

Title (en)  
HIGH PRESSURE PLUNGER PUMP AND METHOD FOR INTERRUPTING A FLUID FLOW

Title (de)  
HOCHDRUCKPLUNGERPUMPE SOWIE VERFAHREN ZUR FUNKTIONSUNTERBRECHUNG EINES FLUIDSTROMS

Title (fr)  
POMPE À PISTON PLONGEUR À HAUTE PRESSION AINSI QUE PROCÉDÉ D'INTERRUPTION DE FONCTION D'UN FLUX DE FLUIDE

Publication  
**EP 3336350 A3 20180815 (DE)**

Application  
**EP 17205242 A 20171204**

Priority  
DE 102016124422 A 20161214

Abstract (en)  
[origin: US2018163717A1] A high pressure plunger pump, having at least one plunger arrangement which comprises a working space connected to a valve seat suction line and a valve seat pressure line, in which a plunger is arranged in an axially reciprocable manner, wherein the valve seat pressure line is closeable by a pressure valve and the valve seat suction line by a suction valve, and the suction valve can be kept in an open position in a controlled manner as required by means of a counter-pressure device, is designed so that the counter-pressure device has a supply line via which a control fluid can be guided to the suction valve for keeping the suction valve open, wherein a low-pressure pump is connected to the supply line for generating pressure of the control fluid.

IPC 8 full level  
**F04B 7/02** (2006.01); **F04B 49/00** (2006.01)

CPC (source: EP US)  
**F02M 59/442** (2013.01 - US); **F02M 59/464** (2013.01 - EP US); **F02M 63/0028** (2013.01 - EP US); **F02M 63/0054** (2013.01 - EP US);  
**F02M 63/0205** (2013.01 - EP US); **F04B 7/02** (2013.01 - EP US); **F04B 37/12** (2013.01 - EP US); **F04B 49/002** (2013.01 - EP US);  
**F04B 49/03** (2013.01 - EP US); **F04B 49/246** (2013.01 - US); **F04B 53/10** (2013.01 - EP US); **F04B 53/109** (2013.01 - US);  
**F04B 53/1087** (2013.01 - EP US); **F04B 2201/06012** (2013.01 - US)

Citation (search report)  
• [XYI] DE 10139055 A1 20030227 - BOSCH GMBH ROBERT [DE]  
• [XYI] DE 10229395 A1 20040122 - BOSCH GMBH ROBERT [DE]  
• [XYI] US 2003091445 A1 20030515 - BASTIA ALBERTO [IT], et al  
• [XYI] US 5813841 A 19980929 - STURMAN ODED E [US]  
• [YA] DE 102013201797 A1 20140807 - BOSCH GMBH ROBERT [DE]  
• [YA] DE 102014225904 A1 20160616 - BOSCH GMBH ROBERT [DE]  
• [YA] JP H06143145 A 19940524 - KAWASAKI HEAVY IND LTD

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3336350 A2 20180620; EP 3336350 A3 20180815; EP 3336350 B1 20191009**; DE 102016124422 A1 20180614; ES 2761902 T3 20200521;  
PL 3336350 T3 20200331; US 2018163717 A1 20180614

DOCDB simple family (application)  
**EP 17205242 A 20171204**; DE 102016124422 A 20161214; ES 17205242 T 20171204; PL 17205242 T 20171204;  
US 201715839492 A 20171212