

# Mini Excavator



#### **Specifications**

Operating weight 3550 kg

Engine power 22.8 kW (31.0 HP)

 Bucket capacity
 54 - 191 I

 Digging depth
 3.25 / 3.45 m

 Reach
 5.63 / 5.81 m

#### **Features**

- ▶ Short-tail machine
- Extra-wide blade for dozer applications
- ▶ Top-mounted boom cylinders for perfect protection of cylinders and larger range of application
- Comfort cab with excellent visibility (canopy as option)
- Increased productivity thanks to load sensing hydraulics
- ► Knickmatik® allows for working closely along walls
- ▶ Wide range of proven working tools

# **SPECIFICATIONS**

## **ENGINE**

Manufacturer, model	Kubota, D1803 M-DI, EU Stage IIIA
Туре	3-cylinder diesel engine
Combustion	4-stroke cycle with direct fuel injection (DI)
Bore x stroke	87 x 102 mm
Displacement	1826 cm <sup>3</sup>
Power rating acc. to ISO 14396 @ 2200 rpm	22.8 kW (31.0 HP)
Torque max. @ 1400 rpm	114 Nm
Air filter with safety cartridge and maintenance switch	
Cold-starting aid	Glow plugs

# **ELECTRICAL SYSTEM**

Nominal voltage	12 V
Battery	12 V / 71 Ah
Generator	12 V / 40 A
Starter	2.0 kW
Lighting system:	1 work light front left on the cab / canopy (auxiliary headlamps optional)

# TRANSMISSION

Two-stage hydrostatic travel drive with axial piston variable displacement motor and reduction gear, fully enclosed. Automatic change-over between speed range I and II. "Straight-Trave!" function. Brake valve for downhill drive. Manual switching via button on dozer lever

Travel speed, forward and reverse 0-2.4/4.2 kph

# UNDERCARRIAGE

Torsion-proof welded design. Crawler unit carriers in sloped design for dirt outlet. Maintenance-free crawler-type undercarriage. Idler suspension with hydraulic crawler-chain tensioning. Support roller at the top

Width rubber tracks	300 mm
Total length (undercarriage)	2090 mm
Number of rollers per side	4 at the bottom, 1 on top
Track width	1450 mm
Gradeability	max. 60%
Drawbar pull 1st / 2nd speed range	3560 / 2110 daN

## **STEERING**

Independent individual control of crawler chains, also counterwise. Sensitive actuation via manual levers, combined with pedals, foot rest on pedal console

## **DOZER BLADE**

Independent of drive train, sensitive control via separate hand lever	
Width x height	1750 x 360 mm
Dozer cut below ground	300 mm
Dozer lift above ground	430 mm
Slope angle	35°

# **SWING SYSTEM**

internally toothed ring gear	
Swing speed	0 – 9 rpm

# **SWING BRAKE**

Hydrostatic drive, also acts as wear-resistant brake. Additional spring-loaded multi-disc brake. Considered as transport securit<



# **FLUID CAPACITIES**

Fuel tank	68 I
Hydraulic system (incl. tank 28 I)	45 I

# **KNICKMATIK®**

Lateral parallel adjustment of boom arrangement at full dig depth	
Angle of articulation / lateral adjustment left	57° / 710 mm
Angle of articulation / lateral adjustment right	60° / 870 mm

