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ASPHALT BITUMEN TEST EQUIPMENTS



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REFLUX EXTRACTION TEST SET

ASTM D2172 | AASHTO T164

Product Code

- B1770 Reflux Extraction Test Set 4000 g, 220-240 V 50/60 Hz
- B1770/01 Reflux Extractor Jar for B1770
- B1770/02 Brass Condenser for B1770
- B1770/03 Stainless Steel Wire Mesh Cone for B1770
- B1770/04 Iron Wire Gauze 160x160mm for B1770
- B1770/05 Filter Paper 400 mm dia for B1770, Pack of 50 pieces

- B1775 Reflux Extraction Test Set 1000 g, 220-240 V 50/60 Hz
- B1775/01 Reflux Extractor Jar for B1775
- B1775/02 Brass Condenser for B1775
- B1775/03 Stainless Steel Wire Mesh Cone for B1775
- B1775/04 Iron Wire Gauze 120x120mm for B1775
- B1775/05 Filter Paper 300 mm dia for B1775, Pack of 50 pieces

DESCRIPTION

Testmak Series B1770 and B1775 Reflux Extractors are used for the quantitative determination of bitumen in hot-mixed paving mixtures and pavement samples. The bitumen content is calculated by difference from the weight of extracted aggregates, moisture content and ash from an aliquot part of the extract. Two models available: 1000 and 4000 g capacity.

Reflux Extractors are supplied with;

- Cylindrical Glass Extractor Jar
- Stainless steel wire mesh cone
- Brass condenser
- Iron Wire Gauze
- Hot plate
- Filter paper

P. Code	Dimensions(mm)	Weight (kg)
B1770	265x265x600 mm	9 kg
B1775	150x150x600 mmm	4 kg

REFLUX EXTRACTION TEST SET

ASTM D2172 | AASHTO T164



B1770



B1775

CENTRIFUGE BINDER EXTRACTOR

ASTM D2172 A | AASHTO T164-A | EN 12697-1
Clause B.1.5

Product Code

- B1580 Centrifuge Binder Extractor 3000 g, 220-240 V 50/60 Hz
 - B1580/110 Centrifuge Binder Extractor 3000 g, 110 V 60 Hz
 - B1580/01 Rotating Bowl and Cover for B1580 and B1580/110
 - B1580/02 Filter Paper 295 mm Outer dia. 45 mm Inner dia. for B1580 and B1580/110 (100 pcs / Pack)
-
- B1585 Centrifuge Binder Extractor 1500 g, 220-240 V 50/60 Hz
 - B1585/110 Centrifuge Binder Extractor 1500 g, 110 V 60 Hz
 - B1585/01 Rotating Bowl and Cover for B1585 and B1585/110
 - B1585/02 Filter Paper 250 mm Outer dia. 45 mm Inner dia. for B1585 and B1585/110(100 pcs / Pack)

DESCRIPTION

The Centrifuge binder extractors are used for the determination of the bitumen percentage in bituminous mixtures. All models comprise a removable precision-machined rotor bowl housed in a cylindrical aluminum box. The bowl is driven by an electric motor fit with an AC drive (inverter) with the double function of speed control up to 3600 rpm regardless of the frequency (50 or 60 Hz) and electrical breaking. The centrifuge extractor can be set for the automatic speed ramp up to 3600 rpm and will stop in 10 seconds. The cover is precisely machined and fitted with a solvent resistant gasket to avoid leakages. All models are fit, for emergency use, by a hand brake system. The control panel includes: Start/Stop button and speed control knob. Digital display can added to monitor the rotational speed according to customer request. Two model available: Standard 1500 g (B1585) and 3000 g (B1580).

The Centrifuge Extractor is supplied with;

- Bowl and Cover,
- Filter Paper - 100 pcs.

P. Code	Dimensions(mm)	Weight (kg)	Power
B1580	550x400x500 mm	50 kg	370 W
B1585	550x400x500 mm	46 kg	370 W

CENTRIFUGE BINDER EXTRACTOR

ASTM D2172 A | AASHTO T164-A | EN 12697-1
Clause B.1.5



B1580



B1585



ASPHALT CONTENT IGNITION FURNACE

ASTM D6307 | EN 12697-39 | AASHTO TP53

Product Code

B1510 Asphalt Content Binder Ignition Furnace - 380 V 50 Hz

DESCRIPTION

The Asphalt Content Binder Ignition Furnace (NCAT) is used to determine the asphalt binder content of hot mix asphalt/bituminous mixtures by the method of loss on ignition. The Asphalt Binder Analyzer is supplied complete with double sample basket with safety cover, extraction fork and 3 meters of metal exhaust pipe.

OVEN AND AFTERBURNER

- High efficiency heating system with afterburner for a total combustion of exhaust fumes to minimize emissions to conform CE Directives.
- Sample size up to 4000 g for more representative test results
- Temperature range is 392 to 1202°F (200 to 650°C).
- Maximum power rating is 3,5 kW
- Supplied complete with 2 sample trays, fork to catch the pan and cooling cage

HARDWARE

- 16 bit microprocessor controller.
- CPU card controlling both test data display,temperature, database and internal functions.
- On board 40 column serial printer
- An accurate internal balance monitors weights automatically throughout ignition to within ± 0.1 g.
- PID closed loop thermoregulation for both oven and afterburner
- 240x120 pixel large graphic display
- RS 232 output for PC connection

FIRMWARE

- Bidirectional real time communication with the weighing system
- Test setting menu for initial weight, weight loss percentage, correction factor.
- Calibration menu to check and set temperature and weight calibration, for possible manual control.
- Test performance menu of all the test data.
- Internal database for up to 100 tests.

