



PISTON RINGS

Locomotive

Diesel engine



IGI Piston Rings Evolution

Proven Performance

Indo German Industries has been manufacturing piston rings for various diesel engine & compressor-exhausters used in marine power sector locomotives since 1977.

Piston rings are manufactured and classified on the basis of function and usability. The primary usage of the piston ring is to seal the chamber (where the piston is moving), which can be a combustion chamber of a 2 stroke or a 4 stroke engine.

The piston ring is an essential piston part, and its numbers and functionality differ depending on the type and capacity of the engine. In 2-stroke large engines, compression type piston rings are used to seal the combustion chamber and wiper rings are installed below them to wipe the deposits from the liner

and distribute oil on the liner surface.

Our complete range of piston ring from 80mm to 325mm is used in various diesel engines. Indo German Industries developed piston rings for MAK locomotive in 1980, in 1999 developed ALCO locomotive piston rings & 2010 piston rings for EMD locomotive

Serviceability in Mind

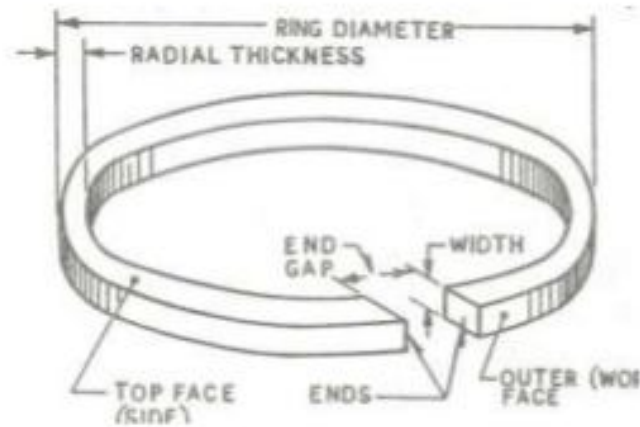
The piston rings were developed as per OEM drawing and specification to meet the required working hours of piston ring.

The Indo German Industries manufacture piston ring as per OEM standard reliable, highly efficient, easy to access, quick to replace, fuel efficiency, durability that improve the performance of diesel engine.



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The most difficult we do first, impossible may take sometime.



Piston Ring Function

Piston rings are metallic seals and have the function of sealing the combustion chamber from the crankcase and assuring the flow of heat from the piston to the cylinder. Other functions are to prevent the oil not needed for lubrication from passing from the crankcase to the combustion chamber and to provide a uniform oil film on the cylinder bore surface.

To achieve these piston rings must be in contact with the cylinder wall and piston groove side. Radial contact is generally achieved by means of the inherent spring force of the ring.

Gas pressure in the combustion chamber augments both the radial and the axial contact in the piston ring groove, i.e. the action of the gas pressure increases the sealing capability of the piston ring. Axial contact can alternate between the top and bottom side of the groove owing to the interaction of gas, inertia and friction forces.

The operational characteristics of piston rings, i.e. faultless sealing against combustion gas and lubricating oil, are contingent on the engine design, the thermal and combustion-related dynamic loading, the cylinder design and finish, the piston, the lubricating oil used, the fuel and, most significantly, the quality and design of the rings themselves.

Besides service in the piston cylinder system of internal combustion engines, piston rings are also employed as metallic seals for rotating shafts and are used both as contracting and expanding



