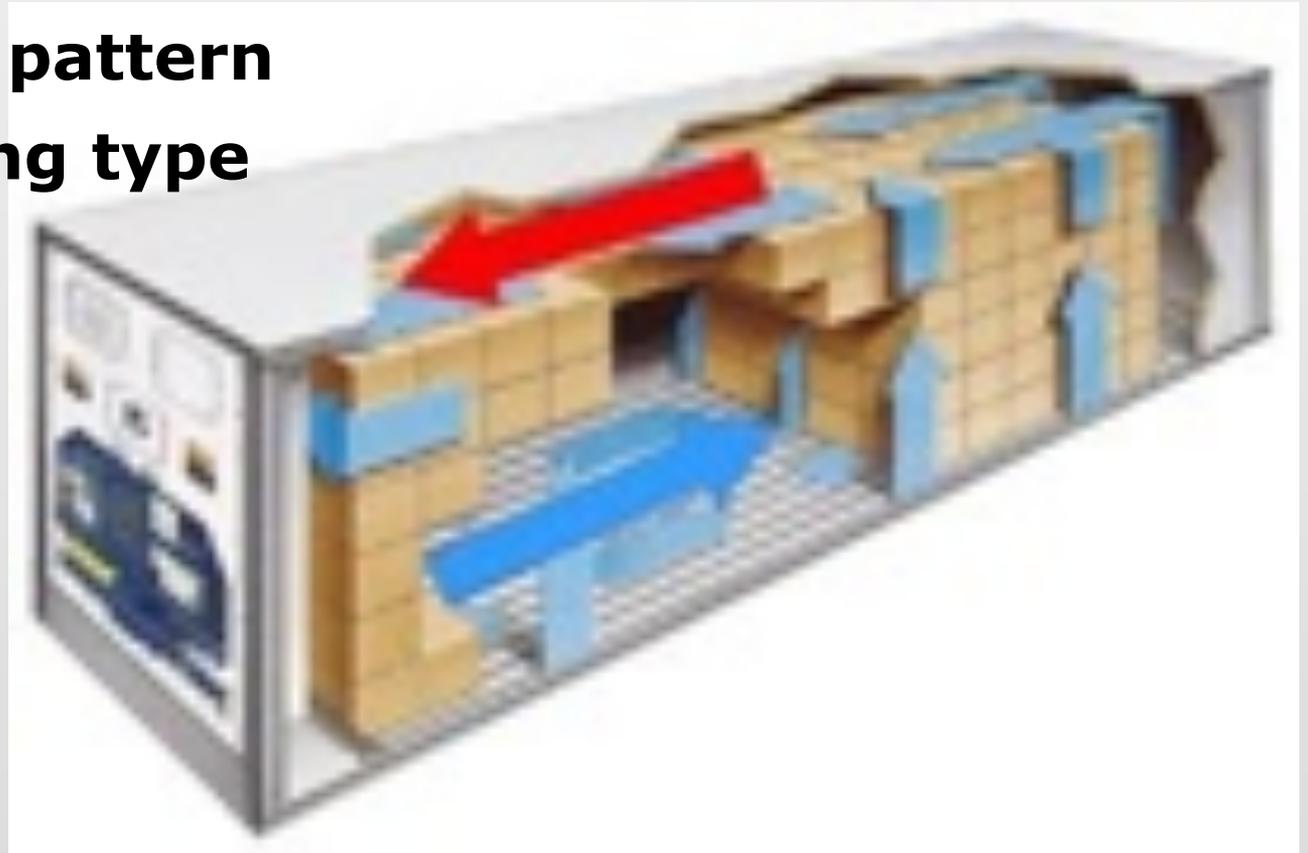
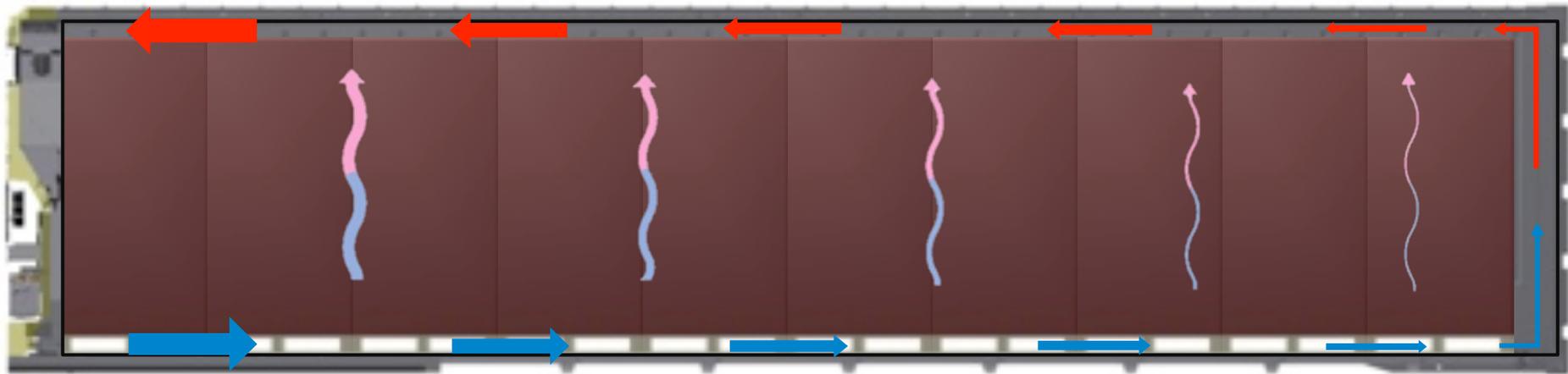


