

Title (en)  
HYDRAULIC CONTROL DEVICE

Publication  
**EP 0331958 A3 19910410 (DE)**

Application  
**EP 89102903 A 19890220**

Priority  
DE 3807583 A 19880308

Abstract (en)  
[origin: US4941321A] A directional control valve between the pump and consumer has a load-pressure-sensing connection with a variable throttle. The sensed load pressure acts to bias a supply-flow-bypassing pressure compensation valve connected to the main pump line. Control of the load pressure throttling allows the increase in main pump line pressure to be adapted continuously and automatically to the demand. The variable throttle includes a spring-biased nonreturn valve in which the spring bias varies in proportion to the lift movement and in an infinitely variable manner at least over a portion of the lift path of the valve spool.

IPC 1-7  
**F15B 11/05**

IPC 8 full level  
**F15B 11/05** (2006.01); **E02F 9/22** (2006.01); **F15B 11/16** (2006.01); **F15B 13/04** (2006.01)

CPC (source: EP US)  
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Citation (search report)  
• [APD] DE 3722083 C1 19880915 - HEILMEIER & WEINLEIN  
• [A] DE 2620041 A1 19771124 - BOSCH GMBH ROBERT  
• [A] DE 3611244 A1 19871008 - REXROTH MANNESMANN GMBH [DE]

Cited by  
WO9805870A1; WO9844266A1

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**US 4941321 A 19900717**; AT E101900 T1 19940315; DE 3807583 C1 19890309; DE 58907019 D1 19940331; EP 0331958 A2 19890913; EP 0331958 A3 19910410; EP 0331958 B1 19940223; JP H01279102 A 19891109; JP H07109206 B2 19951122

DOCDB simple family (application)  
**US 32007689 A 19890306**; AT 89102903 T 19890220; DE 3807583 A 19880308; DE 58907019 T 19890220; EP 89102903 A 19890220; JP 5599089 A 19890308