## Quality that lasts

# MAPROMEC

Precision machining

## Sisters at your service

**Mapromec** and **Maprotec** are independent companies with the same owners and a common goal-providing excellent services to satisfied customers. Our group has 100 employees and a turnover of EUR 23 million. In addition to engine producers, and other operators in the energy field, our customers include manufacturers of other kinds of machinery, such as hoisting, pumping and excavation devices. Companies relying on our services include ABB, Caterpillar, General Electric, MAN, Rolls Royce and Wärtsilä. The majority of our customers are based in Europe, but we also have customers in the Americas and Asia. We are conveniently located in Vaasa, on the western coast of Finland, with access to efficient transport routes by road, sea and air. Express deliveries leaving the region at noon will be anywhere in Europe the next day at noon.

Welcome to take a closer look at our operations.

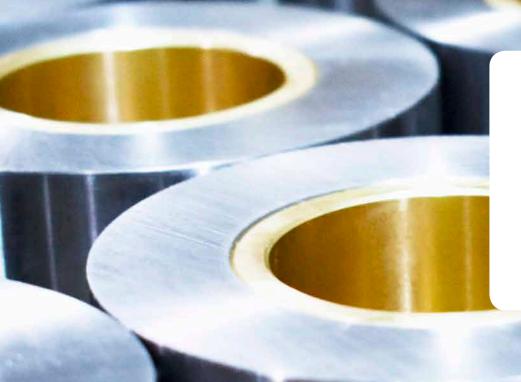
## Oy MAPROMEC Ab

## Mapromec specialises in premium subcontracting.

Mapromec's operations began in 1994. Our product selection includes piston pins for large diesel engines (weight of the pin 5–250 kg). We also offer other smaller pins and shafts, bearing parts and rollers for valve lifters, according to our customers' wishes. In addition, we deliver assembled product entities.

Our customers' operations require constantly more advanced solutions and shorter delivery times. Thanks to our compact size we are a flexible company that meets its customers' needs cost-efficiently.

We can store our customers' products and offer fast delivery solutions. We are ready to provide services that exceed expectations!



## Cylindrical components with high requirements:

- Purity of material
- Tight tolerances
- High demand on surface finish
- Diameters 50–250 mm, length 1500 mm
- Assemblies



www.maxel.fi

## Oy MAPROTEC Ab

## Maprotec specialises in CNC machining and assembly.

Founded in 1985, Maprotec is the older of the two sister companies. Maprotec's highly automated production facilities are located in Raippaluoto.

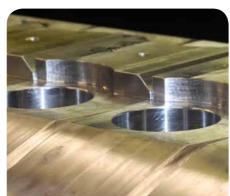
One of our main product groups is diesel and electric engine components for power plants and vessels. Through our collaborative network, we can also provide at the customer's request welded, casehardened, induction-hardened, nitrified and grinded parts.

#### Machining of castings:

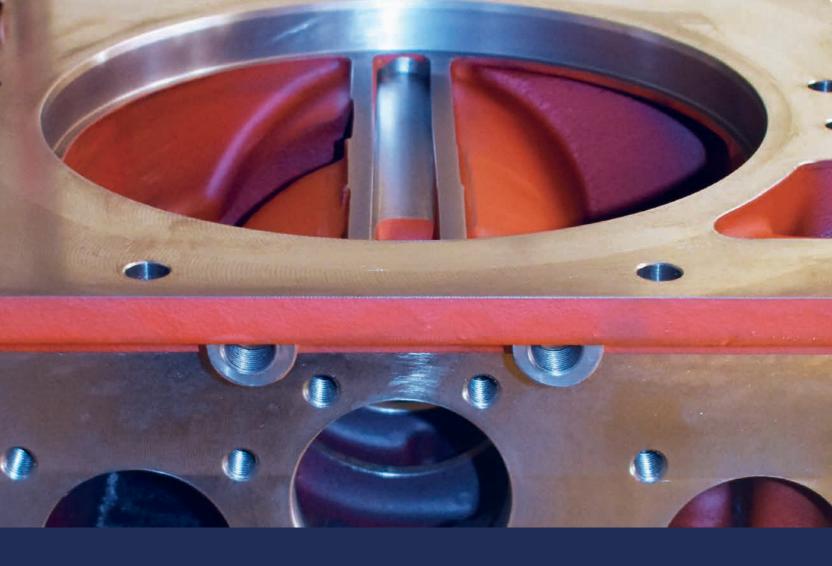
- Different housings and brackets with demanding shapes
- Max dimensions 1400 x 1450 mm
- Assemblies
- Maprotec can also supply the castings

We manufacture both small and large series.









# **Ricomix** precision quality machining

#### Valve mechanism for diesel engines

cnc-turning

- cnc-milling
- grinding
- honing
- crack inspection (magnaflux)

#### **Electric motors**

- manufacturing of shafts
- shaft assemblies
- rotor turning
- balancing

Modern machine base and robotic cells ensure efficient production.

Close co-operation has continued for over 20 years

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## Quality is an attitude

The tolerance requirements are so tight that every 0,001 mm counts.

Our delivery reliability is 99.8%, and we are constantly striving to improve.







#### High quality is one of the building blocks of our operations, and quality assurance is an integral element of our process at each phase.

We received our first ISO 9001 quality certificate in 1996, and since then it has been followed by ISO 14001 and ISO 18001 certificates. We control the quality of our products using 3D and form measuring machines, and through Magnaflux and ultrasonic inspection.

