



Donaldson.
FILTRATION SOLUTIONS

Sterile Air, Steam & Liquid Filtration From Pure to Sterile

Membra-Check II

MAIN FEATURES & BENEFITS:

- Integrity test of membrane filters
- Upstream volume measurement
- Pressure gauge calibration test
- For LIMS and Stand alone
- Portable and handy



INDUSTRIES:



- Food and Beverage



- Chemical Industry



- Pharmaceutical Industry



- Biotech



- Environmental Industry

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Donaldson®
Ultrafilter

PRODUCT DESCRIPTION

The Donaldson “Membra-Check II” is a handy filter integrity test unit for membrane filters used in the Food & Beverage industry. Beside the integrity test this unit can be used as a calibration pressure gauge (0 – 6 bar) and is capable to check unknown volumes (e.g. the upstream volume of a filter housing; 0.1l – 150l). With the integrated software the “Membra-Check II” can be connected to a PC or might be used for on-site testing as stand-alone (printer necessary).

This instrument is designed to run the following tests:

- Pressure Drop / Pressure Hold Test
- Volume Checks from 0,1l to 150l

The 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 densely closed while the outlet side is still open. The Pressure Hold Test shows even the smallest leakages in a filter system. Given a certain test time the pressure loss shouldn't exceed a system specific value. Using intact filter elements the Pressure Hold Test may be used to test the integrity of filter housings.



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|-----------------------------|----------------------------|
| (1) Keyboard | (6) Printer Power Supply |
| (2) PC-Data cable | (7) Printer |
| (3) Adapterunit RS232 – USB | (8) Printer – Data cable |
| (4) Battery Charger | (9) Adapter Stäubli-Rectus |
| (5) Testunit for Net-Volume | |

PRODUCT SPECIFICATIONS

Product Specification	
Cabinet material:	<ul style="list-style-type: none"> Stainless steel 1.4301
Cabinet dimension:	<ul style="list-style-type: none"> 200x300x80mm
Weight:	<ul style="list-style-type: none"> ca. 5,5 kg
Protection class:	<ul style="list-style-type: none"> IP 55 (optional IP 65)
Power supply:	<ul style="list-style-type: none"> Rechargeable Battery 7.2V-4Ah or mains 220 V/110V
Keyboard:	<ul style="list-style-type: none"> alpha numeric
Software Protection:	<ul style="list-style-type: none"> Stored in Flash EPROM
Matrix Printer:	<ul style="list-style-type: none"> Normal paper, 24 characters/ line
Storable Test Programs:	<ul style="list-style-type: none"> up to 10 programs (in Flash EPROM)
Storable Test Records:	<ul style="list-style-type: none"> 40 (in Flash EPROM)
Pneumatic Connectors:	<ul style="list-style-type: none"> Rectus DN 7,2 (Stainless Steel 1.4301)
Pressure Sensors:	<ul style="list-style-type: none"> 1x internal: 0-4 bar / 0-58 psi; (Stainless Steel 1.4404)
CPU-Board:	<ul style="list-style-type: none"> HC-12 (Motorola)
Program Language:	<ul style="list-style-type: none"> C
Display:	<ul style="list-style-type: none"> 4- lines illuminated (blue)
Possible Languages:	<ul style="list-style-type: none"> German, English, French, Italian, Spanish, Danish (Further languages on request)
Pressure units :	<ul style="list-style-type: none"> bar/psi
Interface:	<ul style="list-style-type: none"> Serial bus RS 232 (19.200 bd)

MAINTENANCE AND HANDLING RECOMMENDATIONS

Cleaning of Pneumatic Parts:

- The sensor can be steamed (121 °C for 20 min)
- The filling and vent valve can be cleaned with water (80°C with usual cleaning detergent)

Recommended Temperature: 5°C – 40°C

Recommended Humidity: 0 – 80%

SOFTWARE

Windows XP or comparable PC software is required for the available Membra-Check II Software:

Software “it-collect”

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

Software “Vol. V1.2”

This software calculates:

- Max. pressure drop
- Min. test duration
- Net volume

Please note, that this software is not part of the delivery scope but might be ordered as accessory.

