

Title (en)
PROPORTIONAL SOLENOID-CONTROLLED FLUID VALVE HAVING COMPACT PRESSURE-BALANCING ARMATURE-POPPET ASSEMBLY

Title (de)
PROPORTIONALES ELEKTROMAGNETVENTIL MIT KOMPAKTER, DRUCKAUSGEGLICHENER VENTILANORDNUNG

Title (fr)
SOUPAPE PROPORTIONNELLE POUR FLUIDE, COMMANDEE PAR UN SOLENOIDE, PRESENTANT UN ENSEMBLE D'EQUILIBRAGE DE PRESSION COMPACT A CLAPET ET INDUIT

Publication
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Application
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Priority
IB 0300709 W 20030226

Abstract (en)
[origin: WO2004044468A1] A proportional solenoid-driven valve control assembly contains a moveable, magnetic armature (222) adjacent to a fixed pole piece (306), providing fluid leakage containment, and having no non-magnetic element for alignment, support or magnetic flux path control. A valve unit (200) coupled with the armature contains a fluid cavity in fluid communication with a fluid inlet port (204) and a fluid exit port (206). The valve is closed by a poppet (220) coupled with the armature (222). To compensate for fluid pressures exerted against the poppet, a flow restriction is provided between an armature cavity (256) and the fluid cavity. Also, a bore (223) is formed through the armature to provide fluid communication between the fluid exit port and the armature cavity. This serves to balance fluid pressures at the fluid inlet and exit ports applied to the opposite sides of the fluid flow restriction.

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See references of WO 2004044468A1

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