

# Engine valves

Suitable for: trucks and buses

replaces  
Multibrand



Engine valves control the gas exchange in internal combustion engines. With the help of the valves, the inflow of fresh air and the discharge of exhaust gases can be regulated at specific times.

Intake and exhaust valves are alternately pressed downwards by the rocker arm and open and close the combustion chamber during the charge cycle of the engine. For each cylinder there is at least one intake and one exhaust valve.

During the compression and combustion cycle, the valves seal off the combustion chamber. At maximum engine speed, the valves are opened and closed more than 50 times per second.

The absorbed heat is transferred quickly to the valve seat and valve guide. Compensation for the varying thermal expansion of the components requires a minimum free travel (valve clearance) of approx. 0.2 mm.

DT® Spare Parts brand engine valves are exposed to very high temperatures of above 1000 °C and are subjected to

pressure and stress. They are therefore made of heat and scaling resistant, highalloy steels. Because of the better thermal conductivity and thermal expansion coefficient, stems to be used in high-compression engines are constructed from bimetal.

In order to ensure the perfect interaction of valve seat and valve guide, the valves are manufactured to very narrow tolerance ranges, as well as surface finishes. The sealing surface of the valve plate is designed in various degree values (e.g. 25°, 30°, 45°), depending on the type.

To ensure a perfect seal between the valve seat rings and valve plate, both components are perfectly adapted to each other by hand after installation, using a valve grinding compound. The durability of the valves is ensured by the additionally tempered areas of the stem and the valve plate.

By means of a special process, the valve is tested to 100% for cracks.

In addition to engine valves, the comprehensive DT® range includes all matching valve seat rings, valve guides, valve stem seals and valve springs.

#### Construction of engine valves

1. valve stem
2. valve plates

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## DT Spare Parts

The brand DT Spare Parts from Germany provides a complete range of vehicle parts and accessories with a 24 month guarantee – no matter whether for trucks, trailers, buses, transporters or further applications, e.g. cars, agricultural vehicles, construction vehicles, marine or industrial applications. The guaranteed brand quality is achieved through the consistent product optimisation and relentless quality assurance within the framework of the Diesel Technic Quality System (DTQS).

More info: [www.dtqs.de](http://www.dtqs.de)