

4. Facility's Requirements

Power

Two single phase receptacles are required:

1. system 115 VAC, 60 Hz, 14 or 15 A NEMA 5-15 R
2. pump 115 VAC, 60 Hz, 8 A * NEMA 5-15 R

* Consult pump specifications for actual power consumption. Value given is an average approximation for pump required.

Low Pressure Nitrogen

Dry, filtered nitrogen at 30 psi used in the process for dehydration and purging. During setup procedures, adjustment will be necessary in order to achieve the correct back-fill rate.

High Pressure Nitrogen or Air

Dry, filtered air or nitrogen at 60 to 80 psig required to actuate the Nupro valves (air operated). 70 psig is recommended. If pressure is less than 60 psig, the vacuum valve may have difficulty opening fully.

Vacuum

The system's minimum pump requirement includes:

1. two stage mechanical pump with a pull of 5 or more cfm
2. Buna-N seals must be used for its compatibility with ammonia (process by-product of HMDS).

If you ordered the optional pump, Alcatel Model ZM 2008AC with Buna-N seals, along with it should be a one liter bottle of pump oil and a vacuum line. If you ordered the Leybold-Heraeus model, it will already have the oil in the pump but will need to have the plastic shipping fittings removed. (You may want to consult your enclosed pump manual concerning charging the pump or removing the plastic fittings.) Either optional pump pulls 7 cfm to an ultimate pump down of 1×10^{-4} Torr.

NOTE: Either pump which Y.E.S. supplies is shipped with Buna-N seals only.

Pump Exhaust

Connect the vacuum pump exhaust port to a scrubbed house exhaust.

The exhaust from the pump consists of air, nitrogen, carbon dioxide and the HMDS/NH₃ reaction by-product. This should be no cause for alarm in that the system uses about 4 - 6 cc's of HMDS per run. That's about the same amount a spray dispense uses for one wafer.

Cabinet Exhaust

The electronics and plumbing compartment requires a house exhaust connection for cooling.

Minimum of 20 cfm exhaust at minus 0.5 inches or greater of water.

Each unit is fitted with a 3" (75 mm) OD transition coupling at the rear of the chassis. Connect the transition coupling with a 3" ducting to a house exhaust.