

Title (en)  
SOFTENER CONTROL ASSEMBLY

Title (de)  
STEUERANORDNUNG FÜR ENTHÄRTER

Title (fr)  
ENSEMBLE DE COMMANDE D'ADOUCCISSEUR

Publication  
**EP 1846966 A4 20121107 (EN)**

Application  
**EP 06717933 A 20060111**

Priority  
• US 2006000796 W 20060111  
• US 5032305 A 20050203

Abstract (en)  
[origin: WO2006083504A2] A softener control assembly including a piston and a brine valve to control water and regeneration flow. The piston is controlled by an eccentric connected to the drive shaft of the control valve. The brine valve is controlled by a cam, that is also connected to the drive shaft. The cam and eccentric are mounted on the drive shaft that also includes an encoder disc. The encoder disc and shaft position are monitored by a microcontroller using an optical sensor mounted on a circuit board to control the piston and brine valve positions. The encoder disc has a pattern of slots that are evenly spaced to provide positional control. The encoder disc is designed to include a disrupted location on the disc where the ribs of the slots are removed to provide an open area and the slots are filled in to provide a closed off area. This allows the optical sensing system to recalibrate itself during each revolution. The softener control assembly also includes a de-bounce feature where a delay is incorporated in the optical sensing program to require that the presence or lack of the optical signal is assured before the signal is accepted as valid.

IPC 8 full level  
**C02F 1/32** (2006.01); **C02F 1/00** (2006.01)

CPC (source: EP)  
**C02F 1/008** (2013.01); **C02F 1/42** (2013.01)

Citation (search report)  
• [Y] US 6444127 B1 20020903 - VAUGHAN DON [US], et al  
• [Y] US 3396845 A 19680813 - JOSEPH BANK ST, et al  
• [Y] US 4919595 A 19900424 - LIKUSKI ROBERT K [US], et al  
• See references of WO 2006083504A2

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 LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2006083504 A2 20060810; WO 2006083504 A3 20090423; EP 1846966 A2 20071024; EP 1846966 A4 20121107**

DOCDB simple family (application)  
**US 2006000796 W 20060111; EP 06717933 A 20060111**