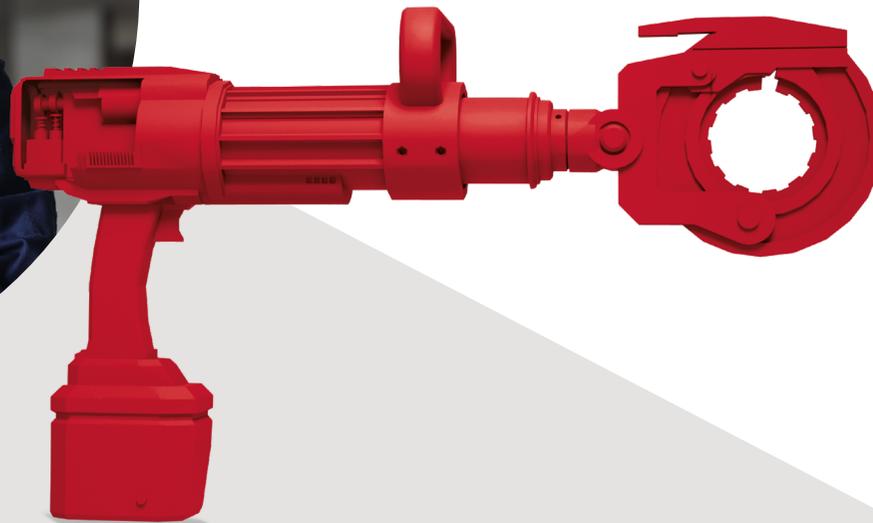


POWERFUL DRIVES FOR HYDRAULIC TOOLS



OUR SOLUTIONS FOR MORE POWER ON THE POINT



WHAT COUNTS WITH HYDRAULIC TOOLS

Many hydraulic tools are handheld and carried to the place of use. Compactness and low weight make the work easier. At the same time, these tools also require a lot of power. That is why most hydraulic hand tools operate at high pressure of up to 700 bar.



Crimping devices
connect e.g. water or heating pipes by plastic deformation.

Cutters
cut cables or metal rods.

Nut splitters
separate screwed connections that cannot be loosened by other means.

Rescue equipment used by the fire department
are hydraulically driven to open deformed cars in accidents.

Torque wrenches
tighten or loosen large bolted connections, such as flange connections of oil pipelines.

THE PERFECT SOLUTION WITH HAWE HYDRAULIK

The advantages of HAWE Hydraulik are highly appreciated by tool manufacturers, as they optimally meet the requirements for strong, compact equipment. In addition, they enable a good price-performance ratio and a robust design:



- + High force density
- + Small installation space
- + Simple force redirection
- + Separation of power generation and effective force point possible
- + Simple logical switching operations without electrical control

THE DUAL STAGE DRIVE - POWERFUL AND EFFICIENT

In hydraulic tools, fast and powerful movements are often combined. This is when a dual stage drive with a high-pressure and a low-pressure circuit is used which reduces the necessary drive power.

