

Title (en)
Friction motor spindle

Title (de)
Friktions-Motorspindel

Title (fr)
Broche à friction motorisée

Publication
EP 2295621 A1 20110316 (DE)

Application
EP 10171587 A 20100802

Priority
DE 102009040864 A 20090909

Abstract (en)
The spindle (3) has a bearing unit (4) comprising two roller bearings (5) e.g. ball bearings, which are axially placed at a distance from one another. An electric motor (2) is provided for directly driving the spindle without a bearing. A gear element (7) e.g. crown gear, is connected with the spindle in a twist-proof manner and forms a part of a belt drive. The electric motor is placed immediately near the bearing unit and formed as a synchronous motor, asynchronous motor, permanent magnet excited motor, electronically commutated direct current (DC) motor or reluctance motor.

Abstract (de)
Eine Friktions-Motorspindel weist eine zur Lagerung einer Spindel (3) vorgesehene Lagereinheit (4), welche zwei axial voneinander beabstandete Wälzlager (5) umfasst, auf, sowie einen zum Direktantrieb der Spindel (3) vorgesehenen Elektromotor (2) ohne eigene Lagerung, und weiter ein drehfest mit der Spindel (3) verbundenes, ein Teil eines Umschlingungsgetriebes bildendes Getriebelement (7), wobei der Elektromotor (2) der Lagereinheit (4) unmittelbar benachbart ist.

IPC 8 full level
D02G 1/06 (2006.01); **D02G 1/08** (2006.01)

CPC (source: EP)
D02G 1/06 (2013.01); **D02G 1/082** (2013.01)

Citation (applicant)
• EP 0828872 B1 19990707 - SCHAEFFLER WÄELZLAGER OHG [DE]
• DE 102005023928 A1 20061130 - SCHAEFFLER KG [DE]

Citation (search report)
• [A] EP 0828872 B1 19990707 - SCHAEFFLER WÄELZLAGER OHG [DE]
• [A] DE 102005023928 A1 20061130 - SCHAEFFLER KG [DE]
• [A] DE 3743708 A1 19890706 - KUGELFISCHER G SCHAEFER & CO [DE]

Cited by
JP2016525173A; JP2016529407A; EP3031963A4

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
BA ME RS

DOCDB simple family (publication)
EP 2295621 A1 20110316; EP 2295621 B1 20111102; AT E531840 T1 20111115; CN 102021700 A 20110420; CN 102021700 B 20141119; DE 102009040864 A1 20110310

DOCDB simple family (application)
EP 10171587 A 20100802; AT 10171587 T 20100802; CN 201010282296 A 20100909; DE 102009040864 A 20090909