Concrete

Concrete is used more than any other man-made material in the world, it is a composite construction material composed of cement (commonly Portland cement), coarse aggregates, sand, water and chemical admixtures. The word concrete comes from the Latin word “concretus” (meaning compact or condensed) hence, concrete solidifies and hardens after mixing with water and placement due to a chemical process known as hydration.

The water reacts with the cement, which bonds the other components together, eventually creating a robust stone-like material that can be moulded in any shape we desire. The quality of concrete is important if structures formed from this versatile material are to be safe and serve the purpose for which they were constructed therefore, several tests are conducted to identify the characteristics and parameters of concrete.

The testing equipment described in this section are special selected to test the physical parameters of concrete for consistency, degree of compaction, workability, setting time, segregation resistance, confined flowability, air content, bulk density, specific gravity, adhesion, water permeability and strength.
**Slump Cone Test set**

**DESCRIPTION:**
Slump Cone test set is used for the determination of the consistency and workability of fresh concrete. The Concrete Slump Test Set is supplied complete with: Slump Cone, Slump Funnel, Base Plate, Tamping Rod, Rubber mallet, Steel ruler.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>500x500x60 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0101-2</td>
<td></td>
</tr>
<tr>
<td>Ø 16x600 mm</td>
<td></td>
</tr>
<tr>
<td>CN 0101-4</td>
<td></td>
</tr>
<tr>
<td>300 x 1 mm</td>
<td></td>
</tr>
<tr>
<td>CN 0101-6</td>
<td></td>
</tr>
<tr>
<td>550x600x250 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>6 kg</td>
</tr>
</tbody>
</table>

**Concrete Flow Table**

**DESCRIPTION:**
The test set is used for concrete mixes of high workability and determines flow index as an arithmetic mean of the diameter of the specimen after working on a flow table. The apparatus consists of a double steel table, an upper table measuring 700x700 mm and hinged at one side to the lower table.

The top table is inscribed and all parts are protected against corrosion. The stainless steel cone has a 130 ±2 mm top diameter, 200 ±2 mm base diameter and 200 ±2 mm height and 1.5 mm thickness.

The Concrete Flow Table Set is complete with flow cone and wooden tamper.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>700x850x300 mm</td>
<td>40 kg</td>
</tr>
</tbody>
</table>

**MAIN FEATURES:**
- Heavy duty
- Made of thick galvanized steel

**ORDERING:**
- CN 0101-1 Slump Cone test complete
- ACCESSORIES:
  - CN 0101-1 Slump Cone
  - CN 0101-2 Base Plate
  - CN 0101-3 Slump Funnel
  - CN 0101-4 Tamping Rod
  - CN 0101-5 Rubber Mallet
  - CN 0101-6 Steel Ruler
### Waltz Container

**DESCRIPTION:**
The Waltz Container is used to measure the degree of compact ability of fresh concrete.

It consists of a 200x200x400 mm metal container with two carrying handles. Coated against corrosion.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200x200x400 mm</td>
<td>5 kg</td>
</tr>
</tbody>
</table>

**MAIN FEATURES:**
- The apparatus consists of a metal box with handles.

**ORDERING:**
- CN 0107 Waltz Container

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### J-ring, narrow gap

**DESCRIPTION:**
The J-RING test, in conjunction with the Slump-flow test, is one way to determine the passing ability of SCC, defined as the ability of the concrete to flow under its own weight to completely fill all spaces within the formwork.

The J-RING test set includes the J-RING, Modified Slump Cone, Strike-off bar and a plastic base plate with convenient cut-out carrying handles.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>CN 0103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
</tr>
<tr>
<td>Weight (approx.)</td>
</tr>
</tbody>
</table>

**MAIN FEATURES:**
- Manufactured from stainless steel.
- Protected against corrosion

**ORDERING:**
- CN 0103 J Ring test set complete
- CN 0104 J Ring
- CN 0105 Slump Cone
- CN 0106 Base Plate

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**EN 12350-12; ASTM C1621; ASTM C1611**

**EN 12350-4**

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**DESCRIPTION:**

The Vebe Consistometer is used to determine the consistency of fresh concrete bysubjecting the concrete specimen to vibration after removal of the slump cone.

**MAIN FEATURES:**

- Bulk Unit Weight measures is made from heavy steel sheet protected against corrosion

**ORDERING:**

- CN 0108: Bulk Unit 1 ltr
- CN 0109: Bulk Unit 3 ltr
- CN 0110: Bulk Unit 5 ltr
- CN 0111: Bulk Unit 7 ltr
- CN 0112: Bulk Unit 10 ltr
- CN 0113: Bulk Unit 15 ltr
- CN 0114: Bulk Unit 20 ltr
- CN 0115: Bulk Unit 28 ltr

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**DESCRIPTION:**

Vebe Consistometer is used to determine the consistency of fresh concrete by subjecting the concrete specimen to vibration after removal of the slump cone.

**MAIN FEATURES:**

- Heavy duty

**ORDERING:**

- CN 0116: Vebe Consistometer complete

**ACCESSORIES:**

- CN 0116-1: Slump Cone
- CN 0116-2: Filling cone
- CN 0116-3: Transparent plate
- CN 0116-4: Tamping rod.

---

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0116</td>
<td>170 W</td>
<td>87 kg</td>
</tr>
<tr>
<td>CN 0116</td>
<td>570x460x670 mm</td>
<td></td>
</tr>
</tbody>
</table>

**DESCRIPTION:**

The set consists of vibrating table, slump cone, graduated rod with transparent plate, filling cone and tamping rod.

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**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0108</td>
<td>100x170x150 mm</td>
<td>2.8 kg</td>
</tr>
<tr>
<td>CN 0109</td>
<td>150x210x210 mm</td>
<td>3.7 kg</td>
</tr>
<tr>
<td>CN 0110</td>
<td>170x240x250 mm</td>
<td>5.0 kg</td>
</tr>
<tr>
<td>CN 0111</td>
<td>190x260x270 mm</td>
<td>6.3 kg</td>
</tr>
<tr>
<td>CN 0112</td>
<td>210x290x310 mm</td>
<td>7.7 kg</td>
</tr>
<tr>
<td>CN 0113</td>
<td>250x340x330 mm</td>
<td>10 kg</td>
</tr>
<tr>
<td>CN 0114</td>
<td>270x370x380 mm</td>
<td>12 kg</td>
</tr>
<tr>
<td>CN 0115</td>
<td>310x410x430 mm</td>
<td>20 kg</td>
</tr>
</tbody>
</table>
Pocket Penetrometer

DESCRIPTION:
The Pocket Penetrometer is designed for the determination of setting time of fresh concrete for field and laboratory use.

Stainless steel plunger has 32.3 mm² (1/20 in²) area and 0-5 MPa measuring range.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length</td>
<td>155 mm</td>
</tr>
<tr>
<td>Maximum diameter</td>
<td>20 mm</td>
</tr>
<tr>
<td>Diameter of the tip</td>
<td>6.35 mm (1/4”)</td>
</tr>
<tr>
<td>Penetration of the tip</td>
<td>6.35 mm</td>
</tr>
<tr>
<td>Cross section of the tip</td>
<td>0.3165 cm²</td>
</tr>
<tr>
<td>Net weight</td>
<td>0.150 kg</td>
</tr>
<tr>
<td>Force required to read 3 kg/cm²</td>
<td>5.10 ± 0.25 kgf</td>
</tr>
<tr>
<td>Force required to read 4.5 kg/cm²</td>
<td>7.71 ± 0.28 kgf</td>
</tr>
<tr>
<td>Compression of the spring for 4.5 kg/cm²</td>
<td>35.6 mm</td>
</tr>
<tr>
<td>Nominal calibration factor of the spring</td>
<td>0.2166 ± 0.01 kg/cm²</td>
</tr>
</tbody>
</table>

Concrete Mortar Penetrometer

DESCRIPTION:
The Concrete Mortar Penetrometer consists of a cylindrical spring housing with a plunger attached to the top of the spring. Penetration needle is attached to the other end of the spring housing.

The plunger is graduated in 1 kg divisions, to a maximum capacity of 60 kg, which can be read with respect to the top end of the spring housing.

A set of six needle points with areas of 645, 323, 161, 65, 32 and 16 mm² are provided.

The Concrete Mortar Penetrometer is supplied complete with; Set of interchangeable needle points of 645, 323, 161, 65, 32, 16 mm² area

<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
<th>Needle Pos</th>
<th>Face areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Mortar Penetrometer complete</td>
<td>CN0118</td>
<td>11</td>
<td>16 mm² (1/40 inch²)</td>
</tr>
<tr>
<td>Set of points needles</td>
<td>CN0119</td>
<td>12</td>
<td>32 mm² (1/20 inch²)</td>
</tr>
<tr>
<td>Set of points needles</td>
<td>CN0119</td>
<td>12</td>
<td>65 mm² (1/10 inch²)</td>
</tr>
<tr>
<td>Carrying case</td>
<td>CN0120</td>
<td>12</td>
<td>161 mm² (1/4 inch²)</td>
</tr>
<tr>
<td>Carrying case</td>
<td>CN0120</td>
<td>12</td>
<td>323 mm² (1/2 inch²)</td>
</tr>
<tr>
<td>Carrying case</td>
<td>CN0120</td>
<td>12</td>
<td>645 mm² (1 inch²)</td>
</tr>
</tbody>
</table>
V-Funnel Apparatus

DESCRIPTION:
The V-Funnel Apparatus is used to evaluate the segregation resistance of freshly mixed self compacting concrete by observing the flowing speed due to the difference of samples remaining period in the funnel.

