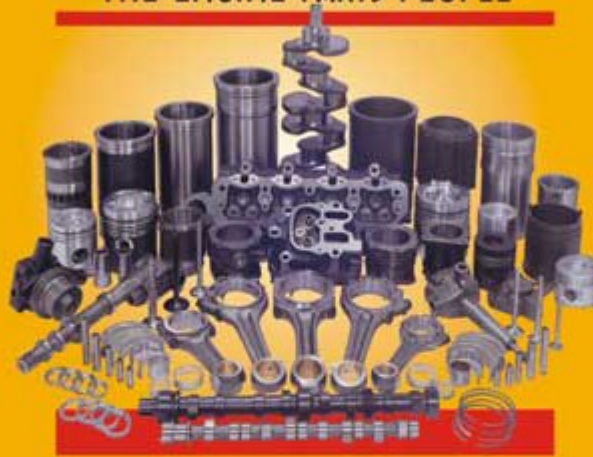


**GARIMA GLOBAL
PRIVATE LIMITED**
MANUFACTURERS & EXPORTERS

**AUTO
GRACE[®]**
ENGINE PARTS
The brand that evokes confidence!

THE ENGINE PARTS PEOPLE



*Reliability in Service
and
Product Quality*

 <p>CYLINDER LINERS COVERS DE CILINDROS</p>	 <p>PISTONS PISTONES</p>	 <p>PISTON RINGS SEGMENTOS</p>	 <p>CONNECTING RODS BIELAS</p>	 <p>CYLINDER HEADS CABECOS</p>	 <p>VALVES VALVULAS</p>	 <p>VALVE GUIDES GUÍAS DE VALVULAS</p>
 <p>VALVE SEATS AJUSTADORES DE VALVULAS</p>	 <p>VALVE SPRINGS MOLIBD</p>	 <p>CAMSHAFTS COURVILLOS</p>	 <p>CRANKSHAFTS EIXOS DE CILINDROS</p>	 <p>BEARINGS OLIVAS</p>	 <p>OIL/WATER PUMPS BOMBAS DE ACEITE/ÁGUA</p>	 <p>AIR DRIVE COMPRESSOR PARTS BOMBAS PNEUMÁTICAS COMPRESSORES PNEUMÁTICOS</p>

EXTENSIVE RANGE IS OFFERED IN RESPECTIVE CATEGORY



CYLINDER LINERS / CAMISAS DE CILINDROS

Cylinder Liners - Sleeves, made of grey cast-iron, ought to have desired casting and machining qualities, viz. strength, toughness, hardness and wear resistance. These are mainly of two types - Dry liner-sleeves and Wet liner-sleeves.

The liners-sleeves are 'cast-in fit', force (press) fit or slip fit. The interference between its outer diameter and bore-hole walls depends on fit-type from 0.050 to 0.075 mm. These are available in wide range suitable for light, medium and heavy duty applications.

PISTONS / PISTONES

The material used in pistons should have good cast ability like high strength, high hot strength, high strength-to-mass ratio, good resistance to surface abrasion, good thermal conductivity and low thermal expansion.

PISTON-RINGS / SEGMENTOS

Piston rings are broadly-compression rings and control (scraper) rings. Piston rings are made of high quality cast-iron with certain percentage of carbon, chromium, nickel and moly.



WATER & OIL PUMPS / BOMBAS DE ACETTE & AGUA

A very critical component, must be checked for smooth operation of fan, shafts, pulleys and belts. Appropriate material will ensure smooth running under high temperature caused by Centrifugal forces.

Avoid tap on the shaft as it may result in damage to the ball. The fan should seat squarely with the Pump Shaft. Improper fan and pulley cause damage. The fan belt tension must be appropriate.

NUTS & BOLTS / TUERCAS & BULONES

The Nuts and Bolts are available in specified and appropriate material, for various applications such as Wheels for Vehicles, Connecting rods of various types and other applications. These can be made as per specifications and drawings.





CRANKSHAFTS / CIGUENALES

Normally forged in Alloy Steel to appropriate strength for various applications. Spheroidal Graphite Iron is also being used for smaller Cranks. The Crankshafts are Normalised and Induction Hardened.

CAMSHAFTS / ARBOL DE LEVAS

The Camshaft performs a critical job, and has a great impact on an engine's performance at different speeds. The material used, and lobes (cams) must be appropriate to ensure optimum performance.



