

SAMPLING TOOLS

The correct sampling and mixing of fresh concrete are important if test results are to be reliable. Most of the equipment necessary for efficient sampling and mixing is standard laboratory equipment detailed in the Laboratory Equipment Section of this catalogue.

SC SERIES SCOOP

STANDARD: EN12350-1

Material: Stainless steel, Aluminium

Model	Capacity(oz)	Weight(g)	Long(mm)
SC-R06	6	78	190
SC-R12	12	120	220
SC-R24	24	210	270
SC-R38	38	300	310
SC-R58	58	440	380
SC-R85	85	525	415
SC-F12	12	115	220
SC-F24	24	210	270
SC-F38	38	300	310
SC-F58	58	440	380
SC-F85	85	525	415



SC-M METAL SCOOP

125 mm dia. x 250 mm long, 5 kg capacity. Ideal for taking increments of concrete.



SLUMP TEST APPARATUS

The test apparatus is carried out by filling the slump cone with freshly mixed concrete which is tamped with a steel rod in three layers. The concrete is levelled off with the top of the slump cone, the cone removed, and the slump of the sample is immediately measured. We propose two different models: the standard one particularly suitable for laboratory testing and the portable model very practical for site testing shown as below. Each component of the kit can be ordered separately. The user can personalize the Slump Cone test.



Complete with metal base plate SM-BP/C and TR-S600 tamping rod. Clamps on the base hold the cone for filling and tamping. After the cone is removed, the handle raises over the specimen and the slump is measured using a 22 cm scale engraved in 1 cm increments on the end of the rod.

The set of components are fitted together for easy carrying.

- ⊙ SM series slump cone
- ⊙ SM-BP/C Metal base plate with clamps and measuring bridge
- ⊙ SC-R24 Scoop
- ⊙ TR-S600 Steel tamping rod, dia. 16*600mm

SM SERIES SLUMP CONE

STANDARD: EN 12350-2, BS 1881:102, ASTM C143

Also known as Abrams cone. These slump cones determine the slump of concrete in the laboratory or field.

Model SM-ES cone is spun from heavy gauge steel and is seamless to provide a stronger, more durable product that is easy to clean. All parts are plated for rust resistance.

20 cm Dia base, 10 cm Dia top and 30 cm height.



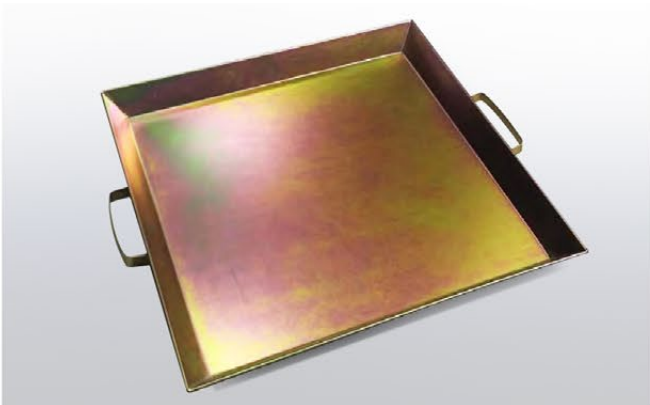
- ⊙ SM series Slump cone
- ⊙ SM-R3 Steel rule 300 mm long
SM-R5 steel rule 500 mm long (user selectable)
- ⊙ SM-BF40 Metal base plate 400x400x1.5 mm galvanized, with one handle.
- ⊙ SC-R24 Scoop
- ⊙ TR-S600 Steel tamping rod, dia.16x600 mm
TR-S380 Metal tamping bar, 25x380 mm long (optional)

Model	Dimension(mm)	Weight (kg)	Remark
SM-ES	100x200x300	2.0	Seamless spun steel
SM-EG	100x200x300	2.0	Galvanized
SM-EP	100x200x300	2.0	Blue
SM-EB	100x200x300	2.0	Black
SM-LG	100x200x300	3.0	Galvanized
SM-PL	100x200x300	0.7	ABS plastic with funnel
SM-HS	100x200x300	1.5	S/S

SLUMP BASE PLATE

STANDARD: ASTM C143, ASTM C143M, AASHTO T119, BS 1881

Slump Base Plate is an accessory of the slump measurement test set. It can be ordered separately.



Model	Dimension (mm)	Remark
SM-BP40	400x400x40 deep	Galvanized, with two handles
SM-BP60	600x400x4 thickness	Galvanized, with two handles
SM-BP75	750x750x2 thickness	Galvanized, with two handles
SM-BF40	400x400x1.5 thickness	Galvanized, with one handle
SM-BF60	600x400x1.5 thickness	Galvanized, with one handle
SM-BP/C	355x355x2 deep 400mm Height handle	Galvanized, with clamps and measuring bridge

STAINLESS STEEL BASE PLATE



Model	Dimension (mm)	Thickness(mm)
WL623-208T	353x325x200 deep	0.8
WL623-158T	353x325x150 deep	0.8
WL623-108T	353x325x100 deep	0.8
WL623-68T	353x325x65 deep	0.8
WL623-48T	353x325x40 deep	0.8

SLUMP FUNNEL



ACCESSORIES



FLOW TABLE TEST

This test will be of interest to those involved with concrete having a high workability. The test determines the flow index as an arithmetic mean of the diameter of the specimen after working on a flow table.



