

Title (en)
Double-acting positive displacement pump.

Title (de)
Doppelwirkende Verdrängerpumpe.

Title (fr)
Pompe à déplacement positif à double effet.

Publication
EP 0451942 A1 19911016 (EN)

Application
EP 91301762 A 19910304

Priority
US 50836890 A 19900411

Abstract (en)
A double-acting positive displacement pump (10) has the piston rod (42) and piston (22) sized so as to balance the dynamic forces generated in the pump, resulting in substantially equal output pressure on both the downstroke and upstroke of the pump. <IMAGE>

IPC 1-7
F04B 5/00; **F04B 9/12**; **F04B 11/00**

IPC 8 full level
F04B 13/02 (2006.01); **F04B 5/02** (2006.01); **F04B 9/129** (2006.01); **F04B 11/00** (2006.01)

CPC (source: EP)
F04B 5/02 (2013.01); **F04B 9/1295** (2013.01); **F04B 11/0083** (2013.01)

Citation (search report)
• [A] FR 2161476 A5 19730706 - GRAHAM GEORGE
• [A] FR 2228389 A5 19741129 - HALE JEAN CLAUDE [FR]
• [A] US 3160105 A 19641208 - SHERMAN KENNETH S, et al
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