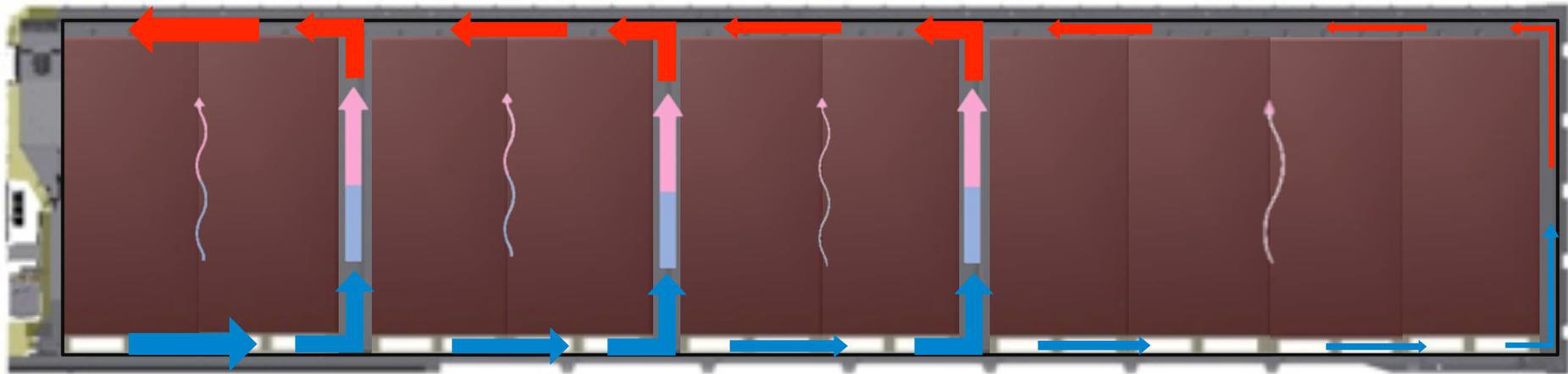
AIRFLOW

1. Reefer technology
2. Stuffing pattern
3. Packaging type





Star Cool



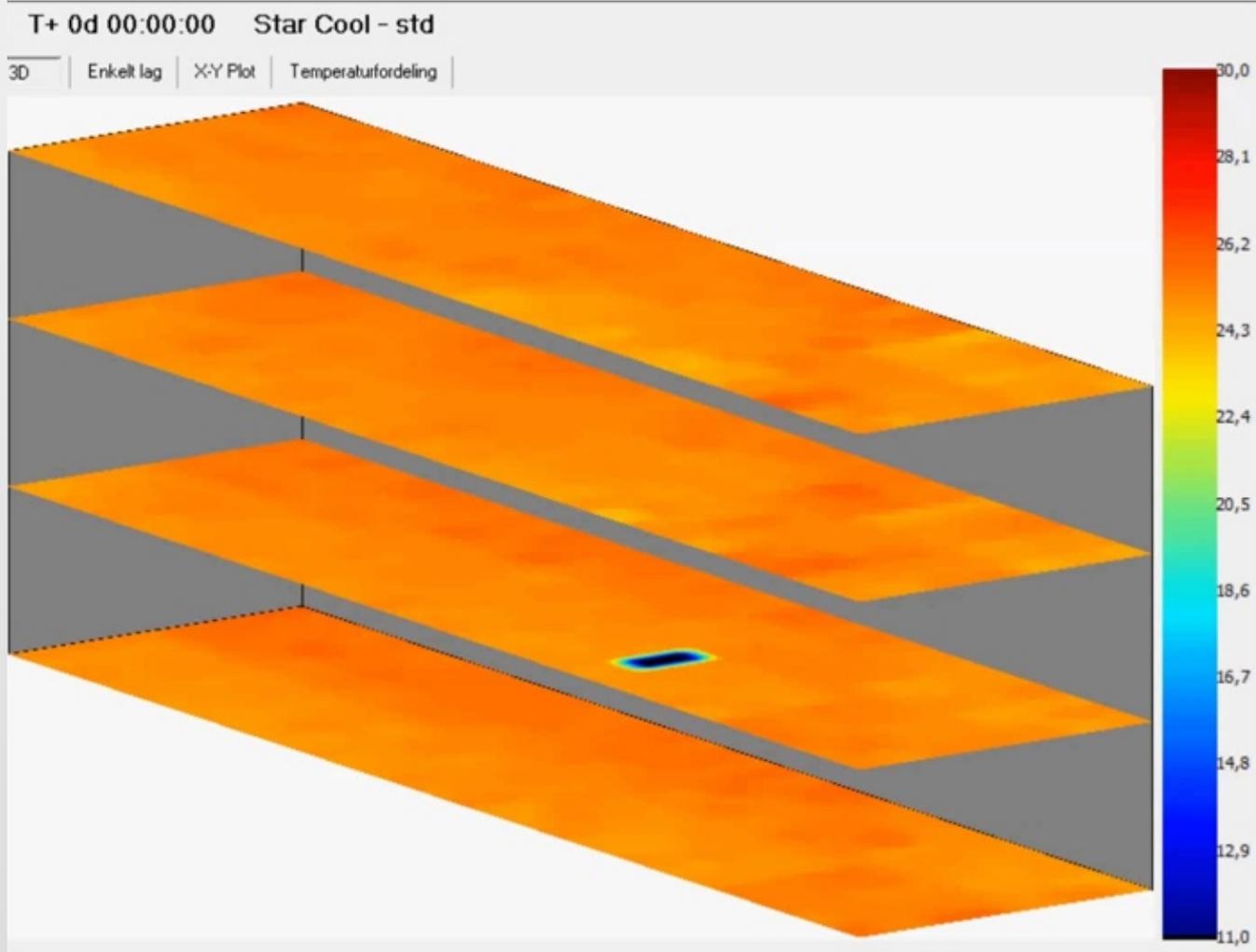
Star Cool



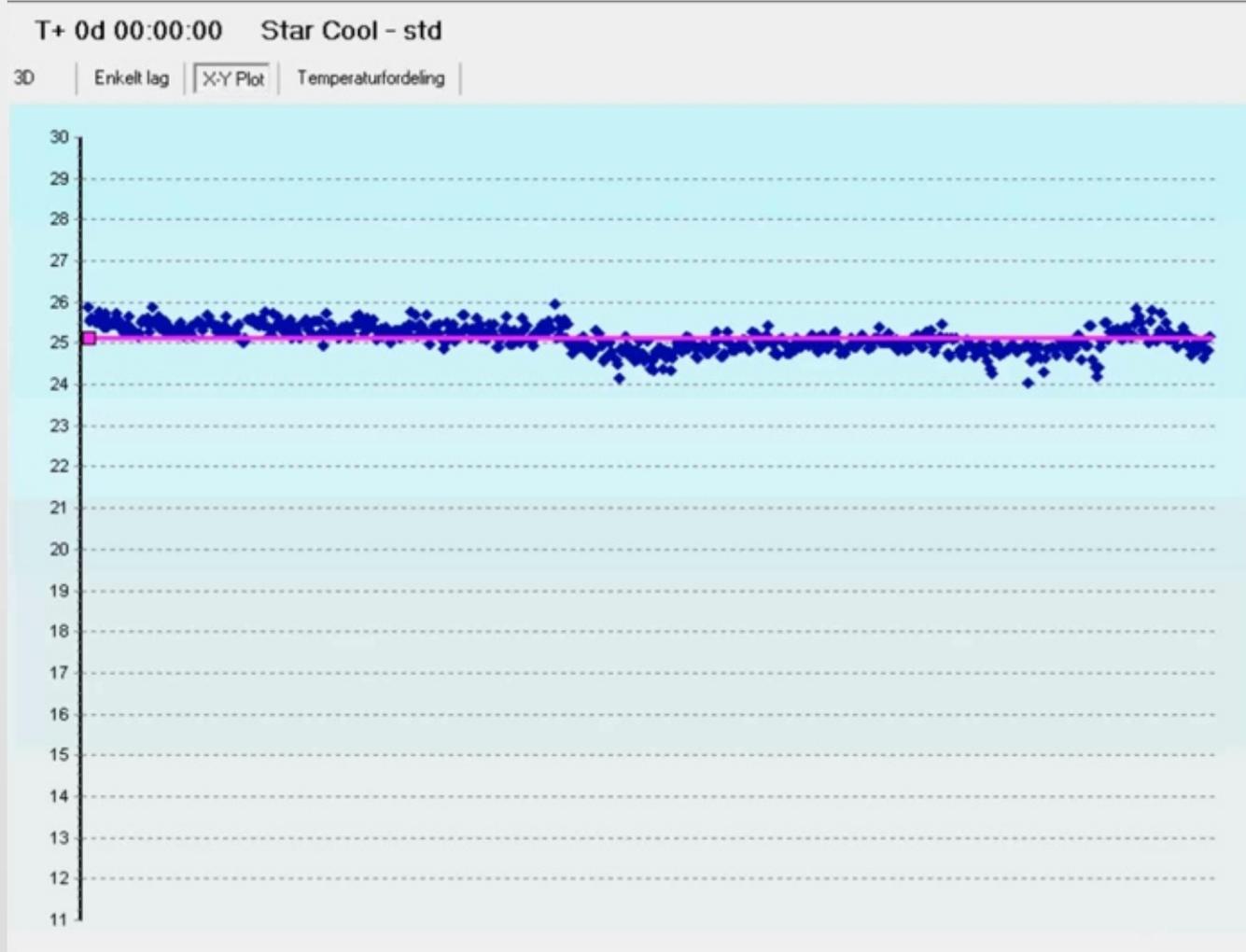
MAERSK
CONTAINER INDUSTRY



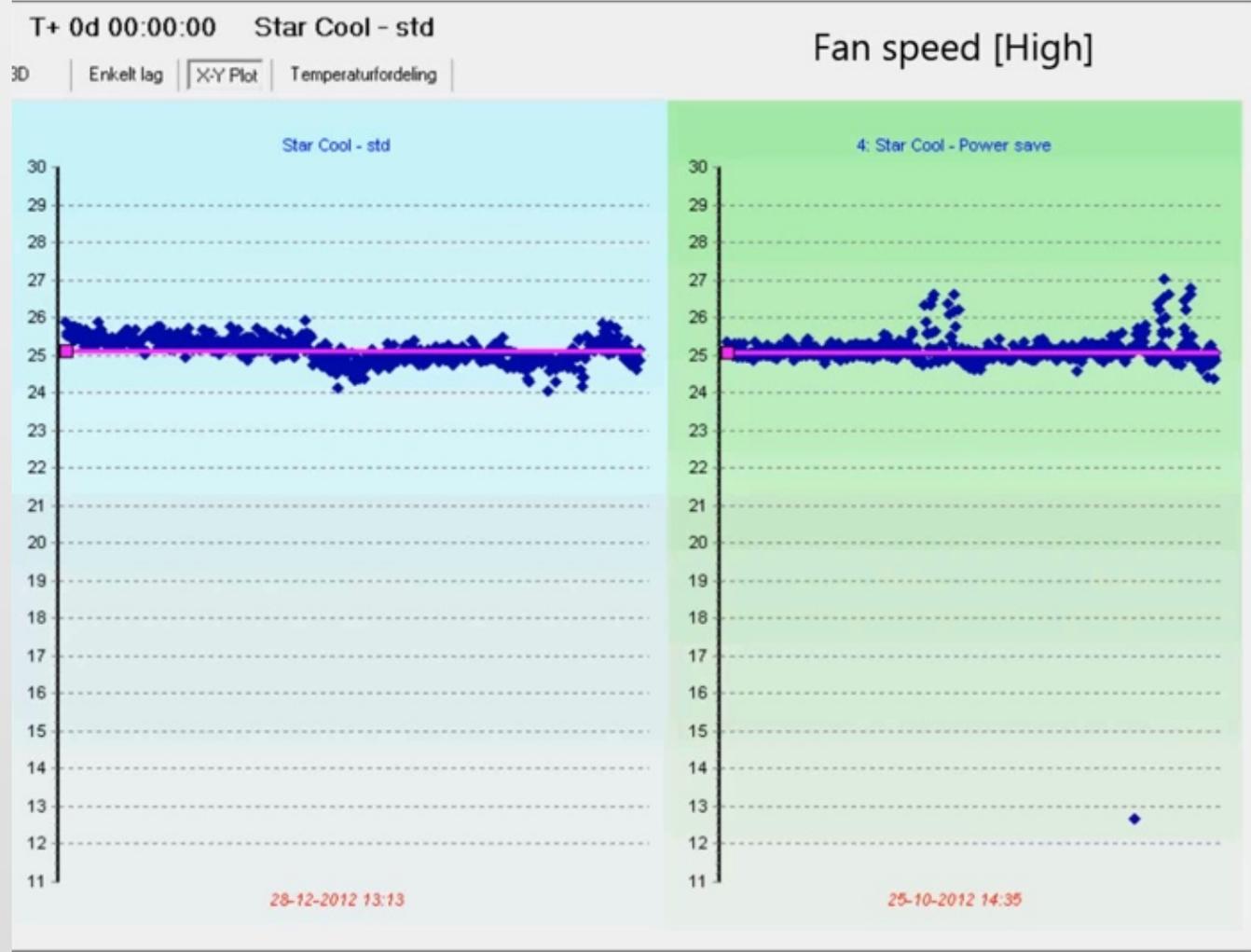
1. Std 3D



2. Std xy



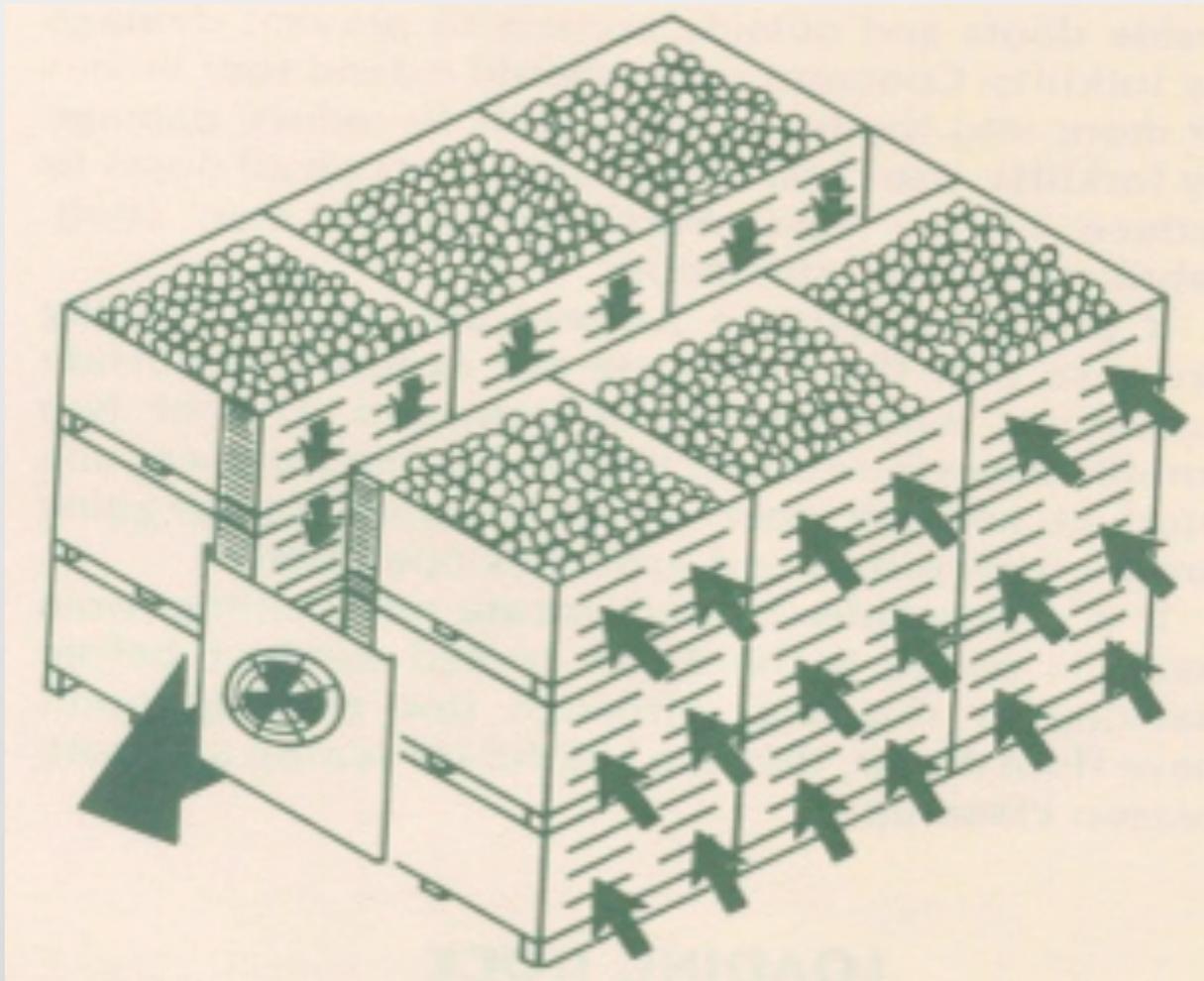
