

Title (en)  
Impeller for a radial fan and radial fan

Title (de)  
Rad für ein Radialgebläse und Radialgebläse

Title (fr)  
Turbine de ventilateur radial et ventilateur radial

Publication  
**EP 2058525 A1 20090513 (EN)**

Application  
**EP 07425710 A 20071112**

Priority  
EP 07425710 A 20071112

Abstract (en)  
An impeller (2) for a radial fan (1) adapted to rotate about a rotation axis (A) comprises a plurality of main blades (25) that are sequentially arranged about such rotation axis (A), and having radially innermost inlet ends (32) and radially outermost outlet ends (33). Each of the main blades (25) comprises a concave main blade first surface (26) and a convex main blade second surface (27) opposite the main blade first surface (26) and facing the main blade first surface of the successive main blade. The main blade first surfaces (26) define main blade arcs (PP) which comprise a first (PP1), a second (PP2), a third (PP3), and a fourth (PP4) main blade circle arcs that are radially arranged from the inside to the outside of the impeller (2), and having a first (R1), a second (R2), a third (R3), and a fourth (R4) main blade radii of curvature, respectively. The main blade radii of curvature (R1, R2, R3, R4) have ratios in the following ranges:  $R2/R1=1-1.1$ ;  $R3/R1=1.1-1.2$ ;  $R4/R1=1.2-1.5$ .

IPC 8 full level  
**F04D 29/28** (2006.01); **F04D 29/30** (2006.01)

CPC (source: EP)  
**F04D 29/281** (2013.01); **F04D 29/30** (2013.01)

Citation (applicant)  
• WO 2006013067 A2 20060209 - EBM PAPST LANDSHUT GMBH [DE], et al  
• EP 1744060 A2 20070117 - BOSCH ROBERT CORP [US], et al

Citation (search report)  
• [A] WO 0216777 A1 20020228 - TEXTRON AUTOMOTIVE CO INC [US], et al  
• [A] EP 1744060 A2 20070117 - BOSCH ROBERT CORP [US], et al  
• [A] US 2005028808 A1 20050210 - CHIANG CHAO CHENG [TW], et al  
• [A] WO 2004015275 A1 20040219 - SPAL SRL [IT], et al

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CN108953236A; CN112032103A; US2016161133A1; US10082305B2; EP3273066A1; EP3366929A1; JP2015135118A; DE102022003842A1; WO2023124700A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK RS

DOCDB simple family (publication)  
**EP 2058525 A1 20090513**; **EP 2058525 B1 20100428**; AT E466195 T1 20100515; DE 602007006209 D1 20100610; RU 2008144614 A 20100520; RU 2492363 C2 20130910

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