



**Levent**  
2002  
CORE DRILLING RIG



# Levent<sub>2002</sub> Core Drilling Rig

The Levent 2002 is an all-hydraulic diamond core drill rig with a wide range of options and accessories. It consists of three main parts: the drill unit, a power unit, and a control console. As an option, the drill unit can be mounted on carriers for special purposes like a; a narrow crawler for underground use, or a wide crawler for surface use. It is suitable for a variety of drilling methods in both underground and surface operations such as core drilling, grout hole drilling, probing etc..

The drill unit can be powered by an electric motor or diesel engine. When the drill rig is equipped with the electrical power unit, as an optional diesel engine for tramming is available.

The Levent 2002 uses the best technology available for diamond core drills. All tube jointing, thread breaking, feeding, wireline hoist sequences are controlled from a control console which can be positioned to suit the setup. Feeding is done by a direct cylinder and chain system.

The drill can be equipped with three different feed lengths, and two different sizes of rotation units to suit rod size and drilling applications.

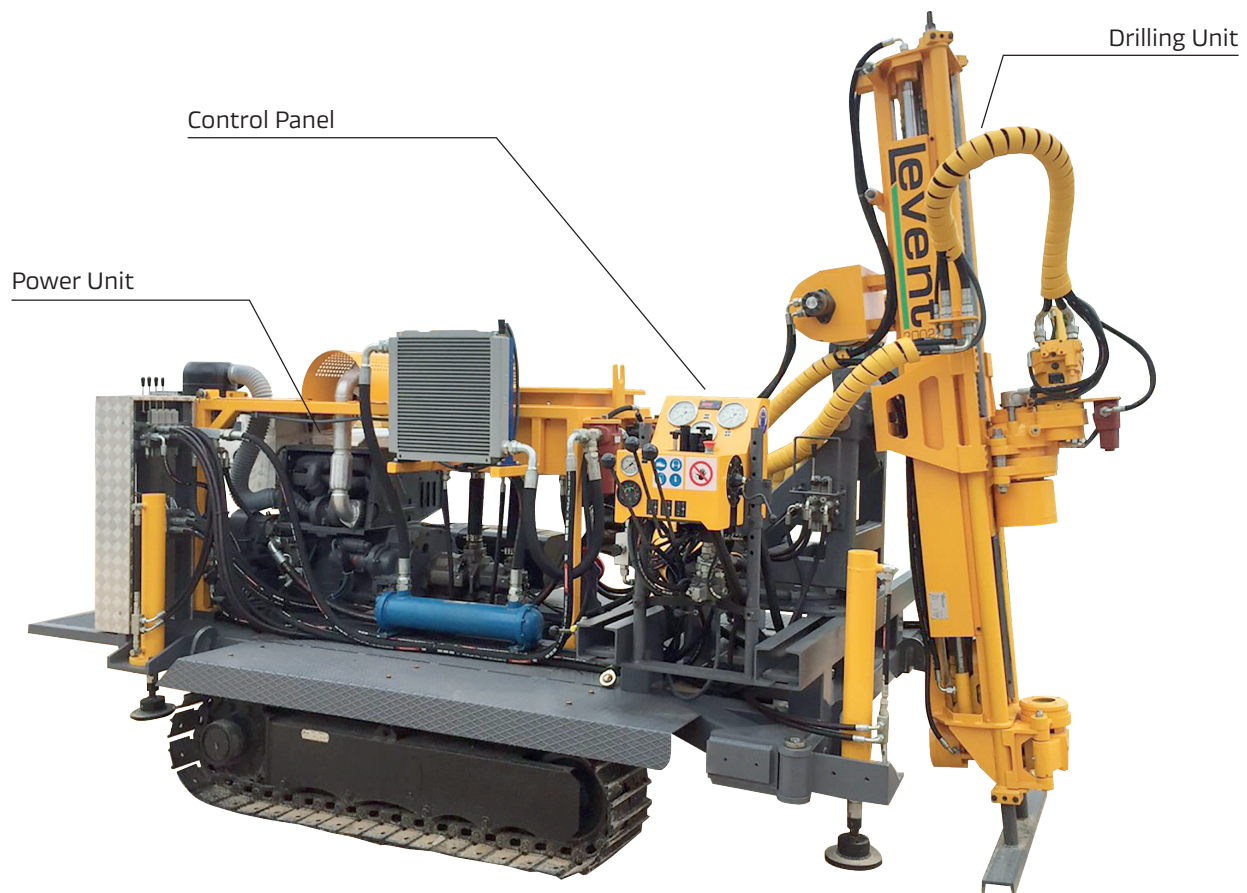
To achieve the best results with regard to:

- high penetration
- optimal core recovery
- and low drilling costs

It is of primary importance that drill rods, core barrels and coring bits are of the right type and quality, matched to the rock drill and to the prevailing rock conditions.