ASPHALT CONTENT IGNITION FURNACE

ASTM D6307 | EN 12697-39 | AASHTO TP53



SAFETY FEATURES

- Door safety features, such as a software-activated door lock, an automatic interlock that cuts power when door is open, full 180 degree door opening and door hinge lock eliminate harmful solvents and make operation easy. CE-Approved.
- Automatic monitoring of closed door before test start.

Dimensions	600x900x1100 mm
Weight	110 kg
Power	3500 W

VACUUM PYKNOMETER

EN 12697-5 | ASTM D2041

Product Code

- B1870 Large Size Heavy Duty Vacuum Pycnometer (Yale) 10 lt, for Rice Test
- B1872 Vacuum Pycnometer (Yale) 4.3L, Aluminium, for Rice Test
- B1873 Vibro-Deaerator, Timer Controlled, 220-240 V 50-60 Hz
- B1873/110 Vibro-Deaerator, Timer Controlled, 110 V 60 Hz
- G430/51 Vacuum Pump, 51 lt/min Capacity, 220-240 V 50-60 Hz, 1ph
- G430/128 Dual Stage Vacuum Pump 128 lt/min Capacity, 220-240 V 50-60 Hz, 1ph
- G435 Vacuum Gauge, Analog, -100 kPa, 1 kPa graduated, dia: Ø 63 mm
- G438 Air Drying Unit/ Water Trap, Vacuum Type
- G050/2500 Filter Flask 2500 ml

DESCRIPTION

The Heavy Duty Vacuum Pycnometer Test Set is used for determining the theoretical maximum specific gravity of uncompacted bituminous paving mixtures. The Vacuum Pycnometer can also be used for the calculation of the percent of air voids in compacted bituminous mixtures and the amount of bitumen absorbed by the aggregates. The Vacuum Pycnometer B1870 is manufactured from transparent plastic and supplied complete with vacuum gauge(G435) on the transparent lid with O-ring. 4,3 L Vacuum Pycnometer B1872 is included aluminum volumetric canister and volumetric lid and transparent vacuum lid with O-ring and supplied complete with vacuum gauge(G435). Vacuum Pumps are supplied with 3m plastic tube (Ø8mm) and 2 pcs. clamps. G435 Vacuum Gauge, Analog, Scale Range (-100/0 kPa), Accuracy (1.0 % of scale range), 1 kPa graduated, Ø63 mm. Supplied with a valve, 4-way dispenser and muffler. Vibra-Deaerator, Vacuum Pump and filter flask or air drying unit / water trap should be ordered separately.

Product Code	B1870	B1872
External Dimensions	300x300x450 mm	210x210x350 mm
Capacity (Approx)	10 L	4,3 L
Weight	7 kg	7 kg

VACUUM PYKNOMETER

EN 12697-5 | ASTM D2041



B1873

SOLVENT RECOVERY DISTILLER

Analysis Of Bituminous Mixtures

Product Code

- B1810 Solvent Recovery Unit 10 lt/h Capacity, 220-240 V 50-60 Hz
- B1810/110 Solvent Recovery Unit 10 lt/h Capacity, 110 V 60 Hz

DESCRIPTION

The Solvent Recovery Distiller Unit is used to recover the solvent liquid after its use for the extraction tests. This recovery unit has been designed to recover unflammable solvents. The consists of two stainless steel chambers. The first chamber is used for dirty solvent. The second chamber used for cleaned solvent. A solvent in the left-hand side chamber is distilled by an electrical heater and then passes through a water cooling system and drops into the second chamber ready for re-use a test. Once the process is completed, a temperature switch automatically stops the heating elements. The solvent recovery unit is supplied complete with 10 m plastic tubing, tube clamps, sieve insert 0.6 mm opening and one lid.

Max. Temperature	150°C
Dimensions	420x350x680 mm
Weight	20 kg
Power	1200 W

SOLVENT RECOVERY DISTILLER

Analysis Of Bituminous Mixtures



LABORATORY ASPHALT MIXER

EN 12697-35

Product Code

- B1690/7 Laboratory Asphalt Mixer 7.5 L, 220-240V 50/60 Hz
- B1690/7-110 Laboratory Asphalt Mixer 7.5 L, 110 V 60 Hz
- B1690/10 Laboratory Asphalt Mixer 10 L, 220-240V 50/60 Hz
- B1690/10-110 Laboratory Asphalt Mixer 10 L, 110 V 60 Hz
- B1693 Heating Mantle (Isomantle heater) for TMB-1690/7, 220-240V 50/60 Hz
- B1693/110 Heating Mantle (Isomantle heater) for TMB-1690/7, 110 V 60 Hz
- B1694 Heating Mantle (Isomantle heater) for TMB-1690/10, 220-240V 50/60 Hz
- B1694/110 Heating Mantle (Isomantle heater) for TMB-1690/10, 110 V 60 Hz
- B1695 Spare Mixing Bowl 7.5 L
- B1696 Spare Mixing Bowl 10 L
- B1697 Spare Mixing Whisk for B1690/7
- B1698 Spare Mixing Whisk for B1690/10

DESCRIPTION

The Testmak B1690 series Laboratory Asphalt Mixer is designed for mixing of soil and asphalt samples to be used for mechanical tests as compaction, indirect tensile, Marshall etc. The mixing head rotates at speeds of 10 to 240 r.p.m. and the whisk from 20 to 480 r.p.m.. The user can adjust rotation speed between given values easily by using a control knob fitted to the front panel.

The bituminous mixture must be prepared at the prescribed temperature according to the EN standard. For this reason the mixer can be equipped with thermostatically controlled heater.

The Heating Mantle (Isomantle heater is fitted with a digital thermostatic controller and can easily be fitted to the Mixing Bowl. The Isomantle heater is supplied complete with PT100 temperature sensor.

