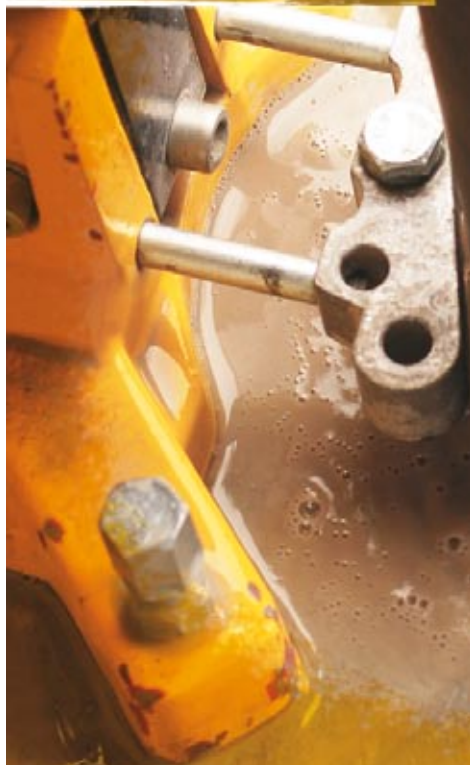


NEW!

PERFORMANCE *diamond core bit*



DIAGER[®]



Wet drilling

Advantages

- + Reduced noise and vibration
- + User comfort
- + Time saving

Used by

- Masons ■
- Plumbers, Heating Engineers ■
- Electricians ■
- All types of Building Firms ■
- Local Authorities and Government bodies ■



Applications



- Attachments : blind holes for bolting and sealing
- Passing conduits through obstructions for the supply and evacuation of water and gas
- Threading electrical cables
- Installing air-conditioning systems
- Preparing for sawing walls : coring of corners
- Cross-cut coring



PERFORMANCE

diamond core bit

Attachments



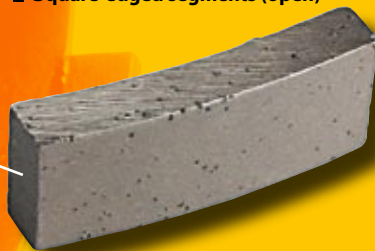
- 1/2" for motors with 1/2" shanks
Ref. 360E
- 1-1/4" for motors with 1-1/4" shanks
Ref. 362E

Tubes

- Perfectly cylindrical and concentric
- Withstand pressure of 800 kg

Segments

- For wet drilling
- Drills through concrete reinforcing bars*
- Fast drilling through concrete, stone and ceramic
- Square-edged segments (open)



Available sizes : pages 16 and 17

DIAGER's assets

- Reliability of the core bit + motor + stand assembly
- Segments are impregnated with diamonds along their entire length
- Tube is perfectly cylindrical and able to withstand pressures up to 800 kg
- Motors have electronic clutches

* drilling through reinforcements should always be approved by a qualified organisation, company or person.

DIAGER[®]



Wet drilling

Motors CARDI

DIAGER has chosen CARDI brand motors, the market leaders in Europe, to drive its core bits. Talpa motors are fitted with electronic clutches which offer surge-free declutching with less wear and tear on the mechanisms. Their power and their aluminium casings both contribute to their robustness and long life.



**MANUAL
DRILLING**
or using a
STAND

Talpa T1
2200W
max bore \varnothing 127 mm
Ref.350E

Talpa T2
2500W
max bore \varnothing 250 mm
Ref.351E



Talpa T6
3400W
max bore \varnothing 300 mm
Ref.352E



PERFORMANCE

diamond core bit

	Talpa T1 Ref.350E	Talpa T2 Ref.351E	Talpa T6 Ref.352E
Attachment	1/2"	1-1/4"	1-1/4"
Power consumption (watt)	2200	2570	3420
Voltage (volt)	240	240	240
Wet drilling	yes	yes	yes
Dry drilling	yes	no	no
Speed in rpm 1	530	330	350
2	1280	570	800
3	1780	790	1475
Brick-drilling capability (mm)	162		
Concrete-drilling capability (mm)	127	35-250	300
Weight (Kg)	7,5	9,8	12,5
Electronic clutch	yes	yes	yes
Case	yes	no	no
Safety switch	yes	yes	yes
Manual drilling	yes	no	no
Drilling on a stand	yes	yes	yes

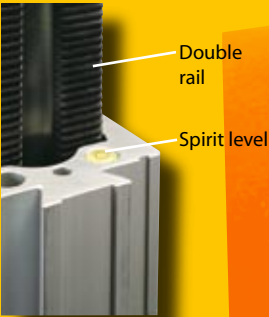


Wet drilling

Stands

DIAGER drilling stands are designed and constructed to meet the requirements of the professionals: robust, easy to install and multi-purpose!

