

Title (en)
Two stage transcritical refrigeration system

Title (de)
Zweistufiges transkritisches Khlsystem

Title (fr)
Systme de rfrigration transcritique  deux tapes

Publication
EP 1921399 A2 20080514 (EN)

Application
EP 07254445 A 20071113

Priority
US 85862406 P 20061113

Abstract (en)
The invention provides a refrigeration system (100) including a plurality of refrigerated display cases (115). Each display case has a dedicated evaporator assembly (165) that cools return air by evaporating a refrigerant, and a first stage compressor assembly (120) that is in fluid communication with the respective evaporator assembly to compress the refrigerant to a first pressure corresponding to a first temperature of the refrigerant prior to discharge of the compressed refrigerant. The refrigeration system also includes a second stage compressor assembly (125) that is in fluid communication with the first stage compressor assemblies (120) to compress the refrigerant to a second pressure that is higher than the first pressure, and that corresponds to a second temperature of the refrigerant. The refrigeration system (100) further includes a heat exchanger (130) that is in fluid communication with the second stage compressor assembly (125) to receive the refrigerant from the second stage compressor assembly to reject heat from the refrigerant.

IPC 8 full level
F25B 1/10 (2006.01); **F25B 5/02** (2006.01); **F25B 7/00** (2006.01); **F25B 9/00** (2006.01); **F25B 25/00** (2006.01); **F25B 40/00** (2006.01); **F25B 43/00** (2006.01)

CPC (source: EP US)
F25B 1/10 (2013.01 - EP US); **F25B 7/00** (2013.01 - EP US); **F25B 9/008** (2013.01 - EP US); **F25B 5/02** (2013.01 - EP US); **F25B 25/005** (2013.01 - EP US); **F25B 40/00** (2013.01 - EP US); **F25B 43/006** (2013.01 - EP US); **F25B 2309/061** (2013.01 - EP US); **F25B 2400/0401** (2013.01 - EP US); **F25B 2400/054** (2013.01 - EP US); **F25B 2400/06** (2013.01 - EP US); **F25B 2400/075** (2013.01 - EP US); **F25B 2400/22** (2013.01 - EP US); **F25B 2400/23** (2013.01 - EP US)

Cited by
DE102010035695A1; EP3865798A1; IT202000002878A1; US9194615B2; US10690389B2; US11656005B2; WO2010045743A1

Designated contracting state (EPC)
ES GB

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
EP 1921399 A2 20080514; **EP 1921399 A3 20100310**; US 2008289350 A1 20081127

DOCDB simple family (application)
EP 07254445 A 20071113; US 93880707 A 20071113