

Title (en)
Vacuum pump assembly

Title (de)
Vakuumpumpenanordnung

Title (fr)
Agencement de pompe à vide

Publication
EP 2913534 A3 20150909 (DE)

Application
EP 15152122 A 20150122

Priority
DE 102014102680 A 20140228

Abstract (en)
[origin: JP2015165134A] PROBLEM TO BE SOLVED: To provide a vacuum pump device and a connection element capable of ensuring simpler connection assembly of vacuum pumps with simpler structure at a low cost and ensuring highly reliable protection against distortion of connection elements.SOLUTION: A turbo molecular vacuum pump device comprises a vacuum pump 38 that includes one rotor, one stator, and one housing, the vacuum pump 38 is connectable to a vacuum chamber 40 via at least one connection element 18, during connection, the connection element 18 can be engaged with a pump flange provided in a pump housing and can be fixed to a counter flange 20 provided in the vacuum chamber 40, at least one tooth part 22 is provided on the connection element 18, and this tooth part 22 is pressed into the counter flange 20 or engaged with a storage recess provided in the counter flange 20 for protection against distortion when the connection element 18 is fixed to the counter flange 20.

IPC 8 full level
F04D 19/04 (2006.01); **F04D 29/60** (2006.01)

CPC (source: EP)
F04D 19/042 (2013.01); **F04D 29/601** (2013.01)

Citation (search report)
• [XAY] US 2005029417 A1 20050210 - SCHEPS RICHARD [CA], et al
• [XY] EP 2133581 A2 20091216 - PFEIFFER VACUUM GMBH [DE]
• [XY] EP 2290242 A2 20110302 - PFEIFFER VACUUM GMBH [DE]
• [X] EP 1517045 A2 20050323 - PFEIFFER VACUUM GMBH [DE]

Cited by
EP3171030A1

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 2913534 A2 20150902; EP 2913534 A3 20150909; EP 2913534 B1 20210519; DE 102014102680 A1 20150903; JP 2015165134 A 20150917

DOCDB simple family (application)
EP 15152122 A 20150122; DE 102014102680 A 20140228; JP 2015033586 A 20150224