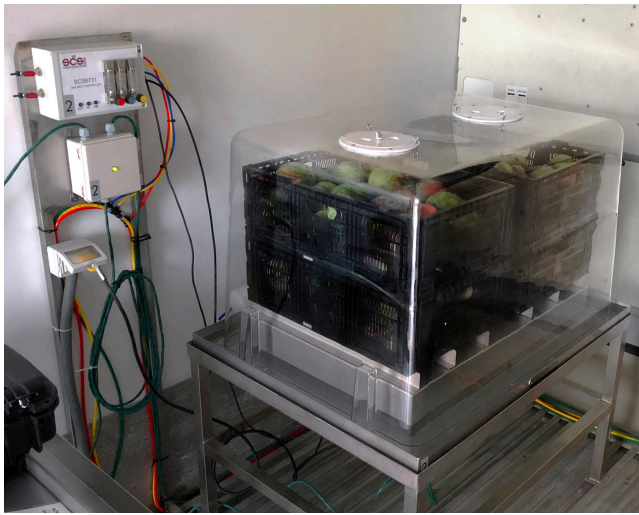




LABPOD CASYSTEM



The LabPod is for testing the response of fruit or vegetables to Controlled Atmospheres down to less than 0.1% Oxygen and for measuring their respiration and respiratory quotient. It is ideal for Post-Harvest Laboratories working with controlled atmospheres and respiration rates within a controlled temperature environment.

The LabPod is a hermetically sealed enclosure with a stainless steel base and a clear molded cover that sits in a water trough for perfect sealing. It has a capacity for about 70 kg of produce in 4 RPC boxes.

Each pod is self-contained with built in Oxygen, Carbon Dioxide and temperature sensors with digital communications to a central operating panel. Built in control valves and gauges regulate the connected Nitrogen, Air and optional CO₂ supply to very accurately maintain the selected atmosphere.

Respiration and RQ are periodically and automatically measured using the built in high sensitivity analysers. The atmosphere control is paused and the changes in Oxygen and CO₂ caused by the product respiration is measured and used to calculate and display the respiration rate.

An internal low power circulation fan periodically stirs the atmosphere and is activated by the system controller.

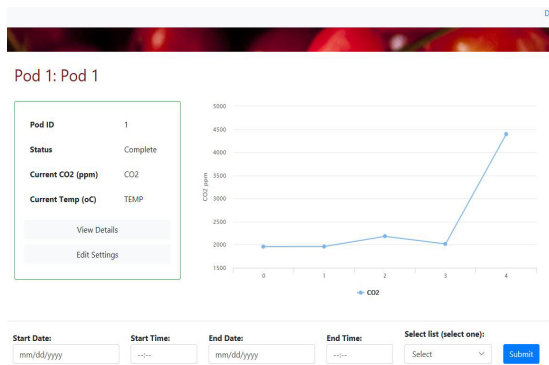
Each SafePod Controller, pictured below, controls two LabPods. All setpoints are programmed via the SCS app or web interface. The measured data is regularly collected and can be displayed on the app or web dashboard, are continuously uploaded to the SCS Cloud, and can be exported to Excel or other common programmes.

Dashboard

History

Start Date: mm/dd/yyyy End Date: mm/dd/yyyy Select list (select one): Select Submit

Pod	Time Stamp	Mode	CO ₂ ppm	Temperature °C	Test Time	Respiration	Pod
16	2019-02-04 12:40:48	Complete	400	10	10	Pod	Pod
9	2019-02-04 12:40:12	Complete	400	10	10	Pod	Pod
13	2019-02-04 12:39:43	Complete	400	10	10	Pod	Pod
10	2019-02-04 11:41:24	Complete	400	50	50	Pod	Pod
14	2019-02-04 11:40:55	Complete	400	50	50	Pod	Pod
11	2019-02-04 11:20:48	Complete	400	33	33	Pod	Pod
15	2019-02-04 11:20:18	Complete	400	10	10	Pod	Pod
12	2019-02-04 11:09:46	Complete	400	25	25	Pod	Pod
8	2019-02-01 13:00:42	Complete	400	10	10	Pod	Pod
5	2019-02-01 13:00:40	Complete	400	10	10	Pod	Pod
2	2019-02-01 13:01:56	Complete	400	50	50	Pod	Pod
6	2019-02-01 12:01:54	Complete	400	50	50	Pod	Pod



