BGB
Vacuum Manifold Assembly

Operation Guide

Manual Part Number: DR-BGB-2109
December 2021

Vacuum Manifold Assembly Instructions

Vacuum Manifolds

24-Port SPE Vacuum Manifold (Part No. BGMNF244824)

16-Port SPE Vacuum Manifold (Part No. BGMNF164416)

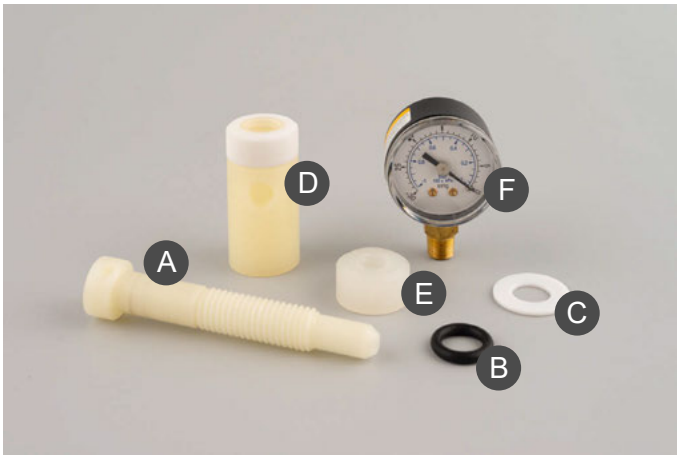
12-Port SPE Vacuum Manifold (Part No. BGMNF124012)

10-Port SPE Vacuum Manifold (Part No. BGMNF1050010)

BGB SPE Vacuum Manifolds are available in 10-, 12-, 16- and 24-port configurations. These manifolds enable convenient batch processing of SPE filtration. They help ensure consistent extraction and filtration results for your laboratory. The manifolds consist of a clear glass chamber and lid. When the vacuum is applied, the sample will drawn through the SPE cartridge. The glass vacuum chamber contains adjustable racks that can accommodate a variety of sample collection vessels and test tube configurations. Various spare parts are available separately.

BGB Manifolds are fully assembled. Assembly steps in this instruction sheet are for replacement purposes only.

How to assemble Vacuum Gauge and Valve



A = Vacuum Attachment Stem
B = Black O-Ring
C = PTFE Washer
D = Valve body and Bleed Valve
E = Retaining Nut
F = Vacuum Gauge

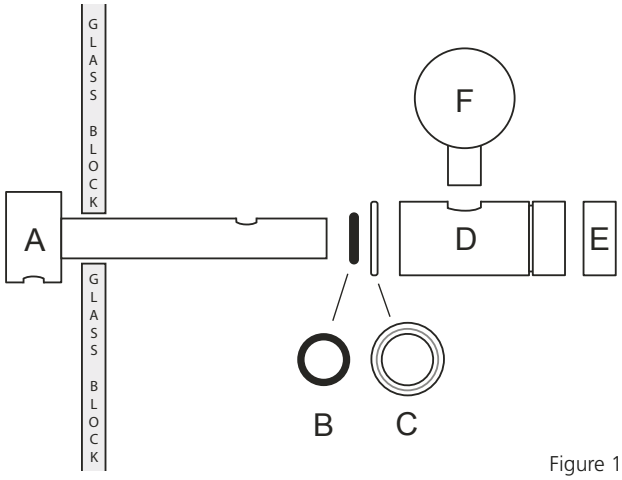
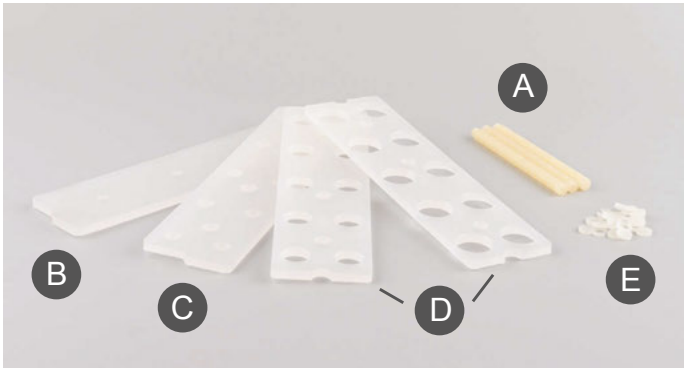


