

NEW DEVELOPMENT BY KLEMM BOHRTECHNIK GMBH // KR 704-2E DRILLING RIG

Mechanical foundation engineering requires highly specialized construction machinery in an urban environment, especially within existing buildings. The compact KR 704-2E drilling rig was developed precisely for this. The electric drive allows work to be carried out extremely quietly and without exhaust emissions.

With a minimal base carrier width of 750 mm and the option to use telescopic drill masts, the drilling rig is able to maneuver itself into buildings with narrow doorways and low ceiling heights. Specialist foundation engineering tasks, particularly micro piles for foundations and the underpinning of existing foundations using high-pressure injection columns, can therefore be performed under difficult conditions.

The telescopic drill mast makes it possible to work under ceiling heights of 2.20 to 3.20 m (or optionally 2.50 to 3.50 m). Drill rods and protective casings with a usable length of 1,500 mm (or 2,000 mm) can be used. The telescopic drill mast provides a retractive force of 60 kN.

The kinematics of the drill mast permit the drill axis to be pivoted sideways ($\pm 35^\circ$), thereby improving maneuverability and allowing drilling points in building corners to be approached. As the upper carriage can be moved lengthways by up to 300 mm, the drill mast can be accurately aligned above the drilling point without having to reposition the drilling rig.

The hydraulic system features a load sensing pump and load-independent volume flow control. The mobile control blocks communicate directly with the CAN bus and react with an extremely high level of precision and reproducibility. The system pressure for the drilling functions is 350 bar. The new hydraulic concept now also enables operation of a hydraulic hammer.

The fact that the drilling rig can be controlled remotely (by radio technology) gives operating personnel numerous advantages when space is tight. All functions (driving, setup and drilling) can be executed remotely. The rig meets EN 16228, with "special protective mode" (SPM)

being available for work without a separating guard under special conditions and "restricted operation mode" (ROM) being available for drill rod changes.

To optimally adapt the rig to the drilling task in hand, several drill mast structures and a wide range of KLEMM drilling accessories are available.

The first drilling rig of this type is already being used on a construction site. The KLEMM KR 704-2E will be officially presented to an international professional audience at BAUMA 2019 in Munich. ▴



KLEMM KR 704-2E DRILLING RIG, ELECTRICALLY DRIVEN FOR WORK IN TIGHT SPACES.

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