

Title (en)  
Pump and method of manufacturing same

Title (de)  
Pumpe und ihr Herstellungsverfahren

Title (fr)  
Pompe et sa méthode de fabrication

Publication  
**EP 1253320 B1 20060208 (EN)**

Application  
**EP 02008979 A 20020423**

Priority  
JP 2001125904 A 20010424

Abstract (en)  
[origin: EP1253320A2] A compact pump has a pump chamber, inlet and outlet channels communicating with the pump chamber, and a pair of check valve units between the pump chamber and the inlet and outlet channels. Each check valve unit has a thin film check valve membrane, and a check valve body with a channel opened and closed by the check valve membrane due to a pressure difference. <IMAGE>

IPC 8 full level  
**F04B 43/00** (2006.01); **F04B 43/04** (2006.01); **F04B 53/10** (2006.01)

CPC (source: EP KR US)  
**F04B 43/00** (2013.01 - KR); **F04B 43/046** (2013.01 - EP US); **F04B 53/1062** (2013.01 - EP US)

Cited by  
DE10242110A1; EP1555469A1; US7284572B2; WO2023092934A1

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DOCDB simple family (publication)  
**EP 1253320 A2 20021030; EP 1253320 A3 20040204; EP 1253320 B1 20060208**; CN 1212476 C 20050727; CN 1382909 A 20021204; DE 60209054 D1 20060420; DE 60209054 T2 20060831; HK 1051061 A1 20030718; HK 1051061 B 20060825; KR 100494262 B1 20050613; KR 20020082800 A 20021031; TW 561223 B 20031111; US 2003002995 A1 20030102

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**EP 02008979 A 20020423**; CN 02118459 A 20020424; DE 60209054 T 20020423; HK 03101906 A 20030314; KR 20020022511 A 20020424; TW 91107782 A 20020416; US 12753502 A 20020423