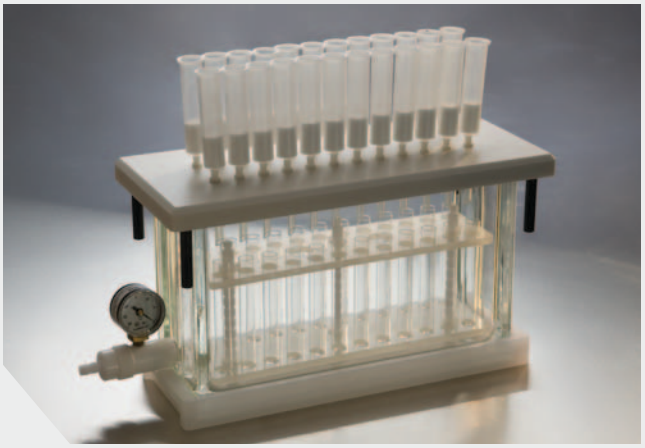
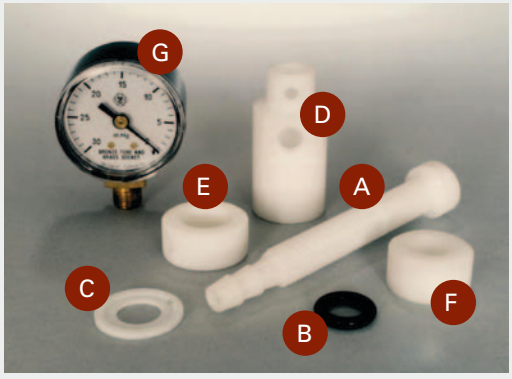
VACUUM MANIFOLD ASSEMBLY INSTRUCTIONS

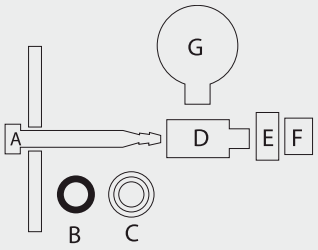
16 Position System



24 Position System



A = Vacuum Attachment Stem
B = Black O-Ring
C = Teflon Washer
D = Valve Body
E = Bleed Valve
F = Retaining Nut
G = Vacuum Guage



Vacuum Gauge and Valve

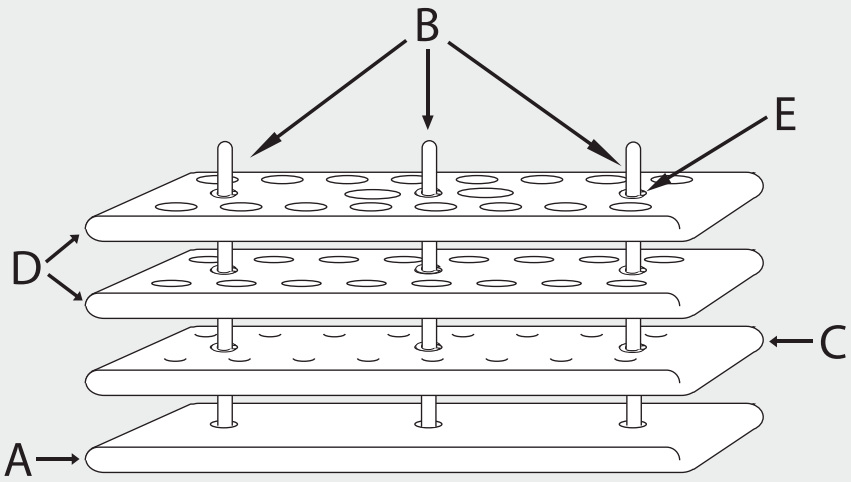
Place the threaded vacuum attachment stem (A) through the hole in the side of the glass block. The hole on the stem head should face downward. The holes on the stem outside of the block will then face upward.

Place the black O-ring (B) onto the stem, and follow with the Teflon washer (C) with its uneven side towards the O-ring.

Screw the valve body (D) onto the stem positioned as in the drawing on this page. Tighten the body onto the stem such that the hole in the valve body line up with those of the stem. The O-ring should seal against the glass block at this point. **NOTE:** Do not hold the stem with pliers or any other tool which will damage the threads, bleed valve sealing face, or tabulation of stem.

Slide the bleed valve (E) onto the valve body and follow with the retaining nut (F). Tighten the nut so that it seals against the bleed valve but does not bind it. The valve should move easily enough so that the rest of valve assembly can remain stationary. **NOTE:** It may be necessary to place of Teflon tape around the threads of the stem next to the installed valve body to insure proper snuggling of the retaining nut.

COLLECTION RACK



1. The collection rack consists of:
   A - base platform
   B - posts (3)
   C - tube support shelf
   D - a variety of shelves for different collection tubes 17mm & 13mm
   E - support clips

2. Screw the posts (B) into the base platform (A).

3. Slide the tube support shelf (C), followed by one of the collection shelves (D), down the posts to desired heights.

4. Secure the shelves on the support posts with clips (E) positioned above, and below each shelf.

5. Install the vacuum gauge (G) carefully. DO NOT allow the brass threads of the gauge to cross-thread the nylon valve body.

Notes to Vacuum Manifold Operation

1. Install a liquid trap between vacuum source and the manifold chamber. Connect the vacuum source to trap, and the trap to the manifold, with sturdy vacuum tubing.

2. When using vacuum DO NOT ALLOW VACUUM TO EXCEED 25" OF Hg.

3. Regulate vacuum levels with:
   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 CLEAN SCREEN®, CLEAN-UP®, XtrackT® extraction columns.

4. It is important that the plugs are in the closed position before removing a CLEAN SCREEN®, CLEAN-UP®, XtrackT® extraction column when under vacuum. Failure to completely bleed vacuum prior to venting manifold system, may result in loss of elutes due to splash or spillage.

5. Routinely disassemble the vacuum gauge and valve to clean and lubricate parts.

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