
**Internal combustion engines — Piston
rings — Scraper rings made of cast iron**

*Moteurs à combustion interne — Segments de piston — Segments
racleurs mixtes en fonte moulée*



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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 documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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The committee responsible for this document is ISO/TC 22, *Road vehicles*.

This third edition cancels and replaces the second edition (ISO 6623:2004), of which it constitutes a minor revision.

Introduction

ISO 6623 is one of a number of series of International Standards dealing with piston rings for reciprocating internal combustion engines. Others are ISO 6621, [2] [3] [4] [5] ISO 6622, [6] [7] ISO 6624, [8] [9] [10] [11] ISO 6625, [12] ISO 6626, [13] [14] [15] and ISO 6627 [16] (see Bibliography for details).

Internal combustion engines — Piston rings — Scraper rings made of cast iron

1 Scope

This International Standard specifies the essential dimensional features of scraper rings made of cast iron, types N, NM, E, and EM, having diameters from 30 mm up to and including 200 mm, used in reciprocating internal combustion engines for road vehicles and other applications.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6621-4, *Internal combustion engines — Piston rings — Part 4: General specifications*

3 Overview

The scraper ring types are specified in [Tables 1](#) and [2](#) and [Figures 1](#) to [5](#). Their common features and the dimensions of those features are specified in [Tables 3](#) to [5](#) and [Figures 6](#) to [9](#). [Tables 6](#) and [7](#) give the force factors for the different ring types, while [Tables 8](#) and [9](#) give the dimensions and forces of the scraper rings.

[Tables 8](#) and [9](#), respectively, offer a choice between the following two radial wall thicknesses:

- radial wall thickness “regular”;
- radial wall thickness “D/22”.

The common features and dimensional tables presented in this International Standard constitute a broad range of variables and the designer, in selecting a particular ring type, shall bear in mind the conditions under which it will be required to operate.

It is also essential that the designer refer to the specifications and requirements of ISO 6621-3^[4] and ISO 6621-4 before completing his/her selection.

4 Ring types and designation examples

4.1 Types N, NM, E, and EM scraper rings — General features

The general features of types N, NM, E, and EM scraper rings are shown in [Figure 1](#).

NOTE See [Tables 8](#) and [9](#) for dimensions and forces.