The test set consists of a stainless steel funnel placed vertically on a supporting stand. The discharge orifice is equipped with a lid, which can be momentarily opened.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>525x300x1040 mm</td>
<td>18 kg</td>
</tr>
</tbody>
</table>

U Shape Box Apparatus

DESCRIPTION:
The U shape Box is used to determine the confined (flow ability) and the capacity of SCC concrete to flow within confined spaces.

The box is made of galvanized steel frame consisting of four 10 mm diameter and three 13 mm diameter bars.

The U Shape box is mounted on a frame with a fixing mechanism.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>650x650x1100 mm</td>
<td>20 kg</td>
</tr>
</tbody>
</table>

Compacting Factor Apparatus

DESCRIPTION:
The Apparatus enables a check to be made on the weight of concrete when it is falls from fixed heights into a cylindrical container of standard capacity.

The apparatus consists of two conical hoppers each with a hinged trap with quick release mechanism to allow free flow of the concrete sample.

A cylindrical mold is fitted beneath the hoppers.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300x400x1300 mm</td>
<td>41 kg</td>
</tr>
</tbody>
</table>
L Shape Apparatus

**DESCRIPTION:**
The L Shape Box is used for evaluation of self compact ability (confined flow ability) of freshly mixed self compacting concrete.

The box gives the opportunity to evaluate different properties, such as filling ability, passing ability and resistance to segregation.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300x1000x1350 mm</td>
<td>35 kg</td>
</tr>
</tbody>
</table>

**MAIN FEATURES:**
- L shape box apparatus has resistance to segregation.

**ORDERING:**
CN 0128
L Shape Box apparatus

**ACCESSORIES:**
CN 0129
Filling Hopper
CN 0130
Base

Air Entrainment Meter

**DESCRIPTION:**
The Air Entrainment Meter is used to determine air content of fresh concrete. Our air entrainment meter is one of the most precise air content measuring devices available in the market. With heat treated cast aluminum construction and cast in handles on the base, it is heavy duty, yet light weight, and easy to handle.

Our unit utilises the best clamping system available, with large stainless steel clamp levers and a holding capacity of about 7 ltr each. This clamping system provides an easy, dependable operation.

Employing the use of a superior high volume Ultra Pump, this system makes operation efficient yet rapid. This includes a larger more accurate pressure gauge with safety glass and bold color dial face. Color coded for entrapped and entrained air readings.

Our equipment comes complete:

B pressure meter, Calibration Outside Tube, Calibration Inside Tube, Strike Off Bar, Tamping Rod rounded to a hemispherical tip at both ends, Bulb Syringe, Rubber Mallet, carrying case

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>7ltr</th>
</tr>
</thead>
<tbody>
<tr>
<td>air content range</td>
<td>0-22%</td>
</tr>
<tr>
<td>Dimensions</td>
<td>700x300x500 mm</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>18 kg</td>
</tr>
</tbody>
</table>

**MAIN FEATURES:**
- Superior meter
- Reliable device
- Quickly and easily
- Durability and effective

**ORDERING:**
CN0131
The Air Entrainment Meter set

**ACCESSORIES:**
CN 0131-01
B pressure meter
Calibrated Vessel
CN 0131-02
Calibration Outside Tube
CN 0131-03
Strike Off Bar
CN 0131-04
Tamping Rod
CN 0131-05
Bulb Syringe
CN 0131-06
Rubber Mallet
CN 0131-07
Carrying case
Specific Gravity Frame

DESCRIPTION:
Specific Gravity Frame is used in conjunction with electronic balance for specific gravity or density determination of hardened concrete and aggregates.

Consisting of a purpose built robust frame designed to support the electronic balance. The lower part of the frame incorporates a moving platform, which carries the water tank allowing the test specimens to be weighed in both air and water.

There are 3 choices of balances to choose from with different capacities.

Supplied complete with Cradle, Density Basket, hook and water tank.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>600x500x1100 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (approx.)</td>
<td>25 kg</td>
</tr>
</tbody>
</table>

Grout Flow Cones and Sets

DESCRIPTION:
Grout Flow Cones measure the flowability of hydraulic grout used in preplaced aggregate concrete. Flowability is measured by time of discharge of a 1.725L sample of grout through an 12.7mm dia. discharge tube orifice from the cone. The cast aluminum Flow Cones all come with an adjustable point gauge assembly to indicate initial sample level.

Grout Flow Cone Set has a 12.7mm dia Orifice already installed, and a 3-Legged Steel Support Stand, and 2L stainless steel Beaker for use as a receiving container.

Grout Flow Cone Set has a 19mm Orifice to be used with alternate test methods.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>178mm dia for top 76mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cone section</td>
<td>190mm</td>
</tr>
<tr>
<td>Discharge Tube</td>
<td>38.1mm</td>
</tr>
<tr>
<td>Grout volume</td>
<td>1,725 ±5ml</td>
</tr>
</tbody>
</table>

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Pan Concrete Mixer

**DESCRIPTION:**
The Concrete Mixer is designed for laboratory use to give efficient mixing of both wet and dry materials.

The mixing pan is rotated by a turntable driven by an electric motor by a reduction gearbox. It has easily adjustable blades to fit different types and volumes of material to be mixed.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th></th>
<th>CN 0143</th>
<th>CN 0144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>950x1050x1250 mm</td>
<td>950x1050x1270 mm</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>255 kg</td>
<td>285 kg</td>
</tr>
<tr>
<td>Power</td>
<td>1500 W</td>
<td>3800 W</td>
</tr>
<tr>
<td>Mixing capacity</td>
<td>56 ltr YIELD 42 ltr</td>
<td>100 ltr YIELD 80 ltr</td>
</tr>
</tbody>
</table>

**ORDERING:**
- CN 0143 Pan concrete Mixer type 56 ltr
- CN 0144 Pan concrete Mixer type 100 ltr

**MAIN FEATURES:**
- Dry and wet materials mixer.
- Adjustable blades
- The mixing pan can be tilted and removed.

Drum Concrete Mixer

**DESCRIPTION:**
The Mixer is used for efficient mixing of concrete, plaster and mortars.

The Concrete Drum Mixer comes complete with: Drum, Light weight mixer, Stand, rubber Wheels which provide high portability and a motor.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th></th>
<th>CN 0145</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drum Volume</td>
<td>125 ltr.</td>
</tr>
<tr>
<td>Mixing Volume</td>
<td>125 ltr.</td>
</tr>
<tr>
<td>Mixing Capacity</td>
<td>2-3 m /h</td>
</tr>
<tr>
<td>Dimensions</td>
<td>670x1200x900 mm</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>40 kg</td>
</tr>
<tr>
<td>Power</td>
<td>750 W (Electric Powered Model) 3.5 HP (Diesel Engine Powered Model)</td>
</tr>
</tbody>
</table>

**ORDERING:**
- CN 0145 Drum concrete Mixer 125 ltr
- CN 0146 Drum concrete Mixer 140 ltr
- CN 0147 Drum concrete Mixer 170 ltr
- CN 0148 Drum concrete Mixer 350 ltr
- CN 0149 Drum concrete Mixer 425 ltr

**MAIN FEATURES:**
- This model comes both in electric and diesel
- Available in different capacity

**ACCESSORIES:**
- CN 0150 Stand
- CN 0151 Wheels
Cylinder Molds

DESCRIPTION:
The Cylinder Molds are designed to produce accurate specimens while avoiding distortion over the length of the mold. Made from reinforced steel construction for added rigidity and long service life. The edge of the rim is of accurate finish to insure clean specimens results. Each mould is tested for conformity, supplied with individual certificate.

Several models and sizes available 100X200, 150X300, 160X320mm, available in ring or clamp type.

ORDERING:
CN 0152 Cylinder mold steel ring type 100x200mm
CN 0153 Cylinder mold steel ring type 150x300mm
CN 0154 Cylinder mold steel ring type 160x320mm
CN 0155 Cylinder mold steel clamp type 100x200mm
CN 0156 Cylinder mold steel clamp type 150x300mm
CN 0157 Cylinder mold steel clamp type 160x320mm

TECHNICAL SPECIFICATIONS:
<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0152 / CN 0155 200x100 mm</td>
</tr>
<tr>
<td>CN 0153 / CN 0156 300x150 mm</td>
</tr>
<tr>
<td>CN 0154 / CN 0157 360x160 mm</td>
</tr>
</tbody>
</table>

Plastic Molds

DESCRIPTION:
Our Plastic Cube and Cylinder Mold is manufactured from rigid high quality plastic that is weather resistant and has an unlimited shelf life. Cured specimens can easily be domolded from the mold.

TECHNICAL SPECIFICATIONS:
<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0158 100x200 mm</td>
</tr>
<tr>
<td>CN 0159 150x300 mm</td>
</tr>
<tr>
<td>CN 0160 160x320 mm</td>
</tr>
</tbody>
</table>

ORDERING:
CN 0161 Plastic Cube Mold 150mm 1gang-standard density g. 1,200
CN 0162 Plastic Cube Mold 150mm 1gang - high density g. 1,700
CN 0163 Plastic Cube Mold 100mm. 2 gang
CN 0164 Plastic Cube Mold 150mm with steel base and handle
CN 0158 Plastic Cylindrical Mold 150x300mm.
CN 0159 Plastic Cylindrical Mold 160x320mm.
CN 0160 Plastic Cylindrical Mold 100x200mm.
Beam Molds

DESCRIPTION:
Steel beam molds are manufactured in accordance to dimensions and tolerances stated in the related standards.