3. Std versus Power save XY



Packagings



Cold store – forced air cooler



Some like nice packagings



Some want them to be sturdy



MAERSK
CONTAINER INDUSTRY

**Some want them big enough to fit
the fruit**



Some want them big enough to fit the bum



MAERSK
CONTAINER INDUSTRY

Some want them to be suited as hideout



Some want them suitable for airplane construction



According to which criteria do you select your packaging?



Star Cool CA Integrated, patented membrane system

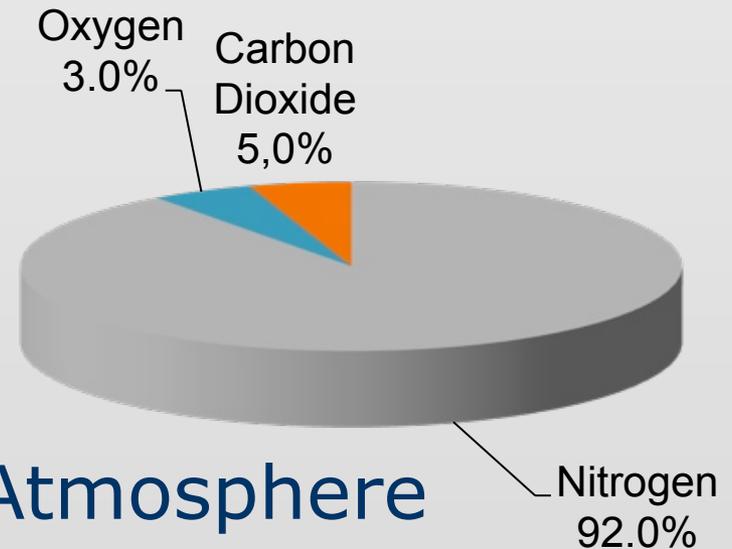
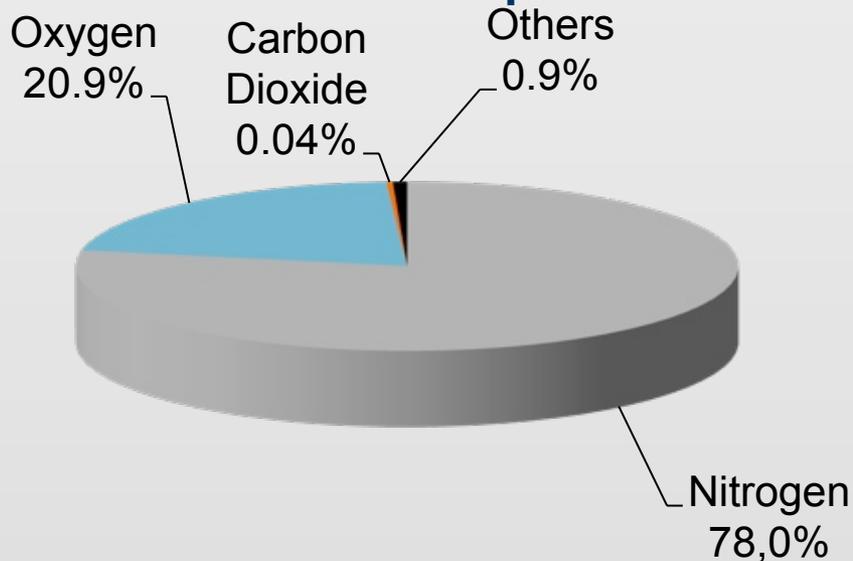
- ❄ *Optimised for high respiring commodities*
- ❄ *Set-points: CO₂ from 5-12% & O₂ from 3-21%*



