



Articulated piston for Volvo/Scania

Situation

The development of more efficient engines with high engine output per litre, low fuel consumption and low pollutant emission has required higher and higher combustion pressures and temperatures in the combustion chamber. This has also strongly influenced the design of the piston. For especially high mechanic and thermic strains, the two-part articulated piston was built.

This piston is designed for combustion pressures of over 200 bar and mileages of over one million kilometres.

Function

The piston crown, predominantly made of forged or cast-steel, takes on the sealing function together with the piston rings. The gas forces are also transmitted to the crank mechanism via the piston crown.

The piston skirt takes over and transfers the lateral forces to the cylinder wall. It is flexibly connected to the piston crown by the piston pin.



Articulated pistons in the KS product range:

Manufacturer	Engine	Diameter	KS No.
VOLVO	D 12 A	131	40 265 600
VOLVO	TD 102	120,65	92 411 600
VOLVO	TD/THD 102	120,65	94 985 600
VOLVO	TD 123	130,175	90 870 601
VOLVO	D 12 B/C/D	131	40 338 600*
SCANIA	DC 12/16, DSC 12/16, DT 12	127	40 368 600*
SCANIA	DC 12/16, DSC 12/16, DT 12	127	40 670 600*

* in process

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The steel piston crown guarantees minimum wear. The reduced clearance of the top land combined with the steel-guided rings enables a constantly low oil consumption. Longer service life and favourable exhaust emissions are the result.



Attention:

To guarantee perfect functionality, the top of the piston must be protected from corrosion.

A correct assembly of the two piston parts is ensured by a nib on the lower piston part. The piston pin can only be pushed in if both parts are assembled in such a manner that the nib fits correctly on the upper piston part (see image).

The piston pin circlip must be assembled with a special tong as usual, although it may be beneficial to assemble the piston pin circlip before assembling piston and connecting rod.