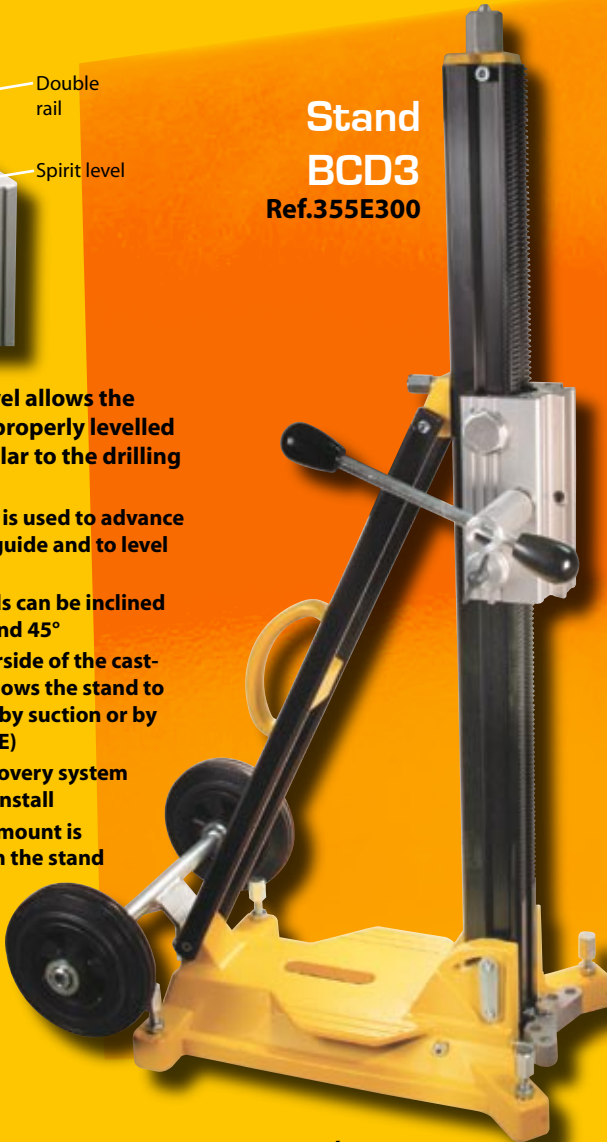
**ANCHORED
BY
BOLTING
OR
SUCTION**



**Stand
BCD3**
Ref.355E300

**Stand
BCD1**
Ref.353E130

- The spirit level allows the base to be properly levelled perpendicular to the drilling support.
- The same key is used to advance the drilling guide and to level the base
- DIAGER stands can be inclined between 0 and 45°
- The flat underside of the cast-iron base allows the stand to be attached by suction or by bolting (370E)
- The water recovery system is simple to install
- The machine mount is shipped with the stand



**Stand
BCD2**
Ref.354E250



PERFORMANCE

diamond core bit

	Stand 1 Ref.353ED130	Stand 2 Ref.354ED250	Stand 3 Ref.355ED300
Max. diameter of bore (mm)	130	250	300
Max. travel (mm)	500	600	700
Weight (Kg)	8,9	13	21
Adjustment 0-45°	yes	yes	yes
Racked column made from hardened aluminium	yes	yes	yes
Motor support guided by 4 ball races	yes	yes	yes
Brake on motor support	yes	yes	yes
Suction base	yes	yes	yes
Wheels included	no	yes	yes
Stand levelled by	4 guides	4 guides	4 guides
Left/right handles	yes	yes	yes
Dimensions (mm)	310x190x900	420x270x1050	450x270x1150
Compatible with which Talpa motor	T1 Ref.350E	T1-T2 Ref.350E Ref.351E	T1-T2-T6 Ref.350E Ref.351E Ref.352E

- +** Tensioning spindle (Ref. 370E) supplied
- +** Cast-iron base can be inclined from 0 to 45°
- +** Can be attached by suction
- +** Racked column and motor support made from aluminium
- +** Adjustable drilling guide
- +** Same key advances the motor and levels the base
- +** 2 hexagonal keys supplied



Wet drilling

Base anchored by bolting

Mechanical anchoring for drilling stands through the oblong hole with an M12 steel drop-in spindle for crack-free concrete.



