

Title (en)  
Ventilator unit

Title (de)  
Lüfterbaueinheit

Title (fr)  
Dispositif de ventilation

Publication  
**EP 2876305 A1 20150527 (DE)**

Application  
**EP 14187394 A 20141002**

Priority  
DE 102013223983 A 20131125

Abstract (en)  
[origin: US2015147170A1] The invention relates to a modular fan unit of a diagonal and/or axial fan. According to the invention, the modular fan unit has a housing that has been provided with an inlet opening and an outflow opening. The housing accommodates a fan, whereby the fan can be an axial fan or a radial fan. In any case, the fan conveys the air at least in the axial direction. The housing is divided perpendicularly to the middle axis (X-X) of the fan into at least two housing halves that are joined to each other, namely, the motor holding part and the air inlet part. The housing forms a chamber in which the blades of the fan are accommodated so as to rotate around the axis (X-X) of the fan. Moreover, the housing has a circumferential edge area in the vicinity of which the housing has a thickness B extending in the axis direction (X-X) of the fan. The motor holding part has a dimension R as the maximum extension in the edge area in the axis direction (X-X) of the fan (150). Moreover, the chamber has an extension in the axis direction (X-X) of the fan at the height of the dimension L, whereas the extension of the air inlet part in the axis direction (X-X) of the fan has a dimension T in the area of the chamber. By selecting a ratio of the dimension B to the dimension R with respect to the ratio of the dimension L to the dimension T within the range from 0.9 to 1.2, the noise emission of the fan during operation is minimized. As a result, no subsequent measures have to be taken to damp the noise emitted. Noise-damping layers that would increase the physical size of the modular fan unit are not necessary, as a result of which the outer diameter of the modular fan unit is kept to a minimum.

Abstract (de)  
Die Erfindung betrifft eine Lüfterbaueinheit eines Diagonal- und/oder Axiallüfters. Erfindungsgemäß weist die Lüfterbaueinheit ein mit einer Einlassöffnung und einer Ausströmöffnung versehenes Gehäuse auf. Das Gehäuse weist einen umlaufenden Randbereich auf, in dessen Bereich das Gehäuse eine in Achsrichtung (X-X) des Lüfters liegende Dicke B aufweist. Das Motorhalterungsteil weist ein Maß R als maximale Ausdehnung im Randbereich in Achsrichtung (X-X) auf. Weiterhin weist die Laufkammer eine Ausdehnung in Achsrichtung (X-X) in Höhe des Maßes L auf, während die Ausdehnung des Lufteinlassteils in Achsrichtung (X-X) im Bereich der Laufkammer ein Maß T aufweist. Durch die Wahl eines Verhältnisses von Maß B zu Maß R zu dem Verhältnis der Maße L zu T im Bereich von 0,9 bis 1,2 wird die Geräuschemission des Lüfters im Betrieb minimiert.

IPC 8 full level  
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Citation (applicant)  
• DE 202009017511 U1 20110505 - EBM PAPST Mulfingen GmbH & Co KG [DE]  
• US 8398365 B2 20130319 - HOPKINS LAWRENCE G [US]

Citation (search report)  
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• [XAI] JP 2007218150 A 20070830 - SUMITOMO HEAVY INDUSTRIES

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