

Title (en)  
Indoor unit and air-conditioner

Title (de)  
Innenraumeinheit und Klimaanlage

Title (fr)  
Unité intérieure et conditionneur d'air

Publication  
**EP 1243864 A3 20030102 (EN)**

Application  
**EP 02006380 A 20020321**

Priority  
• JP 2001084413 A 20010323  
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Abstract (en)  
[origin: EP1243864A2] In an indoor unit, when the fan diameter of a tangential fan (14) is taken to be D, and the width of the intake diaphragm provided on the upstream side of the inlet of an air duct (40) inside the casing is taken to be f,  $f/D$  is within the range of 0.002 to 0.003 ( $0.002 \leq f/D \leq 0.003$ ). In addition, when the width of the outlet of an air duct (40) formed between the outer peripheral surface (14a) of a tangential fan (14) and the air duct wall surface (41) of the casing is taken to be  $W_o$ ,  $W_o/D$  is 0.55 or less ( $W_o/D \leq 0.55$ ). In addition, when a line extending in the direction of flow along the upper surface that forms the discharge port serving as the air duct outlet in the casing is taken to be a, the stabilizer tongue end angle  $\alpha$ , which is formed between the surface of the stabilizer opposing tangential fan (14) and the extended line a, is within the range of 50 degrees to 60 degrees ( $50 \text{ degrees} \leq \alpha \leq 60 \text{ degrees}$ ). In addition, when the distance between the extended line a and a tangent b of the fan diameter D parallel to said extended line a is taken to be d,  $d/D$  is within the range of -0.2 to 0.2 ( $-0.2 \leq d/D \leq 0.2$ ). <IMAGE>

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Citation (search report)  
• [X] EP 0930472 A2 19990721 - MITSUBISHI ELECTRIC CORP [JP]  
• [X] US 5943878 A 19990831 - SMILEY III WILLIAM A [US], et al  
• [A] US 4014625 A 19770329 - YAMAMOTO TERUO  
• [X] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 03 29 March 1996 (1996-03-29)  
• [X] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 06 31 July 1995 (1995-07-31)  
• [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 13 5 February 2001 (2001-02-05)  
• [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04 31 August 2000 (2000-08-31)

Cited by  
CN111997936A; CN112253541A; EP4310404A4; CN107490064A; EP2203688A4; CN107490066A; CN103486661A; CN112432355A; EP2664799A1; EP3088806A4; CN114636197A; WO2009054588A1; WO2023236680A1; US9803340B2; US10443214B2

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