



**Foundation Drilling Tools And Casing**

# ROCK BUCKET

## Application

Very dense sand and gravel, moderately weak to moderately strong rock (upto 25 Mpa)  
Double Flight is recommended in uncased bores or for bigger diameters and secant pile walls.

## Features

- Kellybox 200 mm / 250mm
- Round shank chisel pilot bit RP4 available
- Auger flight thickness of 25/30 mm
- Flat teeth available for soft soil

### Single Flight



### Double Flight



| Tool diameter D (mm) | Weight (kg) |
|----------------------|-------------|
| 600                  | 590         |
| 700                  | 710         |
| 800                  | 810         |
| 900                  | 970         |
| 1000                 | 1100        |
| 1100                 | 1150        |
| 1200                 | 1210        |
| 1300                 | 1395        |
| 1400                 | 1685        |
| 1500                 | 1820        |

\*Other lengths and diameters on request. All weights are approximate values.

## CONICAL ROCK AUGER

### Application

Moderately strong to strong rock (12.5 – 50 MPa).  
Double cut is recommended in uncased bores or for bigger diameters.

### Features

- Kellybox 200 mm / 250mm
- Round shank chisel pilot bit RP4 available
- Auger flight thickness of 25/30 mm
- Fitted with common chisels and interchangeable bit



#### Single Cut



#### Double Cut



| Tool diameter D (mm) | Weight (kg) |
|----------------------|-------------|
| 600                  | 530         |
| 700                  | 580         |
| 800                  | 670         |
| 900                  | 750         |
| 1000                 | 960         |
| 1100                 | 1050        |
| 1200                 | 1100        |
| 1300                 | 1260        |
| 1400                 | 1530        |
| 1500                 | 1700        |

## CONICAL ROCK AUGER

| Tool diameter D (mm) | Weight (kg) |
|----------------------|-------------|
| 600                  | 760         |
| 700                  | 940         |
| 800                  | 990         |
| 900                  | 1100        |
| 1000                 | 1300        |
| 1100                 | 1450        |
| 1200                 | 1720        |
| 1300                 | 1960        |
| 1400                 | 2375        |
| 1500                 | 2550        |



### Application

Strong rock (50 - 100 MPa).

### Double Flight



### Features

- Kellybox 200 mm / 250mm
- Round shank chisel pilot bit RP4 available
- Auger flight thickness of 25/30 mm
- Fitted with common chisels and interchangeable bit

# ROCK BUCKET

## 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.

## Features

- Kellybox 200 mm / 250mm.
- Round shank chisel pilot bit RP4 available.
- Soil Bucket available equipped with flat teeth.
- Cleaning Bucket available.

### Double Opening



| Tool diameter D (mm) | Weight (kg) |
|----------------------|-------------|
| 600                  | 760         |
| 700                  | 880         |
| 800                  | 1040        |
| 900                  | 1150        |
| 1000                 | 1280        |
| 1100                 | 1430        |
| 1200                 | 1580        |
| 1300                 | 1740        |
| 1400                 | 1990        |
| 1500                 | 2150        |
| 1600                 | 2275        |
| 1700                 | 2575        |
| 1800                 | 2750        |
| 1900                 | 3050        |
| 2000                 | 3150        |
| 2100                 | 3375        |
| 2200                 | 3600        |
| 2300                 | 3950        |
| 2400                 | 4150        |
| 2500                 | 4350        |

## CORE BARREL

| Tool diameter D (mm) | Weight (kg) |
|----------------------|-------------|
| 600                  | 640         |
| 700                  | 770         |
| 800                  | 850         |
| 900                  | 950         |
| 1000                 | 1120        |
| 1100                 | 1220        |
| 1200                 | 1320        |
| 1300                 | 1500        |
| 1400                 | 1750        |
| 1500                 | 1900        |
| 1600                 | 2040        |
| 1700                 | 2280        |
| 1800                 | 2380        |
| 1900                 | 2700        |
| 2000                 | 2850        |
| 2100                 | 2925        |
| 2200                 | 3100        |
| 2300                 | 3300        |
| 2400                 | 3475        |
| 2500                 | 3650        |

\*Other lengths and diameters on request. All weights are approximate values.



### Features

- Kellybox 200 mm / 250mm
- Full Helix
- Chisel holders are welded to the base body

### Application

Up to strong rock (50 - 100 MPa) suitable for cutting through fissured rock.

