

Title (en)  
SYNCHRONIZATION DEVICE FOR A HYDRAULIC MULTIPLE CYLINDER DRIVE

Publication  
**EP 0231735 B1 19900124 (DE)**

Application  
**EP 86890350 A 19861219**

Priority  
AT 377385 A 19851230

Abstract (en)  
[origin: EP0231735A1] 1. A synchronisation device for a hydraulic multiple-cylinder drive, in particular for a press brake, having a displacement pickup (8) allotted to each working cylinder (4) in each case and connected to a common electronic control unit (10) in each case, and having a control valve (20) to which pressure medium is admitted and which is connected to the control unit (10) via control lines (22), one control valve for each working cylinder, all the control valves (20) being connected to a common drive station (17) for supplying the working cylinders (4) with pressure medium, characterised in that both sides of each working cylinder (4) are connected via shuttle valves (33, 34, 37) to one common three-way pressure balance (39) for all the working cylinders (4).

IPC 1-7  
**B30B 15/24; F15B 11/22**

IPC 8 full level  
**B21D 5/02** (2006.01); **B30B 15/24** (2006.01); **F15B 11/22** (2006.01)

CPC (source: EP)  
**B30B 15/24** (2013.01); **F15B 11/22** (2013.01)

Cited by  
FR2676041A1; CN104540666A; EP0453986A3; EP0434541A1; FR2655907A1; US9168713B2; WO0225119A1; WO9108894A1; WO2013156095A1; WO9511189A1

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DE FR GB IT

DOCDB simple family (publication)  
**EP 0231735 A1 19870812; EP 0231735 B1 19900124**; AT 385466 B 19880411; AT A377385 A 19870915; CN 1007371 B 19900328; CN 86108883 A 19870812; DE 3668433 D1 19900301; JP S62230426 A 19871009

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