

ICS 27.020
CCS J 92



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

GB/T 1149.9-2008

Replacing GB/T 14223-1993

**Internal combustion engines -- Piston rings -- Part 9: Keystone
rings made of cast iron**

内燃机 活塞环 第9部分：梯形铸铁环

(English Translation)

Issued on: August 11, 2008

Implemented on: February 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Preface
1 Scope
2 Normative references
3 1 Overview
4 Types and tag example
5 General features
6 Modulus of elasticity
7 Specifications
References

Foreword

GB/T 1149 "Piston Ring" for the series of standards, divided into sixteen sections.

- Part 1. General rules;
- Part 2. Terminology;
- Part 3. Material specifications;
- Part 4. Quality requirements;
- Part 5. Test methods;
- Part 6. Cast wiper;
- Part 7. rectangular cast iron ring;
- Part 8. rectangular steel ring;
- Part 9. trapezoidal cast iron ring;
- Part 10. trapezoidal steel ring;
- Part 11. Cast iron wedge ring;
- Part 12. wedge-shaped steel ring;
- Part 13. Oil ring;
- Part 14. Spiral spring supporting oil ring;
- Part 15. Cast iron spiral stays reed thin oil ring;

--- Part 16. strip combination oil ring.

This is Part 9 GB/T 1149's.

This part identical with ISO 6624-1:2001 "Piston Ring Part 1. Ladder Ring" (in English).

This section is equivalent translation ISO 6624-1:2001 (in English).

For ease of use, this section made the following editorial changes.

--- "ISO 6624 this part" to "this Part";

--- Remove the foreword and introduction of international standards.

This part of ISO 6624-1:2001 and other international standards adopted by our country who have been adopted as a standard by our standards instead of phase Corresponding to international standards; our country has not been adopted as a standard, still direct use of international standards.

This part is the GB/T 14223-1993 "Piston Ring keystone ring and wedge ring" amendments, this section and GB/T 14223-1993 The main difference is.

--- GB/T 14223-1993 is equivalent to ISO 6624-1. 1986 and ISO/T R6624-2. 1986, and the Department is divided into equal Using ISO 6624-1:2001.

Since the implementation of this portion instead of GB/T 14223-1993 "Piston Ring keystone ring." this part is proposed by China Machinery Industry Federation.

This part of the internal combustion engine by the National Standardization Technical Committee (SAC/TC177) centralized.

1 Scope

This section GB/T 1149 specifies the piston ring Model T, TB, TBA, TM, K, KB, KBA and KM trapezoidal cast iron piston Basic dimensional characteristics (hereinafter referred to as trapezoidal cast iron rings) ring.

This section applies to a cylinder diameter cast iron ring from 70mm to 200mm reciprocating internal combustion engine ladder.

2 Normative references

The following documents contain provisions which, through reference to GB/T 1149 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 1149.1-2008 internal combustion engine piston rings - Part 1. General rules (ISO 6621-4:2003, IDT)

3 Overview

Trapezoidal type ring Tables 1 to 3 and FIGS. 1 to 8, characterized by its general dimensions shown in Table 4 to Table 7 and FIGS. 9 through 16. Different type Modulus of elasticity of Ring in Table 8 and Table 9, the trapezoidal angle of 6 ° and 15 ° trapezoidal ring size and elasticity are shown in Table 10 and Table 11.

Table 1 symmetrical barrel face ring size in millimeters

Basic dimensional tolerances 2.0 0.40 1.00 ± 0.30 1.60 2.5 0.45 1.25 ± 0.40 2.05 0.003 to 0.015 1.2 1.6 3.0 0.50 1.50 3.5 0.55 1.75 4.0 0.60 2.00 4.5 0.65 2.25 ± 0.50 ± 0.60 2.50 2.95 3.40 3.85 0.005 to 0.020 0.005 to 0.023 2.0 2.4 2.8 3.2

Table 2 asymmetrical barrel face ring size in millimeters

Basic dimensional tolerances 2.00 0.40 0.60 ± 0.20 1.50 0 ~ 0.007 0.009 ~ 0.030 2.50 0.45 0.70 3.00 0.55 0.80 ± 0.25 1.80 2.10 0 to 0.008 0.011 to 0.035 0.012 to 0.038 3.50 0.60 0.90 4.00 0.65 0.95 ± 0.30 2.40 2.80 0 ~ 0.009 0.012 to 0.040 0.013 to 0.045 4.50 0.70 1.05 ± 0.35 3.20 0 ~ 0.010 0.015 ~ 0.050 GB/T 1149.9-2008/ISO 6624-1:2001