





## STANDARDS & QUALITY MANAGEMENT

Achieving complete satisfaction and trust of the customer based on meeting the product's standard requirements has always been the main goal of Ghaem Industrial Group. We believe that achieving this goal depends on providing high-quality products, competitive prices, and timely delivery, in the form of effective application of quality management system standards.

In this regard, the company has succeeded in receiving various international standards in the fields of production management, quality, communication with customers, and after-sales services.

In addition to this, Ghaem, as the first and only producer of all types of cylinder Liner, has been able to obtain Iran's national standard certificate and has also put the European CE standard on its agenda.

### Quality Management System Certificates:

- ISO 9001: 2015
- ISO IATF 16949:2016
- ISO TS 16949
- ISO 10002: 2018
- ISO 10004: 2018



The history of GHAEM Industrial group started in the 90s by producing components for the automotive, oil and gas, and petrochemical industries; Simultaneously with the development of the automobile industry in 2001 to 2010, GHAEM continued its activities with the development of production lines and updating technical knowledge and machines as the biggest and the best Cylinder liner manufacturer in Iran. Currently, as the largest manufacturers of all types of engine spare parts in the Middle East, it provides all of the automobile companies in Iran, domestic and export markets demands.

The quality products of Ghaem have been able to be exported to different countries, such as Germany, Russia, Poland, Serbia, South Africa, United Arab Emirates, Turkey, Iraq, Syria, Ecuador, Lithuania, Afghanistan.

in 1994 with the establishment of "Keyhan Sanat GHAEM" Company in Mashhad the story of production was started. according to the production policies of the senior managers and in order to complete the product portfolio, the production of pistons in the form of multiple production lines with the use of the most modern European equipment started in 2018 in "Piston Sazan Ghaem" Company. This group currently produces more than 3.5 million pieces of cylinder liners and 1 million pieces of pistons for all types of light and heavy engines per year and is also pursuing the development program of other parts production lines.

In 2015 Ghaem Group, in order to have a closer and more specialized relationship with customers all over the world, has established "Tamin Kala Ghaem", Engineering Company to manages the distribution, customer relations and after-sales service network.

The demand to developing production lines in GHAEM companies and other industrial complexes of the country prompted GHAEM Group to establish Raya Machine Company has specialized in the field of manufacturing all kinds of production line machines. This company in 2021 supplied the first CNC lathe production line made by its specialists to the domestic markets as well as the production lines of the group companies.