The Laboratory Asphalt Mixers are supplied with;

- Heating Mantle (Isomantle heater)
- Bowl, Stainless Steel
- Mixing Whisk

Product Code	B1690/7	B1690/10	B1693
Dimensions	380x580x750 mm	700×800×850 mm	300x300x350 mm
Capacity (Approx)	7.5 L	10 L	
Weight	55 kg	70 kg	7.5 kg
Power	550 W	550 W	600 W

LABORATORY ASPHALT MIXER

EN 12697-35



AUTOMATIC MARSHALL COMPACTOR, ASTM

ASTM D1559, D 6926, D 5581| AASHTO T245

Product Code

- B1540/A Automatic Marshall Impact Compactor ASTM Std for 4” dia. specimens, 220-240 V 50/60 Hz
- B1540/A-110 Automatic Marshall Impact Compactor ASTM Std for 4” dia. specimens, 110 V 60 Hz
- B1545/A Automatic Marshall Impact Compactor ASTM Std for 6” dia. specimens, 220-240 V 50/60 Hz
- B1545/A-110 Automatic Marshall Impact Compactor ASTM Std for 6” dia. specimens, 110 V 60 Hz
- B1540SC Soundproof Safety Cabinet for Marshall Compactors
- B1548 Marshall Mould, Ø 102 dia. and 50 mm height
- B1549 Marshall Mould, Ø 154 dia. and 50 mm height

DESCRIPTION

The Astm Standard Automatic Marshall Compactor is automatically compacts the sample and stops after the pre-set number of blows. The mould is held in position by a quick and practical clamping device. The 4536 ± 9 g sliding hammer falls at the 457 ± 3 mm distance for every blow. Automatic control Complete protection for operator safety to CE prescriptions.

Digital console incorporating the emergency stop button to CE prescriptions. System stops automatically for safety when opened compactor cover.

The unit incorporates a compaction pedestal, comprising a laminate block secured to by a 300 mm square x 25 mm thick steel plate. The compactor can be factory installed inside the soundproof and CE security cabinet.

Product Code	B1540/A
Hammer Weight	4536 ± 9 g
Free Fall Height	457 ± 3 mm
Tamping Face Diameter	98,5 mm
Laminated Block Dimensions	200x200x450 mm
Blows Frequency	55 ± 5
Dimensions	400x450x1870 mm
Weight	140 kg
Power	370 W

AUTOMATIC MARSHALL COMPACTOR, ASTM

ASTM D1559, D 6926, D 5581| AASHTO T245



AUTOMATIC MARSHALL COMPACTOR, EN

EN 12697-10, EN 12697-12, EN 12697-30

Product Code

- B1540/E Automatic Marshall Impact Compactor EN Std for 4” dia. specimens, 220-240 V 50/60 Hz
- B1540SC Soundproof Safety Cabinet for Marshall Compactors
- B1548 Marshall Mould, Ø 102 dia. and 50 mm height
- B1549 Marshall Mould, Ø 154 dia. and 50 mm height

DESCRIPTION

The EN Standard Automatic Marshall Compactor is automatically compacts the sample and stops after the preset number of blows. The mould is held in position by a quick and practical clamping device. The 4535 g ± 15 g sliding hammer falls at the 457 ± 5 mm distance for every blow. Automatic control Complete protection for operator safety to CE prescriptions.

Digital console incorporating the emergency stop button to CE prescriptions. The unit incorporates a compaction pedestal, comprising a laminate hardwood block secured to by a 300 mm square x 25 mm thick steel plate. System stops automatically for safety when opened compactor cover.

The compactor can be factory installed inside the sound-proof and CE security cabinet.

Product Code	B1540/E
Hammer Weight	4535 ± 15 g
Free Fall Height	457 ± 5 mm
Tamping Face Diameter	98,5 mm
Concrete Base	450x450x200 mm
Laminated Block Dimensions	200x200x450 mm
Blows Frequency	50 blows in 55/60 s
Dimensions	540x500x2000 mm
Weight	260 kg
Power	370 W

AUTOMATIC MARSHALL COMPACTOR, EN

EN 12697-10, EN 12697-12, EN 12697-30



MANUAL MARSHALL COMPACTION

ASTM D1559 | ASTM D6926 | ASTM D5581 | AASHTO T245

Product Code

- B1550 Manual Marshall Compaction Assembly, 4", ASTM
- B1550/01 Marshall Compaction Hammer , 4" ASTM for B1550
- B1550/02 Wooden Compation Pedestal, ASTM, for B1550 and B1555
- B1550/03 Marshall Compaction Hammer BS
- B1555 Manual Marshall Compaction Assembly, 6", ASTM
- B1555/01 Marshall Compaction Hammer , 6" ASTM for B1555
- B1548 Marshall Compaction Mould, 4 Inches
- B1549 Marshall Compaction Mould, 6 Inches

DESCRIPTION

The B1550 and B1555 Manual Marshall Compaction Assembly are used to prepare Marshall specimens manually. The Compaction Assemblies consist of a Marshall Compaction Hammer and a Wooden Compaction Pedestal. The Pedestal supplied complete with steel plate, mould holder and hammer guide.

B1548 and B1549 Marshall Steel Blocks are used for initial heating of the foot of compaction hammer should be ordered separately.

