

Title (en)
HIGH-PRESSURE CLEANING DEVICE

Title (de)
HOCHDRUCKREINIGUNGSGERÄT

Title (fr)
APPAREIL DE NETTOYAGE À HAUTE PRESSION

Publication
EP 3645885 A1 20200506 (DE)

Application
EP 17734301 A 20170629

Priority
EP 2017066187 W 20170629

Abstract (en)
[origin: WO2019001719A1] The invention relates to a high-pressure cleaning device (10) comprising a pump (14) which has a suction line (24) and a pressure line (30), said pressure line (30) being equipped with a nonreturn valve (34), and which has an overflow valve (84) that releases a flow path via an overflow line (74) depending on the pressure in order to discharge cleaning fluid out of the pressure line (30). The overflow valve (84) has a closing element (86) which rests against a valve seat (82) in a liquid-tight manner in a closed position and can be moved into an open position at a distance from the valve seat (82) against the closing force of a closing spring (92) and which is connected to a control piston (58) that is movably held in a control chamber (56) and is impinged upon by a pressurized cleaning fluid. The aim of the invention is to reduce the construction size of the overflow valve (84) without using an injector. This is achieved in that the control piston (58) divides the control chamber (56) into an outlet pressure chamber (64) and an overflow chamber (66). The outlet pressure chamber (64) is connected to a pressure line (30) region arranged downstream of the nonreturn valve (34) and has a first through-opening (96), through which a piston rod (94) fixed to the control piston (58) engages. The overflow chamber (66) is connected to a pressure line (30) region arranged upstream of the nonreturn valve (34) and has a second through-opening (80) which forms the valve seat (82). The through-openings (96, 80) have different sizes, and the control piston (58) can be acted upon by the closing force of the closing spring (92) on the control piston side facing the larger through-opening.

IPC 8 full level
F04B 1/12 (2020.01); **B08B 3/02** (2006.01); **F04B 17/03** (2006.01); **F04B 49/08** (2006.01); **F04B 49/24** (2006.01); **F04B 53/10** (2006.01)

CPC (source: EP)
F04B 1/12 (2013.01); **F04B 17/03** (2013.01); **F04B 49/08** (2013.01); **F04B 49/24** (2013.01); **F04B 53/10** (2013.01); **B08B 3/026** (2013.01)

Citation (search report)
See references of WO 2019001719A1

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)
WO 2019001719 A1 20190103; CN 110832200 A 20200221; CN 110832200 B 20210810; EP 3645885 A1 20200506; EP 3645885 B1 20210602

DOCDB simple family (application)
EP 2017066187 W 20170629; CN 201780092707 A 20170629; EP 17734301 A 20170629