

Title (en)

Device for cooling or heating a combustion engine

Title (de)

Vorrichtung zum Kühlen oder Erwärmen eines Verbrennungsmotors

Title (fr)

Dispositif de refroidissement ou de chauffage d'un moteur à combustion interne

Publication

EP 2108813 B1 20111026 (DE)

Application

EP 09156022 A 20090324

Priority

DE 102008018532 A 20080408

Abstract (en)

[origin: EP2108813A1] The device (12) has a cooling circuit (2) connected with an internal combustion engine in a heat conductive manner. The cooling circuit comprises a cooling circuit pump (3) for circulating a coolant in the cooling circuit. A pre-heating branch (7) is arranged parallel to the cooling circuit pump, and is connected with the cooling circuit. A bypass branch (13) comprises a bypass heat exchanger (17) and a bypass pump (16), where the bypass branch is connected with the pre-heating branch by a bypass adapter (14), and is connected with the cooling circuit by another bypass adapter (15).

IPC 8 full level

F01P 5/10 (2006.01); **F01P 7/16** (2006.01); **F02N 19/10** (2010.01)

CPC (source: EP)

F01P 7/165 (2013.01); **F02N 19/10** (2013.01); **F01P 2005/105** (2013.01); **F01P 2037/02** (2013.01); **F01P 2060/08** (2013.01); **F01P 2060/18** (2013.01); **F01P 2070/04** (2013.01)

Cited by

DE102014110633A1; US10407869B2; CN107313850A; EP3306113A4

Designated contracting state (EPC)

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 TR

DOCDB simple family (publication)

EP 2108813 A1 20091014; EP 2108813 B1 20111026; AT E530747 T1 20111115; DE 102008018532 A1 20091015

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