Transport solutions for

HEAVY HAULAGE

product range
40 YEARS OF DOLL, 40 YEARS OF HEAVY HAULAGE – I AM VERY PLEASED TO HAVE BEEN ABLE TO USE MY EXPERIENCE AND PASSION FOR OUR SPECIAL PRODUCTS FOR SO MANY YEARS.
Founded in 1878, DOLL draws on almost 140 years of tradition in vehicle construction and has grown into an international technology leader for vehicles for the heavy haulage, timber transport and airport apron sectors.

With its headquarters in the Black Forest and a second location in Saxony, Germany the company guarantees German-made quality: practice-based training for own employees, continuous enhancement of products by experienced engineers, the use of high-grade components and raw materials, and a willingness to constantly improve processes all serve to maintain a high standard for our services.

The result is innovative vehicle concepts which, along with time-tested manufacturing quality, mean added value for customers – added value not only in terms of safety for vehicle users, but also in terms of security of investment in vehicles, assured thanks to a long service life, a high resale value and lower operating costs.

If a visit to the workshop should ever be necessary, DOLL also offers you the assurance that repairs, maintenance and supply of spare parts are guaranteed at all times thanks to its global network of partner workshops.
HEAVY HAULAGE

MUSCLE YOU CAN RELY ON
DOLL has the right vehicles for a variety of complex heavy haulage tasks thanks to innovative technology and time-tested quality.

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### THE SOLID PERFORMER

The platform series is especially suitable for transporting long, heavy and bulky goods. Thanks to its trouble-free, telescopic length extensions, the vehicle can easily be adapted to the length of the cargo and can be universally used in the vehicle fleet.

<table>
<thead>
<tr>
<th>NUMBER OF AXLES</th>
<th>up to 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROSS LOAD WEIGHT</td>
<td>up to 73 t</td>
</tr>
<tr>
<td>PAYLOAD</td>
<td>up to 60 t</td>
</tr>
<tr>
<td>TELESCOPIC</td>
<td>extendible in 3 segments</td>
</tr>
<tr>
<td>STEERING</td>
<td>hydraulic</td>
</tr>
</tbody>
</table>

### THE VERSATILE CONVEYOR

This series is very versatile and flexible thanks to extensive variations and options. Due to its lower loading height, a vehicle can be configured for almost that is high, heavy or wide. An ideal range for construction companies and their transport logistics.

<table>
<thead>
<tr>
<th>NUMBER OF AXLES</th>
<th>up to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROSS LOAD WEIGHT</td>
<td>up to 85 t</td>
</tr>
<tr>
<td>PAYLOAD</td>
<td>up to 70 t</td>
</tr>
<tr>
<td>TELESCOPIC</td>
<td>extendible in 3 segments</td>
</tr>
<tr>
<td>STEERING</td>
<td>hydraulic</td>
</tr>
<tr>
<td>AXLE SYSTEM</td>
<td>conventional or DOLL panther</td>
</tr>
</tbody>
</table>
LOW LOADERS

- **NUMBER OF AXLES**: up to 4
- **GROSS LOAD WEIGHT**: up to 73 t
- **PAYLOAD**: up to 50 t
- **TELESCOPIC**: extendible in 2 segments
- **STEERING**: hydraulic
- **AXLE SYSTEM**: conventional or DOLL panther
- **DOLLY VARIANTS**: 1-Axle-Dolly

THE ALL-ROUNDER

The higher and heavier the load, the greater the demands are which are placed on the transport vehicle. DOLL has the right solutions with its low bed series. A lower loading height, a large stroke and unusual agility even with high payloads can be achieved, especially when combined with the DOLL panther chassis.

SELF-STEERING TRAILERS

- **NUMBER OF AXLES**: 3 – 8
- **GROSS LOAD WEIGHT**: up to 114 t
- **PAYLOAD**: up to 95 t
- **LONG TRANSPORT FREIGHT**: up to 90 m
- **STEERING**: hydraulic

THE ACHIEVER

The self-steering trailer is an unbeatably economical vehicle for transporting long, sizable and self-supporting cargo - and therefore an indispensable complement for transporting of unusually products, such as wind blades and concrete elements.
PLATFORM
SEMI-TRAILER
THE SOLID PERFORMER

The platform series is especially suitable for transporting long and heavy goods. Thanks to its smooth-operating, telescopic extensions, the vehicle can easily be adapted to the length of the cargo and is thus flexible in its use. Robust and resilient, this vehicle type delivers exceptional manoeuvrability when fitted with a DOLL steering system.

