Just drill to the point – with intelligent control.

Whether it's small blast holes, major tunnels or long conduits, in any drilling or boring operation, the direction and working pressure have to be exactly right. If the drilling rig encounters unexpected soil conditions, all the hydraulic and electronic components have to work together seamlessly to ensure successful results.

Solutions for a World under Pressure
Space for new buildings in cities is increasingly constricted, extracting raw materials is becoming ever more demanding and quarrying is more challenging today than ever before. Mobile drilling and boring equipment that performs with precision and flexibility are a necessity for getting these jobs done well, on time, and with minimal impact on surrounding environments. To meet the demands of these challenging situations, manufacturers are designing their drilling and boring equipment for:

■ Reduced size without compromising performance
■ Safer operations without compromising speed
■ Lower overall cost without sacrificing quality

For all these requirements, hydraulics is ideally suited due to its high power density. Through an electronic on-board CAN technology, this well-established technology is even more precisely controllable. HAWE Hydraulik offers robust and easily maintainable systems out of a modular system. By using steel construction of pressurized components, pressures up to 400bar are no problem. This offers you a high security against pressure peaks, as they are likely to occur at the unexpected impact of the drill string on hard or very soft material during the drilling process. HAWE offers both proportional directional valves for demanding and throttling spool valves for easy drilling jobs.

There are various operating options to choose from. With the HAWE electronic control type PLVC you can realise remote control and remote diagnostics. HAWE Hydraulik solutions are currently being used in the following drilling and boring processes:

■ Blast-hole drilling
■ Kelly-bar drilling
■ Pile driving and extraction
■ Horizontal-directional drilling (HDD)

HAWE Hydraulik’s more than 60 years of experience make it the ideal partner for the drilling/boring and construction equipment industry. We offer an integrated service, covering design, manufacture and set-up. This allows you to use your own resources more productively, increases your flexibility and reduces your costs.
Everything revolves around reliability and flexibility.

HAWE Hydraulik offers sturdy, high-precision products with state-of-the-art design. The sophisticated modular system enables you to combine the elements you need in the most cost-effective way. A selection from our product range:

### High-precision positioning and operation:
The compact PSL proportional directional spool valve saves space and is segmented for simplified servicing. Available in four different sizes with options to add a variety of extra functions, it can easily be adapted to suit the control requirements of your machinery.
- Operating pressure ($p_{\text{max}}$): 400 bar
- Flow rate ($Q_{\text{max}}$): 800 lpm

### Smart communication between components:
The PSL's on-board CAN technology minimizes the amount of wiring required, making it easier to design smart systems. As you would expect, it supports all common communication protocols.
- Operating pressure ($p_{\text{max}}$): 400 bar
- Flow rate ($Q_{\text{max}}$): 800 lpm

### Efficient hydraulic fluid supply:
The V80M variable displacement axial-piston pump ensures the right amount of fluid is in the right place at the right time. The low mass (and therefore low inertia) of the actuator gear allows it to make virtually instantaneous adjustments, and the large shaft bearing ensures a long service life.
- Operating pressure ($p_{\text{max}}$): 420 bar
- Displacement vol. ($V_g$): 260 cm$^3$/rev

### Safety and precision:
Counterbalance LHT and LHDV valves reliably maintain load holding functions, and because they are zero leak, they never need readjusting. The availability of in-line, panel-mounted, and screw-in cartridge versions ensure installation close to the actuator, maximizing the speed of response and safety.
- Operating pressure ($p_{\text{max}}$): 450 bar
- Flow rate ($Q_{\text{max}}$): 250 lpm

### Matching pressure to current requirements:
Variations in soil conditions can affect the pressure in hydraulic systems, but this proportional pressure-reducing PDM valve maintains the correct level at all times regardless of pump pressure. A selection of pressure-limiting valves is available to protect against system failure.
- Operating pressure ($p_{\text{max}}$): 350 bar
- Flow rate ($Q_{\text{max}}$): 120 lpm
With five sales offices in Germany, 15 subsidiaries worldwide and around 30 expert partner companies, HAWE Hydraulik is always ready to help.

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, maintenance/service on-site

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