

**Reverse engineering** for all brands



# Spare parts for rotating equipment and valves

## Fast delivery service for castings and machined components

You are in urgent need of a spare part to keep your installation running. But your supplier no longer stocks the original part. Or you find the delivery time you are given too long? Or you wish to replace parts with new parts of improved structural or hydraulic design or higher-grade materials. In all these cases, KSB is your partner of choice.

### Perfect reproductions

Whether the part to be replaced is a turned part, a casting, a milled or welded component: KSB manufactures spare parts irrespective of make. All you have to do is give us the exact dimensions or a sample of the part to be replaced. Even badly worn parts can often be reconstructed. Pumps for water applications or boiler feed pumps in particular can benefit from retrofit solutions from KSB Engineering Services. We will supply an exact copy, finish-machined and of the proven KSB quality. And, being a KTA-approved (Nuclear Engineering Committee) manufacturer and a qualified SCC<sup>p</sup> (Safety Certificate Contractor), you can be sure the parts we manufacture meet the highest standards, in addition to fulfilling the usual certification (DIN EN ISO 9001).

### Manufacturing programme

Bodies, casings, impellers, shafts, shaft protecting sleeves, diffusers, casing wear rings, covers, bearing brackets, fan impellers, propellers, bearing end plates (motor), wedges, bonnets, seat rings, valve plugs and discs, stems, pumps and valves manufactured as replacements – just to name some examples.

### Your benefits

- Short delivery times
- Replacements for original parts that are no longer available
- Longer service lives thanks to upgraded design, higher-quality materials or KSB's special materials
- Improved efficiency
- New operating point possible

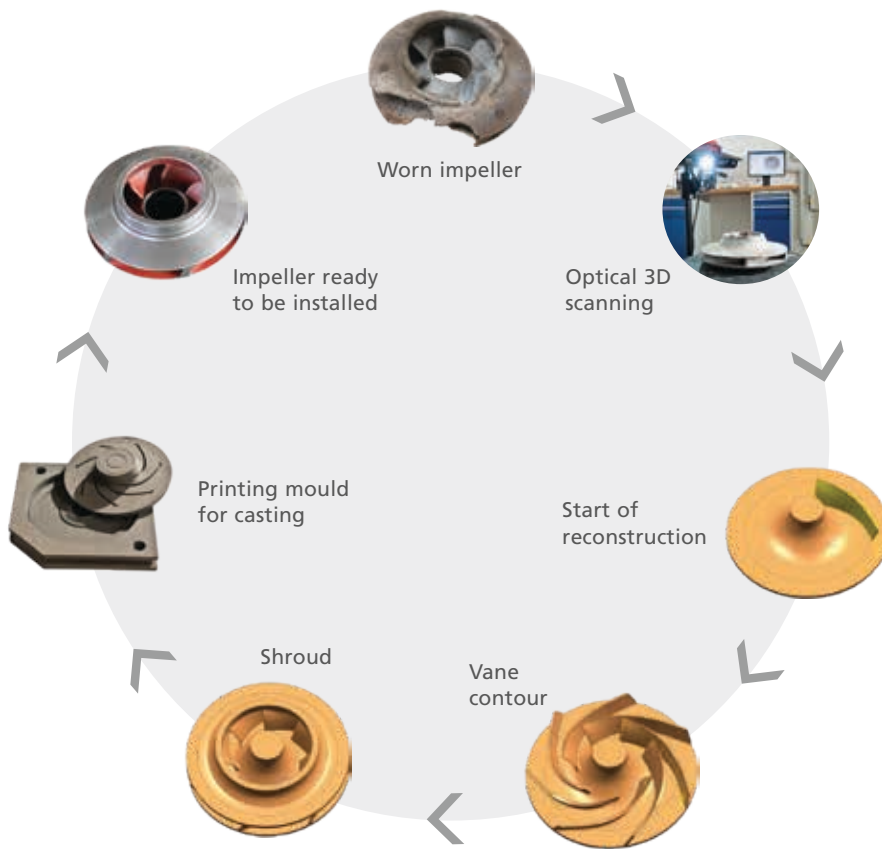
We use reverse engineering to reconstruct castings or turned parts.



# Reconstruction and optimisation – the KSB process

All we need for fast and high-quality manufacturing of spare parts are the original dimensions or a sample of the part to be replaced. We can use the dimensions or measure the sample to create a 3D model – KSB employs the digital CAD reconstruction method for destroyed or worn components. A printing

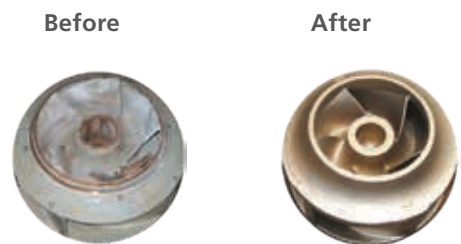
mould is produced using the 3D data, and then the part is cast and machined. Higher-grade materials result in longer service lives. So we offer a wide range: from standard materials like cast iron to bronze to stainless steels.



## Rapid spare parts manufacturing prevents downtimes

Manufacture of a bronze impeller

	Working days
1. Measuring original part	2 days
2. Preparing a 3D design	3 days
3. Producing mould segments and cores	3 days
4. Casting process	3 days
5. Fettling and cleaning	4 days
6. Finish-machining of parts	4 days
<b>Parts are ready for delivery after 19 working days</b>	





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