

The Donaldson Membra-Check II is a compact integrity test unit for membrane filters used in the Food and Beverage industry. Beside performing pressure drop and pressure hold tests, this unit can be used as a calibration pressure gauge (0–87 psi) and is capable to check unknown volumes (e.g. the upstream volume of a filter housing (0.02–8.4 gal). With our integrated software, the Membra-Check II can either be connected to a PC or used for on-site testing as a stand-alone unit.

TEST CAPABILITIES

This instrument is designed to perform the following integrity tests:

- Pressure Drop/Pressure Hold Tests
- Volume Checks from 0.02 – 8.4 gal

STANDARD PRODUCT LIST

- Donaldson Membra-Check II
- Keyboard
- Manual
- Data cable
- Software "IT COLLECT"
- Power supply with battery charger
- Calibration, CE Certificates

ADDITIONAL ACCESSORIES

- Printer (including needed equipment)
- Pressure vessels (5, 7l and 10l)
- Software "VOL V1.2"
- USB data cable
- Test unit for net volume



Membra-Check II

SOFTWARE

A software (Windows 98 – XP) for the central administration of filter test programs is available.

SOFTWARE "IT COLLECT"

This software stores up to 40 test record and is part of the delivery scope. Please note that this software is not compliant with the FDA guideline 21 CFR 11. It can only be used where 21 CFR 11 is not necessary.

SOFTWARE "VOL V1.2"

This software calculates maximum pressure drop, minimum test duration, and net volume. Please note that this software is not part of the standard product and can be ordered as an accessory.

SPECIFICATIONS

Cabinet Material	304 stainless steel
Cabinet Dimensions (L x W x H)	11.7" x 4.9" x 13.7"
Weight	12 lbs
Protection Class	IP55 (optional IP65)
Power Supply	Rechargeable battery 7.2V-4Ah or mains 220V/110V
Keyboard	Alpha numeric
Software Protection	Stored in Flash EPROM
Matrix Printer	Normal paper, 24 characters/line
Storable Test Programs	Up to 100 programs in Flash EPROM
Storable Test Records	40 in Flash EPROM
Pneumatic Connectors	Rectus DN 7.2, 304 Stainless steel
Pressure Sensors	1x internal: 0–4 bar/0–58 psi; CI 0.5 (316 Stainless steel)
CPU-Board	HC-12 (Motorola)
Program Language	C
Display	4-lines illuminated (blue)
Available languages	German, English, French, Italian, Spanish, Danish (Additional languages available upon request)
Pressure Units	bar/psi
Interface	Serial bus RS 232 (19.200 bd)

MAINTENANCE AND HANDLING RECOMMENDATIONS

Cleaning of pneumatic parts:

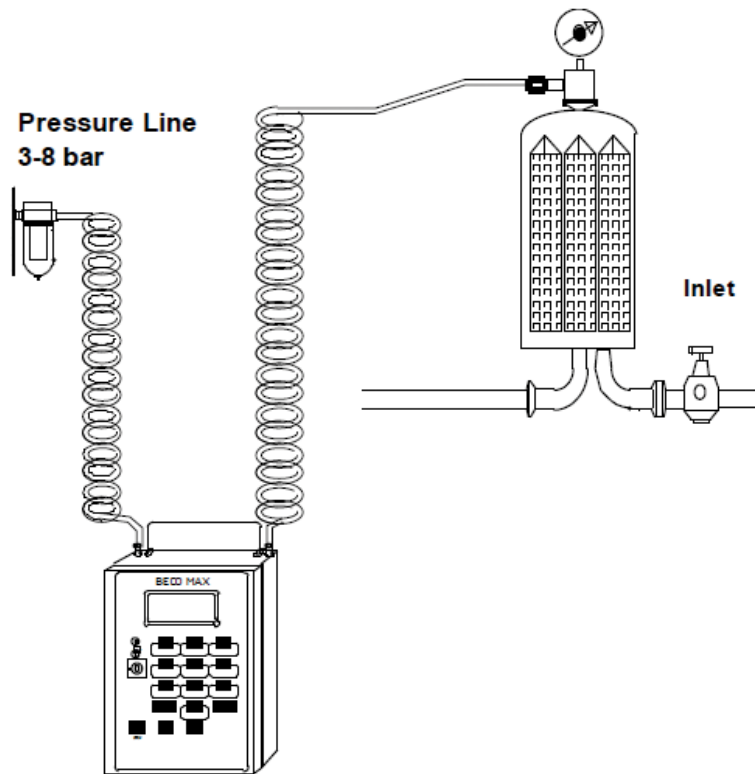
- Sensor can be steamed (250°F for 20 minutes)
- Filling and vent can be cleaned with water (176°F with usual cleaning detergent)
- Recommended temperature: 41°F –104°F
- Recommended humidity: 0 – 80%

