

Ultimate Trading & Consulting DMCC

**Drilling Rig
KLEMM 806-3D**



KLEMM Machinery

- ❖ **KLEMM** is a worldwide leader specializing in production of **drilling rigs** with a total weight of up to 32 tons. It is recognized in terms of the following characteristics:
- ❖ **Acknowledged Performance:** The machinery has been developed in a way that it can be used on a continuous basis – without any long stops.
- ❖ **High Reliability:** This equipment has been proved to be highly reliable. There are no major issues have been raised in terms of tools breakage or spare parts change.
- ❖ **Long Life Time:** The average lifecycle of the machinery is proved to be 30 years which is longer than other equipment with same configurations.

KLEMM KR-806 3D

It is **best to be used** for the following types of works:

- ❖ Micropiling
- ❖ Anchoring
- ❖ Underpinning

Equipment has the following **advantages**:

- ❖ It has **two Rotary Heads**. The auger can be attached to one head and casing will be fitted to another rotary head. One can drill clockwise while other head will move in opposite direction. This will bring safer drilling experience as the case will not allow the sand to pour back into the hole.
- ❖ **Percussive drilling**. It is the technique, when the auger is drilling with certain pressure, which allows to drill through mild to medium rock.
- ❖ **Hydraulic drifter**. Hydraulic hummer is modern type of hummer which allows the drill to go through medium to heavy rock. It is rarely used in UAE sandy ground.
- ❖ The possibility to connect **water** or **mud** to hydraulic pump in order to inject it to the pile whilst drilling. It is also possible to connect **concrete pump**.

Tandem of **Hydraulic Drifter** and **Rotary Head**

The drill rig is designed for the high performance double head units with **hydraulic drifter** and **rotary head**. Our configuration is **KR 806-3D** with **KD-1011** and **KH-22**, allowing operator to drill through medium to hard rock with auger and particular drilling bits whereby piling with counter rotation of outer casing to inner rod. This shall provide a certain advantages to traditional piling systems.

Advantages of Double Head Drilling systems:

- ❖ Counter rotation of outer casing to inner rod
- ❖ Minimal deviation
- ❖ Controlled extraction of soil
- ❖ Low vibration drilling

MOTOR: DEUTZ model TCD 2012 L6 2V

<i>Engine Type</i>	DEUTZ TCD 2012 L6 2V	
<i>certified</i>	EEC 97/68 EC Stage 3A, USA EPA/CARB TIER 3	
<i>Rated Output</i>	kW	147
<i>Fuel Tank Capacity</i>	l	380
<i>Sound power level LWA_d</i>	dB (A)	111

CRAWLER base B2

<i>Crawler Base</i>	B2	
<i>Tractive Force max.</i>	kN	188
<i>Crawler Speed</i>	km/h	2,0
<i>3-rib Grouser Plates</i>	mm	400
<i>Ground Clearance</i>	mm	350
<i>Ground Pressure</i>	N/cm ²	7,9

DRILL MAST type 202

<i>Drill Mast</i>		202
<i>Total Length</i>	mm	6570
<i>Feed Force</i>	kN	100
<i>Retraction Force</i>	kN	100
<i>Feed Rate</i>	m/min	6,0 / 12,0
<i>Retraction Rate</i>	m/min	6,0 / 12,0
<i>Fast Feed Rate</i>	m/min	26,4
<i>Fast Retraction Rate</i>	m/min	52,8

Hydraulic Drifter KD 1011

Hydraulic Drifter KD 1011 is equipped both with **Percussion** and **Rotation Unit**.

