

Title (en)  
Valve rotating apparatus

Title (de)  
Ventildrehvorrichtung

Title (fr)  
Dispositif de rotation de soupape

Publication  
**EP 1510661 B1 20070124 (DE)**

Application  
**EP 04018832 A 20040809**

Priority  
DE 20313101 U 20030825

Abstract (en)  
[origin: EP1510661A1] The valve rotator has a base (10) with an annular groove (16), in which ball bearings (14) are mounted. This fits on a lid (18) and is biased away from it by an elastomeric spring (22).

IPC 8 full level  
**F01L 1/32** (2006.01)

CPC (source: EP)  
**F01L 1/32** (2013.01)

Designated contracting state (EPC)  
DE FI GB

DOCDB simple family (publication)  
**DE 20313101 U1 20040115**; DE 502004002745 D1 20070315; DE 502004005300 D1 20071129; EP 1510661 A1 20050302; EP 1510661 B1 20070124; EP 1705344 A1 20060927; EP 1705344 B1 20071017

DOCDB simple family (application)  
**DE 20313101 U 20030825**; DE 502004002745 T 20040809; DE 502004005300 T 20040809; EP 04018832 A 20040809; EP 06010947 A 20040809