

Title (en)  
Steel piston

Title (de)  
Stahlkolben

Title (fr)  
Piston en acier

Publication  
**EP 1180592 A3 20020911 (DE)**

Application  
**EP 01117240 A 20010717**

Priority  
DE 10040486 A 20000818

Abstract (en)  
[origin: EP1180592A2] The piston comprises a base section (1) which with an annular section (3) forms a cooling passage to which is supplied cooling medium via a hole. After the final machining of the piston at least one additional opening exists between the base section and annular section and is especially an encircling gap (6). The gap is created through the attachment and shape of the annular section with regard to the base section. The annular section is joined to the base section by a welding method. A protrusion (5) is formed on at least the annular section and orientated in the direction of the base section, forming with the wall of the base section the additional gap.

IPC 1-7  
**F02F 3/00; F02F 3/22**

IPC 8 full level  
**F02F 3/00** (2006.01)

CPC (source: EP)  
**F02F 3/003** (2013.01); **F05C 2201/0448** (2013.01)

Citation (search report)  
• [DA] EP 0804680 B1 20000412 - KS KOLBENSCHMIDT GMBH [DE]  
• [DA] DE 19846152 A1 20000413 - MAHLE GMBH [DE]  
• [DA] DE 3643039 A1 19880630 - MAHLE GMBH [DE]

Cited by  
CN106662035A; US11162453B2; US10337450B2; WO2012083929A3; WO2016001379A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1180592 A2 20020220; EP 1180592 A3 20020911; EP 1180592 B1 20060315**; DE 10040486 A1 20020307; DE 10040486 C2 20021031;  
DE 50109197 D1 20060511

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