

Title (en)

Rotary positive displacement blower with noise and shock reduction

Title (de)

Rotationsgebläse mit Geräusch- und Schlagdämpfung

Title (fr)

Souffleuse rotative à déplacement positif avec réduction du bruit et des pulsations

Publication

EP 2348217 A3 20111130 (EN)

Application

EP 11000544 A 20110124

Priority

US 33649510 P 20100122

Abstract (en)

[origin: EP2348217A2] A roots-style blower (210) has a housing (214), rotors (230) and manifolds (212) for the housing (214). The housing (214) forms an inlet plenum (220), a rotor chamber (224) and a discharge plenum (228). The rotors (230) have straight lobes (232) spaced by pockets (240). The pocket (240X) that traps gas between a leading and following lobe (232) and an inside wall of the rotor chamber (224) is a temporary closed cell (240X). The manifolds (212) and the housing (214) form a pair of back-pass loops (250-251), one for each rotor (230). Each back-pass loop (250-252) comprises a back-pass chamber (250), outer channels (252) from the discharge plenum (228) to the back-pass chamber (250), and inner channels (251) to the rotor chamber (224). Wherein, the back-pass chamber (250) volume as a percentage of closed cell (240X) volume ranges between about fifty-six percent (56%) and one-hundred-seventeen percent (117%).

IPC 8 full level

F04C 18/12 (2006.01); **F04C 29/06** (2006.01)

CPC (source: EP US)

F04C 18/126 (2013.01 - EP US); **F04C 29/065** (2013.01 - EP US); **F04C 29/068** (2013.01 - EP US); **F04C 2240/30** (2013.01 - EP US)

Citation (search report)

- [IY] US 5439358 A 19950808 - WEINBRECHT JOHN F [US]
- [IDY] US 5702240 A 19971230 - O'NEAL ALAN D [US], et al
- [IY] GB 2178485 A 19870211 - AERZENER MASCHF GMBH
- [IY] GB 959855 A 19640603 - POLYSIUS GMBH
- [Y] WO 2006062741 A2 20060615 - CARRIER CORP [US], et al

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)

EP 2348217 A2 20110727; **EP 2348217 A3 20111130**; **EP 2348217 B1 20130116**; US 2012195783 A1 20120802; US 2016245287 A1 20160825

DOCDB simple family (application)

EP 11000544 A 20110124; US 201615050651 A 20160223; US 93109311 A 20110124