Title (en)
Diaphragm pump

Title (de)
Membrankolbenpumpe

Title (fr)
Pompe à membrane

Publication
EP 0984164 A3 20010328 (DE)

Application
EP 99113882 A 19990716

Priority
DE 19840365 A 19980904

Abstract (en)
[origin: EP0984164A2] The pump has a pump head divided into components forming the pump chambers and covers as standard units to assemble a pump in a variety of configurations in a compact structure. The membrane piston pump has at least two pump chambers (4) divided by a membrane (3) for fitting to a pump assembly with a number of pistons (1). The pump head, with the membranes and pump chambers and covers, is divided into pump head components (5a-5c) with one more than the number of chambers. The pump head components are next to each other in a row, where alternate units (5b) form the cover for the preceding component (5a) with the chamber (4) for the preceding unit (5a) when fitted in place. The membranes (3) are tensed between the pump head components (5a-5c), parallel to the stroke axes of the pistons (1), on a plane at right angles to the end side of the assembly formed by the pump heads (5a-5c).

IPC 1-7
F04B 43/067; F04B 43/06

IPC 8 full level
F04B 9/107 (2006.01); **F04B 9/115** (2006.01); **F04B 43/00** (2006.01); **F04B 43/06** (2006.01); **F04B 43/067** (2006.01)

CPC (source: EP US)
F04B 43/0009 (2013.01 - EP US); **F04B 43/067** (2013.01 - EP US)

Citation (search report)
- [AD] DE 3903049 A1 19900823 - URACA PUMPEN [DE]
- [A] DE 2701574 A1 19770721 - WARWICK PUMP & ENG CO
- [A] DE 1013522 B 19570808 - ICI LTD
- [A] DE 3706697 A1 19880915 - BREINLICH RICHARD DR [DE]

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US8681781B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0984164 A2 20000308; **EP 0984164 A3 20010328**; **EP 0984164 B1 20050420**; DE 19840365 A1 20000309; DE 59911929 D1 20050525; ES 2241214 T3 20051016; JP 2000080984 A 20000321; JP 4243390 B2 20090325; US 6174144 B1 20010116

DOCDB simple family (application)
EP 99113882 A 19990716; DE 19840365 A 19980904; DE 59911929 T 19990716; ES 99113882 T 19990716; JP 24759799 A 19990901; US 35996399 A 19990722