CONCRETE FLOW TABLE

54-C0151/A Concrete flow table consists of a double wooden table measuring 700x700 mm and hinged at one side. The top table is covered with a flat metal plate 2 mm thick, inscribed, and protected against corrosion. The galvanized steel cone has a top 130 mm dia., base 200 mm dia., and is 200 mm high. Supplied complete with wooden tamping rod.

⊙ Weight approx.: 25 Kg

54-C0151/1 Flow cone top 130 mm dia., base 200 mm dia., 200 mm high

54-C0151/2 Wooden tamping rod



GROUT FLOW

STANDARD : ASTM C939, ASTM C6449

Grout flow cone set is the test set for measuring the flow of grout for preplaced, aggregate concrete. Intended for neat grout and grouts containing fine aggregate capable of passing a No. 8 sieve and grouts which have an eflux time of less than 35 seconds.

FC-13 GROUT FLOW CONE, 1/2" (13MM)

Steel flow cone from above set, has 1/2" (13mm) replaceable orifice. Can also accommodate 3/4" (19mm) orifice, which can be purchased below. Includes adjustable point gauge assembly. Overall dimensions: 8" dia. x 12"H (203 x 305mm).

FC-19 GROUT FLOW CONE, 3/4" (19MM)

Steel flow cone from above set, has 3/4" (19mm) replaceable orifice. Can also accommodate 1/2" (13mm) orifice, which can be purchased below. Includes adjustable point gauge assembly. Overall dimensions: 8" dia. x 12"H (203 x 305mm).

FLOW CONE STAND

Sturdy well-constructed steel stand to support flow cones so the top is level and the cone free from vibration. Overall dimensions: 21"W x 9-1/2"D x 23"H.



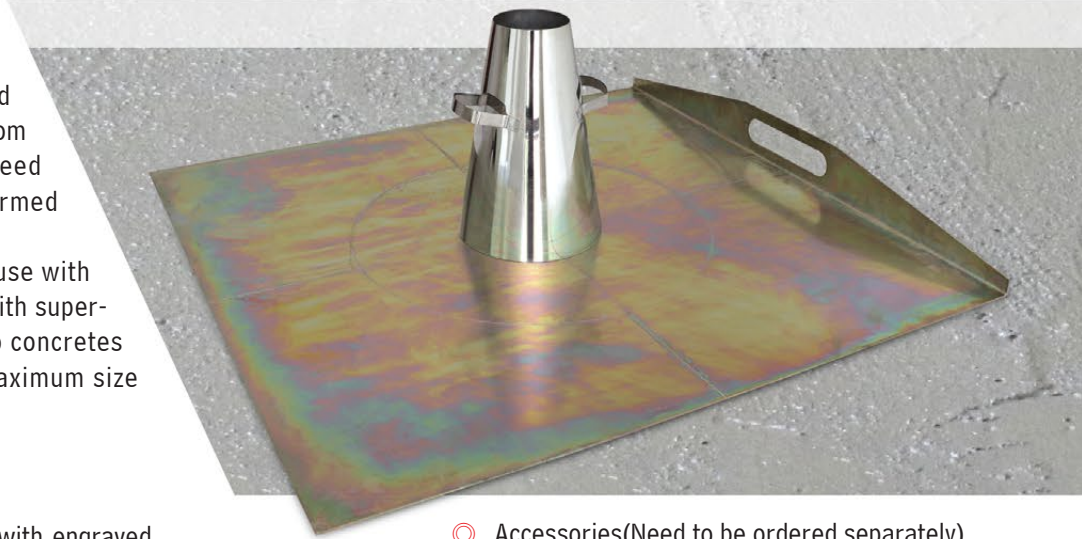
SCC TESTING APPARATUS

SLUMP-FLOW TEST

This test method covers evaluation of the deformability of freshly mixed self-compacting concrete (SCC) from observation of the deforming speed and the spread diameter of deformed sample under the self-weight.

This test method is intended for use with highly fluidized concretes made with super-plasticiser. It is not applicable to concretes made with aggregates whose maximum size exceeds 40 mm.

- ⊙ SM-BP90 Plate
- ⊙ Weight approx.: 19kg
- ⊙ Made of steel, 900 x 900 mm with engraved 210 and 500 mm dia. circles



- ⊙ Accessories(Need to be ordered separately)
- ⊙ Stop watch – precise to ~0.05 seconds



J-RING TEST

This test method covers the determination of flowability, flow time and the capacity of the SCC concrete to go through obstacles.

