

# INTERNATIONAL STANDARD

# ISO 4344

Second edition  
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## Steel wire ropes for lifts — Minimum requirements

*Câbles en acier pour ascenseurs — Exigences minimales*



Reference number  
ISO 4344:2004(E)

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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.

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.

ISO 4344 was prepared by Technical Committee ISO/TC 105, *Steel wire ropes*.

This second edition cancels and replaces the first edition (ISO 4344:1983), which has been technically revised.

## Introduction

This International Standard was developed in response to a worldwide demand for a specification giving minimum requirements for ropes for use on lifts.

As in previous editions of the standard, metric sizes and grades of rope are covered. Additionally, due to widespread application world-wide, information is given in this edition on imperial sizes and grades for comparison and to assist in ensuring that existing levels of safety can be maintained when ropes are selected. It is desirable in such cases that the equipment designer, rope manufacturer or other competent person be consulted prior to ordering a rope.

This International Standard does not limit itself to those classes and constructions covered by the tables. Other stranded rope constructions may also conform to the minimum requirements, and in such cases the manufacturer would specify the minimum breaking force and rope grade.

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# Steel wire ropes for lifts — Minimum requirements

## 1 Scope

This International Standard specifies the minimum requirements for the manufacture and testing of stranded carbon steel wire ropes used for suspension duty on traction drive and roped hydraulic lifts, and for compensation and governor duties on passenger and freight lifts, dumbwaiters, personnel hoists and man lifts moving between guides. It gives the minimum breaking forces for the more common sizes, rope grades and rope classes and constructions.

It is applicable to ropes made from bright and galvanized wire finish in various constructions from 6 mm to 38 mm diameter supplied as bulk manufacture and manufactured after its publication date. It is not applicable to ropes for builder's hoists and temporary hoists not running between permanent guides — whether passenger-carrying or not — or to ropes for cableways.

## 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 2232, *Round drawn wire for general purpose non-alloy steel wire ropes and for large diameter steel wire ropes — Specifications*

ISO 3108, *Steel wire ropes for general purposes — Determination of actual breaking load*

ISO 4101, *Drawn steel wire for elevator ropes — Specifications*

ISO 4345:1988, *Steel wire ropes — Fibre main cores — Specification*

ISO 4346, *Steel wire ropes for general purposes — Lubricants — Basic requirements*

ISO 17893<sup>1)</sup>, *Steel wire ropes — Vocabulary, designations and classifications*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17893 and the following apply.

### 3.1

#### single tensile rope

rope with outer strands having outer wires of the same tensile strength grade as the inner wires

EXAMPLE 1 570 N/mm<sup>2</sup> throughout the rope.

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1) To be published.