BASIC FEATURES OF THE SERIES

- Universal vehicle for long, bulky and heavy goods
- Extendable to a length of 35 metres
- Servo-Slide system ensures easy extension
- Payload-optimised design
- Impressive steering capabilities
- Low loading height
- High manoeuvrability thanks to its hydraulic steering turntable

FIELDS OF APPLICATION

- Prefabricated parts
- Tube and steel transports
- Bridge structure elements
- Roof construction
- Wind turbine components
- Crane systems
- Mining
GOOSENECK

TECHNICAL DETAILS

- Basic version: Height 210 mm
  Fifth-wheel load 18/23 t
- Mega-Trailer: Height 135 mm
  Fifth-wheel load 18 t
  Low loader tires
- Overhang variable in line with truck turning radius

LOADING PLATFORMS

TECHNICAL DETAILS

- Different load and weight variants
- Extendible in up to 3 segments
- Variable platform length adaptable to transportation task concerned
- Extensive options for securing the load and attachments

SUSPENSION

TECHNICAL DETAILS

- 9, 10 or 12 t-axles
- Hydraulic turntable steering
- Suspension air or hydraulic
- Tyres match the selected steering and frame height
FEATURE VARIATIONS

FRONT WALL CONCEPT INCLUDES
- Front boards at different heights
- Pluggable or screwed into position
- Storage of stakes

GOOSENECK
- Integrated steering unit
- Different fifth-wheel loads
- Different overhangs
- In Mega version

BODY
- Different drop-side superstructures
  Short or all the way round and at different heights

ATTACHMENT PARTS UNDER THE LOAD BED
- Underride guard
- Storage compartments
- Storage box design tailored to industry concerned
CHASSIS
- 1–4 axles, hydraulically steered
- Steering radio operated
- Tracking aid
- Different tyres

LOAD BED
- Different load and weight variants

SECURING THE LOAD
- Anchor points and rings
- Stanchion pockets and pocket rails
- Spindle stakes and diagonal struts
- Container locks
- Load securing package tailored to industry concerned

FLOORING
- Hardwood or softwood flooring
SEMI LOW LOADER
THE VERSATILE CONVEYOR

The semi series offers a whole range of design options that cater for an extensive variety of purposes, making it versatile and highly flexible.

BASIC FEATURES OF THE SERIES

- Particularly suitable for long, wide and/or high goods
- 2–5 axles with different axle and steering systems
- Extendable to a length of 35 metres
- Payload-optimised design
- Low loading height
- Different low bed variants

FIELDS OF APPLICATION

- Construction (civil engineering)
- Components
- Forestry and agricultural machinery
- Conveyor and crusher plants
- Industrial and wind turbines
- Mining
- Crane systems
- Rail vehicles
GOOSENECK

TECHNICAL DETAILS

- Height 210 mm, fifth-wheel load 23 t to 35 t
- Straight or slanted, fixed neck with central frame
- External main frame
- Height 135 mm, fifth-wheel load 18 t
- Fixed neck with central frame

LOW BED

TECHNICAL DETAILS

- Variable platform length adaptable to transportation task concerned
- Low bed design features wheel or excavator troughs
- Low design as a variant
- Extensive options for securing the load and attachments
- Telescopic extension in individual segments possible
- Bolt-plate coupling to mount extension supports

SUSPENSION

TECHNICAL DETAILS

- 1 – 5 axles, hydraulically steered
- Axle systems: Vario with beam axle or with the DOLL panther system
- High manoeuvrability thanks to its hydraulic axle steering
- Tyres: twin tyres, 17.5”
LOW BED

3-axle semi low

4-axle semi low

5-axle semi low bed, low-height design

SUSPENSION

DOLL-Vario suspension

DOLL panther suspension
SEMI LOW LOADER

FEATURE VARIATIONS

GOOSENECK
- Integrated steering unit
- Integrierte Can bus control
- Different fifth-wheel loads
- Different overhangs

SUPERSTRUCTURES
- Different front and drop-side superstructures
- Transportation options

ATTACHMENT PARTS
- Open racks
- Storage for safety devices
- Stowing concept tailored to industry concerned

SECURING LOADS
- Lashing points and rings
- Stakes and pocket rails
- Support frames
- Container locks
- Load securing packages tailored to industry concerned

FRONT BOARD
- At different heights
- Front board as tool box
FLOORING
- Flooring type is tailored to customer requirements and can be made from:
  - Different types of wood
  - Rubber coating
  - Steel plate with sand cover

LOW BED
- Liftable low bed
- Various loading surface widening
- Lowered low bed
- Wheel recesses with different covers
- Intermediate tables
- Inclination for wheel loaders

CHASSIS
- 1 – 5 axles, dolly variants
- DOLL panther or conventional Vario chassis
- Rigid, passive or hydraulic steering system
- Hydraulically steered
- Tracking aid

RAMP OPTIONS
- Single and double ramps
- Hydraulic ramps
- Hydraulic displacement
- Different ramp coverings (wood, rubber, climbing bar, grid covering in combination)
- Spring lifting ramp
LOW LOADER
LOW LOADER

THE ALL-ROUNDER

The low bed series is used for transporting heavy and high, when every centimetre counts and if the payload is crucial. The advantages of the DOLL panther are conclusive here. It has a low weight, a lower loading height, a large stroke and therefore has a very universal and flexible usage in any fleet.

