

Title (en)  
COOLANT CIRCUIT

Title (de)  
KÜHLMITTELKREISLAUF

Title (fr)  
CIRCUIT DE LIQUIDE DE REFROIDISSEMENT

Publication  
**EP 2427638 A1 20120314 (DE)**

Application  
**EP 10719914 A 20100504**

Priority  
• EP 2010002716 W 20100504  
• DE 102009020187 A 20090506

Abstract (en)  
[origin: WO2010127826A1] A coolant circuit, particularly a coolant circuit comprising a plurality of partial circuits 1, 2 and 3 of an internal combustion engine 11 having a main coolant circuit 1 and a heating circuit 2, and a coolant delivery pump 5 disposed at a rotating actuator 4, wherein the rotating actuator 4 comprises a rotary slide housing 20 having a plurality of connections 8a, 8b, 9a, 9b, 10a through which a coolant can flow, and a first and at least one second rotary slide 6 and 7 which is rotatably mounted in the rotary slide housing 20 and has at least one rotary slide flow opening 8, 9, 10 forming a flow path, and wherein the connections 8a, 8b, 9a, 9b, 10a can be brought into an at least partial overlap with the rotary slide openings 8, 9, 10 by a rotating movement of the respective rotary slide 6 and/or 7, wherein a first branch 1a of the main coolant circuit 1, which leads from the internal combustion engine 11 via a main cooler 12 to the main cooler connection 8b of the first rotary slide, can be controlled by the first rotary slide 6, and a second branch 1b of the main coolant circuit 1, which leads from an outlet 21 of the coolant delivery pump 5 to the internal combustion engine 11, can be controlled by the second rotary slide 7.

IPC 8 full level  
**F01P 7/14** (2006.01)

CPC (source: EP KR US)  
**F01P 3/20** (2013.01 - KR); **F01P 5/10** (2013.01 - US); **F01P 7/14** (2013.01 - EP KR US); **F04B 49/00** (2013.01 - US); **F16K 5/10** (2013.01 - US); **F01P 2037/02** (2013.01 - EP US); **F01P 2060/04** (2013.01 - EP US); **F01P 2060/08** (2013.01 - EP US)

Citation (search report)  
See references of WO 2010127826A1

Citation (examination)  
• WO 2008049624 A2 20080502 - AUDI AG [DE], et al  
• JP H1077837 A 19980324 - AISIN SEIKI, et al

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 SE SI SK SM TR

DOCDB simple family (publication)  
**DE 102009020187 A1 20101111**; **DE 102009020187 B4 20121108**; CN 102414415 A 20120411; CN 102414415 B 20140528; EP 2427638 A1 20120314; JP 2012526225 A 20121025; JP 5323255 B2 20131023; KR 101419104 B1 20140711; KR 20120024535 A 20120314; US 2012048217 A1 20120301; US 8757110 B2 20140624; WO 2010127826 A1 20101111

DOCDB simple family (application)  
**DE 102009020187 A 20090506**; CN 201080019602 A 20100504; EP 10719914 A 20100504; EP 2010002716 W 20100504; JP 2012508940 A 20100504; KR 20117021694 A 20100504; US 201013318863 A 20100504