RING DATA

RING DESCRIPTION	EMD PART NUMBER						
	Psc In One Set	Complete Set Part No.	Individual Ring Part Number				
Piston ring sets STD	5	8318770	8317533	8235299	8257707	8028545	8257949
Piston ring sets STD	5	8319739	8317533	8235299	8257707	8257949	-
Piston ring sets STD	6	40033365	9338809	40021965	8347100	8347103	40032525
Piston ring sets STD	6	9323296	9323293	8388418	8347100	8347103	8464953
Piston ring sets STD	6	40026492	9338808	40021964	8347100	8347103	40032525
Piston ring sets STD	6	9516928	9338809	8418589	8347100	8347103	8464953
Piston ring sets STD	6	8474214	8470090	8418589	8347100	8347103	8464953
Piston ring sets STD	5	40026487	8470090	8418589	8347103	8464953	-
Piston ring sets STD	4	8271437	-	-	-	-	-
Piston ring sets STD	3	8271433	-	-	-	-	-
Piston ring sets STD	5	8318770	8317533	8235299	8257707	8028545	8257949
Ring sets 0.030 OS Dia.	5	8318997	8317534	8237072	8259514	8040541	8271457
Ring sets 0.060 OS Dia.	5	8318998	8317535	8237073	8259515	8040542	8271458
Piston ring sets STD	6	8355869	8311623	8351048	8269839	8028545	8257949
Ring sets 0.030 OS Dia.	6	8356028	8311752	8355875	8272724	8040541	8271457
Ring sets 0.060 OS Dia.	6	8356029	8311753	8355876	8272725	8040542	8271458
Piston ring sets STD	6	8455543	8455529	8318658	8269839	8028545	8257949
Piston ring sets STD	5	8455540	8455532	8235401	8257707	8028545	8257949
Ring sets 0.030 OS Dia.	5	8455541	8455535	8236290	8259514	8040541	8271457
Piston ring sets STD	6	8355869	8311623	8351048	8269839	8028545	8257949
Ring sets 0.030 OS Dia.	6	8356028	8311752	8355875	8272724	8040541	8271457
Ring sets 0.060 OS Dia.	6	8356029	8311753	8355876	8272725	8040542	8271458
Piston ring sets STD	6	8455543	8455529	8318658	8269839	8028545	8257949
Piston ring sets STD	6	8455544	8455531	8318658	8269839	8028545	8257949
Piston ring sets STD	6	8455546	8455529	8371806	8269839	8028545	8257949
Piston ring sets STD	6	8474214	8470090	8418589	8347100	8347103	8464953
Ring sets 0.030 OS Dia.	6	8474216	8470091	8418590	8347101	8347104	8464954
Ring sets 0.060 OS Dia.	6	8474218	8470092	8418591	8347102	8347105	8464955
Piston ring sets STD	6	9337439	8470093	8418589	8347100	8347103	8464953
Piston ring sets STD	6	9337440	8470096	8418589	8347100	8347103	8464953
Piston ring sets STD	6	8466793	8455536	8388418	8347100	8347103	8464953
Piston ring sets STD	6	8467248	8455537	8388418	8347100	8347103	8464953
Piston ring sets STD	6	8467249	8455538	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323296	9323293	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323297	9323294	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323298	9323295	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9516928	9338809	8418589	8347100	8347103	8464953
Ring sets 0.030 OS Dia.	6	9516929	9338810	8418590	8347101	8347104	8464954
Ring sets 0.060 OS Dia.	6	9516930	9338811	8418591	8347102	8347105	8464955
Piston ring sets STD	6	8466787	8418580	8418589	8347100	8347103	8464953
Piston ring sets STD	6	9516931	9338812	8418589	8347100	8347103	8464953
Piston ring sets STD	6	9516934	9338815	8418589	8347100	8347103	8464953