MAERSK
CONTAINER INDUSTRY

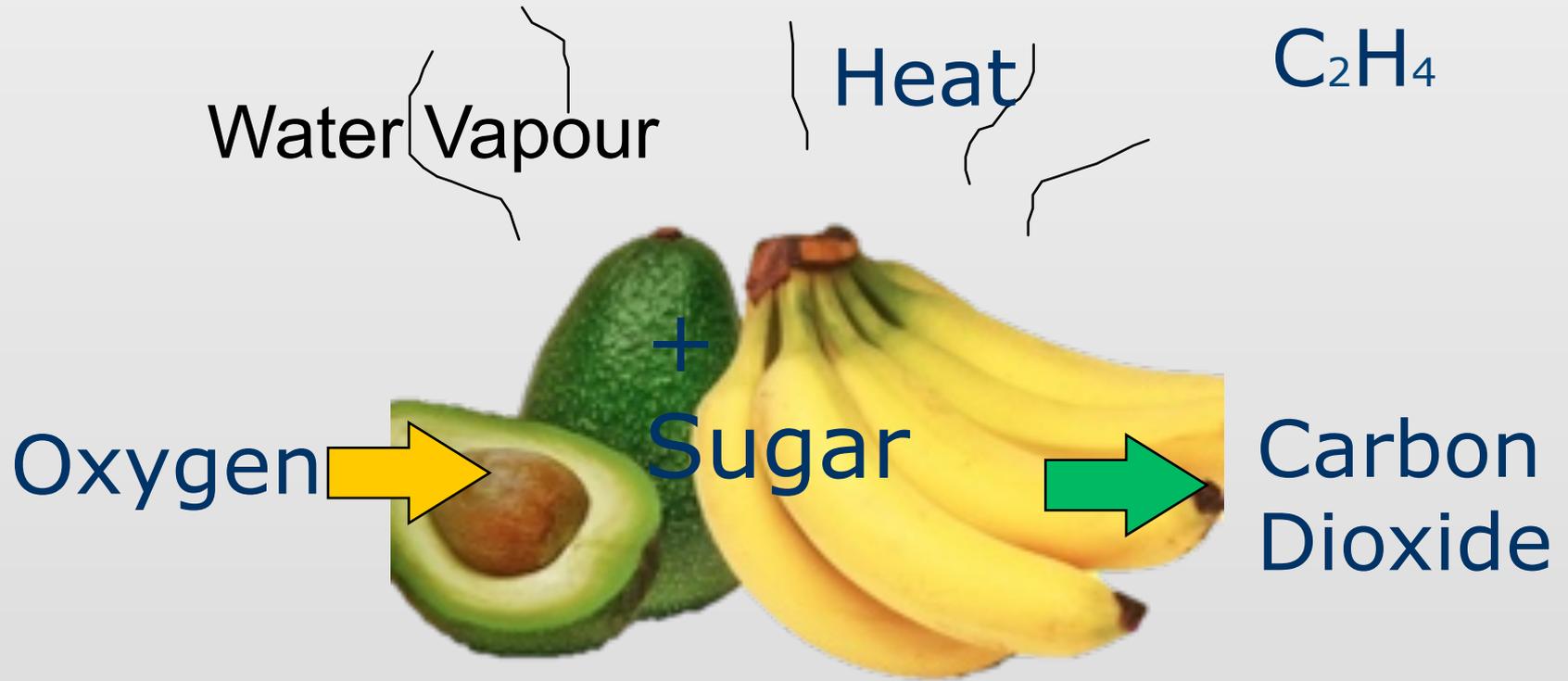
Atmospheric Gas Composition

Normal Atmosphere

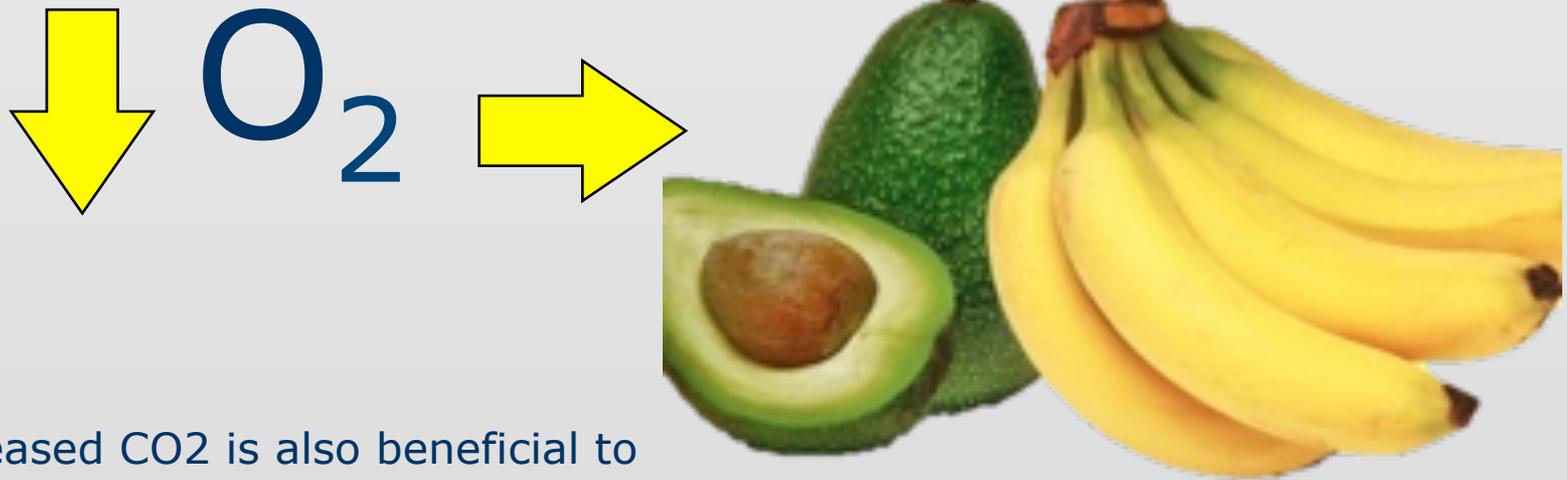


Typical Controlled Atmosphere

Respiration



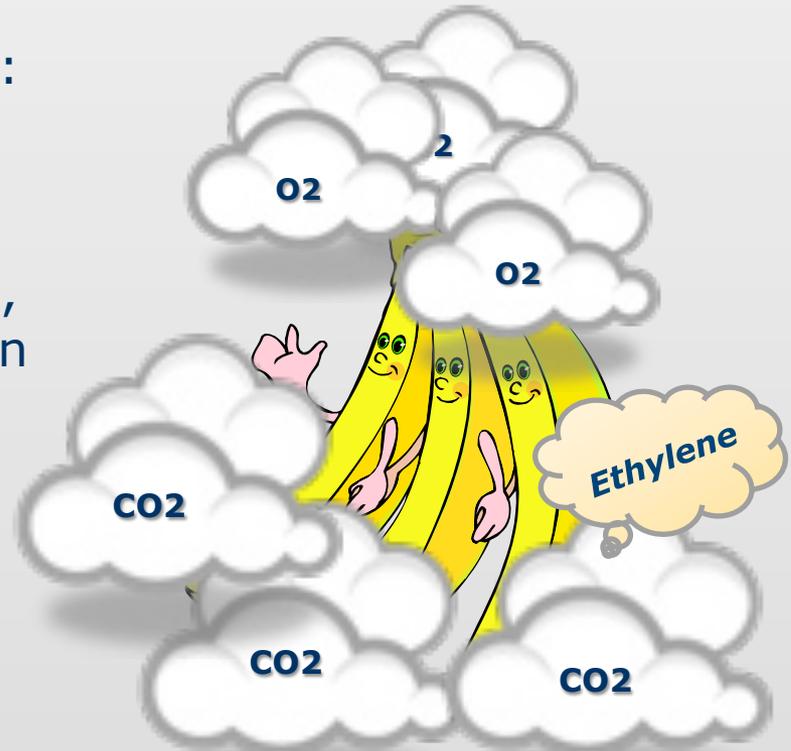
Reduction of oxygen reduces respiration



Increased CO_2 is also beneficial to respiration reduction and can suppress the growth of certain moulds

