

Title (en)  
Rotary piston blower.

Title (de)  
Rotationskolbengebläse.

Title (fr)  
Soufflante à piston rotatif.

Publication  
**EP 0267559 A1 19880518 (DE)**

Application  
**EP 87116469 A 19871107**

Priority  
• DE 3638183 A 19861108  
• DE 3712354 A 19870411

Abstract (en)  
[origin: US4846642A] A gap seal formed between surfaces cooperating with each other such that operation free of engagement between the cooperating rotor and housing parts with respect to each other at relative speeds occurs subject to a roughened light-metal surface of one part cooperating with a covering of foamed synthetic material on the other part so as to assure gap seal therebetween rather than having any metal-to-metal and/or foamed-material to foamed-material interengagement. The foamed synthetic material covering of a surface preferably is made of polyurethane and the light-metal surface is made of aluminum roughened by sandblasting or etching. The lightweight metal part can have cavities and recess spaces therein to be filled with foamed material as well as other fins, ribs, and anchoring provision for holding the foamed synthetic material bodies in place. The applicability of the cooperating surfaces of lightweight metal parts and foamed synthetic material parts includes rotary piston engines having different configuration of lobes of rotating pistons as well as cooperating surfaces of a spiral compressor and also a screw compressor for delivery of working medium free of oil and bearing grease.

Abstract (de)  
Rotationskolbengebläse mit gegeneinander mit relativer Geschwindigkeit berührungsfrei anlaufenden, zwischen sich eine Spaltdichtung bildenden Arbeits-oder Abperrteilen und Arbeitsraumwandungen, insbe sondere eines außenachsigen Gebläse, wobei jeweils eine der gegeneinander anlaufenden Flächen aus verschäumtem Kunststoff und die Gegenfläche aus aufgerauhtem Material besteht, an der sich die aus verschäumtem Kunststoff bestehende Fläche auf einen Spalt geringstmöglicher Weite einschleift.

IPC 1-7  
**F01C 21/08**

IPC 8 full level  
**F04C 29/00** (2006.01); **F01C 19/00** (2006.01); **F01C 21/08** (2006.01); **F04C 18/02** (2006.01); **F04C 18/10** (2006.01); **F04C 18/16** (2006.01); **F04C 18/18** (2006.01); **F04C 27/00** (2006.01); **F04C 18/12** (2006.01)

CPC (source: EP US)  
**F01C 19/005** (2013.01 - EP US); **F01C 21/08** (2013.01 - EP US); **F04C 18/0215** (2013.01 - EP US); **F04C 27/003** (2013.01 - EP US); **F04C 27/004** (2013.01 - EP US); **F04C 18/0207** (2013.01 - EP US); **F04C 18/126** (2013.01 - EP US); **F04C 18/16** (2013.01 - EP US); **F05C 2225/00** (2013.01 - EP US)

Citation (search report)  
• [A] EP 0109823 A1 19840530 - INGERSOLL RAND CO [US]  
• [A] DE 3321692 A1 19841220 - FRESENIUS AG [DE]  
• [A] EP 0012615 A1 19800625 - SANKYO ELECTRIC CO [JP]  
• [A] GB 2157769 A 19851030 - GILARDINI SPA  
• [A] GB 2115875 A 19830914 - PLESSEY CO PLC

Cited by  
EP2711551A3; EP0493315A1

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0267559 A1 19880518**; **EP 0267559 B1 19910424**; DE 3712354 A1 19880511; DE 3769598 D1 19910529; JP 2505501 B2 19960612; JP S63179192 A 19880723; US 4846642 A 19890711

DOCDB simple family (application)  
**EP 87116469 A 19871107**; DE 3712354 A 19870411; DE 3769598 T 19871107; JP 27945087 A 19871106; US 11829087 A 19871106