

PRODUCT SHEET

# HMR RIG SERIES 80/150 TONS



# HMR RIG 80/150

## UNIVERSAL DRILLING SOLUTION

The new technologies of the Huisman HMR rig series offer exploration and mining companies the opportunity to drill exploration wells much faster, safer and with smaller crews, while having less environmental impact and a smaller footprint. Its highly efficient operations and small size also bring middle deep geothermal wells in urban areas within reach. Oil and gas fields with unconventional, such as coal bed methane (CBM), also benefit from these features.

The universal set-up allows for various drilling techniques, including mud rotary direct and reverse circulation, DTH drilling, directional drilling with mud motors and wireline coring. The integrated software packages provide the capability to monitor all operations in real time from a remote centre. This allows for combining best practice of multiple drilled holes, providing the basis for a steep learning curve for overall improvements in the field. The HMR rig series features unique automation, which offers outstanding safety.



### Exploration well drilling for mining companies: Obtaining high quality data at greater depths

Ongoing global electrification has sparked a fast growing demand for copper, other minerals like lithium, and rare earth metals. Although current deposits are situated at approximately 500 metres depth, new explorations are required at greater depths of 1,000-1,200 metres.

The HMR rig series has been developed to minimise time and costs for drilling these deeper holes, by offering a high capacity drilling system equipped with a high torque and high rpm top drive at the same time.

The large diameter coring system provides high quality core samples for obtaining multi-disciplinary information such as geology, hydrology and mechanical rock properties over the full borehole depth.



### Geothermal: Unlocking the potential of urban heat supply

Deeper geothermal wells at a depth around 2,000 metres can offer a permanent local heat supply for urban areas. These wells are less dependent on the local geological formations than the current geothermal wells, and thus provide the ideal climate independent renewable heat source.

Supported by the advanced auto driller system, the HMR Rig drills these deeper wells faster and in a more cost-efficient manner. Placing the unit in small areas, such as a local parking lot, is now also possible, because of its extremely compact design. This ensures that the distance between the heat supply and the end-user is at a minimum in densely populated areas.

When connected to the local power grid, noise emissions are drastically reduced, while local CO<sup>2</sup> emissions are eliminated due to the AC-electric power system.



### Oil and gas: Increasing efficiency, mobility and safety levels

For oil and gas wells and unconventional, the unmatched levels of automation for pipe handling and drilling have the potential to improve efficiencies in the order of up to 30% per well. An additional well control trailer with large drill floor, blow out preventer and BOP handler can be added.

This trailered design combines efficiency, safety and mobility at unmatched levels, making it a universal drilling solution. It can be tailor-made to project specifics, reducing the time and cost per well while minimising the environmental impact.

# FEATURES

## UNIVERSAL DRILLING RIG FOR MINERAL EXPLORATION/GEOTHERMAL/O&G

- Designed for multiple drilling techniques for maximum efficiency
  - Mud rotary direct and reverse circulation drilling
  - Deviated drilling with mud motors
  - Air drilling – DTH hammer
  - Mud drilling – DTH hammer
  - Wireline coring SQ, PQ
- SQ (101 mm) and PQ (85 mm) wireline coring enabling detailed geological analysis
- Accommodates up to 3 m large cellar
- Vertical and slant drilling

## FAST RIG MOVES

- Fast rig moves due to trailered design
- No cranes
- No working at heights
- No loose items

## SAFETY BY DESIGN

- Safety by design: no manual handling during routine operations
- Small crew size of two operational crew members per shift

