

Title (en)  
RECIPROCATING COMPRESSOR

Title (de)  
HUBKOLBENKOMPRESSOR

Title (fr)  
COMPRESSEUR A PISTON ALTERNATIF

Publication  
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Application  
**EP 97900186 A 19970117**

Priority  
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Abstract (en)  
[origin: WO9831936A1] The invention relates to a compressor comprising at least one oil-free operated piston (5), which together with a cylinder insert (33) in each case delimits a ring gap open over the shared longitudinal section, wherein said ring gap allows for the leakage flow of the compressed medium. The piston (5) is coupled through a piston rod (42) to a support element (38) that can be movably guided in the direction of the piston's longitudinal axis (6) and is connected to a drive unit. The piston rod (42) interacts with the piston (5) and the support (38) via convex support areas (43) on each face of the piston rod, which allow for relative motion of the support element (38) in relation to the piston (5) perpendicular to the longitudinal axis (6). Accordingly, the piston (5) can be guided parallel in the cylinder insert (33) without being influenced by the vibrations of the drive elements. The piston (5) comprises a metallic base part (61) and a jacket (62) made of a plastic material which embodies the running surface of the piston (5). The cylinder (5) is made of a material the coefficient of thermal expansion of which at least almost corresponds to a resulting coefficient of thermal expansion of the materials constituting the base part (61) and jacket (62). According to the invention, the compressor is suitable in particular for the oil-free compression of a gas.

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