

Purpose

CORECASE is a portable, lightweight coring rig for quickly obtaining drilled cores of concrete (ASTM C42 or EN 12504-1) that are accurate in diameter, have straight sides, and are perpendicular to the surface. Drilled cores can be used for the following purposes:

- Visual inspection of the concrete interior
- Determination of in-place compressive strength or other mechanical properties
- Verification of flaws identified by NDT methods such as the s'MASH impulse-response system; the DOCTer impact-echo system; and the MIRA and EyeCon pulse-echo systems
- Preparing a partially drilled core for conducting a pull-off test with BOND-TEST following BS 1881:207 or ASTM C1583
- Other laboratory tests such as rapid chloride penetration using the PROOVE'it system, bulk conductivity/resistivity using Merlin, air-void parameters using the RapidAir system, or for petrographic analysis

Principle

A thin-walled coring barrel with a high-performance diamond bit is attached to a water-cooled drill rig. The drill rig pushes the drill barrel forward concentrically, thereby avoiding bending forces during drilling. A special coupling is used between the electric drill and the coring barrel to minimize vibration of the bit, ensuring a long life for the diamond bit and a smooth core surface. The drill rig is kept securely perpendicular to the surface by adjustable clamps anchored to the surface (or by a suction plate available for the CS-75 version). A hose brings water to the rig from a submersible water pump in a bucket and a second hose allows water recirculation to keep the coring bit cool and well lubricated while is drilling, without spilling water.

The end result is a quickly drilled core that has a smooth surface, accurate diameter, and drilled perpendicular to the surface.

Two versions are available:

CORECASE CS-75 for a 75-mm core diameter and **CORECASE CEL-100** for a 100-mm core diameter.

Specifications

Version:	CORECASE CS-75	CORECASE CEL-100
Material	Aluminium rig and barrel with steel diamond bits	
Max. core diameter	75 mm	100 mm
Max. core height	110 mm	220 mm
Rig diameter	100 mm	125 mm
Weight*	2.6 kg	4.8 kg
Length*	340 mm	600 mm
Length, extended*	460 mm	800 mm
Optional vacuum pump and suction plate	No	Yes



*without drill or coring bit

Example Applications



Coring with the **CS-75** rig clamped to the surface



The **CS-75** coring rig attached to the suction plate before conducting **BOND-TEST**



Coring with the **CS-75** rig for inspection of cracks following chloride extraction



Coring with the **CEL-100** rig to for testing chloride permeability over the specimen

Ordering Numbers

CORECASE CS-75 (75-mm core)

Item	Order #
Coring rig with coupling	CC-10
Handles for coring rig, 3 pcs	CC-20
Coring bit, 75 mm x 110 mm	CCB-75/110
Water pump with 2 hoses	CC-30
Clamping pliers, adjustable, 2	CC-40
Set of anchoring tools, 8 mm	CC-50
8 mm expansion anchors, 20	CC-60
Chisel	CC-70
Hammer	CC-80
Core lifter, 75-mm diameter	CC-90
Wrench, 14 mm	CC-100
Measuring tape	CC-110
Set of spare bearings for coring rig	CC-120
Reinforcement locator	CC-130
Manual	CC-140
Attaché case	CC-150

Optional items

Suction plate	CC-160
Vacuum pump	CC-170
1150 W electric drill	CC-180



Optional suction plate with vacuum pump

CORECASE CEL-100 (100 mm core)

Item	Order #
Coring rig with coupling	CC-15
Handles for coring rig, 3 pcs	CC-20
Coring bit, 100 mm x 210 mm	CCB-100/210
Water pump with 2 hoses	CC-30
Clamping pliers, adjustable, 2	CC-40
Set of anchoring tools, 12 mm	CC-55
12 mm expansion anchors, 20	CC-65
Chisel	CC-75
Hammer	CC-80
Core lifter, 100-mm diameter	CC-95
Wrench, 14 mm	CC-100
Measuring tape	CC-110
Set of spare bearings for coring rig	CC-120
Reinforcement locator	CC-130
Manual	CC-145
Attaché case	CC-155

Optional

1150 W electric drill	CC-180
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Extension rods, 100 mm long, for drilling deeper than 110 mm (**CS-75**) or deeper than 210 mm (**CEL-100**) are available on request, Order # CC-190.



Additional coring bits

For CORECASE CS-75

Core diameter × length	Coring bit #
25 mm × 110 mm	CCB-25/110
35 mm × 110 mm	CCB-35/110
50 mm × 110 mm	CCB-50/110
75 mm × 110 mm	CCB-75/110

For CORECASE CEL-100

Core diameter × length	Coring bit #
25 mm × 210 mm	CCB-25/210
35 mm × 210 mm	CCB-35/210
50 mm × 210 mm	CCB-50/210
75 mm × 210 mm	CCB-75/210
100 mm × 210 mm	CCB-100/210