RING DATA

RING DESCRIPTION	EMD PART NUMBER						
	Psc In One Set	Complete Set Part No.	Individual Ring Part Number				
Ring sets 0.030 OS Dia.	6	9516932	9338813	8418590	8347101	8347104	8464954
Piston ring sets STD	6	8466793	8455536	8388418	8347100	8347103	8464953
Piston ring sets STD	6	8467248	8455537	8388418	8347100	8347103	8464953
Piston ring sets STD	6	8467249	8455538	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323296	9323293	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323297	9323294	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323298	9323295	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9516928	9338809	8418589	8347100	8347103	8464953
Piston ring sets STD	6	8466793	8455536	8388418	8347100	8347103	8464953
Piston ring sets STD	6	8323296	9323293	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323297	9323294	8388418	8347100	8347103	8464953
Piston ring sets STD	6	9323298	9323295	8388418	8347100	8347103	8464953
Std. Dia with 1/64 OS width	-	-	8317536	8311754	8455533	8311754	8455530
0.30 Dia with 1/64 OS width	-	-	8317537	8311755	8311755	8470094	9338813
0.60 Dia with 1/64 OS width	-	-	8317538	8311756	8311756	8470095	9338814
Std. Dia with 1/32 OS width	-	-	8317539	8311757	8455534	8470096	8455531
0.30 Dia with 1/32 OS width	-	-	8317540	8311758	8311758	8470097	9338816
0.60 Dia with 1/32 OS width	-	-	8317541	8311759	8311759	8470098	9338817
Std. Dia with 1/64 OS width	-	-	8470093	8455537	9323294	9338812	8418583
0.30 Dia with 1/64 OS width	-	-	8418584	-	-	-	-
Std. Dia with 1/32 OS width	-	-	8455538	9323295	9338815	8418586	8455538
0.30 Dia with 1/32 OS width	-	-	8418587	-	-	-	-
Std. Dia with 1/64 OS width	-	-	8455537	9323294	-	-	-
Std. Dia with 1/32 OS width	-	-	9323295	-	-	-	-

There is more ... For items not listed in this Catalog inquire at
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“Because quality and knowhow
are essential”



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EMD Compressor piston ring set

"OEM quality standard and aftermarket solutions"



Indo German Ind. Part #:

IGI- 8271433

HP Piston Ring In One Set 3 Psc.

Comp. piston rings.....2 Psc.

Oil Scraper rings.....1 Psc.

Indo German Ind. Part #:

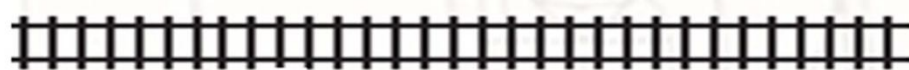
IGI- 8271437

**"Because quality and knowhow
are essential"**

LP Piston Ring In One Set 4 Psc.

Comp. piston rings.....3 Psc.

Oil ring with spring loaded...1 Psc.



Never to worry when you purchase from IGI.



Reg. office:
212, Panchnath Comm. Center,
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Gujarat - INDIA.

Mfg. plant: Unit II
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EMD piston ring set

"OEM quality standard and aftermarket solutions"



Indo German Ind. piston rings
enhance fuel efficiency, durability
that improve the performance
of diesel engine.

Indo German Ind. Part #:
IGI-8474214

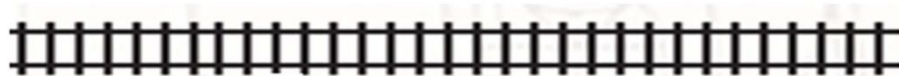
Standard bore dia. 9.062"
Piston Accommodation Quantity 1
Piston Ring In One Set 6 Psc.

Comp. Piston Ring Cr. Faced SS
Comp. Piston Ring Cr. Plated
Comp. Piston Ring Taper Faced
Oil control-double hook scraper
Oil control-spring loaded

Part Number: IGI- 8474214

- ❖ IGI- 8470090.....01psc.
- ❖ IGI- 8418589.....02psc
- ❖ IGI- 8347100.....01psc
- ❖ IGI- 8347103.....01psc
- ❖ IGI- 8464953.....01psc

Oversize piston rings
available



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EMD piston ring set

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Indo German Ind. Part #:
IGI-9323296

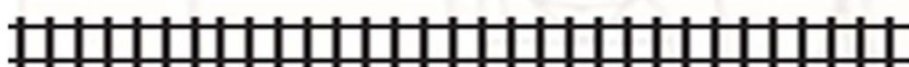
Standard bore dia. 9.062"
Piston Accommodation Quantity 1
Piston Ring In One Set 6 Psc.