Bearing in mind core drill's speed of rotation, its rating and chuck diameter, the LEVENT 2002 is best suited to drill holes 48-76 mm in diameter (A-N) using both conventional as well as wire line rods.

The spindle inner diameter is 78 mm (3.07 in) in the N-size rotation unit.



# Technical Specifications

## Drilling Depth Capacity

These figures serve as guidelines only. They are calculated with available pull/feed force, weight of drill string in water filled hole, average WOB and reserve for breaking solid core in rock with 5MPa Tensile Strength. Son-Mak cannot guarantee these capacities will be reached in all working conditions due to varying factors such as ITH used, conditions of the ground and differences in operation.

Drill Rod	Vertical Down		Vertical Up	
	Metric	U.S. System	Metric	U.S. System
AO Wireline	700 m	2296 ft	460 m	1509 ft
BO / BRO Wireline	600 m	1968 ft	400 m	1312 ft
NO / NRO Wireline	400 m	1312 ft	290 m	951 ft
NRO Thin Wall	500 m	1640 ft	325 m	1066 ft

Rotation Unit	Standard Type	High-Speed Type
Rod sizes:	A-N	A-N
Power:	Hydraulic Motor	Hydraulic Motor
Max. Torque:	1350 Nm (995 ft lbf)	680 Nm (501 ft lbf)
Max. Rotation Speed:	900 rpm	2200 rpm
Type:	Hydraulic Closed, Spring Open	Hydraulic Closed, Spring Open
Spindle Inner Diameter:	78 mm (3.07 in)	78 mm (3.07 in)
Chuck axial holding force:	98 kN (22000 lb)	98 kN (22000 lb)

## System Power Unit

Electrical Power Unit PU55E	Metric	U.S. System
Power:	55 kW	75 hp
RPM:	1450	1450
Primary Pump:	80 l/min - 260 bar	21 gal/min - 3770 psi
Secondary Pump:	40 l/min - 210 bar	10.5 gal/min - 3045 psi
Oil Tank:	150 liters	40 gallons
Hydraulic Oil Cooling:	Water and Air Oil Cooler	

## System Power Unit

Diesel Power Unit PU150D	Metric	U.S. System
Volume:	4.3 liter	1.13 gallons
Power:	78 kW	105 bhp
RPM:	2200	2200
Electrical System:	24V	24V
Cooling System:	Air	
Emmissions Certifications:	Stage II	Tier 2
Engine Type:	Turbo Charged, After Cooled Diesel Engine.	
Primary Pump:	80 l/min - 260 bar	21 gal/min - 3770 psi
Secondary Pump:	60 l/min - 210 bar	16 gal/min - 3045 psi
Oil Tank:	150 liters	40 gallons
Hydraulic Oil Cooling:	Water and Air Oil Cooler	



Feed Frame Alternatives	850		1800		3300	
	Metric	U.S. System	Metric	U.S. System	Metric	U.S. System
Feed Stroke:	850 mm	33.5 in	1800 mm	71 in	3300 mm	130 in
Thrust Force:	60 kN	13488 lbf	60 kN	13488 lbf	60 kN	13488 lbf
Pull Force:	60 kN	13488 lbf	60 kN	13488 lbf	60 kN	13488 lbf
Max. Feed Speed:	0.8 m/s	2.6 fps	0.8 m/s	2.6 fps	0.8 m/s	2.6 fps
Drilling Angle:	360 degrees					

Rod Holder	Metric	U.S. System
Maximum Rod Size (HO)	114.3 mm	4.5 in
Maximum Inside Diameter (w/oJaws):	130 mm	5.1 in
Holding Force:	20 kN	4496 lbf
Holding Force with TC Inserts:	30 kN	6744 lbf
Type:	Hydraulically open, disc spring close	