There are two types ether heavy duty plastic or steel.

The steel beam molds are made of Two part and clamp attached base plate steel molds are designed to be durable, resistant and easy to clean.

The heavy duty plastic beam mold which are much lighter are built to last long time.

Cube Molds and Tamping

DESCRIPTION:
The cast iron steel cube molds are manufactured from heavy duty durable material and in accordance to the dimensions and tolerances acceptable by the standard.

Each mold is numbered and tested for conformity, supplied with individual certificate. There are several models and sizes available, 2 parts and 4 parts, 100mm, 150mm and 200mm.

The Tamping Rod for compacting concrete into cube molds. This rod is made of steel bar it is 25 mm square face x 380 mm long with round side handle

Main Features:
- Heavy duty

Ordering:
- CN 0165 Steel Beam Mold 100x100x400mm
- CN 0166 Steel Beam Mold 100x100x500mm
- CN 0167 Steel Beam Mold 150x150x600mm
- CN 0168 Steel Beam Mold 150x150x750mm
- CN 0169 Plastic Beam Mold 100x100x400mm
- CN 0170 Plastic Beam Mold 100x100x500mm
- CN 0171 Plastic Beam Mold 150x150x600mm
- CN 0172 Plastic Beam Mold 150x150x750mm

Technical Specifications:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>100x100x400 mm</td>
<td>100x100x500 mm</td>
</tr>
<tr>
<td>150x150x600 mm</td>
<td>150x150x750 mm</td>
</tr>
</tbody>
</table>

Dimensions
- 25 mm dia. x 380 mm long.
**Curing Tank**

**DESCRIPTION:**
The Curing Tanks are designed for curing concrete cubes, beams and cylinders. The temperature can be adjusted and can be set and maintained to the required value by an electric resistance incorporating as thermoregular which maintains set temperature between ambient and 65 °C with ± 1 °C accuracy. The tank is also supplied with a submersible circulator pump to assure good temperature uniformity and a bottom rack.

**MAIN FEATURES:**
- Manufactured from rigid material.
- Adjustable temperature
- Circulating pump for temp uniformity.

**ORDERING:**
- **CN 0181** Small Curing Tank complete
- **CN 0182** Medium Curing Tank complete
- **CN 0183** Large Curing Tank complete
- **CN 0184** Extra Large Curing Tank complete

**ACCESSORIES:**
- **CN 0185** Circulating Pump
- **CN 0186** Heater

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**Melting Pot**

**DESCRIPTION:**
The Melting Pot is mainly used for melting capping compound. The apparatus consists of aluminum container in a well-lagged steel jacket, lid cover and a thermostatic control heater to adjust the temperature constant as required.

**MAIN FEATURES:**
- Adjustable thermostat
- Complete with cover.

**ORDERING:**
- **CN 0187** Melting Pot 2.5 ltr
- **CN 0188** Melting Pot 5 ltr
- **CN 0189** Melting Pot 9 ltr

---

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Dimensions</th>
<th>Capacity</th>
<th>Weight approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0181</td>
<td>660 mm x 480 mm x 510 mm</td>
<td>12 x 150 mm cubes</td>
<td>20 kg</td>
</tr>
<tr>
<td>CN 0182</td>
<td>970 mm x 610 mm x 610 mm</td>
<td>24 x 150 mm cubes</td>
<td>25 kg</td>
</tr>
<tr>
<td>CN 0183</td>
<td>1130 mm x 1130 mm x 760 mm</td>
<td>36 mm cubes</td>
<td>60 kg</td>
</tr>
<tr>
<td>CN 0184</td>
<td>1550 mm x 805 mm x 820 mm</td>
<td>64 cubes mm</td>
<td>110 kg</td>
</tr>
</tbody>
</table>

---

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>CN 0188</th>
<th>Capacity</th>
<th>Temperature range</th>
<th>Power</th>
<th>Internal dimensions</th>
<th>External dimensions</th>
<th>Weight approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5 ltr</td>
<td>+30 to +300°C</td>
<td>700 W</td>
<td>200 mm dia. x 160 mm high</td>
<td>285 mm dia. x 275 mm high</td>
<td>2.7 kg</td>
</tr>
</tbody>
</table>
Capping Compound

DESCRIPTION:
100 kg bag of sulfur-based, flake-form capping compound melts and sets within minutes. Silica-filled compound has 150 psi bond strength, 9000 psi compressible strength and 605 psi tensile strength. Compound pours between 129 and 143°C. Over-heated material’s viscosity is reinstated by decreasing temperature.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Strength Compressive</th>
<th>Strength Tensile</th>
<th>Compound pours</th>
<th>Weight approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000 psi</td>
<td>605 psi</td>
<td>265 and 290°F (129 to 143°C)</td>
<td>22.5 kg</td>
</tr>
</tbody>
</table>

Cylinder Capping Equipment

DESCRIPTION:
The Cylinder Capping Frame is used to assure plane and surfaces perpendicular to the axis of the cylinder during the capping.

Built to last the frame comprising vertical supports mounted on a steelbase which can be disassembled for easy machining.

The Cylinder Capping is used in conjunction with flake capping compound and melting pot. The equipment comes complete with capping flame with one size capping flat to choose from.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Product</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder carriers</td>
<td>50 mm (6”x12”9 and 160x320 mm sizes)</td>
</tr>
<tr>
<td>Melting pot</td>
<td>internal 200 mm dia.160 mm depth external 285 mm dia x 275 mm high</td>
</tr>
<tr>
<td>Capping plate for concrete blocks</td>
<td>500x300 mm, 20 mm thick</td>
</tr>
<tr>
<td>Weight</td>
<td>13 kg</td>
</tr>
</tbody>
</table>

ACCESSORIES:

| CN 0192                        | Capping plate 75mm dia                          |
| CN 0193                        | Capping plate 100mm dia                         |
| CN 0194                        | Capping plate 150mm dia specimens               |
| CN 0195                        | Capping plate 160mm dia                         |
| CN 0196                        | Flake Capping compound pack of 100kg            |
**Steel Retainer Set**

**DESCRIPTION:**
Steel Retainer Set are used with neoprene pads (sold separately) in unbounded capping for compressive strength testing of Concrete Cylinders.

They hold and confine the neoprene pads, which are placed at each end of the concrete cylinder before testing.

Steel Retainers are constructed of alloy steel, precisely machined to specified dimensions and are plated inside out to resist corrosion.

Bearing surfaces are plane to within 0.002in (0.05mm). Sold in sets of 2.

**MAIN FEATURES:**
- Rugged alloy steel construction
- Corrosion-resistant plating inside and out
- Plane bearing surfaces

**ORDERING:**
- CN 0197 Steel Retainer Set 100mm
- CN 0198 Steel Retainer Set 150mm
- CN 0199 Steel Retainer Set 160mm

**AASHTO T 22, ASTM C1231, AASHTO T22, T851**

**DESCRIPTION:**
Neoprene Pads are available in 50, 60, or 70 durometer for compressive strength testing of concrete cylinders, and meet requirements of ASTM C1231 and AASHTO T 22.

These thick pads flow during compression to fill irregularities in cylinder ends and assure uniform load distribution.

Two pads are required for testing. Pads are reusable in up to 100 tests, and are sold as a pair.

**MAIN FEATURES:**
- Available in three different durometer ratings
- Can be used up to 100 times before replacing

**ORDERING:**
- CN 0200 Neoprene Pad in 50 Duro 100X20mm
- CN 0201 Neoprene Pad in 60 Duro 100X20mm
- CN 0202 Neoprene Pad in 70 Duro 100X20mm
- CN 0203 Neoprene Pad in 50 Duro 150X20mm
- CN 0204 Neoprene Pad in 60 Duro 150X20mm
- CN 0205 Neoprene Pad in 70 Duro 150X20mm

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Specimen Diameter</th>
<th>165 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duro Strength</td>
<td>100X20mm</td>
</tr>
<tr>
<td>50 Duro</td>
<td>1,500-6,000 psi (10-40 mPa)</td>
</tr>
<tr>
<td>60 Duro</td>
<td>2,500-7,000 psi (17-50 mPa)</td>
</tr>
<tr>
<td>70 Duro</td>
<td>4,000-7,000 psi (28-50 mPa)</td>
</tr>
</tbody>
</table>
Concrete bleed water tester

**DESCRIPTION:**
Concrete bleed water tester is used for determination of the relative quantity of mixing water that will bleed from a sample of freshly mixed concrete.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>290x255x350 mm</td>
<td>6 kg</td>
</tr>
</tbody>
</table>

**ASTM C 232  EN 480-4**

**MAIN FEATURES:**
- Heavy Duty material.

**ORDERING:**
- CN 0209 Concrete bleed water tester

Concrete electric masonry saw

**DESCRIPTION:**
The Concrete Masonry Saws is ideal for trimming concrete, asphalt and other specimens to the desired size preparing sample for testing.

It is designed to work in different cutting length and depth which allows cutting per-cast concrete and blocks very easy and simple.

The Blade can be adjusted to suit several cutting heights in a single pass.

The equipment comes with a heavy duty belt driven by a high efficiency electric motor mounted on robust chassis and re-enforced based frame.

