

Title (en)  
Shroud and blower using the same

Title (de)  
Haube und Lüfter mit dieser Haube

Title (fr)  
Buse et ventilateur utilisant cette buse

Publication  
**EP 1624196 B1 20140326 (EN)**

Application  
**EP 05015433 A 20050715**

Priority  
JP 2004225830 A 20040802

Abstract (en)  
[origin: EP1624196A2] A shroud includes a ring portion (210) surrounding a radial outer rim of an axial flow fan (100) for blowing air, and an air introducing part (220), for introducing air to the ring portion (210), enlarged from the ring portion (210) towards upstream in the airflow. The fan is located opposite to a heat exchanger (1) positioned upstream of the fan (100) in the airflow, and a center of the ring portion (210) is eccentric with respect to a center of the air introducing part (220). In the shroud, an airflow regulating plate (221) protrudes toward an upstream side of the airflow and forms a circular arc shape concentric with the ring portion (210) within a larger-area part (220a) of the air introducing part (220), which is formed due to the eccentrically located ring portion (210). Therefore, the first noise component of fan rotation noise can be effectively reduced without reducing an air amount passing through a heat exchanger.

IPC 8 full level  
**F04D 29/66** (2006.01); **F04D 29/54** (2006.01)

CPC (source: EP)  
**F04D 29/541** (2013.01); **F04D 29/667** (2013.01)

Cited by  
US2015300238A1; US9810135B2; US10605261B2

Designated contracting state (EPC)  
DE FR IT

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**EP 1624196 A2 20060208; EP 1624196 A3 20120808; EP 1624196 B1 20140326**; CN 100404813 C 20080723; CN 1734071 A 20060215; JP 2006046113 A 20060216; JP 4380454 B2 20091209

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**EP 05015433 A 20050715**; CN 200510087590 A 20050728; JP 2004225830 A 20040802