

DANDO JACKAL 4000

Occupying a small footprint, this compact yet powerful medium-depth drilling rig allows the user to carry out a wide range of drilling techniques in areas of difficult terrain and limited space.



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Swing-out Control Panel

The rig's ergonomically designed swing out control console is easy to position and allows optimal view of the borehole. It stows easily when tracking.



Rotary Head

With a variety of rotary heads available the Dando Jackal can perform wireline coring, rotary air blast, reverse circulation, Aircore, DTH and open hole mud rotary drilling. The rotary head is mounted to a hydraulic side shift with optional floating spindle to assist in the making and breaking of tool joints. Hydraulic head tilt is also available.



Break Out Clamps

The rig comes with double breakout clamps and an optional mast foot casing jack which provides a much higher retraction force for extracting casing or drill tooling.



Stability

Four hydraulic jacks to level and stabilise the rig. Rear jacks fold into the chassis to maximise clearance when tracking.

Pump Options

A range of triplex coring pumps, progressive cavity or centrifugal mud pumps are available.



Mast Extension

A manually deployed mast extension allows the operator to trip out 6m of drill rod in or out of the borehole using the winch.

Mast Dump

Capable of drilling inclined boreholes of up to 45 degrees. A stay bar system is used to provide additional mast support when angle drilling.

Compact Design

Crawler mounted as standard, the Jackal is able to track across difficult terrain and operate in areas of restricted space, which are off-limits to larger machines. The rig fits easily into a standard container for easy transportation.



CHASSIS

Main Chassis Fabrication	Folded and welded plate with 2 C-section main rails to ensure lowest weight possible while maintaining high strength and rigidity
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CARRIER

Standard	Crawler mounted
Other Options	Heavy duty commercial 4 x 4 truck Trailer Skid Customer own support vehicle/structure

TRACK SYSTEM

Type	Rubber tracks Options: Steel tracks; Steel with rubber pads
Tracking Speed	Speed 1: 1.4mph Speed 2: 2.7mph
Track Width	400 mm (15.7 inch)
Rig Width	1600 mm (63 inch)
Track Clearance (Max)	250 mm (9.8 inch)
Ground Pressure	6 psi - 8 psi depending on specification
Tracking Controls	Umbilical tracking via pilot control. Option: Radio remote tracking with manual backup

DECK ENGINE

Type	Option 1: Perkins 111HP Stage 3A Diesel Engine Option 2: Kohler 75HP Tier 4 Final Stage IIIB Diesel Engine (EU/NA) Other options available
Fuel Tank Capacity	90 L (23.8 US gal)

MAST CAPACITY	Standard Mast	Heavy Duty Mast
Head Travel Speed Up	25.9 m/min (85 ft/min)	16.6 m/min (54.5 ft/min)
Head Travel Speed Down	34.4 m/min (112.9 ft/min)	32.5 m/min (106.6 ft/min)
Pullback	4000 kgf (8818 lbf)	6000 kgf (13228 lbf)
Pulldown	3000 kgf (6614 lbf)	3500 kgf (7716 lbf)
Hook Load (Max)	2000 kgf (4409 lbf)	4000 kgf (8818 lbf)
Working Stroke	3.6 m (11.8 ft)	3.6 m (11.8 ft)
Drilling Inclination	45° to 90° Stay bar system supports mast from 45 - 65° angles	
Mast Dump	1300 mm (51 inch)	

BREAKOUT SYSTEM

Type	Double breakout clamps, 50 mm – 220 mm Option: Double breakout clamps, 60 mm - 250 mm Option: Guide table and hydraulic breakout wrench
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HYDRAULIC SYSTEM

Type	Load sensing variable piston pump and triple gear pump driven directly from the deck engine and controlled by spool valves. Cooling is provided by a single thermostatically controlled hydraulic fan oil cooler
Hydraulic Tank Capacity	320 L (84.5 US gal)
Flow (Max)	275 lpm (72.6 US gpm)
System Pressure (Max)	230 bar (3335.9 psi)
Other	Standard auxiliary hydraulic quick connect circuit for mud mixer or external pump

Rotary Heads

ROTARY HEAD OPTION 1 (Coring, RC, Aircore, DTH & RAB)

4 speed rotary head with 2 inch water/air swivel. 2 position side shift and head tilt			
Gear 1	91 rpm 3220 Nm	Gear 2	182 rpm 1610 Nm
Gear 3	375 rpm 780 Nm	Gear 4	750 rpm 390 Nm

ROTARY HEAD OPTION 2 (Coring, RC, Aircore, DTH & RAB)

4 speed rotary head with 2 inch water/air swivel. 2 position side shift and head tilt			
Gear 1	48 rpm 6000 Nm	Gear 2	94 rpm 3000 Nm
Gear 3	188 rpm 1470 Nm	Gear 4	370 rpm 740 Nm

