

Title (en)  
Punch unit

Title (de)  
Stanzeinheit

Title (fr)  
Unité de poinçonnage

Publication  
**EP 0694351 B1 20011017 (EN)**

Application  
**EP 95111743 A 19950726**

Priority  
• DE 4426498 A 19940727  
• DE 4428116 A 19940809

Abstract (en)  
[origin: EP0694351A1] A punch unit includes a punch driver connected with a punch and having a base at its back end. Additional parts comprise safeguarding members which keep the punch and the punch driver free of relative rotation during the stroke of the punch, and a pre-loaded compression spring which during the stroke of the punch can be compressed between the base and a guide bushing, which receives the punch so that it cannot be rotated, but is axially displaceable. To prevent weakening of the connection between the punch and the punch driver and to allow the adjustment of their total length in arbitrarily small steps, it is provided that the safeguarding members are formed by an engagement, interlocking in the circumferential direction, between the punch driver and the guide bushing in the axial area between the exterior back edge of the punch and the compression spring. <MATH>

IPC 1-7  
**B21D 45/00**

IPC 8 full level  
**B21D 28/34** (2006.01); **B21D 45/00** (2006.01); **B26F 1/14** (2006.01)

CPC (source: EP)  
**B21D 28/34** (2013.01); **B21D 45/003** (2013.01); **B26F 1/14** (2013.01)

Designated contracting state (EPC)  
FR GB IT

DOCDB simple family (publication)  
**EP 0694351 A1 19960131**; **EP 0694351 B1 20011017**; AU 3143995 A 19960222; CA 2154740 A1 19960128; WO 9603261 A1 19960208

DOCDB simple family (application)  
**EP 95111743 A 19950726**; AU 3143995 A 19950726; CA 2154740 A 19950726; US 9509329 W 19950726