

Exhaust Valves



Parts Development Based on Know-How, Technology and Experience

For MaK Marine Engines

Original MaK Premium Exhaust Valves

- Optimised Lifetime
- Excellent Reliability
- Short Delivery Time
- Excellent Quality
- Low Total Cost

■ Optimised Lifetime

MaK Premium Exhaust Valves for HFO operation provide exceptional service life. MaK valves for the new engine series typically operate with a TBO of 15,000h, if MaK's Instructions for Heavy Fuel Operation are followed. Because of the wear resistance of the facing material, MaK Premium Exhaust Valves may be ground three times or more. This makes the hot temperature corrosion at the bottom of the valve the life-limiting factor. In connection with general overhaul we have reassembled Original MaK Premium Exhaust Valves whose general condition permitted further operation after 30,000 h.



On the left you see a Premium Exhaust Valve that has been partially cleaned. Please note that the face is still in excellent condition after 15,000h. The fuel used was IF380. In comparison on the right you see a new Premium Exhaust Valve.

■ Excellent Reliability

MaK Premium Exhaust Valves are extremely reliable. Our manufacturing and testing processes ensure that. Continuous improvement of our manufacturing processes leads to continuously decreasing very low failures due to manufacturing or material defects.

■ Short Delivery Time

MaK Valves are usually shipped within 24h after the order has been placed, as are most MaK Original Spare Parts, to best serve our customers.

Parts News



Exhaust Valves



MaK Premium Exhaust Valves provide a welded facing on the seat

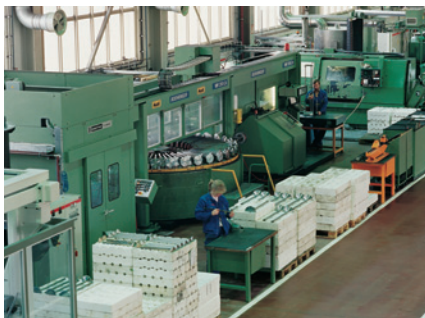
The highly automated valve manufacturing area

■ Excellent Quality

MaK Premium Exhaust Valves are manufactured and tested using sophisticated materials and processes to ensure a superior product that provides long component life for our customers. We face the Premium Exhaust Valve with Colmonoy 6, which is a Chrome-Nickel alloy. This material is the most heat and corrosion resistant available today for use as a valve facing material. Its use results in longer life for the valve. In the manufacturing process the face is mechanically undercut with a groove. Powdered Colmonoy is then carefully welded to the valve using a plasma welding process designed by MaK engineers. This process ensures complete fusion and bonding to the parent material. Every valve is then tested using a thermic process that is more severe than the condition encountered during engine operation. Additionally, we use feedback from the field for continuous improvement.

■ Low Total Cost

We aim to provide the customer with the longest life valves and thus the lowest operating costs per hour. Less will be spent on replacement valves, and less on labour for replacement and grinding of faces and seats. Equally important will be less downtime.



MaK Valves are World-Class High-Tech Products

► **For quotations or orders please contact your local MaK Service Organization.**

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**For more information please visit our website:
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Leaflet No. 410 · 09.08 · e · L+S · VM3

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