



# Setting Up The *ProLab cm*

## 1. Prepare location.

### Platform, table, or bench requirements.

Platform structure: Sturdy and stable, this is especially important.

Platform size: 29" x 60", minimum for a three or four station *ProLab cm*. The height, 30" to 36".

Platform surface: It is best if the working surface is covered with at least ¼" thick polyethylene sheet or equivalent.

### Lighting.

Lighting is very important, we recommend high bay led fixture such as this one from: [Home Depot for about \\$100](#) installed above the plating system.

### Ventilation.

Adequate local ventilation is required.

### Power requirements. 110 – 120 AC volts only.

A single 110 – 120-volt, 20 ampere circuit should be sufficient for most systems.

**All modules and power supplies require GFI protected 110 – 120 Volts.**

**Note: Connection to 220-volt power will damage all components and void any warranty.**

ProLab cm modules: Each heated *ProLab cm* module requires a maximum of 300 watts. The non-heated modules require less than 20 watts each.

Power supplies: The power supplies may require up to 10 amperes each.

### Power strip to plug power supplies and modules into.

A three station *ProLab cm* requires six (6) separate 120V AC connections including one for the air pump. Each additional *ProLab cm* module requires an additional 120V AC connection.

### Shelf above for Power supplies.

We strongly recommend a sturdy, stable 12" wide shelf situated approximately 24" above the table or bench supporting the *ProLab cm* modules. This shelf is used to support the power supplies and air control manifold. We use the common wire frame shelving available at larger home center stores.

## 2. Unpack modules, check components against the order checklist, begin assembly.

Attach the electro-clean tower to its base.

Attach the activator tower to its base.

**Attach the gold plating tower to its base.**

**Position the modules into their final location on the working platform.**

**Set each of the power supplies into their final location.**

**Plug the AC power cords from the power supplies and power towers into the power strip.**

Make sure the power switch on the power supplies and power towers are in the “OFF” position.  
Turn off the main power strip switch.

**Set the air pump into its final location.**

Note: the air pump is a little noisy so you may want to consider having it located in away from the *ProLab cm* system and connecting it to the air control manifold using a longer 3/8” tubing available from most hardware locations.

**Attach the air control manifold to the shelf or other suitable location.**

You will want the air control manifold to be in a location where it is easy to adjust while observing the modules using air agitation.

**Connect the 3/8” air tubing from the air pump to the air control manifold.**

This tubing can be any length if you want to move the air pump to avoid the pump noise.

**Connect the 1/8” air tubing from the air control manifold to the fine adjustment air control on the beaker air line on air agitated solutions.**

**Attach the interconnect cables from tower to tower.**

Note: Remove the red interconnect cable between towers that have different voltage requirements. For example, if you have a four-station system with the electro-clean and activation stations controlled by the left power supply, these first two modules perform the pretreatment steps. The pretreatment steps normally require around 5 volts. The bright nickel plate and gold plating modules, the third and fourth modules, are the plating modules. The plating modules will be powered by the right power supply and normally require 2 – 3 volts. In this case you would remove the red interconnect cable between module #2 and #3. This set-up will allow you to have separate control of the pretreatment module voltage while using a common negative, lead for all four modules.

**Attach the red and black power cables from the power supplies to the towers.**

Attach the red and black leads from the left power supply to the left side of module #1 tower and to the right side of the last plating tower.

**Place the beakers into their positions and attach the anode frames to the towers.**

**Connect the temperature sensors and air lines, where applicable.**

You are now set up and ready to add solutions, turn on the power and set the temperature.

**Caution: Never turn on a Tower using a heated beaker without solution in the beaker. This could overheat and damage the beaker and heater.**



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**Safety Data Sheets and Technical Data Sheets** can be found on our website under the Resources.

Check out our **Plating Procedure chart** for quick references to plating voltages, solution temperature, required anodes and many other plating functions. It can be found on our website under **Resources**.