

## Title (en)

Central bolt ultrasonic atomizer.

## Title (de)

Zentralverschraubter Ultraschallzerstäuber.

## Title (fr)

Pulvérisateur à ultrasons avec vissage central.

## Publication

**EP 0245671 A1 19871119 (EN)**

## Application

**EP 87105667 A 19870416**

## Priority

US 86151286 A 19860509

## Abstract (en)

An ultrasonic atomizing transducer assembly (11) includes cylindrical front atomizing and rear dummy sections (14) clamped to a sandwich of an annular electrode (16) between two annular piezoelectric disks (17, 18) by a central tubular bolt (29). Liquid to be atomized enters the rear of the transducer assembly (11) through a feed tube (30) forming a rearward extension of the central bolt (29) and flows through an axial passage to exit onto an atomizing surface (27) on the tip of an amplifying probe (25) extending from the front end of the front cylindrical section. An annular sealing member (33) disposed between a sealing surface (34) at the front end of the bolt (29) and the passage prevents liquid flowing through the passage from contacting the inner surfaces of the piezoelectric disks (17, 18). To protect the outer surfaces of the piezoelectric disks (17, 18), an enclosed shell surrounds and supports the transducer via O-rings loaded purely in radial compression.

## IPC 1-7

**F23D 11/34**

## IPC 8 full level

**B05B 3/14** (2006.01); **B05B 17/06** (2006.01); **F23D 11/34** (2006.01)

## CPC (source: EP KR)

**B05B 3/14** (2013.01 - KR); **B05B 17/06** (2013.01 - KR); **B05B 17/0623** (2013.01 - EP); **B05B 17/063** (2013.01 - EP); **F23D 11/345** (2013.01 - EP)

## Citation (search report)

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## Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

## DOCDB simple family (publication)

**EP 0245671 A1 19871119**; **EP 0245671 B1 19920102**; AT E71201 T1 19920115; CA 1249861 A 19890207; DE 3775612 D1 19920213; JP H0411268 B2 19920227; JP S62273068 A 19871127; KR 870010906 A 19871218; KR 900003217 B1 19900511

## DOCDB simple family (application)

**EP 87105667 A 19870416**; AT 87105667 T 19870416; CA 536361 A 19870505; DE 3775612 T 19870416; JP 11225887 A 19870508; KR 870004518 A 19870508