ROTARY HEAD OPTION 3 (Coring, Open Hole, DTH and RAB)

4 speed rotary head with 1.25 inch water/air swivel. 3 position side shift			
Gear 1	50 rpm 5000 Nm	Gear 2	105 rpm 3000 Nm
Gear 3	370 rpm 1070 Nm	Gear 4	730 rpm 535 Nm

ROTARY HEAD OPTION 4 (Coring, RC, Aircore, DTH & RAB)

4 speed rotary head with 2 inch water/air swivel. 2 position side shift and head tilt			
Gear 1	66 rpm 7040 Nm	Gear 2	105 rpm 4430 Nm
Gear 3	280 rpm 1670 Nm	Gear 4	1000 rpm 400 Nm

Winches

MAIN WINCH OPTION 1

Single Line Pull (1st Layer)	1360 kg (2998 lb)
Single Line Speed (1st Layer)	65 mpm (213.3 ft/min)

MAIN WINCH OPTION 2

Single Line Pull (1st Layer)	2000 kg (4409.2 lb)
Single Line Speed (1st Layer)	31.5 mpm (103.3 ft/min)

LEVELLING JACKS

Two independent hydraulic front levelling jacks with individual locking valves

Two fold up rear hydraulic levelling jacks with individual locking valves

LIGHTING AND ELECTRICAL SYSTEM

Lighting	Control console and rear canopy lighting Options: Mast lighting; Tripod mounted light
Electrical System	12 V 2 x 12V electrical socket connections for remote lighting and other tools

SAFETY FEATURES

3 emergency stop buttons

Hydraulic system protection via relief valves and low level oil sensor

Option: Safety gate with interlock. Automatic decrease in head speed when opened

WEIGHT

Weight 6000 kg - 8000 kg (13228 lb - 17637 lb) depending on configuration

Other Optional Equipment

WIRELINE WINCH

Single Line Pull (Max)	540 kg (1190.5 lb)
Single Line Speed (Max)	110 mpm (360.9 ft/min)
Cable Length/Drum Capacity (3/16")	400 m (1312.3 ft)

CORING PUMP OPTION 1

Type	CK110
Flow Rate (Max)	85.9 lpm (22.7 US gpm)
Discharge Pressure (Max)	30 bar (435 psi)

CORING PUMP OPTION 2

Type	FMC L0618
Flow Rate (Max)	102.6 lpm (27.1 US gpm)
Discharge Pressure (Max)	31 bar (450 psi)

