

Title (en)
PIEZOELECTRIC MICROBLOWER

Title (de)
PIEZOELEKTRISCHES MIKROGEBLÄSE

Title (fr)
MICROSOUFFLANTE PIÉZOÉLECTRIQUE

Publication
EP 2306019 A4 20141015 (EN)

Application
EP 09754572 A 20090514

Priority
• JP 2009058968 W 20090514
• JP 2008142250 A 20080530

Abstract (en)
[origin: EP2306019A1] The object is to provide a piezoelectric micro blower that makes it possible to transport a compressible fluid efficiently without using a check valve and to achieve an increase in the rate of flow. A blower body 1 includes a first wall 30 and a second wall 10. An opening 31 is formed at a part of the first wall 30 that faces an area of the center of the driver 50. An opening 11 is formed at a part of the second wall 10 that corresponds thereto. A center space 21 that is in communication with the openings 31 and 11 is formed between these walls. Besides the center space 21, inlet passages 22 through which the center space 21 is in communication with the outside are formed between these walls. Bottleneck portions 23 are formed at regions where the inlet passages 22 are connected to the center space 21. A driver 50 vibrates when a voltage is applied to a piezoelectric element 52. The wall 30 vibrates in a sympathetic manner as the driver 50 vibrates. As a result, a large pressure wave is generated from the first opening 31 in an upward direction. Air is forced out of the center space 21 through the second opening 11 to the outside due to the pressure wave. The bottleneck portions 23 reduce pressure energy loss, thereby increasing the rate of flow.

IPC 8 full level
F04B 45/047 (2006.01); **F04B 45/04** (2006.01)

CPC (source: EP US)
F04B 43/043 (2013.01 - EP US)

Citation (search report)
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• [A] WO 2007055136 A1 20070518 - NITTO KOHKI CO [JP], et al
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