It comes complete with heavy duty water pump for wet cutting and blade cooling, automatic starter, slide rolling conveyor and movable wheels.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Motor Voltage</th>
<th>Max. cutting depth</th>
<th>Net weight</th>
<th>Packaging Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 V</td>
<td>200 mm</td>
<td>89 kg</td>
<td>1214x839x1374 mm</td>
</tr>
<tr>
<td>230 V</td>
<td>270 mm</td>
<td>128 kg</td>
<td>1543x851x1571 mm</td>
</tr>
<tr>
<td>230 V</td>
<td>420 mm</td>
<td>303 kg</td>
<td>1982x1207x1549 mm</td>
</tr>
</tbody>
</table>

**ORDERING:**
- CN 0210 Concrete electric masonry saw, max 200
- CN 0211 Concrete electric masonry saw, max 270
- CN 0212 Concrete electric masonry saw, max 420

**ACCESSORIES:**
- CN 0213 Saw Blade 200
- CN 0214 Saw Blade 270
- CN 0215 Saw Blade 420
**Specimen Grinding machine**

**DESCRIPTION:**
The Grinding machine is used to grind and polish rock and concrete specimens, natural stones, ceramic materials, etc.

The cube and cylinder specimens can be easily locked on the table and the grinding head, 330 mm dia., can be radially moved either manually or automatically in both directions so, the only manual operation requested is the lowering of the grinding head by the top hand wheel.

The machine is supplied complete with safety chip guard that, when removed, stop automatically the machine, with coolant tank, motor pump and one set of abrasive sectors. Diamond grinding sectors are available on request.

The machine is supplied complete with clamping element for 100, 150 and 200 mm cubes. Clamping devices for cylinders and device for dry grinding procedure are also available on request.

The Core face preparation jigs can be easily fitted by the clamping element supplied with the machine.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table dimension</td>
<td>775x280 mm</td>
</tr>
<tr>
<td>Grinding wheel dia</td>
<td>330 mm</td>
</tr>
<tr>
<td>Max vertical daylight</td>
<td>350 mm</td>
</tr>
<tr>
<td>Min vertical daylight</td>
<td>145 mm</td>
</tr>
<tr>
<td>Max specimen size cubes</td>
<td>200 mm</td>
</tr>
<tr>
<td>Max specimen size cylinders</td>
<td>160x320 mm</td>
</tr>
<tr>
<td>Grinding head stroke</td>
<td>205 mm</td>
</tr>
<tr>
<td>N of grinding segments</td>
<td>10</td>
</tr>
<tr>
<td>Grinding wheel speed</td>
<td>1400 r.p.m.</td>
</tr>
<tr>
<td>Overall dimensions</td>
<td>1200x1020x1640 mm</td>
</tr>
<tr>
<td>Overall weight approx.</td>
<td>350 kg</td>
</tr>
</tbody>
</table>

**ORDERING:**
- **CN 0216** Specimen Grinding Machine, standard model
- **CN 0217** Specimen Grinding Machine, automatic model

**ACCESSORIES:**
- **CN 0218** Set of 10 diamond impregnated sectors.
- **CN 0219** Accessory to connect an aspirator for drying grinding procedure.
- **CN 0220** Clamping device for concrete cylinders from dia. 100x200 mm to 160x320 mm.
- **CN 0221** Device for clamping one additional cylindrical specimen from 100 up to 160 mm dia

There are two models available:

Standard model in which the radial displacement of the grinding head is motor operated and actuated by a push button.

Automatic model in which the radial displacement is fully automatic and controlled by travel limit switches.

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Poker Vibrator

**DESCRIPTION:**
The Concrete Poker Vibrator removes air bubbles and settles concrete quickly and effectively. It’s designed to be used in freshly poured concrete, such as slabs, footings, small columns and masonry blocks.

The powerful vibrations from this compact machine force air bubbles out of the concrete, settling it as you watch.

The concrete vibrator can be used vertically, horizontally or at an angle. The 1.5m shaft and rotatable base make it easy to reach the required areas without excessive bending or stooping.

It operates with minimal noise, so you won’t need protection during use.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Concrete Vibrator</th>
<th>with 35mm dia Vibrating Poker and 1.5m Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Weight</td>
<td>6.46 Kg</td>
</tr>
<tr>
<td>Package Dimensions</td>
<td>70 x 25.4 x 8 cm.</td>
</tr>
</tbody>
</table>

**Vibrating Table of Concrete**

**DESCRIPTION:**
The Vibrating table is used to compact concrete materials inside cubes, cylinders and beam molds.

It can deliver the vibrating movement controls by vibro compacting motor with fixed amplitude.

Vibrating tables consist of vibrating motor, control unit and clamping assembly.

The table is available in two sizes: 610 x 380 mm and 1260 x 620 mm.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Dimensions</th>
<th>Weight approx.</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0225</td>
<td>380x610x800 mm</td>
<td>52 kg</td>
<td>170 W</td>
</tr>
<tr>
<td>CN 0226</td>
<td>620x1260x1200 mm</td>
<td>135 kg</td>
<td>170 W</td>
</tr>
</tbody>
</table>
Water Absorption

DESCRIPTION:
The Water Absorption set measures the penetration of water into the test surface under an applied pressure, can be used to determine the water penetration characteristics of alternative concrete mixtures or surface sealers and also for in-place testing to demonstrate the characteristics of concrete level of permeation.

The water absorption kit comes complete with:

- Pressure chamber unit with 0-1.5 bar* gauge
- Wrench for pressure lid
- Extra 0-6.0 bar gauge
- Water filling cup
- Adjustable clamping suppliers
- Set of anchoring tools
- Wrenches: 14 and 17 mm
- Sealant tape
- Bottles with boiled water
- Gaskets, 10 mm thick
- Gaskets, 15 mm thick

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrenches</td>
<td>14 and 17 mm</td>
</tr>
<tr>
<td>Pressure chamber unit</td>
<td>0-1.5 bar</td>
</tr>
<tr>
<td>Weight</td>
<td>3 kg</td>
</tr>
</tbody>
</table>

MAIN FEATURES:
- The Water Absorption set is used for on-site evaluation
- Effectiveness of water proofing membranes

ORDERING:
CN 027
Water Absorption Kit

ACCESSORIES:
CN 028
Pressure chamber unit with 0-1.5 bar* gauge
CN 029
Wrench for pressure lid
CN 0230
Extra 0-6.0 bar gauge

CONCRETE EQUIPMENT

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**Concrete Water Impermeability**

**DESCRIPTION:**
The Concrete Impermeability Apparatus is used for the determining of the depth of penetration of water to hardened concrete specimens under pressure. 3 and 6 specimen capacity models are available.

The system can test 150x150x150 mm, 200x200x200 mm cube or 150x300 mm cylinder specimens. Pressure to the sample, up to 10 bar with 0.2 bar precision is generated by way of compressed air applied to the integral water tank and controlled by a pressure regulator; with a pressure gauge.

The penetration of water is measured through the buttresses supplied complete with the system.

There are two main models available. It can be with or without quantitative measure. The quantitative model allows you to measure water penetration through the individual burettes. The system comprises impermeability gaskets for every cell. The measurement apparatus is supplied as standard either in 3 or 6 sample model.

**MAIN FEATURES:**
- Quantitative measurements of water penetration.
- Without quantitative measurements of water penetration.
- Accurate readings.
- High performance clamping system.

**ORDERING:**
- **CN 0231** Concrete impermeability apparatus with quantitative measure, for 3 places
- **CN 0232** Concrete impermeability, Without quantitative measure, for 3 places
- **CN 0233** Concrete impermeability, with quantitative measure, for 6 places
- **CN 0234** Concrete water impermeability, Without quantitative measure, for 6 places
- **CN 0235** Laboratory Air Compressor 15 bar, 380 V 50HZ

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1400x750x1850 mm</td>
<td>430 Kg</td>
</tr>
</tbody>
</table>
Crack Detection Microscope

DESCRIPTION:
The Crack Detection Microscope is a precision apparatus, used for measuring cracks in concrete.

It has its own adjustable light source for darkened conditions.

The image is focused by turning a knurled knob on the side and the eyepiece scale can be rotated through 360 degrees to align with the crack under examination.

The 4mm range of measurement is divided into 0.02mm divisions.

The Crack Detection Microscope comes complete with a wooden box

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Magnification</th>
<th>40 x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring Range</td>
<td>4 mm</td>
</tr>
<tr>
<td>Subdivision</td>
<td>0.02 mm</td>
</tr>
<tr>
<td>Dimensions</td>
<td>150x80x45 mm</td>
</tr>
<tr>
<td>Weight approx</td>
<td>550 g</td>
</tr>
</tbody>
</table>

Ultrasonic Apparatus, Pundit Lab

An essential tool for investigating the structural integrity of a wide range of materials. This new generation Concrete Ultrasonic can be used in the laboratory or on site to investigate uniformity; cavities, cracks, fire/frost damage, declamation, deterioration and strength.

It has memory storage of up to 100 sets of readings and built in RS232 serial port for download of data.

Supplied with a simple software download utility kit and does not require reference bar as calibration is done by ‘zeroing’. It can calculate and display additional parameters – velocity, pathlength and Young’s Modulus. It can be set to any pulse repetition frequency from 1 to 100 and has pulse delay mode which allows the user to take readings at specified intervals from 1 per second up to 99 hours.

Pundit Lab consisting of: Display unit, 2 transducers (54kHz), 2 BNC cables 1.5 m, couplant, calibration rod, battery charger with USB-cable, 4x AA(LR6) batteries, data carrier with software, documentation and carrying case.
Crack Meter Angular and Linear

**DESCRIPTION:**
Crack meters are used to monitor the progress of surface cracks in structural components and buildings caused by subsidence or mechanical failure.

They are composed of two transparent acrylic resin plates, overlapping and able to move relative to each other.