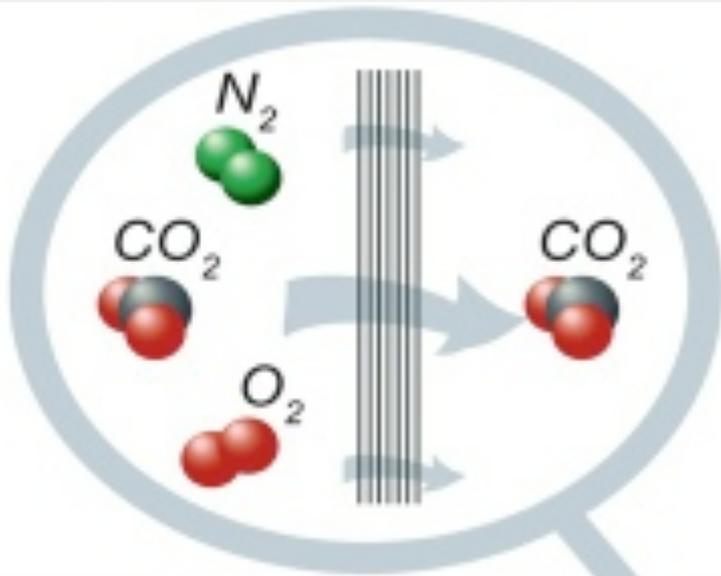
How does it work ?

- Through respiration, the fruit will:
 - consume Oxygen (O_2), slowing down respiration
 - produce Carbon Dioxide (CO_2), contributing to lower respiration & suppressing the release of ethylene

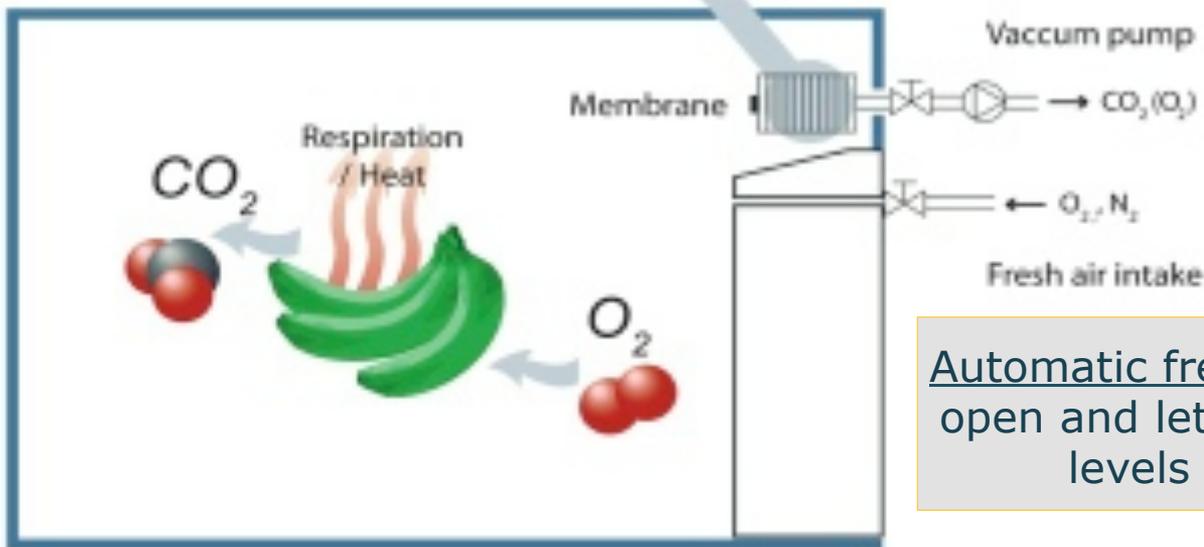


...but, how to remove undesirable CO_2 without increasing the O_2 ?

How? Membrane Technology!

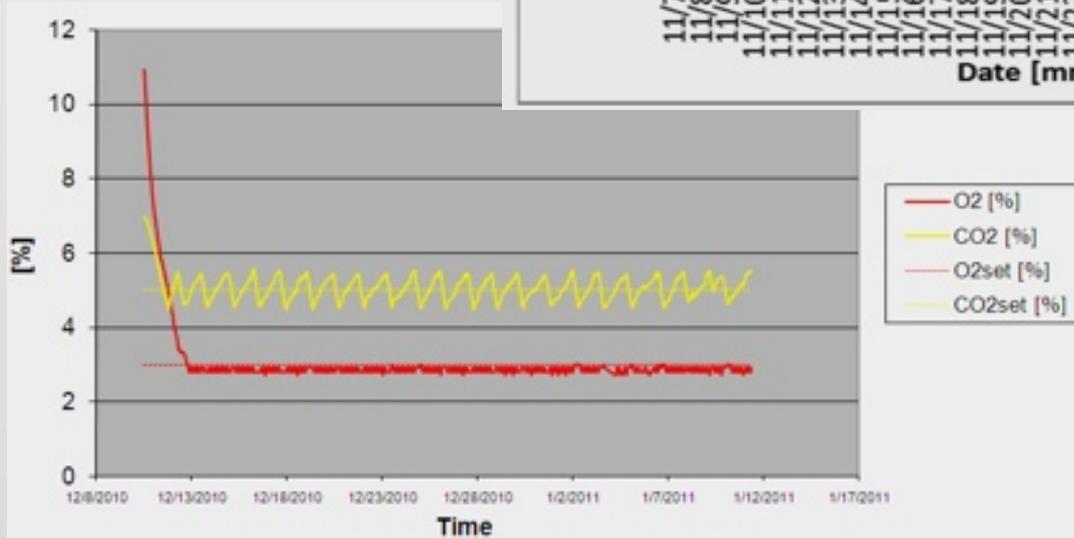
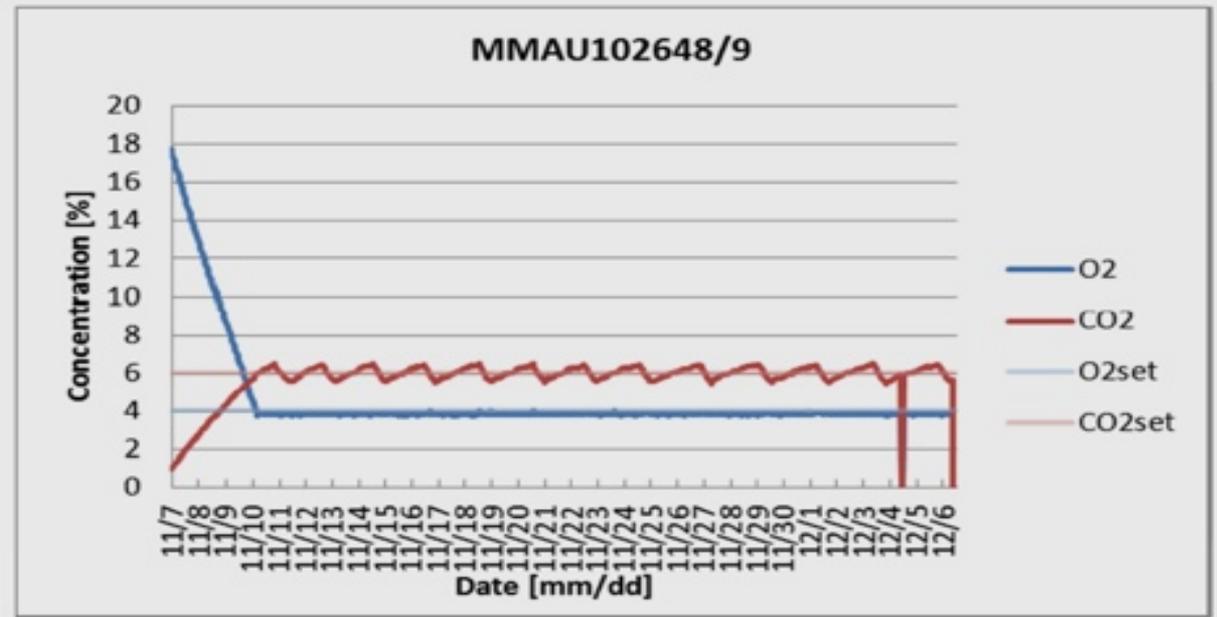