M12 tensioning spindle
Ref.370E



Setting tool for M12 drop-in
anchor
Ref.372E



M12 Ø 16 drop-in
anchor
box of 50
Ref.371E



Anchoring the stand with a prop

Quick-release column (max. height 3 metres) Ref.373E

For anchoring the drilling stand with a ceiling prop
Avoids drilling an anchor hole for the stand on the surface to be drilled
Ideal for renovation work
Requires the floor and ceiling to be straight and parallel



PERFORMANCE

diamond core bit

- 1**
- Drill a hole
Ø 16 mm, 55 mm deep.
 - Insert the drop-in anchor
(371E).



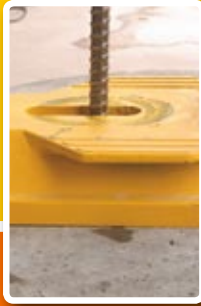
- 2**
- Expand the drop-in anchor (371E) using the setting tool (372E).



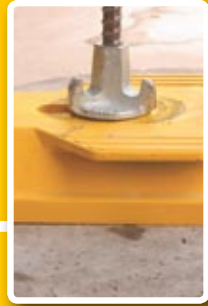
3



- 4**
- Position the stand
over the hole.



- 5**
- Screw the tensioning
spindle (370E) into the
anchor and adjust the
position of the stand.



- 6**
- Tighten the wing nut on
the spindle .
 - Level the stand.
 - Lock the clamp tight.

Quick-release columns (3 metres max) Ref.373E



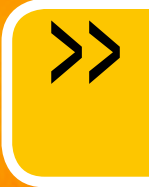


Wet drilling

Anchoring the stand by suction

Suitable for flat, smooth surfaces

Place the vacuum set (connected to the suction pump) on the oblong hole
Start up the pump.



Vacuum set

for BCD1 > Ref.353E13
BCD2 > Ref.354E23
BCD3 > Ref.355E33



Rubber gasket

for BCD1 > Ref.353E14
BCD2 > Ref.354E24
BCD3 > Ref.355E34

Suction pump Ref. 378E

Supplied with separate oil

Pump rate : 4 m³/hour.

Pressure : 2 mbar - hPa

Type of oil: SW40

Working temperature : 60 - 65°C

Recommended ambient temperature : 12 -40°C

Ref 378E



PERFORMANCE

diamond core bit

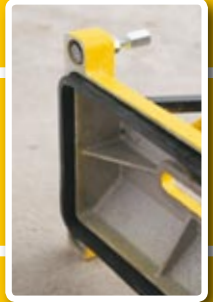
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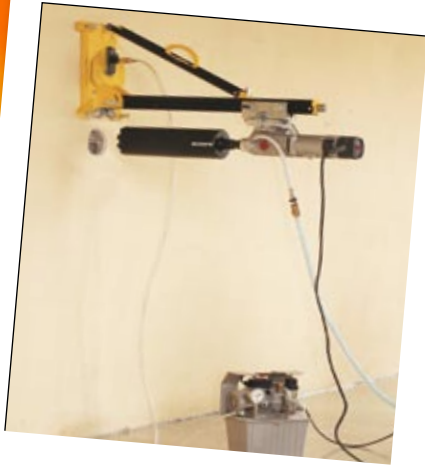
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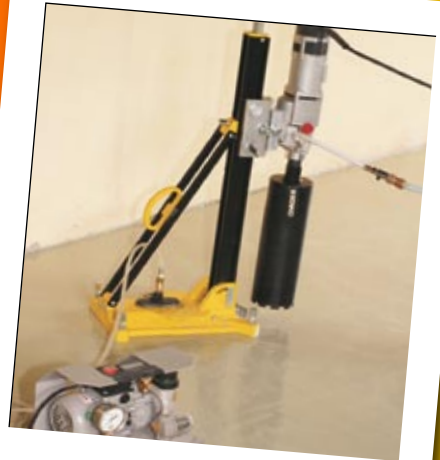
3



