

Title (en)  
Die cushion control device

Title (de)  
Ziehkissen-Steuervorrichtung

Title (fr)  
Dispositif de commande pour amortisseur de matrice

Publication  
**EP 1685914 A2 20060802 (EN)**

Application  
**EP 06250459 A 20060127**

Priority  
JP 2005025413 A 20050201

Abstract (en)  
Die cushion control device that implements die cushion control while making a switch between position control and pressure control by using servomotors, and reduces the impact caused by a collision between a press axis and a die cushion axis during position control. Die cushion members (6) are controlled by servomotors Md. The changeover switch (16) is connected to the "a"-side, to thereby control the position (velocity) of the servomotors Md by commands from a numerical controller (10) and control the position of the die cushion members. During position control, the output torque of the servomotors Md is limited by torque limit means (15). During position control, even if the press axis hits the die cushion members due to erroneous setting, wrong operation or the like, the servomotors Md merely output only a limited torque or less, so that impact force is reduced, which prevents damage to the die cushion members and the press axis. During press operation, when a position detector (7) detects that the press axis moves downward to reach a predetermined position, the changeover switch is connected to the "b"-side, to thereby implement pressure control.

IPC 8 full level  
**B21D 24/02** (2006.01)

CPC (source: EP US)  
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Citation (applicant)  
JP H10202327 A 19980804 - AIDA ENG LTD

Cited by  
CN103703877A; EP2734023A4; EP1990697A1

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