

Title (en)  
CARTRIDGE-TYPE VANE PUMP

Title (de)  
FLÜGELZELLENPUMPE VOM KARTUSCHENTYP

Title (fr)  
POMPE À PALETTES DE TYPE CARTOUCHE

Publication  
**EP 3330541 A1 20180606 (EN)**

Application  
**EP 16846358 A 20160908**

Priority  
• JP 2015185603 A 20150918  
• JP 2016076381 W 20160908

Abstract (en)  
A cartridge vane pump (100) includes a head pin (50) that penetrate through a cover (30), a cover-side side plate (10) and a cam ring (4) and that are fixed to an adapter (40). The head pin (50) has a shaft portion (51) that is fixed to the adapter (40) at a tip end thereof, and a restricting portion (52) that has a diameter larger than that of the shaft portion and being formed on a base end of the shaft portion (51). The cam ring (4), the cover (30), the cover-side side plate (10) and a body-side side plate (20) are held between the restricting portion (52) and the adapter (40).

IPC 8 full level  
**F04C 2/344** (2006.01); **F04C 15/00** (2006.01)

CPC (source: EP US)  
**F01C 21/108** (2013.01 - EP); **F04C 2/344** (2013.01 - EP US); **F04C 15/00** (2013.01 - US); **F04C 15/0057** (2013.01 - US);  
**F04C 15/0073** (2013.01 - EP); **F04C 18/067** (2013.01 - US)

Citation (search report)  
See references of WO 2017047487A1

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 RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3330541 A1 20180606**; CN 107923391 A 20180417; JP 2017057835 A 20170323; MX 2018003394 A 20180606;  
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