

Title (en)
MINIATURE PNEUMATIC DEVICE

Title (de)
PNEUMATISCHE MINIATURVORRICHTUNG

Title (fr)
DISPOSITIF PNEUMATIQUE MINIATURE

Publication
EP 3321505 A1 20180516 (EN)

Application
EP 17200850 A 20171109

Priority
TW 105136553 A 20161110

Abstract (en)
A miniature pneumatic device (1) includes a miniature fluid control device (1A) and a miniature valve device (1B). The miniature fluid control device (1A) includes a gas inlet plate (11), a resonance plate (12), a piezoelectric actuator (13) and a gas collecting plate (16). A first chamber (121) is formed between the resonance plate (12) and the piezoelectric actuator (13). After a gas is fed into the gas inlet plate (11), the gas is transferred to the first chamber (121) through the resonance plate (12) and then transferred. Consequently, a pressure gradient is generated to continuously push the gas. The miniature valve device (1B) includes a valve film (17) and a gas outlet plate (18). After the gas is transferred from the miniature fluid control device (1A) to the miniature valve device (1B), the valve opening (170) of the valve film (17) is correspondingly opened or closed and the gas is transferred in one direction. Consequently, a pressure-collecting operation or a pressure-releasing operation is selectively performed.

IPC 8 full level
F04B 43/04 (2006.01); **F04B 45/047** (2006.01); **F04B 53/10** (2006.01)

CPC (source: EP US)
F04B 45/047 (2013.01 - EP US); **F04B 53/10** (2013.01 - EP)

Citation (search report)
• [I] US 2014377099 A1 20141225 - HSUEH TA-WEI [TW], et al
• [A] US 2016076530 A1 20160317 - CHEN SHIH-CHANG [TW], et al
• [A] US 2015071797 A1 20150312 - TAKEUCHI SUSUMU [JP]

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CN114810561A

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3321505 A1 20180516; EP 3321505 B1 20210407; JP 2018076865 A 20180517; JP 6829676 B2 20210210; TW 201817968 A 20180516; TW I676737 B 20191111

DOCDB simple family (application)
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