

Title (en)

REFILL STATION MULTI-PORT NOZZLE

Title (de)

NACHFÜLLSTATIONS DÜSE MIT MEHREREN ÖFFNUNGEN

Title (fr)

BUSE À ORIFICES MULTIPLES DE STATION DE RECHARGE

Publication

EP 3261931 A4 20180912 (EN)

Application

EP 16756073 A 20160216

Priority

- US 201562120547 P 20150225
- US 2016018080 W 20160216

Abstract (en)

[origin: WO2016137782A1] The present invention provides a nozzle to be used in a refillable fluid exchange between a refill station and a refillable container under hermetic conditions. The use of a secondary port for providing an additive allows customization of the product to the customer's specifications, without long wait times and without otherwise contamination the process. The use of a mixing chamber downstream of the secondary line, preceded by a one way check valve, promotes thorough mixing of two or more constituents as selected by the customer.

IPC 8 full level

B65B 3/04 (2006.01); **B65B 39/00** (2006.01)

CPC (source: EP)

B65B 3/04 (2013.01); **B65B 39/00** (2013.01)

Citation (search report)

- [A] EP 0421992 B1 19930609
- [A] US 2014216603 A1 20140807 - BROWN LAURIE J [US]
- [A] US 2011225106 A1 20110915 - LEVENSTEIN LAWRENCE M [US], et al
- [A] US 5586589 A 19961224 - VOELKER SCOTT C [US]
- See references of WO 2016137782A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2016137782 A1 20160901; AU 2016223159 A1 20170713; AU 2016223159 B2 20191219; BR 112017014810 A2 20180109; CA 2973002 A1 20160901; CN 107249985 A 20171013; CN 107249985 B 20200310; EP 3261931 A1 20180103; EP 3261931 A4 20180912; EP 3261931 B1 20190724; HK 1248662 A1 20181019; JP 2018507823 A 20180322; JP 6653708 B2 20200226; MX 2017009409 A 20171204

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