

Title (en)  
Vacuum pump

Title (de)  
Vakuumpumpe

Title (fr)  
Pompe à vide

Publication  
**EP 1890040 B1 20120627 (DE)**

Application  
**EP 07022290 A 20031112**

Priority  
• EP 03779691 A 20031112  
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Abstract (en)  
[origin: WO2004044431A2] The invention concerns a vacuum pump designed in particular for motor vehicle braking power amplifiers, the pump being normally driven by an internal combustion engine of the vehicle, in a ( front ) rotational direction, the pump including a device for limiting damage resulting from rotations in the opposite direction.

IPC 8 full level  
**F04C 18/344** (2006.01); **F04C 18/46** (2006.01); **F04C 28/04** (2006.01); **F04C 28/26** (2006.01); **F04C 28/28** (2006.01); **F04C 29/00** (2006.01); **F04C 29/12** (2006.01)

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Cited by  
DE102016202426A1; DE102016207123A1; DE102009016048A1; DE102016207115A1; DE102016122903A1; DE102009016048B4;  
WO2015101904A1; US11346343B2; US11306718B2; US8469684B2; US9017051B2

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DOCDB simple family (publication)  
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DOCDB simple family (application)  
**DE 0303747 W 20031112**; AU 2003287863 A 20031112; DE 10393279 T 20031112; EP 03779691 A 20031112; EP 07022290 A 20031112