



INTERNATIONAL  
**DRILLING**  
EQUIPMENT, INC.



**Rotary  
Drilling  
Tools**

## BUCKETS

**Buckets** are recommended for drilling layers of soil and rock in presence of water and when the drilling technology uses bentonite or other types of slurry. As result of different job site reports, buckets are designed in two different ways:

- Single opening: suitable for fine grained soils and bored pile up to diameter 1000 mm. They are particularly needed in case of casings application and coarse gravel.
- Double opening: suitable for fine grained soils and bored pile over diameter 1000 mm. They are particularly indicated for secant pile walls.

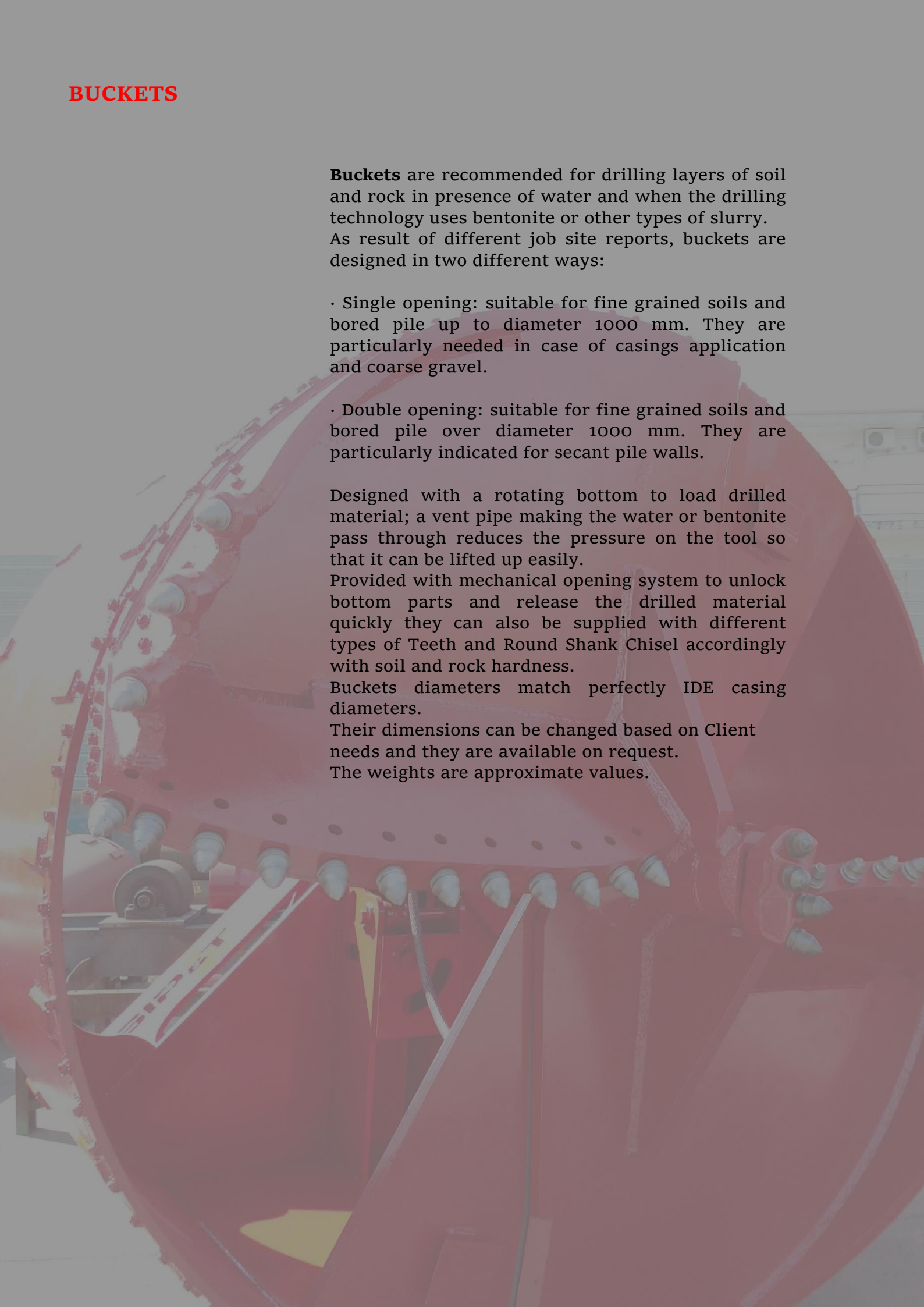
Designed with a rotating bottom to load drilled material; a vent pipe making the water or bentonite pass through reduces the pressure on the tool so that it can be lifted up easily.