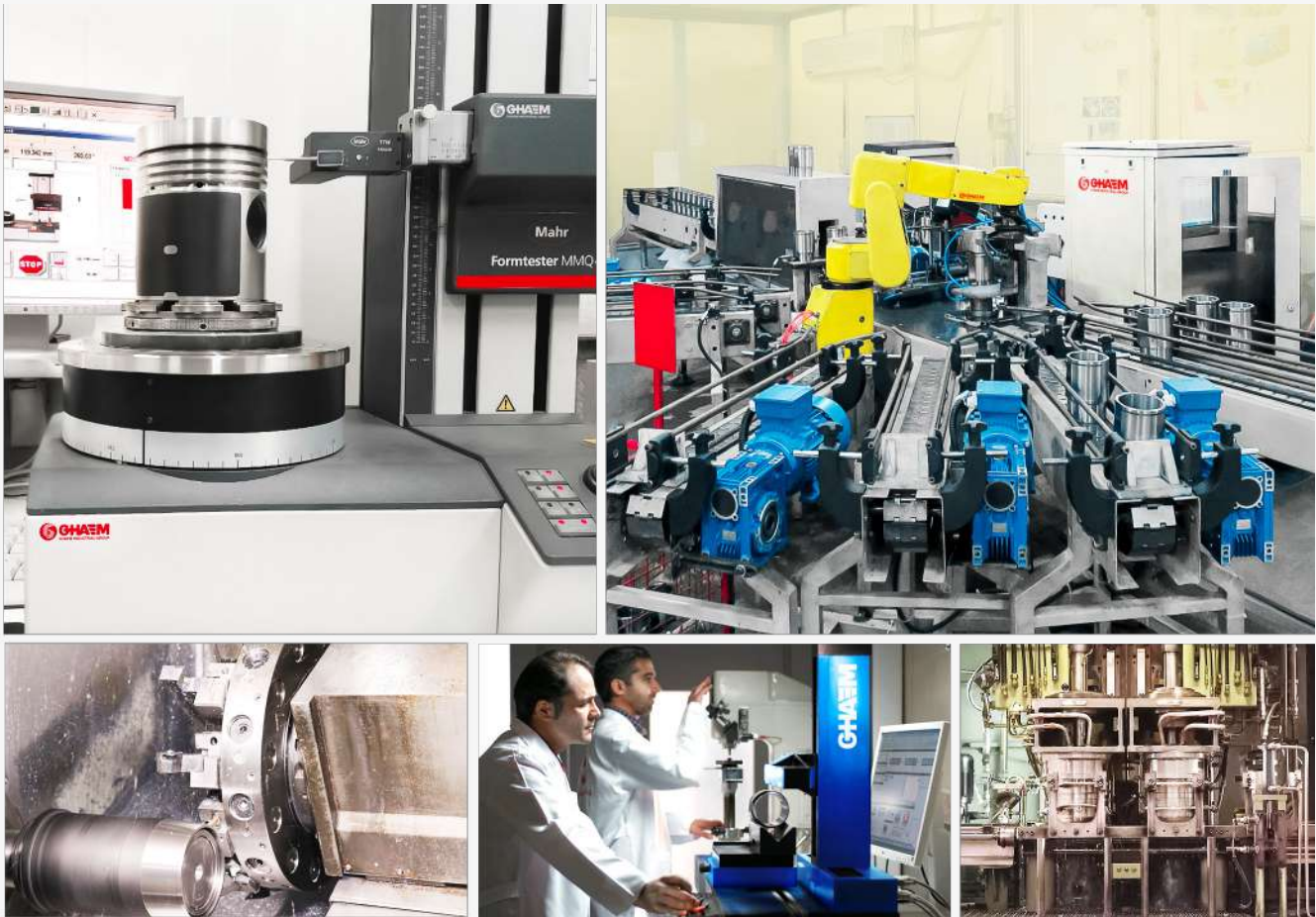


## CASTING

The casting of all the products produced by Ghaem Industrial Group is done in the Liner and piston casting units using the most modern production equipment and relying on the engineering knowledge and capabilities of professional expert.

The gray cast iron casting units have the capacity to produce more than 20,000 tons of castings by centrifugal method and shell molding to produce all kinds of cylinder Liners. In the centrifugal casting method, which is the major part of the production, after entering the molten cast iron to the mold, is subjected to centrifugal force and is cooled based on precise engineering models. Centrifugal casting method and detailed material analysis have made the products to find the necessary resistance against the pressure caused by the engine operation.

The production of aluminum products in different analytical groups such as LM13, LM28, etc., using aluminum ingots and the best quality additives, is done by automatic casting machines, in compliance with the highest standards, in the casting unit of the piston factory.



## MACHINING

Quality products of casting units are provided to Machining units as raw materials for Liner and piston machining lines. The specialists of this department, by using the latest technology and the most modern CNC lathe machines and various specialized machines such as boring, honing, and oval lathe, based on the highest quality standards, produce all kinds of the cylinder and piston with different diameters from 50 mm to 350 mm for the needs of automotive companies (OEM) or After market.

## RESEARCH AND DEVELOPMENT

Research and development (R&D) units, in order to achieve quantitative and qualitative goals, using experienced experts along with internal and external consultants at different levels, have put the implementation of improvement projects at the top of their work in all technical, commercial, managerial fields.

By using engineering, design, and simulation software, the experts of this department are able to carry out engineering projects and design and implement the production process of new products in the form of advanced product quality planning method (APQP) and after the approval of the prototype and One-day production line hands over these products to production departments for mass production.

## SALE

With a commitment to quality, based on the standards of the world's automotive industry, Ghaem Industrial Group is the main supplier in the supply chain of Iran Khodro Industrial Group as the largest manufacturer of passenger cars in the Middle East. In addition to IKCO, this group has a history of long-term cooperation with major motor and car manufacturing

companies in Iran, such as the following companies:

- IDEM (Mercedes-Benz engines)
- MAPNA (Heavy diesel engines for generators, and locomotives)
- MOTORSAZAN Iran, Tractorsazi Holding (Perkins engines)
- DESA (National Diesel Engine D87, RK215, ...)
- SAIPA Diesel, after-sales service
- RENA company (Cylinder Liners for VOLVO and Cummins Engines)

Ghaem products have been able to cover the country's spare parts market demands, in addition to meeting the needs of automotive companies.

