Title (en)

QUANTITY-LIMITING VALVE

Title (de)

MENGENBEGRENZUNGSVENTIL

Title (fr)

SOUPAPE LIMITATRICE DE DÉBIT

Publication

EP 3008327 A1 20160420 (DE)

Application

EP 14729857 A 20140603

Priority

- DE 102013210983 A 20130612
- EP 2014001490 W 20140603

Abstract (en)

[origin: WO2014198387A1] The invention relates to a quantity-limiting valve (1) for an injection system (6) of an internal combustion engine (8), comprising an inflow region (7), an outflow region (9), and a piston (13) which is movably guided in a cylinder (11) and by means of which the inflow region (7) is separated from the outflow region (9). The inflow region (7) and the outflow region (9) are fluidically connected via an overflow channel (15) which passes through some areas of the piston (13) and via a current path (17) arranged between a circumferential surface (19) of the piston (13) and an inner surface (21) of the cylinder (11). An end surface (25) of the piston (13) is preloaded against a stop surface (27) of a stop element (29) in a first functional position. An underflow structure (39) is formed in a region where the end surface (25) contacts the stop surface (27) in the first functional position, said underflow structure comprising at least one intermediate area (41), which is fluidically connected to the inflow region (7), between the piston (11) and the stop element (29).

IPC 8 full level

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

CPC (source: EP US)

F02M 61/042 (2013.01 - US); **F02M 63/0077** (2013.01 - EP US); **F02M 63/0215** (2013.01 - EP US); F02M 2200/28 (2013.01 - EP US)

Citation (search report)

See references of WO 2014198387A1

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)

DE 102013210983 A1 20141218; **DE 102013210983 B4 20210429**; CN 105264216 A 20160120; CN 105264216 B 20171117; EP 3008327 A1 20160420; EP 3008327 B1 20180523; HK 1220243 A1 20170428; JP 2016520767 A 20160714; US 2016084210 A1 20160324; US 9909547 B2 20180306; WO 2014198387 A1 20141218

DOCDB simple family (application)

DE 102013210983 A 20130612; CN 201480033589 A 20140603; EP 14729857 A 20140603; EP 2014001490 W 20140603; HK 16108202 A 20160713; JP 2016518860 A 20140603; US 201514960870 A 20151207