

Title (en)  
ELECTROMAGNETIC DRIVE

Title (de)  
ELEKTROMAGNETISCHER ANTRIEB

Title (fr)  
SYSTEME D'ENTRAINEMENT ELECTROMAGNETIQUE

Publication  
**EP 1131540 B1 20030319 (DE)**

Application  
**EP 99958043 A 19991115**

Priority  
• DE 19854020 A 19981116  
• DE 19900933 A 19990113  
• EP 9908785 W 19991115

Abstract (en)  
[origin: DE19955079A1] The electromagnetic drive has a reciprocating magnetic armature for operation of a valve element (6) and at least one cooperating electromagnet (7,8), with the depth to width ratio of both the armature and the electromagnet being greater than 1.5, e.g. greater than 3. A pair of opposing spring forces (16) hold the magnetic armature in an intermediate position between its end positions when neither electromagnet is supplied with current.

IPC 1-7  
**F01L 9/04**

IPC 8 full level  
**F01L 9/20** (2021.01)

CPC (source: EP US)  
**F01L 9/20** (2021.01 - EP US); **F01L 2009/2109** (2021.01 - EP); **F01L 2305/00** (2020.05 - EP US)

Designated contracting state (EPC)  
DE FR GB IT SE

DOCDB simple family (publication)  
**DE 19955079 A1 20000525**; DE 59904667 D1 20030424; EP 1131540 A1 20010912; EP 1131540 B1 20030319; US 6516758 B1 20030211; WO 0029723 A1 20000525

DOCDB simple family (application)  
**DE 19955079 A 19991115**; DE 59904667 T 19991115; EP 9908785 W 19991115; EP 99958043 A 19991115; US 85601001 A 20010516