The upper plate is engraved with a reference cross, while the underlying one is marked with a grid in millimeters, both horizontal and vertical, which can be zeroed along its axes.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Linear crack meters quantity</th>
<th>10 pcs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angular crack meters</td>
<td>5 pcs</td>
</tr>
<tr>
<td>Weight</td>
<td>200 g</td>
</tr>
</tbody>
</table>

Profoscope

**DESCRIPTION:**

The Profoscope uses electromagnetic pulse induction technology to detect rebars. Coils in the probe are periodically charged by current pulses and thus generate a magnetic field.

The Profoscope uses different coil arrangements to generate several magnetic fields.

Advanced signal processing allows
1. Localization of a rebar
2. Localization of the mid-point between rebars.
3. Determination of the cover
4. Estimation of the bar diameter

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Measuring Range</th>
<th>Up to 185 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Measuring Accuracy</td>
<td>± 1 to 4 mm, depending on cover</td>
</tr>
<tr>
<td>Diameter Measuring Range</td>
<td>Up to 63 mm</td>
</tr>
<tr>
<td>Diameter Measuring Accuracy</td>
<td>± 1 rebar size</td>
</tr>
<tr>
<td>Weight</td>
<td>200 g</td>
</tr>
</tbody>
</table>
DESCRIPTION:
The Profometer 630 is an all-in-one solution for rebar assessment and corrosion analysis which increases productivity for civil engineers and inspection companies in charge of assessing the conformity of concrete cover of a new structure (quality check and fire resistance assessment) or dealing with corrosion analysis on large elements.

Profometer Link PC tool is included with all Profometer Cover Meter and Corrosion units. It is based on an integrated suite enabling the user to process the data coming from rebar detection / concrete cover as well as corrosion potential measurement. The Profometer units can be connected to the PC via USB and the software is fully compatible.

Consisting of Profometer touchscreen, universal probe with ruggedized scan cart, probe cable 1.5 m (5 ft), power supply, USB cable, chalk, DVD with software, documentation, carrying strap and carrying case.

MAIN FEATURES:
• All features available on the touchscreen unit are also implemented on the PC
• Create custom reports with exported graphs and charts
• Support for the merging of several corrosion scans into a single graph
• Picture and table export (csv files)

ORDERING:
CN 0243
Profometer 630 complete

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover measuring range</td>
<td>up to 185 mm</td>
</tr>
<tr>
<td>Cover measuring accuracy</td>
<td>± 1 to 4 mm, depending on cover</td>
</tr>
<tr>
<td>Path measuring accuracy on smooth surface</td>
<td>0.5 to 1.0 % of measured length</td>
</tr>
<tr>
<td>Diameter measuring range</td>
<td>Up to 63 mm</td>
</tr>
<tr>
<td>Diameter measuring accuracy</td>
<td>± 1 rebar size</td>
</tr>
<tr>
<td>Memory Internal</td>
<td>8 GB flash memory</td>
</tr>
<tr>
<td>Weight</td>
<td>300 g</td>
</tr>
</tbody>
</table>
Resipod Resistivity Meter

DESCRIPTION:
Surface resistivity measurement provides extremely useful information about the state of a concrete structure. Not only has it been proven to be directly linked to the likelihood of corrosion and the corrosion rate, recent studies have shown that there is a direct correlation between resistivity and chloride diffusion rate.

ResiPod is a fully integrated 4-point Wenner probe, designed to perform concrete resistivity measurement in a completely non-destructive test. It is the most accurate instrument available, extremely fast and stable and packaged in a robust, waterproof housing designed to operate in a demanding site environment.

Resipod Concrete Resistivity Meter has probe spacing fixed at 38mm as required in AASHTO T 358 or 50mm probe spacing. The wider spacing allows a greater sampling size, but is still narrow enough to avoid interference from reinforcing steel in most cases.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0–1000 kΩcm (depending on probe spacing)</td>
</tr>
<tr>
<td>Resolution (nominal current 200µA)</td>
<td>±0.2 kΩcm or ±1% (whichever is greater)</td>
</tr>
<tr>
<td>Resolution (nominal current 50µA)</td>
<td>±2 kΩcm or ±5% (whichever is greater)</td>
</tr>
<tr>
<td>Frequency</td>
<td>40 Hz</td>
</tr>
<tr>
<td>Memory Non volatile</td>
<td>500 measured values</td>
</tr>
<tr>
<td>Power Supply</td>
<td>&gt; 50 hours autonomy</td>
</tr>
<tr>
<td>Charger connection</td>
<td>USB type B, (5V, 100mA)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>197 x 53 x 69.7 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>318 g</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0° to 50°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-10° to 70°C</td>
</tr>
</tbody>
</table>

AASHTO T 358 Provisional Standard TP 95-11

MAIN FEATURES:
- Easy to use, little training required
- Delivers fast, accurate measurement results
- Wide range of resistance measurement, 1 to 1000 kΩcm
- Dedicated Windows-based software
- Charger connects to standard USB computer or laptop ports

ORDERING:
- CN 0244 Resipod resistivity meter complete 38mm Probe Spacing
- CN 0245 Resipod resistivity meter complete 50mm Probe Spacing
- CN 0246 Geometric Accessory (4-Probe Wenner Array Attachment) with adjustable spacing for testing different types of concrete samples and mix designs
- CN 0247 Replacement Foam Contact Pads
- CN 0248 Bulk Resistivity Accessory for measuring resistivity 100 x 200mm concrete cylinders
- CN 0249 Resipod Test Strip to verify performance
Ultrasonic Pulse Velocity

DESCRIPTION:
The Velocity of Ultrasonic wave in concrete is affected by elastic property or strength.

The equipment applies high voltage and sends it to transit transducer to generate ultrasonic wave. This ultrasonic wave reaches to the receive transducer through concrete. When elastic property or strength of concrete is high, the transit time is short. On the other hand, when the materials are contrary, the velocity is low.

The instrument measures the ultrasonic transit time accurately so it makes possible to evaluate a material or find elastic properties non-destructively to investigate uniformity, cavities, cracks, fire/frost damage, declamation, deterioration and strength.

It uses 54 kHz concrete transducers which were designed to send and receive ultrasonic signal effectively in highly attentive materials, including concrete, wood, stone and plastic.

The Ultrasonic equipment contains:
The main machine
A pair of 54 kHz UT Transducer
RG 58 cable with BNC to XTR-9 Connector
Ultrasonic Couplant
Reference Block
Instruction Manual
Portable Aluminum Bag

BS 1881-203, EN 12504-4; ASTM C597

MAIN FEATURES:
• Excellent accuracy
• Color LCD background changes according to measurement mode
• Perfect in thick and attentive materials
• It is possible to connect 2 to 16 transducers
• Rugged Aluminium case

ORDERING:
CN 0250
Ultrasonic Pulse Velocity

ACCESSORIES:
CN 0251
A pair of 54 kHz UT Transducer

CN 0252
RG 58 cable with BNC to XTR-9 Connector

CN 0253
Ultrasonic Couplant

CN 0254
Reference Block

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Overall Dimensions</th>
<th>175x55x220 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Weight</td>
<td>1.5 kg</td>
</tr>
</tbody>
</table>
Mechanical Strain Gauge

DESCRIPTION:
The mechanical strain gauge allows strain measurement to be made at different parts of a structure using a single instrument comes with a digital gauge.

A fixed conical point is mounted at one end of the bar, and a moving conical point is mounted on a knife edge pivot at the opposite end. A setting out bar is used to position pre-drilled stainless steel discs which are attached to the structure using a suitable adhesive.

The mechanical strain gauge is available in several sizes 100, 150, 200, 250 and 300 mm.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Repeatability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.001 mm type M 0.01 mm series C</td>
<td>0.001 mm e 0.01 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Dimensions</th>
<th>300x400x110 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Weight</td>
<td>2.1 kg</td>
</tr>
</tbody>
</table>

MAIN FEATURES:
- Manual single axis measurement of change in cracks
- Able to measure distance between two measurement points to a precision of 1 micron

ORDERING:
- CN 0255 Mechanical strain gauge 100 mm
- CN 0256 Mechanical strain gauge 150 mm
- CN 0257 Mechanical strain gauge 200 mm
- CN 0258 Mechanical strain gauge 250 mm
- CN 0259 Mechanical strain gauge 300 mm
Concrete Test Hammer

DESCRIPTION:
The Concrete Test Hammer is the traditional instrument used for the non-destructive testing of hardened concrete. This easy-to-use instrument provides a quick and simple test for obtaining an immediate indication of concrete strength in various parts of a structure. The verifiable strength is between 5 and 120N/mm²

There are four models available:

• Concrete test hammer normal type complete with carrying case, PSI curve and carborundum stone.

• Concrete test hammer new shape comes complete with carrying case, PSI curve carborundum stone, Plastic grid 30x30 cm, Pencil, Fenolftaleina 100ml, Paper note, Operating manual and Calibration report


ORDERING:
CN 0260  Calibration anvil TAM 100
CN 0261  New Shape Concrete Hammer
CN 0262  Rock Concrete Hammer
CN 0263  Normal Concrete Hammer
CN 0264  Digital Concrete Hammer

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Range of Measurement</th>
<th>Impact energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock</td>
<td>10-200 N/mm²</td>
</tr>
<tr>
<td>Normal</td>
<td>5-120 N/mm²</td>
</tr>
<tr>
<td>Digital</td>
<td>5-120 N/mm²</td>
</tr>
</tbody>
</table>

The test Anvil on the other hand is essential semi spherical steel block made of hard steel C45 with a diameter of about 150 mm and 150 mm in height. A semi-spherical shape which mirrors the rebound hammer strike piston surface has been created on one of the two flat surfaces.

