

Title (en)  
DIAGONAL FAN HAVING AN OPTIMISED DIAGONAL IMPELLER

Title (de)  
DIAGONALVENTILATOR MIT OPTIMIERTEM DIAGONALLAUFRAD

Title (fr)  
VENTILATEUR DIAGONAL ÉQUIPÉ D'UN ROTOR DIAGONAL OPTIMISÉ

Publication  
**EP 3821132 A1 20210519 (DE)**

Application  
**EP 19798270 A 20191104**

Priority

- DE 102018128821 A 20181116
- EP 2019080093 W 20191104

Abstract (en)  
[origin: CN209781249U] The utility model relates to a diagonal fan. The centrifugal fan comprises a motor (10) and a diagonal impeller (12) which can be driven by the motor (10) around a rotating shaft (RA), wherein the diagonal impeller (12) defines an air inlet (30) and an air outlet (31) and has a hub (35) and circumferentially distributed impeller blades (121) extending radially outward from the hub, the impeller blades are surrounded by a centrifugal ring (122) on the radial outer side. Wherein a flow angle  $\alpha_D$  formed by the centrifugal ring (122) with respect to the axis of rotation (RA) increases from the air inlet (30) to the air outlet (31) and a flow angle  $\alpha_N$  formed by the hub (35) with respect to the axis of rotation (RA) decreases from the air inlet (30) to the air outlet (31). Compared with an axial flow fan with the same structural size, the diagonal fan provided by the utility model has higher pressure under the condition that the efficiency is improved.

IPC 8 full level  
**F04D 17/06** (2006.01); **F04D 29/18** (2006.01); **F04D 29/32** (2006.01)

CPC (source: EP US)  
**F04D 17/06** (2013.01 - EP); **F04D 19/002** (2013.01 - US); **F04D 25/06** (2013.01 - US); **F04D 29/326** (2013.01 - EP);  
**F04D 29/329** (2013.01 - EP US); **F04D 29/386** (2013.01 - US); **F04D 29/541** (2013.01 - US); **F04D 29/183** (2013.01 - EP)

Citation (search report)  
See references of WO 2020099167A1

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

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DOCDB simple family (publication)  
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EP 3821132 A1 20210519; US 11542955 B2 20230103; US 2022049715 A1 20220217; WO 2020099167 A1 20200522

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**DE 102018128821 A 20181116**; CN 201920172751 U 20190131; CN 201980067351 A 20191104; EP 19798270 A 20191104;  
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