CONNECTING RODS / BIELAS

Connecting rods are made from steel forgings, but malleable or spheroidal-graphite iron casting or sinter forgings are beginning to be used for smaller engines. These have normally either serrated or groove-and-tongue joints. Split half-shell thin-wall bearings are incorporated in the big-end-housing bore.

BEARINGS / CONJINETES

The plain journal bearings (shell bearing liners) consist of a low carbon-steel cylindrical backup strip on to which the principal bearing material is cast or roll-bonded. This combination is known as bi-metal bearing. It is essential to thinly overlay a soft-anti-friction alloy.

ENGINE VALVES / VÁLVULAS

Valves are nitrided to increase the exhaust strength, Chrome Plated to increase the wear resistance and Stellite (Seat Hard Faced) to get high hot hardness at the seat.

VALVE GUIDES / GUÍA DE VÁLVULAS

The guides are usually made of cast iron by casting process. Sometimes, shoulder bushes are provided to position the guide in cylinder head.

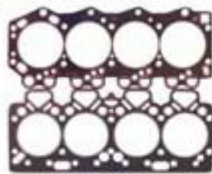
VALVE-SEATS / ASIENTOS DE VÁLVULAS

These are produced by centrifugal cast process to obtain closed grain dense structure.

VALVE TAPPETS / TAQUES

Valve Tappets are made in "Chilled" Cast Iron in shell moulds.





GASKETS / JUNTAS

The Gaskets, both in Asbestos and Asbestos free material are available to suit specific applications. The range covers applications such as Heavy Duty Engines, Air-Brake Compressors, Automotive and Agricultural Tractors. These can also be made as per customer specifications.

CYLINDER HEADS / CULATAS

These are usually made of Grey Cast-Iron, suitable for wet-sleeved and non-sleeved engines. Direct Injection and Petrol Cylinder Heads are available.

These are provided with fitments like Valve-Guides, Valve-Seats or also supplied without the fitments.



AIR BRAKE COMPRESSOR PARTS / COMPRESORES PARA FRENO DE AIRE COMPRIMIDO

The parts are available for various compressors suitable for such engines as CUMMINS, MACK, INTERNATIONAL, MERCEDES and other Heavy Duty Vehicles.



All the parts - Sleeves, Pistons, Piston Rings, Bushings, Bearings etc. are made by using appropriate technology and quality assurance process. The parts suitable for various well known brands such as MIDLAND, TF, CLAYTON and others Are available.

The Pistons are made of Cast-Iron as well as of Aluminium depending on the application.

SOME NEW OFFERINGS



FLYWHEEL RING GEAR



OIL SEAL



SYNCHRONIZER RING



SYNCHRONIZER RING



DRIVE GEAR



WHEEL RIM



OIL PUMP



AXLE CARRIRER (REAR SIDE)



WATER PUMP



ROLLER AND ROLLER PIN



TIE RODS



HYDRAULIC CYLINDER RAM



HYDRAULIC PUMP



COMPRESSOR KIT



INJECTOR SLEEVE



HYD. LIFE CAM BLOCK BUSH
BRASS BUSH BATTERY TERMINALS



TAPPETS PUSH RODS



VALVE TRAIN COMPONENTS



NOZZLE AND ELEMENTS



ROCKER ARM
BRACKETS FLANGE

SETTING GLOBAL TARGETS

Team building and consultative approach to setting up global targets is part of our strategic mantra...

WORKPLACE

Conductive work environment coupled with latest equipment and programs provides us a well deserved lead...



QUALITY POLICY

Quality is not incidental, we achieve it micron-by-micron literally. Each piece is subjected to vigorous checks...

MISSION STATEMENT

Customer is our first and last priority. Our objective is to achieve full customer satisfaction through the route of scheduled deliveries, quality products and over-all satisfaction. We build relationships on trust.



Export House

WORLD CLASS INFRASTRUCTURE & ENVIRONMENT



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**GARIMA GLOBAL
PRIVATE LIMITED**
MANUFACTURERS & EXPORTERS

501, VIP Plaza, Off. New Link Road, Opp. Fame Adlabs,
Andheri (West), Mumbai - 400 053, INDIA.
Tel.: +91 (22) 40378886 / 67568900 / 26734405
Fax: +91 (22) 67568999 / 26734439
E-mail: email@garimaglobal.com / garimaglobal@vsnl.com

www.garimaglobal.com

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