

Title (en)  
FLANGE ELEMENT

Title (de)  
FLANSCELEMENT

Title (fr)  
ÉLÉMENT DE BRIDE

Publication  
**EP 3730802 B1 20210407 (DE)**

Application  
**EP 19170677 A 20190423**

Priority  
EP 19170677 A 20190423

Abstract (en)  
[origin: JP2020193619A] To further enhance crash safety of a connection between two vacuum devices, in particular a turbo molecular vacuum pump and a vacuum vessel.SOLUTION: A flange element (11) is to be disposed between two vacuum devices (13, 15), particularly between two flanges (13a, 15a) associated with the vacuum devices (13, 15), respectively. The flange element has a ring portion (19) defining a penetration portion (17), and in the penetration portion, at least one group of plural receiving portions (21), which are distributed and arranged in the circumferential direction, particularly located on a circle, are formed for a plurality of fixing elements (27), in which at least some receiving portions (21) of the group, in particular all receiving portions (21), are each formed as a safety receiving portion.SELECTED DRAWING: Figure 10

IPC 8 full level  
**F04D 17/16** (2006.01); **F04D 19/04** (2006.01); **F04D 27/02** (2006.01); **F04D 29/60** (2006.01)

CPC (source: EP)  
**F04D 17/168** (2013.01); **F04D 19/04** (2013.01); **F04D 27/0292** (2013.01); **F04D 29/601** (2013.01)

Citation (examination)  
US 2008226387 A1 20080918 - NAMIKI HIROTAKA [JP]

Cited by  
EP4269804A1

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 3730802 A1 20201028; EP 3730802 B1 20210407; JP 2020193619 A 20201203; JP 7177113 B2 20221122**

DOCDB simple family (application)  
**EP 19170677 A 20190423; JP 2020052048 A 20200324**