

MultiCheck[®] Series

Package Integrity Test System for
Modified Atmosphere Packages



A breakthrough system that dramatically reduces testing costs by using one package to provide:

- Headspace
- Leak Detection
- Seal Strength
- One-way Valve Testing

mocon[®]

The MultiCheck® Package Integrity Test System

The MultiCheck provides an all-in-one system that performs O₂ and CO₂ measurements (model dependent) coupled with leak detection and seal strength analysis all on one package. The MultiCheck 400 and 425 add the ability to test a one-way degassing valve.

Ideal for a broad spectrum of shelf life sensitive food, pharmaceutical and medical products, the MultiCheck System enables users to significantly reduce resources and testing times while achieving the same accurate results.

Use One Package to Test For:

Oxygen Headspace

Measure residual oxygen within modified or controlled atmosphere packages

Carbon Dioxide Headspace

Measure the residual carbon dioxide within modified or controlled atmosphere packages

Seal or Material Strength

Analyze seals or material strength of a package by measuring the peak pressure at which the seals separate or the material bursts

Leak Detection

Detect package leaks through pressure decay analysis

One-way Valve Testing

Analyze the burst pressure required to actuate a degassing valve and test for leaks in the valve and valve seating

Typical Applications

Ideal for a broad spectrum of packages where modified or controlled atmosphere is used to extend shelf life. Below are typical applications:

- > Produce
- > Dairy
- > Case Ready Meats
- > Baked Goods
- > Prepared Foods
- > Snack Foods
- > Medical Devices
- > Nutraceuticals
- > Pet Foods
- > Pharmaceuticals
- > Coffee

Oxygen and Leak

- O₂ Headspace
- Seal Strength
- Leak Detection



MultiCheck® 300

System Components: Lippke 4500, Software, PAC CHECK 302, Closed Package Fixture

Oxygen, Carbon Dioxide and Leak

- O₂ Headspace
- CO₂ Headspace
- Seal Strength
- Leak Detection



MultiCheck® 325

System Components: Lippke 4500, Software, PAC CHECK 325, Closed Package Fixture

Features and Benefits

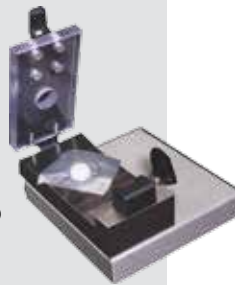
- Save costs by using one package for all five tests
- Save time by conducting multiple tests in one sequence
- Get answers to five critical conditions existing in your package environment
- Software enables users to create testing protocols, link them to SKUs and log data to a PC
- Software also provides statistical analysis and easily plots out data, offering easy to read charts grouped by package run, shift and day or week
- Reduce testing set up time
- Optional barcode reader can be used to log tests against the UPC's
- The PAC CHECK® 302 and 325 come with Cal-Smart® - MOCON's no tank gas, smart calibration system

Valve Testing Unit (VTU™)

Analyzes the burst pressure required to actuate a degassing valve. Also test for atmospheric leaks to insure proper sealing and seating of the valve.

Typical VTU Applications:

- > Coffee
- > Pet Foods
- > Animal Nutrition
- > Agricultural Chemicals
- > Food Packaging with Pressure Relief Valves



Additional Testing Option

This option offers the following additional tests (available on all models):

- Creep
- Creep-to-fail
- Combined Creep & Burst
- Combined Creep & Leak
- Combined Creep, Leak & Burst

Oxygen, Leak and VTU

- O₂ Headspace
- Seal Strength
- Leak Detection
- One-way Valve Testing



MultiCheck® 400

System Components: Lippke 4500, Software, PAC CHECK 302, Closed Package Fixture & VTU

Oxygen, Carbon Dioxide, Leak and VTU

- O₂ Headspace
- CO₂ Headspace
- Seal Strength
- Leak Detection
- One-way Valve Testing



MultiCheck® 425

System Components: Lippke 4500, Software, PAC CHECK 325, Closed Package Fixture & VTU

Specifications *For additional specifications please contact a MOCON Representative

LIPKE® 4500*

Air pressure supply	4.0 - 8.0 bar / 60 - 120 psi
Environmental temperature	15 to 40 C
Ambient operating conditions	0 - 90% RH (non-condensing)
Pressure readout units	Pounds per square inch (psi), millibar (mbar), millimeter of mercury (mmHg)
Option of three measurement ranges	14.5 psi (1 bar) 43.5 psi (3 bar) 101.5 psi (7 bar)
Pressure sensor accuracy and repeatability per measuring range	0.007 (0.5 mbar) 0.03 (2.0 mbar) 0.07 (5.0 mbar)
Supply voltage	100 - 250 VAC with built in surge protection
Weight (pounds)	14.3

PAC CHECK® 302*

Maximum sample size (90 sec auto pump)	450 cc
Minimum sample size (1 sec auto pump)	5 cc
Response (without extension tube) needle only	0 - 98% of value with a one second pump cycle and a 6 second test cycle
O ₂ accuracy	± 0.1% O ₂ absolute or 2% of relative reading, whichever is larger
O ₂ range	0.0 - 100% O ₂
Ambient operating humidity	10 - 90% RH, non-condensing
Ambient temperature range	5 to 35 C
Supply voltage	Rechargeable Ni-MN battery pack, 2000 mAh
AC/DC battery charger	Input 100-240 volts, Output 9 volts

PAC CHECK® 325*

Maximum sample size (90 sec auto pump)	450 cc
Minimum sample size (1 sec auto pump)	5 cc
Response (without extension tube) needle only	0 - 98% of value with a one second pump cycle and a 6 second test cycle
O ₂ accuracy	± 0.1% O ₂ absolute or 2% of relative reading, whichever is larger
O ₂ range	0.0 - 100% O ₂
CO ₂ accuracy	2% absolute at 0-20%; 3% absolute at 20-100%
CO ₂ range	0.0% - 100% CO ₂
Ambient operating humidity	10 - 90% RH (non-condensing)
Ambient temperature range	5 to 35 C
Supply voltage	Rechargeable Ni-MN battery pack, 2000 mAh
AC/DC battery charger	Input 100-240 volts, Output 9 volts

VTU™

H x W x D cm (inches)	11.89 x 17.78 x 17.15 (4.68 x 7.0 x 6.75)
Weight kg (pounds)	2.13 (5.7)
Maximum diameter cm (inches)	2.413 (0.950)
Temperature operating range	18 to 35 C
Temperature range	5 to 50 C
Humidity range	0 - 95% RH (non-condensing)

MOCON Commitment

These analytical instruments are another example of MOCON's long-standing commitment to innovation and quality in the support of customers.

Technical Support & Service

MOCON offers a variety of services designed to provide you with first class technical support. Whether you require next-day spare parts delivery, on-site training, N.I.S.T. certification or "turn-key" validation, our staff can tailor a service program to fit your needs. Our goal is to provide the best in product support services.

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MOCON reserves the right to change specifications without notice as part of our continuous program of product improvement.

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