

Title (en)
Screw vacuum pump

Title (de)
Schraubenvakuumpumpe

Title (fr)
Pompe à vide à vis

Publication
EP 2719899 A1 20140416 (DE)

Application
EP 14150358 A 20100413

Priority
• DE 102009017886 A 20090417
• EP 10713646 A 20100413

Abstract (en)
The vacuum pump has a pump housing (10) forming a suction chamber (12). Two screw-type rotors (14) are engaged with each other and arranged in the suction chamber. Multiple pressure relief openings (28) are arranged in a lateral wall (24) of the suction chamber. The pressure relief openings are connected with a pressure relief outlet (26). A pressure relief valve (34) is arranged in the pressure relief outlet. Breadth of one of the pressure relief openings in a longitudinal direction is smaller than or equal to a tooth width of one of the screw-type rotors.

Abstract (de)
Eine Schraubenvakuumpumpe, die insbesondere zur Verdichtung gegen Atmosphärendruck eingesetzt wird, weist einen in einem Pumpengehäuse (10) angeordneten Schöpfraum (12) auf. In dem Schöpfraum (12) sind zwei ineinander greifende Schraubenrotoren (14) angeordnet. Ferner ist ein Überdruckauslass (26) vorgesehen, der mehrere in einer Seitenwand (24) des Schöpfraums (12) angeordnete Überdrucköffnungen (28) aufweist.

IPC 8 full level
F04C 18/16 (2006.01); **F04C 25/02** (2006.01)

CPC (source: EP KR US)
F04C 18/16 (2013.01 - EP KR US); **F04C 25/02** (2013.01 - EP KR US); **F04C 28/26** (2013.01 - EP KR US); **F04C 29/124** (2013.01 - KR); **F04C 29/126** (2013.01 - EP KR US); **F04C 2250/10** (2013.01 - KR)

Citation (applicant)
DE 10046768 A1 20020411 - LEYBOLD VAKUUM GMBH [DE]

Citation (search report)
• [X] WO 2006099104 A2 20060921 - NOTIS ALAN [US]
• [X] DE 19800711 A1 19990729 - LANG HERMANN DIPL ING [DE]
• [X] JP S6165087 A 19860403 - HITACHI LTD
• [X] EP 0697523 A2 19960221 - DIAVAC LIMITED [JP]

Citation (third parties)
Third party :
• JP S6165087 A 19860403 - HITACHI LTD
• GB 384355 A 19321208 - FREDERICK CHARLES GREENFIELD
• WO 2006099104 A2 20060921 - NOTIS ALAN [US]
• US 3677664 A 19720718 - WYCLIFFE HENRYK, et al
• DE 10046768 A1 20020411 - LEYBOLD VAKUUM GMBH [DE]

Designated contracting state (EPC)
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)
DE 102009017886 A1 20101021; CN 102395793 A 20120328; CN 102395793 B 20150401; EP 2419640 A2 20120222; EP 2419640 B1 20140115; EP 2419640 B2 20170913; EP 2719899 A1 20140416; EP 2719899 B1 20170906; JP 2012524202 A 20121011; JP 5665847 B2 20150204; KR 101695319 B1 20170111; KR 20110136898 A 20111221; TW 201042153 A 20101201; TW 201546373 A 20151216; TW I513903 B 20151221; TW I589779 B 20170701; US 2012039737 A1 20120216; US 8602759 B2 20131210; WO 2010119038 A2 20101021; WO 2010119038 A3 20110623

DOCDB simple family (application)
DE 102009017886 A 20090417; CN 201080016680 A 20100413; EP 10713646 A 20100413; EP 14150358 A 20100413; EP 2010054842 W 20100413; JP 2012505148 A 20100413; KR 20117027054 A 20100413; TW 104126781 A 20100415; TW 99111726 A 20100415; US 201013264021 A 20100413