ENERGY SAVING
JTL Suction Pressure Optimisation Principles

Suction pressure optimisation for compressor packs.

The refrigeration process is more efficient when operating at a high suction pressure than at a lower suction pressure. But higher suction pressure means higher evaporator temperatures.

How low the evaporator temperatures need to be depends on the load presented to the evaporator. The load varies with a number of parameters - ambient temperature and humidity being significant ones.

By monitoring how close to the set temperature **each** of the evaporators supplied from one pack is, it can be known whether the evaporators are cold enough or not. If the temperatures are satisfied, the suction pressure (and hence, evaporator temperature) can be increased slightly. If they are not, the suction pressure needs to be decreased slightly.

Using this technique the suction pressure set point for the pack is varied. When it needs to be low, it is low and when it can be higher, it is higher. **This reduces the amount of electricity used** whilst providing refrigeration of higher quality than with a fixed (low) setpoint.

Example logged results from trading stores are shown on the following application datasheets:-

Doc No. 02891 -Application SP021	-	Chill pack and cabinets
Doc No. 02892 -Application SP022	-	Frozen pack and cabinets
Doc No. 02893 -Application SP023	-	Frozen pack and cabinets

SALES SUPPORT DATA

Doc No. 03081-spo-overview.pmd Issue 1 April 2004

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