Insert the rubber casket into the base



Anchoring to the wall



Anchoring to the floor



Wet drilling

Water supply



Electric water pump S2
Supplied with electric plug
and flexible hose
Ref 376E



Immerse the pump in a
bucket full of water.
10 litres is enough to bore
at least 3 holes
Ensures the water reaches the
job at constant pressure



Pressure pump
(metal - 10 litres)
Ref 377E



Manual pumping

PERFORMANCE

diamond core bit

Water recovery

The water recuperator comprises :

Watertight floor seal

Cast-iron recuperator with outlet to vacuum cleaner (with water-recovery tank) and 2 lugs for fastening to stands

Rubber seal for water recuperator fastened to the top of the water recuperator.

1. Trim the rubber seal of the water recuperator to the right diameter
2. Fasten the water recuperator onto the stand guide (M12 screw on the stand)
3. Position and anchor the stand in the drilling location
4. Connect the vacuum cleaner to the water outlet

Rubber seal



for \varnothing max 120 mm > Ref.353E12

\varnothing max 180 mm > Ref.354E22

\varnothing max 250 mm > Ref.355E32

Water recuperator



for \varnothing max 120 mm > Ref.353E11

\varnothing max 180 mm > Ref.354E21

\varnothing max 250 mm > Ref.355E31



With vacuum cleaner



Wet drilling

Adapters and Extensions



Adapter
1/2" male > 1-1/4" male
Ref.379E



Adapter
1-1/4" female > 1/2"
female
Ref.380E



Adapter
SDS DI > 1/2" female
Ref.381E



Adapter
for Hilti DD160, DD250
motors
> 1-1/4" male
Ref.382E



Extension
200 mm
1/2"
Ref.383E



Extension
300 mm
1-1/4"
Ref.384E

PERFORMANCE

diamond core bit

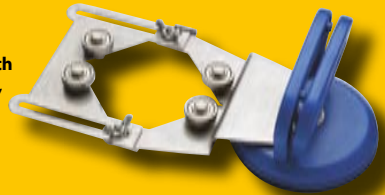
Sundries

1-1/4" anti-friction ring
Very useful for loosening core bits after drilling
Ref.387E



Ring

Manual drilling support
(8 to 83 mm)
For starting and guiding manual drilling on smooth surfaces (marble, granite, ceramic)
Ref.375E



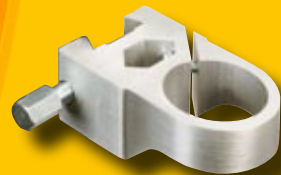
Guiding



Stand adapter block
for all non-CARDI motors
on stands
Ref.385E



4 cm spacing block
for DIAGER stands
For larger diameters
It is possible to use several
spacing blocks together
Ref.386E



Talpa 60mm int Ø mounting bracket
60mm internal Ø
For adapting a Talpa T1-MU motor
(ref 350E) to DIAGER stands
Ref.374E



Wet drilling

Range

Ref 362E 1-1/4" diamond core bit range

Useful length : 400 mm – Total length : 465 mm



Ø	Ref.	Number of Segments	Length of Segments	Thickness of Segments	Height of Segments
25*	362ED25			2.5	7
30*	362ED30			2.5	7
35*	362ED35			2.5	7
40*	362ED40			2.5	7
46	362ED46	6	16	3	9
51	362ED51	5	24	3	9
56	362ED56	5	24	3	9
61	362ED61	6	24	3	9
66	362ED66	6	24	3	9
71	362ED71	6	24	3	9
76	362ED76	7	24	3	9
82	362ED82	7	24	3.5	9
87	362ED87	7	24	3.5	9
92	362ED92	8	24	3.5	9
102	362ED102	9	24	3.5	9
112	362ED112	9	24	3.5	9
117	362ED117	10	24	3.5	9
122	362ED122	10	24	3.5	9
127	362ED127	10	24	3.5	9
132	362ED132	11	24	3.5	9
142	362ED142	11	24	4	9
152	362ED152	12	24	4	9
162	362ED162	12	24	4	9
172	362ED172	13	24	4	9
182	362ED182	13	24	4	9
200	362ED200	14	24	4.5	9
225	362ED225	15	24	4.5	9
250	362ED250	16	24	4.5	9
275	362ED275	18	24	4.5	9
300	362ED300	18	24	4.5	9

