

Title (en)

Apparatus with evacuable chamber

Title (de)

Gerät mit evakuierbarer Kammer

Title (fr)

Appareil avec boîtier pouvant être mis à vide

Publication

EP 1422423 B2 20160120 (DE)

Application

EP 03029746 A 19990327

Priority

- DE 19823270 A 19980526
- DE 19901340 A 19990115
- EP 99917896 A 19990327

Abstract (en)

[origin: DE19901340A1] The invention relates to a frictional vacuum pump (1) with a chassis (5), a stator (3), a rotor (4) and a housing. All functional elements of the pump are assembled in a single unit (22) that is in turn inserted into a housing (19, 55) which is adapted to the application. This makes it possible to exclude additional connecting housings and enables optimal conductance situations.

IPC 8 full level

F04D 19/04 (2006.01); **F04D 17/16** (2006.01); **F04D 29/60** (2006.01)

CPC (source: EP KR)

F04D 17/168 (2013.01 - EP); **F04D 19/04** (2013.01 - EP KR); **F04D 29/602** (2013.01 - EP)

Citation (opposition)

Opponent :

- US 5733104 A 19980331 - CONRAD ARMIN [DE], et al
- US 5722819 A 19980303 - BROISIN JEAN-CLAUDE [FR], et al
- DE 2442614 A1 19760318 - SIEMENS AG
- DE 69623700 T2 20030731 - ALCATEL SA [FR]

Cited by

US7811065B2; US8757987B2; DE202008017530U1; DE102007010068A1; US8529218B2; US8858188B2; DE102007010068B4

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 19901340 A1 19991209; **DE 19901340 B4 20160324**; EP 1422423 A1 20040526; EP 1422423 B1 20051005; EP 1422423 B2 20160120; JP 2009121491 A 20090604; JP 5069264 B2 20121107; KR 100613957 B1 20060818; KR 20010043815 A 20010525

DOCDB simple family (application)

DE 19901340 A 19990115; EP 03029746 A 19990327; JP 2009059969 A 20090312; KR 20007013247 A 20001124