

Title (en)  
Electro-proportional solenoid-valve unit

Title (de)  
Elektroproportionalmagnet-Ventileinheit

Title (fr)  
Unité de soupape à électro-aimant proportionnel

Publication  
**EP 0667459 B1 19991103 (DE)**

Application  
**EP 95100336 A 19950112**

Priority  
DE 9402206 U 19940210

Abstract (en)  
[origin: EP0667459A1] The proportional electromagnetically actuated fluid power valve has a main housing sleeve (7) that supports a hollow cylindrical spool (3) that has formed ring shaped flow channels (17,19). The spool is displaced axially by the armature pin (2) of the actuator (1). Flow passes through the channels to control the flow between inlet and outlet (8,10) ports. The ring channel (17) is coupled to a central region in a tube (14) by a port (16) and this avoids hydraulic stagnation pressure being generated to modify the proportional action of the valve.

IPC 1-7  
**F15B 13/044**; **F16K 31/06**

IPC 8 full level  
**F15B 13/04** (2006.01); **F15B 13/044** (2006.01); **F16K 31/06** (2006.01)

CPC (source: EP US)  
**F15B 13/0402** (2013.01 - EP US); **F15B 13/0442** (2013.01 - EP US); **Y10T 137/86622** (2015.04 - EP US); **Y10T 137/86702** (2015.04 - EP US)

Cited by  
DE19853670C5; DE19727180A1; DE19727180C2; WO9900602A1; WO0161714A1

Designated contracting state (EPC)  
DE ES FR GB IT SE

DOCDB simple family (publication)  
**DE 9402206 U1 19940505**; DE 59507148 D1 19991209; EP 0667459 A1 19950816; EP 0667459 B1 19991103; JP H07224965 A 19950822; US 5592972 A 19970114

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**DE 9402206 U 19940210**; DE 59507148 T 19950112; EP 95100336 A 19950112; JP 1786295 A 19950206; US 38637295 A 19950210