

Title (en)

VALVE DEVICE FOR CONTROLLED PASSAGE OF A MEDIUM IN PARTICULAR IN THE HIGH-PRESSURE RANGE

Title (de)

VENTILEINRICHTUNG FÜR EIN GESTEUERTES DURCHLASSEN EINES MEDIUMS INSBESONDERE IM HOCHDRUCKBEREICH

Title (fr)

DISPOSITIF DE SOUPAPE POUR LE PASSAGE RÉGULÉ D'UN FLUIDE EN PARTICULIER DANS LA PLAGE DE HAUTE PRESSION

Publication

**EP 4217631 A1 20230802 (DE)**

Application

**EP 21769693 A 20210825**

Priority

- CH 12072020 A 20200923
- EP 2021073532 W 20210825

Abstract (en)

[origin: WO2022063513A1] The invention relates to a valve device for controlled passage of a medium, in particular in the high-pressure range, which is provided with: a housing (15) having a bore (11) and at least one inlet opening (12) and an outlet opening (13); a pressure chamber (14) which is formed in the bore (11) and can be acted upon by the medium; and a valve needle (16) which is movable to and fro therein and has a conical tip (16'). A guide means (20) for the valve needle (16), by means of which the valve needle (16) with its circumferential region (16'') is guided directly at the conical tip (16') almost without play and concentrically with respect to the valve seat (17) until it is almost in the closed position, is located in a valve seat (17) in a valve seat block (18). This guide means (20) has passage openings (24) for the passage of the medium from the pressure chamber (14) into the outlet opening (13). Very precise guiding of the valve needle is thus achieved at the front at the tip thereof, so that the service life of the valve device can be increased.

IPC 8 full level

**F16K 1/38** (2006.01); **F16K 1/42** (2006.01); **F16K 27/02** (2006.01)

CPC (source: CH EP US)

**F16K 1/38** (2013.01 - CH EP US); **F16K 1/42** (2013.01 - EP US); **F16K 25/04** (2013.01 - CH US); **F16K 27/0254** (2013.01 - EP US); **B26F 3/004** (2013.01 - EP US)

Citation (search report)

See references of WO 2022063513A1

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**CH 717897 A2 20220331**; **CH 717897 B1 20230531**; EP 4217631 A1 20230802; US 2023366478 A1 20231116; WO 2022063513 A1 20220331

DOCDB simple family (application)

**CH 12072020 A 20200923**; EP 2021073532 W 20210825; EP 21769693 A 20210825; US 202118246136 A 20210825