
**Building construction machinery and
equipment — Concrete mixers —**

**Part 2:
Procedure for examination of mixing
efficiency**

*Machines et matériels pour la construction des bâtiments —
Malaxeurs de béton —*

*Partie 2: Mode opératoire pour la détermination de l'efficacité de
malaxage*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 195, *Building construction machinery and equipment*, Subcommittee SC 1, *Machinery and equipment for concrete work*.

This second edition cancels and replaces the first edition (ISO 18650-2:2006), of which it constitutes a minor revision. The main changes are:

- updated normative references in [Clause 2](#);
- notes added to [Clause 4](#) re requirements for mixer verified;
- an alternative coarse aggregates size added to [5.2](#);
- notes added to [Figure 3](#);
- mesh screen/coarse aggregate modified size in [5.4.1.1 d](#)), [Figure 7](#), [5.4.1.3](#), [Tables 1](#) and [4](#);
- corrected intersections on regression curves in [Figure 8](#).

ISO 18650 consists of the following parts, under the general title *Building construction machinery and equipment — Concrete mixers*:

- *Part 1: Vocabulary and general specifications*
- *Part 2: Procedure for examination of mixing efficiency*

Introduction

This part of ISO 18650 deals with the testing of the mixing capabilities of concrete mixers, characterized as the recommended mixing time.

The test consists of the determination of the variance of the mortar, coarse aggregate and air content, and the consistency of concrete mix samples, drawn after an assumed mixing time.

Compressive strength is also tested.

The measure of a concrete mixer's efficiency is the value of the variance of the above parameters, after the assumed mixing time.

This part of ISO 18650 provides for the preparation of concrete mix, sampling, execution of particular tests, criteria of test result evaluation and the test report.

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Building construction machinery and equipment — Concrete mixers —

Part 2: Procedure for examination of mixing efficiency

1 Scope

This part of ISO 18650 specifies the procedure and requirements for examination of the mixing efficiency of batch-type and continuous-type concrete mixers as defined in ISO 18650-1. It is applicable to concrete mixers having a rated capacity greater than or equal to 70/50.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1920-1, *Testing of concrete — Part 1: Sampling of fresh concrete*

ISO 1920-2, *Testing of concrete — Part 2: Properties of fresh concrete*

ISO 1920-3, *Testing of concrete — Part 3: Making and curing test specimens*

ISO 1920-4, *Testing of concrete — Part 4: Strength of hardened concrete*

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 6783, *Coarse aggregates for concrete — Determination of particle density and water absorption — Hydrostatic balance method*

ISO 7033, *Fine and coarse aggregates for concrete — Determination of the particle mass-per-volume and water absorption — Pycnometer method*

ISO 11375, *Building construction machinery and equipment — Terms and definitions*

ISO 18650-1, *Building construction machinery and equipment — Concrete mixers — Part 1: Vocabulary and general specifications*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18650-1 and ISO 11375 apply.

4 Requirements for mixer verified

The design and execution of the whole structure of the mixer and its components, such as the mixing chamber (drum, pan, or trough), rotor with blades or paddle agitator(s), their directions of rotation, charging and discharging devices (if any), should be verified according to the manufacturer's instructions.

It shall be determined that the number of revolutions per minute of a drum or mixing tools conforms to the manufacturer's specification.