

Title (en)  
Actuator, in particular for actuating valves

Title (de)  
Betätigungsvorrichtung, insbesondere zum Betätigen von Ventilen

Title (fr)  
Dispositif de commande, notamment pour la commande de soupapes

Publication  
**EP 1607988 A3 20080220 (DE)**

Application  
**EP 05007959 A 20050412**

Priority  
DE 102004028871 A 20040615

Abstract (en)  
[origin: EP1607988A2] The liner electromagnetic actuator for use with valves has a body with an actuation coil assembly [12] and an inset pole core [18] and tube [14] within which an armature moves [20]. A coupling channel [40] allows any fluid to move freely between the ends of the armature and so prevents fluid loading.

IPC 8 full level  
**H01F 7/16** (2006.01); **F16K 31/06** (2006.01)

CPC (source: EP)  
**H01F 7/1607** (2013.01)

Citation (search report)  
• [X] EP 1313110 A2 20030521 - INA SCHAEFFLER KG [DE]  
• [X] DE 4445221 A1 19960620 - BOSCH GMBH ROBERT [DE]  
• [X] DE 19900995 A1 19990819 - CATERPILLAR INC [US]  
• [X] DE 4430509 A1 19951123 - COLTEC IND INC [US]  
• [A] DE 10196576 T1 20030710 - NOK CORP [JP]

Cited by  
EP1992855A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR LV MK YU

DOCDB simple family (publication)  
**EP 1607988 A2 20051221; EP 1607988 A3 20080220; EP 1607988 B1 20111019; AT E529869 T1 20111115; DE 102004028871 A1 20060105**

DOCDB simple family (application)  
**EP 05007959 A 20050412; AT 05007959 T 20050412; DE 102004028871 A 20040615**