The shaped surface where impact occurs is characterized by a surface hardness no less than 52 HRC, the weight of this cylinder is 16Kg ±0.5 in full compliance with reference standards.

Overall Dimensions 190x100x350 mm
Overall Weight 1.5 kg
**Covermeter**

**DESCRIPTION:**
The covermeter provides rebar location, sizing and cover measurement in a single weather-resistant instrument. For immediate results on-site, the onscreen gauge and audio feedback rapidly pin-point rebar location and orientation.

The Micro Covermeter is developed model with newly designed probe believed to incorporate the most accurate depth and bar size determination routines available.

Combined with extremely good resolution of multiple bars, sets the unit apart from others and sets the benchmark for covermeter surveying.

The Covermeter kit comes complete with:

- Probe with integral cable
- Battery charger
- Spare probe sole-plate
- Certificate of Conformity
- Light & tough equipment bag

**MAIN FEATURES:**
- Fast, accurate measurement of concrete cover
- Quick, clear indication of rebar location
- Automatic measurement of bar size
- Rapid area scanning for low-cover
- Built-in data logging

**ORDERING:**
- **CN 0265** Standard Covermeter kit
- **ACCESSORIES:**
  - **CN 0266** Probe with integral cable
  - **CN 0267** Battery charger
  - **CN 0268** Spare probe sole-plate
  - **CN 0269** Light & tough equipment bag

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Cover measurement</th>
<th>Cover Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mm – 185 mm</td>
<td>± 1 mm up to 60 mm depth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>± 2 mm up to 120 mm depth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>± 3 mm up to 160 mm depth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>± 4 mm over 160 mm depth</td>
<td></td>
</tr>
</tbody>
</table>

| Operating Weight (instrument+probe+cable) | 800 g |
| Battery Operation                        | 20 hrs |
Rapid Chloride Permeability

**DESCRIPTION:**
The Rapid Chloride Permeability apparatus is a laboratory test device for the measurement of the electrical resistance of concrete against the penetration of chloride (RCPT) according to the standard methods such as ASTM C1202, AASHTO T277 and ASTM C1760.

The measurement data can be used to estimate the chloride diffusion coefficient of concrete for the service life prediction and design of concrete structures as well as the durability-based quality control of concrete.

In concrete materials, the DC electrical resistance of concrete is correlated with important durability parameters of concrete such as chloride diffusion coefficient and the chloride migration coefficient that are used for the durability design or service life design of concrete structures.

The set comes complete with:
- 4 set of test cells,
- 4 set of temperature sensors
- 4 pairs of test cables
- Power cord
- USB cable
- User manual
- Standard Sample Preparation Package.

**MAIN FEATURES:**
- Digital Readout and logging system
- Stand alone operation
- Easy-to-assemble
- Accurate (±0.1 mA)
- Flexible logging interval time (1 to 10 min)
- Four measurement channels

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing up to</td>
<td>4 cells simultaneously</td>
</tr>
<tr>
<td>Voltage settings in 5 V increments</td>
<td>5 to 60 VDC</td>
</tr>
<tr>
<td>Weight</td>
<td>100 g</td>
</tr>
</tbody>
</table>

**ACCESSORIES:**

| CN 0270 | Rapid Chloride Permeability test set |
| CN 0271 | Test Cell                             |
| CN 0272 | Stainless Steel Mesh - Pair           |
| CN 0273 | Sample Prep Package                   |
| CN 0274 | Rubber Gasket Cast – Pair             |
| CN 0275 | Test Cable Set                        |
| CN 0276 | Temperature Sensor                    |

**ORDERING:**

www.Geotechnical-equipment.com  Tel: +441908 766 400, 401
Carbonation Depth Determination

**DESCRIPTION:**
Carbonation is a precursory condition for corrosion, which will take place when there is oxygen and water present. Preventing carbonation is the only possible way of preventing the decay of a reinforced concrete structure. Therefore, carbonation test is used to establish the depth of carbonation.

The test is based on collecting the powder, after analysis of the powder, making use of the chemical color change of phenolphthalein.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hole Depth</td>
<td>40 cm</td>
</tr>
<tr>
<td>Hole Diameter</td>
<td>10 mm</td>
</tr>
<tr>
<td>Phenolphthalein Sensitivity</td>
<td>pH 8.3 to pH 10.0</td>
</tr>
<tr>
<td>Dimensions</td>
<td>390x340x140 mm</td>
</tr>
<tr>
<td>Weight approx.</td>
<td>3 Kg</td>
</tr>
</tbody>
</table>

Kit is complete with:
1 no. picker to collect the powder.
25 no. test tubes
1 no. measuring ruler
1 no. bottle of 1% solution of phenolphthalein
1 no. Pasteur pipette
1 no. cartridge
1 no. block of survey sheets

**MAIN FEATURES:**
- Innovative, easy to use and portable.

**ORDERING:**
CN 0277 Carbonation Depth Determination kit.

**ACCESSORIES:**
CN 0278 1 no. picker to collect the powder.
CN 0279 25 no. test tubes
CN 0280 1 no. bottle of 1% solution of phenolphthalein
CN 0281 1 no. Pasteur pipette
CN 0282 1 no. cartridge
CN 0283 1 no. block of survey sheets

Rebar Pull Out Force Test

**DESCRIPTION:**
The Apparatus are used for determining the bond strength between anchored reinforcing steel bar (rebar) and concrete and for checking anchorage performance in-situ.

Digital Readout Unit connected to a 30 tons capacity hydraulic jack and hand pump provides 1% sensitive load or tensional strength value readings.

The Digital Rebar Pull-Out Force Tester have a steel hydraulic cylinder. For ease of handling.

The apparatus is supplied complete with three different jaw sets which allows user to test anchorage rebar with different diameters. These jaws are made of high strength steel. The three jaw sets are for 4-8mm, 10-20mm and 20-32mm dia. rebars.
Rebar Pull Out Force Test

ASTM C1583/D4541/D7234/D7522, ISO 4624/16276-1, BS EN 12004-2, AS/NZS 1580.408.5

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working ability</td>
<td>30 tons</td>
</tr>
<tr>
<td>Rebar diameters can be tested</td>
<td>Up to 32 mm</td>
</tr>
<tr>
<td>Tension journey (stroke)</td>
<td>50 mm</td>
</tr>
<tr>
<td>Dimensions</td>
<td>205x175x175 mm</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>28 kg</td>
</tr>
</tbody>
</table>

DESCRIPTION:

Bond Strength Pull off tester is used to Measure the adhesion of coatings to metal, wood, concrete. It measures the force required to pull a specified test diameter of coating away from its substrate using hydraulic pressure.

The pressure is displayed on a precision digital indicator and can be related to the strength of adhesion to the substrate.

There are 2 models available: Manual Hydraulic pump with Digital Read-out, Automatic Electronically controlled Hydraulic pump with Digital Read-out.

Bond Strength/Pull Off Test Digital

ASTM C1583/D4541/D7234/D7522, ISO 4624/16276-1, BS EN 12004-2, AS/NZS 1580.408.5

MAIN FEATURES:

- Portable requires no external power source
- Can be used in any position
- Self-aligning dolly enables accurate measurements on smooth or uneven surfaces
- Sealed USB port for fast, simple connection to a PC

DESCRIPTION:

Bond Strength Pull off tester is used to Measure the adhesion of coatings to metal, wood, concrete. It measures the force required to pull a specified test diameter of coating away from its substrate using hydraulic pressure.

The pressure is displayed on a precision digital indicator and can be related to the strength of adhesion to the substrate.

There are 2 models available: Manual Hydraulic pump with Digital Read-out, Automatic Electronically controlled Hydraulic pump with Digital Read-out.
**Bond strength/pull off test digital**

The Bond Strengh Pull off tester comes complete with all accessories.

<table>
<thead>
<tr>
<th>Ordering guide</th>
<th>50 mm Kit</th>
<th>50 x 50 mm Tile Kit (BS EN 12004-2)</th>
<th>50 mm C1533 Kit (ASTM C1583)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical application</td>
<td>Lower bond strength coatings on wood, concrete and plastic</td>
<td>Cementitious adhesive for tiles</td>
<td>Concrete surfaces and overlays</td>
</tr>
<tr>
<td>Manual model with protective case</td>
<td>0.4 – 3.3 MPa 50 – 480 psi</td>
<td>0.4 – 2.585 MPa 50 – 375 psi</td>
<td>0.4 – 3.3 MPa 50 – 480 psi</td>
</tr>
<tr>
<td>Automatic Models with protective case</td>
<td>0.4 – 3.8 MPa 50 – 560 psi 100 – 7550 N</td>
<td>0.4 – 3.033 MPa 50 – 440 psi 100 – 7550 N</td>
<td>0.4 – 3.8 MPa 50 – 560 psi 100 – 7550 N</td>
</tr>
<tr>
<td>Typical Application</td>
<td>Lower bond strength coatings on wood, concrete and plastic</td>
<td>Cementitious adhesive for tiles</td>
<td>Concrete surfaces and overlays</td>
</tr>
<tr>
<td>Included Dollies</td>
<td>Ø50 mm (qty 8) Aluminum</td>
<td>50 x 50 mm Plate (qty 4) with threaded post Steel</td>
<td>Ø50 mm (qty 4) with &gt;25 mm thickness Steel</td>
</tr>
<tr>
<td>Cutting Tool</td>
<td>50 mm hole saw</td>
<td>-----</td>
<td>50 mm diamond grit hole saw with arbor</td>
</tr>
</tbody>
</table>

**ORDERING:**
- **CN 0286** Adhesion Tester Manual Model 50 mm kit
- **CN 0287** Adhesion tester Automatic Model 50 mm kit
- **CN 0288** Adhesion Tester Manual Model 50X50 mm (BS EN 12004-2) Tile Kit
- **CN 0289** Adhesion Tester Automatic Model 50X50 mm (BS EN 12004-2) Tile Kit
- **CN 0290** Adhesion Tester Manual Model 50 mm C1533 Kit
- **CN 0291** Adhesion Tester Automatic Model 50 mm C1533 Kit
- **ACCESSORIES:**
  - CN 0292 Dollies Ø50 mm

**Column Load cell**

**DESCRIPTION:**
The high accuracy column load cell is designed for use in applications where precise compression measurement of mid to high loads and forces is required.