## EFFICIENCY BY AUTOMATION

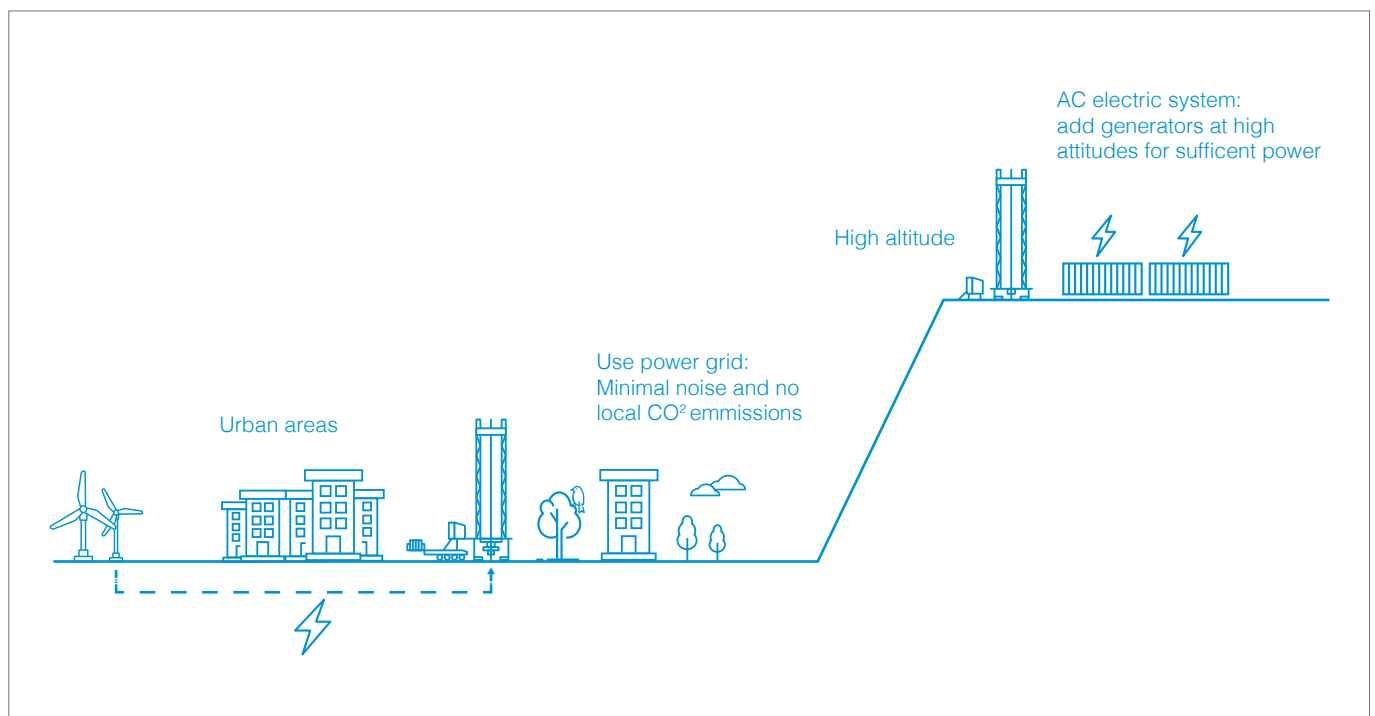
- High level of automation/rod handler
  - Automated tripping sequences
  - Automated drilling including advanced auto driller
  - Auto rod feeder
  - Semi-automated casing running
- Integrated auto-slips for multi-size pipe handling
- Hands-off automated rod storage system
- Remote real time data analysis

## STEEP LEARNING CURVE BY ADVANCED DATA COLLECTION

- Remote drilling parameter control and optimisation

## MINIMISED NOISE AND CO<sup>2</sup> EMISSIONS

- AC-electric central power system
- Option to connect to local grid power



	Exploration drilling & wireline coring	Geothermal + Oil and gas Drilling
<b>Capacity</b>	60-80 t	150 t
<b>Pipe</b>	30 ft (9m) rods R2 – 42 ft (12.8m) casing	45 ft (13.7m) pipe R3 – 42 ft (12.8m) casing
<b>Floor</b>	Fixed at 1.3m	5.8m BOP trailer provides extra floor space
<b>Mast</b>	21m, max 30 degr. slant	28.5m, vertical only
<b>Top drive</b>	60 rpm @ 32000 Nm 100 rpm @ 20000 Nm max 330 rpm@4200 Nm 54,000 Nm break out torque	60 rpm @ 32000 Nm 100 rpm @ 20000 Nm max 330 rpm@4200 Nm 54,000 Nm break out torque
<b>Pipe handler</b>	up to 8 5/8" drill pipe up to 16" casing	16" + up to 24" manual
<b>Aux</b>	1x 250 hp pump 3,000 psi	2x 800 hp pump 5,000 psi (Ac electric vfd driven)
<b>Power</b>	1x C18 Genset	1x C18 + 2x C32
<b>Well control</b>	Not standard, on request	13 5/8 5000 psi 2 ram + annular
<b>Transport size</b>	2.7m width 4m height 22m long (including truck) 6 steerable axles	2.7m width 4m height 25m long (including truck) 7 steerable axles







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