

Title (en)
PUMPING UNIT AND USE

Title (de)
PUMPEINHEIT UND VERWENDUNG

Title (fr)
GROUPE DE POMPAGE ET UTILISATION

Publication
EP 3607204 A1 20200212 (FR)

Application
EP 18712883 A 20180321

Priority
• FR 1753029 A 20170407
• EP 2018057211 W 20180321

Abstract (en)
[origin: WO2018184853A1] The invention relates to a pumping unit (1) comprising: a rough-vacuum pump (2) of the multi-stage dry pump type comprising at least four pumping stages (T1, T2, T3, T4, T5) mounted in series, characterized in that the pumping unit (1) comprises: a vacuum pump (3) of the two-stage Roots type comprising a first and a second pumping stage (B1, B2) mounted in series, the second pumping stage (B2) of the two-stage Roots type vacuum pump (3) being mounted in series with and upstream of a first pumping stage (T1) of the rough-vacuum pump (2) in the direction of flow of the gases that are to be pumped, the ratio of the flowrate generated by the first pumping stage (B1) of the two-stage Roots type vacuum pump (3) to the flowrate generated by the second pumping stage (B2) of the two-stage Roots type vacuum pump (3) being less than six, and the ratio of the flowrate generated by the second pumping stage at (B2) of the two-stage Roots type vacuum pump (3) to the flowrate generated by the first pumping stage (T1) of the rough-vacuum pump (2) being less than six. The present invention also relates to a use of the said pumping unit (1).

IPC 8 full level
F04C 23/00 (2006.01); **F04C 18/12** (2006.01); **F04C 25/02** (2006.01)

CPC (source: EP KR US)
F04C 18/126 (2013.01 - EP KR US); **F04C 23/001** (2013.01 - EP KR US); **F04C 25/02** (2013.01 - EP KR US); **F04C 2220/10** (2013.01 - US); **F04C 2220/12** (2013.01 - EP KR US); **F04C 2220/30** (2013.01 - EP KR US); **F04C 2270/185** (2013.01 - US); **F04C 2270/21** (2013.01 - EP KR); **F05B 2210/12** (2013.01 - KR)

Citation (search report)
See references of WO 2018184853A1

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)
WO 2018184853 A1 20181011; CN 110506163 A 20191126; CN 110506163 B 20210924; EP 3607204 A1 20200212; EP 3607204 B1 20210310; FR 3065040 A1 20181012; FR 3065040 B1 20190621; JP 2020513088 A 20200430; KR 102561996 B1 20230731; KR 20190132483 A 20191127; TW 201837310 A 20181016; TW I735764 B 20210811; US 11078910 B2 20210803; US 2020191147 A1 20200618

DOCDB simple family (application)
EP 2018057211 W 20180321; CN 201880023602 A 20180321; EP 18712883 A 20180321; FR 1753029 A 20170407; JP 2019554923 A 20180321; KR 20197032270 A 20180321; TW 107109998 A 20180323; US 201816500847 A 20180321