Quality assurance starts at the tendering phase and continues at each phase during and after production, in accordance with our quality assurance system. Should there be a deviation, we carefully inspect and learn from it, in order to avoid repeating it. Thanks to constantly developing control methods, we can detect deviations in materials and measurements right down to the smallest detail. We control the quality of our products using nondestructive testing methods, such as Ultrasonic – and Magnetic Particle Inspections. The material is inspected for any impurities that might cause cracking in heavily loaded parts.

Each product is inspected and measured before delivery. When needed we also do cleanliness tests of the parts. In addition, we test materials and other aspects of the products on our own initiative, which can give valuable information to customers.

High quality is achieved through state-of-the-art methods and strong professional competence. However, the most important thing is attitude: we want to be proud of our work and always deliver premium products.

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### Mapromec's production phases

The best solutions are created together. We help our customers to select the most suitable material and heat treatment method. In addition to the most common steel types, we can also process special steels.

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## We have invested in state-of-the-art facilities, machines and production methods, and we develop these on a continuous basis.



#### Turning

In our CNC machines and robot cells we are able to turn parts weighing 2–250 kg, with diameters of up to 400 mm and a length of 1,500 mm. The materials we are turning are different grades of steel.



#### **Heat treatment**

The improvement of steel and its alloys is a critical part of the production process. Through our partner, we can offer different kinds of heat treatments and special processes, which improve the product's characteristics and extend its useful life.



#### Honing

Honing of cylindrical holes is used when there is a tight tolerance and a need for a perfect surface finish. We have experience in providing this service and we have the necessary equipment.



## Mapromec's production phases

Fastems

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Working with demanding companies have given us a lot of insight into the demands of global supply chains.

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Thanks to our many robots, our operations are highly automated, which can be seen in our cost-efficient pricing and short delivery times.



Hard turning

Hard turning is performed on hardened parts. The hard surface means the process requires special knowledge. We have gained a high level of experience in hard turning over the years.



Grinding

Many critical parts need grinding, and we are equipped to do both cylindrical and face grinding of the parts we manufacture.



Superfinishing of the surfaces

To ensure that the surface finish is correct, we use superfinishing grinding, lapping or polishing.



## Maprotec's production phases

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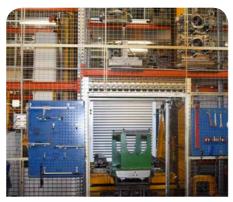
We can manufacture a variety of products flexibly thanks to our extensive experience in machining and the optimisation of robots and FMS systems.

## Maprotec has equipment for turning, milling, drilling, honing, grinding and assembling.



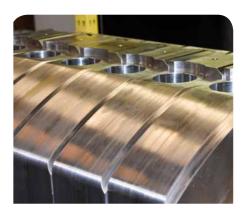
#### **Robot cells**

We use our three robot cells mainly for the turning of cast and forged products. All phases are integrated and the cells produce finished pieces.



#### **FMS systems**

We manufacture cast and steel parts using two FMS systems. The FMS systems have 5 machines and are flexible enough to manufacture both small and large series.



#### **CNC** machining

Our stand-alone CNC machines with palettes and our CNC turning machines serve the varying needs of our customers.



#### Assembly

We assemble components and deliver pre-assembled modules directly to our customers around the world.



INNOVATIVE PROFESSIONAL CUSTOMER ORIENTED CNC-Machining subcontractor, specialised in demanding, mechanical precision components

- Machine tool maintenance and repair service
- Automation and machine manufacturing
- Customized data collecting systems
- Industrial electronics repair service



#### **Temite Oy**

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## Cherishing our heritage

The Vaasa region is the most energetic in Finland, where you will also find the biggest energy cluster in the Nordic countries – more than 140 businesses, several of which are global market leaders in their respective fields.

The region is also unique because of its magnificent natural environment. The Kvarken Archipelago near Vaasa has been included on the UNESCO World Heritage List. We want to preserve these natural wonders also for our grandchildren. Therefore, it is second nature to us to protect the environment and ensure that our operations are environmentally friendly. Our processes do not generate harmful substances, and we treat our waste with care.

We take responsibility for everything we do. All of our materials are 100% traceable, and we always choose raw materials that are produced sustainably.

We are a transparent and honest partner, ready to serve your company!

Complete traceability according to customers' demands throughout the component's life cycle is a routine for us.



## A FAMILY-OWNED MACHINING EXPERT SINCE 1961

Our products are mostly solids of revolution made with turning centers, measuring 3-300 mm. Manufactured solids often undergo post-hardening machining of which we have decades of experience. Heat and surface treatments are done by our local partners. Thread rolling during the manufacturing process is also one of our areas of expertise. Materials we work with include steel alloys, stainless steels, aluminum, brass and copper. Materials are provided in part by clients and in part by ourselves.

Our client base is formed from five major industries: the transmission, munitions, electricity, IT and hydraulic industries.

The company has about 10 CNC machines in use. Pieces of 3–41 mm in diameter are manufactured directly from bars with automatic multiple-spindle machines or Swiss-type lathes with magazine bar feeders. In addition, work pieces of 40–300 mm are manufactured from saw-cut or forged blanks with robotic cells and with a vertical turning machine, which is equipped with a programmable turret milling head.

In the future, we will focus even more on robotic automation in our production, and thus on even larger pieces and subassemblies.

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#### Myös Mapromec ja Maprotec käyttävät Petrofer-leikkuunesteitä

