

Microfiltration Vacuum Manifold

Cat. No. BT2107

IMPORTANT SAFETY INFORMATION

- Please read this operation manual carefully before using the instrument
- Instructions not followed properly may cause problems such as unstable air pressure or cross-contamination between holes
- The operator should never attempt to disassemble installed components. Doing so will void the warranty.
- The device should be stored in a place with low humidity, little dust, and avoid direct sunlight and strong light.
- If the instrument will not be used for a long period of time, unplug the connecting pipe and cover the unit with a soft cloth to prevent dust from entering.

MAINTENANCE

- After each use, wipe the base and bracket with a clean, soft cloth dipped in a small amount of anhydrous alcohol.
- Ensure the inside of the device is sufficiently clean to avoid contamination
- Before cleaning the instrument, it is important to cut-off the power supply of the vacuum pump first.
- It is strictly forbidden to pour the cleaning agent directly into the well of the base when cleaning.
- Do not use corrosive cleaning fluid

INTRODUCTION

The Microfiltration Vacuum Manifold is used for protein kinase/phosphatase analysis, protein purification, receptor interaction analysis, and protein binding.

It is suitable for applications such as synthesis assay, ELISPOT analysis, sample preparation, sample filtration processing for mass spectrometry, fluorescent dye removal, etc.

It is designed to be suitable for 96-well filter microplates, avoiding repeated operations such as suction, centrifugation and liquid transfer in traditional methods

NORMAL OPERATING CONDITIONS

Ambient temperature: 20°C~30°C

Relative humidity: ≤ 70%

TECHNICAL SPECIFICATIONS

Applicable vacuum pressure	0.02MPa
Pipe Specifications (outer x inner diameter)	12 x 7mm
Applicable orifice plate	96-well microplate
Dimension	148 x 138 x 64mm
Approximate Weight (kg)	1.8

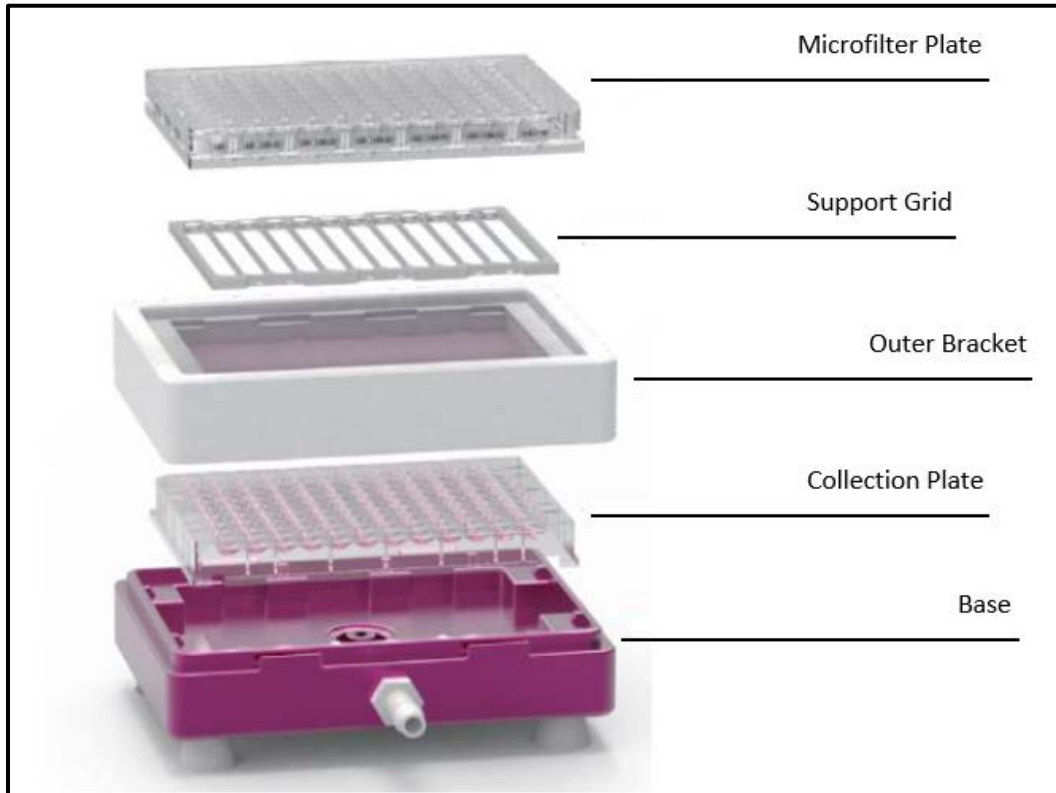
SUPPLIED PARTS

Component	Quantity
Outer Bracket	1
Support Grid	1
Base	1
Vacuum Gauge	1
Pipe 1	1
Pipe 2	1



