

Title (en)  
VACUUM PUMP SCREW ROTOR

Title (de)  
VAKUUUMPUMPEN-SCHRAUBENROTOR

Title (fr)  
ROTOR À VIS DE POMPE À VIDE

Publication  
**EP 3507497 B1 20240417 (DE)**

Application  
**EP 17749704 A 20170808**

Priority  
• DE 102016216279 A 20160830  
• EP 2017070065 W 20170808

Abstract (en)  
[origin: CA3032345A1] The invention relates to a vacuum pump screw rotor, comprising at least two helical displacement elements (10, 12) on a rotor shaft. The at least two displacement elements (10, 12) have different slopes, but the slopes of each displacement element are constant. Furthermore, the displacement elements each have a helical recess, each having a contour that remains the same over its entire length. Hereby, a suction-side displacement element (10) has a recess having an asymmetrical contour, and a pressure-side displacement element (12) has a recess having a symmetrical contour.

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

CPC (source: EP KR US)

**F04C 18/16** (2013.01 - US); **F04C 18/18** (2013.01 - EP KR US); **F04C 25/02** (2013.01 - KR); **F04C 23/001** (2013.01 - US);  
**F04C 2210/1005** (2013.01 - KR); **F04C 2210/221** (2013.01 - KR); **F04C 2220/10** (2013.01 - KR); **F04C 2230/10** (2013.01 - KR US);  
**F04C 2240/20** (2013.01 - KR US); **F04C 2240/30** (2013.01 - KR); **F04C 2250/20** (2013.01 - KR US); **F05B 2210/12** (2013.01 - KR);  
**F05B 2210/16** (2013.01 - KR); **F05B 2230/10** (2013.01 - KR); **F05B 2240/20** (2013.01 - KR); **F05B 2280/1021** (2013.01 - KR);  
**F05B 2280/1073** (2013.01 - KR); **F05C 2201/021** (2013.01 - KR US); **F05C 2201/903** (2013.01 - KR US)

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)

**DE 102016216279 A1 20180301;** BR 112019002011 A2 20190514; CA 3032345 A1 20180308; CN 109642575 A 20190416;  
CN 109642575 B 20210226; EP 3507497 A1 20190710; EP 3507497 B1 20240417; JP 2019528400 A 20191010; JP 6983872 B2 20211217;  
KR 102390690 B1 20220426; KR 20190043138 A 20190425; US 11293435 B2 20220405; US 2019211822 A1 20190711;  
WO 2018041556 A1 20180308

DOCDB simple family (application)

**DE 102016216279 A 20160830;** BR 112019002011 A 20170808; CA 3032345 A 20170808; CN 201780051854 A 20170808;  
EP 17749704 A 20170808; EP 2017070065 W 20170808; JP 2019511599 A 20170808; KR 20197005814 A 20170808;  
US 201716326838 A 20170808