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Building construction machinery and equipment — Truck mixers —

Part 1: Terminology and commercial specifications

Machines et matériels pour la construction des bâtiments — Camions malaxeurs —

Partie 1: Terminologie et spécifications commerciales

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Foreword

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This document was prepared by Technical Committee ISO/TC 195, *Building construction machinery and equipment*, Subcommittee SC 1, *Machinery and equipment for concrete work*.

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Introduction

Truck mixers are used for producing concrete or mortar and for delivering concrete, mortar or the materials of the mixture to worksites.

Examples of truck mixer structures covered by this document can be found in Annex A.

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Building construction machinery and equipment — Truck mixers —

Part 1: Terminology and commercial specifications

1 Scope

This document defines terms and commercial specifications for truck mixers used for producing concrete or mortar and for delivering concrete, mortar or the materials of the mixture to worksites.

This document is applicable to truck mixers that are either

a) truck mounted, or

b) semi-trailer mounted.

This document does not apply to

— fixed (stationary) mixers (see ISO 18650-1);

— turbo mixers (see ISO 18650-1);

— concrete or mortar mixing plants (see ISO 19720-1);

— small portable mixers (see ISO 18650-1);

— purpose-built underground truck mixers;

— volumetric mixers (mobile concrete or mortar mixing plants).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1176:1990, *Road vehicles — Masses — Vocabulary and codes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1176 and the following apply.

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

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3.1
truck mixer
drum-shaped *mixer device* (3.2) mounted on a chassis capable of producing the *mixture* (3.20) and delivering the *mixture* (3.20) or the materials of the *mixture* (3.20) to worksites

Note 1 to entry: The materials of the *mixture* (3.20) that can be delivered by a truck mixer include cement, aggregate (sand, gravel, stone) and rock before processing.

3.1.1
rear discharge type truck mixer
truck mixer (3.1) where the *discharge device* (3.11) unloads the *mixture* (3.20) at the rear of the truck

Note 1 to entry: See Annex A, Figures A.1 and A.2.

3.1.2
front discharge type truck mixer
truck mixer (3.1) where the *discharge device* (3.11) unloads the *mixture* (3.20) at the front of the truck

Note 1 to entry: See Annex A, Figure A.3.

3.1.3
semi-trailer mounted mixer
drum-shaped *truck mixer* (3.1) where the *mixer device* (3.2) is mounted on a semi-trailer chassis

Note 1 to entry: See Annex A, Figure A.4.

3.2
mixer device
upper portion of *truck mixer* (3.1) (excluding the chassis) which is typically composed of a *drum* (3.3), *basic frame* (3.8), *drum drive* (3.12), *roller pedestal* (3.6), *drive pedestal* (3.7), *charge device* (3.10), *discharge device* (3.11) and *control device* (3.13)

3.3
drum
vessel for *mixing* (3.19), *agitating* (3.17) and discharging concrete or mortar

3.4
drum fin
spiral-shaped projection fitted inside the *drum* (3.3) that mixes, agitates and directs the *mixture* (3.20) out of the *drum* (3.3) for discharge

3.5
manhole
hatch
access opening at the surface of the *drum* (3.3) which is fitted with a cover to allow the passage of authorized personnel for inspection and maintenance purposes

3.6
roller pedestal
support structure for the *drum* (3.3) at its open side where a *charge device* (3.10) and a *discharge device* (3.11) are fitted

3.7
drive pedestal
support structure for the *drum* (3.3) at its closed side where the *drum drive* (3.12) is fitted

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3.8
basic frame
structure connecting the *roller pedestal* (3.6) and the *drive pedestal* (3.7) for attachment of the *mixer device* (3.2) to the chassis

Note 1 to entry: Certain types of *truck mixers* (3.1) are without a basic frame as the *roller pedestal* (3.6) and the *drive pedestal* (3.7) of the *mixer device* (3.2) are directly fixed to the truck chassis.

Note 2 to entry: See Annex A, Figure A.2.

3.9
working platform
level surface on the *truck mixer* (3.1) for drum cleaning, maintenance and inspection

3.10
charge device
receptacle (e.g., hopper) that takes in the charged *mixture* (3.20) transitorily and charges it to the *drum* (3.3)

3.11
discharge device
components [specifically the *discharge hopper* (3.11.1) and *chute system* (3.11.2)] which receives and distributes the discharged *mixture* (3.20)

3.11.1
discharge hopper
receptacle that receives the discharged *mixture* (3.20) from the *drum* (3.3)

3.11.2
chute system
device(s) used to distribute the discharged *mixture* (3.20) to a desired location

Note 1 to entry: Components in a chute system typically can include a *swivel chute* (3.11.2.1) with *chute lock* (3.11.2.4), *flip-over chute* (3.11.2.2) and *extension chute(s)* (3.11.2.3).

3.11.2.1
swivel chute
conduit that can rotate and adjust vertically and swivel horizontally to deliver the discharged material to a desired location

Note 1 to entry: See Annex B, Figure B.1.

