

Title (en)  
COOLANT PUMP FOR THE AUTOMOTIVE INDUSTRY

Title (de)  
KÜHLMITTELPUMPE FÜR DEN KFZ-BEREICH

Title (fr)  
POMPE À LIQUIDE DE REFROIDISSEMENT DESTINÉE AU SECTEUR DE L'AUTOMOBILE

Publication  
**EP 3371460 A1 20180912 (DE)**

Application  
**EP 16741314 A 20160721**

Priority  
• DE 102015119097 A 20151106  
• EP 2016067372 W 20160721

Abstract (en)  
[origin: WO2017076645A1] Coolant pumps for internal combustion engines having a drive shaft (18), having a coolant pump impeller (20) which is arranged at least rotationally conjointly on the drive shaft (18) and by means of which coolant can be delivered into a delivery duct (12) surrounding the coolant pump impeller (20), having an adjustable regulating slide (28) by means of which a throughflow cross section of a ring-shaped gap (30) between an outlet (32) of the coolant impeller (20) and the delivery duct (12) can be regulated, having a side channel pump (56) with a side channel pump impeller (46) which is arranged at least rotationally conjointly on the drive shaft (18), having a side channel (50) of the side channel pump (56), in which side channel a pressure can be generated as a result of rotation of the side channel pump impeller (46), having a pressure duct (72) via which an outlet (54) of the side channel (50) is fluidically connectable to a first pressure chamber (58) of the regulating slide (28), and having a valve (66) by means of which a throughflow cross section (70) of the pressure duct (72) can be closed and opened up, are known. To shorten the structural space thereof in particular axially, it is proposed that the coolant pump impeller (20) is formed in one piece with the side channel pump impeller (46), and the side channel (50) is formed in a first housing part (40) on which the regulating slide (28) is slidingly guided.

IPC 8 full level  
**F04D 5/00** (2006.01); **F04D 13/12** (2006.01); **F04D 15/00** (2006.01)

CPC (source: EP US)  
**F01P 5/10** (2013.01 - US); **F04D 5/002** (2013.01 - EP US); **F04D 13/12** (2013.01 - US); **F04D 15/0038** (2013.01 - EP US); **F01P 2003/001** (2013.01 - US); **F01P 2005/105** (2013.01 - US); **F05D 2270/64** (2013.01 - EP US)

Citation (search report)  
See references of WO 2017076524A1

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 2017076645 A1 20170511**; CN 108291550 A 20180717; CN 108291550 B 20210608; CN 108350886 A 20180731; CN 108350886 B 20200303; DE 102015119097 A1 20170511; DE 102015119097 B4 20190321; EP 3371460 A1 20180912; EP 3371460 B1 20191113; EP 3371461 A1 20180912; EP 3371461 B1 20191127; JP 2018530706 A 20181018; JP 2018537609 A 20181220; JP 6574311 B2 20190911; JP 6679718 B2 20200415; US 10508650 B2 20191217; US 10982676 B2 20210420; US 2018320692 A1 20181108; US 2018320695 A1 20181108; WO 2017076524 A1 20170511

DOCDB simple family (application)  
**EP 2016075076 W 20161019**; CN 201680063475 A 20161019; CN 201680064591 A 20160721; DE 102015119097 A 20151106; EP 16741314 A 20160721; EP 16782281 A 20161019; EP 2016067372 W 20160721; JP 2018519746 A 20160721; JP 2018522763 A 20161019; US 201615772813 A 20160721; US 201615772817 A 20161019