

Title (en)  
Multistage pump

Title (de)  
Mehrstufige Pumpe

Title (fr)  
Pompe multiétagée

Publication  
**EP 1164296 A3 20030319 (EN)**

Application  
**EP 01113613 A 20010615**

Priority  
IT PD20000163 A 20000615

Abstract (en)  
[origin: EP1164296A2] A multistage pump (10) comprising, in a tubular body (11), a plurality of diffusers (12) which are alternated with impellers (13), the diffusers (12) being stacked peripherally so as to form a diffuser casing (14), the impellers (13) being keyed on a shaft (15) arranged on the axis (16), a closure assembly (18) being associated with the tubular body (11) at the intake region (17) so as to lock the diffusers in the packed configuration. The pump (10) comprises two annular elements (22, 23) which are interposed between the closure assembly (18) associated with the tubular body (11) and the corresponding head (21) of the diffuser casing (14), the mutually facing surfaces of the annular elements being shaped so as to form a contact with three degrees of freedom of rotation so as to allow adaptation with correction of any errors of co-planarity in the locking on the part of the closure assembly (18) on the head (21) of the diffuser casing (14). <IMAGE>

IPC 1-7  
**F04D 29/42**; **F04D 1/06**

IPC 8 full level  
**F04D 1/06** (2006.01); **F04D 29/42** (2006.01)

CPC (source: EP)  
**F04D 1/063** (2013.01); **F04D 29/426** (2013.01); **F04D 29/4266** (2013.01)

Citation (search report)

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- [X] DATABASE WPI Derwent World Patents Index; AN 2000-420975, XP002227652
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Cited by  
CN105190048A; CN112901511A

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

DOCDB simple family (publication)  
**EP 1164296 A2 20011219**; **EP 1164296 A3 20030319**; IT 1315710 B1 20030318; IT PD20000163 A0 20000615; IT PD20000163 A1 20011215

DOCDB simple family (application)  
**EP 01113613 A 20010615**; IT PD20000163 A 20000615