

Title (en)
Vacuum pump

Title (de)
Vakuumpumpe

Title (fr)
Pompe à vide

Publication
EP 1318308 A2 20030611 (EN)

Application
EP 02258145 A 20021127

Priority
JP 2001370627 A 20011204

Abstract (en)
A multiple cylinder (2) having a plurality of cylinders (4, 5) arranged concentrically and a rotor shaft (8) rotatably disposed on the center axis of the multiple cylinder are provided in a pump casing (1). Each of the cylinders that constitute the multiple cylinder has a mounting portion (10, 11), through which the cylinders are integrally fixed to the rotor shaft. <IMAGE>

IPC 1-7
F04D 19/04; **F04D 29/26**

IPC 8 full level
F04D 19/04 (2006.01); **F04D 29/26** (2006.01)

CPC (source: EP KR US)
F04D 19/04 (2013.01 - KR); **F04D 19/044** (2013.01 - EP US); **F04D 19/046** (2013.01 - EP US); **F04D 29/266** (2013.01 - EP US)

Cited by
EP1666730A4; CN103562554A; EP2722528A4; US7390164B2; WO2020120955A1; EP2722528B1

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EP 1318308 A2 20030611; **EP 1318308 A3 20031203**; CN 1429994 A 20030716; JP 2003172291 A 20030620; KR 20030045597 A 20030611; TW 200300819 A 20030616; US 2003103847 A1 20030605

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EP 02258145 A 20021127; CN 02154776 A 20021204; JP 2001370627 A 20011204; KR 20020073978 A 20021126; TW 91133405 A 20021114; US 30881902 A 20021203