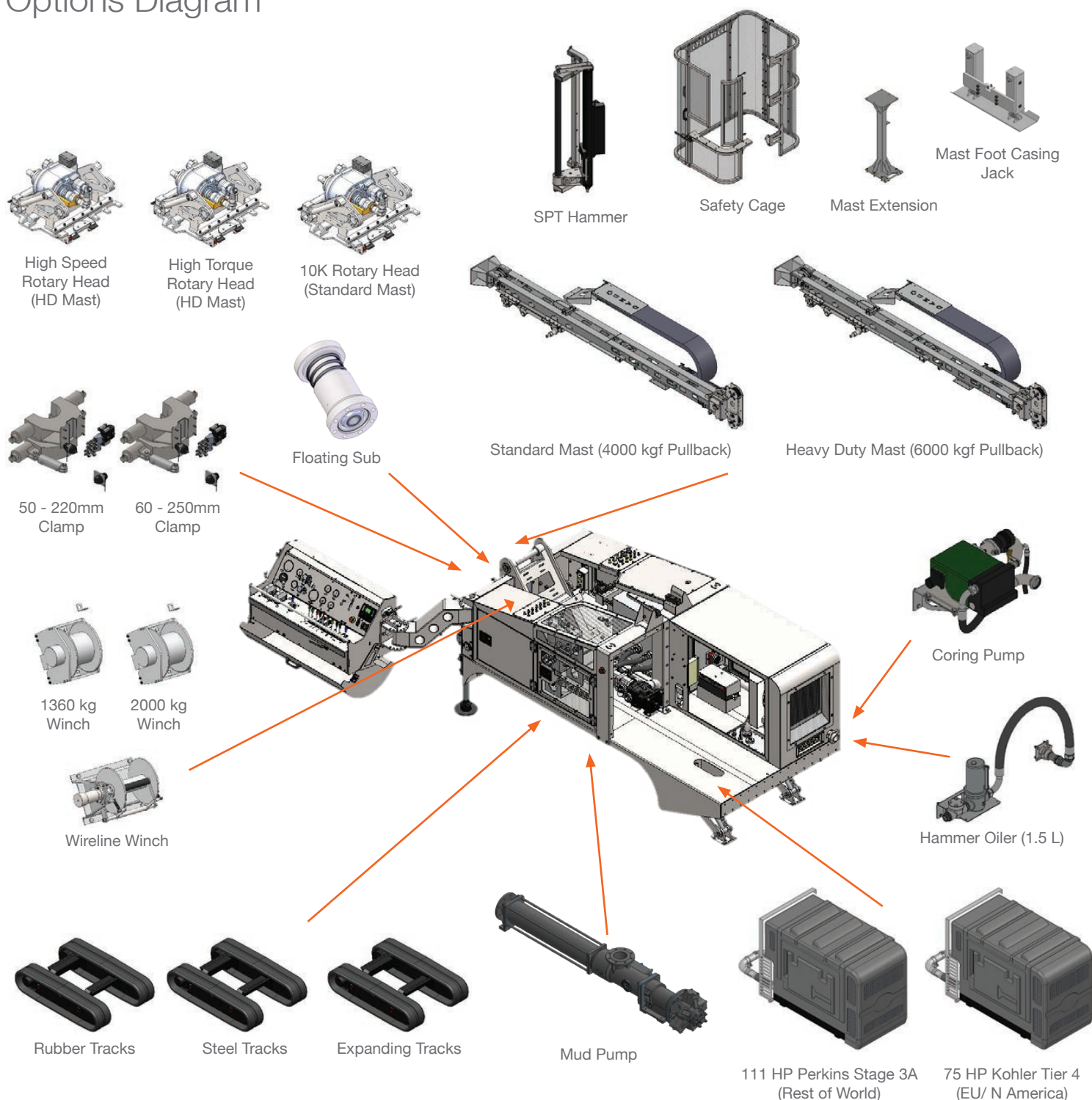
MUD PUMP

A range of progressive cavity or centrifugal mud pumps available.

