

Title (en)

FAST COOLDOWN MINIATURE REFRIGERATORS.

Title (de)

MINIATURKÜHLSCHRÄNKE FÜR SCHNELLE KÜHLUNG.

Title (fr)

MACHINES FRIGORIFIQUES MINIATURES A REFROIDISSEMENT RAPIDE.

Publication

**EP 0128196 A4 19850626 (EN)**

Application

**EP 84900220 A 19831201**

Priority

US 44585282 A 19821201

Abstract (en)

[origin: WO8402177A1] A multilayer miniature low temperature rapid cooldown refrigerator in which a central cooling chamber (30) for a device to be continuously cooled is connected to input (44) and output (52) refrigerant lines by micron sized channels (26) formed in interfaces of glass or like plates (20, 22, 24), the channels (26) including a counterflow heat exchanger and a capillary section (30) and the channels (76) being so arranged as to assure rapid cooldown immediately in the region of the device to be cooled.

IPC 1-7

**F25B 19/00**; B21D 53/00; B44C 1/22; F28F 3/12; F28F 7/00

IPC 8 full level

**F25B 9/02** (2006.01)

CPC (source: EP)

**F25B 9/02** (2013.01)

Citation (search report)

- [X] FR 2505036 A1 19821105 - LITTLE WILLIAM [US]
- [Y] GB 1168997 A 19691029 - EMI LTD

Designated contracting state (EPC)

DE FR GB NL SE

DOCDB simple family (publication)

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DOCDB simple family (application)

**US 8301885 W 19831201**; EP 84900220 A 19831201