

Title (en)  
Device for damping pressure pulses in a fluid system, in particular a fuel system of a combustion engine

Title (de)  
Vorrichtung zum Dämpfen von Druckpulsationen in einem Fluidsystem, insbesondere in einem Kraftstoffsystem einer Brennkraftmaschine

Title (fr)  
Dispositif d'amortissement d'impulsions de pression dans un système de fluide, notamment dans un système de carburant d'un moteur à combustion interne

Publication  
**EP 2284384 B1 20121010 (DE)**

Application  
**EP 10180727 A 20030716**

Priority  
• EP 03015623 A 20030716  
• DE 10248822 A 20021019  
• DE 10327408 A 20030618

Abstract (en)  
[origin: EP2278150A1] The device has housings (38, 40), and an operating chamber (66) provided in communication with a fluid system i.e. fuel system, of an internal combustion engine. A gas volume (58) is sealably closed by membranes (54a, 54b) i.e. metallic pipes, provided within the operating chamber, where the membranes are made up of metal. The membranes are limited by a thin wall and arranged parallel to each other, and the closed gas volume includes pressure i.e. overload pressure, and is provided with a closable opening (60). Edges of the membranes are sealably connected with each other.

IPC 8 full level  
**F02M 55/04** (2006.01); **F02M 37/00** (2006.01); **F02M 55/00** (2006.01); **F02M 55/02** (2006.01); **F02M 59/44** (2006.01); **F02M 69/54** (2006.01); **F02M 63/00** (2006.01); **F02M 63/02** (2006.01)

CPC (source: EP)  
**F02M 37/0041** (2013.01); **F02M 55/04** (2013.01); **F02M 69/54** (2013.01); **F04B 11/0008** (2013.01); **F04B 11/0033** (2013.01); **F04B 23/04** (2013.01); **F02M 37/0047** (2013.01); **F02M 63/0225** (2013.01); **F02M 2200/315** (2013.01)

Citation (examination)  
• US 5794594 A 19980818 - FEHLMANN WOLFGANG [DE]  
• US 3366144 A 19680130 - DURST HENRY J  
• US 2002139351 A1 20021003 - BRAUN CHARLES W [US], et al  
• WO 0165106 A1 20010907 - SAN O IND CO [JP], et al  
• EP 1342911 A2 20030910 - HITACHI LTD [JP], et al

Cited by  
DE102015219772A1; DE102015219769A1

Designated contracting state (EPC)  
DE ES FR IT

DOCDB simple family (publication)  
**DE 10327408 A1 20040429**; **DE 10327408 B4 20171026**; DE 10362411 B3 20170907; DE 10362412 B3 20170907; EP 2278150 A1 20110126; EP 2278150 B1 20121010; EP 2278151 A1 20110126; EP 2278151 B1 20150114; EP 2284384 A2 20110216; EP 2284384 A3 20110323; EP 2284384 B1 20121010; ES 2391627 T3 20121128; ES 2391727 T3 20121129; ES 2393308 T3 20121220; ES 2528601 T3 20150210

DOCDB simple family (application)  
**DE 10327408 A 20030618**; DE 10362411 A 20030618; DE 10362412 A 20030618; EP 10180722 A 20030716; EP 10180727 A 20030716; EP 10180742 A 20030716; ES 03015623 T 20030716; ES 10180722 T 20030716; ES 10180727 T 20030716; ES 10180742 T 20030716