

Title (en)

Two-stage pump

Title (de)

Zweistufenpumpe

Title (fr)

Pompe à deux étages

Publication

EP 2634426 B1 20140514 (DE)

Application

EP 12157913 A 20120302

Priority

EP 12157913 A 20120302

Abstract (en)

[origin: EP2634426A1] The pump (P) has a high-pressure and low-pressure pumping element (H,N) for small and high flow rate, and common pressure outlet (2). A switching valve (9) arranged between low-pressure pumping element and tank is opened to tank dependent on pressure in discharge outlet, such that piston pump elements of two pumping elements are equipped with suction and pressure valves (4,5). A common housing is shared by suction and discharge valves and changeover valve (9), so that piston (16,17) is divided into separate high-pressure and low-pressure delivery spaces (3,6).

IPC 8 full level

F04B 3/00 (2006.01); **F04B 1/02** (2006.01); **F04B 25/00** (2006.01)

CPC (source: EP)

F04B 1/02 (2013.01); **F04B 3/00** (2013.01); **F04B 25/005** (2013.01)

Cited by

DE102017200212A1; US2018195510A1; ES2685458A1; US10851909B2; DE102017012400B3; DE102017200212B4

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 2634426 A1 20130904; EP 2634426 B1 20140514

DOCDB simple family (application)

EP 12157913 A 20120302