

Title (en)
A VACUUM PUMP WITH A PRESSURE RELIEF VALVE

Title (de)
VAKUUMPUMPE MIT DRUCKENTLASTUNGSVENTIL

Title (fr)
POMPE À VIDE DOTÉE D'UNE SOUPAPE DE SURPRESSION

Publication
EP 3762611 B1 20230830 (EN)

Application
EP 19711684 A 20190308

Priority
• GB 201803859 A 20180309
• GB 2019050650 W 20190308

Abstract (en)
[origin: GB2571792A] A vacuum pump comprises at least two rotors each comprising at least one lobe 10. At least one of the lobes 10 comprises an inertial pressure relief valve, which comprises a valve body member 20 mounted to move between a closed position in which it obstructs a fluid flow pathway 30 between leading and trailing sides of the rotor and an open position in which the fluid flow pathway is not obstructed. The body 20 is moved between the open and closed positions by centrifugal force, i.e. in response to the rotational velocity of the rotor. An increased pressure at the inlet will result in increased flow rate and loading, which reduces the speed, and allows the pressure relief valve to open. The valve may be defined by a tip member which is biased away from the stator wall, but is urged into sealing contact by centrifugal force at normal operating speeds.

IPC 8 full level
F04C 18/12 (2006.01); **F04C 25/02** (2006.01); **F04C 28/26** (2006.01)

CPC (source: EP GB)
F04C 18/126 (2013.01 - EP); **F04C 18/18** (2013.01 - GB); **F04C 25/02** (2013.01 - EP); **F04C 28/26** (2013.01 - EP GB);
F04C 2270/21 (2013.01 - GB)

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)
GB 201803859 D0 20180425; **GB 2571792 A 20190911**; **GB 2571792 B 20201216**; CN 111801498 A 20201020; CN 111801498 B 20230310;
EP 3762611 A1 20210113; EP 3762611 B1 20230830; EP 3762611 B8 20231011; TW 201938915 A 20191001; TW 201938916 A 20191001;
TW 201940815 A 20191016; WO 2019171074 A1 20190912; WO 2019171075 A1 20190912; WO 2019171076 A1 20190912

DOCDB simple family (application)
GB 201803859 A 20180309; CN 201980018247 A 20190308; EP 19711684 A 20190308; GB 2019050650 W 20190308;
GB 2019050651 W 20190308; GB 2019050652 W 20190308; TW 108107829 A 20190308; TW 108107830 A 20190308;
TW 108107831 A 20190308