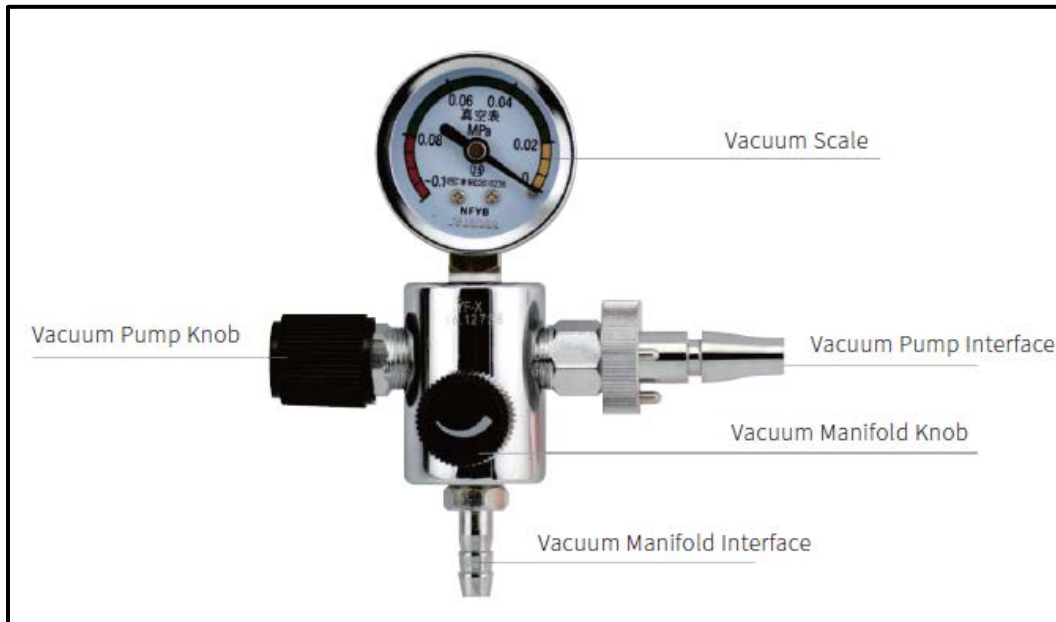
ASSEMBLY ILLUSTRATION

Refer to the image below for the assembling method.



OPERATING INSTRUCTIONS

Vacuum Gauge Overview



1. Connect the Vacuum Manifold and Vacuum Pump to the Vacuum Gauge.
 - a. Connect one end of Pipe 1 to the Vacuum Manifold port and the other end to the Vacuum Manifold Interface on the gauge.
 - b. Connect one end of Pipe 2 to the Vacuum Pump port and the other end to the Vacuum Pump Interface on the gauge.
2. Turn the Vacuum Pump Knob on the vacuum gauge fully counterclockwise and the Vacuum Manifold Knob fully clockwise.
3. Turn on the vacuum pump, then adjust the vacuum pump pressure value to 0.02MPa by using the Vacuum Pump Knob on the gauge.

Note: The pressure should be at 0.02MPa when the filter plate is used for suction filtration
4. After the pressure is adjusted, turn the vacuum pump off.

96-well Microplate Suction Filtration

1. Following the Assembly Illustration on page 4, place the collection plate on the vacuum manifold base. Then set the outer bracket with the support grid and 96-well filter plate on after. The holes at the bottom of the 96-well microplate should align with the guide holes of the support grid.
2. Pipette an appropriate amount of test sample (10 to 250 μ L) into a 96-well filter plate, then place the microfilter plate cover on.
3. Turn on the vacuum pump and adjust the pressure with the Vacuum Manifold Knob, turning it counterclockwise. The pressure inside of the manifold will begin to form. The pressure indicated on the vacuum gauge is the pressure inside of the vacuum manifold
4. Based on the flow rate of the filtration adjust the Vacuum Manifold pressure accordingly.
5. When vacuuming, press the four corners of the microfilter plate cover with your hands, so that the bottom end of the filter plate is firmly attached to the vacuum manifold. Make sure the installed gasket is fully fitted.
6. After filtration is completed, turn off the vacuum pump, then turn the Vacuum Pump Knob on the vacuum gauge fully counterclockwise to release line pressure.
7. Remove the microfilter plate and collection plate.

TROUBLESHOOTING

If the vacuum gauge of the vacuum manifold has no pressure value, there may be a pressure leak. Please check the sealing condition of each interface. If the cause cannot be determined, please contact BT Lab Systems for Technical Support.

CORROSION RESISTANCE OF MATERIALS

	Base (GB Aluminum 6061)	Outer Bracket (Saigang POM)
Acetone	E	E
Acetonitrile	E	E
Dimethyl Sulfoxide (DMSO)	E	E
Ethyl Acetate	E	E
Ethanol	E	E
Formic Acid	E	E
n-Hexane	E	E
Hydrochloric Acid	G	G
Isopropanol isopropyl alcohol	E	E
Methanol	E	E
Methylene Chloride Dichloromethane	E	E
Toluene	G	G

E=Excellent performance; G=Good performance; R=Rinse after prolonged contact; P=Rinse immediately; NR=Not recommended.

WARRANTY

Our company guarantees that this unit is warranted against defective material and workmanship for a period of one year from the date of shipment. We will repair or replace the defective equipment returned during the warranty period free if the equipment has been used under normal laboratory conditions and in accordance with the instruction in this manual. The following defects are specifically excluded:

1. Damage caused by accident, misuse, or abuse
2. Damage caused by disaster
3. Repair or modification by anyone else without our authorization
4. Corrosion due to the use of improper solvent or sample
5. Defects caused by improper operation
6. Use of fittings or other spare parts supplied by different manufacturers

This warranty does not apply to platinum wire and all the accessories.

A return authorization must be obtained from us before returning any product for repair on a freight prepaid basis.

For any inquiry or request for repair service, please contact BT Lab Systems via the email below.

E-Mail: info@BTLabSystems.com

TECHNICAL SUPPORT

BT Lab Systems offers technical support for all its products. If you have any questions about the product's use or, operation, please contact BT Lab Systems at the following info.

E-Mail: info@BTLabSystems.com