# **OPERATING DATA, STANDARD EQUIPMENT**

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Operating weight according to ISO 6016: Cab with 400 mm bucket, quick-attach tracks, including driver, full fuel tank	system, rubber 3550 kg
Operating weight according to ISO 6016: Canopy with 400 mm bucket, quick-attracks, including driver, full fuel tank	ach system, rubber 3470 kg
Transport weight: Cab, tank half full, with quick-attach system, w/out bucket	3340 kg
Transport weight: Canopy, tank half full, with quick-attach system, w/out bucket	3260 kg
Total length (travel position)	3195 mm
Total length (trailer transport position)	4843 mm
Total height (top of canopy/cab)	2480 / 2500 mm
Total height (travel position)	3420 mm
Total width (undercarriage)	1750 mm
Total width of uppercarriage	1500 mm
Uppercarriage tail swing	935 mm
Uppercarriage front swing	1955 mm
Working envelope, bucket heaped (also with 600 mm bucket): 180° 360°	2890 mm 3900 mm
Ground clearance	200 mm
Swing clearance	550 mm
Reach max.**	5630 / 5810* mm
Digging depth max.**	3255 /3455* mm
Loading height approx.**	3060 / 3165* mm
Highest reachable height**	4540 / 4645* mm
Bucket rotation angle	187°
Bucket digging force acc. to ISO 6015	35,600 N
Stick digging force acc. to ISO 6015	21,100 N
Specific ground pressure: Excavator cpl. with rubber crawlers	0.29 daN/cm²
* W P	

- \* with dipperstick 1800 mm (optional)
- \*\* Dimensions apply to machine standing on level ground, but can be increased by tilting the machine using the blade.



## **HYDRAULIC SYSTEM**

Pump capacity, max. 103 l/min Working pressure 250 bar

Single-stage, load-sensing controlled variable displacement axial piston pump

LS-control and load independent flow distribution (LIFD) for all working movements and travel drive

Simultaneous independent control of all functions

All excavator movements servo-controlled, ISO

All functions are proportionally controllable

Powerful hydraulic oil cooler

Full flow filtration through return filter

Cylinders for boom, dipper arm and articulation with end position damping at both ends

Bucket retract function with end-position damping

Safety shutdown activated by exit barrier

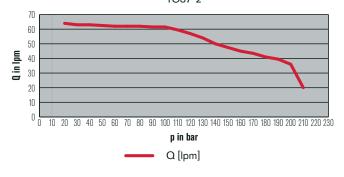
Additional control circuit as standard: Terex 'Fingertip' control (electro proportional) for additional control circuit for work attachments on right joystick, including holding function for continuous operation, actuation via rollers

Additional control circuit with bypass for pressure-reduced return quantity

Hydraulic power to the couplings (additional control circuit 1):

Pump capacity (pressure-controlled)	
up to approx. 100 bar	62 lpm
@ 210 bar	20 lpm
Max. working pressure	210 bar
Diagram shows P/Q provided on couplers:	

p/Q characteristic curve for additional control circuit 1 TC37-2



# **CAB (STANDARD)**

Spacious, sound-insulated full-vision steel cab, FOPS\*\*\* (acc. to ISO 3449), ROPS and TOPS (acc. to ISO 12117) certified

Very good all-round visibility, lean vertical support members

Safety glass

Front window supported by pneumatic springs, slidable under cab roof

Fixed window part without frame which obstructs the forward view

Door with large access on left hand side

Foldable console on left hand side for large entry access

Sliding window on right-hand side

Matching locks of hood and ignition

Central connector for electrical cable

Wiper washer with wiper for windscreen

Sun visor, interior light, coat hook

Operator's seat (standard version), imitation leather:

Longitudinal and back tilt adjustment

Continuous weight adjustment as per operators weight

Safety belt

Armrests height adjustable without tools

Preparation for antenna, loudspeakers and radio

Large storage compartment under the operator's seat

Heating (water) with 2-speed fan and 4 adjustable exhaust nozzles

Temperature controller in cab

Storage pocket behind the operator's seat

Storage compartment for mobile phone (near 12V outlet)

1 left-hand outside rear-view mirror, foldable in front of windshield

1 working floodlight front left as standard

Display, fuel gauge, hour meter and warning lights

Fuse box easily accessible from outside of the cab

Very good ergonomics

Ergonomically arranged dozer blade lever

Fast / slow switch on dozer blade lever

Yellow beacon, radio, immobilizer (anti-theft device), working floodlights prepared for optional installation

\*\*\* FOPS-approved only with skylight guard (optional)

# **CANOPY**

Robust steel pipe construction. 4 support members for the best all-round visibility

1 working floodlight front left

FOPS (acc. to ISO 3449), ROPS and TOPS (acc. to ISO 12117) certified

Operator's seat (standard version):

