

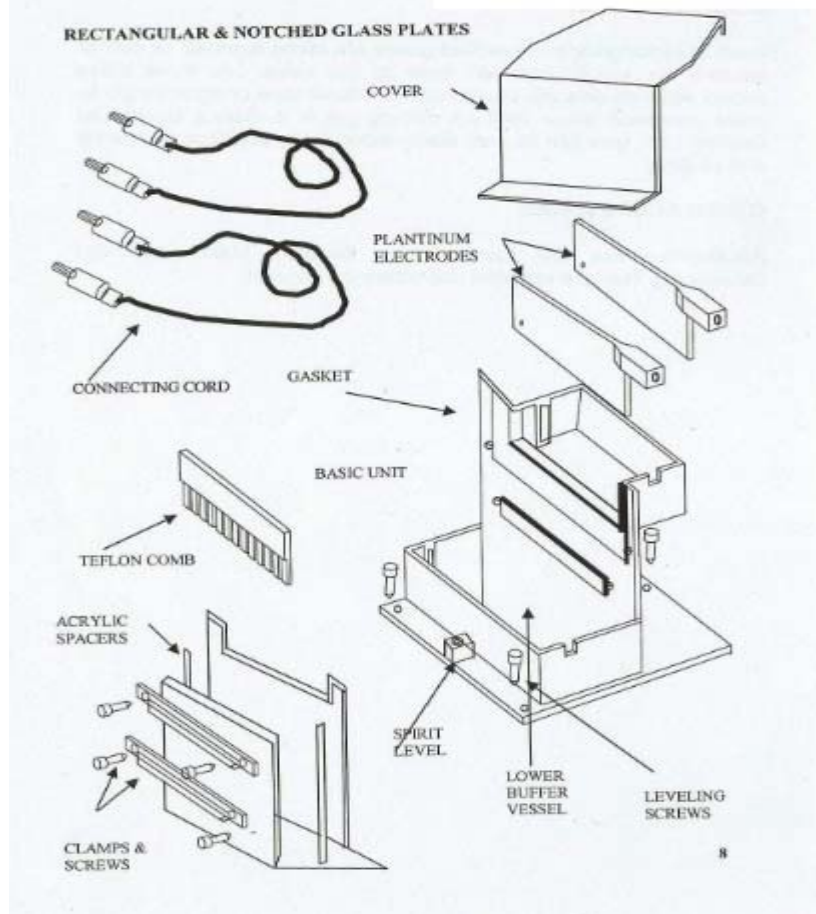
INSTRUCTIONS &  
OPERATING MANUAL  
FOR

VERTICAL MINI & MIDI GEL SYSTEM

**GENECO-V-MINI**

**GENECO-V-MIDI**

Vertical Slab Gel electrophoresis Systems, Suitable for a wide range of modern electrophoretic techniques. The Mini Model answers the demand for small, conventional electrophoresis unit for fast, high resolution protein separations in 80 X 70 mm gel. The Midi model is used for electrophoresis in 160 X 140 mm gel.



**SPECIFICATIONS:**

MODEL	VERTICAL MINI GEL SYSTEM	VERTICAL MIDI GEL SYSTEM
Dimensions (LXWXH)	150 X 180 X 150mm	250 X 200 X 270 mm
Gel Size (Max)	80 X 70mm	160 X 140mm
Buffer Required	300 ml	500ml
Electrodes	Platinum	Platinum
Combs -Teflon	7 Well-1.0mm Optional: 0.75 ,1.5mm	13 Well - 1.0mm Optional: 0.75 ,1.5mm & 3.0mm
Spacers- Teflon	1.0mm, Opional: : 0.75 ,1.5mm	1.0mm, Opional: : 0.75 ,1.5mm,3.0mm
Power Required	100 V , 25 mA	150 V, 100mA
Time Consumed	2 o 3 hrs	4 to 5 hrs

## **DESCRIPTION AND ASSEMBLY**

Slab Gel Systems, both regular and mini models contain almost the similar components and hence the following descriptions are common for both. The System mainly consists of;

- Basic Unit with Lid
- Platinum Electrode Assembly & Connecting Cords
- Combs and Spacers
- Glass plates
- Other accessories
  1. Gel Casting Unit
  2. Gradient Maker
  3. Gel Developing Tray

### **BASIC UNIT:**

The basic unit has buffer reservoirs and provision for accommodating platinum electrodes, glass plate sandwich and leveling mechanism.

