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Separate-Type High-Performance Energy-Saving Hot/Cold Air Conditioner

分離式高效能節電冷暖氣機

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作品摘要 Abstract

本研究針對四通閥之缺點加以改進，以四個電磁閥控制冷媒之流向，將室內、外熱交換器各分成一大一小兩部分，大的熱交換器與大和小熱交換器之和的比例正好是蒸發器與冷凝器的正確比例。使冷凍循環不管在使用冷氣或暖氣時其蒸發器和冷凝器能量永遠是匹配的，因此永遠有高效能的冷氣和暖氣。

This study pinpoints the four ways valve shortcomings to make a big improvement. Four solenoid valves are used to control the flow directions of refrigerant, the indoor and outdoor heat exchanger are divided into two parts, one bigger and one smaller, the ratio between the bigger heat exchanger and the whole heat exchanger is the same as the ratio between the evaporator and condenser. The ratio between the evaporator and condenser is ever match refrigeration cycle of both the heating and cooling functions. Thus, the high-performance heating and cooling functions can be ever obtained.

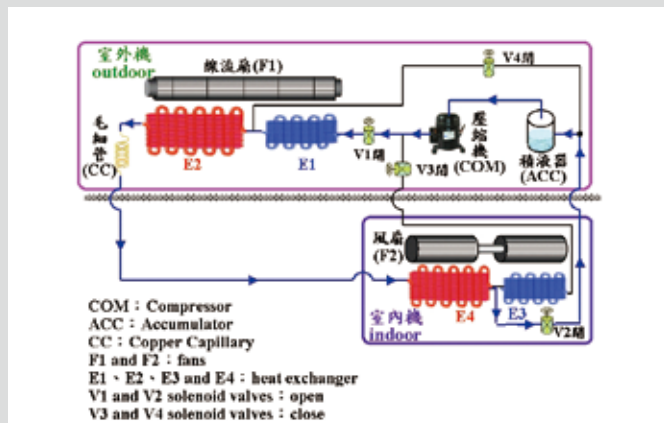


圖1 > 「分離式節電高效能冷暖氣機」作為冷氣用途時之控制流程圖
 Fig.1 > "Separate efficient energy-saving air-conditioning machines" is controlled as cooling purpose flowchart

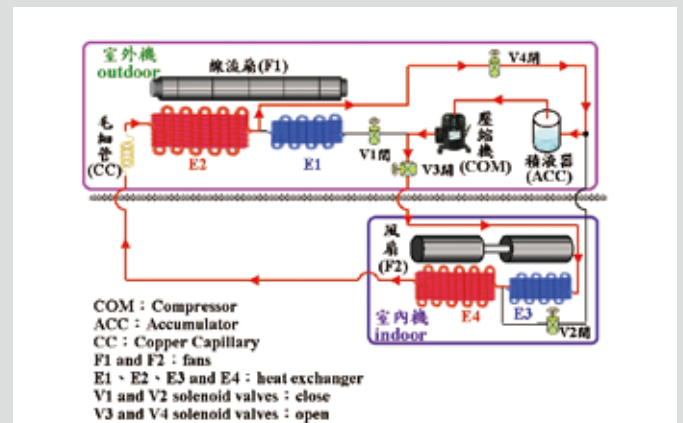


圖2 > 「分離式節電高效能冷暖氣機」作為暖氣用途時之控制流程圖
 Fig.2 > "Separate efficient energy-saving air-conditioning machines" is controlled as heating purpose flowchart