



**Standard Casting Stand
Combination Comb
Holder Wide/Long
Combination Casting
Stand
Instruction Manual**

**Catalog Numbers
170-3689,
170-3699,
and 170-3704**

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Table of Contents

Section 1	Introduction.....	1
Section 2	Assembly	1
2.1	Standard Casting Stand.....	3
2.2	Combination Casting Stand.....	3
Section 3	Reagents and Accessories for Pulsed Field Electrophoresis.....	4

Section 1

Introduction

The frame and platform format of these new casting stands provides a simple method for transferring and positioning gels in the CHEF electrophoresis cell. The frame and platform are made from an electrically-inert fiberglass resin, and permit positioning of the gel in the center of the cell without the use of gel stops, which can cause distortions in the electric field. In addition, the gel adheres tightly to the surface of the platform, eliminating the possibility of floating gels during electrophoresis.

Section 2

Assembly

Assemble the casting stand and cast the gel on a level surface for optimal results. Bio-Rad's Leveling Table (catalog 170-4046) is recommended for this purpose.

1. To assemble the casting stand (Figure 1), slide the platform (A) into the casting stand (B). There is no sidedness to the platform. Position one end gate (C) over the screws protruding from the casting stand (D), insuring that the horizontal slot is facing toward the platform. Slide the edge of the platform into the slot, press down on the end gate, and gently tighten the screws.

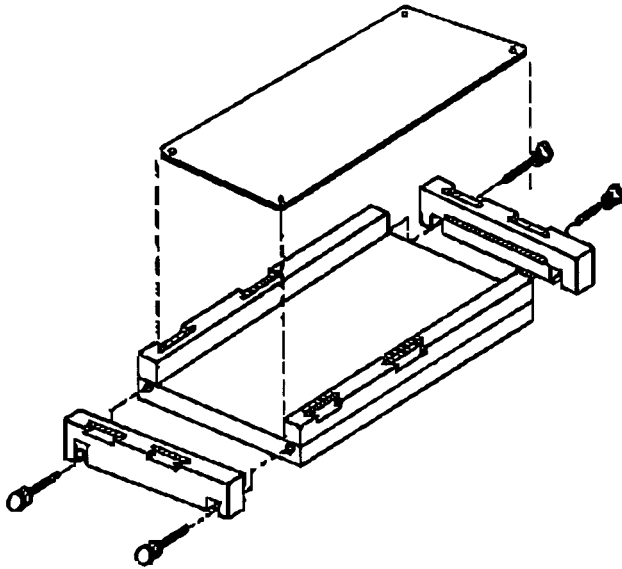


Fig. 1. Casting stand and platform.

2. Position the other end gate over the screws, and slide it toward the platform until the edge of the platform is inserted into the slot. Press down on the end gate, and gently tighten the screws. The slots force the platform against the bottom of the casting stand.
3. To attach the desired comb to the comb holder (Figure 2), place the comb over the two metal pins (A and B), and turn the screw (C) clockwise. This causes one pin to move toward the screw, holding the comb in place. Adjust the height of the comb to 2 mm above the surface of the platform by loosening the screw (counterclockwise), then tightening when the comb is properly positioned. A thin plastic ruler makes a good height gauge. **Note:** For 14 cm wide gels (standard casting stand, and long option of combination casting stand), the comb holder should be positioned as shown in Figure 2. For 21 cm wide gels (wide option of combination casting stand), the comb holder should be inverted.

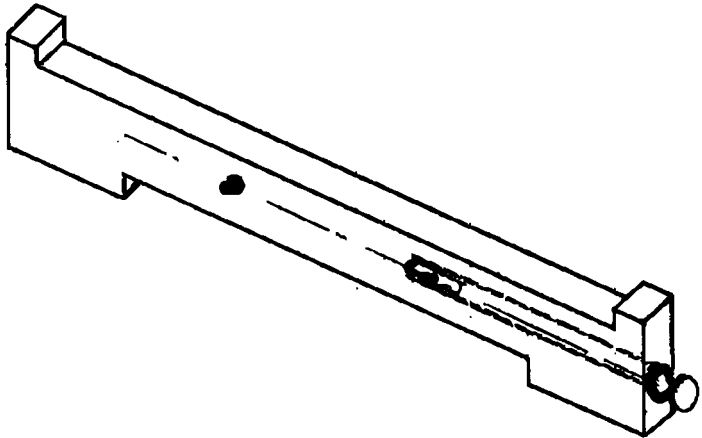


Fig. 2. Comb holder.