BASIC FEATURES OF THE SERIES

- Flexible in its use for high, heavy goods with point loads
- High variance in the design of the low-bed
- Flexible thanks to 1-axle dolly (forced or passive steering, liftable)
- Payload-optimised construction
- Impressive steering capabilities
- Low loading height, large stroke
- High maneuverability with its hydraulic axle steering

FIELD OF APPLICATION

- Heavy construction equipment and components
- Heavy agricultural and forestry machines
- Mining
- Large wind turbine components
- Heavy industrial and plant components
- Conveyor and crusher plants
- Container
- Boat transport
GOOSENECK

TECHNICAL DETAILS
- Height 210/490 mm
- Fifth-wheel load up to 35 t
- Solid neck in central grate or segment version
- Hinged or compensating, retractable neck

LOW BED

TECHNICAL DETAILS
- Low bed with central box frame
- Lowered low bed
- Flatbed
- Vessel bed
- Excavators bed
- Dolly variants: 1-axle dolly
  Permanently attached, hinged connection with gooseneck

CHASSIS

TECHNICAL DETAILS
- 1–4 axles, hydraulically steered
- DOLL panther or conventional Vario chassis
LOW BED

Low bed, central box with lateral running surface

Low bed, flat bed

Low bed,

CHASSIS

DOLL-Vario chassis

DOLL panther chassis

LOW LOADER
FEATURE VARIATIONS

SUPERSTRUCTURES
- Different front and drop-side superstructures possible

GOOSENECK
- Integrated steering unit
- Integrated CAN bus system
- Different fifth-wheel loads
- Different overhangs

DOLLY CONCEPT
- 1-axle dolly
- Dolly permanently linked to gooseneck
- Dolly flexible in its installation
- Additional mountable axle

FLOORING
- Made of hardwood or softwood
- Fixed or loose, flooring sections removable
LOAD SECURING
- Lashing points and rings
- Stanchion pockets and pocket rails
- Bolsters and levelling wedge
- Container locks
- Load securing package tailored to industry concerned

RAMP RANGE
- Single and double ramps with different bearing capacities
- Hydraulic ramps
- Hydraulic positioning
- Different ramp coverings (wood, rubber, ribbed border, grating; also combinations)
- Spring-lifted ramp

LOW BED
- Low bed with central box frame
- Flat bed and excavator bed
- Lowered low bed
- Different outriggers

CHASSIS
- 1–4 axles
- DOLL panther or conventional Vario chassis
- Hydraulic steering system
- Air or hydraulic suspension
- Tracking aid
- Excavator trough
SELF-STEERING TRAILER
As a result of their usage in timber transportation, DOLL has been building self-steering trailers for almost 100 years. Since the mid-60s, this expertise has also been applied to heavy haulage, which has gradually become our core business. It is used to transport very long and heavy self-supporting loads.

### EQUIPMENT
- **DOLL heavy-duty bolster with 4x spindle adjustment**
- **Comprehensive options for load securing with: concrete bolster other supports, stakes, diagonal struts, a variety of adapters to transport turbine blades and tower sections**

### APPLICATION AREAS
- **Components**
- **Precast concrete**
- **Long material**
- **Wind turbines – blades and tower components**

### NUMBER OF AXLES
- 3–5 axles – extendable with, dolly with 2–3 axles

### GROSS LOAD WEIGHT
- up to 114 t

### PAYLOAD
- up to 95 t

### MAXIMUM LENGTH OF THE CARGO
- 90 m

### STOOL IMPACT
- 85°

### STEERING
- **for 3- or 4-axle: direct linkage to 1st axle, adjustable steering angle**
- **for 5-axle: hydraulic turntable steering, adjustable steering angle; additional steering remotely controlled**
STEERING

STEERING IS A MATTER OF TRUST

Steering with a semi-trailer requires a precise system capable of better cornering, greater manoeuvrability, reduced tyre wear and fewer forces pulling on the frame. It is particularly necessary if vehicles exceed a total length of 20 metres.

Since all DOLL series are telescopic, the most suitable steering system is available for all vehicle types and their loads.

