

Title (en)

PORTABLE COOLING APPARATUS WITH REFRIGERANT LIQUID RECOVERY

Title (de)

TRAGBARE KÜHLVORRICHTUNG MIT KÜHLFLÜSSIGKEITSRÜCKGEWINNUNG

Title (fr)

APPAREIL DE REFROIDISSEMENT PORTABLE À RÉCUPÉRATION DE LIQUIDE RÉFRIGÉRANT

Publication

EP 3412271 A1 20181212 (EN)

Application

EP 18176564 A 20180607

Priority

IT 201700062432 A 20170607

Abstract (en)

Cooling apparatus 1, preferably for coffins, including a cooling circuit 2 of the type comprising a compressor 9, a condenser 10, one or more expansion valves 18, a heat exchanger 24 and a collection reservoir 14. The cooling apparatus 1 further comprises a cooling plate 3 removably connectable with fast-coupling with the circuit 2 and preferably of the disposable type, to carry out a heat exchange state with the inside of a coffin. The cooling plate 3 is composed of at least one serpentine 6 permanently installed in the coffin and pre-loaded with under pressure refrigerant fluid. The cooling circuit 2 further comprises: a control electronic system 33 incorporating a control unit of the functional states of the cooling circuit 2. Moreover, the cooling circuit 2 comprises a three-way solenoid valve 20 on a delivery duct 4 of the cooling plate 3 to allow a refrigerant liquid recovery from the cooling plate 3 at the end of the operative phase of the cooling apparatus 1 governed by the control system 33; as well as a unidirectional valve 32 placed between said three-way solenoid valve 20 and said heat exchanger 24 to prevent the backflow of refrigerant fluid in the recovery phase of said refrigerant fluid.

IPC 8 full level

A61G 17/00 (2006.01); **F25D 19/02** (2006.01)

CPC (source: EP US)

A61G 17/002 (2013.01 - EP US); **F25B 45/00** (2013.01 - EP); **F25D 15/00** (2013.01 - EP); **F25B 41/40** (2021.01 - EP US); **F25B 2400/19** (2013.01 - EP); **F25D 31/001** (2013.01 - EP); **F25D 2400/12** (2013.01 - EP)

Citation (applicant)

- EP 0230595 A1 19870805 - ZORSOL S A S DI ALBERTO CIPELL [IT]
- EP 0631097 A1 19941228 - NUOVA ZORSOL SRL [IT]
- US 2008229774 A1 20080925 - JEFFERS EDWARD [US], et al
- US 2017115042 A1 20170427 - CANTADORI ANDREA [IT]

Citation (search report)

- [AD] EP 0631097 A1 19941228 - NUOVA ZORSOL SRL [IT]
- [A] DE 2549922 A1 19770518 - NETHERY HOWARD J

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

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