

Function

Piston rings fulfil three important functions in the running of an engine:

- Sealing off the combustion chamber from the crankcase
- Limiting and controlling oil consumption
- Dissipating the heat that is absorbed by the piston in combustion away to the cooled cylinder wall

A general distinction is made between compression rings and oil control rings.

Compression rings

These rings perform the sealing function and they dissipate heat to the cylinder wall. They also help to control the amount of lubricating oil that is present. The shape of their contact surfaces is of decisive importance for this. Some of the rings that are used have slightly bevelled contact surfaces or contact surfaces that are symmetrically or asymmetrically convex.

Oil control rings

They control and limit the amount of oil that is present. They scrape excess lubricating oil off the cylinder wall and return it to the crankcase. Together with the compression rings, they serve the purpose of ensuring that a film of oil provides sufficient lubrication for the piston and the rings. If not enough oil is scraped off, the result is increased oil consumption.