54-C0147/C J-Ring apparatus

- ⊙ Galvanized steel, 300 mm dia., with 16 single rods 18 mm dia. The slump cone should be ordered separately.
- ⊙ Dimension: 900x900x130mm
- ⊙ Weight approx.: 30 kg

SIEVE SEGREGATION TEST

Used for determining the sieve segregation resistance of self-compacting concrete. This method is not applicable to concrete containing fibers or lightweight aggregates.

54-C0147/F Sieve segregation test set

- ⊙ The set includes a 300 mm dia. test sieve with perforated plate 5 mm opening, pan and plastic bucket 11 L cap.
- ⊙ Weight approx.: 3kg





L-SHAPE BOX TEST

The method covers evaluation of self-compactability (confined flowability) of freshly mixed self-compacting concrete. With the L-shaped box it is possible to evaluate different properties, such as filling ability, passing ability, and resistance to segregation.

54-C0147/B L-Shape box apparatus

- ⊙ Complete with funnel tube and frame to simulate reinforcement.
- ⊙ Dimensions: 700x200x700 mm
- ⊙ Weight approx.: 30 kg



U-SHAPE BOX TEST

This test method covers the determination of confined flowability and the capacity of the SCC concrete to flow within confined spaces.

54-C0147/D U-Shape box apparatus

- ⊙ Made of galvanized steel with frame consisting of four 10 mm dia. bars and three 13 mm dia. bars.
- ⊙ Dimensions: 250x250x710 mm
- ⊙ Weight approx.: 20 kg



V-FUNNEL TEST 54-C0147 V-Funnel

This apparatus is used to evaluate the segregation resistance of freshly mixed self-compacting concrete by the observation on the flowing speed due to the difference of samples remaining period in the funnel. It consists of a funnel placed vertically on a supporting stand, having 10L capacity, stand mounted.

The upper edge of the funnel is smooth and reinforced, and the outflow orifice is equipped of an openable seal valve.

- ⊙ Funnel (width x deep): 515 x 75 mm
- ⊙ Height over all: 1000 mm
- ⊙ Weight approx.: 20 kg

Accessories (need to be ordered separately)

Stopwatch with the accuracy of 0.1 second for recording the flow time.

Buckets with a capacity of 12-14 L for taking concrete sample.

Moist sponge or towel for wetting the inner surface of the V-funnel.

Straightedge for levelling the concrete.

DEGREE OF COMPACTABILITY

STANDARD : EN 12350-4

WALTZ CONTAINER

The apparatus consists of a metal box with two carrying handles. Coated against corrosion.

- ⊙ Dimensions (WidthxDepthxHeight): 200x200x400 mm
- ⊙ Weight approx.: 5 kg



VEBÉ TEST

STANDARD : ASTM C143, BS1881

This test method is a variation of the simple slump test and subjects the concrete to vibration after removal from the slump cone. The time taken for the concrete to be recompacted is taken as a measure of workability. The small vibrating table operates at a fixed amplitude and frequency, and in the test a plastic disc is placed into contact with the upper surface of the concrete. The test is completed when the lower surface of the disc has been completely coated with cement grout.

VEBÉ CONSISTOMETER 34-0300/01

Amplitude(with empty container)	0.5mm
Vibrating frequency	0.5Hz
Counter weight when VB Test	2750g±20g
Slump cone size (Top Dia. x Bottom Dia. x Height)	100x200x300mm
Power	380 V, 50Hz, 250 W
Net weight	30kg



K-SLUMP METHOD

STANDARD : ASTM C1362

K-SLUMP TESTER

This device is used to determine the workability and degree of compaction of fresh concrete after being placed in the forms. It can be used for in-situ measurements or inside test moulds and forms. Results can be correlated against the slump test.

The operation is very simple, insert the tester into the concrete up to the level of the disc, after 60 seconds, a measuring rod is lowered onto the surface of the concrete and the K-slump is read directly on a scale. The calibrated hollow tube has a diameter of 20 mm.

- ⊙ Dimensions: 200x200x400(h) mm
- ⊙ Weight approx.: 5 kg



COMPACTION FACTOR APPARATUS CF-A

STANDARD : BS 1881-103, BS 5075

The apparatus is used for determining the workability of fresh concrete, provided the maximum size of the aggregate does not exceed 38 mm. The test is particularly useful for concrete mixes of very low workability where true slump values are not reliable.

It consists of two rigid conical hoppers and a cylinder mounted on a rigid metal frame. The lower openings of the hoppers are fitted with hinged trap-doors having quick release catches. A circular metal plate is provided to cover the top of the cylinder.

- ⊙ Dimensions: 350 (L) x 320 (W) x 1300 (H)
- ⊙ Net weight: 25 kg

