

Title (en)  
PIEZO-ELECTRIC COMPRESSOR WITH DISPLACEMENT AMPLIFIER

Title (de)  
PIEZO-ELEKTRISCHER KOMPRESSOR MIT VERDRÄNGUNGSVERSTÄRKER

Title (fr)  
COMPRESSEUR PIEZO-ELECTRIQUE AVEC AMPLIFICATEUR DE DEPLACEMENT

Publication  
**EP 1534955 A4 20110223 (EN)**

Application  
**EP 03794411 A 20030724**

Priority  
• SG 0300175 W 20030724  
• SG 200205376 A 20020904

Abstract (en)  
[origin: WO2004022972A1] A compressor (300) for successive suction and discharge of a compressible fluid, thereby increasing fluid pressure of the compressible fluid in a substantially closed chamber, the compressor (300) comprising: at least one piezoelectric element (22); a primary displacement member (46) coupled to the at least one piezoelectric element (22); a secondary displacement member (44) coupled to the piston (16); and a non-compressible fluid (45) disposed to fill a fixed predetermined volume between the primary displacement member (46) and the secondary displacement member (44); wherein electrical actuation of the piezoelectric element (22) is controllable to displace the primary displacement member (46) by a predetermined distance, being coupled via the non-compressible fluid (45) to displace the secondary displacement member (44) by an amplified distance based upon the fixed predetermined volume.

IPC 1-7  
**F04B 35/04**; B06B 1/06

IPC 8 full level  
**F04B 17/00** (2006.01); **F04B 35/00** (2006.01); **F04B 35/04** (2006.01)

CPC (source: EP US)  
**F04B 17/003** (2013.01 - EP US); **F04B 35/00** (2013.01 - EP US); **F04B 35/04** (2013.01 - EP US)

Citation (search report)  
• [X] DE 19844518 A1 20000406 - POBERING SEBASTIAN [DE], et al  
• [X] US 5286199 A 19940215 - KIPKE SIEGFRIED [DE]  
• [A] DE 4407962 C1 19950601 - CONTINENTAL AG [DE]  
• See references of WO 2004022972A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2004022972 A1 20040318**; AU 2003259010 A1 20040329; CN 1313732 C 20070502; CN 1668848 A 20050914; EP 1534955 A1 20050601; EP 1534955 A4 20110223; HK 1081252 A1 20060512; MY 136102 A 20080829; SG 109502 A1 20050330; US 2006051232 A1 20060309

DOCDB simple family (application)  
**SG 0300175 W 20030724**; AU 2003259010 A 20030724; CN 03816554 A 20030724; EP 03794411 A 20030724; HK 06101018 A 20060123; MY PI20032834 A 20030728; SG 200205376 A 20020904; US 52082505 A 20050728