

The Donaldson Membra-Check I is a compact filter integrity test unit for both hydrophilic and hydrophobic membrane filters. In addition to 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). Both standard software and GMP/GLP compliant versions are available. A printer is included for on-site testing without a PC connection or as a stand alone unit.

TEST CAPABILITIES

This instrument is designed to perform the following integrity tests:

- Diffusion Test (Forward Flow)
- Pressure Drop
- Diffusion and Bubble Point
- Diffusion Tests with automatic filter wetting
- Water Intrusion Test (WIT)
- WIT on huge housings (39.6 gal)
- WIT with automatic filter drying
- WIT with automatic housing cooling
- Volume Checks from 0.02 – 8.4 gal



STANDARD PRODUCT LIST

- Donaldson Membra-Check I
- Infrared keyboard
- Paper roll and color ribbon
- Pressure sensor with Stäubli connection
- Reference vessel for volume measurement
- Manual
- Data cable
- Software
- Power supply with battery charger
- Inlet tube with pressure reducer
- Outlet tube
- Additional accessories upon request



Membra-Check I

SOFTWARE

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

INTERNAL SOFTWARE VERSION "CFR"

The integrity tester stores up to 40 test records. All features for the acceptance of the FDA guideline 21 CFR 11 are implemented - audit trail, electronic signature, different password levels, etc. The instrument is compliant with the FDA guideline 21 CFR 11. It can be used where 21 CFR 11 is necessary.

INTERNAL SOFTWARE VERSION "G"

The integrity tester stores up to 40 test records. The instrument is not compliant with the FDA guideline 21 CFR 11. It can only be used where 21 CFR 11 is not necessary.

SPECIFICATIONS

Cabinet Material	304 stainless steel
Cabinet Dimensions (L x W x H)	17 " x 4.9 " x 13.7"
Weight	12 lbs
Protection Class	IP55
Power Supply	Rechargeable battery 7.2V-4Ah or mains 220V/110V
Keyboard	Infrared-alpha numeric
Software Protection	Stored in Flash EPROM
Matrix Printer	Normal paper, 24 characters/line
Storable Test Programs	Up to 100 Prg. in Flash EPROM
Storable Test Records	40 in Flash EPROM
Pneumatic Connectors	Stäubli RBE 03/316 stainless steel
Pressure Sensors	1x internal: 0–4 bar/0–58 psi; CI 0.5 1x external: 0–4 bar/0–58 psi; CI 0.5 (Stainless steel) 1x barometric 800–1090 mbar/11.6–15.8 psi; CI 0.5
CPU-Board	HC12 (Motorola)
Program Language	C
Display	4–lines illuminated
Available Languages	German, English, French, Italian, Spanish, Danish (Additional languages available upon request)
Pressure Units	bar/psi
Interface	Serial bus RS 232

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%

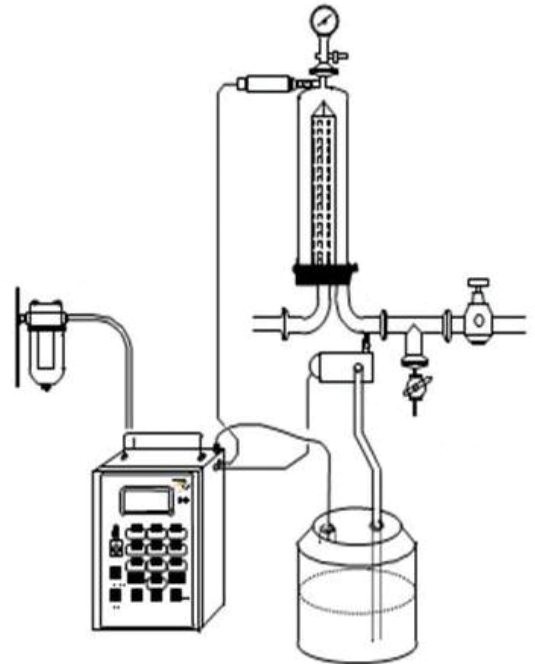
EXAMPLE 1: WATER INTRUSION TEST (WIT)

MEASUREMENT LIMITS

Measuring Range (input limits)	100 – 99,999 μ L/measuring time
Resolution	5 μ L (for Mini cartridge system)
Measuring Uncertainty	3% of measured value \geq 0.4 ml/min

GENERAL LIMITS FOR PROGRAMMING

Parameter	Entry Limits	General Values for PF-PT N, 0.2 μ m
Test Pressure	5 – 58 psi	32 psi
Stabilizing Time	60 – 999 s	600 s
Test Time	30 – 999 s	300 s
Hardware Volume	1 – 32,000 ml	2,629 ml (for FP-EG 0150)
Max. Water Flow	100 – 99,999 μ L/t	27,000 μ L/5 min



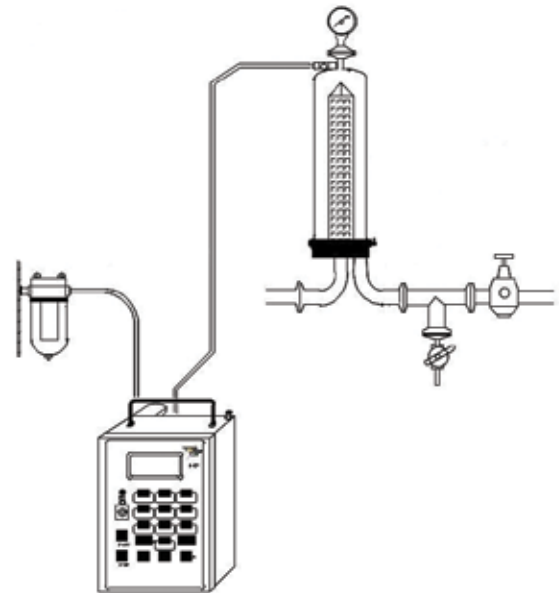
EXAMPLE 2: BUBBLE POINT TEST

MEASUREMENT LIMITS

Measuring Range (input limits)	6.5 – 58 psi
Test Pressure Range (diffusion test)	5 – 51 psi
Resolution	1 mbar
Measuring Uncertainty	1% F.S.

GENERAL LIMITS FOR PROGRAMMING

Parameter	Entry Limits	General Values for PES WN, 0.2 μ m
Test Pressure	5 – 58 psi	32 psi
Stabilizing Time	60 – 999 s	600 s
Test Time	30 – 999 s	300 s
Net Volume (upstream)	1 – 32,000 ml	10,625 ml (for PF-EG 0150)
Max. Diffusion	1 – 999 ml/min	25 ml/min for 10"



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 I Integrity Tester

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