

Title (en)  
Piston cartridge with venting means

Title (de)  
Kartuschenkolben mit Entlüftung

Title (fr)  
Piston de cartouche muni d'un évent

Publication  
**EP 1308218 A3 20050601 (DE)**

Application  
**EP 02015303 A 20020710**

Priority  
DE 20117778 U 20011031

Abstract (en)  
[origin: US2003079798A1] A cartridge plunger with at least one gas evacuation opening and at least one gas evacuation element covering the cartridge plunger opening. For a simple and dependable gas evacuation and to prevent any undesirable leakage of the filler material, the gas evacuation element is at least one cover disk that forms a labyrinth path running transverse to the plunger axis. The path is located between the contact surface of the cover disk facing the gas evacuation opening and a corresponding contact surface on the cartridge plunger.

IPC 1-7  
**B05C 17/01**; **B05C 17/005**; **B65D 83/00**

IPC 8 full level  
**B05C 17/005** (2006.01); **B65D 83/00** (2006.01)

CPC (source: EP US)  
**B05C 17/00576** (2013.01 - EP US); **B05C 17/00579** (2013.01 - EP US); **B65D 83/0005** (2013.01 - EP US)

Citation (search report)

- [XY] US 5316186 A 19940531 - PRESTELE EUGEN [DE]
- [Y] US 4402431 A 19830906 - WIEGNER GEORG [DE], et al
- [A] DE 20010417 U1 20011011 - SULZER CHEMTECH AG WINTERTHUR [CH]
- [A] DE 29811344 U1 19991028 - PRESTELE EUGEN [DE]
- [A] US 4819836 A 19890411 - MECKENSTOCK FRITZ [DE]

Cited by  
EP1514812A1; US7621428B2; US7909211B2; EP3597311A1; DE102019118627A1; US9844796B2; US10279935B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)  
**DE 20117778 U1 20030320**; DE 50208587 D1 20061214; EP 1308218 A2 20030507; EP 1308218 A3 20050601; EP 1308218 B1 20061102; US 2003079798 A1 20030501; US 6685063 B2 20040203

DOCDB simple family (application)  
**DE 20117778 U 20011031**; DE 50208587 T 20020710; EP 02015303 A 20020710; US 21605302 A 20020810