

Title (en)
INJECTION VALVE WITH DIRECT AND SERVO DRIVE

Title (de)
EINSPRITZVENTIL MIT DIREKT- UND SERVOANTRIEB

Title (fr)
SOUPAPE D'INJECTION DOTÉE D'UNE COMMANDE DIRECTE ET D'UNE SERVOCOMMANDE

Publication
EP 2580462 A1 20130417 (DE)

Application
EP 11724213 A 20110609

Priority
• DE 102010023698 A 20100614
• EP 2011059542 W 20110609

Abstract (en)
[origin: WO2011157613A1] A valve device (100) is described for conveying a liquid having a housing (110), a valve needle (120) which is arranged such that it can be deflected in a valve-needle chamber (113) of the housing (110), and a drive device (200) for the valve needle (120), wherein the drive device (200) comprises an electric drive component (210) which brings about a direct deflection of the valve needle (120). Furthermore, the drive device (200) comprises a hydraulic drive component (220) which can be activated in addition to the electric drive component (210) and brings about a ballistic deflection of the valve needle (120).

IPC 8 full level
F02M 51/06 (2006.01); **F02M 45/08** (2006.01); **F02M 47/02** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)
F02M 45/08 (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 51/0603** (2013.01 - EP US); **F02M 51/061** (2013.01 - EP US); **F02M 63/0005** (2013.01 - EP US); **F02M 63/0017** (2013.01 - EP US); **F02M 63/0026** (2013.01 - EP US); **F02M 63/0028** (2013.01 - EP US); **F02M 63/0043** (2013.01 - EP US); **F02M 2200/702** (2013.01 - EP US)

Citation (search report)
See references of WO 2011157613A1

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)
DE 102010023698 A1 20111215; CN 102933833 A 20130213; CN 102933833 B 20150114; EP 2580462 A1 20130417; EP 2580462 B1 20151202; US 2013200180 A1 20130808; US 9429119 B2 20160830; WO 2011157613 A1 20111222

DOCDB simple family (application)
DE 102010023698 A 20100614; CN 201180029540 A 20110609; EP 11724213 A 20110609; EP 2011059542 W 20110609; US 201113703641 A 20110609