Percussion Unit

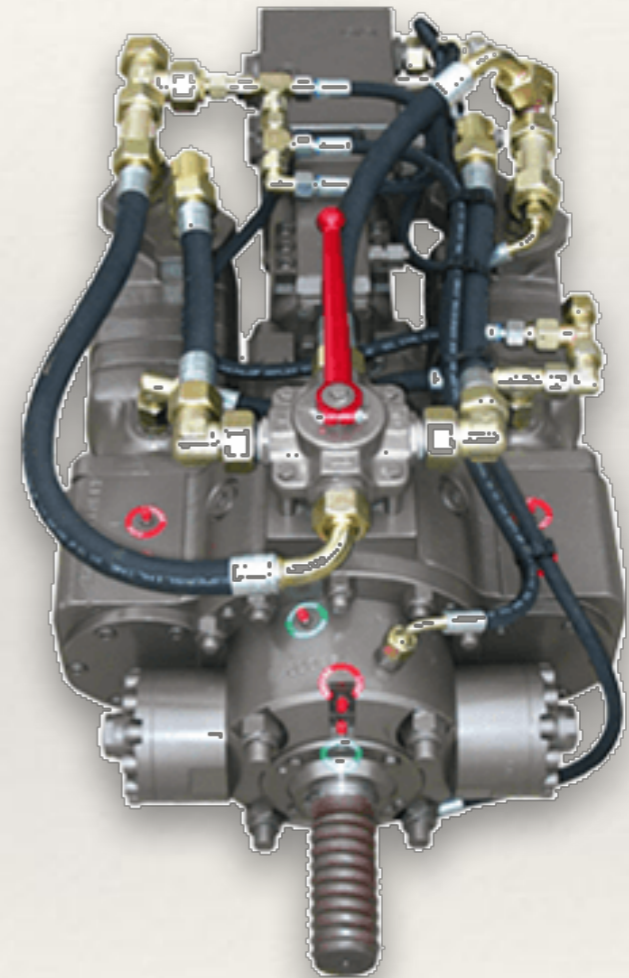
This new redesigned damping device compensates empty blows while operating the drifter without insufficient feeding force. Reverse impulses are implied on the shank adapter through the damping device. This results in a faster retraction and breaking of the threads.

Operating Pressure: up to 180bar

