

Title (en)
Vacuum pump

Title (de)
Vakuumpumpe

Title (fr)
Pompe à vide

Publication
EP 0819856 B1 19981202 (EN)

Application
EP 97105458 A 19970402

Priority
IT TO960624 A 19960718

Abstract (en)
[origin: EP0819856A1] The invention concerns a vacuum pump comprising a casing (2) in which gas pumping stages are housed, an suction port for sucking the gases to be pumped, and an exhaust port (4) of the pumped gases, wherein upstream of the gas suction port there is provided a heat exchanger (21) for freeze-trapping undesired gases, and said heat exchanger (21) is directly in contact with the cold end (22) of a closed circuit cryogenic assembly (30) of the Joule-Thomson type, in which a refrigerant gas mixture is circulated. <IMAGE>

IPC 1-7
F04D 19/04; F04B 37/06; F04B 41/06

IPC 8 full level
F04B 37/06 (2006.01); **F04B 41/06** (2006.01); **F04D 19/04** (2006.01)

CPC (source: EP)
F04B 37/06 (2013.01); **F04B 41/06** (2013.01); **F04D 19/046** (2013.01)

Cited by
EP1447567A3; CN107524579A; US7500821B2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0819856 A1 19980121; **EP 0819856 B1 19981202**; DE 69700064 D1 19990114; DE 69700064 T2 19990715; DE 819856 T1 19980514; IT 1287016 B1 19980724; IT TO960624 A0 19960718; IT TO960624 A1 19980118

DOCDB simple family (application)
EP 97105458 A 19970402; DE 69700064 T 19970402; DE 97105458 T 19970402; IT TO960624 A 19960718