

Title (en)

Vacuum pump with improved inlet geometry

Title (de)

Vakuumpumpe mit verbesserter Einlassgeometrie

Title (fr)

Pompe à vide avec géométrie d'admission perfectionnée

Publication

EP 2886870 B1 20171220 (DE)

Application

EP 14196002 A 20141203

Priority

DE 102013114290 A 20131218

Abstract (en)

[origin: US2015167679A1] A vacuum pump includes at least one vacuum pump stage having a housing with an inlet, and a rotor having a shaft, with the inlet being arranged radially to the shaft and widening in direction of the shaft.

IPC 8 full level

F04D 19/04 (2006.01); **F04D 29/52** (2006.01)

CPC (source: EP US)

F04D 17/168 (2013.01 - EP US); **F04D 19/042** (2013.01 - EP US); **F04D 19/044** (2013.01 - EP US); **F04D 29/4213** (2013.01 - EP US); **F04D 29/522** (2013.01 - EP US); **F04D 29/541** (2013.01 - US)

Citation (opposition)

Opponent : Leybold GmbH

- EP 1302667 A1 20030416 - BOC GROUP PLC [GB]
- EP 1243796 A2 20020925 - PFEIFFER VACUUM GMBH [DE]
- DE 102008024764 A1 20091126 - OERLIKON LEYBOLD VACUUM GMBH [DE]
- DE 202005019644 U1 20070426 - LEYBOLD VAKUUM GMBH [DE]
- JP S6146492 A 19860306 - MITSUWA SEIKI CO LTD
- DE 102011112689 A1 20130307 - PFEIFFER VACUUM GMBH [DE]
- JP 2013053627 A 20130321 - PFEIFFER VACUUM GMBH
- EP 2565463 A2 20130306 - PFEIFFER VACUUM GMBH [DE]
- EP 2385257 A2 20111109 - PFEIFFER VACUUM GMBH [DE]
- GB 2360066 A 20010912 - BOC GROUP PLC [GB]
- US 6435811 B1 20020820 - BEYER CHRISTIAN [DE], et al
- US 5707213 A 19980113 - CONRAD ARMIN [DE]
- DE 102009035332 A1 20110203 - PFEIFFER VACUUM GMBH [DE]
- EP 1759118 B2 20161005 - EDWARDS LTD [GB]
- US 6371735 B1 20020416 - GOODWIN DAVID JOHN [GB], et al
- DE 4331589 C2 20030626 - PFEIFFER VACUUM GMBH [DE]

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

DOCDB simple family (publication)

EP 2886870 A1 20150624; **EP 2886870 B1 20171220**; **EP 2886870 B2 20201223**; DE 102013114290 A1 20150618; JP 2015117697 A 20150625; JP 6118784 B2 20170419; US 2015167679 A1 20150618

DOCDB simple family (application)

EP 14196002 A 20141203; DE 102013114290 A 20131218; JP 2014246652 A 20141205; US 201414571355 A 20141216