Comp. Piston Ring Barrel Face
Comp. Piston Ring (Ferrox Filled)
Comp. Piston Ring Taper Faced
Oil control-double hook scraper
Oil control-spring loaded

Part Number: IGI-9323296

- ❖ IGI-9323293.....01psc.
- ❖ IGI- 8388418.....02psc
- ❖ IGI- 8347100.....01psc
- ❖ IGI- 8347103.....01psc
- ❖ IGI- 8464953.....01psc

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EMD piston ring set

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Indo German Ind. Part #:
IGI-40026492

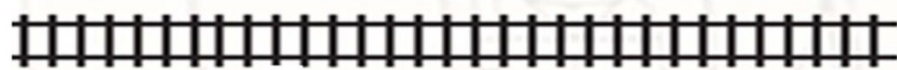
Standard bore dia. 9.062"
Piston Accommodation Quantity 1
Piston Ring In One Set 6 Psc.

Comp. Piston Ring five groove
Comp. Piston Ring seven groove
Comp. Piston Ring Taper Faced
Oil control-double hook scraper
Oil control-spring loaded

Part Number: IGI- 40026492

- ❖ IGI- 9338808.....01psc.
- ❖ IGI- 40021964.....02psc
- ❖ IGI- 8347100.....01psc
- ❖ IGI- 8347103.....01psc
- ❖ IGI- 40032525.....01psc

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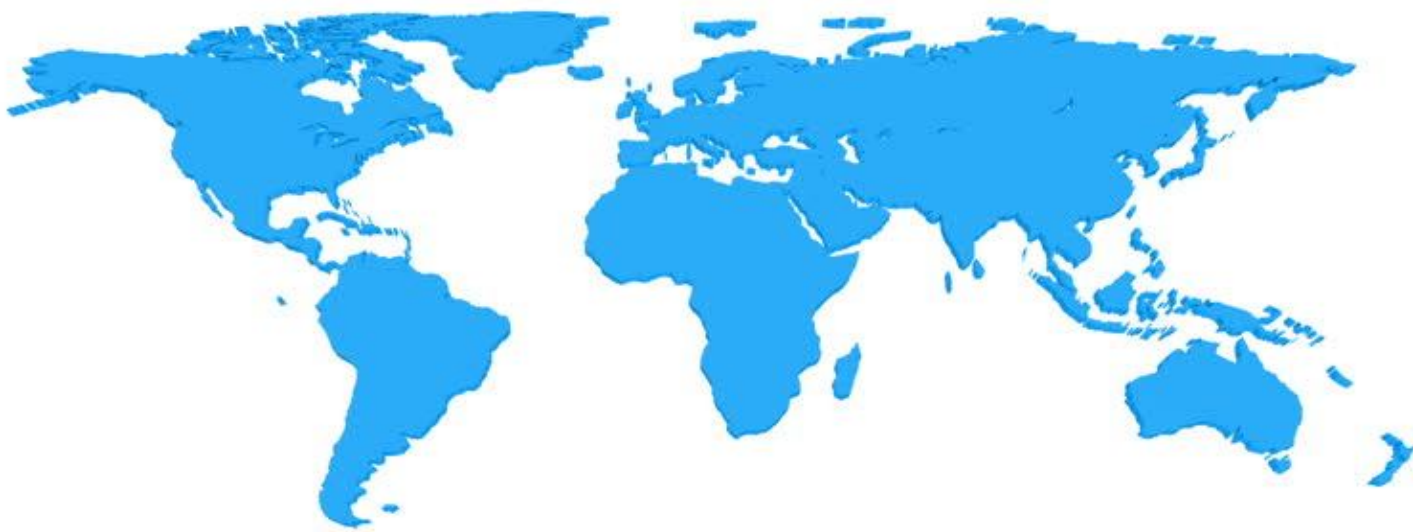
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OUR VALUED CLIENT'S ARE ROUND THE



Our primary goal is to help customers to achieve their evolving needs. We deliver our promise and set best standards in terms for quality of service. We incorporate innovation, research and development to help customers achieve their mission. Our priority focus is on giving solutions to customer's requirements.



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