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

**Part 1:  
Commercial specifications**

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

*Partie 1: Spécifications commerciales*

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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 (see [www.iso.org/directives](http://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 (see [www.iso.org/patents](http://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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee 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 18650-1:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

- added definition for "self-loading mobile concrete mixer" in [3.1.3.4](#) and also added reference to [Figures A.23](#) and [A.24](#);
- added commercial specifications for discharging-chute concrete mixer in [5.3.4](#) and self-loading mobile concrete mixer in [5.3.8](#);
- added [Figures A.17](#) to [A.22](#) for clarification of classification.

A list of all parts in the ISO 18650 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Building construction machinery and equipment — Concrete mixers —

## Part 1: Commercial specifications

### 1 Scope

This document establishes the content for commercial literature for concrete mixers used either as individual machines on building sites or as components of batching plants.

Definitions refer to whole machines, their structure and parameters.

The commercial specifications establish technical characteristics of the whole machines and their components.

Truck mixers, as defined in ISO 19711-1, are excluded from this document.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1

##### **concrete mixer**

machine designed for the production of concrete by mixing of measured (by mass or volume) proportions of water, cement, aggregate and possibly chemical additives, within a certain time limit

Note 1 to entry: A concrete mixer can be furnished with the following accessories: charging skip hoist, fixed or wheeled, or self-propelled supporting frame, mechanical shovel, water dosing equipment, and a skip weighing system.

##### 3.1.1

##### **batch-type concrete mixer**

*concrete mixer* (3.1) in which charging with concrete constituents and discharging of the drum are carried out periodically, in batches

##### 3.1.2

##### **continuous-type concrete mixer**

*concrete mixer* (3.1) in which charging with concrete constituents and discharging of the drum are carried out continuously as an uninterrupted flow

Note 1 to entry: See [Figures A.15](#) and [A.16](#) for examples.

### 3.1.3

#### **gravity concrete mixer** **free-fall concrete mixer**

*concrete mixer* (3.1) where mixing is performed by repeatedly elevating the mixed concrete and dropping it from a certain height, inside a mixing drum, during its rotation

#### 3.1.3.1

##### **reversing-drum concrete mixer**

reversing concrete mixer

*gravity concrete mixer* (3.1.3) with a reversible direction of rotation of the mixing drum where discharge of mixed concrete is by reversing the rotation of the drum

Note 1 to entry: See [Figures A.4](#) and [A.5](#) for examples.

#### 3.1.3.2

##### **tipping-drum concrete mixer**

*free-fall concrete mixer* (3.1.3) with a tipping mixing drum, open at one end for charging and discharging of the concrete mix where discharging is carried out by tilting the drum

Note 1 to entry: See [Figures A.1](#), [A.2](#) and [A.3](#) for examples.

#### 3.1.3.3

##### **discharging-chute concrete mixer**

*free-fall concrete mixer* (3.1.3) with a mixing drum open at both sides where charging is carried out from one side and discharging from the other by means of a chute entering the drum

Note 1 to entry: See [Figure A.17](#) for an example.

#### 3.1.3.4

##### **self-loading mobile concrete mixer**

*gravity concrete mixer* (3.1.3) with a reversible direction of rotation of the mixing drum where discharge of mixed concrete is by reversing the rotation of the drum, integrated into a self-propelled frame equipped with a self-loading attachment intended to use for a complete production and batching of concrete, including transportation on road and off-road to reach the pouring site

Note 1 to entry: See [Figures A.23](#) and [A.24](#) for examples.

### 3.1.4

#### **compulsory concrete mixer**

*concrete mixer* (3.1) with mixing effected by the action of one or more agitators moving inside a mixing chamber with either a vertical axis (pan) or horizontal axis (trough)

Note 1 to entry: See [Figure A.18](#) for an example.

#### 3.1.4.1

##### **pan-type concrete mixer**

*compulsory concrete mixer* (3.1.4) with agitators rotating about the vertical axis of a stationary or rotating pan

#### 3.1.4.2

##### **turbo concrete mixer**

*compulsory concrete mixer* (3.1.4) with an agitator rotating about the vertical axis of a stationary pan, charged from the top and discharged by opening a segment of the pan bottom

Note 1 to entry: See [Figures A.6](#), [A.7](#) and [A.8](#) for examples.