

*For comments only*

---

*भारतीय मानक मसौदा*

आंतरिक दहन इंजन — पिस्टन रिंग — भाग 1: ढलवां लोहे से बने आयताकार रिंग

*Draft Indian Standard*

**Internal Combustion Engines — Piston Rings — Part 1: Rectangular Rings  
Made of Cast Iron**

ICS: 43.060.10

---

Not to be reproduced without permission of BIS  
comments or used as standard

Last date for receipt of  
is 18/03/2024

---

Automotive Prime Movers, Transmission Systems and Internal Combustion Engine Sectional Committee, TED 02

## NATIONAL FOREWORD

This draft Indian Standard (*First Revision*) which is identical with ISO 6622-1: 2021 ‘Internal Combustion Engines — Piston Rings — Part 1: Rectangular Rings Made of Cast Iron’ issued by International Organization for Standardization (ISO), will be adopted by the Bureau of Indian Standards on the recommendations of Automotive Prime movers, Transmission Systems and Internal Combustion Engine Sectional Committee and approval of the Transport Engineering Division Council.

Once published, this draft standard along with Doc. TED 02 (24549){adoption of ISO 6622-2: 2013 (*Internal Combustion Engines — Piston Rings — Part 2: Rectangular Rings Made of Steel*)}, will supersede IS 8422 (Part 1): 1977 ‘*Specification for piston rings for IC engines: Part 1 plain compression rings from 30 up to 200 mm nominal diameter R - Rings*’ and IS 8422 (Part 2): 1977 ‘*Specification for piston rings for IC engines: Part 2 taper faced compression rings from 30 up to 200 mm nominal diameter M - Rings*’.

The text of ISO standard is proposed for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard / Document No. of Draft Under Development</i>	<i>Degree of Equivalence</i>
ISO 6621-1 Internal Combustion Engines — Piston Rings — Part 1: Vocabulary	IS/ISO 6621-1: 2018 / ISO 6621: Part 1  Internal Combustion Engines — Piston Rings Part 1 Vocabulary (First Revision)	Identical under single numbering
ISO 6621-4 Internal Combustion Engines — Piston Rings —	TED/02/24507*  Internal Combustion Engines Piston Rings Part 4: General	Identical under dual numbering

Part 4: Specifications	General	Specifications	
---------------------------	---------	----------------	--

*\*Draft Under Development*

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The Bureau of Indian Standards shall not be held responsible for identifying any or all such patent rights.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off it shall be done in accordance with IS 2: 2022 'Rules for rounding off numerical values (*Second revision*)'.

## **INTRODUCTION**

The ISO 6622 series is one of a number of series of International Standards dealing with piston rings for reciprocating internal combustion engines. Others are ISO 6621, ISO 6623, ISO 6624, ISO 6625, ISO 6626 and ISO 6627.

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

It is also important that the designer refers to the specifications and requirements of ISO 6621-3 and ISO 6621-4 before completing selection.

## **SCOPE**

This document specifies the essential dimensional features of rectangular rings made of cast iron, Types R, B, BA and M, having diameters up to and including 200 mm, used in reciprocating internal combustion piston engines. It is also applicable to piston rings of compressors working under similar conditions.

**FOR COMPLETE TEXT OF THE DOCUMENT KINDLY REFER ISO 6622-1: 2021 or CONTACT:**

P. V. Srikanth  
Scientist- D & Head  
Transport Engineering Department  
Bureau of Indian Standards  
9 Bahadur Shah Zafar Marg  
New Delhi 110 002  
Email: [ted@bis.org.in](mailto:ted@bis.org.in), [hted@bis.org.in](mailto:hted@bis.org.in)  
Telefax: 011- 2323 6311