CO_2 molecules will easily pass through the membrane and out of the container, whereas only few Oxygen and Nitrogen molecules will be allowed to pass.



Automatic fresh air (AV+) intake will open and let in ambient air, until O_2 levels are back in range.

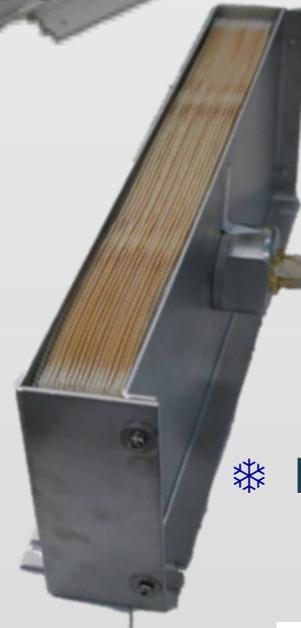
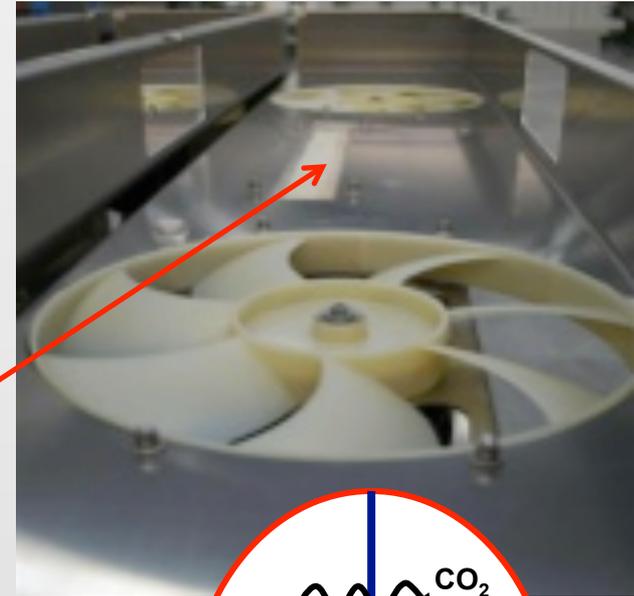
Avocados/Bananas: SAM – N. Europe



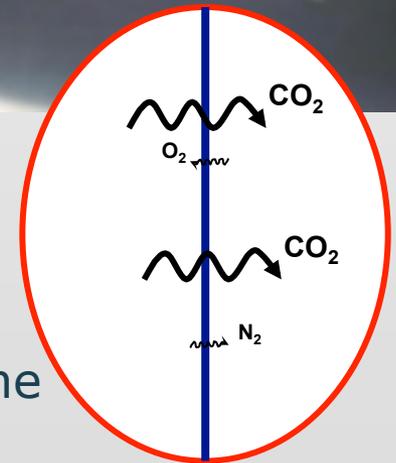
Star Cool CA : Components

Additional Components

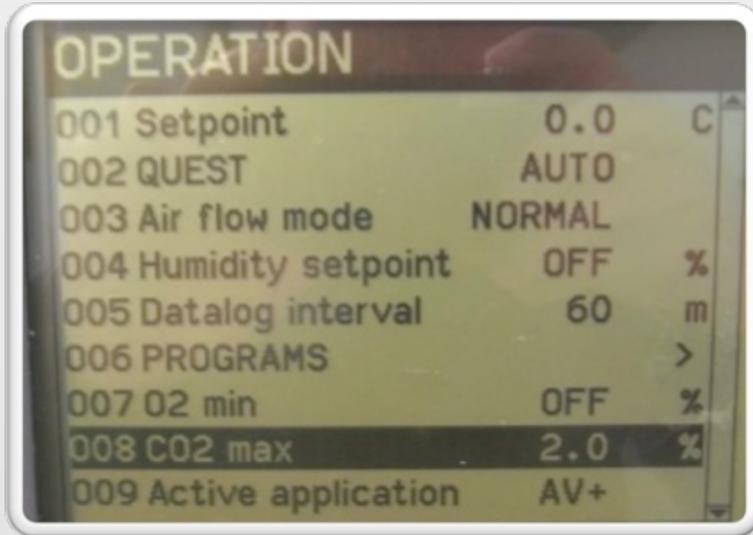
- ❄ Vacuum Pump
- ❄ + Oil Heater
- ❄ + Temp Sensor



