

Setting Time & Consistency

TM-201

Vicat Needle Apparatus

Consistency & setting time

IS 5513

Vicat apparatus to IS 5513 for standard consistency and initial and final setting time of cement, with mould, glass plate, plunger and needles.

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Description

The Vicat apparatus is the standard way to find the normal consistency of cement paste and its initial and final setting times. Cement paste is filled into the conical mould on a glass plate, and the weighted moving rod is released so the plunger or needle sinks into it. The depth it reaches is read on the scale.

The set includes the stand with moving rod and 40 mm scale, the Vicat mould, a glass base plate, the 10 mm consistency plunger, and the initial and final setting needles. Each needle and the plunger weighs 9 ± 0.5 g, and the moving unit with any one of them fitted weighs 300 ± 1 g, as IS 5513 requires.

The final setting needle has a brass cap with a 5 mm circular cutting edge, so the final set is reached when the needle marks the paste but the cutting edge does not.

Supplied ready for use with operating manual and test certificate. Contact us for configuration options, accessories and calibration services.

Technical specifications

Initial setting needle	1.13 ± 0.05 mm dia, 50 ± 1 mm long, flat end
Final setting needle	1.13 mm dia, 30 ± 1 mm long, with brass cap
Final needle cap	5 ± 0.1 mm cutting edge, hollowed 0.5 ± 0.1 mm, 0.75 mm vent hole
Needle projection beyond cap	0.5 ± 0.1 mm
Consistency plunger	Polished brass, 10 ± 0.05 mm dia, 50 ± 1 mm long
Mass of each needle / plunger	9 ± 0.5 g
Mass of moving unit	300 ± 1 g
Scale	40 mm, 1 mm divisions
Vicat mould	Conical, 70 ± 5 mm top and 80 ± 5 mm bottom ID, 40 ± 0.2 mm high, 4 mm min wall
Base plate	Glass or stainless steel, 2.5 mm min thick