

Title (en)  
Gerotor compressor and gerotor expander

Title (de)  
Gerotorverdichter und Gerotorexpansionsvorrichtung

Title (fr)  
Compresseur et expandeur du type Gerotor

Publication  
**EP 1422378 A1 20040526 (EN)**

Application  
**EP 04003555 A 19990730**

Priority  
• EP 02022310 A 19990730  
• EP 99937633 A 19990730  
• US 9492098 P 19980731

Abstract (en)  
An engine is disclosed. According to one embodiment of the present invention, the engine comprises an compressor, and combustor, and an expander. The compressor compresses the ambient air. The combustor burns the compressed air, and produces exhaust gas. The expander receives the exhaust gases from the compressor, and expands the exhaust gases. The compressor may be a gerotor compressor or a piston compressor having variable-dead-volume control. The expander may be a gerotor expander or a piston expander having variable-dead-volume control. In another embodiment, an engine comprises a piston compressor, a combustor, a piston expander, and a pressure tank. The piston compressor compresses ambient air. The combustor burns the compressed air, and produces exhaust gases. The piston expander receives the exhaust gases from the combustor, and expands the exhaust gases. The pressure tank receives and stores the compressed air from the compressor. In another embodiment, a gerotor compressor or a gerotor expander comprises an inner gerotor, and an outer gerotor. The inner gerotor and the outer gerotor are driven so that they do not touch. The gerotors may be cantilevered or non-cantilevered. <IMAGE>

IPC 1-7  
**F01C 11/00**; **F01C 21/10**; **F01C 1/10**; **F01C 21/00**

IPC 8 full level  
**F01C 1/10** (2006.01); **F01C 11/00** (2006.01); **F02G 1/02** (2006.01)

CPC (source: EP)  
**F01C 1/103** (2013.01); **F01C 11/004** (2013.01); **F02G 1/02** (2013.01); **F02G 2250/03** (2013.01)

Citation (search report)  
• [A] FR 2720788 A1 19951208 - DEL BARBA WILLY [FR]  
• [A] US 4052928 A 19771011 - PIERRAT MICHEL A, et al  
• [A] US 3894255 A 19750708 - NEWTON JR GEORGE C  
• [A] US 3334253 A 19670801 - HILL FRANCIS A

Cited by  
EP2351907A4; EP1752613A3; US7448213B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**EP 1422378 A1 20040526**; **EP 1422378 B1 20050921**

DOCDB simple family (application)  
**EP 04003555 A 19990730**