

Title (en)
ROTARY FLUID MACHINE

Title (de)
ROTATIONSFLUIDMASCHINE

Title (fr)
MACHINE A FLUIDE ROTATIVE

Publication
EP 1577489 A1 20050921 (EN)

Application
EP 03780999 A 20031222

Priority
• JP 0316481 W 20031222
• JP 2002374329 A 20021225
• JP 2003379929 A 20031110

Abstract (en)
[origin: WO2004059130A1] In a rotary fluid machine, both end portions of a rotor (22) with an axial piston cylinder group (56) that converts pressure energy of an operation medium to mechanical energy are supported at a casing (11) by a first bearing (23f, 23r) and a second bearing (24). Out of the bearings, only the first bearing (23f, 23r) is formed by a combination angular bearing capable of supporting an axial load, and the second bearing (24) is formed by a radial bearing capable of supporting a radial load and movable in an axial direction relative to the rotor (22). Since the rotor (22) is positioned in the axial direction at the casing (11) only by the first bearing (combination angular bearing) (23f, 23r), different amounts of axial thermal expansion present between the casing (11) and the rotor (22) can be absorbed by the second bearing (radial bearing) (24) without any problem. This effectively solves a problem produced by different amounts of thermal present expansion between the casing and rotor of the rotary fluid machine.

IPC 1-7
F01B 3/02; **F01B 31/06**

IPC 8 full level
F04B 1/20 (2006.01); **F04B 27/08** (2006.01)

CPC (source: EP US)
F04B 1/2071 (2013.01 - EP US); **F04B 27/0856** (2013.01 - EP US)

Citation (search report)
See references of WO 2004059130A1

Designated contracting state (EPC)
DE GB

DOCDB simple family (publication)
EP 1577489 A1 20050921; AU 2003289491 A1 20040722; US 2006153698 A1 20060713; WO 2004059130 A1 20040715

DOCDB simple family (application)
EP 03780999 A 20031222; AU 2003289491 A 20031222; JP 0316481 W 20031222; US 54015803 A 20031222