The wide distribution network of spare parts in different applications, in addition to the distribution of Ghaem products, has been able to take over the distribution of other reputable domestic and foreign brands as an exclusive representative in Iran.

Customer relationship management units of GHAEM group try to achieve their main goal of increasing customer satisfaction and loyalty, by facilitating communication, speeding up responsiveness, changing from product-oriented to customer-oriented, optimizing after-sales services, and developing long-term relationships.

## World Wide Delivery



High quality products of this industrial group have been able to be exported to different countries of the world.  
 We Owe This to 30 Years' Experience.





## COMMERCIAL ROAD TRANSPORT

DAF, FAW, FIAT, HOWO, IVECO, MAN, MAZDA  
 MERCEDES-BENZ, VOLVO, SCANIA, MACK, RENAULT TRUCK  
 BMC, HINO



## AGRICULTURE

JOHN-DEERE, PERKINS, UTB, DEUTZ, ZETOR, URSUS



## CONSTRUCTION EQUIPMENT

CATERPILLAR, CUMMINS, KOMATSU, LIEBHERR, VOLVO



## PASSENGER CAR

BMW, FIAT, HYUNDAI, MAZDA, MITSUBISHI, NISSAN, OPEL,  
 PEUGEOT, RENAULT, TOYOTA, VW



## GENERATOR, MARINE, RAILWAY ENGINES

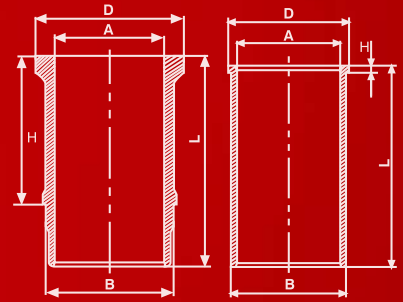
YANMAR, CATERPILLAR, MTU, GUASCOR, RUSTON

All the Brand Names in This Catalogue are Used Only for Identification Purpose.

# BETTER LINER BETTER INTERIOR

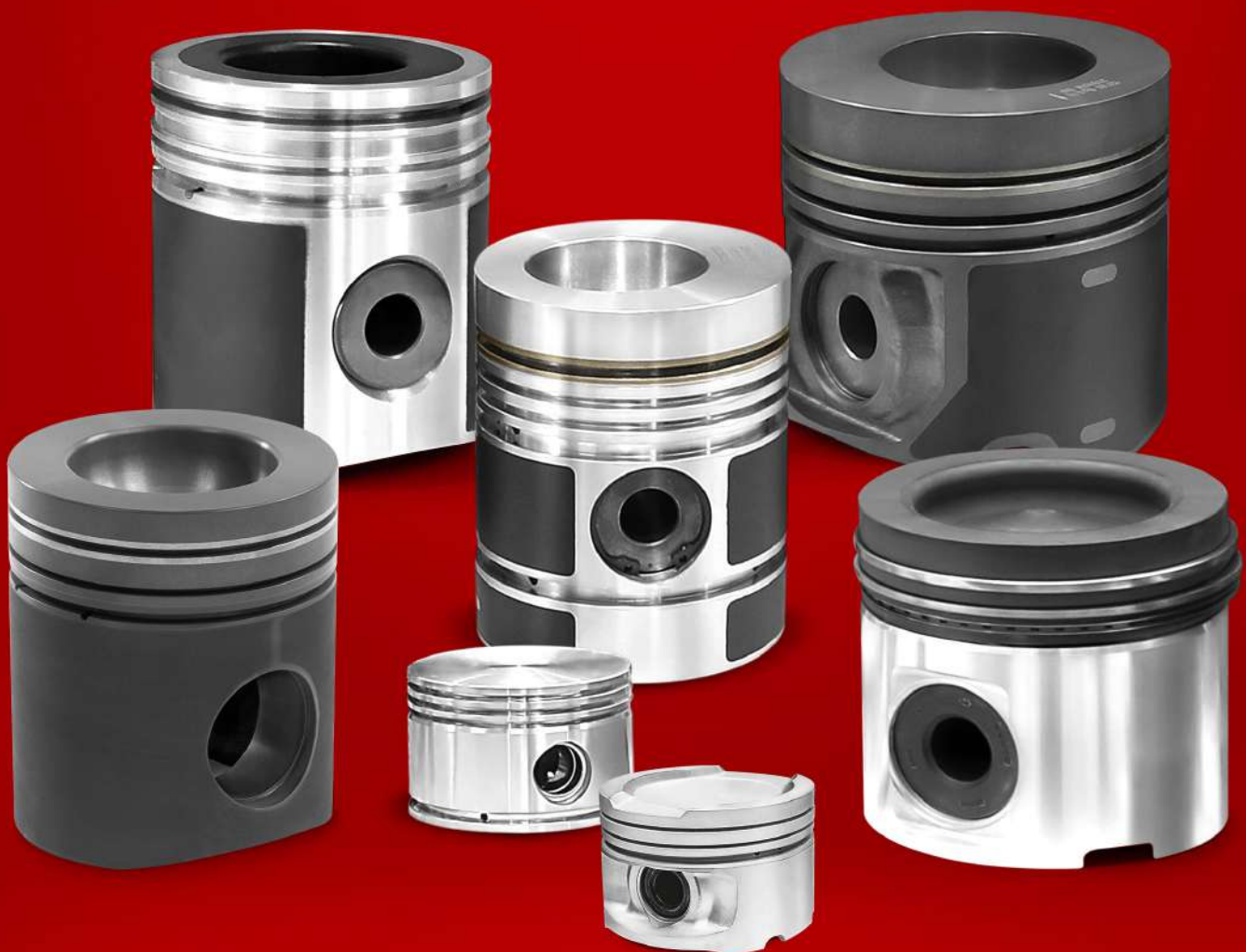
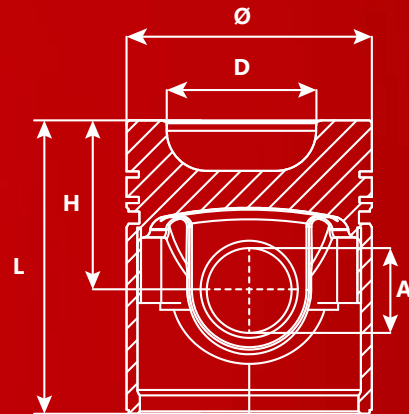
Engine Functionality

