

Title (en)

PRESSURE CONTROL VALVE, PARTICULARLY FOR AN AUTOMATIC TRANSMISSION IN A MOTOR VEHICLE

Title (de)

DRUCKREGELVENTIL, INSBESONDERE FÜR EIN AUTOMATIKGETRIEBE IN EINEM KRAFTFAHRZEUG

Title (fr)

VANNE DE RÉGULATION DE LA PRESSION, EN PARTICULIER POUR UNE TRANSMISSION AUTOMATIQUE D'UN VÉHICULE AUTOMOBILE

Publication

**EP 2414713 A2 20120208 (DE)**

Application

**EP 10711612 A 20100218**

Priority

- EP 2010052035 W 20100218
- DE 102009002003 A 20090331

Abstract (en)

[origin: WO2010112263A2] A pressure control valve (20) for an automatic transmission of a motor vehicle comprises a housing (28), a valve gate (32) that is guided in the housing (28) and has a plurality of adjacent sections (34, 36, 38), wherein a first section (34) has a first diameter (D1), a subsequent second section (36) has a second diameter (D2), which is smaller than the first diameter (D1), and a third section (38) adjacent thereto has a diameter equal to the first diameter (D1). The first section (34) has a dedicated supply pressure opening (58), the second section (36) has a dedicated control pressure opening (60), and the third section (38) has a dedicated return flow opening (62). An electromagnetic actuating device (26) acts upon the valve gate (32) in a first effective direction (78) by way of a piston (72) engaging at a first face surface (50) and guided pressure-tightly in the housing (28). An application device (53) acts upon the valve gate (32) counter to the first effective direction (78). It is proposed for the first face surface (50) of the valve gate (32) to adjoin a first pressure chamber (82), and an opposite second face surface (52) to adjoin on a second pressure chamber (80), said pressure chambers being fluid-connected to the control pressure opening (60).

IPC 8 full level

**F16K 31/06** (2006.01); **F16H 61/02** (2006.01)

CPC (source: EP US)

**F15B 13/0402** (2013.01 - EP US); **F15B 13/0442** (2013.01 - EP US); **F16H 61/0251** (2013.01 - EP US); **F16K 31/0613** (2013.01 - EP US);  
**F16H 2061/0253** (2013.01 - EP US)

Citation (search report)

See references of WO 2010112263A2

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

**DE 102009002003 A1 20101007**; EP 2414713 A2 20120208; JP 2012522297 A 20120920; US 2012104293 A1 20120503;  
WO 2010112263 A2 20101007; WO 2010112263 A3 20110224

DOCDB simple family (application)

**DE 102009002003 A 20090331**; EP 10711612 A 20100218; EP 2010052035 W 20100218; JP 2012502526 A 20100218;  
US 201013138759 A 20100218