EXAMPLE 1: PRESSURE HOLD TEST

This test checks the integrity of an entire system. On the wetted membrane filters, up to 80% of the Bubble Point Pressure is applied. After a period of stabilization, the compressed air or nitrogen flow is turned off and the inlet side is closed with the outlet side is open. The Pressure Hold Test shows even the smallest leakages in a filter system. Using intact filter elements, the Pressure Hold Test may also be used to test the integrity of filter housings.

MEASUREMENT LIMITS

Measuring Range	7.25 – 40.6 psi
Pressure Drop Range	0.01 – 14.5 psi/min
Resolution	0.01 psi
Measuring Uncertainty	0.15% (P = 58 psi)



GENERAL LIMITS FOR PROGRAMMING

Parameter	Entry Limits	General Values for PES WN, 0.2 μm (example)
Test Pressure	7.25 – 40.6 psi	32 psi
Stabilizing Time	60 – 999 seconds	600 seconds
Test Time	10 – 999 seconds	300 seconds
Net Volume (upstream)	1 – 150,000 ml	6,240 ml (for PF-EG 0075)
Max. Pressure Drop	0.01 – 14.5 psi/min	.007 psi/min for 10"

EXAMPLE 2: NET VOLUME TEST

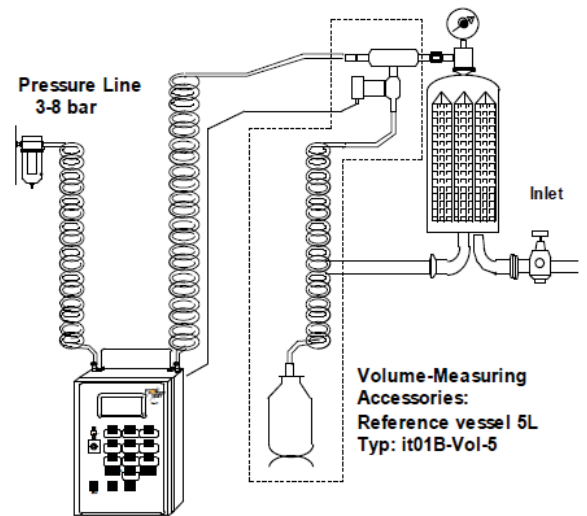
MEASUREMENT LIMITS

Measuring Range	100 – 150,000 mL
Test Pressure Range	7.2 psi – 40 psi
Resolution	5 mL
Measuring Uncertainty	2% (P= 36.2 psi and v > 100 mL)

Please note: Measuring the net volume is only needed if the net volume of the housing is not known. The pressure vessel needed for measuring the net volume is not included but can be ordered as an accessory.

GENERAL LIMITS FOR PROGRAMMING

Parameter	Unit	General Values for PES WN, 0.2 µm (example)
Filter System	-	"Sterile Filter Line 1"
Filter Type	-	"Donaldson PES WN, 0.2 µm"
Product	-	"Water"
Wetting Agent	-	"Water"
Test Gas	-	"Air"
Housing Type	-	"PF-EG 0150"
Net Volume	ml	"6240" (for PF-EG 0075)
Test Pressure	psi	72.5
Stabilizing Time	seconds	600
Test Time	seconds	300
Max. Pressure Loss	psi/MIN	0.007
Operator	-	"..XY.."



Important Notice

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



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(11/17) ENG Membra-Check II Integrity Tester

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{Contains Donaldson proprietary technology.}