



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 25684.12-2021**

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**Earth-moving machinery - Safety - Part 12: Requirements for  
cable excavators**

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### foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is Part 12 of GB/T 25684 "Earth-moving Machinery Safety": GB/T 25684 has released the following parts:

- Part 1: General requirements;
- Part 2: Requirements for bulldozers;
- Part 3: Requirements for loaders;
- Part 4: Requirements for backhoe loaders;
- Part 5: Requirements for hydraulic excavators;
- Part 6: Requirements for dump trucks;
- Part 7: Requirements for scrapers;
- Part 8: Requirements for motor graders;
- Part 9: Requirements for pipelayers;
- Part 10: Requirements for trenchers;
- Part 11: Requirements for backfill compactors;
- Part 12: Requirements for mechanical excavators;
- Part 13: Requirements for road rollers;

This document replaces GB 25684:12-2010 "Earth-moving Machinery Safety Part 12: Requirements for Mechanical Excavators": and

Compared with GB 25684:12-2010, in addition to structural adjustment and editorial changes, the main technical changes are as follows:

- a) Changed the scope of the standard (see Chapter 1, Chapter 1 of the:2010 edition);
- b) Added some terms and definitions (see 3:4~3:9);
- c) delete the channel requirements (see 4:2 of the:2010 edition);
- d) Deleted the requirement for driver seat vibration (see 4:3:4 of the:2010 edition);
- e) Changed the content of terms and definitions in Appendix A (see Appendix A, Appendix A of the:2010 edition);
- f) Changed the content of the legend in Appendix B (see Appendix B, Appendix B of the:2010 edition);
- g) Deleted Appendix C (see Appendix C of the:2010 edition):

This document is revised and adopted ISO 20474-12:2017 "Earth-moving machinery safety - Part 12: Requirements for mechanical excavators":

The technical differences between this document and ISO 20474-12:2017 and their reasons are as follows:

- Delete EN791:1995 in Chapter 2, because EN791:1995 has been abolished;
- Deleted "Tilt line determined according to 5:5 of EN791:1995" in 4:8:1, this clause does not affect the use of the standard:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

## Introduction

This document is a Type C standard defined by ISO 12100:

The scope of this document describes the machinery involved and the scope of the hazards, hazardous states or hazardous events involved:

Since the design and manufacture of the machine follow the requirements of Class C standards, when the requirements of Class C standards are different from those of Class A or Class B standards

At the same time, the requirements of Class C standards take precedence over other standards:

GB/T 25684 "Earth-moving Machinery Safety" is a basic and universal guideline for guiding my country's earth-moving machinery products to meet relevant safety requirements:

standard: GB/T 25684 aims to establish general safety requirements applicable to earth-moving machinery products and special safety requirements for specific machine families

requirements, it is proposed to be composed of 14 parts:

--- Part 1: General requirements: The purpose is to establish general safety requirements applicable to all machine types in the earthmoving machinery industry:

The foundational standard for a full range of standards:

--- Part 2: Requirements for bulldozers: The purpose is to propose specific products that meet the unique characteristics of bulldozer products:

Security Requirements Clause:

--- Part 3: Requirements for loaders: The purpose is to propose specific products that meet the characteristics of their own products according to the unique characteristics of loader products:

Security Requirements Clause:

--- Part 4: Requirements for backhoe loaders: The purpose is to propose a product that meets the unique characteristics of backhoe loader products:

Point-specific security requirements clause:

--- Part 5: Requirements for hydraulic excavators: The purpose is to put forward the unique characteristics of hydraulic excavator products that meet the characteristics of their own products:

Point-specific security requirements clause:

--- Part 6: Requirements for dump trucks: The purpose is to propose specific products that meet the unique characteristics of dump truck products:

Security Requirements Clause:

--- Part 7: Requirements for scrapers: The purpose is to propose specific products that meet the characteristics of their own products according to the unique characteristics of scraper products:

Security Requirements Clause:

--- Part 8: Motor grader requirements: The purpose is to propose specific products that meet the unique characteristics of motor graders:

Security Requirements Clause:

--- Part 9: Requirements for pipelayers: The purpose is to propose specific products that meet the unique characteristics of the pipelayer products:

Security Requirements Clause:

--- Part 10: Requirements for trenchers: The purpose is to propose special features that

conform to the characteristics of the trencher products according to the unique characteristics of the trencher products:

Security requirements clauses:

--- Part 11: Requirements for backfill compactors: The purpose is to propose products that meet the unique characteristics of backfill compactor products:

Features specific security requirements clause:

--- Part 12: Requirements for mechanical excavators: The purpose is to propose products that meet the unique characteristics of mechanical excavators:

Features specific security requirements clause:

--- Part 13: Requirements for road rollers: The purpose is to propose special characteristics that meet the characteristics of the rollers according to the unique characteristics of the road roller products:

Security requirements clauses:

--- Part 14: Requirements for small implement carriers: The purpose is to put forward a proposal to meet the unique characteristics of small implement carrying machine products:

Specific safety requirements clauses for their own product features:

The safety requirements of Part 2 to Part 14 are used in conjunction with the general requirements of Part 1 to better meet the use requirements:

Earthmoving Machinery Safety

Part 12: Requirements for mechanical excavators

## 1 Scope

This document specifies the safety requirements for mechanical excavators and specifies the conditions for reasonable misoperation of earth-moving machinery in the manufacturer's designated purpose or foreseen:

When applied under conditions, all major hazards, hazardous states and hazardous events related to it (see Appendix A of GB/T 25684:1-2021); and regulations

It defines technical measures to eliminate or reduce the risks caused by major hazards, dangerous states or dangerous events in use, operation and maintenance:

This document is used in conjunction with GB/T 25684:1 (specifying general safety requirements for two or more families of earth-moving machinery): of this document

Specific requirements take precedence over the general requirements of GB/T 25684:1:

If it is expected to work with other work equipment or attachments such as drilling rigs,