Web-Based Graphing of Data with Export Options



FEATURES

- ▣ Patented Technology – U.S. Patent No. 11484038, Canadian Patent No. CA 3057938, UK Patent No. GB 2579270
- ▣ Self-contained control of CA Atmosphere
- ▣ Totally leak tight
- ▣ Measures RQ & Respiration
- ▣ 70kg fruit capacity
- ▣ High-Resolution Gas Analysers
- ▣ Automatic operation
- ▣ Full Data Recording & Graphing via SCS Cloud
- ▣ Cloud Reporting



XPod Controller

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LABPOD CASYSTEM

FEATURES & SPECIFICATIONS

MEASUREMENT & CONTROL RANGE

Oxygen: 0-25% or 0-2.5% Auto range Resolution: low range +/- 0.002% O₂ Electrochemical 4-year long life sensor
Carbon Dioxide: 0-20% CO₂ Resolution: < 5% 0.002% >5% 0.02%

CONTROL INPUTS

Control Gases required: Nitrogen with an oxygen content lower than minimum required CA Oxygen.
Fresh Filtered Air. CO₂ if required. Gas supply inlet pressure 1 to 3 Bar (15 to 50 psi)

Automatic atmosphere control with included solenoids.

Control Setpoints for Oxygen and CO₂ adjustable to a 0.01% resolution. Gas control differentials 0.05%, CO₂ add differential 0.2%.

Air added when Oxygen is measured low: Air flow adjustable 0.5 to 5 L/min

Nitrogen added when Oxygen is measured high or when CO₂ is high. Adjustable flow 1 to 10 L/min

CO₂ (if connected) added when CO₂ is low. Adjustable flow 0.1 to 1. L/min.

Additional flow rate adjustable from controller from 100% to 1% of maximum flow over a 5 minute period.

Optional CO₂ scrubber available for CO₂ control if Nitrogen flush CO₂ removal is not acceptable.

RESPIRATION & RQ MEASUREMENT

Automatic frequency of measurement, adjustable from 10 to 999 hours

OPERATION OF INTERNAL FAN

ON when control gases being added. With no gas addition, adjustable over range 1 to 999 seconds every 1000 seconds.

TEMPERATURE MEASUREMENT

Probe with a typical accuracy of 0.1°C available for measuring and recording the fruit temperature

ANALYSER CALIBRATION

Zero stability typically better than 0.05% over 12 months

Automatic barometric pressure compensation for span calibration

Remote calibration possible from website.

Sampling port available for atmosphere sampling with a portable standard analyser and for Ethylene and volatile measurement

WATER LEVEL DETECTOR

A warning indicated on operators screen when water in trough is low and requires topping up.

PRESSURE RELIEF

The flow of correction gases into the LabPod are automatically discharged to atmosphere through vents normally sealed by the water seal.

ELECTRICAL CONNECTION

One multicore cable for CAN data connection and 24v operational power. Connector & wall mounted termination box provided with each LabPod.

CENTRAL OPERATION

Capacity for up to 2 LabPod connections.

The controller has a standard Ethernet connection with an IP address.

Continuous readout of gas and temperature and operational status. Access to all control settings. Remote analyser calibration protected with a passcode.

Settings for empty volume and product weight for respiration rate calculations

DATA COLLECTION

O₂, CO₂ and temperature recorded every hour together with most recent RQ and respiration results. Results stored on web-based portal accessible via internet browser or mobile app for iOS and Android devices. Can be exported in various formats including Excel and PDF.

LEAKTIGHTNESS

Oxygen at typically 1% in a static LabPod (no produce, no correcting gas) will remain within 0.1% O₂ over a period of 24 hours.

DIMENSIONS

135 x 84 x 70 cm high Weight 46 Kg. Empty volume 379L Pull down time to 2% Oxygen with N₂ at 5 L/min is 4 Hours.

Capacity: 4 x RPC crates (Typical Single RPC size: 40 x 60 x 20 cm, 17 Kg capacity)

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