4. Place the comb holder (with attached comb) into one of the two positioning slots on each side of the casting stand (Figure 1 E). Check that the bottom of the comb is at least 2 mm above the surface of the platform. Pour approximately 100 ml of the desired agarose solution (<math><60\text{ }^{\circ}\text{C}</math>) into the casting stand (150 ml for the wide/long combination casting stand) for a thickness of approximately 5-6 mm. Allow the gel to solidify for 30 minutes at room temperature.
5. Remove both end gates by loosening the screws. Push the end gates off the edge of the platform for removal, and slide the platform out of the casting stand.

2.1 Standard Casting Stand

6. Position the frame (Figure 3) in the electrophoresis cell by placing the two plastic pins into the bottom set of holes (toward the “T” connector) in the floor of the cell so that the frame is centered (center hole in each group of three holes). Place the gel and platform assembly into the frame so that the bottom of the platform rests on the floor of the cell. Do not remove the gel from the platform.

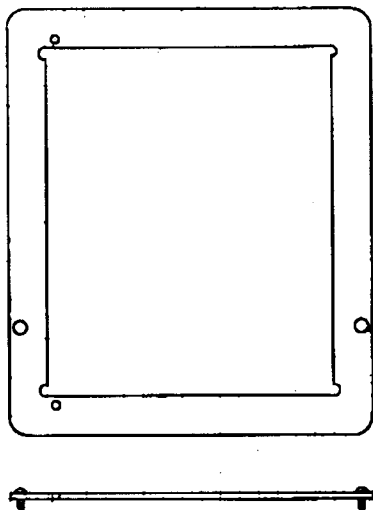


Fig. 3. Gel frame.

2.2 Combination Casting Stand

6. The frame (Figure 3) can be positioned for either a 21 cm long gel (14 cm wide) or 21 cm wide gel (14 cm long) by changing the position of the frame within the cell.

For the **long** gel, place a plastic pin (four are provided) in holes 1 and 2 (Figure 3). Position the frame in the electrophoresis cell by placing the two plastic pins into the bottom set of holes (toward the “T” connector) in the floor of the cell so that the frame is centered (center hole in each group of three holes). Place the gel and platform assembly into the frame so that the bottom of the platform rests on the floor of the cell. Do not remove the gel from the platform.

For the **wide** gel, place a plastic pin in holes 3 and 4 (Figure 3). Position the frame in the electrophoresis cell by placing the two plastic pins into the bottom

set of holes (toward the “T” connector) in the floor of the cell so that the frame is centered (outer hole in each group of three holes). Place the gel and platform assembly into the frame so that the bottom of the platform rests on the floor of the cell. Do not remove the gel from the platform.

7. After electrophoresis, remove the frame first, then the gel and platform assembly from the cell. Lift up each corner of the gel, then slide the gel off the platform into the ethidium bromide staining solution. Do not immerse the platform in the staining solution.

Note: Do not clean the casting stand with organic solvents. Use a mild detergent, followed by 70% ethanol, for cleaning. Do not autoclave the casting stand, platform, or frame.

Section 3

Reagents and Accessories for Pulsed Field Electrophoresis

Catalog Number	Description
Agaroses	
162-0133	Molecular Biology Certified , 100 g
162-0134	Molecular Biology Certified , 500 g
162-0135	Chromosomal Grade , 100 g
162-0136	Chromosomal Grade , 500 g
162-0137	Pulsed Field Certified , 100 g
162-0138	Pulsed Field Certified , 500 g

DNA Size Standards

170-3605	<i>S. cerevisiae</i>
170-3624	5 kb ladder
170-3633	<i>S. pombe</i>
170-3635	lambda ladder
170-3667	<i>H. wingei</i>

Catalog Number	Description
Combs	
170-4326	10 well comb , 14 cm wide, 1.5 mm thick
170-4325	10 well comb , 14 cm wide, 0.75 mm thick
170-4324	15 well comb , 14 cm wide, 1.5 mm thick
170-4323	15 well comb , 14 cm wide, 0.75 mm thick
170-4322	20 well comb , 14 cm wide, 1.5 mm thick
170-4321	20 well comb , 14 cm wide, 0.75 mm thick
170-4344	30 well comb , 14 cm wide, 1.5 mm thick
170-4327	15 well comb , 21 cm wide, 1.5 mm thick
170-4328	30 well comb , 21 cm wide, 1.5 mm thick
170-4345	45 well comb , 21 cm wide, 1.5 mm thick
170-3623	Prep comb , 2 well (plus 2 outer wells for size standards), 14 cm wide, 1.5 mm thick
170-3643	Gel Scoop , for transporting gels
170-4046	Leveling Table

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