

Title (en)  
INTERNAL GEARED WHEEL PUMP WITHOUT A FILLER PIECE

Title (de)  
FÜLLSTÜCKLOSE INNENZAHNRADPUMPE

Title (fr)  
POMPE A ENGRENAGES INTERIEURS DEPOURVUE D'ELEMENT DE SEPARATION

Publication  
**EP 1328730 B1 20041020 (DE)**

Application  
**EP 01978115 A 20010907**

Priority  
• DE 0103484 W 20010907  
• DE 10052779 A 20001025

Abstract (en)  
[origin: WO0235097A1] The invention relates to an internal geared wheel pump without a filler piece, comprising a housing, an internal geared wheel (3) which rotates in said housing and an external geared pinion (2) which is rotationally mounted in the housing and which meshes with the geared wheel. The teeth of said pinion define a suction area and a pressure area in the gearing, by complete engagement with the tooth spaces of the geared wheel and by sealing contact with tooth crowns of said geared wheel in an engagement-free geared wheel area which lies approximately diametrically opposite the tooth space engagement. The toothing of the geared wheel and the pinion is an involute or cycloid toothing, the tooth crowns having a rounded peripheral surface (23, 34). The tooth crowns of the geared wheel (3) and/or the pinion (2) are asymmetrically rounded in relation to a centre line (40) of each tooth (22, 33), in such a way that a transition line (42) between the tooth face (24, 35) and the peripheral surface (41) is located on the rear tooth face (35) (in the direction of rotation) for the geared wheel and on the front tooth face (24) (in the direction of rotation) for the pinion, closer to the tooth base than on the opposite tooth face, respectively.

IPC 1-7  
**F04C 2/10**

IPC 8 full level  
**F04C 2/08** (2006.01); **F04C 2/10** (2006.01)

CPC (source: EP US)  
**F04C 2/084** (2013.01 - EP US); **F04C 2/102** (2013.01 - EP US)

Cited by  
DE102011100105A1

Designated contracting state (EPC)  
DE FR IT

DOCDB simple family (publication)  
**WO 0235097 A1 20020502**; DE 10052779 A1 20020508; DE 50104246 D1 20041125; EP 1328730 A1 20030723; EP 1328730 B1 20041020; US 2004091379 A1 20040513; US 6893239 B2 20050517

DOCDB simple family (application)  
**DE 0103484 W 20010907**; DE 10052779 A 20001025; DE 50104246 T 20010907; EP 01978115 A 20010907; US 41522503 A 20030425