

# MH DDM™ Series Top Drives

## Derrick Drilling Machines

Our derrick drilling machines (DDM) offer a wide and high operational performance for 2 000 hp land rigs with 500 short tons up to 3 000 hp land rigs with highest capacity of 1 000 short tons for deep drilling installations.

### Product description

Our DDMs are designed based on more than 35 years of experience in accordance with recognized standards. It features a continuous main shaft from the power swivel through the gearbox and pipe handler. The weight of drill string is supported directly in main shaft pin or transferred from the link hanger to the main shaft by means of a load hang-off nut.

A remote controlled, multifunctional pipe handler, enabling 360° continuous rotation is included. The pipe handler is also equipped with auto positioning to ensure safe, easy and accurate orientation of the elevator.

The control system features both manual and automatic mode. In automatic make-up mode, automatic repetition is provided until the required torque setting is obtained.

The assembly of main components simplifies maintenance and overhaul, i.e. all hydraulic valves are collected inside a single valve cabinet with easy access from service platforms.

### Benefits

- Flexible design to meet your requirements for different drives (AC, DC or hydraulic)
- Bi directional link tilt system, “drill to the floor” to drill down full stand
- Break out/make up of drill string, saver subs and IBOP with dual torque wrench
- Link tilt stop system, stop elevator in any pick-up position of pipe or stand
- Tool face for orientation of drill bit as standard
- Filtration of cooling air to prevent ingress of foreign objects in motors
- Centralized valve and junctions boxes

Our DDM is delivered with a control system for optimal operation and lifecycle support through remote diagnostic systems and data acquisition systems.

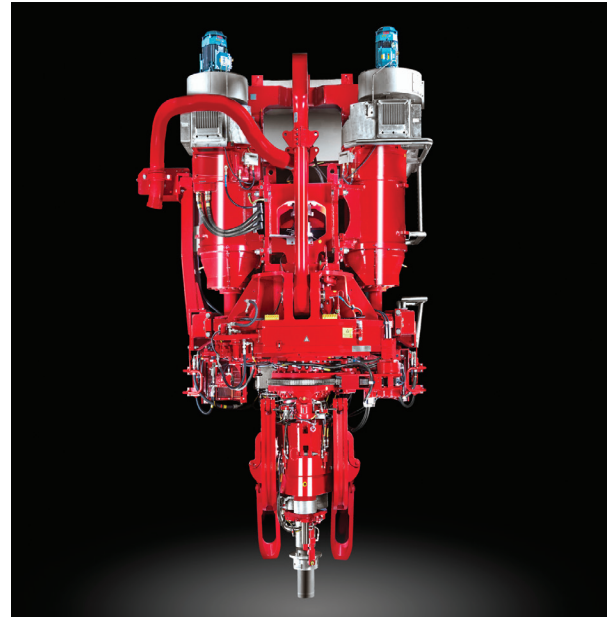
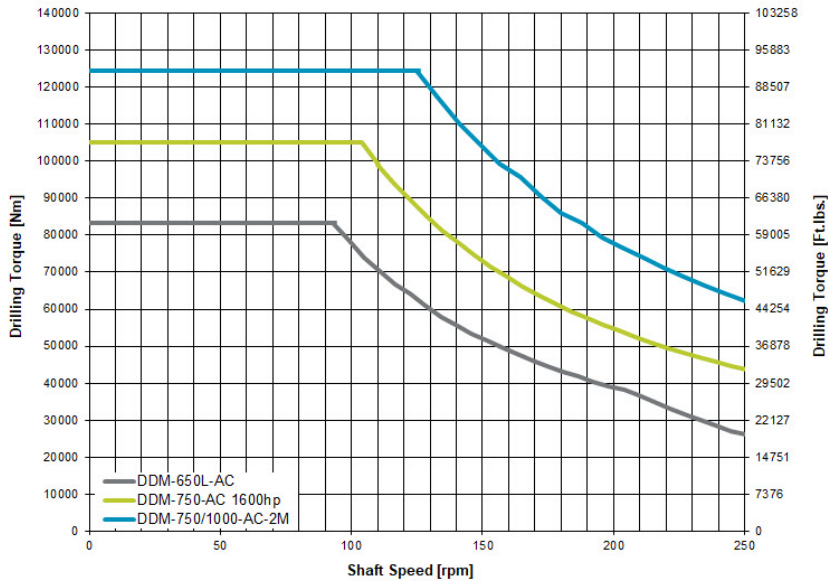
We deliver a wide range of different equipment and solutions for various operator environments onshore and offshore, from the robust stainless steel panels for outdoor use in hazardous area, or to the state-of-the-art DrillView™ operator environment for the drillers control room. Interfaces to most third party operator systems and anti-collision systems are also available.

### Key features

- CE marking
- Various elevator links, saver subs, travelling block adaptors, etc.
- SoftTorque Z technology
- Condition Based Maintenance (CBM)



## Drilling Performance



## Technical specifications

	DDM-650L-AC	DDM-750-AC	DDM-1000-AC-2M
Controls	Electric remote		
Weight	35 200 lb (16 000 kg)	60 600 lb (27 500 kg)	64 400 lb (29 200 kg)
Power rating	1 150 hp (858 kW)	1 600 hp (1 193 kW)	2 x 1 150 hp (858 kW)
Height	22.5 ft (6.9 m)	24.5 ft (7.5 m)	21.3 ft (6.5 m)
Continuous torque, max.*	61 600 lbf-ft (83 500 Nm)	77 443 lbf-ft (105 000 Nm)	91 665 lbf-ft (124 280 Nm)
Speed @ max.continuous torque	93 rpm	105 rpm	125 rpm
Speed, max.	250 rpm		
Hook load drilling	650 sh.tons (590 m.tons)	750 sh.tons (680 m.tons)	1 000 sh.tons (907 m.tons)
Hook load tripping	650 sh.tons (590 m.tons)	750 sh.tons (680 m.tons)	1 000 sh.tons (907 m.tons)
Pressure class	7 500 psi (517 bar)		
IBOP pressure rating	15 000 psi (1 034 bar)		
Water course	3 in (76.2 mm)	3 ½ in (90 mm)	3.15 in (80 mm)
Torque wrench, make-up/break out	125 000 lbf-ft (169 500 Nm)		
Hazardous area classification (according to IEC 60079-10-1)	Zone 1		
Ambient temperature, min./max.	-4 / +131°F (-20/ +55°C)		
Hydraulic requirements	47.6 gpm (us) @ 3 000 psi (180 l/min @ 210 bar)		

\* Performance at 113° F (45° C) ambient. Data is subject of confirmation by the manufacturer.