

Title (en)  
CRYOGENIC REFRIGERATOR WITH IMPROVED THERMAL-COUPLING DEVICE

Publication  
**EP 0059272 B1 19840829 (FR)**

Application  
**EP 81200646 A 19810612**

Priority  
FR 8104070 A 19810226

Abstract (en)  
[origin: EP0059272A1] 1. Cryogenic cooling device of the type comprising a probe (4) provided with an extremity (5) cooled by expansion of a gas and closed by a bottom (5a), a cryostat (6) with double envelope under vacuum, the inner envelope (8) of which formed by a cylindrical wall (8a) closed by a bottom (8b) is adapted to contain the cooled extremity (5) of the probe, a sample to be cooled (9), in particular one or more infrared detectors, fixed in the double envelope of the cryostat on the bottom (8b) of the inner envelope, and a thermal connecting piece (10) of good thermal conductivity located in the free space between said bottom (5a) of the probe and the bottom (8b) of the inner envelope (8) of the cryostat, the cryogenic cooling device being characterized in that the thermal connecting piece : a) is in one piece, b) comprises a central securing heel (11) by which it is fixed on the bottom (5a) closing the extremity of the probe, c) has a general revolution form about the longitudinal axis of the probe adapted to impart to it a radial inherent elasticity, d) is provided with peripheral surfaces coming to bear under the effect of the said elasticity against the cylindrical wall (8a) of the inner envelope on the periphery of the aforementioned free space between the bottom (5a) of the probe and the bottom (8b) of the inner envelope of the cryostat.

IPC 1-7  
**F25D 3/10**; **F25J 1/00**

IPC 8 full level  
**F25D 19/00** (2006.01); **F25J 1/00** (2006.01)

CPC (source: EP)  
**F25D 19/006** (2013.01); **F25J 1/0276** (2013.01)

Cited by  
EP0119604A1; CN102538551A; EP0726582A1; FR2699263A1; EP1540236A4; EP0285491A1; FR2613046A1; WO9951922A1

Designated contracting state (EPC)  
DE GB IT NL SE

DOCDB simple family (publication)  
**EP 0059272 A1 19820908**; **EP 0059272 B1 19840829**; DE 3165767 D1 19841004; FR 2500581 A1 19820827; FR 2500581 B1 19831209

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**EP 81200646 A 19810612**; DE 3165767 T 19810612; FR 8104070 A 19810226