

Title (en)
ALTERNATING PUMP

Title (de)
HIN- UND HERGEHENDE PUMPE

Title (fr)
POMPE À MOUVEMENT ALTERNATIF

Publication
EP 4102069 B1 20240306 (EN)

Application
EP 22177920 A 20220608

Priority
IT 202100015101 A 20210609

Abstract (en)
[origin: EP4102069A1] Alternating pump (1), comprising a casing (2) provided with at least three guide jackets (23), each of which defining a corresponding guide seat (3) extended along a corresponding radial direction (X), at least three heads (4), each of which mounted on the casing (2) at a respective guide seat (3) and defining a pumping chamber (5), and at least three membranes (6), each of which delimiting a pumping chamber (5). In addition, the alternating pump (1) comprises actuation means (7), housed within the casing (2) and comprising at least three pistons (8), each of which carrying, fixed thereto, a corresponding membrane (6) and is susceptible of sliding in a guided manner in a corresponding guide seat (3) between a release position, in which the corresponding membrane (6) expands the volume of the pumping chamber (5) and a compression position, in which the membrane (6) reduces the volume of the pumping chamber (5), and a drive shaft (9) carrying, fixed thereto, at least one thrust cam (10), which abuts against each piston (8) and is actuatable to rotate around a rotation axis (Y) thereof in order to move it from the release position to the compression position. In addition, the actuation means (7) comprise at least three return springs (11), each of which placed to connect between two adjacent pistons (8) in order to move each piston (8) from the compression position to the release position.

IPC 8 full level
F04B 9/04 (2006.01); **F04B 43/02** (2006.01)

CPC (source: EP)
F04B 9/042 (2013.01); **F04B 43/026** (2013.01)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 4102069 A1 20221214; EP 4102069 B1 20240306; WO 2022259177 A1 20221215

DOCDB simple family (application)
EP 22177920 A 20220608; IB 2022055339 W 20220608