

Title (en)  
VACUUM PUMP

Title (de)  
VAKUUMPUMPE

Title (fr)  
POMPE À VIDE

Publication  
**EP 4239197 A1 20230906 (EN)**

Application  
**EP 23154594 A 20230202**

Priority  
JP 2022018854 A 20220209

Abstract (en)  
A vacuum pump that can discharge particles contained in gas from a rotor chamber well is disclosed. The vacuum pump 1 includes: a pump casing 6 having a rotor chamber 5 therein; a pair of Roots rotors 8 disposed in the rotor chamber 5; and a pair of rotation shafts 9 supporting the pair of Roots rotors 8. The pump casing 6 has a gas inlet 12 and a gas outlet 13 communicating with the rotor chamber 5. A connection 25 between an inner wall 22 forming the rotor chamber 5 and an inner wall 23 forming the gas outlet 13 is located on or located more outwardly than a rotor center line CL extending through a center of rotation RC and a bottom dead center LP of each Roots rotor 8.

IPC 8 full level  
**F04C 18/12** (2006.01)

CPC (source: CN EP KR)  
**F04C 18/126** (2013.01 - EP KR); **F04C 25/02** (2013.01 - CN KR); **F04C 29/00** (2013.01 - CN); **F04C 2220/10** (2013.01 - KR); **F04C 2240/10** (2013.01 - KR); **F04C 2240/20** (2013.01 - CN KR); **F04C 2240/30** (2013.01 - KR); **F04C 2240/60** (2013.01 - KR); **F05B 2240/10** (2013.01 - KR); **F05B 2240/20** (2013.01 - KR); **F05B 2240/60** (2013.01 - KR)

Citation (applicant)  
JP 2010101321 A 20100506 - EDWARDS LTD

Citation (search report)  
• [XAY] US 2021140430 A1 20210513 - DREIFERT THOMAS [DE], et al  
• [YA] DE 3603818 A1 19870813 - MESSER GRIESHEIM GMBH [DE]  
• [A] DE 102013110091 B3 20150212 - PFEIFFER VACUUM GMBH [DE]  
• [A] JP S5891390 A 19830531 - KARIYA TOKUJI

Citation (third parties)  
Third party : Anonymous  
EP 2180188 A1 20100428 - EDWARDS LTD [GB]

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA

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KH MA MD TN

DOCDB simple family (publication)  
**EP 4239197 A1 20230906**; CN 116576110 A 20230811; JP 2023116194 A 20230822; KR 20230120576 A 20230817; TW 202346713 A 20231201

DOCDB simple family (application)  
**EP 23154594 A 20230202**; CN 202310073318 A 20230207; JP 2022018854 A 20220209; KR 20230013579 A 20230201; TW 112103694 A 20230202