The basic unit is made of heavy duty acrylic sheets. Especially, the bottom sheet is made of 12 mm thick sheet – onto which rectangular anode chamber (at the bottom) and cathode chamber (at the top) are fabricated. These buffer reservoirs have the provision for inserting the platinum electrode assembly.

The Central vertical sheet supports the gel sandwich by means of clamps. The notch provided to the upper buffer reservoir facilitates buffer contact between gel and the buffer. The rubber gasket around the notch prevents leakage of buffer from the upper reservoir.

Three leveling screws are provided at the bottom sheet. They are adjusted and the basic unit can be kept in a perfect horizontal plane. The circular spirit level helps in keeping the basic unit in horizontal plane.

### **GLASS SANDWICH:**

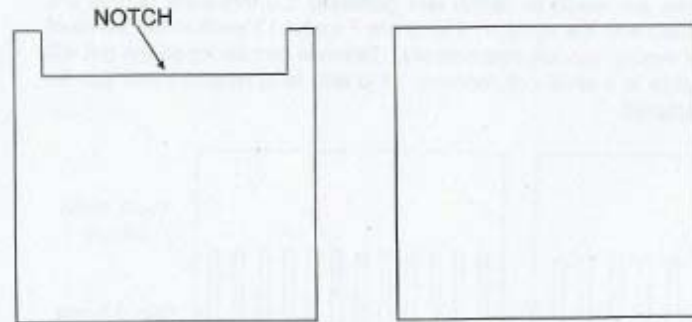
A set of rectangular and notched plates are taken together. A pair of spacers is placed between them at the sides. All three sides except notched side are sealed with adhesive tape or agarose gel to make sandwich water tight for casting gel in it. (Using Gel casting unit, gels can be cast easily without any problem of packing and sealing).

### **OTHER ACCESSORIES:**

Accessories like Gel Casting Unit, Gradient Maker and Gel Developing Tray are supplied separately on request.

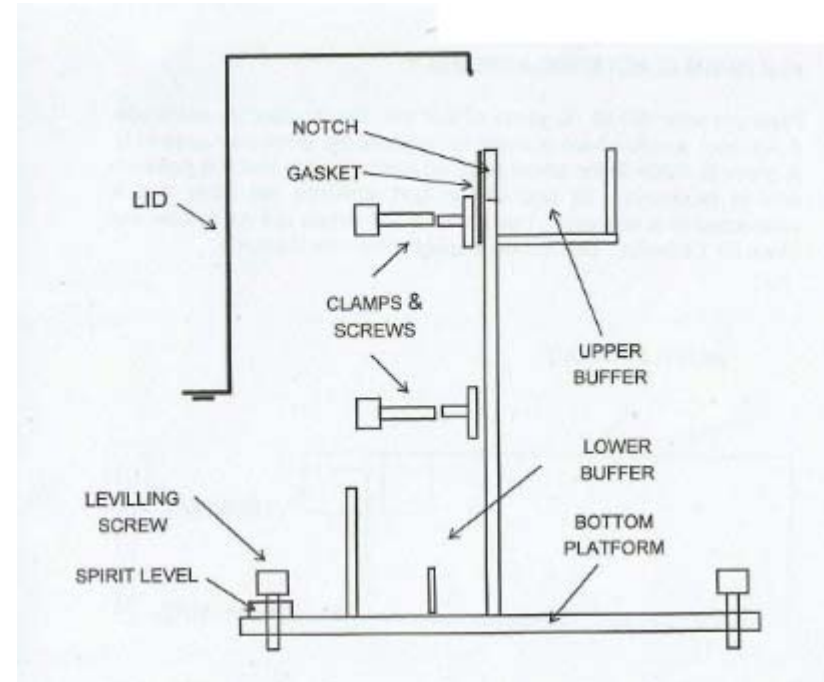
**GLASS PLATES:**

Glass Plates used to cast gels are used in a pair such that one is rectangular and the other is notched and both are of the same size and thickness (100 X 100 mm for mini and 190 X 175 mm for regular gels and 4.0 mm thick). They are of good quality, scratch free, undulation glass, and bubble free and heat resistant.



