TECHNICAL ADJUSTMENTS INSTRUCTION | KEEP COOL®

BEHR
REHAU Group

AIR FLOW VELOCITY

In order to avoid steam and condensation on the upper side of the glass, it is crucial to reduce the air flow velocity.

For freezer islands: Reduction of the air velocity to: max. 0.3-0.5 m/sec.
For refrigerated islands: No adjustment required.

Reduction of the air flow velocity can be obtained by using one (or more) of the following methods:

- **Mounting fan speed regulators**
  (please make sure that the voltage reduction does not damage the fan engines)
- **Mounting new fan blades**
- **Adjustment of existing fan blades**
  (reduction of the slope of the blades).

! **After having made the reduction of the air flow velocity it is important to demonstrate that it does not exceed 0.5 m/sec.**

DEFROST

The number of defrost cycles may be reduced to 1-3 times per week – defrost should take place at night.

- **If the freezer island is equipped with an automatic demand-defrost device:**
  please set the device at lowest frequency.
- **If the freezer island is equipped with an integrated electronic timer:**
  please connect an external timer to the existing input.
- **If the freezer island is equipped with an external defrost timer:**
  please replace with a timer with a weekly defrost program (with minute accuracy).

Max. defrost time = 45 minutes.

TEMPERATURE

With KEEP COOL® the temperature influence from the surroundings is reduced significantly, and it is therefore necessary to adjust the injection temperature. If the thermostats are set to measure on the injection air, please adjust according to the table below. If the thermostats are set to measure on the return air, no additional steps are required.

Freezer Island	Open		With KEEP COOL®	
	Frozen food	Ice	Frozen food	Ice
Entry air temp.	-28° C	-31° C / -33° C	-24° C	-27° C / -29° C
Return air temp.	-18° C	-21° C / -23° C	-18° C	-21° C / -23° C

Refrigerated Island	Open			With KEEP COOL®		
	Fresh meat	Sausage etc.	Dairy	Fresh meat	Sausage etc.	Dairy
Entry air temp.	-4° C / -5° C	-2° C / -3° C	-1° C / 0° C	-2° C / -3° C	0° C / -1° C	0° C / +1° C
Return air temp.	0° C / +2° C	+2° C / +4° C	+3° C / +5° C	0° C / +2° C	+2° C / +4° C	+3° C / +5° C

HANDRAIL HEATING

The handrail heating still has to run after fitting KEEP COOL®.

COMPRESSOR SYSTEM

Installing KEEP COOL® combined with the above technical adjustments will reduce the load on the system substantially, while the higher suction pressure will increase the cooling capacity of the system.

It is therefore important to check out, before fitting KEEP COOL® if:

- **The system is provided with at least 4 capacity steps.**
  If they all are in operation during peak periods (not only after defrost), then the system is immediately qualified for the installation of KEEP COOL®.
- **The system is able to adjust it's capacity appropriately.**
  A system unable to adjust it's capacity will result in too many start/stop operations. The solution could be the installation of a number of smaller compressors, or mounting a frequency converter on the largest compressor (remember to verify that the system is suited for a frequency converter, as well as frequency area).

PLEASE NOTE!

It is important to inform the store manager to still respect the loading capacity of the island after fitting KEEP COOL® – in case of over-stacking the glasses will condensate.

This guide was prepared by the Danish Technological Institute for Keep Cool products.