

**GENERAL
EQUIPMENT**



5.2

CORING AND DRILLING

5.2.1 CORING AND DRILLING

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5.2.1 CORING AND DRILLING

TECNOTEST

Can be positioned at any angle



AT 244



CORING & DRILLING MACHINES

EN 12504-1

The range of Tecnotest machines permits the extraction of all kinds of cores (reinforced or ordinary concrete, asphalt, masonry, rocks and so on) with diameters between 23 and 200 mm.

By applying special extensions it is possible to reach considerable depths that vary according to the material in question and the diameter of the hole. Drillings and corings can be carried out at any angle.

All machines are wheel-mounted and fitted with handles to facilitate movement.

The frame is of robust construction and the rotating unit, mounted on a special trailer, slides along a worm-screw guide.

The maximum stroke is 70 cm.

The machines are supplied complete with quick couplings for water supply, a handwheel and a set of wrenches to fit and remove the bits.

The shaft thread is 1 1/4" UNC (31.75 mm) with 7 threads per inch. Tecnotest's range of coring and drilling machines includes units with electric and petrol motors produced by leading manufacturers: this guarantees excellent service facilities all over the world.

ELECTRIC CORE DRILLING MACHINES

These machines can be positioned at any angle (360° rotation) in order to work on pavements, walls or ceilings. This is the classic machine for all kinds of building sites.

The single phase motor has an overload protection mechanism.

DIMENSIONS: 740 x 600 x 1300 (h) mm approx.

WEIGHT: 110 kg approx.

ELECTRIC CORE DRILLING MACHINES: MODELS

(the shaft thread is 1 1/4" UNC (31.75 mm) with 7 threads per inch)

FEATURES	AT 244	AT 244/D	AT 244/H
Motor speeds (rpm)			
- load speed	330 - 570 - 790	210 - 360 - 600 - 1000	80 - 130 - 200 - 300
- idle speed	520 - 880 - 1230	330 - 560 - 920 - 1530	120 - 200 - 310 - 450
Power 230 V - 50 Hz - single phase			
HP	3,5	4,5	9
Watts	2570	3420	6840
Spare motors	R 244/MM	R 244/D	R 244/H

LIGHT-WEIGHT, PORTABLE CORING MACHINE

A highly practical model with base in die-cast aluminium mounted on two wheels at the rear for ease of movement. The support column is in galvanized steel and may be positioned at different angles up to 70° with respect to the base. Mobile, motor support on ball-bearings, shaft thread is 1 ¼" UNC (31.75 mm) with 7 threads per inch.

Base may be wall mounted using special anchors.

Motor is equipped with bit cooling system by water and electronic clutch.

Safety switch on cable.

POWER SUPPLY: 220 V, 50 Hz, single phase



AT 244/L

AVAILABLE MODELS:

Code	Motor HP	Watt	3 speeds (rpm - operating)	Diamond bits	Dimensions	Weight
AT 244/L	3.5	2570	330 - 570 - 790	Ø 30 ÷ 150 mm	460 x 300 x 950 (h) mm	25
AT 244/LL	3	2200	530 - 1280 - 1780	Ø 30 ÷ 150 mm	460 x 300 x 950 (h) mm	22.5



RANGE OF ELECTRIC MACHINES

ELECTRIC CORING MACHINE WITH SUCTION PAD AT 244/V

This core drilling machine is very easy to use because of its light weight combined with a powerful electrical system.

It is ideal for core drillings on walls in any position since its base is provided with a suction pad that grips the concrete walls by means of a vacuum pump.

No further vertical bracing is required.

Electric motor: 3.5 hp - 3 speeds (330-570-790 rpm)

Vacuum pump with switch, dial gauge, filter and air hose. Complete with 10 litre reserve tank to ensure against blackouts and to allow a good margin of autonomy when releasing the anchors.

Pump motor: 0.25 hp, 1400 rpm

POWER SUPPLY: 220 V, 50 Hz, single phase, 2200 W

DIMENSIONS: 800 x 620 x 1120 (h) mm

WEIGHT: 74 kg.



AT 244/V

5.2.1 CORING AND DRILLING

TECNOTEST



B 542



B 542/C



AT 244/LP

PETROL-DRIVEN CORE DRILLING MACHINES

PETROL-DRIVEN CORE DRILLING MACHINE

300-600 giri/min. (rope start)

B 542

This model can only bore vertically downwards and is therefore ideal for rock and core drillings in pavements.

The shaft thread is 1¼" (31.75 mm) with seven threads per inch. BRIGGS & STRATTON 4-stroke petrol-driven engine, 11.5 hp, air-cooled, with pressure lubrication.

Starting by rope. Speed while operating: 300 - 600 rpm.

DIMENSIONS: 870 x 560 x 1240 (h) mm.

WEIGHT: 120 kg

BIT GUIDE DEVICE

B 542/C

Accessory for the models B 542.

