

Title (en)  
DEVICE FOR GENERATING IMPACT IMPULSES OR VIBRATIONS FOR A CONSTRUCTION MACHINE

Title (de)  
VORRICHTUNG ZUR ERZEUGUNG VON SCHLAGIMPULSEN ODER SCHWINGUNGEN FÜR EINE BAUMASCHINE

Title (fr)  
DISPOSITIF DE GÉNÉRATION DES IMPULSIONS À CHOC OU DES VIBRATIONS POUR UNE MACHINE DE CONSTRUCTION

Publication  
**EP 4001510 B1 20230607 (DE)**

Application  
**EP 20207463 A 20201113**

Priority  
EP 20207463 A 20201113

Abstract (en)  
[origin: CA3148308A1] The invention relates to a device and a method for generating percussive pulses or vibrations for a construction machine, with a housing, a piston which is reversibly reciprocable in a working space in the housing between a first reversal point and a second reversal point, a pressure fluid supply, through which pressure fluid can in each case be led into and out of the working space in the region of the first reversal point and the second reversal point, wherein the piston can be set into the reversible movement in order to generate the percussive pulses or vibrations, at least one controllable valve, through which the pressure fluid can be led into and/or out of the working space, and a control unit which is connected to the at least one controllable valve, wherein by the control unit the movement of the piston in the working space can be controlled and changed. According to the invention provision is made in that the control unit is designed to move the piston at a frequency that corresponds to a resonance frequency of an overall arrangement comprising the piston and the pressure fluid.

IPC 8 full level  
**E02D 7/06** (2006.01); **B06B 1/18** (2006.01); **E02D 7/18** (2006.01); **E21B 1/26** (2006.01)

CPC (source: CN EP KR US)  
**B06B 1/18** (2013.01 - CN EP US); **B06B 1/183** (2013.01 - KR US); **B06B 3/02** (2013.01 - CN); **E02D 3/046** (2013.01 - CN); **E02D 7/06** (2013.01 - EP); **E02D 7/18** (2013.01 - CN EP US); **E02F 5/30** (2013.01 - CN); **E02F 5/326** (2013.01 - CN); **E21B 1/26** (2020.05 - EP US); **E21B 1/28** (2020.05 - KR); **E21B 6/04** (2013.01 - CN); **F15B 13/02** (2013.01 - US); **B06B 2201/73** (2013.01 - KR); **E02D 3/046** (2013.01 - US); **E02D 7/10** (2013.01 - US)

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)  
**EP 4001510 A1 20220525**; **EP 4001510 B1 20230607**; **EP 4001510 C0 20230607**; CA 3148308 A1 20220513; CN 114482004 A 20220513; ES 2954751 T3 20231124; HR P20230860 T1 20231110; HU E062993 T2 20231228; JP 2022078960 A 20220525; KR 20220065700 A 20220520; PL 4001510 T3 20230911; RS 64549 B1 20230929; US 2022152655 A1 20220519

DOCDB simple family (application)  
**EP 20207463 A 20201113**; CA 3148308 A 20211026; CN 202111338572 A 20211112; ES 20207463 T 20201113; HR P20230860 T 20201113; HU E20207463 A 20201113; JP 2021179248 A 20211102; KR 20210154500 A 20211111; PL 20207463 T 20201113; RS P20230708 A 20201113; US 202117525710 A 20211112