

Title (en)
MODULAR PTC ELECTRIC HEATER

Title (de)
MODULARER ELEKTRISCHER PTC-HEIZER

Title (fr)
CHAUFFAGE ÉLECTRIQUE PTC MODULAIRE

Publication
EP 4325137 A1 20240221 (EN)

Application
EP 23190607 A 20230809

Priority
SK 1082022 U 20220815

Abstract (en)
A modular PTC electric heater equipped with a cold liquid inlet (30) and a heated liquid outlet (40) is assembled from at least two structurally identical modules (10). The module (10) is designed as a cylindrical or cuboid tank (1) with a cavity watertight closed by two flanges or plugs (2), while the module (10) has a tubular inlet opening (3) and a tubular outlet opening (4), both openings are connected with the tank (1) cavity. The modules (10) are interconnected by a connecting part (7) provided with two sealings (71, 72) and each module (10) is equipped with at least one PTC cartridge heating element (5) fixed on at least one flange or plug (2).

IPC 8 full level
F24H 1/10 (2022.01); **F24H 1/12** (2022.01); **F24H 1/14** (2022.01); **F24H 1/20** (2022.01); **F24H 9/00** (2022.01); **H05B 3/00** (2006.01); **H05B 3/04** (2006.01); **H05B 3/06** (2006.01); **H05B 3/82** (2006.01)

CPC (source: EP)
F24H 1/102 (2013.01); **F24H 1/121** (2013.01); **F24H 1/142** (2013.01); **F24H 1/202** (2013.01); **F24H 9/0015** (2013.01); **H05B 3/04** (2013.01); **H05B 3/06** (2013.01); **H05B 3/82** (2013.01); **H05B 2203/02** (2013.01); **H05B 2203/021** (2013.01)

Citation (applicant)
• EP 3910260 A1 20211117 - PROTHERM PRODUCTION S R O [SK], et al
• EP 3869118 A1 20210825 - VAILLANT GMBH [DE], et al
• EP 3037741 A1 20160629 - VAILLANT GMBH [DE]
• EP 2792211 A1 20141022 - BEHR GMBH & CO KG [DE]
• WO 2021014432 A1 20210128 - IRCA SPA [IT]

Citation (search report)
• [Y] WO 2011135441 A1 20111103 - N&W GLOBAL VENDING SPA [IT], et al
• [Y] US 2014314398 A1 20141023 - PIERRON FREDERIC [FR], et al
• [Y] EP 2022687 A1 20090211 - WU CHIA-HSIUNG [CN]
• [A] DE 19613579 A1 19971009 - ECKERFELD ERIKA [DE]

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
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