

Title (en)

MICROPUMP WITH A BUILT-IN INTERMEDIATE PART

Title (de)

MICROPUMPE MIT EINGEBAUTEM ZWISCHENSTÜCK

Title (fr)

MICROPOMPE AVEC PIECE INTERMEDIAIRE INTEGREE

Publication

**EP 0951617 B1 20030129 (FR)**

Application

**EP 97954671 A 19971219**

Priority

- EP 9707278 W 19971219
- FR 9616278 A 19961231

Abstract (en)

[origin: FR2757906A1] A micropump including at least one main plate (1), at least one upper plate (2), and a middle plate (3) arranged between the other two plates (1, 2) and forming a pumping chamber (4) that is connected with at least one inlet of the micropump and at least one outlet of the micropump. The pumping chamber comprises a movable wall (5) machined into the middle plate (3); the upper plate is equipped with at least one opening (12) linking a cavity (8) with at least one portion of the movable wall (5). Actuation devices (6, 7, 13) attached to the free surface of the upper plate (2) are used to shift said movable wall (5) in order to bring about a periodic variation in the volume of the pumping chamber (4). According to the invention, the actuating devices (6, 7, 13) are formed by an actuating plate (7) of a material which can be machined so as to define a movable area (11) and said cavity (8). A intermediate part (13), formed from the upper plate (2), is fastened to the actuating plate so as to establish contact with the movable wall (5).

IPC 1-7

**F04B 43/04**

IPC 8 full level

**B81B 3/00** (2006.01); **B81C 1/00** (2006.01); **F04B 43/04** (2006.01)

CPC (source: EP US)

**F04B 43/046** (2013.01 - EP US)

Designated contracting state (EPC)

DE ES FR GB IT NL

DOCDB simple family (publication)

**FR 2757906 A1 19980703**; AU 5955798 A 19980731; CA 2276401 A1 19980709; CN 1245547 A 20000223; DE 69718820 D1 20030306; DE 69718820 T2 20040122; EP 0951617 A1 19991027; EP 0951617 B1 20030129; ES 2189994 T3 20030716; JP 2001507425 A 20010605; US 6309189 B1 20011030; WO 9829661 A1 19980709

DOCDB simple family (application)

**FR 9616278 A 19961231**; AU 5955798 A 19971219; CA 2276401 A 19971219; CN 97181688 A 19971219; DE 69718820 T 19971219; EP 9707278 W 19971219; EP 97954671 A 19971219; ES 97954671 T 19971219; JP 52960498 A 19971219; US 33195299 A 19990628