The Manual Marshall Compaction Assemblie are supplied complete with;

- Wooden Compaction Pedestal
- Hammer

P. Code	Dimensions(mm)	Weight (kg)
B1550	350x400x1700 mm	55 kg
B1550/01	100x100x108 mm	8.5 kg
B1550/02	350x400x1700 mm	42 kg
B1550/03	100x100x108 mm	8.5 kg
B1555	350x400x1700 mm	62 kg
B1555/01	100x100x108 mm	15 kg
B1548	110x110x60 mm	3.5 kg
B1549	160x160x60 mm	7.5 kg

MANUAL MARSHALL COMPACTION

ASTM D1559 | ASTM D6926 | ASTM D5581 | AASHTO T245



MARSHALL COMPACTION MOULD

ASTM D 6926 | EN 12697-10

Product Code

- B1548 Marshall Compaction Mould, 4 Inches
- B1549 Marshall Compaction Mould, 6 Inches
- B1547 Marshall Storage Plate for 6 pcs. for 4" (101.6mm) specimens



DESCRIPTION

The Marshall Compaction Moulds are used to produce the Marshall specimens with automatic or manual compactors. The moulds are manufactured using galvanized steel. The Compaction Moulds consist of a base plate, mould body and a collar.



P. Code	Dimensions(mm)	Weight (kg)
TMB-1548	110x110x60 mm	3.5 kg
TMB-1549	160x160x60 mm	7.5 kg

SAMPLE EXTRUDER

ASTM D1587 | ASTM D1883 | ASTM D698 | BS 1377:4 | BS 1924:2 | BS 598:107

Product Code

- B1850/50 Specimen Extruder for Marshall CBR and Proctor Specimens, 50 kN Capacity
- B1850/30 Specimen Extruder for Marshall CBR and Proctor Specimens, 30 kN Capacity



DESCRIPTION

The Specimen Extruder is produced to easily extrude specimens from Marshall, CBR, standard and modified Proctor Moulds. The capacity of the extruder is 50 kN. Supplied complete with a manual hydraulic jack and 2 pcs. adaptor to extrude specimens from 100mm (4 "), 150 mm (6") inner diameter marshall, CBR standard and modified proctor, moulds.

Screw Travel	90 mm
Ram Travel	130 mm
Dimensions	300x300x500 mm
Weight	30 kg

MARSHALL STABILITY TEST MACHINE

EN 12697-34 | ASTM D1559 | AASHTO T245-T2833 |
BS 598 | NF P98-252-2 | DIN 1996

Product Code

- B1710 Automatic Marshall Stability Test Machine, 50 kN, 220-240 V 50-60 Hz
- B1710/110 Automatic Marshall Stability Test Machine, 50 kN, 110 V 60 Hz
- B1710/01 Marshall Stability Test Frame
- G345/S50 Load Cell, 50 kN
- G340/02 Linear Potentiometric Displacement Transducer, 25x0.001 mm
- B1710/04 Data acquisition and control System TCM304 and Pc Software
- B1710/05 Breaking Head (Stability Mould) 4"
- B1710/06 Breaking Head (Stability Mould) 6"
- B1710/07 Indirect Tensile Splitting Device for Compacted Bituminous Samples 100 mm (4") Dia

DESCRIPTION

The Automatic Marshall Stability Test Machine is used to determine the maximum load and flow values of bituminous mixtures. Capacity is 50 kN. The machine comprises compact two column frame with adjustable upper cross beam. Platen speed is 50.8 mm/min. For safety, the up and down travel of the lower platen is limited the use of limit switches. Rapid adjustment of the platen is controlled using the up and down buttons on the front panel of the machine.

The measuring system consists of a 50 kN capacity strain gauge load cell fitted to the upper cross beam to read stability values and the 25 x 0.001 mm linear potentiometric displacement transducer fitted to the breaking head. The machine is supplied complete with marshall breaking head.

Data acquisition and processing: by TCM readout unit featuring;

- Large graphic touch screen display 240 X 128 pixel,
- Effective resolution 16 bit ,
- Effective sampling rate 40 Hz ,
- Communication port

The Automatic Marshall Stability Test Machine is supplied complete with;

- Load Cell, 50 kN
- Linear Potentiometric Displacement Transducer with Bracket, 25 x 0.001 mm
- Data acquisition and processing: by TCM readout unit featuring
- PC Software
- Connection Cable
- Breaking Head, 4"

MARSHALL STABILITY TEST MACHINE

EN 12697-34 | ASTM D1559 | AASHTO T245-T2833 |
BS 598 | NF P98-252-2 | DIN 1996



TCM304 LCD Graphic Display Data Acquisition and Control Unit;

TCM304 LCD Graphic Display Data Acquisition and Control Unit is produced to control the machine and processing of data from load-cells, pressure transducers or displacement transducers which are fitted to the machine. TCM304 LCD Graphic Display are controlled from the front panel consisting of a 240x120 pixel LCD display and function keys. One analog channel for load cell and one analog channel for displacement transducer exists.

MARSHALL STABILITY TEST MACHINE

EN 12697-34 | ASTM D1559 | AASHTO T245-T2833 |
BS 598 | NF P98-252-2 | DIN 1996

TCM304 LCD Graphic Display are controlled with function keys on the front panel. One analog channel for load cell and one analog channel for displacement transducer exists.

TCM304 has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seamless manner to activate the option or enter a numeric value to set the test parameters. The TCM 304 digital graphic display is able to draw real-time "Load vs. Time", "Load vs. Displacement" or "Stress vs. Time" graphics.

TCM304 can save 256 test results in its internal memory. At the end of the test cycle, the results can be stored in the large memory or downloaded to a PC in TCM304 software format. Dedicated software package is available for further online data processing data base management and certificate printing.

MAIN FEATURES

- Automatically calculates flow and stability values
- 240*120 pixel blue-white graphic LCD display.
- High resolution 65.000 points.
- Backlight function.
- Capability of contrast calibration by light.
- 21 key touch membrane keyboard.
- Two analogical and two digital channels, use for load cell or pressure transducer etc.
- Standalone full automatic testing capacity.
- Can make manual tests if requested.
- A sample type and dimension can be entered respect to the standards,
- Load-Time, Tensile-Time, Test Results and Sample reports observable and printable.
- One RS232 serial port for connecting either PC or printer for data transmission.
- Comes with Connection cable and software.
- Large permanent memory up to 256 test results.
- Language select, English, Russian and Turkish.

