RECONDITIONING

Reconditioning is an economic and green solution for giving engine components a second life, or even a third or fourth. It offers as-new or better quality at a very attractive price. It can save you up to 50% of the costs when compared to buying new parts.

Reconditioning brings used components back to as-new condition with identical or improved:

- Dimensions
- Specifications
- Performance
- Warranty
- Lifetime

QuantiServ has more than 40 years of experience in the reconditioning of engine components and equipment of all brands. We make use of the very latest technologies, giving you the benefits of our passion.

QuantiServ’s reconditioning portfolio:

- Pistons
- Two-stroke cylinder covers
- Exhaust valves and valve seats
- Piston rods
- Piston skirts
- Fuel injection equipment
- Four-stroke connecting rods
- Four-stroke cylinder heads
- White metal bearings
QuantiServ brings reconditioning of two-stroke piston heads to a higher level through application of our new groundbreaking QS50K™ surface treatment on piston ring grooves. It is a much more wear resistant and therefore durable alternative than hard chroming. It is a fully automated, robotic process that guarantees a consistently high quality.

Service experience has shown supreme results with neglectable wear on the piston ring grooves. QS50K™ can be applied to all two-stroke pistons.

Because of the superior performance of QS50K™ process we grant a two-year warranty on the ring grooves.

QUANTISERV QS50K™

- Machining off the remaining chromium layer
- Laser-cladding of the groove flanks with a filler material
- Final machining of the grooves and skimming the mating faces
- Application of the new QS50K™ surface treatment
- Grinding the grooves to final dimensions.
EXHAUST VALVES AND SEATS

The service life of the valve seat area is nowadays very long. Hot corrosion at the valve disc however still occurs on both Nimonic and Stellite valves and puts a limit on their operating life.

If a valve spindle shows signs of blow-by, excessive corrosion on the bottom of the valve disc or excessive wear on the stem, then it should be replaced or reconditioned. Depending on the valve spindle’s condition, either partial reconditioning or full reconditioning is available at any of QuantiServ’s six reconditioning centres.

Partial reconditioning will involve grinding of the sealing area, and re-chroming or HVOF coating of the valve stem.

Full reconditioning involves the complete rebuilding of the valve seat area and of the bottom of the disc by welding. Re-chroming or HVOF coating of the valve stem is also included.

In addition to valve stems we also recondition two-stroke valve seats of any type and make.
QUANTISERV’S LARGE RECONDITIONING PORTFOLIO

QuantiServ’s large reconditioning portfolio consists of main engine components like two-stroke cylinder covers, pistons, piston rods, white metal bearings and many other parts.
WORKSHOPS, MACHINERY, PERSONNEL

All reconditioning processes are carried out in our own workshops, using modern machinery, top-quality materials and competent, well-trained personnel.

QuantiServ’s workshops are able to machine, weld, chrome-plate and laser-clad a wide variety of different parts. Many of the customers that we serve come from the oil and gas, petrochemical, pulp and paper, or mining industries.

We take pride to not decline any machining job due to its complexity.

Ask us for an offer at reconditioning@quantiserv.com
RECONDITIONING ON EXCHANGE

Under this model, the customer orders a new reconditioned component delivered from one of QuantiServ’s six reconditioning centers. Once the customer has installed the component in his engine, the old part is returned to one of QuantiServ’s reconditioning locations. In this, the customer enjoys maximum flexibility because the old part does not need to be returned to the same reconditioning center from where the reconditioned part is coming from. This means that the customer can pick up and return parts to and from any of the locations where QuantiServ has reconditioning centers.

No other company in this industry offers so much flexibility!

