

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

**EP 0 727 560 A3**

(12)

**EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**29.01.1997 Bulletin 1997/05**

(51) Int. Cl.<sup>6</sup>: **E21B 3/02, E21B 7/20**

(43) Date of publication A2:  
**21.08.1996 Bulletin 1996/34**

(21) Application number: **96101254.9**

(22) Date of filing: **30.01.1996**

(84) Designated Contracting States:  
**AT BE CH DE ES FR GB GR IT LI PT**  
Designated Extension States:  
**SI**

(30) Priority: **16.02.1995 IT UD950022**

(71) Applicant: **CASAGRANDE SpA**  
**I-33074 Fontanafredda (PN) (IT)**

(72) Inventor: **Casagrande, Sergio**  
**33074 Fontanafredda (PN) (IT)**

(74) Representative: **Petraz, Gilberto Luigi**  
**GLP S.r.l.**  
**Piazzale Cavedalis 6/2**  
**33100 Udine (IT)**

**(54) Casing rotating device for drilling machines**

(57) Casing rotating device (10) for drilling machines, the device being associated and coaxial with a device (13) for the rotation of a drilling tool for the obtaining of foundation piles, the drilling tool rotation device (13) having its own motor, the rotary casing-

oscillator device (10) being located in a position below the drilling tool rotation device (13) and being associated with a reduction-gear and torque-multiplier transmission assembly (15,115).

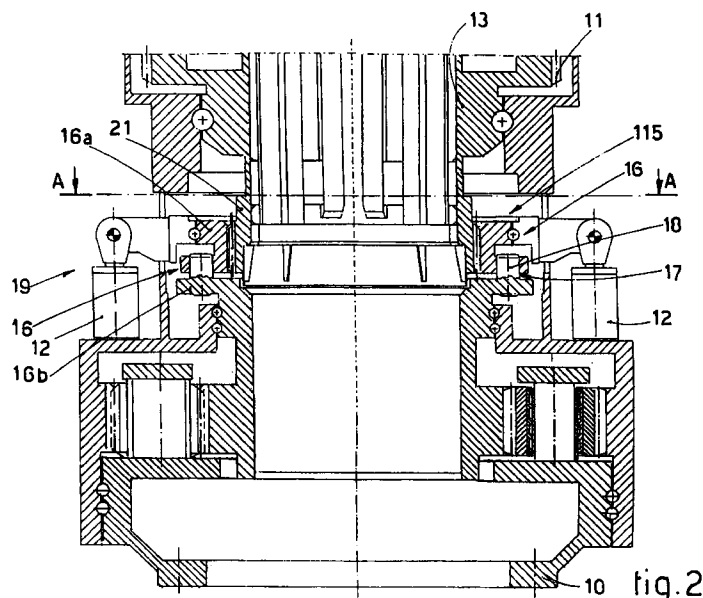


fig.2

**EP 0 727 560 A3**



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 96 10 1254

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US-A-4 148 367 (REICH) * column 3, line 21 - line 31 * ---	1	E21B3/02 E21B7/20
A	US-A-4 102 409 (LAGERSTEDT) * column 2, line 12 - line 52 * ---	1	
A	DE-A-20 26 364 (SALZGITTER MASCHINEN AG) * claim 1 * ---	1	
A	US-A-3 703 212 (ABRAHAMS) * column 2, line 43 - line 66 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			E21B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 3 December 1996	Examiner Rampelmann, K
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  .....  &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04C01)