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DIN EN 12390-4

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Supersedes
DIN EN 12390-4:2000-12

Testing hardened concrete – Part 4: Compressive strength – Specification for testing machines; English version EN 12390-4:2019, English translation of DIN EN 12390-4:2020-04

Prüfung von Festbeton –
Teil 4: Bestimmung der Druckfestigkeit –
Anforderungen an Prüfmaschinen;
Englische Fassung EN 12390-4:2019,
Englische Übersetzung von DIN EN 12390-4:2020-04

Essais pour béton durci –
Partie 4: Résistance à la compression –
Charactéristiques des machines d'essai;
Version anglaise EN 12390-4:2019,
Traduction anglaise de DIN EN 12390-4:2020-04

Document comprises 22 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

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A comma is used as the decimal marker.

National foreword

This document (EN 12390-4:2019) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products” (Secretariat: SN, Norway).

The responsible German body involved in its preparation was *DIN-Normenausschuss Bauwesen* (DIN Standards Committee Building and Civil Engineering), Working Committee NA 005-07-05 AA “Test methods for concrete”.

This standard contains an informative National Annex with supplementary specifications for testing machines as in this standard.

Amendments

This standard differs from DIN EN 12390-4:2000-12 as follows:

a) the text has been aligned with EN ISO 7500-1 to avoid duplications;

b) machines are to meet the requirements for class 1 except those manufactured before 2000 where Class 2 is acceptable;

c) verification points and new limits of acceptance over the working range have been increased;

d) a verification procedure for the strain gauge column is described;

e) Annex B has been deleted.

Previous editions

DIN 51302-2: 1986-08
DIN EN 12390-4: 2000-12

National Annex NA
(informative)

Supplementary specifications for machines for testing the compressive strength of hardened concrete and building materials

NA.1 General

This informative national annex supplements the specifications of some clauses of EN 12390-4:2019. The supplements for machine platens and auxiliary platens are intended to ensure high precision in subsequent compression strength testing, including the testing of mineral binders that are not covered by EN 12390-4:2019, but which can be tested with the same testing machines. In addition, examples, e.g. for a device that enables a reproducible position of the strain gauged column for checking the blocking, are provided to assist in the application of the standard.

NA.2 Machine platens and auxiliary platens for testing

Unless standards for individual test methods contain other specifications, the compression and bearing surfaces should be ground flat. The flatness and roughness deviations should not exceed the values specified in Table NA.1.

Where auxiliary platens are used, these should meet the requirements specified for the lower machine platen. The surface of the lower machine platen shall be perpendicular to the load application line of the testing machine.

The size of the machine platens or any auxiliary platens used should be such that they project at least 5 mm beyond the contact surface of the specimen to be tested on all sides, unless other conditions are specified in other process standards.

The stiffness of the machine platens and their force application components should be such that the deflection of the platens at maximum force of the machine does not exceed the values given in Table NA.1, assuming uniformly distributed force. This specification applies only to machine platens which do not project more than 0,6 times their thickness beyond their support. For larger machine platens the permissible deflection shall be agreed.

The thickness *s* of the machine platens should be greater at its weakest point than the diameter *d* of an interruption in the bearing surface (see Figure NA.1).

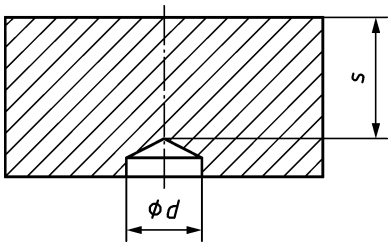

Figure NA.1 — Machine platen with central bore