Data Acquisition & PC Software

Marshall Test Software is developed for both EN 12697-34 and ASTM D5581 Marshall Tests. Marshall Test Software includes control of machine, acquisition of load and displacement data, saving them and reports. The Marshall Test Software accepts specimen diameter and height as an input parameter. It automatically calculates correction factor coming from the standarts respect to specimen size. The stability value is calculated regarding to this fac-

MARSHALL STABILITY TEST MACHINE

EN 12697-34 | ASTM D1559 | AASHTO T245-T2833 |
BS 598 | NF P98-252-2 | DIN 1996

tor. The software continuously updates load and displacement until the end of test. When the test is completed, the sharpest slope of the graph is calculated. The point that this line crosses displacement axis is commented as an offset. This offset is subtracted from the displacement value at peak point and called as flow. Graphical outputs and reports can be saved as a MS Excel worksheet



TEST STANDARDS	
TS 436, EN 1346	EN 1916, 821 - ASTM C301, C497
COMPRESSION TEST ON CARD BOX	COMPRESSION TEST ON CONCRETE PIPES
ASTM D698-66T, ASTM 1557-66T	EN 1916, 821 - ASTM C301, C497
CBR RATIO TEST	COMPRESSION TEST ON REINFORCED CONCRETE PIPES
EN 12697-34, ASTM D1559	TS 1900-2 - ASTM D3080 - BS 1377-7
MARSHALL STABILITY TEST	DIRECT SHARE TEST

Specimen Dimensions	
Bituminous Sample Dimensions	
Channel / Unit nr:	0.00
Length (mm):	0.00
Diameter (mm):	0.00

PAVAMENT CORE DRILLING MACHINE

EN 12697-27

Product Code

- B1620/65 Pavement Core Drilling Machine, 6.5 Hp
- B1620/125 Pavement Core Drilling Machine, 12.5 Hp
- B1630/50 Coring Bit for Asphalt 50 mm dia. x 400 mm length
- B1630/75 Coring Bit for Asphalt 75 mm dia. x 400 mm length
- B1630/100 Coring Bit for Asphalt 100 mm dia. x 400 mm length
- B1630/150 Coring Bit for Asphalt 150 mm dia. x 400 mm length

DESCRIPTION

The Pavement core drilling machine is produced to cut cores up to 200 mm diameter from concrete, asphalt and similar hard construction materials. The machine comprises a vertical support column which carries the drill head/motor assembly. The motor assembly comprises a 6.5 Hp 4 stroke high quality petrol engine. A ball screw mechanism enables close control of the drilling pressure and rapid return. A water spraying assembly is mounted on the machine. The complete assembly is supplied on a rigid wheel mounted metal base frame with leveling and fixing facility during the operation. Coring Bits should be ordered separately.

P. Code	B1620/65	B1620/125
Dimensions	460x950x1120 mm	520x1100x1200 mm
Weight (approx)	105 kg	125 kg
Power	6.5 Hp	12.5 Hp

PAVAMENT CORE DRILLING MACHINE

EN 12697-27



PAVAMENT CORE MACHINE ON TRAILER

EN 12697-27

Product Code

- B1625 Pavement Core Drilling Machine on Trailer



DESCRIPTION

Pavement Core Drilling Machine on Trailer is installed in on a trailer. 100 liter water tank provides continuous lubrication during drilling. The two-wheeler taut liner trailer is fully equipped with brake lamps, hazard flashers, retroreflectors conforming to road traffic regulations. The trailer is produced with a space to be used for storing the core samples. The two fixing legs are robustly designed for improved stabilization. Core Drilling Machine is produced to cut cores up to 200 mm diameter from concrete, asphalt and similar hard construction materials. The machine comprises a vertical support column which carries the drill head/motor assembly. The motor assembly comprises a 6.5 Hp 4 stroke high quality petrol engine. A ball screw mechanism enables close control of the drilling pressure and rapid return. A water spraying assembly is mounted on the machine. The complete assembly is supplied on a rigid wheel mounted metal base frame with leveling and fixing facility during the operation. Coring Bits should be ordered separately. Coring Bits should be ordered separately.

Dimensions	1600x2500x1900 mm
Weight	370 kg
Power	6.5 Hp

ASHALT TEMPERATURE MEASUREMENT

TEMPERATURE

Product Code

- G380/03 Hand Type Digital Thermometer, -50°C to 1350°C
- G380/04 200 mm Hand-Held Penetration Probe for Temperature Mesurement (Ø6mm), with 1.5m cable and connector, up to 1200° C
- G380/05 300 mm Hand-Held Penetration Probe for Temperature Mesurement (Ø6mm), with 1.5m cable and connector, up to 1200° C
- G380/06 500 mm Hand-Held Penetration Probe for Temperature Mesurement (Ø6mm), with 1.5m cable and connector, up to 1200° C



DESCRIPTION

Digital thermometer and penetration priobes are used together for measuring the delivery and compaction temperatures of bituminous mixtures. Preffered penetration probe should be ordered with G380/03.

VIALIT PLATE APPARATUS

EN 12272-3 | NF P98-274-1

Product Code

- B1880 Vialit Plate (Adhesion Test) Apparatus
- B1880/01 Steel Ball, 512gr, for B1880
- B1880/02 Mechanic Aggregate Deployment for B1880 for 100 chippings



DESCRIPTION

The B1880 Vialit Plate Apparatus is used to assess the adhesion property of aggregates to bitumen. Supplied complete with a metal basement with three vertical pointed rods to hold the flat steel plate, 50 cm. high vertical rod with a slot at the upper end for the steel ball to drop, a 512 g steel ball, 6 metal test plates and a hand operated rubber wheel roller. The mechanic aggregate deployment should be ordered seperately. The test plate, coated by bitumen on one face and spread with the aggregate chippings in a standard way is rolled using the roller and then placed on the three-point support base. The steel ball drops three times from the slot, and the chippings that become loose after the three impacts are counted and checked.

