

TECHNICAL ISO/TR

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Comparison of worldwide lift safety standards —

Part 2: Hydraulic lifts (elevators)

*Comparaison des normes mondiales de sécurité des ascenseurs —
Partie 2: Ascenseurs hydrauliques*



Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

ISO/TR 11071-2 was prepared by Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

This second edition cancels and replaces the first edition (ISO/TR 11071-2:1996), and amendment 1 (ISO/TR 11071-2:1996/Amd. 1:1999), which have been technically revised.

ISO/TR 11071 consists of the following parts, under the general title *Comparison of worldwide lift safety standards*:

- *Part 1: Electric lifts (elevators)*
- *Part 2: Hydraulic lifts (elevators)*

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Introduction

Introduction to 1996 edition

At the 1981 plenary meeting of ISO/TC 178, work was started on a comparison of CEN standard EN 81/1 with the American, Canadian, and USSR lift safety standards. In 1983, Working Group 4 was officially formed to carry out the task of preparing cross reference between the relevant sections of these standards and to analyze the differences on selected subjects. The goal at that time was to prepare a technical report which would provide reference information to assist national committees when reviewing and revising individual standards which may initiate a gradual convergence of the technical requirements. In 1984, the study was expanded to include the Council for Mutual Economic Assistance (CMEA) safety standard. That report, ISO/TR 11071-1, *Comparison of worldwide lift safety standards — Part 1: Electric lifts (elevators)*, was published 1990-12-01.

In 1989, the charge to WG 4 was expanded to include hydraulic lifts. Since there was no standard for hydraulic lifts in the Russian Federation, and the CMEA standard was being phased out of use, this Part 2 of the comparison is generally limited to the ASME, CEN, and CSA standards. The Japan Elevator Association was invited to add their standards to this comparison, however, no response to this request was received.

This report is intended to aid standards writers in developing their safety requirements, and to help standard users understand the basis for the requirements as they are applied throughout the world.

This report is not intended to replace existing safety standards. Conclusions are arrived at in some cases, but only where there is unanimity amongst the various experts. In other cases, the reasons for the divergent views are expressed.

This report must be read in conjunction with the various safety standards, as it was often necessary to summarize the requirements for the sake of clarifying the comparisons. Further, the information contained in this report does not necessarily represent the opinions of the standards writing organizations responsible for the development of the safety standards which are being compared, and they should be consulted regarding interpretations of their requirements (see Annex B).

Introduction to this edition

After the original publication (1996) of this technical report, including American, Canadian and European data and thereto Supplement 1 (1999-08-01), which added Australian and Japanese data, has been revised or amended. The recommendations in the form of "agreed upon points" stated in the first edition have also affected the revisions of the national standards.

The original report and amendment have been widely used by lift industry and standards writing organizations, including the ISO Technical Committee 178. Users have expressed need for an updated and consolidated version of the document, in particular the comparison tabulations. With the Resolution 208/2002, the ISO/TC 178 requested WG4 to consolidate original publications, including Supplements and "to update comparison tables in ISO/TR 11071 with data from the most recently published standards for lifts and to republish both documents, Part 1 and Part 2 with updated tables and with minimum changes to the narrative sections".

The narrative sections of the original publication, in particular assumptions, historical backgrounds, observations and suggestions as well as the points agreed upon were the result of extensive work of the ISO/TC 178 Working group 4. ISO/TC 178 is currently working on a new series of ISO documents under the general title *Safety requirements for lifts (elevators)*. In that process the updated comparison tables are being used as reference. Extensive work on complete re-write of the narrative sections was not deemed necessary. However, republication of the text with only minor editorial changes would help readers to understand the background to the safety concerns being addressed in the current national standards. However, because of

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recent (2000) harmonization of ASME and CSA Codes, it was necessary to replace the quoted rule numbers with those in the current Codes. In most sentences the ASME and CSA. In some other cases quoted references are updated in a NOTE following the narrative section or sentence.

All quoted requirements referenced in all tables (CEN, ASME/CSA, Japan and SA) are up to date.