

Title (en)  
IMPROVED SCREW ROTOR DEVICE

Title (de)  
VERBESSERTE SCHRAUBENROTORVORRICHTUNG

Title (fr)  
DISPOSITIF A ROTOR EN FORME DE VIS AMELIORE

Publication  
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Application  
**EP 03779360 A 20031028**

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Abstract (en)  
[origin: WO2004040133A2] A screw rotor device has a pair of intermeshing rotors (14, 16) that are rotatably mounted in a housing around a pair of axes (26, 28). The cross-sectional shape of the rotors can be identical, i.e., twin rotors, or the rotors may have different cross-sectional shapes, i.e., a male and female. Generally, the screw rotor has an identical number of threads and the twisting of the cross-sectional shape along the respective rotor axes results in a helical shape for each rotor that intermeshes with the other rotor (14, 16). Accordingly, the rotors (14, 16) can be referred to as having intermeshing helical element pairs (34, 36). In several aspects of the invention, the helical element pairs can be, in the alternative or in any combination, a phase-offset thread and a corresponding phase-offset groove, a pair of single-pitch buttress threads (50), or a pair of single-pitch concave/convex threads.

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