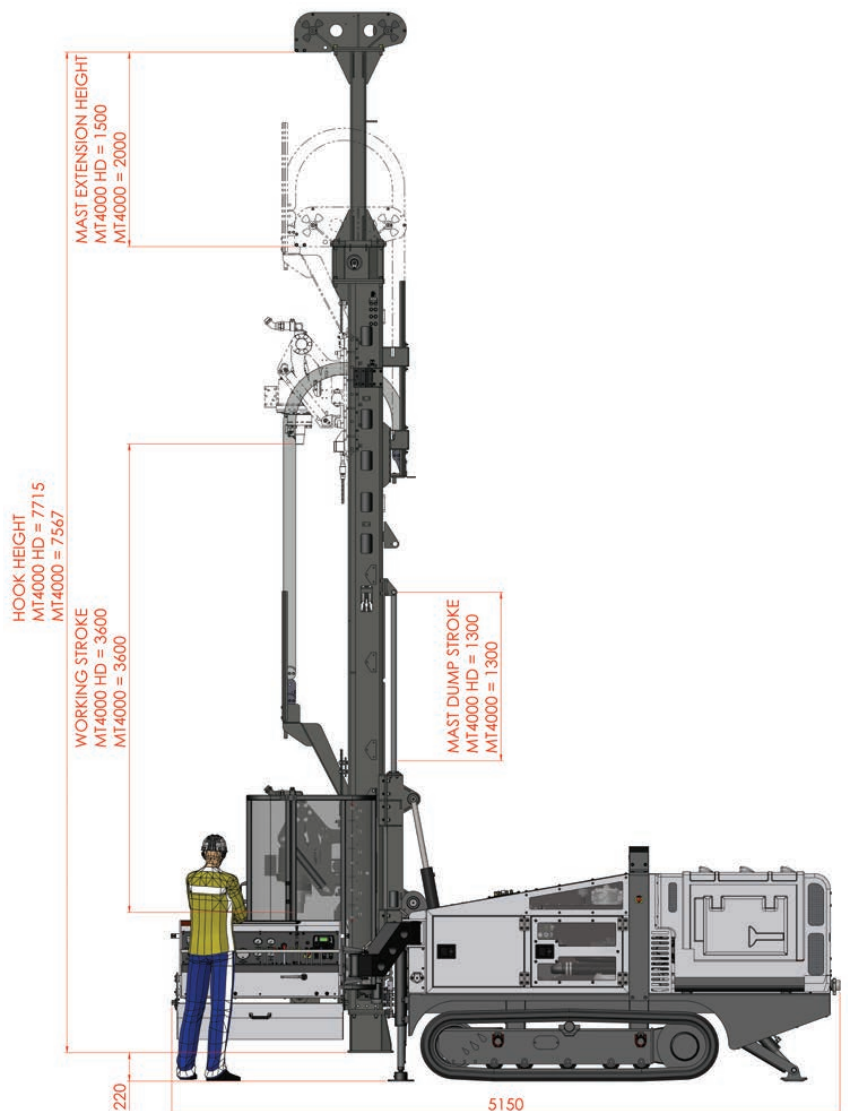
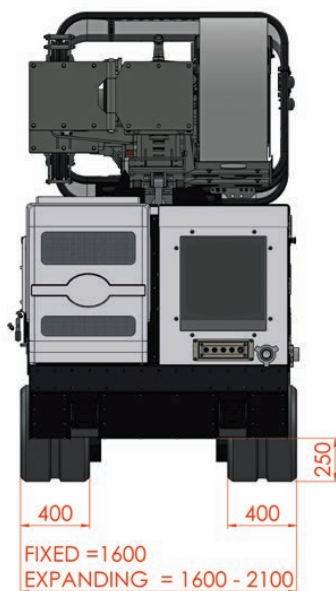
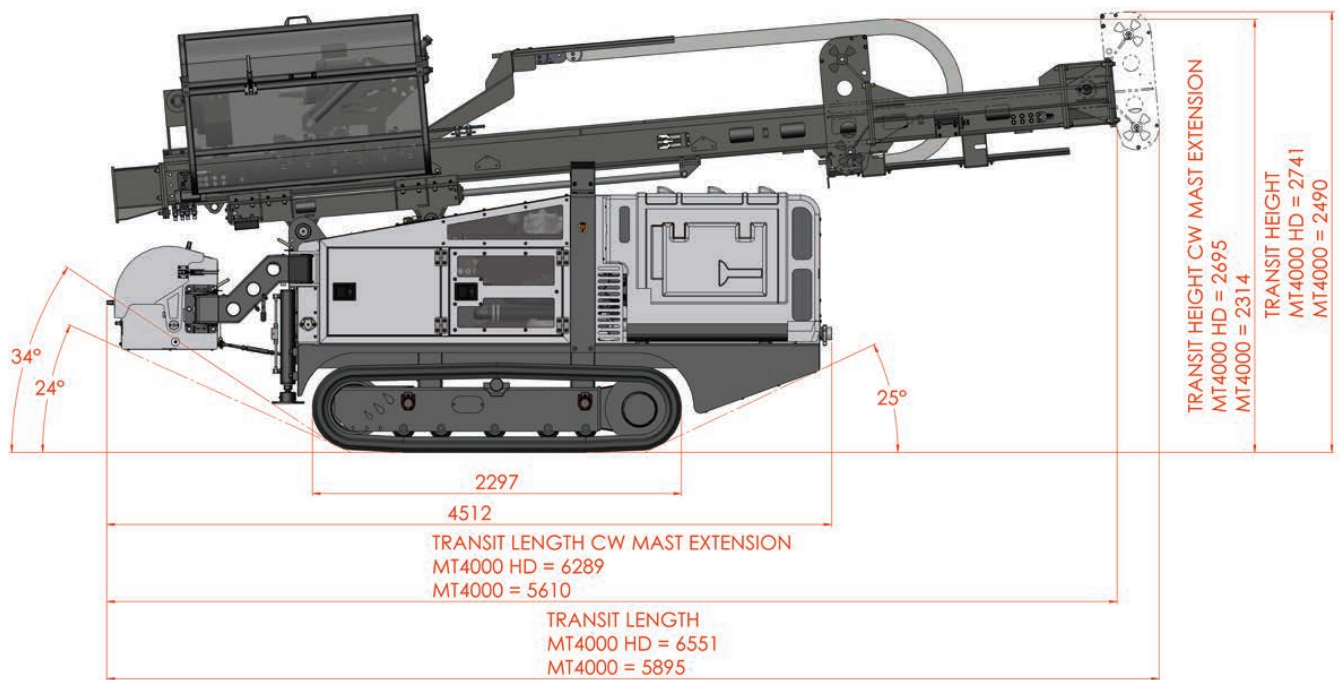
DRILLING DEPTHS*	Standard Mast	Heavy Duty Mast
4" RC (25kg/m)	128 m (420 ft)	192 m (630 ft)
3 1/2" (13.5kg/m)	237 m (778 ft)	356 m (1168 ft)
HWL (11.6kg/m)	276 m (906 ft)	414 m (1358 ft)
NWL (8kg/m)	400 m (1312 ft)	600 m (1969 ft)

*Figures are theoretical and are calculated at 80% of total pullback capacity of the mast

Options Diagram



Track Mounted Dimensions



*Standard dimensions in mm

Please note: All figures and claims made here are indicative and Dando Drilling International reserves the right to make alterations to specification detail without notice. All images are for reference only and may not represent the exact specification outlined in this document. Please visit www.dando.co.uk for our Terms and Conditions

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