Blow Frequency: up to 2800 min⁻¹

Single Blow Energy: up to 400 Nm

Piston Weight: 11.5 Kg



Rotation Unit

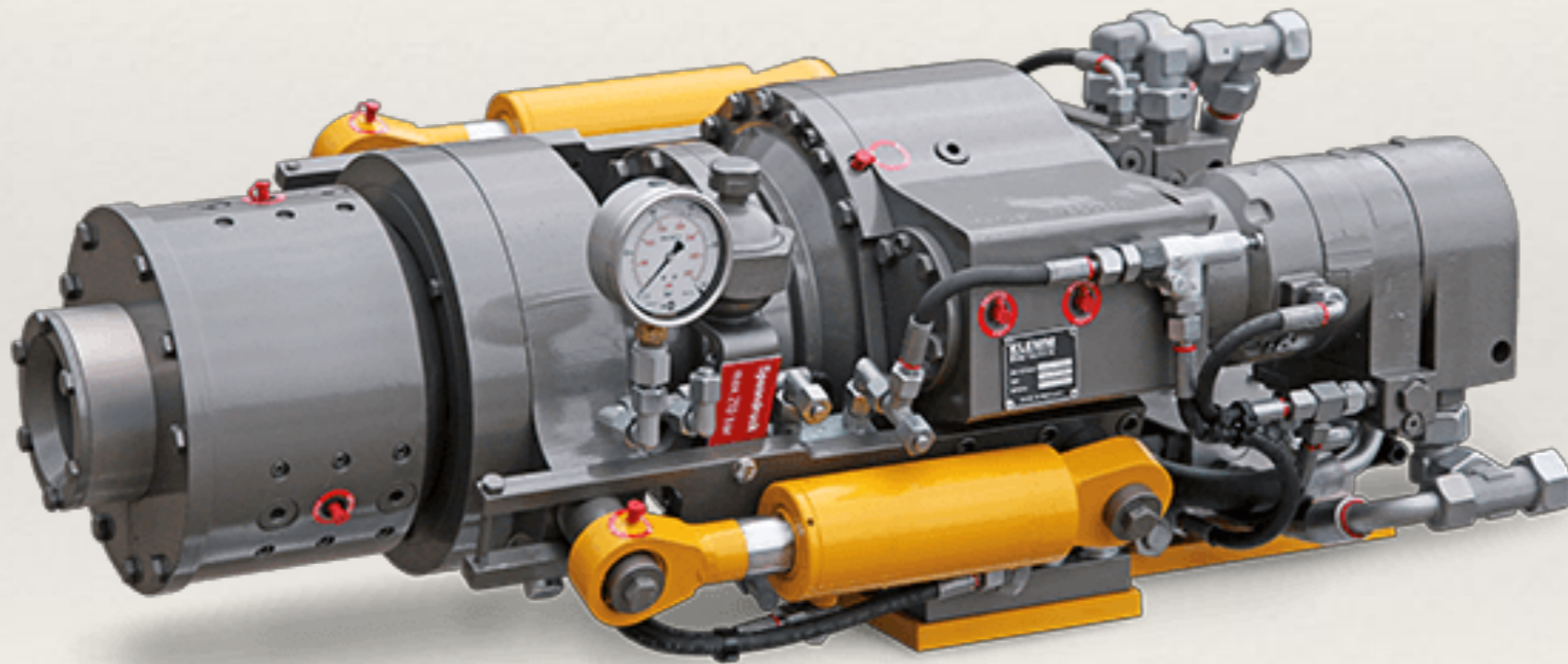
Rotation Unit is classified according to maximum available torque. The torque and the corresponding rotation speed of a drifter can be changed by the use of hydraulic motors. There are two motors.