The Vialit Plate (Adhesion Test) Apparatus is supplied complete with;

- Flat Steel Plates, 6 pcs.
- Steel Ball, 512 g
- Rubber Wheel Roller, hand operated

Dimensions	400x1400x400 mm
Weight	45 kg

TRAVELLING BEAM DEVICE

SURFACE IRREGULARLY

Product Code

- B1830 Travelling Beam Device (Paper Print System)



DESCRIPTION

The Travelling Beam Device is used to check for any irregularities in both concrete and bituminous road surfaces. The Device is 3 meter long. A sensing unit comprising a wheel connected to an indicator provides a magnification of 4:1. Deviation of the surface from a straight-line on a scale calibrated in increments of 2 mm up to 10 mm and 5 mm up to 25 mm. A dye-marker is fitted which may be used to identify suspect areas. Outrigger wheels provide mobility on site. The device is supplied as three sub-assemblies which are quickly assembled on site. The Travelling Beam is supplied fitted with an autographic recorder providing a permanent record of the surface profile. Records up to 1 kilometre can be recorded on the special chart paper rolls used.

Dimensions	720x1600x500 mm
Weight	58 kg

SEMI AUTOMATIC BITUMEN PENETROMETER

ASTM D5 | EN 1426 | AASHTO T49

Product Code

- B1530 Semi-Automatic Digital Bitumen Penetrometer, 220-240 V 50-60 Hz
- B1530/110 Semi-Automatic Digital Bitumen Penetrometer, 110 V 60 Hz
- B1525/01 Penetration Needle, 2,5 g
- B1525/02 Transfer Dish, Dia 100x100(h) mm
- B1525/03 Sample Cup, Ø 55x35 mm, Stainless steel
- B1525/04 Sample Cup, Ø 70x45 mm, Stainless steel
- B1525/05 Brass Penetrometer Cone ASTM D 217 and ASTM D 937 (Optional)
- B1525/06 Resilience Ball Penetration Tool (ASTM D5329)

DESCRIPTION

The Semi-Automatic Digital Bitumen Penetrometer is used to determine the penetration of bituminous samples under constant load, time and temperature. The bitumen penetrometer is consists of steel base, leveling screws, digital penetration measurement gauge 0.01 mm precision, release button, automatic zeroing and spirit level. Bitum Penetrometer is supplied with semi automatic timer unit. Penetration timer unit is used to release the plunger fitted with the needle to start the 5 seconds test. Thermometers required for the test should be ordered separately.

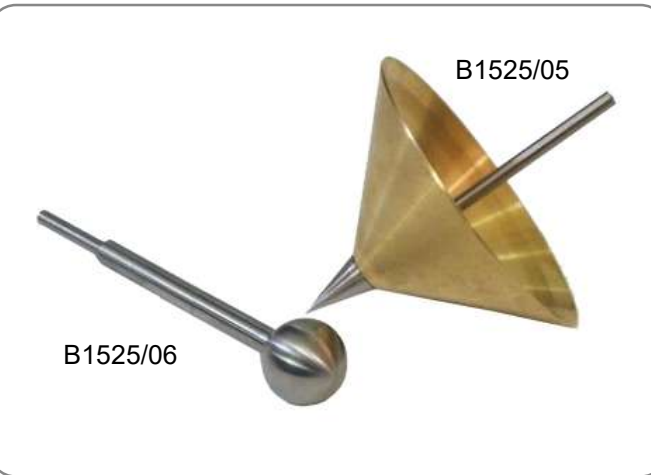
The Semi-Automatic Digital Penetrometer is supplied with;

- Penetration Needle, 2,5g, 1 piece
- Transfer Dish
- Sample Cup Ø 55x35 mm, 6 pieces, stainless steel

Dimensions	200x300x480 mm
Weight	15 kg

SEMI AUTOMATIC BITUMEN PENETROMETER

ASTM D5 | EN 1426 | AASHTO T49



AUTOMATIC BITUMEN PENETROMETER

ASTM D5 | EN 1426 | AASHTO T49

Product Code

- B1520 Automatic Digital Bitumen Penetrometer, 220-240 V 50-60 Hz
- B1520/110 Automatic Digital Bitumen Penetrometer, 110 V 60 Hz
- B1525/01 Penetration Needle, 2,5 g
- B1525/02 Transfer Dish, Dia 100x100(h) mm
- B1525/03 Sample Cup, Ø 55x35 mm, Stainless steel
- B1525/04 Sample Cup, Ø 70x45 mm, Stainless steel
- B1525/05 Brass Penetrometer Cone ASTM D 217 and ASTM D 937 (Optional)
- B1525/06 Resilience Ball Penetration Tool (ASTM D5329)

DESCRIPTION

The Automatic Digital Bitumen Penetrometer is used for determination of the needle penetration according to Astm and EN standards. The penetration depth of the needle is determined with a pulse type electronic measuring system. Before each start of the test the measuring system automatically resets, and then the penetration needle moves down to the sample by using the electric drive, the needle position can be finely adjusted by using the buttons located on the penetrometer front . The bitumen penetrometer is supplied complete with outfit for penetration of bituminous materials including needle, holder, 50 g weight. The Automatic Digital Bitumen Penetrometer is supplied with;

