Powerpack





9. SPMC - Safe and easy to use

Faymonville's SPMC is the ideal solution for OFF-ROAD movements without truck-tractor.

The self-propelled trailer with conventional steering and its self-driven axles can generate 170kN traction force per driven line.

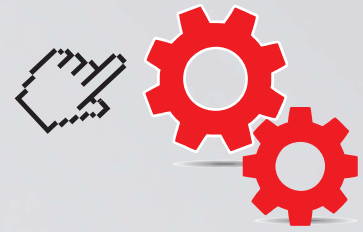
Thus, one single driven line can move 340to.

Multiple trailers can work in a compound by using only one remote control.

The use of first class components for the Powerpack as well as for the hydraulic drive system and the electronic control units results in a reliable and innovative transport system offering the following features:

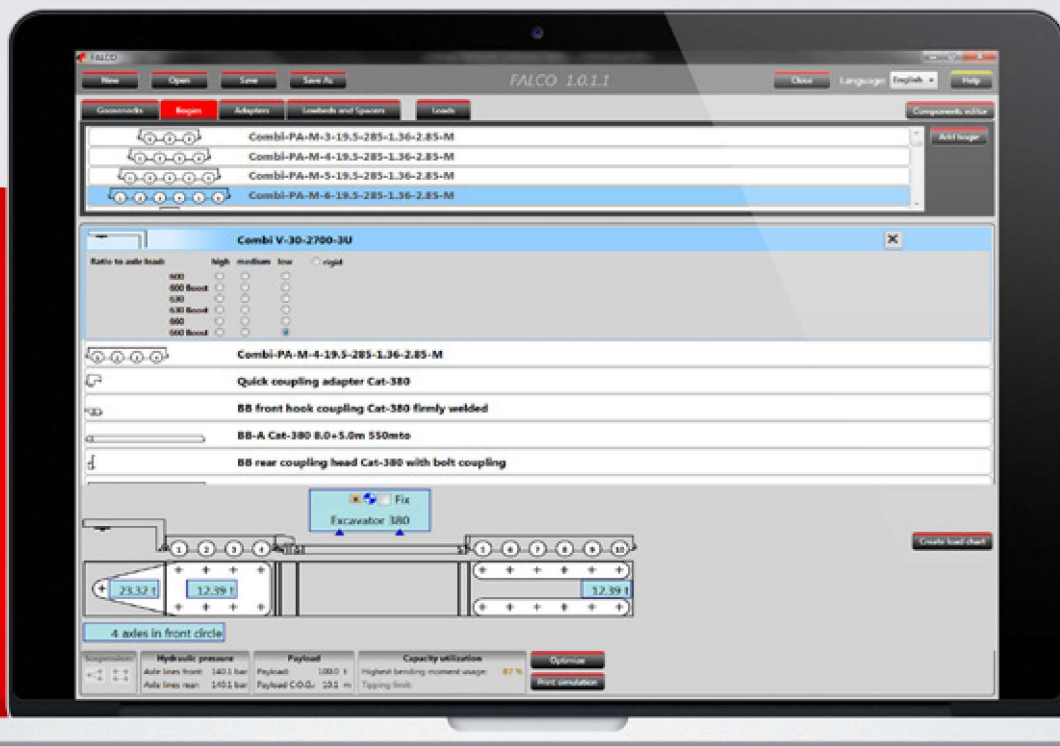
- *Safe and easy to use*
- *Intuitive user guidance on MMI-display*
- *Configure your own display presentation and show only the values you need.*
- *New EP (electro-proportional) control system on drive axles with easy enabling and disabling of individual drive axles in order to improve system consumption and components' life time.*
- *Speed monitoring on all drive axles protects them against wheel-spinning.*
- *MMI-display with on-demand trouble shooting and help*
- *Online localisation and aftersales-support by remote diagnostics.*





Falco Simulation Software

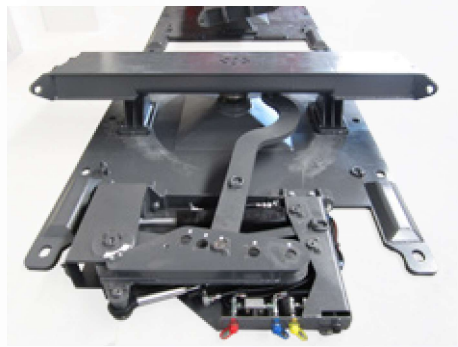
- Load distribution and axle load calculation
- Bending moment survey
- Tilt- and overload-limit calculation
- Documentation



The ModulMAX in detail



Extendable spacer beam for modular trailers



Turntable with self tracking device



Double ramp for modular trailer



Connecting Kit



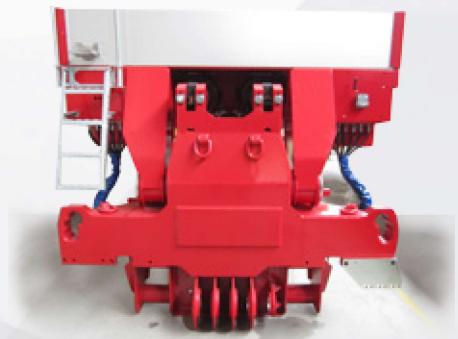
Interoperability



G-Modul gooseneck



Gooseneck-fine tuning device for fifth wheel load



Universal coupling head on gooseneck



Widenable boiler deck



Lighting with underrun



Hose rupture safety valve



Wheel-set with pivot bearing

MAXPROTECT+

Weather conditions and environmental influences as well as corrosion and stone chips are the biggest enemies of a steel structure. For the long-term surface protection of semi-trailers, FAYMONVILLE relies on MAXProtect+, a fully co-ordinated and meticulously optimised surface treatment system.

MAXProtect+ is by far the best concept currently available in the industry. That is why it sets the benchmark in the field of surface protection. Our MAXProtect+ treatment offers a long-life surface protection.

All stages and processes included in MAXProtect+ – from the painting to the metallisation, including shot- and sandblasting – are carried out, developed and tested 'in-house'.

This optimum surface treatment additionally increases the quality and longevity of our products.



Composition of the surface refinement

- 1 Machine blasting:** Airless blast cleaning with metallic shot.
- 2 Manual blasting:** Manual cleaning and refinement of the material surface with mineral blasting agents.
- 3 Spray galvanising:** Application of a zinc/aluminium layer for corrosion and adhesion protection.
Partial metallisation especially for strongly stressed surfaces.
- 4 Joint sealing:** Prevents the spread of rust in the gap and underneath the paintwork.
- 5 Priming:** 2-component zinc epoxy with 81% zinc content and additional active corrosion protection.
- 6 Top coat:** Final coating with 2-component DTM.
- 7 Sealing:** Prevents corrosion in corners and hollow spaces.
- 8 Optional:** Seawater-resistant complete preservation



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