## ROLLER BIT CORE BARREL

| Tool diameter D (mm) | Weight (kg) |
|----------------------|-------------|
| 600                  | 690         |
| 700                  | 840         |
| 800                  | 980         |
| 900                  | 1150        |
| 1000                 | 1290        |
| 1100                 | 1390        |
| 1200                 | 1590        |
| 1300                 | 1750        |
| 1400                 | 1950        |
| 1500                 | 2090        |
| 1600                 | 2170        |
| 1700                 | 2450        |
| 1800                 | 2580        |
| 1900                 | 2800        |
| 2000                 | 3000        |
| 2100                 | 3200        |
| 2200                 | 3350        |
| 2300                 | 3450        |
| 2400                 | 3600        |
| 2500                 | 3800        |



MH-3



MH-3C



MH-3B

\* How to select roller bit - [www.drillnova.com](http://www.drillnova.com)

### Application

Roller bit core barrel is used in very strong rock formations (compressive strength > 100 MPa).

It uses rock roller bits for cutting the annular groove with a width of 120 mm.

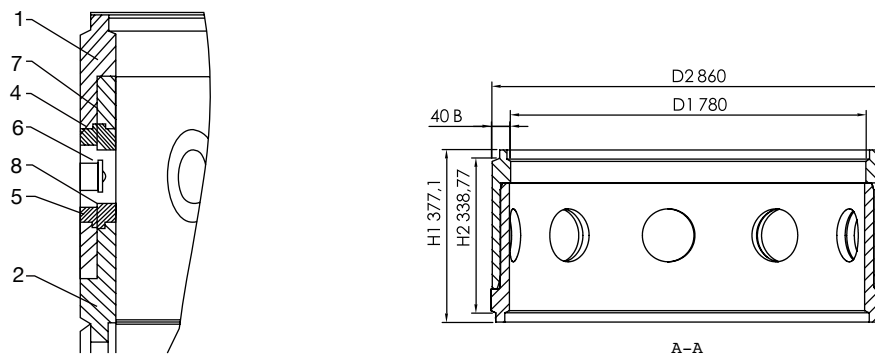
The core barrel is extracted from the bore after coring a length of about 1 -2.5 m.

### Features

- Kellybox 200 mm / 250mm
- Outside helix and flat teeth to optimize drilling performance
- Replaceable type available

# CASING JOINT

The casing joints are precision-machined to ensure fast, efficient replacement and secure bolting, providing the highest level of force transmission.



| DIMENSION  |         |         |        |             | BOLTS & INSERTS |          |                 |                  | KEY              | O-RING      |
|------------|---------|---------|--------|-------------|-----------------|----------|-----------------|------------------|------------------|-------------|
| D1/D2 (mm) | H1 (mm) | H2 (mm) | B (mm) | Weight (kg) | Bolt Type       | Bolt qty | Thread Ring qty | Conical Ring qty | Locating Key qty | O-Ring (mm) |
| 620/540    | 338     | 378     | 40     | 179         | I               | 8        | 8               | 8                | 4                | 10x535      |
| 750/670    | 338     | 378     | 40     | 218         | I               | 10       | 10              | 10               | 4                | 10x665      |
| 880/800    | 338     | 378     | 40     | 261         | I               | 10       | 10              | 10               | 4                | 10x790      |
| 1000/920   | 338     | 378     | 40     | 300         | I               | 10       | 10              | 10               | 4                | 10x910      |
| 1180/1100  | 338     | 378     | 40     | 355         | I               | 12       | 12              | 12               | 4                | 10x1090     |
| 1200/1120  | 338     | 378     | 40     | 375         | I               | 12       | 12              | 12               | 4                | 10x1110     |
| 1300/1220  | 338     | 378     | 40     | 393         | I               | 12       | 12              | 12               | 4                | 10x1210     |
| 1500/1400  | 490     | 530     | 50     | 827         | II              | 12       | 12              | 12               | 4                | 10x1400     |
| 1800/1700  | 490     | 530     | 50     | 998         | II              | 12       | 12              | 12               | 4                | 10x1695     |
| 2000/1880  | 561     | 601     | 60     | 1520        | II              | 12       | 12              | 12               | 8                | 10x1870     |
| 2200/2080  | 561     | 601     | 60     | 1670        | II              | 12       | 12              | 12               | 8                | 10x2070     |
| 2500/2380  | 561     | 601     | 60     | 1800        | III             | 16       | 16              | 16               | 8                | 10x2360     |

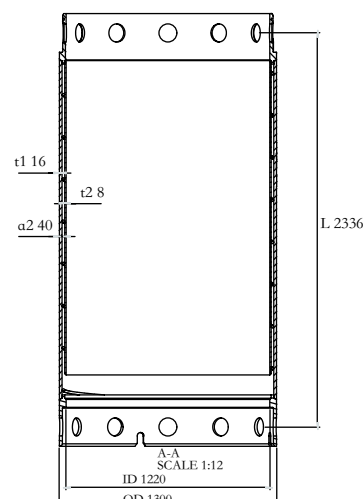
|   |              |   |               |
|---|--------------|---|---------------|
| 1 | Female Part  | 5 | Threaded Ring |
| 2 | Male Part    | 6 | Bolt          |
| 3 | Locating Key | 7 | Sealing       |
| 4 | Conical Ring | 8 | O-Ring        |

## DOUBLE WALL SEGMENTAL CASING

Double-wall casings consist of two layers of steel, with a gap & filler material between them, providing higher strength and torsion resistance.