- Penetration Needle, 1 piece
- Transfer Dish
- Sample Cup, Ø 55x35 mm, 6 pieces, stainless steel



AUTOMATIC BITUMEN PENETROMETER

ASTM D5 | EN 1426 | AASHTO T49



Measuring Range	0-50 mm
Resolution	0.01 mm
Test Load	100 g (plunger 97.5 g + 2.5 g penetration needle)
Test Time	5 seconds (adjustable from 0.1 to 9999 sec.)
Dimensions	300x450x700 mm
Weight	22 kg
Power	75 W

AUTOMATIC RING AND BALL APPARATUS

EN 1427 | ASTM D36 | AASHTO T53

Product Code

- B1795 Automatic Ring and Ball Apparatus, 220-240 V 50-60 Hz
- B1790/01 Brass Ring, with Steel Ball and Ball Centering Guides, 2 pcs.each
- B1790/02 Ring Holder and Assembly
- B1790/04 Glass Beaker 600 ml
- B1790/05 ASTM 15C Thermometer -2 +80°C (IP60C)
- B1790/06 ASTM 16C Thermometer +30 + 200°C (IP61C)
- B1525/07 Glass Thermometer Max. 110°C
- B1525/08 Glass Thermometer Max. 250°C,

DESCRIPTION

Automatic Ring and Ball Tester with glass-ceramic heating plate and magnetic stirring motor with variable speed range below. Operation by use of a touch panel. The microprocessor controlled system provides a temperature rise of 5 K/min. as per standard with continuous temperature measurement inside the glass beaker. The ring and ball values are automatically registered by two photoelectric cells right and left with digital display of results and difference. Two test options 30 to 80° C for water and 80 to 150° C for glycerol are provided. Supplied with glass beaker 600 ml, stirring rod as well as a test frame with two rings, two balls and two ball centering supports. A software permits to select the test method and the test parameters, run the test automatically, store, retrieve and print data, diagnose and calibrate the instrument. Additional cooling system, permits to quickly cool down the sample allowing to handle the glassware and to perform number of tests during a day by reducing the dead times between consequent analysis.

The apparatus consists of a heater, cooling system, electric lifting system, and magnetic stirrer with speed control, temperature probe, glass beaker, ring and ball support, brass ring with steel ball and ball centering guides (2 pcs. each), light barrier system, microprocessor system and large graphic display with touch screen, USB port for PC or printer.

AUTOMATIC BITUMEN PENETROMETER

EN 1427 | ASTM D36 | AASHTO T53



MAIN FEATURES

- Pyrex beaker 1000 cc capacity for sample heating.
- Microprocessor control with automatic programmable test sequences for water or glycerol
- USB serial port for connection to PC or printer
- Colour large TFT graphic display with touch screen
- Electric lifting system
- PID controlled heating system
- Cooling system with solenoid valve control
- Magnetic stirrer with adjustable speed
- Digital light barrier system determines exact softening point of bituminous sample
- Software controlled system allows select test parameters, store and retrieve test results.

SAFETY FEATURES

- Heater is automatically shut down at the end of the test cycle and cooling media and a solenoid valve is automatically opened by the controller.
- Automatic test interruption when there is a probe failure or when the probe is not positioned properly

Dimensions	510x320x300 mm
Weight	18 kg
Power	750 W

RING AND BALL APPARATUS

EN 1427 | ASTM D36 | AASHTO T53

Product Code

- B1790 Ring and Ball Apparatus
- B1790/01 Brass Ring, with Steel Ball and Ball Centering Guides, 2 pcs.each
- B1790/02 Ring Holder and Assembly
- B1790/03 Magnetic Stirrer with Hot Plate, 220-240 V 50-60 Hz
- B1790/04 Glass Beaker 600 ml
- B1790/05 ASTM 15C Thermometer -2 +80°C (IP6OC)
- B1790/06 ASTM 16C Thermometer +30 + 200°C (IP61C)
- B1525/07 Glass Thermometer Max. 110°C
- B1525/08 Glass Thermometer Max. 250°C,



DESCRIPTION

The Ring and Ball Test Apparatus is used for determining the softening point of bituminous materials by ring and ball method.

Ring and Ball Test Apparatus is supplied with;

- Magnetic Stirrer with Heater
- Brass Rings, 2 pcs.
- Steel Balls, 9.5 mm dia., 2 pcs.
- Ball Centering Guides, 2 pcs.
- ASTM 15C Thermometer -2 +80°C (IP 6OC)
- Ring Holder and Assembly,
- Glass Vessel Beaker 600ml
- Magnetic fish

Dimensions	510x320x300 mm
Weight	18 kg
Power	750 W

CLEVELAND FLASH POINT TESTER

EN 22592 | ASTM D92 | AASHTO T48 | IP 36/67

Product Code

- B1600 Cleveland Open Cup Flash Point Tester, 220-240 V 50-60 Hz
- B1600/110 Cleveland Open Cup Flash Point Tester, 110 V 60 Hz
- G0639 Thermometer IP28C, -6 +400°C



DESCRIPTION

The open cup Cleveland flash tester is used to determine the flash and fire point of petroleum products. It consists of a brass cup mounted on an electric heater with a temperature controller and a thermometer. Conforming to the CE Directive, the unit is supplied complete with a double line-fuse, Hot plate control apparatus and a thermometer(-6 C to +400 C).

The Cleveland Flash Tester is supplied complete with;

- Brass Cup
- Thermometer IP28C, -6 +400°C

Dimensions	270x270x550 mm
Weight	12 kg
Power	750 W

FRAASS BREAKING POINT APPARATUS

EN 12593

Product Code

- B1920 Fraass Breaking Point Apparatus
- B1920/02 Stainless Steel Plaque, Frass Apparatus (pack of 10)

DESCRIPTION

Breaking Point Apparatus is used to determine the breaking point of solid and semisolid bitumen. The Fraass Breaking Point is the temperature at which bitumen first becomes brittle, as indicated by the appearance of cracks when a thin film of bitumen on a metal plaque is cooled and flexed in accordance with specified conditions.

