

Hepta Adaptor Assembly Instructions

Section A

The Hepta pressure divider is pre-assembled but has four parts (labeled 1–4 in Figure 1), plus additional two top and bottom parts for holding the macrocarriers (top) and holding a stopping screen (bottom). Assemble part numbers 1–3 prior to mounting the device into the PDS 1000: Place part 3 through the opening of part 2 (large, lower ring), and mount part 1 (small, upper ring) on top of part 3 so that part 2 is contained between parts 1 and 3. Tighten counter-clockwise.

Section B

Thread assembled parts 1–3 clockwise onto the Helium Gas Acceleration Tube (5) protruding down from the interior ceiling of the PDS-1000 (in place of the standard Rupture Disk Retaining Cap that is supplied with the PDS-1000).

Section C

Once the parts have been fit gently, firmly twist the small upper ring (1) against the Helium Gas Acceleration Tube (5). Tighten the small upper ring with torque wrench (provided with PDS-1000) by inserting the short end into one of the holes. This upper assembly can be left in place, removing only the lower 7-arm gas divider (4) when replacing a rupture disk.

Section D

Place the rupture disk of choice into the round recess in the top of the 7-arm gas divider (4). Note: a much higher p.s.i. rupture disk is required than with the conventional PDS-1000/He as the pressure is split 7 ways. Fit the top of part 4 into the threads inside the bottom of part 2, and loosely turn part 2 clockwise holding part 4 stationary.

Section E

Next, fit the 7-hole macrocarrier holder (top of shelf) with prepared macrocarriers (DNA/particle side DOWN) onto the Stopping screen holder. Slide Hepta Macrocarrier Shelf Assembly into the 2nd shelf slot position with narrow side in, and 7 small holes of macrocarrier holder on top (in place of the standard Microcarrier Launch Assembly shelf supplied with the PDS-1000/He). Align the 7- pressure outlets on the bottom of part 4 with the centers of the 7 holes in the macrocarrier holder. Hold part 4 still, and tighten part 2 (lower ring) with torque wrench. Insert Target shelf and biological sample. Pull Vacuum. Fire. Vent Vacuum. Remove sample, macrocarrier shelf, stopping screen, and macrocarriers. To replace rupture disk, loosen/remove part 4 from part 2 by one full counter-clockwise rotation. Again, Parts 1-3 of the Hepta assembly can remain mounted within the PDS-1000. Insert new rupture disc onto Part 4. Continue from section D.

