

Title (en)  
Variable geometry turbine

Title (de)  
Turbine mit verstellbarer Statorgeometrie

Title (fr)  
Turbine à géométrie variable

Publication  
**EP 0884454 B1 20030716 (EN)**

Application  
**EP 98304122 A 19980526**

Priority  
GB 9711892 A 19970610

Abstract (en)  
[origin: EP0884454A1] A variable geometry turbine comprising a housing, a turbine wheel mounted to rotate about a pre-determined axis within the housing, and a gas inlet passage to the turbine. The gas inlet passage is defined between a fixed wall and an annular sidewall which is mounted in the housing and is displaceable relative to the fixed wall between axially spaced first and second positions. The sidewall is biased away from the fixed by at least one spring towards the first position, an axial force is applied to the sidewall in opposition to the spring to thereby control the axial position of the sidewall. The spring or springs provide a non-linear length to spring force characteristics such that the resultant of the applied spring force and an axial force applied to the sidewall as a result of gas flow through the passage increases continuously as the sidewall is displaced from the first position to the second position.

IPC 1-7  
**F01D 17/14**

IPC 8 full level  
**F01D 25/24** (2006.01); **F01D 17/14** (2006.01); **F02B 37/22** (2006.01); **F02C 3/05** (2006.01); **F02C 7/00** (2006.01)

CPC (source: EP)  
**F01D 17/143** (2013.01)

Cited by  
DE19905637C1; US7475540B2; US6931849B2; US7658068B2; US8291703B2

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
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