The unit comprises three adjustable screw guides, with the ends made of a special material which adapts to the bit and guides it.

PETROL-DRIVEN CORE DRILLING MACHINE AT 244/LP

Portable, lightweight model.

General technical features of the support column same as those of electric machines (page 355).

Shaft thread 1¼" UNC (31.75) with seven threads per inch.

Starting by rope. Power 4 hp.

Speed while operating: 185 to 850 rpm.

Suitable cores from 35 to 200 mm diameter.

DIMENSIONS: 450 x 290 x 1060 (h) mm.

WEIGHT: 40 kg.

POSITIONABLE PETROL-DRIVEN

CORE DRILLING MACHINE

AT 244/S

This machine has a petrol motor which makes it suitable for use in sites without mains supply.

The AT 244/S rotates through 360° and can work at any angle.

Shaft thread 1¼" UNC (31.75) with seven threads per inch.

The machine is equipped with a 3.3 hp, 2-stroke petrol-driven motor, with reduction gear; starting by rope.

DIMENSIONS: 740 x 600 x 1260 (h) mm.

WEIGHT: 100 kg.



AT 244/S

TRAILER MOUNTED CORE DRILLING MACHINE AT 247

A very practical unit for the extraction of core samples from roads. The operator positions the 4 outside stabilizers of the trailer and lowers the drill (hydraulic system) so that the bit-guide lower plate rests on the ground at the point to be drilled.

The drilling machine is driven by a BRIGGS & STRATTON 11.5 hp 4-stroke petrol-driven engine, with an electric starter.

Shaft thread 1¼" UNC (31.75) with seven threads per inch.

The motor is provided with an A.C. generator for recharging the battery, a 12 V starter, a 36 Ah battery and a starting button.

This unit can use diamond bits up to a maximum external diameter of 210 mm.

It has a graduated rod to check coring depths.

The full load capacity of the trailer is 600 kg.

The trailer is provided with over-run mechanical brakes, parking brake and lighting system.

The following parts are supplied as standard equipment:

- 1 stainless steel water tank, 125 litres capacity
- 12 V automatic water pump for cooling
- Carrying case for bits
- Tool box
- Set of spanners
- Spare wheel
- Operator's seat

DIMENSIONS: 2800 x 1700 x 1700 (h) mm

WEIGHT: 600 kg

All core drilling machines are supplied without bits and relevant bit adaptors (see page 358 for available models).

ROOF HOOP AND CANOPY AT 247/C

Protects user during adverse weather conditions.

May be supplied printed with client's logo at no extra charge.



AT 247 - AT 247/C



5.2.1 CORING AND DRILLING

DIAMOND BITS

Consisting of the coring tube and the actual diamond bit. They are mounted on the core drilling machine by means of a joint-adaptor.

Shaft thread 1¼" UNC (31.75) with seven threads per inch.

Every bit is characterized by an outside diameter corresponding to that of the hole to be drilled, and an inside diameter corresponding to that of the sample or core to be taken.

The standard cutting length is 400 mm (500 mm upon request). For greater depths special extensions are used; these are illustrated and described later on.

DIAMOND BITS WITH IMPREGNATED

DIAMONDS FOR REINFORCED CONCRETE AT 245

In these bits the diamond particles are mixed to the material of which the bit is made: they are therefore uniformly distributed throughout the thickness of the bit.

This means that the bit has a longer life because its operation is not affected by wear.

Such bits should be used when drilling particularly hard or abrasive materials.

DIAMOND BITS WITH EXPOSED DIAMONDS FOR

BRICKS, ASPHALT AND LIGHT CONCRETE B 544

These bits have diamond particles which are set on the bit surface.

They are suitable for the sampling of suitably soft materials such as asphalts, non-reinforced concrete and bricks.

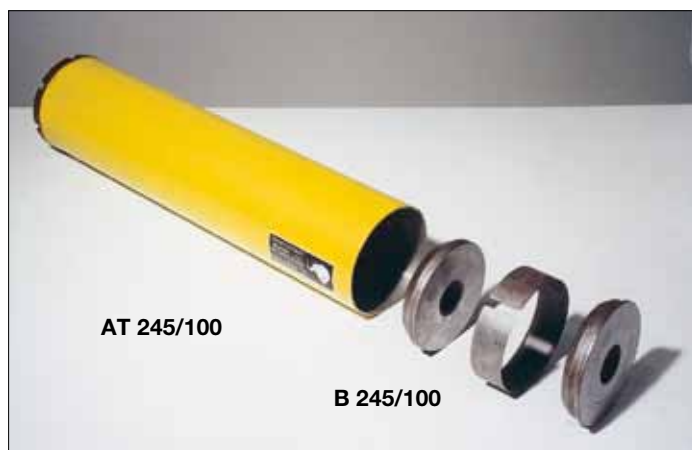
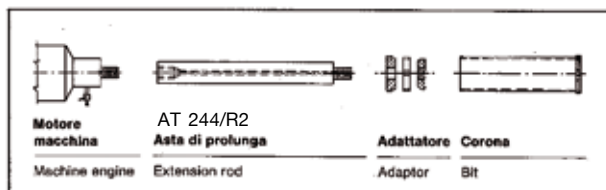
THREADED ROD

AT 244/R2

For bits with outside diameter greater than 45 mm.