3.11.2.2
flip-over chute
folded *extension chute* (3.11.2.3) which is attached to the end of the *swivel chute* (3.11.2.1)

3.11.2.3
extension chute
conduit which is attached to the end of the *swivel chute* (3.11.2.1) to deliver the *mixture* (3.20) to a desired distance

Note 1 to entry: Chute system can include storage location for extension chute(s).

3.11.2.4
chute lock
locking device capable of keeping the *swivel chute* (3.11.2.1) from unintended rotation

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3.12
drum drive
energy transmission device for the rotation of the *drum* (3.3)

Note 1 to entry: This energy can be supplied by for example the truck engine PTO, a separate auxiliary engine, or an electrical drive.

3.13
control device
elements for the control of the *drum drive* (3.12)

Note 1 to entry: The control device is typically situated either in the cabin on the *front discharge type truck mixer* (3.1.2) or at the rear side of the *drum* (3.3) on the *rear discharge type truck mixer* (3.1.1).

3.14
water system
water delivery system used for cleaning the *truck mixer* (3.1)

Note 1 to entry: Components in the water system typically include water tank, pipes, hoses, valves and water pump.

Note 2 to entry: The water system can also be used to add water to the *mixture* (3.20) on the construction site.

3.15
rated drum capacity
maximum volume of *mixture* (3.20) the *truck mixer* (3.1) is designed for

Note 1 to entry: See Figure 1.

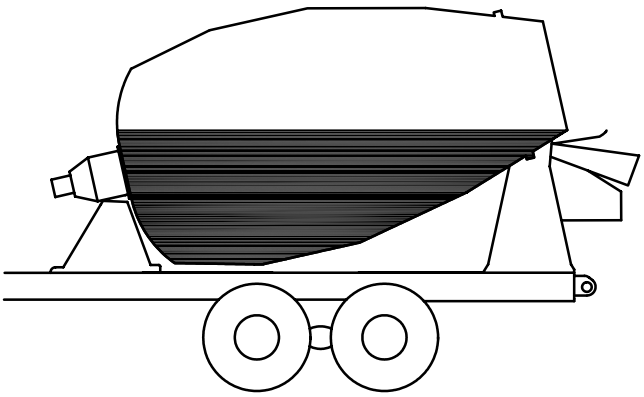


Figure 1 — Example for rated drum capacity

3.16
rated agitating capacity
maximum volume of *mixture* (3.20) that the *mixer device* (3.2) can slowly rotate without spillage

Note 1 to entry: See Figure 2.

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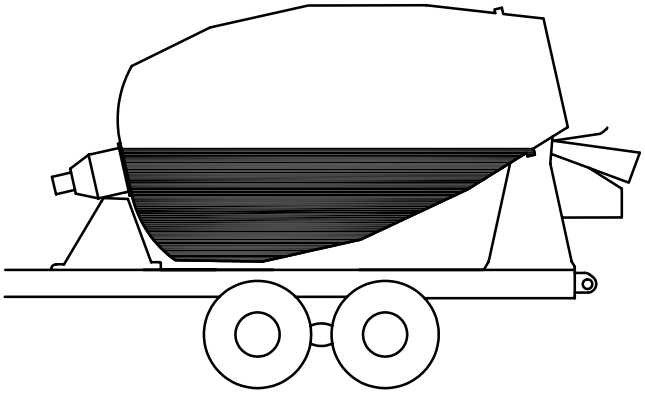


Figure 2 — Example for rated agitating capacity

3.17
agitating
rotating of the *mixer device* (3.2) slowly to maintain *mixture* (3.20) uniformity

3.18
rated mixing capacity
maximum volume of materials that the *mixer device* (3.2) can rotate without spillage at maximum rpm

Note 1 to entry: See Figure 3.

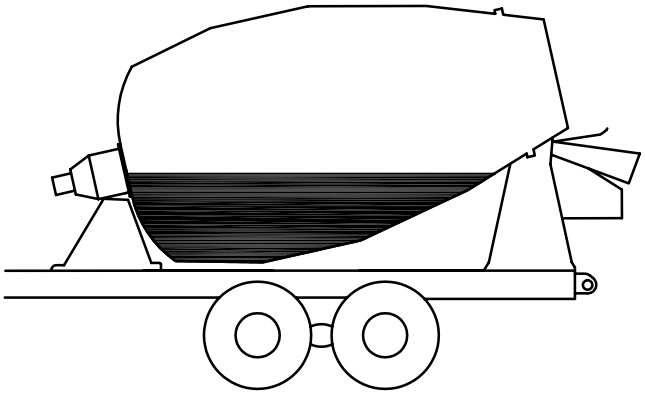


Figure 3 — Example for rated mixing capacity

3.19
mixing
rotating of the *mixer device* (3.2) to produce the *mixture* (3.20)

3.20
mixture
homogeneously mixed concrete or mortar

4 Commercial specifications

4.1 Specifications and dimensions of truck mixers

The following data shall be presented:

a) mixer type

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