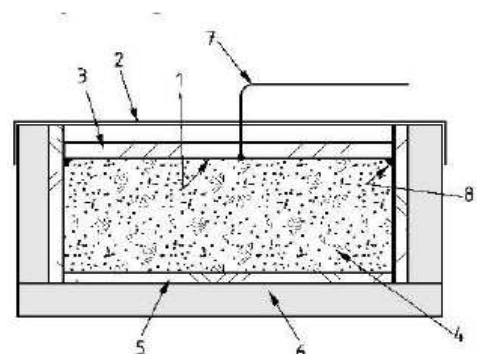
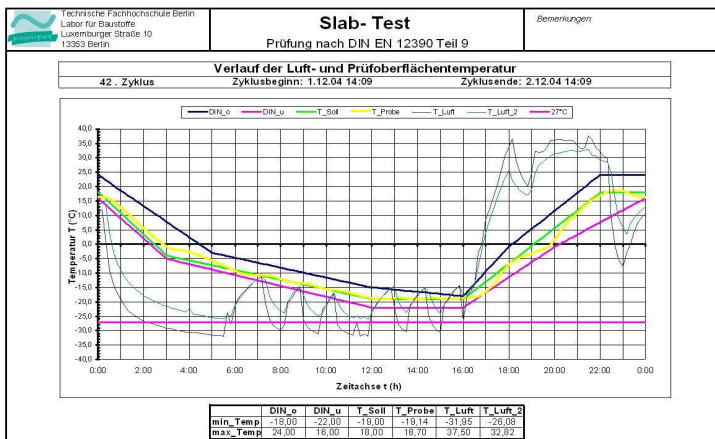


The Schleibinger Freeze-Thaw Slabtester

The slab-test or Borås test is a frost thaw test for concrete. It is defined in the preEN 12390-9 "Freeze-thaw resistance - Scaling", DIN-EN-1338, DIN-EN 1339, DIN-EN 1340, EN 1367-1 and DIN V 18004. The standards are different in minor details. Please check them if you are in doubt.

Preparing the specimen

The test requires four specimens obtained from four cubes. After 21 days a 50mm thick specimen is sawed from each cube perpendicular to the top surface so that the saw cut for the test surface is located in the center of the cube. So specimens are 15x15x5 cm sized. When the concrete is 25 days old a rubber sheet is glued to all surfaces except the test surface. Place a string of glue around the test surface in the corner between the concrete and the rubber. After 28 days pour a layer about 3 mm deep of de-mineralized water on the top surface for 72h. After 31 days all surfaces except the test surface are thermally insulated with 20mm thick polystyrene foam plastic. Then the de-min. water is replaced by the freezing medium and the test surface is covered with a polyethylene sheet.



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Created by Kristian Siebert for his diploma-thesis WS/SS 04/05
"Vergleichende Untersuchungen zum Frost-Tausalz-Widerstand von Betonen mit dem Slab-Test und CDF-Verfahren - Comparing research about the frost thaw resistance between the Slab test and the CDF test". Chair of : Prof. Dipl.-Ing Jürgen Berger

Temperature Cycles

One frost thaw cycle is run in 24 hours. The temperature shall exceed 0°C during each cycle for at least 7h but not more than 9h.

The reference temperature is measured in the middle of the test surface and may deviate, between $\pm 2,5$ K and ± 5 K from the target temperature

Measuring Scaling

After 7, 14, 28 42 and 56 days the weight of the scaled material is measured, after the surface has been brushed.

The Slab-Tester

The Schleibinger Slab-Tester is a temperature and time controlled frost-thaw system. It allows freezing and thawing of the concrete specimen according to prEN 12390-9 and prEN 1339 EN 1367-1, DIN V 18004 and 1340:2002. Made of stainless steel.

Including: 4 shelves, electronic controller, manual. Order No. C0104

Additional Feature Programming Tool, Internet Interface and Data Logger

This feature makes the Schleibinger Slabtester much more sophisticated. You can input up to 8 programs for the temperature over time. Two add. temperature measuring devices for measuring the temperature in the freezing medium on the test surface and in the air. The data from the last temperature cycles are recorded and can be downloaded from any PC by a ethernet TCP/IP interface. So the Slabtester can be operated by an internet browser from any PC in your intranet. Up to 8 own temperature programs may be created. A data acquisition module stores the temperature date of the last 4 weeks. The temperature curve of the last 24h may be plotted on the color touch screen.

Including: TCP/IP interface, add. temperature sensor, color touch screen, software, CF-card, CF-card-reader, user-manual. Order No. C1041

Power supply	V/Hz	110/230V/1Ph/50/60Hz
Power	kW	0.8
Size outside	cm (wxdxh)	77x70x200
Size inside	cm (wxdxh)	63x57x144
Weight	kg	ca. 160
Temperature range	°C	-25..+40