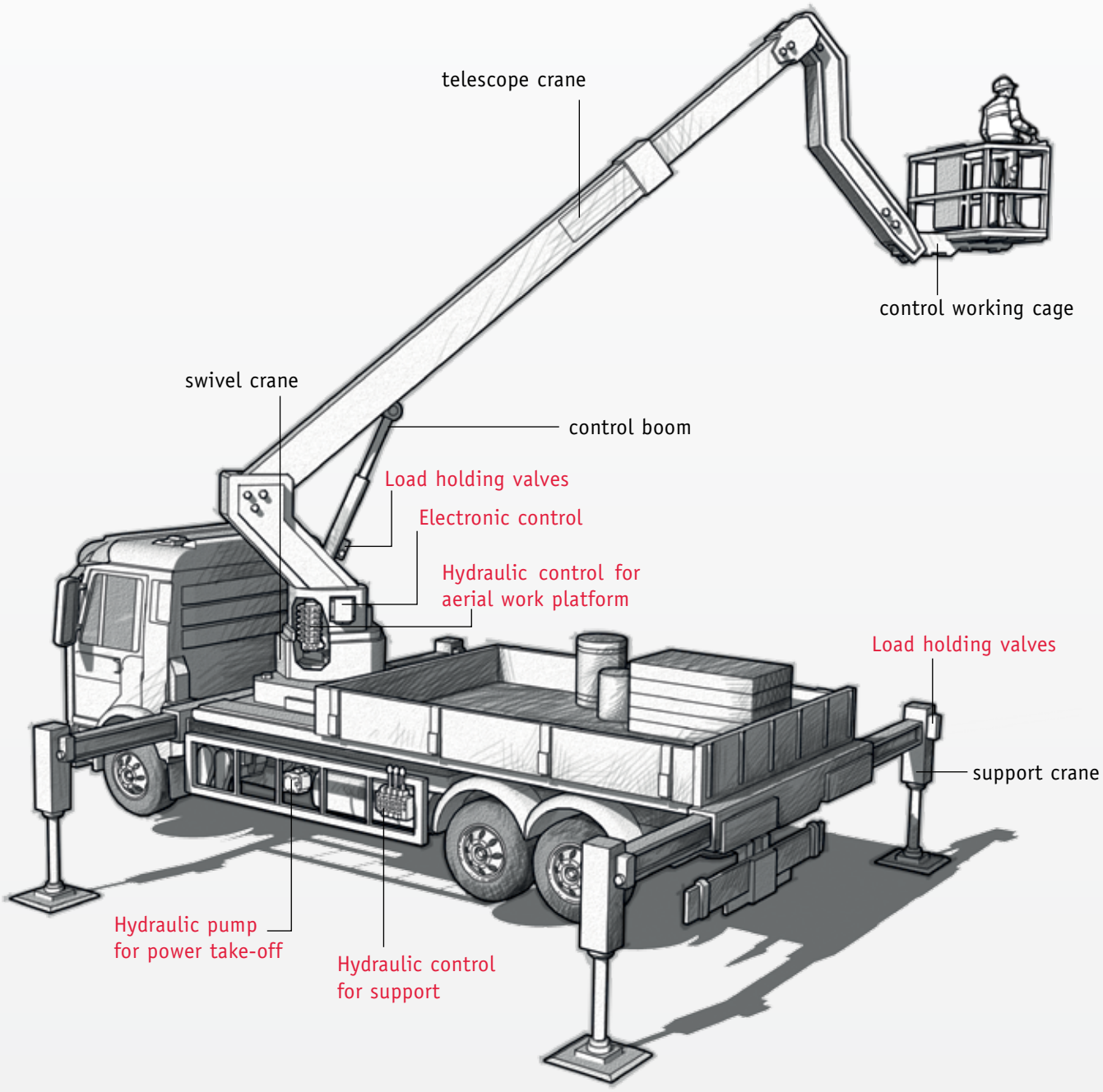
# Over, under and beyond. There are no limits to your access.




Under a bridge, above a roof or next to a wind power plant – wherever you need to work, hydraulics can get you there. Dealing with great heights accurately and safely not only requires being able to overcome vertigo. You also need to be able to rely on technology.

