

Title (en)  
Valve assembly

Title (de)  
Ventilbaugruppe

Title (fr)  
Bloc de soupape

Publication  
**EP 2770217 A3 20170510 (DE)**

Application  
**EP 14151711 A 20140120**

Priority  
DE 102013003116 A 20130225

Abstract (en)  
[origin: EP2770217A2] The assembly has through bolts (9) each connected to valve block plates (1), and a channel (3) for hydraulic fluid. The bolt is extended to the channel through a through-hole (10), and includes an external thread and an internal thread corresponding to the external thread. The through-hole includes an equilateral polygonal cross-section in length region (31). The bolt includes an extending branch hole (28) transverse to the through-hole.

IPC 8 full level  
**F15B 13/08** (2006.01)

CPC (source: EP RU)  
**F15B 13/0839** (2013.01 - EP); **F15B 13/0871** (2013.01 - EP); **F15B 13/06** (2013.01 - RU); **F15B 13/0817** (2013.01 - EP);  
**F15B 13/0821** (2013.01 - EP)

Citation (search report)  
• [X] FR 2938622 A1 20100521 - JTEKT HPI [FR]  
• [X] EP 0283673 A2 19880928 - FISCHER AG GEORG [CH]  
• [X] GB 1135444 A 19681204 - BOSCH GMBH ROBERT

Cited by  
IT201800003266A1; US11828140B2; WO2021025662A1; WO2019171248A1

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 2770217 A2 20140827**; **EP 2770217 A3 20170510**; DE 102013003116 A1 20140828; RU 2014104770 A 20150820;  
RU 2645065 C2 20180215

DOCDB simple family (application)  
**EP 14151711 A 20140120**; DE 102013003116 A 20130225; RU 2014104770 A 20140212