

Title (en)
Pump for low flow rates

Title (de)
Pumpe für niedrige Flussraten

Title (fr)
Pompe à faible débit

Publication
EP 1167757 B1 20041006 (DE)

Application
EP 01114608 A 20010619

Priority
DE 10029453 A 20000621

Abstract (en)
[origin: EP1167757A2] The pump has a channel (2) which at least partially is filled with a transporting fluid, a membrane (4) which is wetted by the transporting fluid and located at the opening of the channel, and a chamber on the other side of the membrane with constant transporting fluid vapor pressure. The chamber contains a sorbent (6) to absorb the vaporized transporting fluid. The chamber and the transporting fluid are separated from each other by the membrane. Independent claims are included for a micro-dialysis system incorporating the proposed pump, for an ultra-filtration unit incorporating the proposed pump, and for a system for pumping a working fluid with a low flow rate.

IPC 1-7
F04B 17/00; **F04B 43/06**; **B01D 67/00**; **A61M 1/14**; **B01D 61/22**

IPC 8 full level
A61M 1/14 (2006.01); **B01D 61/22** (2006.01); **B01D 67/00** (2006.01); **F04B 17/00** (2006.01); **F04B 43/06** (2006.01)

CPC (source: EP US)
F04B 17/00 (2013.01 - EP US); **F04B 43/06** (2013.01 - EP US); **Y10T 436/2575** (2015.01 - EP US)

Cited by
EP1363020A3; DE102004039404A1; DE102004039404B4; US7118351B2; US7976535B2

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

DOCDB simple family (publication)
EP 1167757 A2 20020102; **EP 1167757 A3 20030709**; **EP 1167757 B1 20041006**; AT E278874 T1 20041015; DE 10029453 A1 20020110; DE 10029453 C2 20020613; DE 50103943 D1 20041111; ES 2228700 T3 20050416; US 2002087110 A1 20020704; US 2005006309 A1 20050113; US 6860993 B2 20050301; US 6872315 B2 20050329

DOCDB simple family (application)
EP 01114608 A 20010619; AT 01114608 T 20010619; DE 10029453 A 20000621; DE 50103943 T 20010619; ES 01114608 T 20010619; US 88487901 A 20010619; US 91270504 A 20040805