Provided with mechanical opening system to unlock bottom parts and release the drilled material quickly they can also be supplied with different types of Teeth and Round Shank Chisel accordingly with soil and rock hardness.

Buckets diameters match perfectly IDE casing diameters.

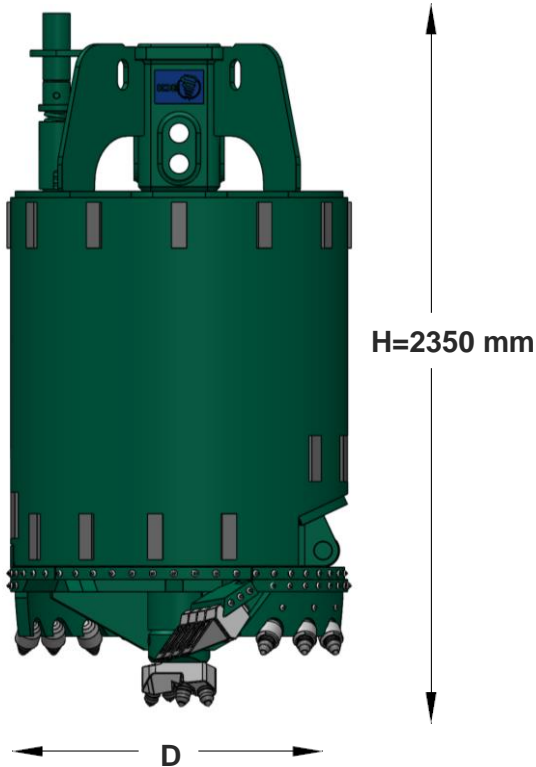
Their dimensions can be changed based on Client needs and they are available on request.

The weights are approximate values.

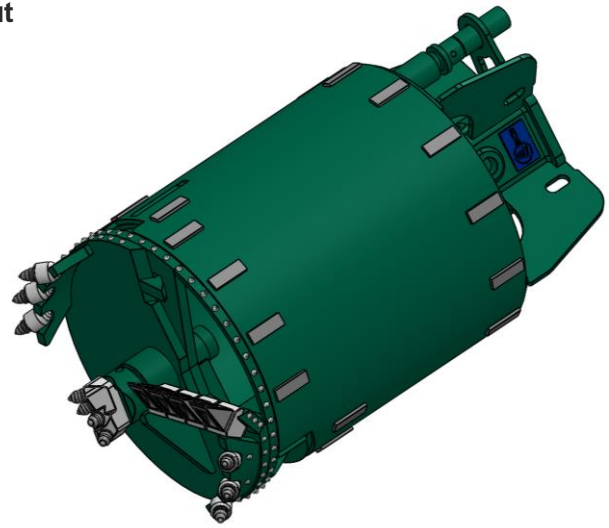


# Soil Bucket

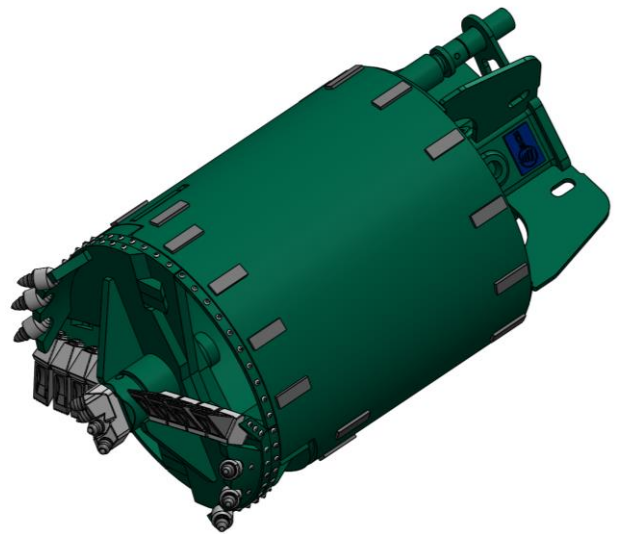
## Technical data



single cut



double cut



D	Φ Casings	Weight
mm	mm	kg
520	620/540	766
650	750/670	953
780	880/800	1142
900	1000/920	1365
980	1080/1000	1552
1060	1180/1100	1810
1180	1300/1220	2005
1350	1500/1400	2227
1650	1800/1700	2890
1830	2000/1880	3960