But there are many different steering requirements. For many years now, DOLL has been using its own steering system - mature in its development and proven in the field. DOLL steering is exceptionally precise, producing a rapid, very direct effect on the steering movements in the towing vehicle. Knowing that DOLL steering systems can be relied on gives the driver that all-important sense of safety.
HYDRAULIC TURNTABLE STEERING

In this steering system, the tractor hydraulic cylinders are operated in the gooseneck in the gooseneck (master cylinder) and the force is transmitted to the cylinders in the chassis (slave cylinder). The steering angle is transmitted to the axis via the swivelling bolster. The 2-circle hydraulic system ensures a safe steering system even when the system malfunctions. In the platform semi-trailer series, this type of steering is installed in vehicles with up to 6 axis.

HYDRAULIC AXLE STEERING

This type of steering functions in the same way as fifth-wheel steering. The steering angle is transmitted to the axis here instead of through the steering knuckle. In extreme situations, it is possible to intervene and re-adjust the steering at any time where necessary. The kingpin steering is used in the multiaxial semi and low bed ranges. A redundant, 2-line hydraulic system for both hydraulic steering types guarantees safe driving even in the most extreme situations.
DOLL panther

Our all-rounder for heavy haulage is exceptionally resilient, unwavering from the towing vehicle’s path. Highly agile, durable and versatile in its use, it performs well off road. It features a split axle, hydraulic suspension, innovative, independent wheel suspension and levelling.
Millions of kilometres travelled serve as proof of low operating costs
- Low wear
- Lower maintenance costs
- Reliability in use
- High resale value

Universal range of applications: The panther is flexible thanks to high payloads and a low loading height
- Optional features ensure vehicle is configured to customer requirements

Stable driving performance means high centres of gravity possible, even for low ride heights
- Excellent manoeuvrability with large steering angles of up to 55 degrees
- No body roll due to its spirit-level function
- Cargo friendly with its optimised suspension
- DOLL 5-year warranty

Universal range of applications: The panther is flexible thanks to high payloads and a low loading height
- Optional features ensure vehicle is configured to customer requirements
DOLL is not only a leader in the suspension and steering technology but also in the electronic operation of its vehicles. This system ensures that the advantages of the Doll suspension technology (panther) are fully utilised.

With DOLL tronic, DOLL has developed the first radio-based electronic operating and control system in the industry. The heart of the development is a computerised CAN bus system that allows the operator to safely operate the trailer functions using control panels on the trailer (keypads).

The required radio remote control has been specifically designed and incorporated into the system for this purpose. This system has a significant handling advantages and saves considerable time during loading and unloading.

DOLL tronic provides operation for all trailer functions using a radio remote control and/or keypads on the trailer.
ADVANTAGES

- All trailer functions radio-controlled with visual remote indications on the radio display; menu-driven program
- The controls are mounted as keypads on the side of the gooseneck and rear; clear, self-explanatory symbols make operating easy and safe
- The electronics are preprogrammed in the factory, securely installed in an easily accessible, rugged waterproof switch box in the gooseneck
- The ramp function and central lubrication system monitoring are integrated into the system

Central lubrication system at the rear end of vehicle

Keypads to operate ramp

Protected cable connections in low bed

Keypads for the chassis

Electronic control unit at the rear end of vehicle
SERVICE

DOLL Technology provides all vehicles with adequate safety margins in their design. Vehicles are manufactured to a high standard, guaranteeing that they will experience a long service life even when used in tough conditions. As with all vehicles, regular maintenance is required to ensure that the vehicle remains fully functional and safe. Even the best components show wear over time. DOLL Service offers all the services that you require for your vehicles, twenty-four hours a day no matter where you happen to be.

MORE AT:
www.doll.eu

SPARE PARTS LOGISTICS

There are numerous original spare parts for all DOLL vehicles. These are delivered as quickly as possible when needed wherever the vehicle happens to be.

REPAIR AND MAINTENANCE

DOLL experts will handle any repairs with diligence, providing servicing and maintenance tailored to your needs. Vehicles thus retain their maximum value and offer permanent driving pleasure.

USED AND RENTAL VEHICLES

For buying and selling used vehicles, DOLL offers attractive options and support. To increase the flexibility of your fleet you can use the service of DOLL rental according to your order situation.

TECHNICAL SUPPORT

The Service line and the free Truck Hotline are available across Europe twenty-four hours a day. There is an extensive partner network and service stations worldwide.

TRAINING

Service partners and dealers need to be highly familiar with DOLL vehicles to ensure that they can offer precisely the right assistance at all times. They thus receive training for the different individual DOLL vehicle types on a regular basis. There are also special training courses for operating and maintaining DOLL vehicles for those interested.
YOU CAN REACH US ON
Mon.–Fri. between 8 a.m. and 8 p.m.

BENEFIT FROM THE ADVANTAGES OF OUR LOYALTY CARD
Rapid assistance and transfer to a DOLL Service Partner twenty-four hours a day.

LOYALTY CARD
0800 36 55 244
Free hotline – available across Europe 24 hours a day.