

Title (en)

TOGGLE CLAMP DEVICE, IN PARTICULAR FOR USE IN VEHICLE BODY MANUFACTURING IN THE AUTOMOTIVE INDUSTRY

Title (de)

KNIEHEBELSPANNVORRICHTUNG, INSBESONDERE ZUR VERWENDUNG IM KAROSSERIEBAU DER KFZ-INDUSTRIE

Title (fr)

DISPOSITIF DE SERRAGE À GENOUILLÈRE, À UTILISER EN PARTICULIER DANS LE MONTAGE DE CARROSSERIE DANS L'INDUSTRIE AUTOMOBILE

Publication

**EP 3204191 A1 20170816 (DE)**

Application

**EP 15770794 A 20150912**

Priority

- DE 102014014857 A 20141006
- DE 202015004786 U 20150703
- EP 2015001832 W 20150912

Abstract (en)

[origin: WO2016055138A1] The invention relates to a toggle clamp device, in particular for use in vehicle body manufacturing in the automotive industry. The worldwide industry standard for the range of toggle clamps in the automotive industry contains the same technical data for the structural dimensions, clamping and retaining forces and cylinder diameters. Deviating from this standard while maintaining the technical data, according to the invention, smaller cylinder diameters are used which lead to a reduction in compressed air or energy consumption of between 25 to 60%.

IPC 8 full level

**B25B 5/12** (2006.01)

CPC (source: EP US)

**B25B 5/122** (2013.01 - EP US); **B23K 37/0435** (2013.01 - US)

Citation (search report)

See references of WO 2016055138A1

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)

**DE 202015004786 U1 20150814;** DE 102014014857 B3 20151112; EP 3204191 A1 20170816; US 2018185989 A1 20180705;  
US 2020331121 A1 20201022; WO 2016055138 A1 20160414

DOCDB simple family (application)

**DE 202015004786 U 20150703;** DE 102014014857 A 20141006; EP 15770794 A 20150912; EP 2015001832 W 20150912;  
US 201515558748 A 20150912; US 202016918381 A 20200701