Custom lengths and diameters are available upon request

### Features

- 200 kelly box made of heat-treated cast steel with two locking pins
- Betek TungStuds wear protection at the bottoms
- Single cut up to a diameter of 1200 mm
- Fitted with Betek teeth and interchangeable bit
- Rotating bottom in Hardox HB 500
- The bottom gate can be opened manually or mechanically via a spring loaded pin
- A ventilation pipe prevents the development of a vacuum during extraction

### Application

soft to hard silt and clay, loose to dense sand and gravel (0 – 12.5 MPa)

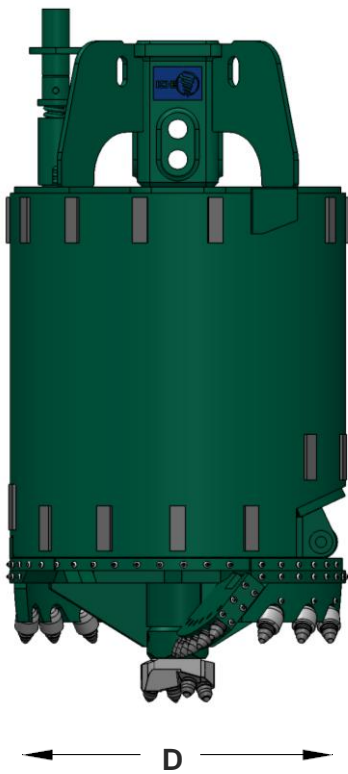
Single cut up to coarse gravel

Double cut is recommended in uncased bores or for bigger diameters and for secant pile walls.



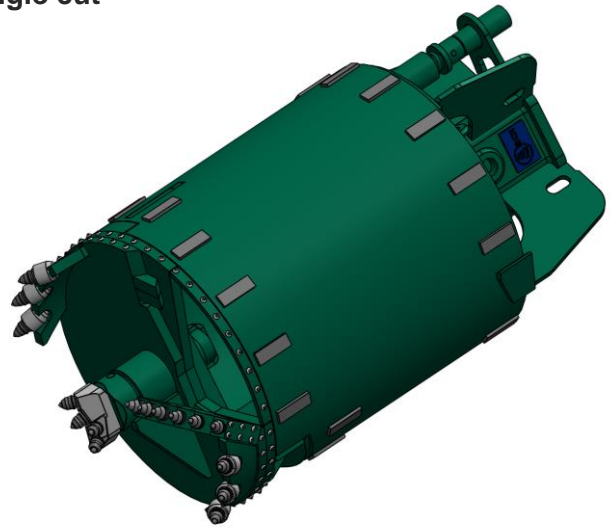
# Rock Bucket

## Technical data

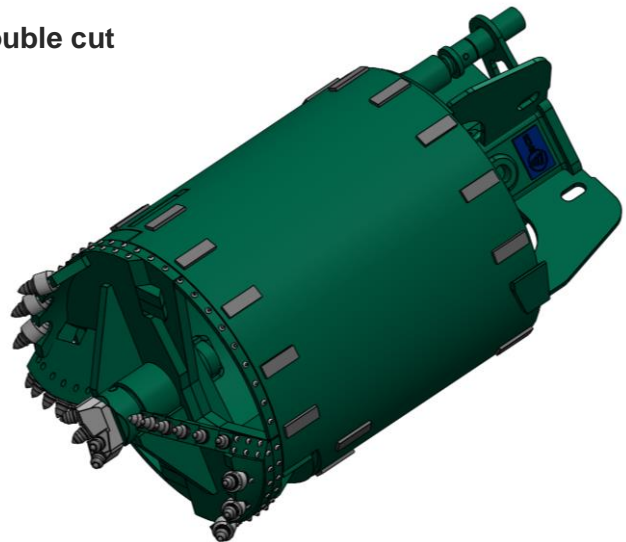


H=2350 mm

single cut



double cut



D	Φ Casings	Weight
mm	mm	kg
520	620/540	758
650	750/670	937
780	880/800	1141
900	1000/920	1373
980	1080/1000	1557
1060	1180/1100	1810
1180	1300/1220	1980
1350	1500/1400	2280
1650	1800/1700	2935
1830	2000/1880	3915

Custom lengths and diameters are available upon request

### Features

- 200 kelly box made of heat-treated cast steel with two locking pins
- Betek TungStuds wear protection at the bottoms
- Single cut up to a diameter of 1200 mm
- Fitted with Betek chisels and interchangeable bit
- Rotating bottom in Hardox HB 500
- The bottom gate can be opened manually or mechanically via a spring loaded pin
- A ventilation pipe prevents the development of a vacuum during extraction