Safety belt

Large storage compartment under the operator's seat

Storage pocket behind the operator's seat

Display, fuel gauge, hour meter and warning lights

Easy and quick change of cab to canopy and vice-versa

Yellow beacon, immobilizer (anti-theft device), working floodlights prepared for optional installation

Reduction weight canopy

80 kg

# CRANE TRANSPORT

Crane lifting beam for cab and canopy

## SOUND LEVEL VALUES

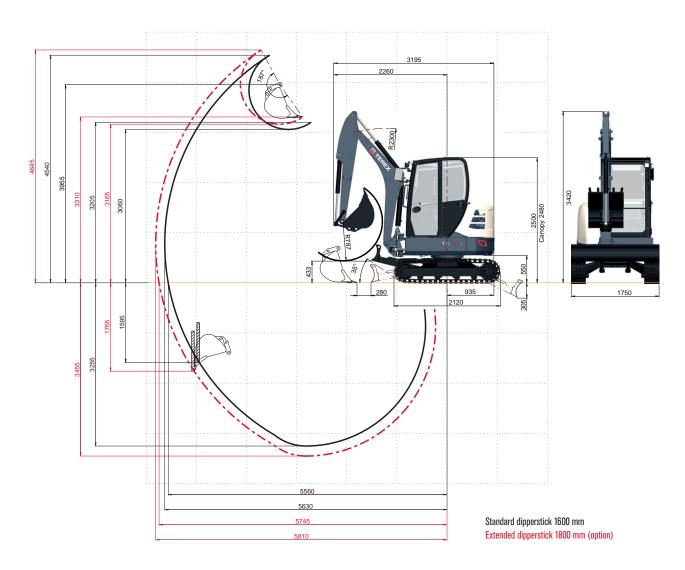
Noise emission ambience  $L_{_{WA}}$  cab / canopy 95 / 95 dB (A) Noise emission cab  $L_{_{ols}}$  cab / canopy 78 / 79 dB (A)

Sound level values measured in compliance with Directive 2000/14/EC and EN474.

#### VIBRATION VALUES

Effective values of acceleration for whole body less than  $0.5 \text{ m/s}^2$  Effective values of acceleration for hand-arm less than  $2.5 \text{ m/s}^2$ 

Vibration values in compliance with Directive 2006/42/EC and EN474.



# **DIMENSIONS**

Fig. 1, 2: Excavation within the entire width of the machine

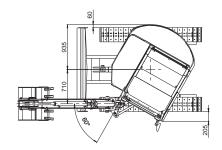
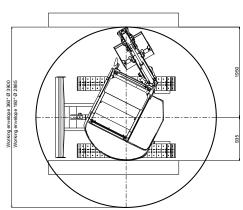
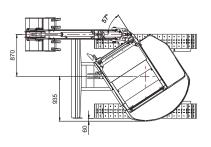


Fig. 3: Working envelope





# **LIFTING CAPACITIES**

Bucket hinge height		Load radius from center of ring gear									
Dipperstick 1600 mm	Dipperstick 1600 mm 2.5 m		3.0 m 3.5 r		m 4.0		m	4.5	4.5 m		
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0.0	I	-	-	-	-	0.96	0.57	0.91	0.45	0.86	0.38
2.0 m	1/2	-	-	-	-	0.70	0.56	0.56	0.45	0.44	0.37
1.0 m	1D	2.11	0.88	1.54	0.67	1.23	0.52	1.03	0.42	0.87	0.35
1.0 m	1/2	1.13	0.87	0.84	0.66	0.65	0.51	0.51	0.41	0.43	0.34
0.0	1D	2.33	0.80	1.67	0.61	1.29	0.49	1.05	0.40	0.84	0.34
0.0 m	1/2	1.15	0.79	0.76	0.60	0.60	0.48	0.46	0.39	0.40	0.33