The majority of high accuracy canister load cells that we manufacture are used as reference standards for the calibration or verification of other force transducers and testing machines such as compression testers.

The high accuracy column load cell can be supplied with a calibration certificate issued by a UKAS laboratory or the National Physical Laboratory (NPL) if required.

**MAIN FEATURES:**
- Capacities 500 KN to 3000 KN

**ORDERING:**
- **CN 0293** Column Load Cell 500
- **CN 0294** Column Load Cell 1000
- **CN 0295** Column Load Cell 2000
- **CN 0296** Column Load Cell 3000

**TECHNICAL SPECIFICATIONS:**
- Weight (approx.)
  - 3kg

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Handheld Load Cell Indicator

**DESCRIPTION:**
The handheld load cell indicator is a high resolution handheld load cell indicator designed to work with all types of load cell and strain gauge based transducer.

The handheld load cell indicator’s dual range facility allows for calibration in two different engineering units, i.e. Newton and kg. Alternatively, it is possible to calibrate two separate load cells or sensors with a single handheld load cell indicator display.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight</th>
<th>Depth</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90 mm</td>
<td>34 mm</td>
<td>152 mm</td>
</tr>
</tbody>
</table>

**MAIN FEATURES:**
- Portable for On-Site Monitoring
- Simple to Use
- Calibrate 2 Individual Load Cells

**ORDERING:**
- **CN 0297** The Handheld Load Cell Indicator
- **CN 0298** The Wireless Handheld Load Cell Indicator

Compressometer

**DESCRIPTION:**
Concrete Compressometers are used to determine the deformation (both axial and diametrical) of concrete cylinder specimens during the compression test.

There are 4 different models available for Ø4”x8” or Ø100x200 mm cylinders, Ø6”x12” or Ø150x300 mm.

The apparatus work in conjunction with a Data Logger, ordered separately.

Compressometer Ø4”x8” or Ø100x200 mm cylinders comes complete with 2 transducers.
Compressometer Ø6”x12” or Ø150x300 mm cylinders comes complete with 2 transducers.
Compressometer Ø4”x8” or Ø100x200 mm cylinders comes complete with 2 dial gauge.
Compressometer Ø6”x12” or Ø150x300 mm cylinders comes complete with 2 dial gauge.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1kg</td>
</tr>
</tbody>
</table>
Concrete Embedded Strain Gauge

**DESCRIPTION:**
The Concrete-embedded Strain Gauge is designed to measure shrinkage and stress of cement and concrete materials.

The Strain Gauge is connected to the Data logger using the thermocouple wire.

There are several forms and shapes of strain gauge that can be ordered, please consult with our sales team for available options.

**MAIN FEATURES:**
- Strain Gauge for Static and Dynamic Applications
- Very Flexible, Mechanically Strong
- Broad Temperature Range

**ORDERING:**
CN 0308
Concrete-embedded Strain Gauge

**ACCESSORIES:**
CN 0309
Thermocouple wire

Compression Testing Machine

**DESCRIPTION:**
The Compression Testing Machine is a very common testing method that is used to establish the compressive force or crush resistance of a material and the ability of the material to recover after a specified compressive force is applied and even held over a defined period of time by measuring fundamental variables, such as, strain, stress, and deformation.

There are several models and capacity available for the compression test machine designed to meet the need for reliable and consistent testing of concrete samples.

Ranging from Full automatic or Semi automatic, hydraulic controlled or servo controlled. Designed to meet all standards requirement, BE, EN, ASTM.

Our range of compression machines vary from 1500 KN up to 5000 KN compression capacity.

The compression frame can be purchased separately or with hydraulic or servo controlled power pack.

The Control Power Pack in turn can be connected to another frame, such as flexural machine or another compression machine. Additional accessories such as distance pieces, Printer connection, software, block testing assembly, rail.

**MAIN FEATURES:**
- Designed for reliable and consistent testing of a wide range of specimens.
- User-friendly design enable an inexperienced operator to perform the test.

**EN 12390-3, 4, 5,6; EN 12504-1, 1354, 1521, 13161, 1338, 1340, 196, 772-1, -6, 13286-41, BS 1881 3892-3, 187, 6073-1, 6717 ASTM C39**
The full automatic models come with complete automatic test cycle, a closed loop digital readout unit. Once the specimen parameters have been introduced, it is sufficient to press START button to complete the test.

The Full automatic compression machines consist of their main parts: Frame, power pack and data acquisition control system.

The compression machines consist of a heavy duty frame, 4 column or welded type, depending on the standard required. connected to the automatic hydraulic power pack with data acquisition and digital control system.

The digital control system Button type or touch screen models are also available, depending on the user preference.

The Full automatic compression machine can be full controlled and operated from a PC connected directly to the machine. A small printer connection is also available for a quick printout.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Capacity</th>
<th>Standard</th>
<th>Lower Platens Dimensions</th>
<th>Upper Platens</th>
<th>Maximum vertical clearance between platens</th>
<th>Piston Diameter</th>
<th>Maximum piston movement</th>
<th>Horizontal Clearance</th>
<th>Maximum working pressure</th>
<th>Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN 0310-CN 0310-1</td>
<td>1500 kN</td>
<td>EN 12390-4</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>340 mm</td>
<td>300 mm</td>
<td>50 mm</td>
<td>385 mm</td>
<td>280 Bar</td>
<td>CN 0320</td>
</tr>
<tr>
<td>CN 0311-CN 0311-1</td>
<td>2000 kN</td>
<td>EN 12390-4</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>340 mm</td>
<td>300 mm</td>
<td>50 mm</td>
<td>385 mm</td>
<td>280 Bar</td>
<td>CN 0321</td>
</tr>
<tr>
<td>CN 0312-CN 0312-1</td>
<td>3000 kN</td>
<td>EN 12390-4</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>340 mm</td>
<td>50 mm</td>
<td>50 mm</td>
<td>385 mm</td>
<td>310 Bar</td>
<td>CN 0322</td>
</tr>
<tr>
<td>CN 0313-CN 0313-1</td>
<td>4000 kN</td>
<td>EN 12390-4</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>300 mm</td>
<td>50 mm</td>
<td>100 mm</td>
<td>445 mm</td>
<td>315 Bar</td>
<td>CN 0323</td>
</tr>
<tr>
<td>CN 0314-CN 0314-1</td>
<td>5000 kN</td>
<td>EN 12390-4</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>300 mm</td>
<td>100 mm</td>
<td>120 mm</td>
<td>455 mm</td>
<td>350 Bar</td>
<td>CN 0324</td>
</tr>
<tr>
<td>CN 0325-CN 0325-1</td>
<td>600 kN</td>
<td>ASTM C39</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>370 mm</td>
<td>300 mm</td>
<td>50 mm</td>
<td>385 mm</td>
<td>280 Bar</td>
<td>CN 0325</td>
</tr>
<tr>
<td>CN 0326-CN 0326-1</td>
<td>1500 kN</td>
<td>ASTM C39</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>370 mm</td>
<td>300 mm</td>
<td>50 mm</td>
<td>385 mm</td>
<td>280 Bar</td>
<td>CN 0326</td>
</tr>
<tr>
<td>CN 0327-CN 0327-1</td>
<td>3000 kN</td>
<td>ASTM C39</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>370 mm</td>
<td>50 mm</td>
<td>50 mm</td>
<td>385 mm</td>
<td>310 Bar</td>
<td>CN 0327</td>
</tr>
<tr>
<td>CN 0328-CN 0328-1</td>
<td>4000 kN</td>
<td>ASTM C39</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>370 mm</td>
<td>50 mm</td>
<td>100 mm</td>
<td>385 mm</td>
<td>315 Bar</td>
<td>CN 0328</td>
</tr>
<tr>
<td>CN 0329-CN 0329-1</td>
<td>5000 kN</td>
<td>ASTM C39</td>
<td>Ø300 mm</td>
<td>Ø300 mm</td>
<td>370 mm</td>
<td>100 mm</td>
<td>120 mm</td>
<td>385 mm</td>
<td>350 Bar</td>
<td>CN 0329</td>
</tr>
</tbody>
</table>

The full automatic models comes with complete automatic test cycle, a closed loop digital readout unit. Once the specimen parameters have been introduced, it is sufficient to press START button to complete the test.

The Full automatic compression machines consist of their main parts: Frame, power pack and data acquisition control system.

The compression machines consist of a heavy duty frame, 4 column or welded type, depending on the standard required. connected to the automatic hydraulic power pack with data acquisition and digital control system.

The digital control system Button type or touch screen models are also available, depending on the user preference.

The Full automatic compression machine can be full controlled and operated from a PC connected directly to the machine. A small printer connection is also available for a quick printout.
DESCRIPTION:
The dual stage power pack which controlled by the control system is designed to supply the required oil pressure to the frame.