### Application

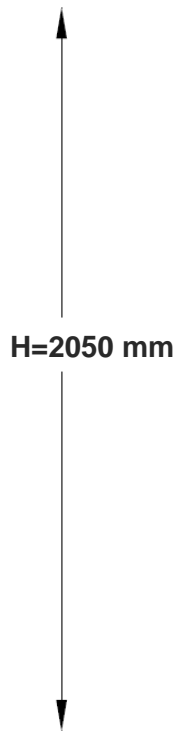
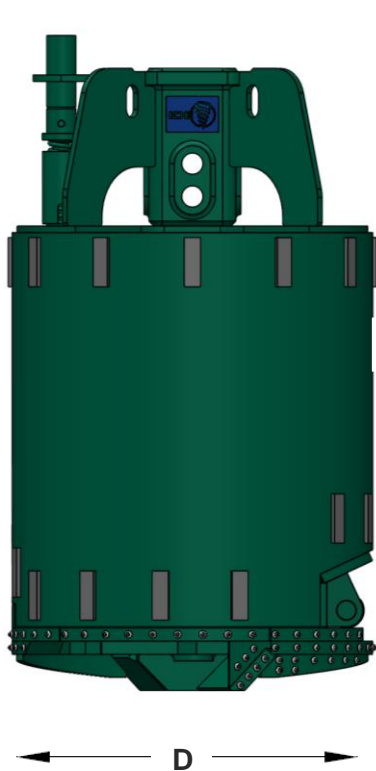
very dense sand and gravel, weak rock (12.5 – 50 Ma)

Single cut up to coarse gravel

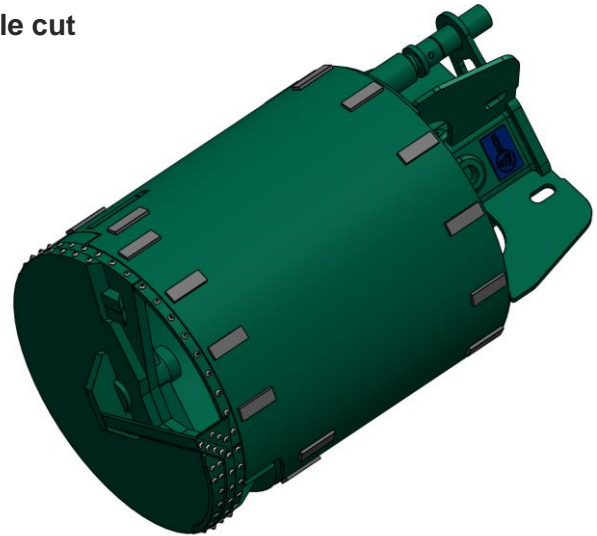
Double cut is recommended in uncased bores or for bigger diameters and for secant pile walls

# Cleaning Bucket

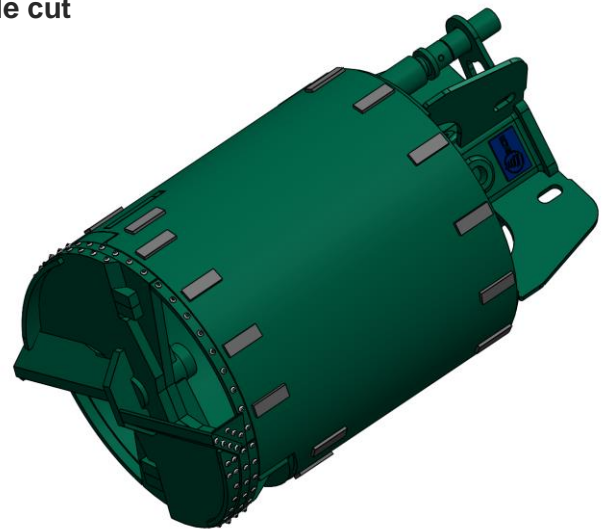
## Technical data



single cut



double cut



D	Φ Casings	Weight
mm	mm	kg
520	620/540	614
650	750/670	782
780	880/800	959
900	1000/920	1141
980	1080/1000	1327
1060	1180/1100	1474
1180	1300/1220	1652
1350	1500/1400	1984
1650	1800/1700	2466
1830	2000/1880	3288

Custom lengths and diameters are available upon request

### Features

- 200 kelly box made of heat-treated cast steel with two locking pins
- Betek TungStuds wear protection at the bottoms
- Single cut up to a diameter of 1200 mm
- Blades in hardox Hb 500
- The bottom gate can be opened manually or mechanically via a spring loaded pin
- A ventilation pipe prevents the development of a vacuum during extraction