**NOTCHED PLATE**

**RECTANGULAR PLATE**

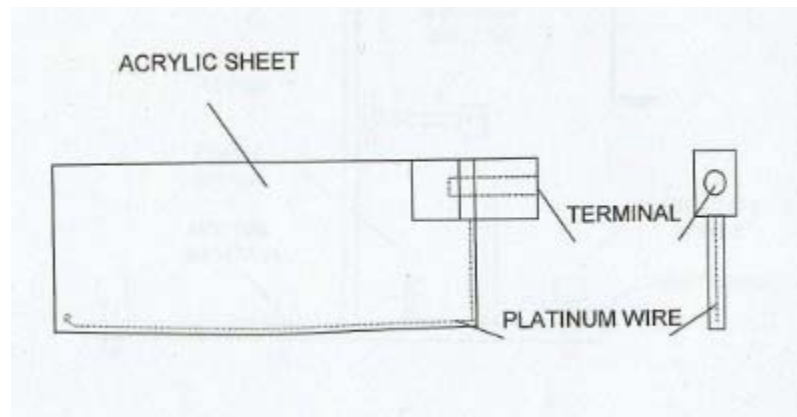


**NOTE:**

- a) Clean and apply a thin film of silicon grease over the rubber gasket every time after use. This will ensure durability and performance. If it becomes rigid, replace it with a new one.
- b) While clamping the gel sandwich, tighten the screws only upto the required levels. Too much of tightening may cause breakage of glass plates.

**PLATINUM ELECTRODE ASSEMBLY:**

Platinum Wire (99.95 % Pure) of 0.2mm dia is used as electrode. A 4.0 mm acrylic sheet is used for making the electrode assembly. A Groove is made in the sheet at its one edge and in that the platinum wire is recessed. Its one end is tied whereas the other end is connected to a terminal. The terminal is marked red for anode and black for cathode. The Anode is longer than cathode..



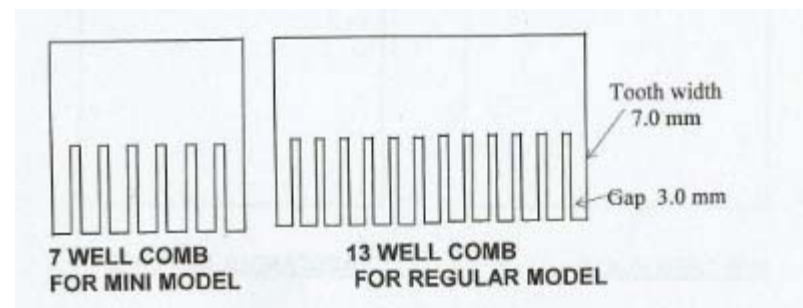
**NOTE:** The platinum Electrode assembly is detachable from the basic unit, So that it can be taken out for washing with distilled water/mild detergent after use. If there is any deposition of trace elements, mild acid wash can be given.

**CONNECTING CORDS:**

The connecting cords are provided with the proper banana plugs and are with red and black colour to distinguish between anode and cathode connections while connecting the unit to the power supply.

**COMBS AND SPACERS:**

Combs are made up of Teflon and generally 1.0mm thick combs are supplied with the system. There are 7 Wells/13 Wells in the comb of mini/regular models respectively. Teflon is non sticky so the gel will not stick it while polymerizing. It is also heat resistant and can be autoclaved.



Note: Combs of other thickness and well sizes are available on request separately .

Spacers: Spacers made of Acrylic and of 1.0 mm thickness are generally supplied with the system. They are made 0.05 mm thicker than the combs so that comb can be inserted in the glass sandwich easily.