❄ Membrane

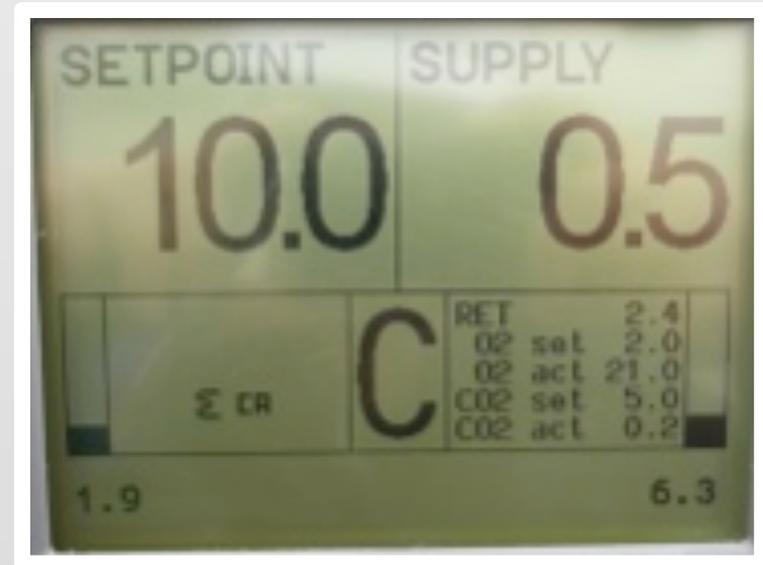


Star Cool CA : How to set & read?



A screenshot of a reefer controller screen showing the 'OPERATION' menu. The menu items are listed in a table format with their corresponding values and units.

Item	Value	Unit
001 Setpoint	0.0	C
002 QUEST	AUTO	
003 Air flow mode	NORMAL	
004 Humidity setpoint	OFF	%
005 Datalog interval	60	m
006 PROGRAMS	>	
007 O2 min	OFF	%
008 CO2 max	2.0	%
009 Active application	AV+	



A screenshot of a reefer controller screen showing the 'SETPOINT' and 'SUPPLY' display. The screen is divided into two main sections: 'SETPOINT' and 'SUPPLY'. The 'SETPOINT' section displays '10.0' and 'C'. The 'SUPPLY' section displays '0.5'. Below these sections, there is a table of data points and a large 'C' in the center.

Section	Value
SETPOINT	10.0
SUPPLY	0.5

Parameter	Value
RET	2.4
O2 set	2.0
O2 act	21.0
CO2 set	5.0
CO2 act	0.2

Large 'C' in the center of the screen.

1.9 6.3

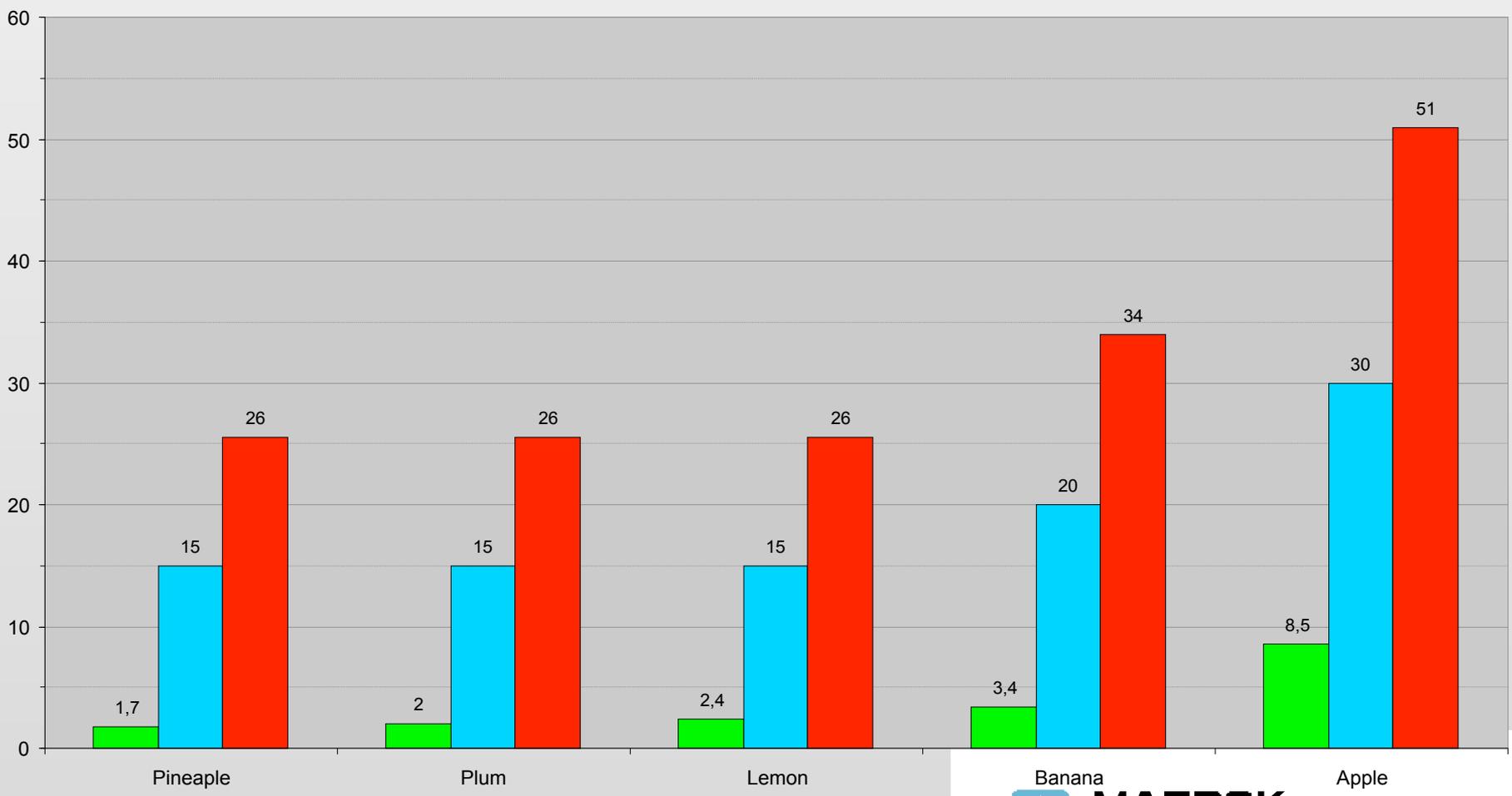
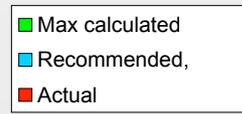
Standard Components

- ❄ All CA functions accessed via reefer controller
- ❄ All CA data displayed and recorded via reefer controller

AV+

m³/h **AV+**

Ventilation overview



AV+ video



Benefits of AV+

- ✓ Maintain higher humidity in the box
- ✓ Alarm against malfunction (In-range, CO2 sensor, Motor)
- ✓ Possibility to include ventilation in MTS
- ✓ High/Low speed on fans have no influence
- ✓ Actual heat production (respiration) have no influence
- ✓ Mechanical tolerance and adjustment have no influence
- ✓ Manual setting still possible
- ✓ Remote setting