Transport solutions for

HEAVY HAULAGE

Low loaders
The platform series is particularly suitable for transporting long, heavy and bulky loads. Its easily extendible telescopic sections mean that the vehicle can be simply adjusted to the length of the load, making it a universally applicable part of the vehicle fleet.

The wide variety of versions and options make this series extremely adaptable and flexible. For almost everything that’s tall, heavy and wide, a vehicle can be configured to do the job. An ideal series for haulage logistics and construction companies.

The low loader series is used when heavy and tall items have to be transported – when every centimetre counts and when payload is crucial. This is where the advantages of the DOLL panther running gear come into their own. It has a low dead weight, lower load height, large lift and as a result can be used universally and flexibly in any vehicle fleet.

The self-steering trailer is a vehicle of unbeatable efficiency for transporting long, heavy and self-supporting loads, tried and tested and offering extraordinary durability – an indispensable addition to every vehicle fleet for long loads (e.g. for wind turbine blades or concrete components).
LOW LOADERS

THE ALL-ROUNDER

LOAD PLATFORM

GOOSENECK

RUNNING GEAR

BASIC FEATURES

- Flexible in use for tall, heavy items with point loads
- High variability in the layout of the load bed
- Flexibility with 1-axle dolly (steered, lifting)
- Payload-optimised design
- Big steering angle
- Low loading height, large lift
- High manoeuvrability with hydraulic knuckle steering

INDUSTRIES

- Heavy construction machinery and building elements
- Heavy agricultural and forestry machinery
- Mining
- Wind turbine elements
- Heavy industrial and plant components
- Conveyor and crusher installations
- Containers
- Boat haulage

NUMBER OF AXLES

up to 4

GROSS VEHICLE WEIGHT

up to 73 t

PAYLOAD

up to 50 t

TELESCOPIC

double extension

STEERING

hydraulic

AXLE SYSTEM

conventional or DOLL panther

DOLLY VERSIONS

1-Axle-Dolly
LOW LOADERS

MODEL OVERVIEW

GOOSENECK

TECHNICAL DETAILS

- Height 210/490 mm
- Fifth-wheel load up to 35 t
- Fixed gooseneck in central box or Segmenti design
- Hinged or compensating and detachable gooseneck

LOAD PLATFORM

TECHNICAL DETAILS

- Low bed with central box frame
- Lowered running surfaces
- Flat bed
- Tracked excavator bed
- Dolly variants: 1-axle dolly steered or friction steered, permanently installed, hinged to the gooseneck, can be fitted to increase the number of axles.

RUNNING GEAR

TECHNICAL DETAILS

- 1–5 axles, hydraulic power steered
- DOLL panther or conventional VARIO running gear
LOAD PLATFORM

- Low bed, central box frame with lowered running surface
- Low bed, flat bed
- Lifting load bed

RUNNING GEAR

- Running gear DOLL VARIO
- Running gear DOLL panther
A wide range of options enable a DOLL low loader to be configured according to the vehicle’s application.
### GOOSENECK
- Integrated steering unit
- Integrated CAN bus system
- Various fifth-wheel loads
- Various overhangs

### SUPERSTRUCTURES
- Various front wall and dropside packages possible

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1. **SUPERSTRUCTURES**
   - Fold-down dropsides
   - Drop sides with oblique supports
   - Tool box with angled corners
   - Spare wheel mount, chock holders, warning plate brackets
   - Front wall as tool box, square edges
   - High front wall with integrated tool box
FLOOR

- Made of soft- or hardwood
- Fixed or loose, removable floor segments
Removable floor elements, spruce
Removable wooden floor elements
Steel floor with wooden running surfaces
Wooden running surfaces bolted down
LOAD SECURING SYSTEM

- Lashing points and rings
- Stanchion pockets and pocket rails
- Support frames
- Container twist locks
- Load-securing package according to industry
Galvanised steel stanchions and lashing eyes

Pocket rail

Lashing points and sand-coated steel plate

Lashing gear in the bed of the load-loader
LOW LOADBED

- Low bed with central box frame
- Flat bed and tracked excavator bed
- Vessel bed
- Lowered running surfaces
- Various load area extensions

5 LOW LOADBED

- Lowered running surfaces with insert rails
- Lowered running surfaces
- Ramp in the bed of the load-loader
- Rear running gear with grip bars
- Vessel bed
- Wheel recess in lowered running surface
- Lifting load bed
Low bed with outriggers for combine harvesters

Low bed with central box frame

Folding extension

Extensions and attachable ramp

Central box frame, not telescopic, lowered running surfaces

Extension piece

EQUIPMENT OPTIONS
**DOLLY**
- 1 to 2-axle dollies
- Dolly permanently connected to the gooseneck
- Flexibly attachable dolly
- Additional attachable axle

**RUNNING GEAR**
- 1 to 6-axle dollies
- DOLL panther or conventional VARIO running gear
- Rigid or hydraulic power steered
- Tracking aid
- Tracked excavator recess
- Trough can be covered