The Semi-automatic models comes with complete valve controlled test cycle, There are two valves on the oil tank. One valve is the pace rate control valve. It is used for controlling the pace rate. When you push it forward, the pace rate increases fast.

In order to make fine-tuning, top valve is turned clockwise to increase load in small amount or counter-clockwise direction to decrease.

The Semi-automatic compression machines consist of their main parts: Frame, power pack with valve control and digital readout unit.

The valve control power pack is designed to supply the required oil pressure to the frame. Very silent power pack can load specimen between 1KN/sec to 20KN/sec. On all power packs maximum pressure valve is used to avoid machine overloading.

Very silent power pack can load specimen between 1KN/sec to 20KN/sec. On the dual sage pump high delivery low pressure pump is used for rapid approach and delivery high pressure radial piston bump is used for test execution. On all power packs maximum pressure valve is used to avoid machine overloading.

The Servo controlled hydraulic pack is an advanced system that can very accurately control the speed loading rate.

The user have full control of the load cycle before or during the test. In a way that you can set the machine preplanned cycle or change speed, even hold the load during the test cycle for a period of time.

The servo controlled hydraulic system, comes complete with a digital touch screen control system and data acquisition that can send the result either by blue tooth, email, printout or save.
MAIN FEATURES:

- Pace rate control from 0.01 kN/s to 100 kN/s (depend on the specimen stiffness)
- Extra channels for displacement transducers, extensometers, etc. built in the system as an addition to frame loadcell (pressure transducer) or displacement transducer
- Ethernet port for connecting to computer
- 240x320 pixel LCD digital display, Touchscreen operator panel, Can control 2 frames
- Can execute load, displacement or strain controlled tests.
- Free of charge PC software for test control and advanced report printout
- Multiple language support
- Real time clock/date

ORDERING:

CN 0310
Full Auto Compression Machine, 1500KN, EN

CN 0311
Full Auto Compression Machine, 2000KN, EN

CN 0312
Full Auto Compression Machine, 3000KN, EN

CN 0313
Full Auto Compression Machine, 4000KN, EN

CN 0314
Full Auto Compression Machine, 5000KN, EN

CN 0315
Full Auto Compression Machine, 1500KN, ASTM

CN 0316
Full Auto Compression Machine 2000KN, ASTM

CN 0317
Full Auto Compression Machine, 3000KN, ASTM

CN 0318
Full Auto Compression Machine, 4000KN, ASTM

CN 0319
Full Auto Compression Machine, 5000KN, ASTM

CN 0310-1
Semi Automatic Compression Machine, 1500KN, EN

CN 0311-1
Semi Automatic Compression Machine, 2000KN, EN

CN 0312-1
Semi Automatic Compression Machine, 3000KN, EN

CN 0313-1
Semi Automatic Compression Machine, 4000KN, EN

CN 0314-1
Semi Automatic Compression Machine, 5000KN, EN

CN 0315-1
Semi Automatic Compression Machine, 1500KN, ASTM

CN 0316-1
Semi Automatic Compression Machine, 2000KN, ASTM

CN 0317-1
Semi Automatic Compression Machine, 3000KN, ASTM

CN 0318-1
Semi Automatic Compression Machine, 4000KN, ASTM

CN 0319-1
Semi Automatic Compression Machine, 5000KN, ASTM

CN 0323-1
Semi Automatic Compression Machine, 1500KN, ASTM

CN 0324-1
Semi Automatic Compression Machine, 2000KN, ASTM

CN 0325
Full Automatic Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 2 frames.

CN 0325-1
Semi Automatic Power pack, variable output pump, Rapid approach pump, pressure transducer, digital readout unit.

CN 0325-2
Full Automatic Servo Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 4 frames.

CN 0326
Distance Piece 20mm

CN 0327
Distance Piece 30mm

CN 0328
Distance Piece 50mm

CN 0329
Distance Piece 90mm

CN 0330
Distance Piece 100mm

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The Compression Testing Machine is a very common testing method that is used to establish the compressive force or crush resistance of a material and the ability of the material to recover after a specified compressive force is applied and even held over a defined period of time by measuring fundamental variables, such as, strain, stress, and deformation.

There are several models and capacity available for the compression test machine designed to meet the need for reliable and consistent testing of concrete samples. Ranging from Full automatic or Semi automatic, hydraulic controlled or servo controlled. Designed to meet all standards requirement, BE, EN, ASTM.

Our range of compression machines vary from 1500 KN up to 5000 KN compression capacity.

The compression frame can be purchased separately or with hydraulic or servo controlled power pack. The Control Power Pack in turn can be connected to another frame, such as flexural machine or another compression machine. Additional accessories such as distance pieces, Printer connection, software, block testing assembly, rail.

Block Test Platens Sliding

**DESCRIPTION:**
The Block Platens 460x280x65 mm with Sliding Rail Assembly are installed on the compression testing machines for testing concrete blocks and other structural materials. The Sliding Rail Assembly allows the platens to be easily installed without removing the existing compression platens. This assembly should be factory installed.

Block Platens Lifting Assembly is used for easy removal of the lower platen and easy replacement of the distance pieces between the piston and the lower platen without lifting the heavy platform or causing injury.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500x300x150 mm</td>
<td>175 kg</td>
</tr>
</tbody>
</table>

Splitting Tensile Device

**DESCRIPTION:**
Two column steel frame with self-centering base specimen holder and upper load beam suspended with springs for easy adjustment of the specimen. The devices can be easily placed on lower platen of the compression tester using suitable distance pieces to adjust the vertical daylight. The device have to be completed with the packing strips to be inserted between the specimen and the load beams.

CN 0334 is used for splitting tensile tests on cylindrical specimens. CN 0335 is used for splitting tensile tests on concrete block pavers and concrete cubes.

For both models max total height is 370 mm. The 370 mm vertical daylight can easily obtained removing the lower platen of the compression tester.

**TECHNICAL SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylindrical Specimens</td>
</tr>
<tr>
<td>Ø150x300 mm / Ø160x320 mm</td>
</tr>
<tr>
<td>Concrete Block Pavers</td>
</tr>
<tr>
<td>60-150x220 mm</td>
</tr>
<tr>
<td>Concrete Cubes</td>
</tr>
<tr>
<td>150x150 mm</td>
</tr>
</tbody>
</table>
The Flexural test equipment is used to test flexural strength of concrete beams, kerbs, interlocking pavers, flagstones and blocks of different sizes.

The flexural test equipment ranges from 100 kN to 300 kN capacity, it has been designed for reliable and consistent testing due to its heavy steel fabrication and design.

The flexural test equipment comes in two types of frames, the U type and the C type frame. Both very rigid design is ideal either for conventional flexural test or for more sophisticated tests such as deformability and ductility index.

The Flexural Machines feature the complete automatic test cycle with a closed loop digital readout. Once the specimen parameter have been introduced, it is sufficient to press the START button to complete the test.

The Flexural Frame can be connected to any Geotechnical compression machine as a second frame or can be used individually with any power pack as an independent Flexural Machine.

Flexural test assemblies should be ordered separately.

• Bearers for flexure test on flagstones and kerbs to EN 1339 and 1340. Consist of two lower roller of 20 mm dia. x 600 mm length and upper load point of 40 mm dia with ball seating

• Bearers for flexural test on concrete blocks Consist of two lower roller and one upper roller of 20 mm dia. x 600 mm length

• Bearers for flexural test on concrete beams of 100x100x400-500 mm, 150x150x600-750 mm. Consist of two upper rollers and two lower rollers of 40 dia and 160 mm length. Complying to EN 12390-5 and ASTM C78.

The distance of the lower bearers can be adjusted between 100mm and 800mm. The distance between upper bearers can be set to 100mm or 150 mm.

During the 3 point Flexural testing one of the bearers can be removed and the other placed in the centre.

TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Vertical Clearance</td>
<td>425 mm (without accessories)</td>
</tr>
<tr>
<td>Max. Horizontal Clearance</td>
<td>650 mm</td>
</tr>
<tr>
<td>Max. Clearance Between Lower Rollers</td>
<td>900 mm</td>
</tr>
<tr>
<td>The Distance Between The Center of The Piston to The Side of The Frame</td>
<td>320 mm</td>
</tr>
<tr>
<td>Overall Dimensions</td>
<td>1000x950x1250 mm</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>425 kg</td>
</tr>
</tbody>
</table>
Flexural Test Equipment

ORDERING:

**CN 0337**
Flexural Testing Machine, 100 kN capacity U Type Frame

**CN 0338**
Flexural Testing Machine, 150 kN capacity U Type Frame

**CN 0339**
Flexural Testing Machine, 200 kN capacity U Type Frame

**CN 0340**
Flexural Testing Machine, 300 kN capacity U Type Frame

**CN 0341**
Flexural Testing Machine, 100 kN capacity C Type Frame

**CN 0342**
Flexural Testing Machine, 150 kN capacity C Type Frame

**CN 0343**
Flexural Testing Machine, 200 kN capacity C Type Frame

**CN 0344**
Flexural Testing Machine, 300 kN capacity C Type Frame

**CN 0325**
Full Automatic Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 2 frames.

**CN 0325-1**
Semi Automatic Power pack, variable output pump, Rapid approach pump, pressure transducer, digital readout unit.

**CN 0325-2**
Full Automatic Servo Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 4 frames.

ACCESSORIES:

**CN 0345**
Bearers for flexure test on flagstones and kerbs

**CN 0346**
Bearers for flexure test on concrete blocks

**CN 0347**
Flexural Test assembly on Concrete Beams