

## UTILITY REQUIREMENTS FOR THE PERKIN-ELMER M340

1. AIR COMPRESSED\*  
Pressure: 60-100 PSIG\*  
Flowrate: 15.0 SCFM Maximum  
Temperature: Ambient  
Quality: Dry, Oil Free, and particulate free\*\*

NOTE: In the absence of specified quality compressed air, the equivalent quality and amount of Nitrogen may be substituted.

2. VACUUM  
Pressure: 20 inches Hg Minimum\*  
Flowrate: 0.7 SCFM  
Fitting: 1/4-18 NPT Female Fitting on Micralign

3. NITROGEN  
Pressure: 50-100 PSIG\*  
Flowrate: 1.7 SCFM  
Quality: High Purity, Dry  
Fitting: 1/4-18 NPT Female Fitting on Micralign

4. a. AIR INLET COOLING FOR CONDENSER  
Flowrate: 70-100 SCFM at 0.0 to 0.2 in. H<sub>2</sub>O  
Contamination: Oil Free  
Fitting: Tube extension for 3" dia. flexible hose.\*\*\*

NOTE: Air is normally drawn directly from the room environment. A user may, however, supply clean, oil-free air from outside the room through the 3" hose. The flow will be between 70-100 SCFM under normal operation when the inlet pressure is maintained at 0.0 to 0.2 inches H<sub>2</sub>O above room ambient pressure. (See 4b.)

4. b. EXHAUST - AIR FROM CONDENSER  
Flowrate: 70-100 SCFM

NOTE: Provision must be made to duct the exhaust flow from the condenser blower (which is part of the Micralign) to a point outside the room. The air may contain mercury vapor and ozone and must not, therefore, be mixed with air that is used within the building. The duct must also have an adjustable damper which should be set under normal operation to provide 0.0 to +0.05 inches H<sub>2</sub>O as measured by the pressure gauge on Micralign marked "HPC EXHAUST".

5. AIR ENVIRONMENT

Pressure: Adjustable to 1.5 inches of water min.

Flowrate: 225-250 SCFM. This corresponds to a minimum reading of 0.25 inches of H<sub>2</sub>O on the micralign gauge labeled "HEPA FLOW".

Temp. Ranges (a) Min. Temp: 25°F below Max desired control setting.  
(b) Max. Temp: 2°F below Min desired control setting.  
(c) Rate of Change: 10°F/hour max.

Relative Humidity: 50% max at the controlled temperature within the Micralign.

Contamination: Oil Free

Fitting: Tube extension for 6" inside dia. flexible hose.\*\*\*

This air can be delivered from:

- a) Customer facility (see Temp. Range)
- b) SCi supplied air conditioner (see Installation drawing 677-9775)

6. AIR - ROOM AMBIENT

It is recommended that the room ambient air be 72°F + 5°F with a maximum rate of change of 5°F/hr.

7. a. ELECTRICAL REQUIREMENTS

Plug: Part No. 2621 Twist-lock for wall receptacle  
No. 2620 Twist-lock

Suggested Vendor: Harvey Hubbell, Inc.  
State Street & Bostwick Ave.  
Bridgeport , CT 06602

3 wire grounding (single phase with equipment safety ground), 220±10% VAC, 50 Hz or 60 Hz, 30 Amp service. Operating power consumption approximately 4KW.

7. b. 110 VAC, 50 Hz or 60 Hz, 5 Amps minimum outlet available in immediate area (required for test and alignment equipment).

\*Measured at connection to Micralign and held constant with 5 psi.

\*\*Such air should have the following properties:

Dew Point: -40°F

Oil Content: Less than one part per million

Particle size: Less than 0.9 micron

\*\*\*Suggested source of hose:

R.B. Birge Co., 22 Webster Avenue, Bridgeport, CT 06607

**Service Consortium, Inc.**

1759 South Main Street Suite 100

Milpitas, CA 95035-6765

(408) 935-9700 • Fax: (408) 719-9700