MADE FOR THE WORLD
Who Is Hastings?

- Dedicated Piston Ring Manufacturer
- Global Design & Engineering Center
- Servicing Global OEM And Aftermarket
- Trusted By Our Partners
- Intently Focused On Service
- Constantly Improving Piston Ring Design

Steel Ring Production
Hastings Manufacturing Company Is A World Leader In The Engineering And Manufacturing Of Piston Rings.

For over 100 years, we’ve never wavered from our first and only mission—to make the best piston ring possible. Hastings offers piston rings for nearly any application worldwide—from automotive and truck, to agriculture, industrial, small engine, as well as marine and high performance engine applications.

Our Benefits:

• Complete control of casting supply chain
• Better quality
• Reduced lead time
• Regional distribution facilities
• Lower MOQ’s
• Rapid prototyping and production
• TecDoc database

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Our rings come in sets, a top compression ring, second compression (or oil scraper) ring, and oil control ring—and range from 1.125” to 8.875” (29 mm - 225 mm) bores. If you’re questioning the set you need, our engineers can recommend the right one out of the thousands we offer.
Learn About The Types Of Applications Hastings Covers

1: Gasoline and Diesel engines,
2: Automotive, Commercial, Powersports, Industrial, Marine

**Automotive**
- **Automotive Applications:**
  - Gasoline & Flex Fuel (LVP)
  - Light Vehicle Diesel (LVD)
  - Medium, Heavy Diesel (MVD)
  - Naturally Aspirated, Supercharged, Turbocharged
  - Direct Fuel Injection
  - Cast Iron Bore, Aluminium Alloy Bore, Coated Aluminium Bore

**Commercial**
- **Typical Applications:**
  - Heavy trucks (HDV)
  - Off highway
  - Agricultural machinery

**Powersports**
- **Engine Applications:**
  - Air Cooled
  - Liquid Cooled
  - Motorcycle
  - Moped

**Industrial**
- **Typical Applications:**
  - Compressors
  - Air Brakes
  - Generators
  - Pumps
  - Chain Saws
  - Air Compressors: Single and Two stage
  - Air Brake compressors
  - Industrial Refrigeration: Air Conditioning, Refrigerators, Freezers, Mobile Refrigeration Units
  - Oil and Oil-less Compressors

**Marine**
- **Typical Applications:**
  - Gasoline & Diesel Engines
  - Naturally Aspirated
  - Supercharged
  - Turbocharged
  - Carbureted
  - Inboard Motors
  - Outboard Motors
  - Jet Skis
  - Jet Boats
  - Marine Generators
  - Cast Iron Bore
  - Aluminium Alloy Bore
  - Coated Aluminium Bore

**Markets**
- Automotive
  - Powersports
  - Commercial
  - Marine
**Technical Capabilities**

**Base Materials**

- **Iron**
  - Dedicated piston ring foundry capable of pouring:
    - ISO MC 12/13, 23, 25, 32, 52/53, 56
    - nodular (ductile) iron
    - martensitic ductile iron

- **Steel**
  - ISO MG64
  - ISO MG65, 66, 67
  - ISO MG68

- **Gasoline**
  - Base Material
    - 9254 steel
    - stainless steel
    - Cast gray iron
    - Cast ductile iron

- **Diesel (LCV, LVD, MDD, HDD)**
  - Base Material
    - Hardened ductile iron
    - 9254 steel
    - Stainless steel

- **Coatings**
  - Chrome
  - Ceramic Chrome
  - Gas Nitrided
  - PVD
  - Gas Nitrided + PVD

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  - Ceramic Chrome
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**Made for the World**
Type Of Piston Rings

Typical Representatives

**RING CROSS-SECTIONS**

- Bevelled-Edge Oil Control
  - Type D
- Coil-Spring Loaded Bevelled-Edge Oil Control
  - Type DSF-C
- Expander-Segment Oil Control
  - Flex-Vent™
- Half Keystone
  - Type HK
- Inner-Spring Loaded Oil Control

**PERIPHERAL SURFACE CONFIGURATIONS**

- Asymmetrical Barrel Face
  - Type BA
- Barrel Face
  - Type B
- Rectangular
  - Type R
- Scraper
  - Type E
- Steel Vent Oil Control

**EDGE CONFIGURATIONS**

- Internal Bevel Bottom Side (Negative Twist)
  - Type IFU
- Internal Bevel Top Side (Positive Twist)
  - Type IF
- Internal Step Bottom Side (Negative Twist)
  - Type IWU
- Internal Step Top Side (Positive Twist)
  - Type IW

Piston rings are sold in 1 cylinder and complete engine sets for various applications.
Quality

We Are Not Just Meeting Expectations… We Are Exceeding Them

Inspection Process

• Relentless pursuit of Quality, Excellence and Continuous Improvement (QECI)
  - Deployed Six-Sigma and Lean Manufacturing Programs
• Hastings’ Quality Management System (QMS) is certified for compliance with international quality and business process standards
• Hastings’ Environmental Management practices and system are certified for compliance with international standards
  - ISO 14001 (ENVIRONMENTAL MANAGEMENT SYSTEM)
• Certificate of conformity use of the mark of conformity for piston rings products
  - CERTIFICADO NO. 14A-0011
  - CERTIFICATE INMETRO
  - SASO CERTIFICATE
  - EAC CERTIFICATION
  - VMI CERTIFICATION

Steel Ring Manufacturing

Foundry