

Crawler drill rig AN 140

The crawler drill rig AN 140 has been developed in particular for drilling applications with doublehead systems and rod changer.

The machine frame houses a robust 140 kW liquid-cooled Deutz diesel engine BF6M 1013 C with latest turbocharger and intake-air cooling system. This power unit features an eco-friendly fuel-saving EMR (electronic engine control) speed governor which means no exhaust-smoke discharge when load changing. The emission values correspond to the standards of European COM2 and EPA2 US Stage 2 off-highway regulations.

The hydraulic unit operates on the load-sensing principle and can run on biologically degradable fluids. The high drive power output ensures that the drill heads are always well supplied.

The drill mast on the AN 140 is designed with a hydraulic motor feed system and feeding and retraction forces up to 8 tons. Optionally a drill mast with cylinder feed can be supplied. A new type of patented rod/casing magazine KBM allows the drill string to be fitted and removed quickly and safely. The magazine can hold as many as 7 double-rod units comprising 3 m long sections of inner rods 76.1 mm and outer casings up to 133 mm in diameter.



The drill strings are lifted from the magazine racks by a hydraulic manipulator which then swings them into line with the drilling axis. The same procedure is employed for drill string removal, with the manipulator returning the inner rods and outer casings to their racks.

For overburden drilling, as used for example for anchor jobs, the inner string is detached first and replaced in the rack. After the anchors have been inserted in their holes the outer casings are slid back into the racking system over the inner rods. The sections are then ready for the next twin-rod drilling phase. A time-consuming part of the working cycle is eliminated and the overall drilling time is significantly reduced.



Figure: KBM rod handler

Technical data:	Crawler drill rig AN 140
Drive engine	Deutz BF6M 1013C; liquid-cooled
Engine output	140 kW at 1,900 rpm
Diesel tank capacity	350 l
Pump output	2 x 230 l/min at 320 bar 1 x 24 l/min at 220 bar
Hydraulic tank capacity	600 l
Hydraulic fluids	mineral oils, biologically degradable fluids
Length	8.28 m
Width	2.49 m
Height (in parking position)	2.87 m
Weight	16,000 kg*
Specific ground pressure	7.0 N/cm ²
Ground clearance	350 mm
Pendulum range of crawlers	+15° / -15°
Travel speed	2.5 km/h
Max. traction	135 kN
Mast length	7,900 mm
Feed travel (single sled)	5,620 mm
Feed travel (double head)	4,375 mm
Feed force	80 kN
Retraction force	80 kN
Feed rate	0 – 15 m/min
Retraction rate	0 - 15 m/min
Rapid feed	0 – 60 m/min
Rapid retraction	0 – 60 m/min
Hydraulic drifters (recommended)	B 1000 R / B 1500 R / B 2000 R
Rotary heads (recommended)	DK 1300 / DK 2000
Recommended rod/casing magazine	KBM 130 / KBM 150
Additional equipment	auxiliary winch with deflection displaceable sleds clamp/break device for up to Ø 450 mm

* without attachments

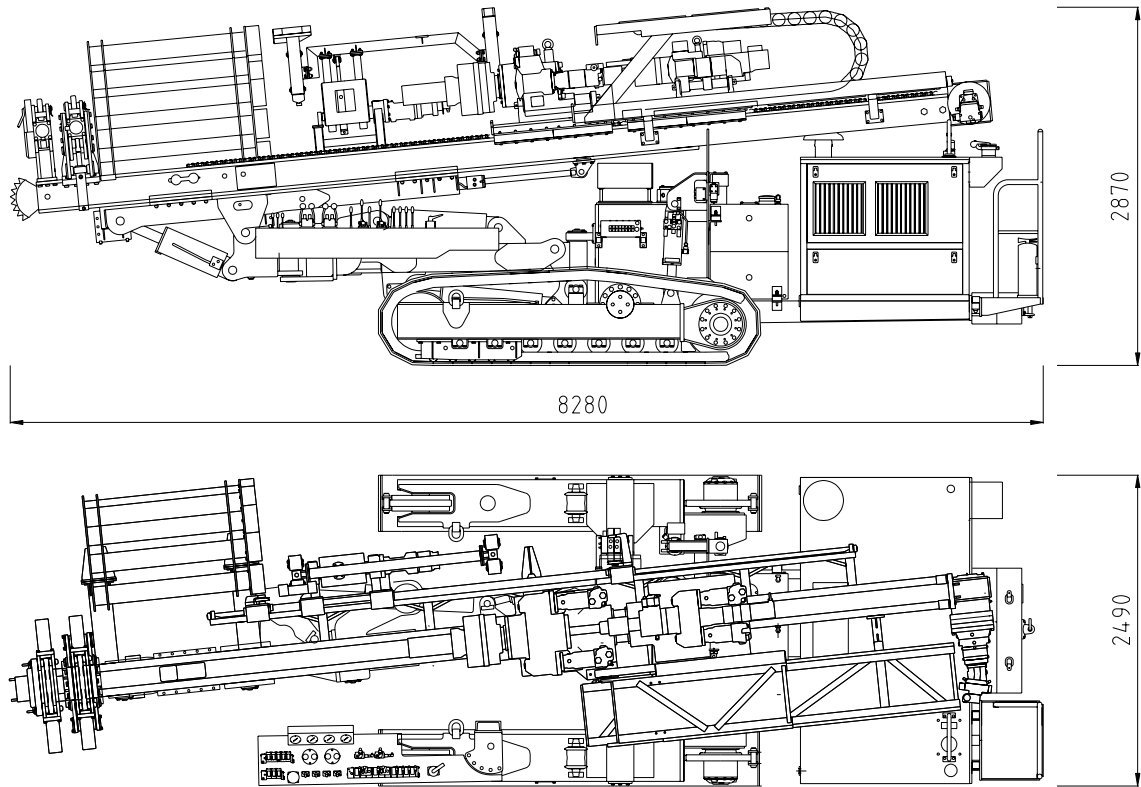


Figure: AN 140 crawler drill rig