

Title (en)  
VACUUM PUMP

Title (de)  
VAKUUMPUMPE

Title (fr)  
POMPE À VIDE

Publication  
**EP 2440788 B1 20170118 (DE)**

Application  
**EP 10723116 A 20100607**

Priority  
• EP 2010057899 W 20100607  
• DE 102009024336 A 20090609

Abstract (en)  
[origin: WO2010142631A2] The invention relates to a vacuum pump comprising pump elements (14) in a suction chamber (12). One of the pump elements (14) is driven by an electric motor (24). A frequency converter (30) is provided for changing the rotational speed of the electric motor (24). The frequency converter (30) is arranged in a frequency converter housing (32) connected directly to the pump housing (10). An air cooler (34) and a liquid cooler (36) are arranged inside the frequency converter housing (32), for cooling the frequency converter (30).

IPC 8 full level  
**F04C 18/16** (2006.01); **F04C 29/04** (2006.01)

CPC (source: EP KR US)  
**F04C 18/16** (2013.01 - KR); **F04C 25/02** (2013.01 - KR); **F04C 29/047** (2013.01 - EP KR US); **F04C 18/16** (2013.01 - EP US); **F04C 2220/10** (2013.01 - EP KR US); **F04C 2240/30** (2013.01 - EP KR US); **F04C 2240/40** (2013.01 - KR); **F04C 2240/808** (2013.01 - EP KR US)

Citation (examination)  
• EP 0836008 A2 19980415 - VARIAN SPA [IT]  
• WO 2008062598 A1 20080529 - EDWARDS JAPAN LTD [JP], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2010142631 A2 20101216; WO 2010142631 A3 20110728**; CN 102450115 A 20120509; CN 102450115 B 20150715; DE 102009024336 A1 20101223; EP 2440788 A2 20120418; EP 2440788 B1 20170118; JP 2012529590 A 20121122; JP 5756097 B2 20150729; KR 101740235 B1 20170608; KR 20120027052 A 20120320; TW 201104077 A 20110201; US 2012315165 A1 20121213; US 9234519 B2 20160112

DOCDB simple family (application)  
**EP 2010057899 W 20100607**; CN 201080023678 A 20100607; DE 102009024336 A 20090609; EP 10723116 A 20100607; JP 2012514436 A 20100607; KR 20127000675 A 20100607; TW 99117561 A 20100601; US 201013376691 A 20100607