Used to carry out discontinuous drillings at considerable depths (strictly dependant on the hole diameter and the material to be drilled).

The rods are made of high-quality steel, they are threaded at their ends and hollow in order to allow the conveyance of the cooling water.



TECNOTEST

DIAMOND BITS

Standard cutting length 400 mm (500 mm upon request)				
Impregna- ted	Exposed	External diameter	Internal diameter	Adaptor
AT 245/023	B 544/023	30	23	included
AT 245/028	B 544/028	35	28	included
AT 245/031	B 544/031	38	31	included
AT 245/033	B 544/033	40	33	included
AT 245/036	B 544/036	43	36	included
AT 245/038	B 544/038	45	38	included
AT 245/040	B 544/040	47	40	included
AT 245/043	B 544/043	50	43	included
AT 245/048	B 544/048	55	48	included
AT 245/050	B 544/050	57	50	included
AT 245/053	B 544/053	60	53	B 545/053
AT 245/057	B 544/057	63	57	B 545/057
AT 245/060	B 544/060	67	60	B 545/060
AT 245/063	B 544/063	70	63	B 545/063
AT 245/072	B 544/072	80	72	B 545/072
AT 245/075	B 544/075	83	75	B 545/075
AT 245/080	B 544/080	87	80	B 545/080
AT 245/083	B 544/083	90	83	B 545/083
AT 245/090	B 544/090	97	90	B 545/090
AT 245/093	B 544/093	100	93	B 545/093
AT 245/098	B 544/098	105	98	B 545/098
AT 245/100	B 544/100	108	100	B 545/100
AT 245/102	B 544/102	110	102	B 545/102
AT 245/113	B 544/113	121	113	B 545/113
AT 245/120	B 544/120	128	120	B 545/120
AT 245/130	B 544/130	137	130	B 545/130
AT 245/142	B 544/142	150	142	B 545/142
AT 245/150	B 544/150	158	150	B 545/150
AT 245/152	B 544/152	160	152	B 545/152
AT 245/162	B 544/162	170	162	B 545/162
AT 245/172	B 544/172	180	172	B 545/172
AT 245/192	B 544/192	200	192	B 545/192
AT 245/200	B 544/200	210	200	B 545/200



AT 245/GR	CARRIAGE ELEVATION KIT CONSISTING OF WINCH, CABLE AND ROTATING PULLEY
AT 245/P10	1 m COLUMN EXTENSION
AT 245/P5	0.5 m COLUMN EXTENSION

ADJUSTABLE CORE LIFTER**AT 285**

Adjustable according to various core diameters (up to 6").

DIMENSIONS: 250 x 250 x 550 mm

WEIGHT: 2 kg.

B 545/G	CORE PULLER (6" in dia.)
B 545/T	CORE PULLER (4" in dia.)

BITS FOR CONTINUOUS CORING

Ideal for consolidation holes in old buildings (injections and chain insertions).

The special threaded bits allow holes with a max. diameter of up to 80 mm to be drilled to considerable depths.

This system is free of vibrations (which are typical in destructive core drilling) and is most commonly employed for horizontal holes. The equipment consists of a 250 mm fixture rod element with a buffer-ring, to which the subsequent extension rods (500 mm) are fitted, and finally the threaded 90 mm bit with various diameters.

N.B.: EACH BIT DIAMETER REQUIRES SUITABLE EXTENSION RODS AND ENGINE FITTING.



AT 245/C3

AT 245/A3

AT 245/R3

BITS: length 90 mm

EXTENSION
RODS

CONNECTOR

WIDIA light masonry	EXPOSED masonry	IMPREGNATED reinforced concrete	DIA. mm		LENGTH 500 mm	LENGTH 250 mm
			ext.	int.		
AT 245/W1	AT 245/B1	AT 245/C1	26	14	AT 245/A1	AT 245/R1
AT 245/W2	AT 245/B2	AT 245/C2	35	25	AT 245/A2	AT 245/R2
AT 245/W3	AT 245/B3	AT 245/C3	40	30	AT 245/A3	AT 245/R3
AT 245/W4	AT 245/B4	AT 245/C4	50	40	AT 245/A4	AT 245/R4
AT 245/W5	AT 245/B5	AT 245/C5	60	50	AT 245/A5	AT 245/R5
AT 245/W7	AT 245/B7	AT 245/C7	80	70	AT 245/A7	AT 245/R7