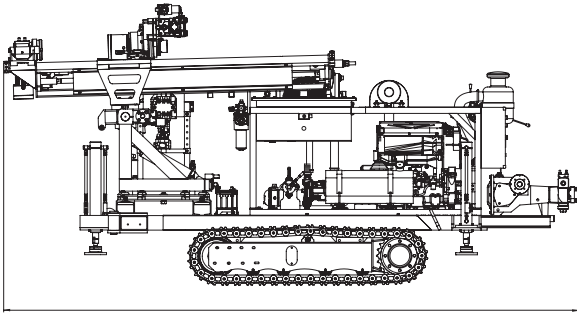
Wireline Hoist	Metric	U.S. System
Drum Capacity (4.76mm - 3/16" wire)	400 m	1312 ft
Line pull min. (full drum)	3.4 kN	765 lb
Line pull max. (bare drum)	5.8 kN	1303 lb
Line speed min. (bare drum)	120 m/min	393 ft/min
Line speed max. (full drum)	250 m/min	820 ft/min

Mud Pump Alternatives	Metric	U.S. System
<b>TP80H</b>		
Flow:	80 l/min	21 gal./min
Pressure:	60 bar	870 psi

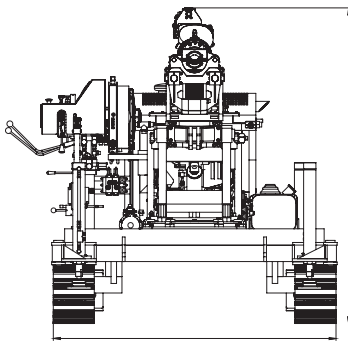
	Metric	U.S. System
<b>TP135H</b>		
Flow:	135 l/min	35 gal./min
Pressure:	70 bar	1000 psi

# Transportation Dimensions

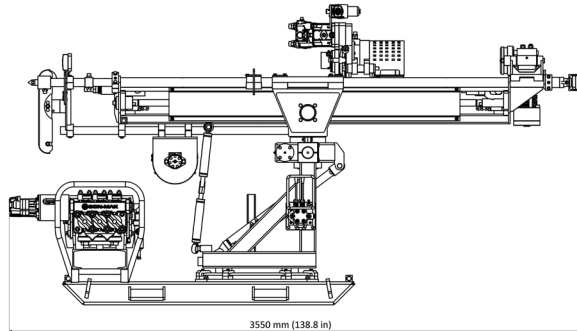
## Levent 2002 Crawler



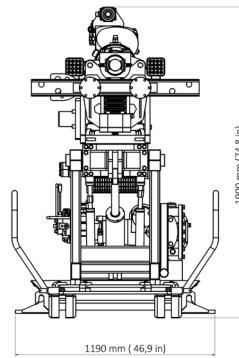
4729 mm (186 in)



## Levent 2002 Skid



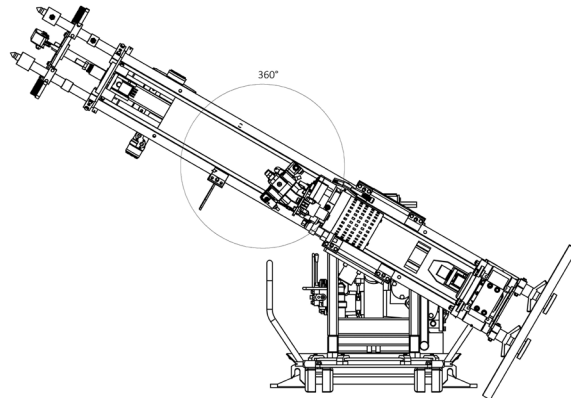
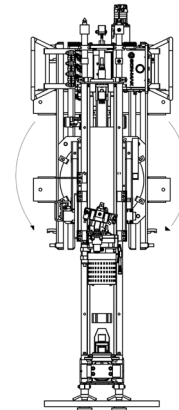
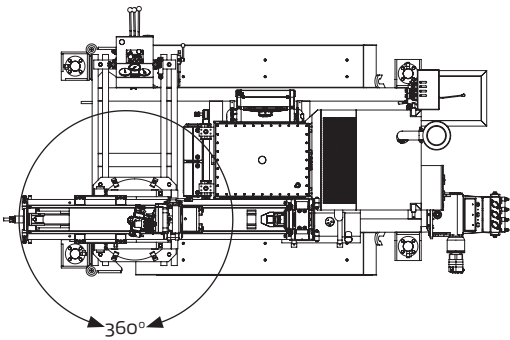
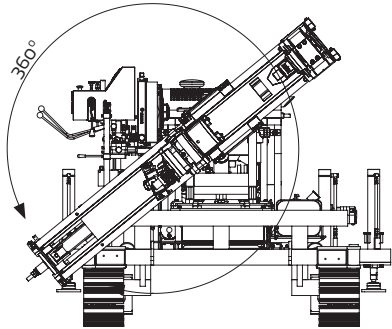
3550 mm (138.8 in)