The apparatus consists of a bending device, a plaque made of springly stainless steel 41x20x0.15 mm, a cooling device, a thermometer IP 42 C, a plate and stand.

Dimensions	100x100x300 mm
Weight	3 kg

ROLLING THIN FILM OVEN (RTFOT)

EN 12607-1 | ASTM D2872 | AASHTO T240

Product Code

- B1780 Rolling Thin Film Oven (RTFOT), 220-240 V 50-60 Hz
- B1780/01 Glass containers for B1780
- B1780/02 Air-Drying Unit for B1780

DESCRIPTION

The Rolling Thin Film Oven (RTFOT) is asphaltic semi-rigid material on a moving film of air and heat are used to measure the effect. External body and inner surface made of stainless steel. The middle portion is insulated with fiberglass. A wide range of devices for observation of the door is covered with glass. Oven must be connected to a suitable source of air pressure.

Rolling Thin Film Oven (RTFOT) is equipped of a dual safety thermostat to prevent accidental over-heatings. 8 pieces of 64 x 140 mm diameter glass carriers will be delivered.

The RTFOT is supplied complete with;

- Digital thermostat to maintain 163°C temperature,
- Control thermometer ASTM 13C,
- Ventilation device,
- Diameter 64x140 mm 8 glass containers.

Dimensions	620x620x910 mm
Weight	70 kg
Power	1300 W

FRAASS BREAKING POINT APPARATUS

EN 12593



ROLLING THIN FILM OVEN (RTFOT)

EN 12607-1 | ASTM D2872 | AASHTO T240



Dimensions	620x620x910 mm
Weight	70 kg
Power	1300 W

SAYBOLT TWO TUBE VISCOMETER

ASTM D88 | AASHTO T72

Product Code

- B1840 Saybolt Two-Tube Digital Viscometer, 220-240 V 50-60 Hz
- B1840/110 Saybolt Two-Tube Digital Viscometer, 110 V 60 Hz
- B1840/01 Filter Funnel with Wire Mesh and Clip
- B1840/02 Withdrawal Tube
- B1840/03 Saybolt Viscosity Flask, glass, 60 ml
- B1840/04 Heat Transfer Oil, 5 lt.
- B1840/05 Saybolt Viscosity Thermometer Set, 6 pcs

DESCRIPTION

The Saybolt Two-Tube Digital Viscometer is used to determine empirical measurement of Saybolt Viscosity of petroleum products at specified temperatures. The viscometer can be used for temperatures between 21 to 99 °C (70 to 210 °F) The viscometer includes water-oil bath, stirrer, cooling coil, electric heater with digital thermo regulator, furol orifice, universal orifice, ASTM thermometers and 2 pcs 60 ml glass saybolt viscosity flask.

The B1840/05 Viscosity Thermometer set consists of 6 thermometers with the temperature ranges;

- Saybolt Thermometer ASTM 18C / +19 to 27°C / 0.1°C subdivisions
- Saybolt Thermometer ASTM 18C / +34 +42°C / 0.1°C subdivisions
- Saybolt Thermometer ASTM 19C / +49 + 57°C / 0.1°C subdivisions
- Saybolt Thermometer ASTM 20C / +57 + 65°C / 0.1°C subdivisions
- Saybolt Thermometer ASTM 21C / +79 +87°C / 0.1°C subdivisions
- Saybolt Thermometer ASTM 22C / + 95 + 103°C / 0.1°C subdivisions

The Saybolt Two-Tube Digital Viscometer is supplied complete with;

- Universal Orifice
- Furol Orifice
- Heat Transfer Oil, 5 lt
- Key
- Saybolt viscosity flask, glass, 60 ml, 2 pcs.

SAYBOLT TWO TUBE VISCOMETER

ASTM D88 | AASHTO T72



Dimensions	270x270x550 mm
Weight	12 kg
Power	750 W

DUCTILITY TESTING MACHINE

EN 13589, 13398, 13703 | ASTM D113 | AASHTO T51 | AASHTO T300

Product Code

- B1650 Ductility Testing Machine, 220-240 V 50-60 Hz
- B1650/110 Ductility Testing Machine, 110 V 60 Hz
- B1650/CS Ductility Testing Machine with Cooling Unit, 220-240 V 50-60 Hz
- B1650/CS-110 Ductility Testing Machine with Cooling Unit, 110 V 60 Hz
- B1655 Ductility Mould and Base Plate



DESCRIPTION

The Testmak Ductility Testing Machines determine ductility of formed asphalt or semi-solid bitumen by measuring the distance of elongation before reaching the breaking point of a briquette sample, which is pulled apart at a specific speed and temperature. The Internal tank is made of stainless steel. The bath is fitted with an immersion heater in order to obtain, the 25°C test temperature. Suitable for testing 3 samples simultaneously. Standard carriage stroke is 1500 mm. The machine consist of graduated scale, moulds and mould base plates. The ductility machine comprises speed control and water circulator to maintain the homogeneous water temperature.

The B1650/CS Ductility Testing Machine with Cooling Unit has the same specifications with B1650 Ductility Testing Machine but with an additional cooling unit and It is not possible to convert B1650 to B1650/CS.

Speed	50 mm/min.
Carriage Stroke	1500 mm
Dimensions	320x1800x600 mm
Weight	90 kg
Power	350 W

DUCTILITY TESTING MACHINE

EN 13589, 13398, 13703 | ASTM D113 | AASHTO T51 | AASHTO T300