### Application

cleaning the bottom of the borehole





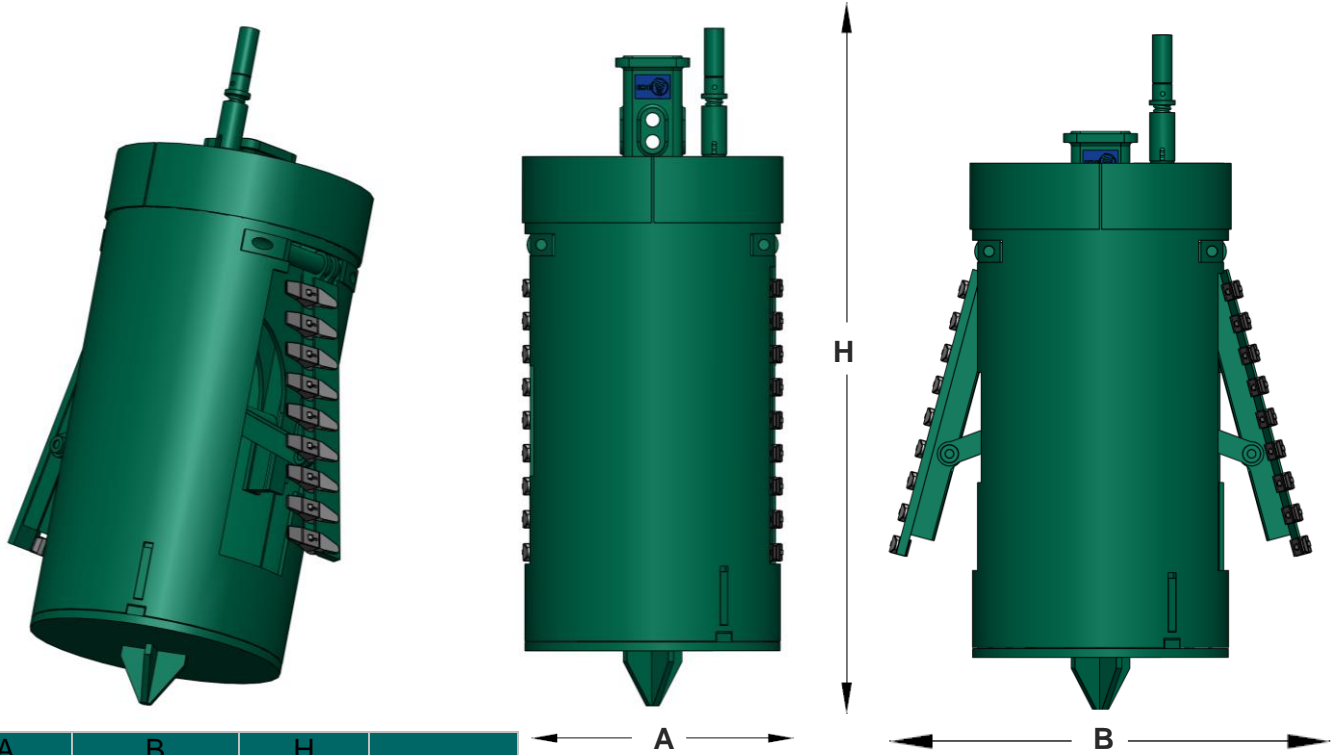






# Belling Bucket

## Technical data



A Closed Reamer	B Open Reamer	H Tool Height	Weight
mm	mm	mm	kg
500	1000	1800	1300
600	1200	2000	1400
700	1400	2200	1500
800	1600	2400	1700
900	1800	2600	2100
1000	2000	2800	2500
1100	2200	3000	2800
1200	2400	3200	3000
1300	2600	3400	3500
1400	2800	3600	4000
1500	3000	3800	4500

Custom lengths and diameters are available upon request

### Features

- 200 kelly box made of heat-treated cast steel with two locking pins
- Blades in hardox Hb 500
- The bottom gate can be opened manually or mechanically via a spring loaded pin
- Mobile carriage in Hardox HB500
- Fitted with Betek teeth or chisels

### Application

A belling bucket is used for enlarging the pile base in stable (mainly cohesive) soil conditions. The cutting arms are gradually opened by applying vertical crowd force on a push rod and a leverage system. The spoil falls into the open shell of the bucket. When extracting the tool from the borehole, the upward movement of the kelly bar transmits the pull onto the push rod and the cutting arms are closed. The maximum opening angle of the bell is about 60° and the standard increase of diameter is about 2 – 3 times the shaft diameter







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