1190 mm (46.9 in)

1900 mm (74.8 in)

# Working Dimensions

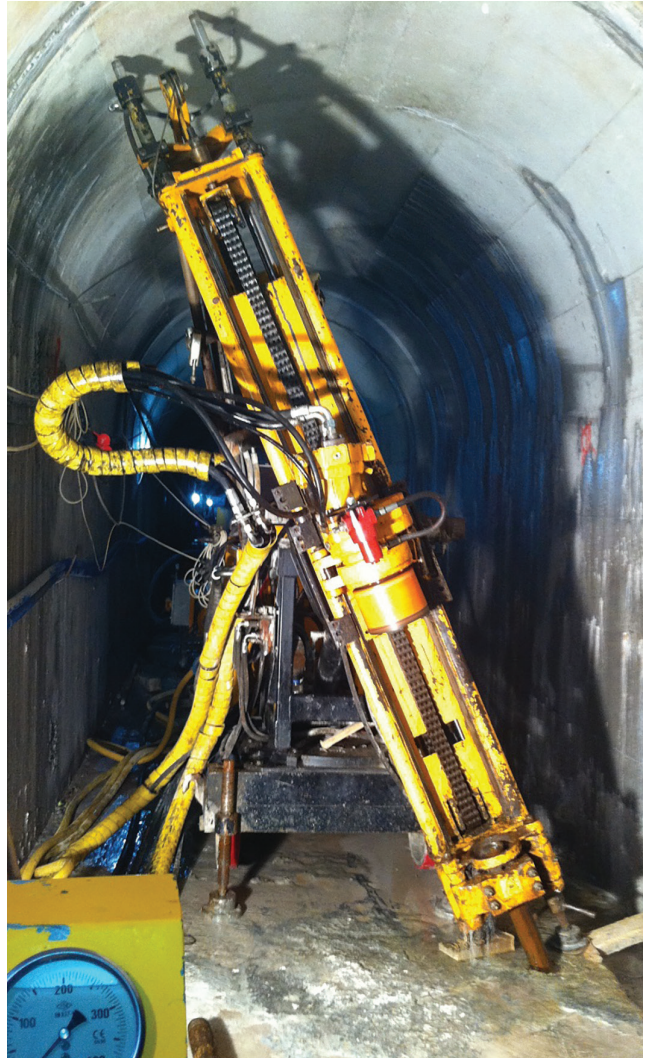


### Weight

Levent 2002 DC: 4500 kg (9921 lb)  
 Levent 2002 EC/d: 4800 kg (10582 lb)

### Weight

Levent 2002ES: 2560 kg (5644 lb)





**SON-MAK**

MAKİNE - İNŞAAT - SONDAJ SAN. TİC. LTD. ŞTİ.

Kayapa I. Organize Sanayi Bölgesi

Kayapa Sanayi Bulvarı No:4/1 16280 Nilüfer BURSA - TÜRKİYE

Tel: +90 224 440 0 555 (pbx) Fax: +90 224 482 44 39

info@son-mak.com.tr www.son-mak.com.tr

© Copyright 2021, Son-Mak Makine, Bursa - Turkey.  
Any unauthorized use or copying of the contents or any part thereof is prohibited. This applies in particular to trademarks, model denominations, part numbers and drawings. Illustrations and photos in this brochure may show equipment with optional extras. Specifications and equipment subjects to change without notice. Consult to Son-Mak for specific information.