### Advantages:

- High Strength: The double-wall structure makes these casings more durable, allowing them to perform well under high torque and in difficult geological conditions.
- Durability: Double-wall casings are less prone to deformation or damage in hard rock formations or gravel layers, offering longer service life.
- Better Torsion Resistance: They can transmit the rotary torque more effectively, ensuring stable performance during drilling.



### Application:

Ideal for complex geological conditions, such as hard rock formations or gravel layers, and deep drilling operations that require high strength and durability.

| DIAMETER  | LENGTH L<br>(WEIGHT) |         |         |         |         |         | CASING WALL THICKNESS |            |                               | BOLTS             |
|-----------|----------------------|---------|---------|---------|---------|---------|-----------------------|------------|-------------------------------|-------------------|
|           | 1m (kg)              | 2m (kg) | 3m (kg) | 4m (kg) | 5m (kg) | 6m (kg) | t1<br>(mm)            | t2<br>(mm) | Total<br>Thickness<br>a2 (mm) | Bolt qty<br>(nos) |
| 620/540   | 403                  | 739     | 1074    | 1411    | 1747    | 2081    | 12                    | 8          | 40                            | 8                 |
| 750/670   | 492                  | 902     | 1311    | 1722    | 2131    | 2540    | 12                    | 8          | 40                            | 10                |
| 880/800   | 585                  | 1069    | 1552    | 2036    | 2520    | 3005    | 12                    | 8          | 40                            | 10                |
| 1000/920  | 669                  | 1221    | 1773    | 2328    | 2877    | 3429    | 12                    | 8          | 40                            | 10                |
| 1180/1100 | 844                  | 1580    | 2316    | 3052    | 3787    | 4522    | 16                    | 8          | 40                            | 12                |
| 1200/1120 | 872                  | 1620    | 2370    | 3120    | 3870    | 4620    | 16                    | 8          | 40                            | 12                |
| 1300/1220 | 933                  | 1246    | 2558    | 3372    | 4184    | 4996    | 16                    | 8          | 40                            | 12                |
| 1500/1400 | 1433                 | 2628    | 3817    | 5009    | 6210    | 7393    | 20                    | 10         | 50                            | 12                |
| 1800/1700 | 1730                 | 3166    | 4602    | 6038    | 7474    | 8910    | 20                    | 10         | 50                            | 12                |
| 2000/1880 | 2450                 | 4280    | 6110    | 7940    | 9770    | 11600   | 20                    | 10         | 50                            | 12                |
| 2200/2080 | 2700                 | 4720    | 6740    | 8760    | 10780   | 12800   | 20                    | 15         | 60                            | 12                |
| 2500/2380 | 2960                 | 5240    | 7520    | 9800    | 12080   | 14360   | 20                    | 15         | 608                           | 16                |



## SINGLE WALL SEGMENTAL CASING

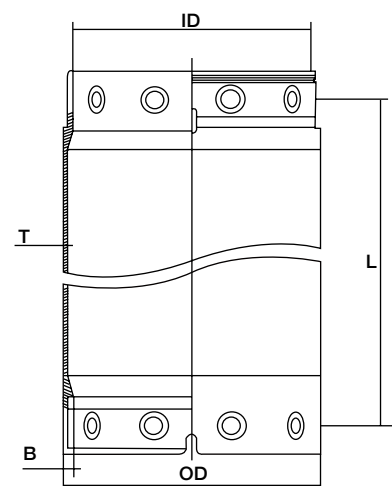
Single-wall casings are made from a single layer of steel and are typically used in simpler geological conditions.

### **Advantages:**

- Lightweight:** Due to their single-layer structure, single-wall casings are lighter and suitable for shallow or soft soil drilling operations.
- Lower Cost:** They are less expensive to produce and use less material, making them a budget-friendly option for certain projects.