<table>
<thead>
<tr>
<th>Reconditioning centre</th>
<th>Closest ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athens, Greece</td>
<td>GRPIR, GRATH</td>
</tr>
<tr>
<td>Dubai, UAE</td>
<td>AEDXB, AEFJR, AEJEA, AEKLF, AEAUH</td>
</tr>
<tr>
<td>Genoa, Italy</td>
<td>ITGOA*, ITSPE, ITSVN, ITLV, FRMRS</td>
</tr>
<tr>
<td>Kruiningen, Netherlands</td>
<td>NLAMS, NLRTM*, DEHAM, DEBRV, BEANR*, BEGNE, BEZEE</td>
</tr>
<tr>
<td>Shanghai, China</td>
<td>CNWGG, CNYAN, CNWUS, CNINGB, CNNTG, CNUJA, CNZOS</td>
</tr>
<tr>
<td>Singapore</td>
<td>SGSIN*, SGSCT*, MYJHB, MYTPP</td>
</tr>
<tr>
<td>Vancouver, Canada</td>
<td>CAVAN, CAVIC, CADEL, USSEA</td>
</tr>
</tbody>
</table>

*Served by our truck at least twice a week*
RECONDITIONING CUSTOMER’S OWN COMPONENT

Under this model, the customer sends his own part to one of the QuantiServ reconditioning centres where it undergoes professional reconditioning, after which the same part will be returned to the customer.

This model gives benefits and control for IMO regulated components which are registered in the ship’s technical file.

Every component that we receive for reconditioning at any of our six reconditioning centres will be given an individual number and will be entered into our database. This means that we offer full component traceability to our customers. We can keep customers updated about how long individual parts last, about specific wear rates and let them know how often a given component has undergone reconditioning with us already.
CHOOSING QUANTISERV AS YOUR GLOBAL RECONDITIONING PARTNER OFFERS MANY IMPORTANT ADVANTAGES

- Guaranteed quality and reliability
- A global network of reconditioning centres. Parts can be picked up and returned to any of the six reconditioning centres in Asia, Europe and North America
- QuantiServ has more reconditioned parts in stock than anyone else
- Fleet-wide reconditioning agreements at very attractive prices
- Six-month warranty on workmanship and materials supplied by QuantiServ

- Extended warranty up to two years for selected materials and solutions
- Reconditioning is a green solution for engine maintenance.

Two Years Warranty on QS50K™ pistons!
In-Situ Machining
Whenever a worn-out or damaged machinery component is too large to be brought to a machine shop, or when doing so involves too much dismantling work and thus is too time consuming and costly, then the solution is to bring the machine tools to the site. This is what in-situ machining is all about. In twelve locations across the globe we have highly trained engineers who are able to respond and travel to a site within hours.

Mobile Teams
QuantiServ offers an on-board service concept specializing in performing auxiliary engine major overhauls during the voyage. The concept is known by its industry standard name, Mobile Teams. The Mobile Teams mostly perform auxiliary engine major overhauls of all brands and models on the market. Our Mobile Teams have complete tool sets for all brands’ major overhaul at their disposal. Accordingly, no parts need to be sent ashore for machining. Service based on the customer’s swing set parts is also one of the standard operating procedures.

Epoxy Resins
Our resin engineers and technicians are able to carry out virtually any epoxy resin grouting work. Our regular customers include new building and repair ship yards, refineries and various EP contractors.

Metal Stitching and Specialized Welding
QuantiServ specializes in the repair of broken machinery components. Our technicians are often able to repair even very badly broken parts, either by welding or by metal-stitching. Welding is applicable to parts that are made of steel. Metal stitching can be used on a variety of materials, such as cast iron, cast steel and many non-ferrous metals.

Dry Docking Support
QuantiServ provides seasoned and straight forward dry-docking support in Asia and the Middle East. Bulkers, cruise & ferry vessels, container ships, tankers, drill rigs, support vessels... You own or operate the vessel and QuantiServ helps you schedule, plan, supervise and execute your dry docking in an expedited and cost-effective manner.

QuantiServ has site offices and service stations in major Asian ports, and workshops in Dubai, Singapore and Shanghai that can aid you in your dry-docking operations. QuantiServ has the technical and practical know-how for all shipboard mechanical, electrical and automation systems regardless of the manufacturer or brand.
GLOBAL PRESENCE
15 locations