- Cylinder Diameter: 60~300mm
- Type: Wet / Dry (Semifinal-Final) Air Cooled Cylinder Liners
- Material: Grey Cast Iron in Different Grades
- Coating: Chrome & Phosphate
- Finishing Processes: Pelateu Honing inside surface



# HIGH QUALITY MATERIAL PRECISE DIMENSIONS

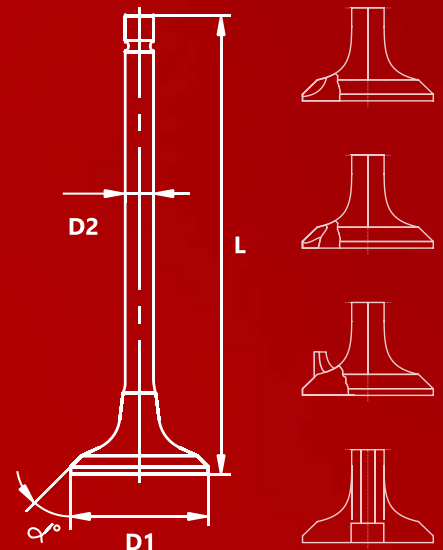
- Cylinder Diameter: 75~350mm
- Precision casting & machining
- Type & Material: Aluminum Pistons  
Steel-Aluminum Pistons, with Graphite  
or Zinc Coating





# HIGH SERVICE LIFE THERMAL RESISTANCE

- High Quality Raw Materials and Precise Machining
- Heat Treatment & High Temperature Metal Coatings (Cobalt and Chromium Base Alloys)
- Chrome-Plated Valves with High Abrasion Resistance
- Friction Welded Bimetallic Intake and Exhaust Valves
- Material: Martensitic and Austenitic Steels in Monometallic and Bimetallic Versions



# LESS OIL CONSUMPTION

- Cylinder Diameter: 75~170mm
- Material: Steel, Cast Iron, Ductile Iron
- Coating: Chrome, Molybdenum & Nitride  
Chrome Ceramic





#### PRODUCTION SITE

- Packaging site: 16th km of Fariman Rd, Mashad, Iran
- Production site 1: 17th km of Fariman Rd, Mashad, Iran
- Production site 2: kavian industrial Cmplx, Fariman, Iran

#### OFFICES

- Iran: No87, Classic Bldg, kashani Blvd, Tehran / Tel(+98)2144976716/(+98)2143856101
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- Germany: 60487 Frankfurt am Main, Germany

#### MEDIA

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