

Title (en)  
LIGHT-WEIGHT METAL PISTON

Publication  
**EP 0210649 A3 19870429 (DE)**

Application  
**EP 86110453 A 19860729**

Priority  
DE 3527447 A 19850731

Abstract (en)  
[origin: US4754731A] Light-metal piston for combustion engines, having a sleeve-like insert embedded therein and controlling its heat expansion and being formed of a metal of smaller heat expansion coefficient than the piston base material. The insert is arranged in the solid material of the piston crown and extends around the entire piston periphery. Behind the insert, the piston base material is self-contracted to form a gap delimited by the insert on one side. On at least one edge or one side, the insert is not covered by piston base material, i.e. it extends up to the piston surface, this occurring however only in certain segments and not along the entire piston periphery. In the other segments, the insert lies beneath the piston surface and is thus covered by piston base material. To the extent that the insert is exposed on the piston end face, it is provided with an edge zone covering the depth of the self-contraction gap.

IPC 1-7  
**F02F 3/04**

IPC 8 full level  
**F02F 3/04** (2006.01); **F02F 3/08** (2006.01)

CPC (source: EP KR US)  
**F02F 3/02** (2013.01 - KR); **F02F 3/045** (2013.01 - EP US); **F02F 3/08** (2013.01 - EP US); **F05C 2201/0448** (2013.01 - EP US); **F05C 2251/042** (2013.01 - EP US)

Citation (search report)  
• [A] CH 346068 A 19600430 - FONDERIE TECH DE VITRY SUR SEI [FR]  
• [A] DE 630440 C 19360528 - ELEKTRONMETALL GMBH  
• [A] GB 530570 A 19401216 - FRANK HUNTER CLAYTON, et al  
• [A] GB 407478 A 19340322 - KARL FRIEDRICH WAGNER

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EP0952326A3; US6240828B1; WO9205355A1

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**EP 0210649 A2 19870204; EP 0210649 A3 19870429; EP 0210649 B1 19891220**; AT E48895 T1 19900115; BR 8603617 A 19870310; DE 3527447 A1 19870212; DE 3667703 D1 19900125; JP S6241953 A 19870223; KR 870001392 A 19870313; US 4754731 A 19880705

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