

Title (en)  
HYDROPNEUMATIC ACCUMULATOR

Title (de)  
HYDROPNEUMATISCHER DRUCKSPEICHER

Title (fr)  
ACCUMULATEUR DE PRESSION HYDROPNEUMATIQUE

Publication  
**EP 1250533 B1 20050518 (DE)**

Application  
**EP 01902324 A 20010117**

Priority  
• DE 10003648 A 20000129  
• EP 0100442 W 20010117

Abstract (en)  
[origin: US6622755B2] A hydropneumatic accumulator includes a bellows inside the accumulator housing, separating a gas chamber from an oil chamber. The bellows is fastened at one end to the accumulator housing so that the oil chamber is delimited by the inside of the bellows, and is sealed on the other free end by a closing body that is movable according to changes in volume of the gas chamber and of the oil chamber. The hydropneumatic accumulator also includes a valve to enable a hydraulic fluid to flow out of and into the oil chamber or to block the flow of the hydraulic fluid. The valve can be moved into its blocking position by the closing body when the closing body undergoes a movement corresponding to an increase in the volume of the gas chamber that exceeds a predetermined maximum value. The closing body is in the shape of a trough, with its edge located on the open end connected to the free end of the bellows. The trough extends with its lateral wall along the inside of the bellows. The bottom of the trough is configured as a moveable valve element of the valve that controls the flow of hydraulic fluid.

IPC 1-7  
**F15B 1/22**; **F15B 1/10**

IPC 8 full level  
**F15B 1/08** (2006.01); **F15B 1/10** (2006.01); **F15B 1/22** (2006.01)

CPC (source: EP US)  
**F15B 1/103** (2013.01 - EP US); **F15B 1/22** (2013.01 - EP US); **F15B 2201/205** (2013.01 - EP US); **F15B 2201/3153** (2013.01 - EP US); **F15B 2201/411** (2013.01 - EP US); **F15B 2201/415** (2013.01 - EP US)

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 0155602 A1 20010802**; AT E295941 T1 20050615; DE 10003648 A1 20010809; DE 50106255 D1 20050623; EP 1250533 A1 20021023; EP 1250533 B1 20050518; ES 2240397 T3 20051016; JP 2003521643 A 20030715; JP 3971188 B2 20070905; US 2003000589 A1 20030102; US 6622755 B2 20030923

DOCDB simple family (application)  
**EP 0100442 W 20010117**; AT 01902324 T 20010117; DE 10003648 A 20000129; DE 50106255 T 20010117; EP 01902324 A 20010117; ES 01902324 T 20010117; JP 2001555707 A 20010117; US 18172102 A 20020722