International Standard

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Industrial trucks — Fork arm extensions and telescopic fork arms — Technical characteristics and strength requirements

Chariots de manutention — Extensions de bras de fourche et bras de fourche télescopiques — Caractéristiques techniques et prescriptions de résistance

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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 document 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).

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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.

This document was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*.

This third edition cancels and replaces the second edition (ISO 13284:2022), which has been technically revised.

The main changes are as follows:

— the lateral clearance for fork extensions has been changed to include upper and lower limits.

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.

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Introduction

This document was developed in response to worldwide demand for specifications for fork arm extensions and telescopic fork arms.

Fork arm extensions are used as a temporary means of extending the effective blade length of fork arms on industrial trucks. They are available with either a closed rectangular cross-section or an open inverted-channel cross-section.

Whenever possible, longer forks should be used instead of fork arm extensions.

Telescopic fork arms replace standard fork arms and provide the truck operator with the means of adjusting the fork arm blade length. They are available either as simple variable-length fork arms for handling loads of varying dimensions or for reaching out or retracting palletized loads in double-deep stacking and de-stacking operations.

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Industrial trucks — Fork arm extensions and telescopic fork arms — Technical characteristics and strength requirements

1 Scope

This document specifies technical characteristics and strength requirements for fork arm extensions and telescopic fork arms (as defined in ISO 5053-2) for industrial trucks (as defined in ISO 5053-1). It applies to fork arm extensions and telescopic fork arms that are designed for use on industrial trucks that have fork arm carriers and, in the case of fork arm extensions, fork arms that conform to ISO 2330.

This document does not apply to integral transverse telescopic fork devices or scissor-action reach devices.

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 3691-1, *Industrial trucks — Safety requirements and verification — Part 1: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks*

ISO 3691-2, *Industrial trucks — Safety requirements and verification — Part 2: Self-propelled variable-reach trucks*

ISO 2330:2002, *Fork-lift trucks — Fork arms — Technical characteristics and testing*

3 Terms and definitions

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

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

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

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

3.1
parent fork arm
fork arm having the rated capacity at the rated load centre distance, blade length and blade cross-section for which a fork arm extension is specifically designed

3.2
test load
test/design load for each open-section and closed-section extension, F_{EX}, and test/design load for each telescopic fork arm, F_T, applied load for verifying the strength of fork arm extension and telescopic fork arms, respectively, by physical testing or calculation

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