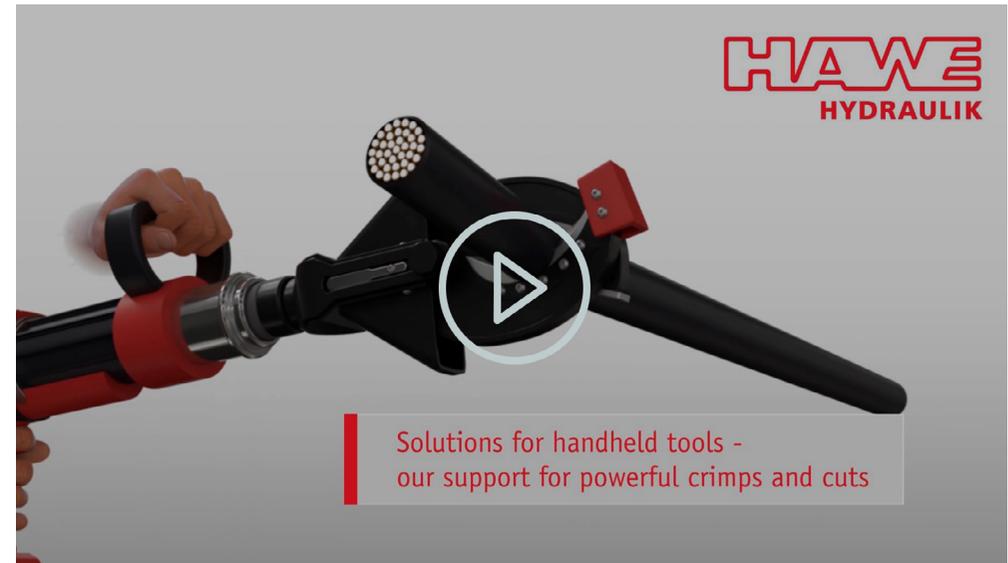


Both pump circuits are used for the **rapid stroke**. This provides the maximum possible flow rate. The working cylinder extends and moves the mold quickly to the working point. When the low-pressure limit is reached, an integrated valve depressurizes the low-pressure piston.



The **power stroke**, also called the working stroke, has only a very short length. Here, however, the peak pressure is needed to bring the maximum required force to bear. The high-pressure pump alone is used for this purpose.

VIDEO



<https://www.youtube.com/watch?v=hsl5mbTQrPk>

Due to the simple but reliable principle of hydraulics, the design of a dual stage drive with automatic changeover can be realized very easily and without electronics.

HAWE Hydraulik implements the dual stage drive either with the extremely compact **double pump element** or in the form of **compact units** with high-pressure and low-pressure pumps flanged directly together.

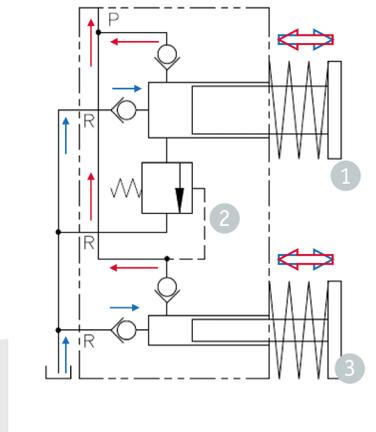
DOUBLE PUMP ELEMENT FOR HANDHELD TOOLS

In battery-powered handheld tools that are not in continuous use, the motor and pressure generation are **integrated in the tool**. This ensures maximum independence during operation.

HAWE Hydraulik has developed the patented double pump element type DMPE for this purpose, in which two pump pistons and a shut-off valve are integrated. This is the smallest conceivable two-stage drive for these type of applications. The motor power is optimally utilized, which significantly increases the operating time per battery charge.



Double pump element type DMPE
[> more](#)



1 Low-pressure piston
 2 Changeover valve
 3 High pressure piston

COMPACT POWER UNITS FOR HYDRAULIC TOOLS

In larger solutions, the mold and hydraulic power unit are **separate** and connected via hose lines. This allows a combination of a lightweight tool with the highest performance possible.

In the compact units from HAWE Hydraulik, the pump and motor are arranged in the tank to save space. The finned tube and the motor in submerged oil design provide minimal heat, so that the power unit can operate in intermittent mode without any intermittent operation. A small-dimensioned motor is sufficient which reduces the size and weight of the unit. The product range also includes a unit for continuous operation.



Compact power unit type KA
[> more](#)



Compact power unit type HKL
 for continuous operation
[> more](#)

VALVE TECHNOLOGY FROM THE HIGH PRESSURE SPECIALIST

For the high-pressure range, seated valves are generally used. These are leakage-free and insensitive to dirt. HAWE Hydraulik's modular system includes valve types in a wide range of sizes for almost all requirements.

Extremely compact seated valves have been developed for the actuation of hydraulic hand tools. In the case of tools that are driven by a separate compact power unit, directional seated valves can be mounted directly on the power unit.

VIDEO

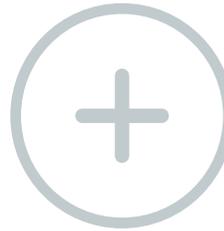
Valve bank type VB with various directional seated valves



Directional seated valve bank for operation pressures up to 700 bar – Type VB

<https://www.youtube.com/watch?v=CeEtjOUdDwY>

HAWE MAKES THE DIFFERENCE



- + Manufactured according to ISO and CE standards
- + Robust and reliable technology
- + Long service life
- + Large selection through configuration from the modular system
- + Short time to market
- + Plug&Play delivery
- + Online training on technology

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