Bucket hinge height		Load radius from center of ring gear									
Dipperstick 1800 mm 2.5 m		3.0 m 3.5 m				4.0 m		4.5 m			
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2.0 m	13	-	-	-	-	0.89	0.60	0.85	0.46	0.81	0.38
2.0 m	1/1	-	-	-	-	0.50	0.58	0.55	0.45	0.44	0.37
1.0 m	1)	1.94	0.92	1.41	0.69	1.16	0.52	0.99	0.44	0.85	0.35
1.0 m	1/1	1.13	0.89	0.83	0.67	0.65	0.51	0.51	0.42	0.42	0.35
0.0	100	2.26	0.81	1.61	0.63	1.27	0.51	1.03	0.42	0.84	0.35
0.0 m	1/1	1.03	0.80	0.76	0.62	0.60	0.50	0.49	0.41	0.40	0.34

All values in tons (t) were determined acc. to ISO 10567 and include a stability factor of 1.33 or 87% of the hydraulic lifting capacity. All values were determined with quick-attach system but without bucket. In case of mounted-on work attachments, the deadweights of the work attachments must be deducted from the permissible operating loads.

Working equipment: Rubber tracks

# **WORK ATTACHMENTS**

# **BUCKETS**

Bucket, QAS	300 mm wide, capacity 54 l, 67 kg
Bucket, QAS	400 mm wide, capacity 78 l, 78 kg
Bucket, QAS	500 mm wide, capacity 103 l, 89 kg
Bucket, QAS	600 mm wide, capacity 129 l, 98 kg
Bucket, QAS	700 mm wide, capacity 155 I, 109 kg
Ditch-cleaning bucket, QAS	1000 mm wide, capacity 145 I, 135 kg
Ditch-cleaning bucket, QAS	1300 mm wide, capacity 191 I, 164 kg
Swing bucket, QAS	1000 mm wide, capacity 145 I, 194 kg
Swing bucket, QAS	1300 mm wide, capacity 191 I, 228 kg

# **GRABS**

Clamshell grab GL 1250, grab swing brake	set of shells 250 mm wide, capacity 45 l
Clamshell grab GL 1350, grab swing brake	set of shells 350 mm wide, capacity 65 I
Clamshell grab GL 1450, grab swing brake	set of shells 450 mm wide, capacity 85 l
Clamshell grab GL 1600, grab swing brake	set of shells 600 mm wide, capacity 115 I
Finator	

# **OTHER WORK ATTACHMENTS**

Cutting unit
Quick-change adapter for hydraulic hammer
Bolt-on load hook for bucket rod



# **OPTIONAL EQUIPMENT**

# **BOOM OPTIONS**

Monobloc boom, with extended dipperstick 1800 mm

# HYDRAULIC SYSTEM

Terex 'Fingertip' control (electro proportional)
for 2<sup>nd</sup> additional control circuit for work attachments on left joystick, actuation via rollers (boom with standard dipperstick)

Quick couplings for work attachments

Float position - front dozer blade

Float position - front dozer blade

Supplementary set "Clamshell grab opening /

Quick couplings for supplementary set "Clamshell grab opening/closing"

Hose-rupture / load-retaining valve for boom

OPERATOR'S STAND

Operator's seat (comfort version), hydraulic damping, extra-high backrest, longitudinal-horizontal suspension, mechanical lumbar support

dipperstick

closing", for standard dipperstick

Hose-rupture / load-retaining valve for

Biodegradable hydraulic oil / ester-based HLP

Operator's seat (premium version), air damping, extra-high backrest, longitudinal-horizontal suspension, seat and backrest heating, mechanical lumbar support

# CAB

Rain guard

Lighting package: Cab-mounted working floodlight front right and rear right, boom-mounted
working floodlight, yellow beacon

Fire extinguisher, ABC powder 2 kg

Back-up alarm, signal-horn (can be switched off)

Guard for front window

# OTHER OPTIONAL EQUIPMENT

 Mechanical quick-attach system
 Special colour options

 Quick-attach system, mechanical
 Canopy with working floodlight

 (genuine Lehnhoff system), type MS03
 (weight reduction: 80 kg)

 Crane loading wire-rope harness
 Immobilizer

Electric refueling pump

Safety package: hose-rupture / load-retaining
valves for boom and dipperstick cylinders, fire
extinguisher, immobilizer, motion alarm

Battery master switch

Further optional equipment available on request

# www.terex.com/construction

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