



AERON



PC-28
Provision Room Refrigerating Plants

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We have long experience with various types of Provision Refrigeration Plants. It could be from small types as well as very big ones, all depending on the vessel and its operation purpose and the amount of people which shall be served with provisions from the stores.

For these plants we calculate the cooling demand and design the entire plant and included components. This is done in order to get a plant that is function-thermodynamic-sufficient, with all its equipment in harmony to each other. Normally the plant is designed for automatic operation with direct expansion of the refrigerant. Today we are used to operate with all types of environmentally friendly refrigerants applicable with a low-temperature system.

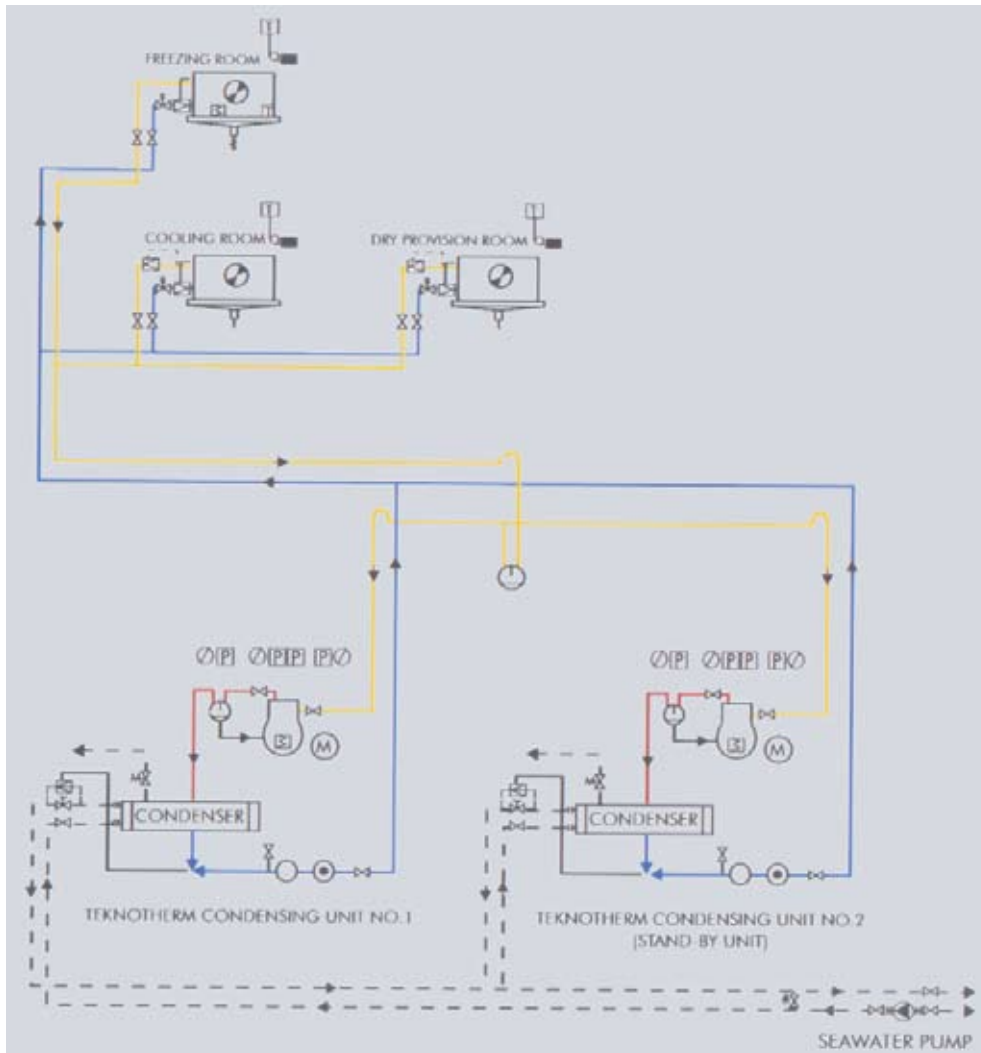
The most common way to build up a provision refrigeration plant is to utilize 2-two identical condensing units. Under normal automatic operation one condensing unit has sufficient capacity to maintain the specified temperatures while the second unit acts as stand-by.

The evaporators for the cooling- and freezing rooms are of forced draft type with element in Cu/Al, housing and drip tray in epoxy coated aluminium with built in fans. Defrosting of evaporators to be automatic by means of timer. Evaporator for freezing room has electric defrosting element. Freezing room has self-regulating heater in the drain pipe from drip tray.

Temperatures in freezing- and cooling rooms are individually controlled by room thermostats, which activate a solenoid valve mounted in liquid line to each room's air-cooler. When there is no cooling demand in the room the thermostat will close the solenoid valve, and the liquid supply to the actual evaporator will be stopped. This according to so-called "pump-down" function, ensuring only a minimum of refrigerant to be trapped in the aircooler at no cooling demand mode.

WATER CHILLER UNITS FOR INDIRECT COOLING

When there is no cooling demand, all solenoid valves to the air-coolers will be closed and the "pump-down" sequence takes place. After a while the compressor will be stopped by the low pressure cut-out. The compressor will start automatically when the cooling demand increases.



This is a typical refrigeration plant for Provision stores, with seawater cooled condenser.