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**6 DOLLY AND RUNNING GEAR**

1-axle intermediate dolly
1-axle dolly, fixed to the gooseneck
2-axle dolly
1-axle intermediate dolly, docked
1-axle dolly, lifting
2-axle dolly, lifting
Tracked excavator recess as tool box
Tracked excavator recess completely open
Tracked excavator recess with aluminium covers
**RAMPS**

- Single and double ramps with various load-bearing capacities
- Hydraulic ramps
- Hydraulically adjustable
- Various ramp surfaces (wood, rubber, grip bars, lattice grid surface – also available in combination)
- Spring-assisted lifting ramp

**EQUIPMENT OPTIONS**

- Radio remote control
- Simple ramp, wooden surface, mechanically adjustable
- DOLL tronic on the gooseneck
- DOLL tronic remote control
- Plug-in front wall plate in the tracked excavator recess
- Panther running gear
- Galvanised ramp with grip bars
- DOLL tronic remote control
- Hydraulic double ramp, lifting and adjustable
- Simple ramp, wooden surface, mechanically adjustable
STEERING PRINCIPLES

STEERING IS A MATTER OF TRUST

A steering system on a semi-trailer generally means: better cornering, greater manoeuvrability, lower tyre wear and fewer tensile forces acting on the frame. Steering is particularly necessary when vehicles exceed an overall length of 20 metres.

As all the model series from DOLL have the telescoping function and hence significantly exceed this limit, the appropriate steering system is available for every vehicle model.

However, there are quality differences between steering systems. DOLL has employed its own steering systems - refined in development and proven in use – for many years. The DOLL steering system is extraordinarily precise, reacting quickly and very directly to the steering movements in the towing vehicle. This gives drivers a sense of security – they know that they can rely on their DOLL steering system.
Hydraulic Knuckle Steering

With hydraulic steering the turning angle of the towing vehicle is transferred via hydraulic cylinders in the gooseneck to the cylinders in the running gear. The turning angle is then transferred to the axles by means of the stub axles. The hydraulic steering delivers excellent manoeuvrability and handling. The redundant, dual-circuit hydraulic system and the possibility of manual adjustment ensure safety at all times, including in the most extreme driving situations.
THE ORIGINAL

The all-rounder for heavy haulage, especially resilient, especially stable tracking, especially manoeuvrable and off-road-capable, especially flexible in use, especially durable. With split axle, hydraulic suspension, innovative independent suspension and levelling.

MAXIMUM FLEXIBILITY

- Stable handling and high centres of gravity are possible even with a low ride height
- Especially manoeuvrable as a result of good turning angle of up to 55°
- No tilting as a result of spirit level function
- Load protection by means of optimised suspension

MAXIMUM SAFETY

- Universal range of applications: The high payload and the low loading height of the DOLL panther make it flexible in use
- Equipment options take care of customer-specific configurations

MAXIMUM PROFITABILITY

The millions of kilometres covered confirm the low operating costs

- Low wear
- Low maintenance costs
- Reliability in use
- High resale value
**DOLL panther-AXLE TECHNOLOGY**

The characteristic element of DOLL panther independent suspension is the double wishbone suspension. In conjunction with hydraulic suspension and hydraulic knuckle steering it offers optimum handling, vehicle weight and payload, as well as optimum suspension travel and ground clearance.

**MINIMAL WEAR**

6 years experience with over 4,000 axle lines delivered. Low maintenance and wear costs for the customer. Not a single claim against the DOLL 5-year warranty.

**DURABLE QUALITY**

DOLL engineering and know-how, the use of high-quality raw materials and components, precise production techniques, the experience of the highly skilled DOLL workforce – all this ensures a level of quality that guarantees the lasting durability of the vehicle.
DOLL is not only a leader in the field of running gear technology and steering systems, but also in the operation of its vehicles by means of electronics. The DOLL tronic system enables the advantages of the DOLL panther running gear technology to be exploited to the fullest extent. With its DOLL tronic system, DOLL is the first in the industry to develop an electronic operating and control system based on radio technology. At the heart of this development lies the decentralised, computer-based CAN bus system. All the trailer functions can be easily and safely controlled using various control panels (keypads) on the semi-trailer. The radio remote control unit required for this was developed specifically for this purpose and is integrated into the system. The central control of all the functions is a significant handling advantage and leads to considerable time savings when loading and unloading.

DOLL tronic means: Operation of all trailer functions via radio remote control and/or keypads on the semi-trailer.
ADMANTAGES

- Control of all the trailer’s functions via radio and visual feedback on the remote control display; menu-guided program
- The controls are fitted as keypads on the side of the gooseneck and at the rear; clear, self-explanatory symbols enable simple and safe operation
- The electronics, which are individually preprogrammed in the factory, are securely and accessibly housed in a robust, waterproof control box in the gooseneck
- The system includes the operation of the ramps and the monitoring of the central lubrication system

Central lubrication system at the rear
Keypads for ramp operation
Protected cable connections in the bed of the load-loader
Keypads for running gear
Electronic control unit at the rear