Ring

PERFORMANCE

diamond core bit

Ref 360E 1/2" diamond core bits

Useful length : 400 mm – Total length : 465 mm



Ø	Ref.	Number of Segments	Length of Segments	Thickness of Segments	Height of Segments
20*	360ED20			2.5	7
22*	360ED22			2.5	7
25*	360ED25			2.5	7
28*	360ED28			2.5	7
30	360ED30			2.5	7
35	360ED35			2.5	7
40	360ED40			2.5	7
46	360ED46	6	16	2.5	9
51	360ED51	5	24	3	9
56	360ED56	6	24	3	9
61	360ED61	6	24	3	9
66	360ED66	6	24	3	9
71	360ED71	6	24	3	9
76	360ED76	7	24	3	9
82	360ED82	7	24	3	9
87	360ED87	7	24	3	9
92	360ED92	8	24	3	9
102	360ED102	9	24	3	9
112	360ED112	9	24	3	9
117	360ED117	10	24	3	9
122	360ED122	10	24	3	9
127	360ED127	10	24	3	9
132	360ED132	11	24	3	9
142	360ED142	12	24	3	9
152	360ED152	13	24	3	9
162	360ED162	13	24	3	9

Ring

*Useful length : 300 mm

Helpful tips

- Always make sure that you have enough water to drill your hole.
DIAGER recommends using an S2 electric water pump (ref 376E) immersed in a bucket full of water
- For boring holes deeper than 400 mm, use a core bit extension (ref 383E or ref 384E)

DIAGER®



Wet drilling

F.A.Q.

What are the essential points about diamond-impregnated segments?

With diamonds, the “cut” is often referred to. The terms “wear” and “abrasion” are also used.

- The quality of the diamonds: the diamonds are synthetic; their size and hardness are suitable for drilling stony materials.
- The density of the diamonds, expressed in carats per cm^3 .
- The quality of the binder (mixture of metals) holding the diamonds together. The composition of the binder is suitable for the desired wear as a function of the hardness of the materials. The harder the materials, the softer the binders.

The diamond-impregnated segment regenerates as the binder is worn away. The grains of diamond are freed by the wearing away of the binder.

The rotation and the force applied to the material cause the wearing away of the material by the diamonds; the wearing away of the binder by abrasion by dust from the “cut” material; and also generate heat.

Why are there 1/2” and 1-1/4” core bits?

The 1/2” attachment is most suitable for use with a manual core cutter : the attachment is lighter and the steel is thinner.

The 1-1/4” is ideal for cutting bores above 100 mm diameter with a drilling stand.

How do you start cutting a hole manually?

For holes up to 82 mm diameter on smooth surfaces, you are advised to use the drilling guide, ref 375E. If there are rough patches on the surface, you should start the boring at an angle of 45°.

Can DIAGER core bits be adapted for use with HILTI motors?

For HILTI DD100 and DD130 motors, use DIAGER adapter ref 381E.

For HILTI DD160, DD250 and DD400, motors, use adapter ref 382E

Why is water used?

For cooling : excessive heat wears away the diamond impregnated segments prematurely. Lubricating with water cools everything down and enables dust to be removed in the form of a “milky paste”.

PERFORMANCE

diamond core bit

Problems

The tool will not cut

- The material may be too hard for the segment.
- The diamonds are polished or “closed segments” (satin-like appearance).
- The flow of water is too great. The discharge from the boring is too clear and runny. The water is preventing the tool from advancing and the segments are in danger of closing up.
- The speed of rotation is wrong.

There is too much vibration

- The drilling guide on the stand is not doing its job.

The core bit is “burning”

- Flow of water is insufficient

The segments are wearing down too fast

- The material may be too abrasive for the segment.
- Drilling speed is excessive. The binder is wearing down and ejecting the diamonds before they can serve their purpose fully

Solutions

- ▶ Choose a more suitable segment (softer).
- ▶ Revive the tool in an abrasive material (breeze block, sandstone, etc.)
- ▶ Adjust the flow to obtain a discharge with the consistency of a milky paste.
- ▶ Small diameter = high speed.
- ▶ Adjust the guide against the core bit.
- ▶ Adjust the flow to obtain a discharge with the consistency of a milky paste.
- ▶ Choose a more suitable segment (harder).
- ▶ Reduce the pressure on the core bit.





D00106

Distributor's stamp

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