DELIVERY SCOPE AND ACCESSORIES

- Donaldson Membra – Check II
- Keyboard
- Manual
- Data cable
- Software « it-collect »
- Power Supply
- Battery Charger
- Calibration, CE Certificates

Additional Accessoires on request:

- Printer incl. needed equipment
- Pressure Vessels (5,7l & 10l)
- Software « Vol V1.2 »
- USB Data cable
- Testunit for Net-volume

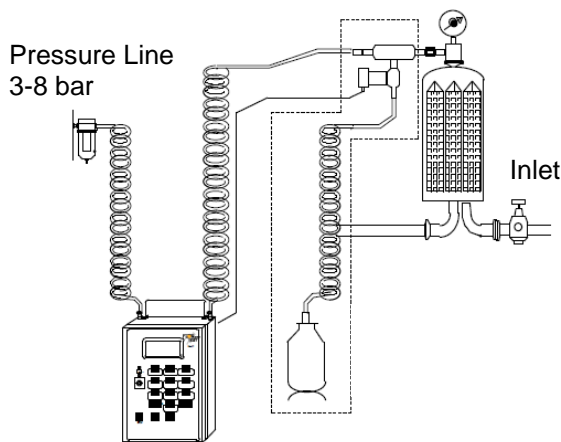
Accessories



NET VOLUME & PRESSURE HOLD TEST

Measuring Limits for Volume Measuring Program (Net Volume)

Measuring range:	• 10 – 150.000 ml
Test pressure range:	• 500 – 2800 mbar
Resolution:	• 1 ml
Measuring uncertainty:	• 2% (P= 2500 mbar 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 part of the delivery scope but might be ordered as accessory.

Information needed For Pressure Hold Test (Programming)

Parameter	Unit	General values for Donaldson PF-PES W, 0,2 µm (as an example)
Filter system	-	"Sterile Filter Line 1"
Filter type	-	"Donaldson PF-PES W, 0,2µm"
Product	-	"Water"
Wetting agent	-	"Water"
Test gas	-	"Air"
Housing type	-	"PF-EG 0150"
Net volume	ml	"6240" (for PF-EG 0075)
Test pressure	mbar	"5000"
Stabilising time	Seconds	"600"
Test time	Seconds	"300"
Max. pressure loss	mbar/min	"0,5" (for 10" units)
Operator	-	"..XY.."

NET VOLUME & PRESSURE HOLD TEST

Measurement limits for Pressure Hold Test

Measuring range:

- 500 - 2800 mbar

Pressure drop range:

- 1 - 999 mbar/min

Resolution:

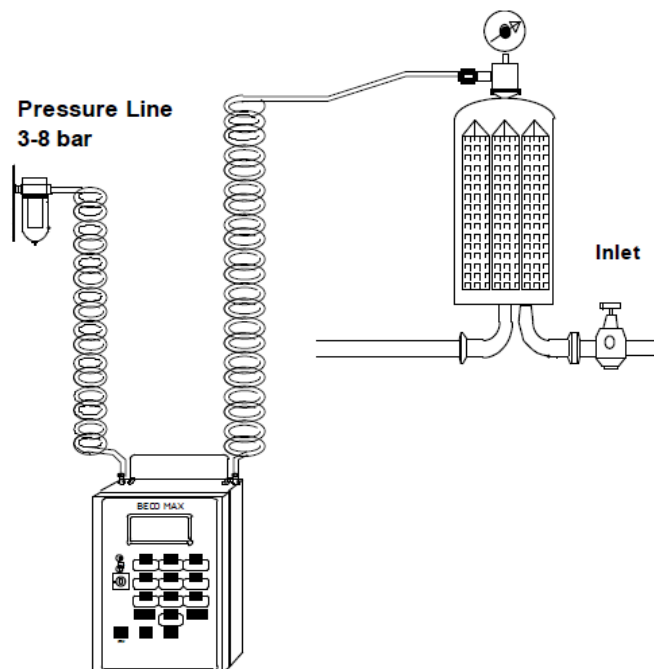
- 1 mbar

Measuring uncertainty:

- 0,15 % (P = 4000 mbar)

General limits for Pressure Hold Tests for programming

Parameter	Entry limits	General values for Donaldson (P)-PF-PES W, 0.2µm (as an example)
Test pressure:	500 - 2800 mbar	2200 mbar
Stabilising time:	60 - 999 s	600 s
Test time:	10 - 999 s	300 s
Net volume: (upstream volume)	1 - 150.000 ml	6240 ml (for PF-EG 0075)
Max. Pressure Drop	1 - 999 mbar/min	0,5mbar/min for 10"



Technical alterations reserved 04/2009

- For further information on this test equipment or additional test services, please contact your Donaldson Sales Engineer and visit our website at www.donaldson.com!

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