

Title (en)

Rotary positive displacement machines.

Title (de)

Verdrängungsmaschinen mit rotierenden Kolben.

Title (fr)

Machines rotatives à déplacement positif.

Publication

EP 0009915 A1 19800416 (EN)

Application

EP 79301948 A 19790919

Priority

US 94659178 A 19780928

Abstract (en)

The machine may function as a rotary compressor, vacuum pump, expansion engine, or blower. Two rotors (1,2) interengage inside a housing (5). The first rotor (1) opens and closes higher pressure ports (15) in the end walls of the housing (5). The first rotor (1) has a larger diameter hub (6) than that (8) of the co-acting second rotor (2) so as to permit the ports (15) to be larger in area. The optimum number of teeth or lobes (7,9) for each rotor (1,2) is two. So as to reduce an internal throttling loss between the large diameter first rotor hub (6) and the casing (3), (a) the hub (6) has two grooves (10) instead of one and (b) the grooves (10) are large in angle. The lobes (7) on the first rotor (1) are smaller in angle whereas the lobes (9) on the second rotor (2) are larger in angle. The rotary shaft power transmitted through the two timing gears is less than one half of the total.

IPC 1-7

F01C 1/12

IPC 8 full level

F04C 18/20 (2006.01); **F01C 1/12** (2006.01); **F01C 1/20** (2006.01)

CPC (source: EP)

F01C 1/123 (2013.01)

Citation (search report)

- US 3472445 A 19691014 - BROWN ARTHUR E
- US 3535060 A 19701020 - BROWN ARTHUR E

Cited by

CN103696961A; CN103982425A; DE102008003077A1; US6776594B1; EP0133629A1; DE3248225A1; FR2520451A1; US9702361B2

Designated contracting state (EPC)

BE DE FR GB IT SE

DOCDB simple family (publication)

EP 0009915 A1 19800416; AU 5101479 A 19800403; CA 1119139 A 19820302; JP S5591702 A 19800711; ZA 794573 B 19800827

DOCDB simple family (application)

EP 79301948 A 19790919; AU 5101479 A 19790920; CA 335365 A 19790911; JP 12429179 A 19790928; ZA 794573 A 19790829