With a **medium pressure motor**, which brings up to **210 bar**, and its **revolutions**, which makes up to **125 1/min**, rotation unit creates maximum **torque** of **9.1 kNm**. The **flow rate** is around **170 l/m**.

The impact energy of a hydraulic drifter can be adjusted according to the requirements of the drill task by changing the stroke of the piston and the pressure in the percussion unit.

Rotary Head KH 22

Rotary Heads and its application within **KR 806-3D**

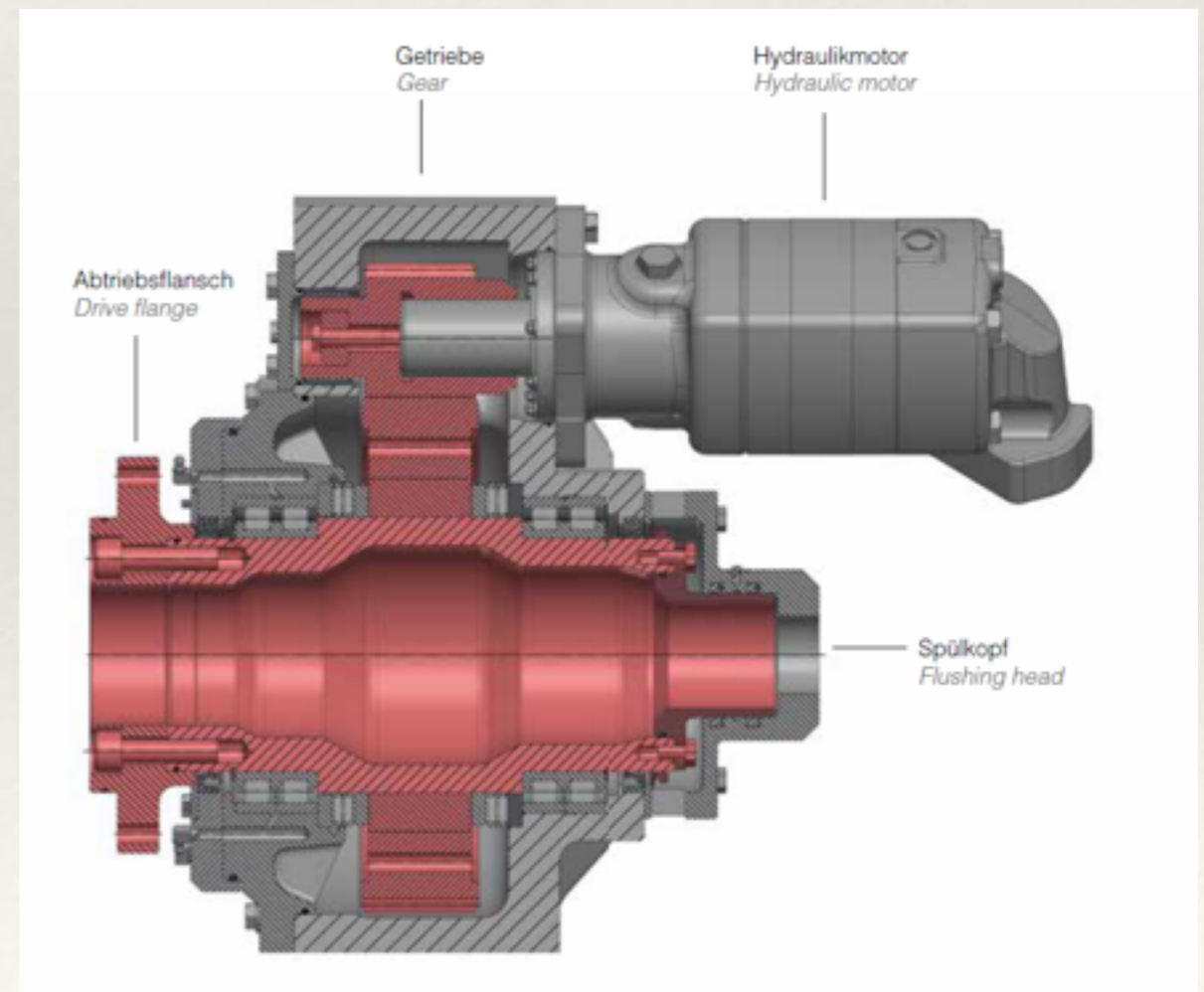


Drilling rigs equipped with rotary heads for different kinds of rotary drilling applications. Rotary heads are *classified* according to the *maximum available torque*.

The **torque** and the corresponding **rotation speed** of a rotary head can be changed for a constant power output of the drilling rig by use of hydraulic motors with a different oil flow capacity.

