

Title (en)  
AXIAL FAN

Title (de)  
AXIALVENTILATOR

Title (fr)  
VENTILATEUR AXIAL

Publication  
**EP 2823184 A2 20150114 (DE)**

Application  
**EP 13711568 A 20130306**

Priority  
• DE 102012004617 A 20120306  
• EP 2013000649 W 20130306

Abstract (en)  
[origin: WO2013131641A2] The axial fan has a motor (1), on the rotor side of which an impeller is fixed, wherein fan blades (24) with a front and a rear edge (26, 27) project from the hub of said impeller. The motor (1) is fixed to a housing (3) by means of a suspension (2). The suspension has a bracing part (4 to 8) made of a flat material, said bracing part connecting the motor (1) to the housing (3) and being arranged in an approximately vertical manner in the flow direction of the air. The aim of the invention is to design the axial fan such that the axial fan has a high overall efficiency and only a low flow resistance. This is achieved in that the bracing part (4 to 8) is provided with at least one recess (7) over a part of the length of the bracing part. The flow resistance due to the bracing part is minimized by means of the recess. The recess reduces the weight of the axial fan. The noise emitted by the axial fan is significantly reduced because the size of vortex-related flow separation regions is significantly reduced by means of the recess.

IPC 8 full level  
**F04D 29/38** (2006.01); **F04D 29/54** (2006.01); **F04D 29/64** (2006.01)

CPC (source: CN EP RU US)  
**F04D 19/002** (2013.01 - US); **F04D 29/38** (2013.01 - RU); **F04D 29/384** (2013.01 - CN EP US); **F04D 29/542** (2013.01 - CN EP US); **F04D 29/644** (2013.01 - US); **F04D 29/646** (2013.01 - CN EP US); **F04D 29/666** (2013.01 - CN EP US); **F04D 29/667** (2013.01 - CN EP US); **F05D 2230/10** (2013.01 - CN EP US); **F05D 2230/51** (2013.01 - CN EP US); **F05D 2240/304** (2013.01 - CN EP US); **Y10T 29/49336** (2015.01 - EP 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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**DE 102012004617 A1 20130912**; BR 112014022131 A2 20170620; BR 112014022131 B1 20211109; CN 104302926 A 20150121; CN 104302926 B 20180130; EP 2823184 A2 20150114; EP 2823184 B1 20230510; ES 2949380 T3 20230928; JP 2015509567 A 20150330; RU 2014140100 A 20160427; RU 2626911 C2 20170802; SI 2823184 T1 20230929; US 10781818 B2 20200922; US 2015023791 A1 20150122; WO 2013131641 A2 20130912; WO 2013131641 A3 20131212

DOCDB simple family (application)  
**DE 102012004617 A 20120306**; BR 112014022131 A 20130306; CN 201380023650 A 20130306; EP 13711568 A 20130306; EP 2013000649 W 20130306; ES 13711568 T 20130306; JP 2014560270 A 20130306; RU 2014140100 A 20130306; SI 201332055 T 20130306; US 201314383542 A 20130306