

TELEDYNE HASTINGS

APPLICATION NOTES INSTRUMENTS

Goal: Air and Nitrogen Flow Measurement in Controlled Atmosphere (CA) Room

Solution: Teledyne Hastings HFM - 200 - LFE

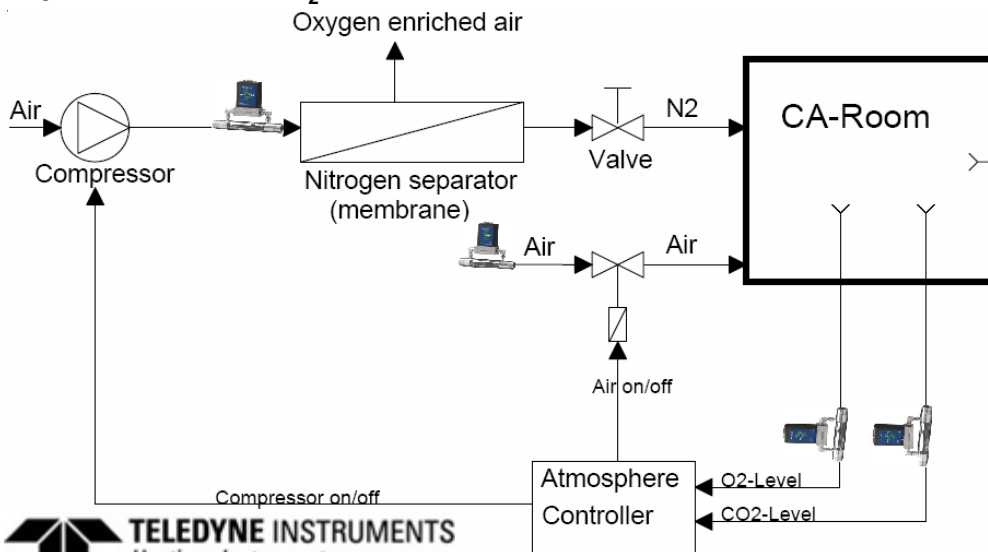


Transporting refrigerated perishable goods such as fruits and vegetables in Controlled Atmosphere (CA) is an economical solution for long distance shipments as well as long-term storage.

The freshness of perishables is preserved by refrigeration and modification of the gas concentrations in CA rooms which provides reduced respiration ($C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + \text{Heat}$) of fruits and vegetables increasing their market life.

Teledyne Hastings' HFM-200-LFE easily integrates with Nitrogen separating membranes (Pressure-Swing-Adsorption-Membrane) on reefer containers with portholes making the delivery of the exact amount of Nitrogen from ambient air to flush the CA room.

Since fruit respiration is not only controlled by Nitrogen saturation of the CA, it is also important to use CO₂ scrubbers with HFM-200-LFE to distribute the right amounts of gas.



The HFM-200-LFE, capable of flows to 15000 SLM (nitrogen equivalent) at low differential pressure, is a reliable Mass Flow Meter with an accuracy of 1% Full Scale.