

Title (en)  
SWASH PLATE-TYPE AXIAL PISTON PUMP

Title (de)  
AXIALKOLBENPUMPE IN SCHRÄGSCHNITTBAUART

Title (fr)  
POMPE À PISTONS AXIAUX DE TYPE À PLATEAU INCLINABLE

Publication  
**EP 3749857 B1 20230308 (DE)**

Application  
**EP 19715863 A 20190329**

Priority  
• DE 102018003207 A 20180419  
• EP 2019057982 W 20190329

Abstract (en)  
[origin: WO2019201574A1] The invention relates to a swash plate-type axial piston pump, in particular for hydraulic systems, comprising a cylinder drum (3) which is rotated about a rotational axis (7) in a pump housing (1) and in which pistons (9) are arranged in an axially movable manner, the piston actuation ends that can be accessed from outside the cylinder drum (3) being supported at least indirectly on a swash plate (15), wherein the swash plate can be pivoted into a desired inclination angle relative to the rotational axis (7) by means of an adjustment device (21) in order to adjust the stroke of the piston (9) and thus the fluid system pressure generated thereby, and the adjustment device has at least one pivot lever (23) which can be deflected in at least one direction and restored by means of an adjustment drive and which has a respective actuation piston (35) in at least one hydraulically actuatable actuation cylinder (31, 43), said actuation piston engaging on an attachment point (29) of the pivot lever (23) at one end. The invention is characterized in that the at least one actuation piston (35, 47) has a guide surface (73) at the end opposite the attachment point (29), said guide surface being a single-piece part of the actuation piston (35, 47) and contacting a paired guide surface (33, 45) of the actuation cylinder (31, 43), and at least one adjustment means (75, 70, 59) is provided which aligns the respective position of each guide surface (73; 33, 45) relative to each other.

IPC 8 full level  
**F04B 1/324** (2020.01); **F03C 1/40** (2006.01); **F04B 49/00** (2006.01); **F04B 53/14** (2006.01)

CPC (source: EP US)  
**F03C 1/0686** (2013.01 - EP); **F04B 1/324** (2013.01 - EP US); **F04B 49/002** (2013.01 - EP); **F04B 53/14** (2013.01 - EP US);  
**F04B 53/143** (2013.01 - EP); **F04B 53/144** (2013.01 - EP); **F04B 53/18** (2013.01 - US)

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)  
**WO 2019201574 A1 20191024**; AU 2019256414 A1 20201008; CA 3096965 A1 20191024; CA 3096965 C 20240604;  
CN 111989485 A 20201124; DE 102018003207 A1 20191024; EP 3749857 A1 20201216; EP 3749857 B1 20230308;  
JP 2021520470 A 20210819; JP 7167182 B2 20221108; US 11725639 B2 20230815; US 2021115909 A1 20210422

DOCDB simple family (application)  
**EP 2019057982 W 20190329**; AU 2019256414 A 20190329; CA 3096965 A 20190329; CN 201980026219 A 20190329;  
DE 102018003207 A 20180419; EP 19715863 A 20190329; JP 2020555844 A 20190329; US 201917047773 A 20190329