

Title (en)
PUMPING UNIT

Title (de)
PUMPEINHEIT

Title (fr)
UNITÉ DE POMPE

Publication
EP 2791509 B1 20180221 (DE)

Application
EP 12809164 A 20121212

Priority
• DE 102011088679 A 20111215
• EP 2012075170 W 20121212

Abstract (en)
[origin: WO2013087668A1] The invention relates to a pumping unit (14, 30) for conveying a reducing fluid, in particular for conveying a urea-water solution for reducing nitrogen oxides in an exhaust gas flow of an internal combustion engine, with a housing cover (32), a housing upper part (34) and a housing lower part (36), wherein a diaphragm (38) which is actuatable by means of a drive unit (40) is accommodated between the housing cover (32) and the housing upper part (34), and a first and a second connection chamber (60, 62) are provided in the housing lower part (36). According to the invention, the conveying direction is reversible by means of an integrated valve unit (22), in particular by means of a 4/2-way valve. This reduces, inter alia, the number of components required for constructing an SCR system, thereby in particular reducing the outlay on installation and maintenance. At the same time, the availability of the SCR system is improved, in particular because of the reduced number of connecting lines. Furthermore, owing to the connecting lines no longer being necessary, the installation space which is to be kept ready and the weight are reduced.

IPC 8 full level
F04B 43/02 (2006.01); **F04B 43/04** (2006.01); **F04B 53/00** (2006.01); **F04B 53/10** (2006.01)

CPC (source: EP US)
F04B 43/023 (2013.01 - EP US); **F04B 43/04** (2013.01 - EP US); **F04B 53/007** (2013.01 - EP); **F04B 53/10** (2013.01 - EP)

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

DOCDB simple family (publication)
WO 2013087668 A1 20130620; DE 102011088679 A1 20130620; EP 2791509 A1 20141022; EP 2791509 B1 20180221

DOCDB simple family (application)
EP 2012075170 W 20121212; DE 102011088679 A 20111215; EP 12809164 A 20121212