LABORATORY

Acro® 37 TF Vent Device

Description

- Hydrophobic membrane acts as a barrier to aqueous solutions and aerosols to protect sensitive equipment or laboratory environment.
- Ideal for venting small volume culture vessels in-line filtration of air and other gasses.
- PTFE membrane and polypropylene housing have broad chemical compatibility for solvent filtration.

Specifications

Materials of Construction
Filter Media: PTFE on a polypropylene support
Housing: Polypropylene

Filter Diameter
37 mm

Effective Filtration Area
7.5 cm^2

Minimum Air Flow Rate
3.6 Lpm @ 0.2 bar (3 psi)

Maximum Operating Temperature
100 °C (212 °F)

Maximum Operating Pressure
4.1 bar (410 kPa, 60 psi)

Minimum Bubble Point (IPA, 100%)
0.9 bar (90 kPa, 13 psi)

Minimum Water Breakthrough Pressure
2.1 bar (210 kPa, 30 psi)

Dimensions
Overall Length: 5.3 cm (2.1 in.)
Diameter: 4.5 cm (1.8 in.)

Inlet/Outlet Connections
Stepped hose barbs 6.4-9.5 mm (1/4-3/8 in.) diameter

Sterilization
Provided non-sterile. Autoclave at 121-123 °C (250-253 °F) for a maximum of 20 minutes.

NOTE: Pall Laboratory tests indicate this unit can withstand multiple autoclave cycles. Reuse requires individual integrity testing and consideration for other problems including cross-contamination..



Integrity Testing

1. Fill a 10 mL or larger syringe with IPA.
2. Insert a 3-way connector between syringe and either end of the Acro 37 TF vent device.
3. Attach a pressure gauge and orient the outlet in an upward direction.
4. Gradually (with low pressure) wet the Acro 37 TF vent device membrane allowing the IPA to displace the air within the housing.
5. Flush the wetted filter with an additional 10-30 mL of IPA at higher syringe pressures to assure thorough wetting (using less than a 10 mL flush may result in incomplete wetting).
6. Disconnect the IPA source and attach an air filled syringe or pressure vessel and orient the filter in an upward direction.
7. Applying increasing pressure, gradually push the air into the filter, constantly watching for bubbles at the outlet of the Acro 37 TF vent device.
8. Read pressure gauges at the moment bubbles appear, to determine bubble point (see specifications).

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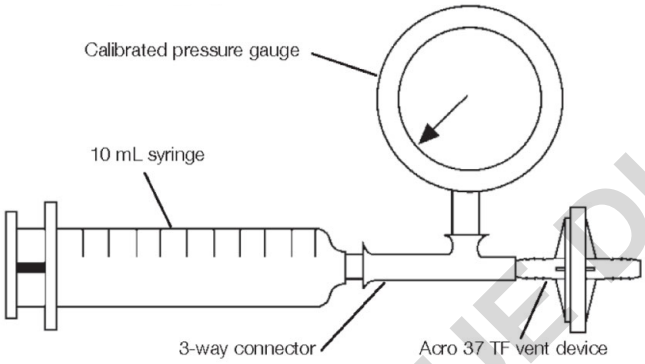
Water Breakthrough Test (WBT)

Due to the unacceptable nature of alcohol in many applications, and the need for an easy, routine procedure for integrity testing, we recommend the Water Breakthrough Test. The WBT is also referred to in the literature as water intrusion pressure or water entry pressure.

NOTE: A WBT cannot be performed on units following an alcohol Bubble Point Test due to the residual alcohol "wetting out" the membrane.

This relatively simple and reproducible test has been adopted by membrane manufacturers and reported in their literature and specifications for hydrophobic membranes. The naturally hydrophobic PTFE membrane resists water penetration. However, water can be forced through the membrane under high pressures. The pressure required to force water through (the water breakthrough point) is inversely correlated to the pore size of the membrane. Any physical destruction or rupture of the membrane is easily detected. The WBT takes only a minute to run and is very reproducible.

Water Breakthrough Integrity Test



1. Fill a 10 mL syringe* (male luer) with water.
2. By using a 3-way connector, attach the calibrated syringe pressure gauge [must measure up to 2.1 bar (30 psi)], syringe, and the external connector of the Acro 37 TF vent device.
3. Gently fill the housing and connectors with water.
4. Apply appropriate pressure [2.1 bar (30 psi)] with syringe plunger and hold this pressure for 15 seconds.
5. Integrity of housing and membrane is proven by retention of water in the syringe, and by the pressure remaining steady.
6. If failure occurs, check connectors for leaks and repeat above steps. If failure reoccurs, discard filter unit.
7. After completing test procedure, aspirate the water back into the syringe by pulling back on the syringe plunger. Disconnect the test equipment. Shaking the Acro 37 TF vent device by hand will aid in further removing residual water in the plastic housing.

* Note: Over a period of time, the syringe and stopcock can begin to wear and may affect water breakthrough test results. Any standard 10 mL (or greater) syringe with luer slip fittings may be substituted.

Ordering Information

Part Number	Description	Pkg
4464	Acro 37 TF Vent Device, 0.2 µm, 37 mm	24/pkg
4465	Acro 37 TF Vent Device, 0.2 µm, 37 mm	200/pkg

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