

Title (en)

FUEL INJECTOR AND CONTROL VALVE THEREOF

Title (de)

KRAFTSTOFFEINSPRITZVENTIL UND STEUERVERTIL DAFÜR

Title (fr)

INJECTEUR À COMBUSTIBLE ET SA SOUPAPE DE COMMANDE

Publication

**EP 3112663 A1 20170104 (EN)**

Application

**EP 16170837 A 20160523**

Priority

CN 201510387784 A 20150703

Abstract (en)

A fuel injector and a control valve used in it are disclosed. The control valve comprises: a valve seat defining a valve seating surface and a valve hole extending through a center portion of the valve seating surface in a longitudinal direction, the valve hole and the valve seating surface defining a longitudinal central axis, and the valve hole being in fluid communication with an injection valve of the fuel injector; a valve element configured to be moved between a closed position and an opened position along the longitudinal central axis, the valve element contacting and cooperating with the valve seat in the closed position to close the valve hole, and the valve element being moved away from the valve seat in the opened position to open the valve hole; and a holding block having an accommodating recess for holding the valve element; wherein the valve element is in the form of a solid of revolution, with the longitudinal central axis being the revolution axis of the solid of revolution, and the solid of revolution having a non-circular section in a longitudinal plane in which the longitudinal central axis lies so that the valve element is able to rotate around the longitudinal central axis but cannot rotate around any transverse central axis that is perpendicular to the longitudinal central axis.

IPC 8 full level

**F02M 63/00** (2006.01); **F02M 47/02** (2006.01)

CPC (source: EP)

**F02M 47/027** (2013.01); **F02M 63/0031** (2013.01); **F02M 63/0036** (2013.01); **F02M 2200/05** (2013.01)

Citation (search report)

- [X] FR 2973092 A1 20120928 - BOSCH GMBH ROBERT [DE]
- [A] DE 102004049288 A1 20060420 - BOSCH GMBH ROBERT [DE]
- [A] US 2009277421 A1 20091112 - EISENMENGER NADJA [DE]

Cited by

WO2024094380A1

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 3112663 A1 20170104**; **EP 3112663 B1 20180912**; CN 106321307 A 20170111; CN 106321307 B 20200306; JP 2017040254 A 20170223; JP 6824645 B2 20210203

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