Solutions for a World under Pressure

HAWE HYDRAULIK

# HAWE Hydraulik: For a diverse and productive fleet.

## Quick access to inaccessible areas.

The design requirements and operational height of an elevating working platform could not be more different. Truck working platforms can reach heights of over 100m or reach across ranges of up to 40m. They are therefore ideally suited for the installation of wind turbines or radio masts. Even the smallest oscillation at this height will be unpleasant for the operator – a secure stand is therefore essential. These flexible vehicles can also be used as bridge inspection devices, for light maintenance or for commercial cleaning.

The safety of the operator is always the top priority when designing the elevating working platform. The site of use and the operator of the vehicles also change frequently. The control unit should therefore be intuitive and have a straight-forward design – regardless of whether the operator is controlling the vehicle from the cage or the ground.


Photo: HAWE Hydraulik

## HAWE Hydraulik: Precisely controllable, small and light-weight.

Mobile working platforms are frequently used on different sites.
For operations on the road, the permissible axle load and the total weight in accordance with the licensing regulations should not be exceeded. HAWE Hydraulik therefore supplies extremely compact and light, but at the same time robust, hydraulic valves and pumps. A central element for the load-independent control of movements is the valve bank type PSL used according to the load-sensing system. A valve section is used for every function. There is space to combine up to 10 functions in one valve bank and directly integrate other additional functions.
A so-called whip effect or catapult effect can occur, especially when working on elevating working platforms at great heights.

If the working cage is far away from the machine's centre of gravity, a pendulum swing motion may occur as a result of driving over edges or a tremor in the surrounding area. This is to be avoided or mitigated in a safe and controlled manner.

Thanks to an optimal alignment of the vehicle control unit, the hydraulic pump, the directional spool valve and the load-holding valve, a system is created that can be controlled sensitively, is load-independent and simultaneously minimises oscillations. HAWE Hydraulik offers you all components from a single source.

## Competency in safety.

HAWE Hydraulik helps the manufacturer to reach their desired performance level (safety level). With the directional spool valve type PSL, HAWE Hydraulik offers several options as standard for this purpose. These can be both redundant and individually integrated into the spool valve or built into ancillary blocks. All components from the modular product range offer a high average service life (MTTFd value).

Proportional directional spool valve PSL with MTTFd values >200 and many safety options.

# Uniquely tailored to your crane.

HAWE enables you to improve efficiency, reduce weight and operate economically with its modern, reliable and robust products, all of which form part of modular systems. Some of the items in our product range include:

## A directional valve for all functions:

With minimal installation effort and reduced space requirements, the PSL proportional directional valve, which is based on the load sensing principle, provides a technologically sophisticated and economic way of combining up to 10 functions, including additional and directly integrated options such as shock anti-cavitation valves.

- Operating pressure ($p_{max}$): 420 bar
- Flow rate ($Q_{max}$): 240 l/min

## Intelligent communication between components:

The PSL's on-board CAN technology minimizes the amount of wiring required and makes it easier to design smart systems. As you would expect, it supports all common communication protocols.

- Operating pressure ($p_{max}$): 420 bar
- Flow rate ($Q_{max}$): 120 l/min

## Safety and precision:

Load-holding valves types LHK/LHDV prevent uncontrolled movements of the crane boom, and because they are leak-free, there is no need of re-adjusting. The availability of different versions (pipe connection, manifold mounting, screw-in cartridge) ensures the valve can be installed close to the actuator, maximizing speed of response and safety.

- Operating pressure ($p_{max}$): 450 bar
- Flow rate ($Q_{max}$): 250 lpm

## Efficient hydraulic fluid supply:

The energy-efficient axial piston pump type V60N generates the necessary pressure and flow rate, continually adapting these to the current requirements. Various nominal sizes, controls and drive options offer maximum flexibility while minimizing space requirements.

- Operating pressure ($p_{max}$): 400 bar
- Geometric displacement ($V_g$): 130 cm3/U

## Mobile and flexible – our electronic control:

Ideally suited to the hydraulic components, the PLVC operates and carries out signal evaluation for all functions. It is linked to the vehicle controls by a CAN bus, and can also send telemetry data to maintenance technicians remotely.

## End-to-end service.

With five sales offices in Germany, 15 subsidiaries worldwide and around 30 expert partner companies, HAWE Hydraulik is bound to have a presence in your area.

HAWE Hydraulik offers the following benefits:

- Comprehensive individual advice and assistance
- Customized solutions
- Products designed and manufactured using state-of-the-art technology
- Many years of experience and expertise in hydraulic products and their uses
- Tailored service and maintenance contracts
- Layout, set-up, and maintenance/service on-site

If you have any questions, please get in touch. Our experts are always happy to help.



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