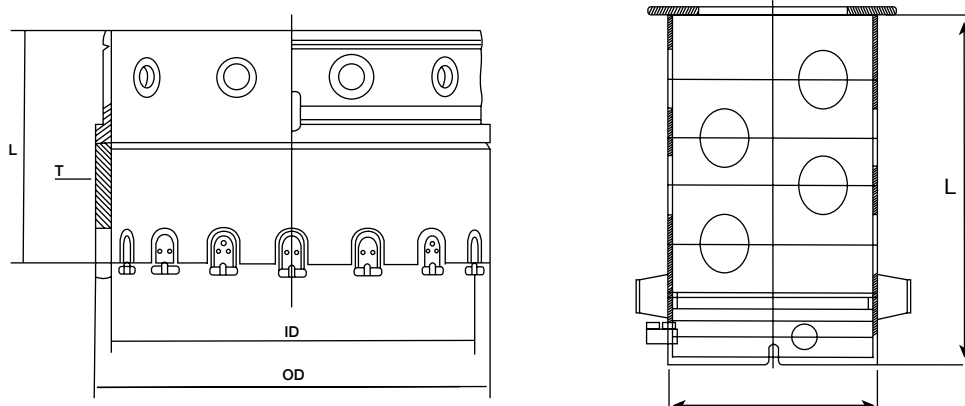
### **Applications:**

- Suitable for projects in soft soil or shallow drilling,** such as sandy or clay soils, where the geological conditions are relatively straightforward.



| DIAMETER  | LENGTH L<br>(WEIGHT) |            |            |            |            |            | CASING<br>WALL THICKNESS |           | BOLTS             |
|-----------|----------------------|------------|------------|------------|------------|------------|--------------------------|-----------|-------------------|
|           | 1m<br>(kg)           | 2m<br>(kg) | 3m<br>(kg) | 4m<br>(kg) | 5m<br>(kg) | 6m<br>(kg) | T<br>(mm)                | B<br>(mm) | Bolt qty<br>(nos) |
| 1300/1220 | 845                  | 1475       | 2105       | 2735       | 3365       | 3995       | 20                       | 40        | 12                |
| 1500/1400 | 1310                 | 2220       | 3130       | 4040       | 4950       | 5860       | 25                       | 50        | 12                |
| 1800/1700 | 1580                 | 2675       | 3770       | 4865       | 5960       | 7055       | 25                       | 50        | 12                |
| 2000/1880 | 2140                 | 3355       | 4570       | 5785       | 7000       | 8215       | 25                       | 60        | 12                |
| 2200/2080 | 2350                 | 3690       | 5030       | 6370       | 7710       | 9050       | 25                       | 60        | 12                |
| 2500/2380 | 2575                 | 4100       | 5625       | 7150       | 8675       | 10200      | 25                       | 60        | 16                |

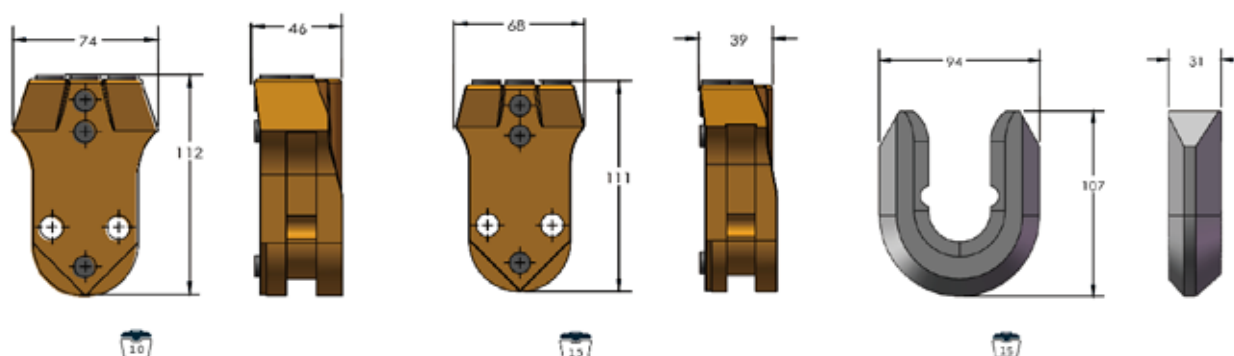
## CASING SHOE



| Diameter       | 620 (mm) | 750 (mm) | 880 (mm) | 1000 (mm) | 1180 (mm) | 1300 (mm) | 1500 (mm) |
|----------------|----------|----------|----------|-----------|-----------|-----------|-----------|
| Tooth Quantity | 14       | 16       | 18       | 18        | 20        | 24        | 30        |
| Weight (kg)    | 309      | 374      | 439      | 500       | 589       | 653       | 955       |

The casing drive adapter is a crucial component designed to transfer torque from the rotary drive to the top of the casing string. Its upper connection is fully customizable to match the specific size and model requirements as specified by the customer.

## CASING ACCESSORIES



| Model | Application                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WS39  | It is a Bauer standard changeable teeth, which can save replacement time. It has a wide range of applications, and suitable for soft to medium hardness casing construction. |

| Model | Application                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WS46  | It is a Bauer standard changeable teeth, which can save replacement time. It has a wide range of applications, and suitable for soft to medium hardness casing construction. |

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