

Title (en)

Centrifugal compressor having variable geometry diffuser and method thereof

Title (de)

Zentrifugalkompressor mit Diffusor mit variabler Geometrie und Verfahren dafür

Title (fr)

Compresseur centrifuge doté d'un diffuseur à géométrie variable et procédé correspondant

Publication

**EP 2484916 B1 20130918 (EN)**

Application

**EP 11153299 A 20110204**

Priority

EP 11153299 A 20110204

Abstract (en)

[origin: EP2484916A1] A centrifugal compressor (1) comprises a plurality of diffuser vanes (5) arranged in a circumferentially spaced array about a machine axis (9). Each diffuser vane (5) is mounted on a respective shaft (10). Each of the shafts (10) is coupled to a ring (8) that is rotatable about the machine axis (9). A worm drive (11,12) is provided that comprises a worm (11) that meshes with a worm gear (12) or a segment of a worm gear (12) mounted along at least a portion of the circumference of the ring (8). A step motor (14) is coupled to the worm (11). The step motor (14) is operable to rotate the worm (11) about a worm axis (13) perpendicular to the machine axis (9), such that the worm drive (11,12) transmits rotational torque from the step motor (14) to said ring (8), to resultantly vary the position of the diffuser vanes (5).

IPC 8 full level

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CPC (source: EP US)

**F04D 29/462** (2013.01 - EP US); **F05D 2250/52** (2013.01 - EP)

Cited by

EP3521628A1; EP3567222A1; EP3499043A1; US2019178255A1; US10883379B2

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