SAUTER novaTouch keeps things nice and cool.

When fresh produce has to stay fresh, reliable refrigeration is an absolute necessity – and it can also help to achieve massive savings.

To advance efficiency in the refrigeration sector, SAUTER has now developed two versions of its tried-and-tested compact controller: one is for ventilation plants, and the other is for cold-storage rooms and deep-freeze facilities. These developments combine all our experience from the successful SAUTER novaTouch product with our knowledge of the specific requirements for refrigeration circuits and their principles of operation.

As the German Federal Ministry for the Environment has said with regard to industrial refrigeration technology: "Exceptional savings effects can be achieved in this area. Energy-saving methods that barely paid off in the past now become profitable in just a few years. The use of state-of-the-art components together with digital control and regulation provide great potential for savings."

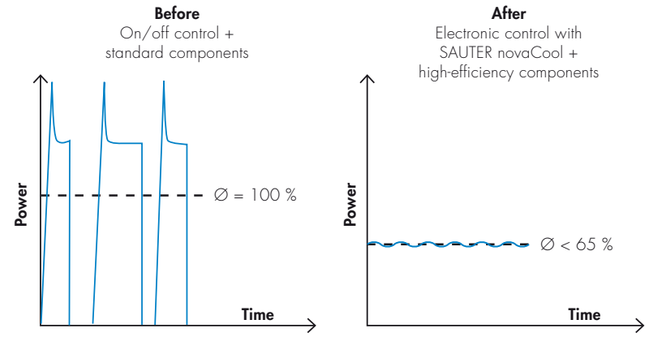
SAUTER novaCool and SAUTER novaFreeze compact controllers

The SAUTER novaCool controller has been developed for ventilation systems with a finned coil evaporator, an electronically-controlled expansion valve and a speed-controlled compressor with a condenser fan. On the other hand, the SAUTER novaFreeze version controls cold storage and deep-freeze facilities with genuine demand-led defrosting and optimised control for the defrosting heater.

SAUTER's controllers start saving time and money as soon as they go into operation. The refrigeration system is very simply commissioned by the plant manufacturer himself. There is no time-intensive parameterisation. No complicated programming – and no additional computers.

A touch-panel provides fully graphic operation, with intuitive guidance through the clear menu and no need for lengthy explanations. Only five minutes are needed to achieve sure mastery of this profitable technology. All the operating parameters to monitor the systems are always clearly available. And as you would expect, the SAUTER controllers can be integrated into a networked building automation system at any time.

Huge potential for savings can be tapped by changing existing refrigeration systems over to SAUTER novaCool. Only a few new components are required to ensure energy-efficient operation for an installed cooler: one electronic expansion valve, two frequency converters, five sensors and one SAUTER novaCool.



SAUTER novaFreeze compact controllers prevent the coil from icing up

Coil icing is one of the difficulties that arise in connection with control for cold storage and deep-freeze facilities. It is easiest to explain this problem by reference to a deep-freeze room.

In a butcher's shop, for instance, the freshly-made sausages have to be placed in the cold store as quickly as possible on account of the food cooling chain. Rising vapour is immediately precipitated onto the cooling coil, causing it to ice up. This leads to a substantial drop in cooling power. The cooling can operate only with optimal power again after defrosting has taken place. This makes it impossible to maintain the room setpoint of 0°C (for example), and the actual value will vary considerably above the setpoint.

With most existing controllers, defrosting is based on a fixed time programme. This means that the defrosting process starts even though there is no need for it at all, or else it takes place too late. These reasons prompted us to develop SAUTER novaFreeze, which counteracts icing at an early stage because defrosting is demand-led, and is assisted by an optimisation module. There's no doubt about it: this saves energy and money.

Gisela Kornmeier