VirTis Ultra 50L Install Requirements

For units with air-cooled or water-cooled refrigeration systems.

To ensure successful installation and efficient operation, the following utilities and pre-installation requirements must be in place at your facility.

Placement / Positioning

Position the Ultra 50L in an area providing adequate air circulation. 24 inches (61 cm) of obtainable clearance is recommended on all sides of the unit for serviceability and efficient operation. If multiple machines are being operated in a single area, position them so that the hot exhaust from one unit does not blow into the intake of another.

Electrical Requirements

The Ultra 50L XL is offered with the following standard voltage configurations:

- 208/240 VAC, 50/60 Hz, 1 phase, 40 Amps
- 208/230 VAC, 60Hz, 3 phase , 30 Amps
- 400 VAC, 50Hz, 3 phase, 30 Amps

The Ultra 50L EL is offered with the following standard voltage configurations:

- 208/240 VAC, 50/60 Hz, 1 phase, 50 Amps
- 208/230 VAC, 60Hz, 3 phase, 40 Amps
- 400 VAC, 50 Hz, 3 phase, 30 Amps

Note: *VirTis lyophilizers are highly customizable. SP Scientific can configure equipment to conform to the service requirements of a wide range of international voltage and phase configurations.*

Workstation Voltage Configurations (Encore™ and Maestro™):

- 115 VAC, 60 Hz, 1 phase
- 230 VAC, 50 Hz, 1 phase

Electrical Plugs

The Ultra 50L is typically shipped with a NEMA 6-50P plug. However, other applicable plugs may be used.

Note: *XL units configured with 208/230 VAC, 60 Hz, 3 phase, 30 Amps and EL units configured with 400 VAC, 50 Hz, 3 phase, 30 Amps will be shipped without a plug.*

Ambient Temperature

The Ultra 50L is designed for installation and operation in a room with a controlled temperature of 20 °C (68 °F). SP Scientific recommends an operating range of 15 to 25 °C (59 to 77 °F).

Do not allow the intake air for the Ultra 50L to exceed 30 °C. If the ambient room temperature exceeds 30 °C, do not operate the lyophilizer until adequate cooling or ventilation is established.

Heat Output

Heat emissions in the room may vary depending on the product load and the current step of an automatic cycle. Suitable ventilation or conditioning of the room is required to maintain unit performance at the specified level. The system shall add the following approximated BTU/hour to your room during peak demand:

Air-Cooled Units:

- XL: 19,100 BTU/h
- EL: 22,900 BTU/h

Water-Cooled Units:

- XL: 5,000 BTU/h
- EL: 5,400 BTU/h

Compressed Air

Units equipped with the pneumatic isolation valve shall require water-free compressed air regulated at 80 psig. Consumption shall be minimal.

Utility Connection: ¼-inch FPT

Inert Gas (Backfilling)

Nitrogen, room air or customer specified inert gas should be provided near atmospheric pressure (1 psig maximum) for vacuum level control, vacuum release and/or backfill. Consumption during cycle operation shall be dependent upon process parameters. Consumption during full vacuum release shall be consistent with the freeze dryer's total system volume at atmospheric pressure.

Vacuum Exhaust

SP Scientific recommends, where practical, venting vacuum pump exhaust from the vacuum pump to the outside of the building. Proper venting of the freeze dryer's vacuum pump shall be the responsibility of the customer. Note that when pumping exhaust outside of the building, SP Scientific recommends installing a "T Trap" to prevent condensate from running back down the vent piping and entering the vacuum pump.

Cooling Water (Water-cooled only)

The Ultra 50L's water-cooled refrigeration system shall require 2-5 gpm of 5 to 24 °C (41 to 75°F) water at 30 to 60 psi. Do not operate the Ultra 50L with cooling water above 24 °C (75 °F).

Note: *SP Scientific recommends installing a 30 x 40 mesh or finer strainer on the cooling water supply (Reference McMaster Carr 98775K45).*

Utility Connection: ½-inch FPT

Cleanroom Installation

For cleanroom installation, refer to VirTis Ultra Cleanroom Install Instructions (P/N 100006473).

Complete the following information and return to SP Scientific. A signature shall indicate that all utilities are in place and installation may be scheduled. If facilities are not in place upon technician's scheduled arrival, additional charges incurred will be billed as a Field Service Visit.

Name	**Title**
Signature	**Date**
Company	**Phone**
City / State	**Email**

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