

Title (en)  
ECCENTRIC SCREW PUMP WITH HELICAL ROTOR

Publication  
**EP 0046779 B1 19850109 (DE)**

Application  
**EP 81900526 A 19810227**

Priority  
DE 3007881 A 19800301

Abstract (en)  
[origin: DE3007881A1] The eccentric screw pump is subdivided into several stages by separation planes (18). The stator (1) is formed by distinct stator segments (3) which cooperate with the eccentrics of the rotor formed for example by distinct eccentric discs (22) mounted on a grooved shaft (20). Between the stator and the eccentric of each stage there is inserted an intermediary member comprised of an annular shrouding (240) pivotingly mounted on the eccentric, a piston ring or a wear ring fixed angularly and optionally adjustable longitudinally on the eccentric. The adjacent eccentrics (22) are offset angularly by one angular subdivision of the rotor (tr) about the axis of the shaft (15), the adjacent rings (3) of the stator are offset mutually by an angular shift of the stator (ts) the magnitude of which is twice smaller. The intermediary members (240) are guided by separation planes (18) of the stator. To allow the rotor to freely adapt to an axial thermal expansion different from that of the stator, there are provided free expansion spaces which, in the present case, are formed by annular grooves (67), but which may also be formed by crescent shaped and grooves. The eccentrics of adjacent stages may move in the grooves (67) in case of different thermal expansions.

IPC 1-7  
**F04C 2/107**

IPC 8 full level  
**F04C 2/107** (2006.01)

CPC (source: EP)  
**F04C 2/107** (2013.01)

Designated contracting state (EPC)  
DE FR GB NL SE

DOCDB simple family (publication)  
**DE 3007881 A1 19810910**; DE 3168099 D1 19850221; EP 0046779 A1 19820310; EP 0046779 B1 19850109; WO 8102447 A1 19810903

DOCDB simple family (application)  
**DE 3007881 A 19800301**; DE 3168099 T 19810227; EP 8100016 W 19810227; EP 81900526 A 19810227