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**Hand-held non-electric power tools —  
Safety requirements —**

Part 6:  
**Assembly power tools for threaded  
fasteners**

*Machines portatives à moteur non électrique — Exigences de sécurité —  
Partie 6: Machines d'assemblage pour éléments de fixation filetés*



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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 11148-6 was prepared by Technical Committee ISO/TC 118, *Compressors and pneumatic tools, machines and equipment*, Subcommittee SC 3, *Pneumatic tools and machines*.

This second edition cancels and replaces the first edition (ISO 11148-6:2010), of which it constitutes a minor revision.

ISO 11148 consists of the following parts, under the general title *Hand-held non-electric power tools — Safety requirements*:

- *Part 1: Assembly power tools for non-threaded mechanical fasteners*
- *Part 2: Cutting-off and crimping power tools*
- *Part 3: Drills and tappers*
- *Part 4: Non-rotary percussive power tools*
- *Part 5: Rotary percussive drills*
- *Part 6: Assembly power tools for threaded fasteners*
- *Part 7: Grinders*
- *Part 8: Sanders and polishers*
- *Part 9: Die grinders*
- *Part 10: Compression power tools*
- *Part 11: Nibblers and shears*
- *Part 12: Circular, oscillating and reciprocating saws*

A part 13, dealing with fastener driving tools, is under preparation.

## Introduction

This document is a type C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are defined in the Scope of this part of ISO 11148.

When provisions of this type C standard are different from those that are stated in type A or B standards, the requirements of this type C standard take precedence over the requirements of other standards for machines that have been designed and built according to the requirements of this type C standard.

ISO 11148 consists of a number of independent parts for individual types of hand-held, non-electric power tools.

Certain elements of this part of ISO 11148 cover hand-held, non-electric power tools driven by internal combustion engines powered by gaseous or liquid fuel. In these parts, the safety aspects relating to internal combustion engines are found in a normative annex.

The parts are type C standards and refer to pertinent standards of types A and B where such standards are applicable.



# Hand-held non-electric power tools — Safety requirements —

## Part 6:

### Assembly power tools for threaded fasteners

**IMPORTANT** — The electronic file of this document contains colours that are considered useful for the correct understanding of the document. Users should consider printing this document using a colour printer. ISO 3864-4 provides colourimetric and photometric properties together with, as a guideline, references from colour order systems.

#### 1 Scope

This part of ISO 11148 applies to hand-held non-electric power tools (hereinafter “assembly power tools for threaded fasteners”) intended for tightening or installing of threaded fasteners. The assembly power tools for threaded fasteners can be powered by compressed air, hydraulic fluid or internal combustion engines and are intended for use by one operator and supported by the operator’s hand or hands, with or without a suspension, e.g. a balancer.

This part of ISO 11148 covers

- air-hydraulic impulse wrenches;
- impact wrenches;
- fastener installation tools;
- nutrunners;
- open-ended spanners (crow-foot with open-ended socket or tube nut wrench);
- ratchet wrenches;
- screwdrivers.

NOTE 1 For examples of assembly power tools for threaded fasteners, see Annex B.

This part of ISO 11148 does not cover special requirements and modifications of assembly power tools for threaded fasteners for the purpose of mounting them in fixtures.

This part of ISO 11148 deals with all significant hazards, hazardous situations or hazardous events when the tools are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer, with the exception of the use of assembly power tools for threaded fasteners in potentially explosive atmospheres.

NOTE 2 EN 13463-1 gives requirements for non-electrical equipment for potentially explosive atmospheres.

#### 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 3857-3, *Compressors, pneumatic tools and machines — Vocabulary — Part 3: Pneumatic tools and machines*

ISO 3864-2, *Graphical symbols — Safety colours and safety signs — Part 2: Design principles for product safety labels*