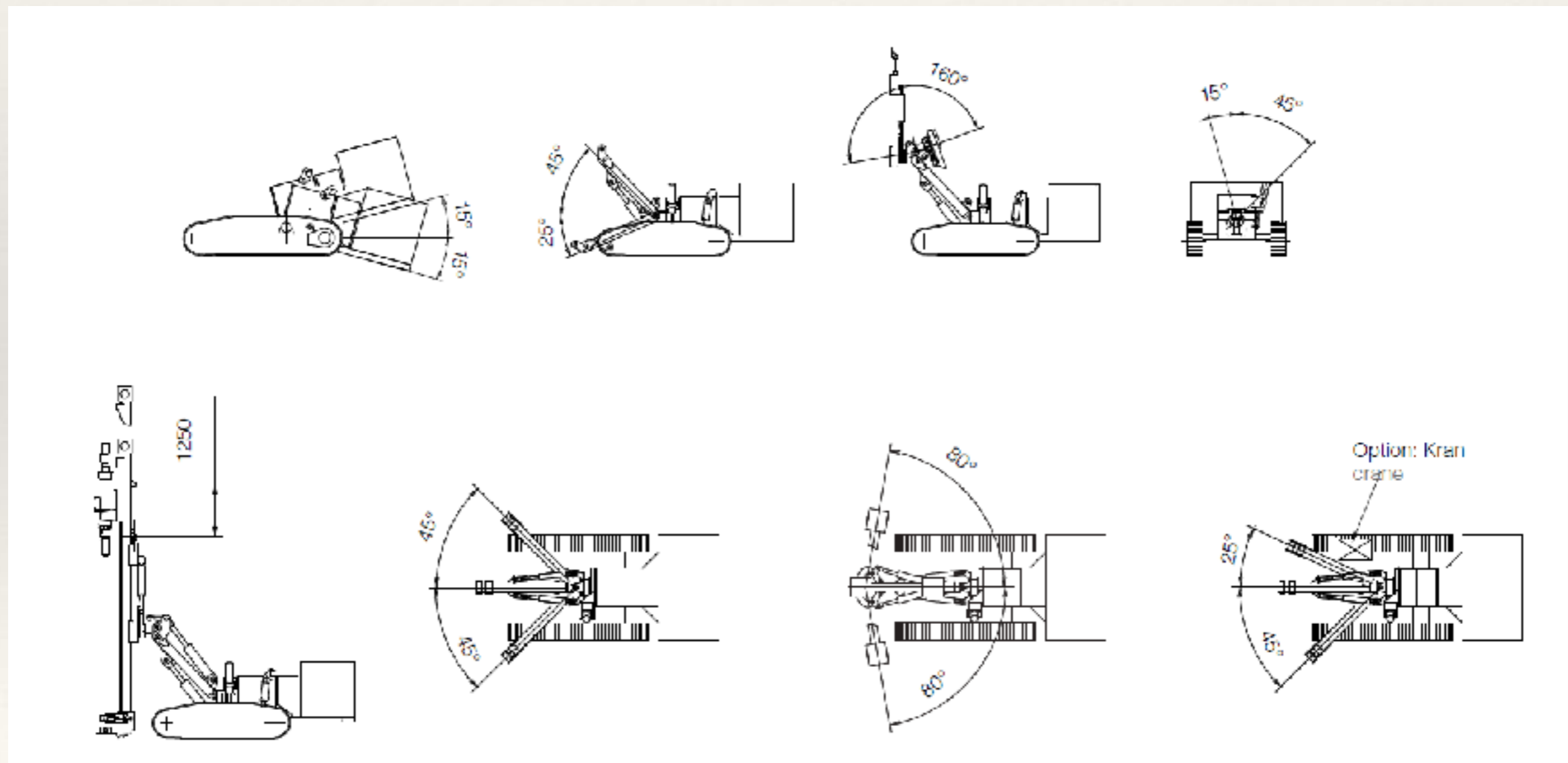
With the **motor option - H34T** installed into Rotary Head, the maximum **rotation speed** is **146 rpm**, which creates **torque** of up to **17.3 kNm**. The **pressure** difference is **up to 310 bar** with the maximum **flow rate** of **170 l/min**.

The total **Weight** is 310 kg.



Multi-purpose boom kinematics enables various drilling positions:

- Drilling at 90° in front of the tracks and with inclinations of up to 45°
- Drilling parallel to the tracks
- Vertical drilling with tilting function to both sides
- Horizontal drilling in direction of travel and across the tracks to both sides



Other Characteristics

Clamping and breaking device type H has the following specifications:

- ❖ Casing maximum diameter - 254 mm
- ❖ Casing maximum diameter - 38 mm
- ❖ Clamping Force - 196 kN at 250 bar
- ❖ Breaking Torque - 43 kNm at 250 bar

GAMMA 202 H Water Pump

Flow Rate - 80 l/m

Operation Pressure 30 bar

Equipped with the **Manual Flushing assembly 1 1/2"**

Rack Magazine MAG 2.1V

It is installed for casings and inner rods with the following sizes:

- ❖ 6 casings with the diameter of 133 mm and 6 inner rods T45
- ❖ 9 casings with the diameter of 152 mm and the useful length of 3 meters
- ❖ 12 augers with the diameter o 133 mm

Transport Dimensions

Length 8400 mm

Width 2500 mm

Height 3100 mm

Weight 17.8 tonns



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