Figure 1

1. To assemble the vacuum gauge and valve, place the threaded vacuum attachment stem (A) through the hole in the side of the glass block. Note that the hole on the vacuum attachment stem head faces downward. Then the holes on the vacuum attachment stem outside of the glass block will face upward.
2. The next step is to place the black O-Ring (B) onto the vacuum attachment stem (A) on the outside of the glass block. Then place the PTFE washer (C) with its uneven side towards the black O-Ring (B).
3. Screw the valve body and the bleed valve (D) onto the vacuum attachment stem (A) as shown in figure 1.
4. Tighten the valve body and the bleed valve (D) onto the vacuum attachment stem (A) so that the hole in the valve body lines up with the holes of the vacuum attachment stem (A). At this point the black O-Ring (B) should seal against the glass block. NOTE: Do not hold the vacuum attachment stem (A) with any tools which will damage the threads, bleed valve sealing face or other parts.
5. Put the retaining nut (E) onto the vacuum attachment stem (A). Tighten the retaining nut (E) so that it seals against the bleed valve without locking it in place. NOTE: To ensure proper mounting of the retaining nut, it may be necessary to place PTFE tape around the thread of the vacuum attachment stem (A) next to the installed valve body.

How to assemble the Collection Rack



A = Support Posts
B = Base Plate
C = Dimple Plate
D = Test Tube Plate (available in different types)
E = Retaining Clips

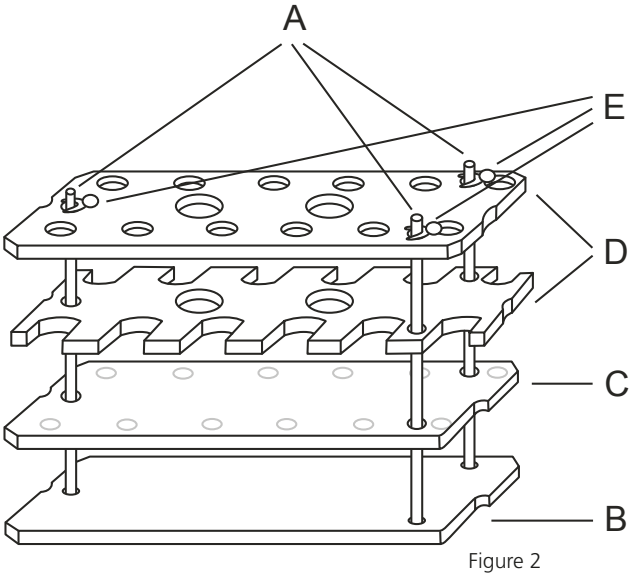


Figure 2

1. Screw the support posts (A) into the base plate (B).
2. To adjust the height, slide the dimple plate (C) and the test tube plates (D) up and down the support posts (A).
3. Retaining clips (E) should be placed above and below each plate to attach the plates to the support posts (A).
4. Install the vacuum gauge (F, figure 1) carefully. DO NOT allow the brass threads of the gauge to cross-thread the nylon.

Notes on Vacuum Manifold Operation

1. It is recommended that you install a compatible liquid trap with sufficient capacity between vacuum source and the SPE manifold chamber with the vacuum tubing.
2. The vacuum you use SHOULD NOT EXCEED 635 mm of Hg.
3. Regulate vacuum levels with:
   A. A bleed valve allows you to control the flow rate on the manifold system. (When the bleed valve is aligned with the holes in the gauge attachment and vacuum attachment stem, the vacuum on the manifold will be released.)
   B. Plugs allow regulation of flow through individual extraction columns.
4. When the system is under vacuum, it is important that the stopcocks be in the closed position before an extraction column is removed. Otherwise the resulting venting of the manifold system may result in a loss of elutes due to splash or spillage.
5. To clean and lubricate parts, routinely disassemble the vacuum gauge and valve.

The manifolds and various spare parts are available at

www.bgb-shop.com/spe-manifolds

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