



Sutter Instrument Company Technical Tip Creating a Large Tip



Total Taper (shoulder to tip) 6 to 7 mm and a 25 μ to 50 μ Tip

Puller = P-97 Glass = B100-50-10 Filament = FT330B, 3mm Trough
Pressure = 500

Line 1) Heat = Ramp Pull = 0 Vel = 160 Time = 150

Line 2) Heat = Ramp Pull = 90 Vel = 75 Time = 150

Directions to modify program for your glass and filament:

- ❖ Install the above program and adjust the velocity in Line 1 so the glass consistently separates on Line 2.
- ❖ If the puller bars drift apart and the glass separates on Line 1, reduce the velocity in Line 1 by five units until you get separation on Line 2.
- ❖ Once the tip is approximately 10 to 100 microns, adjust the velocity in Line 2 to modify the size of the final tip.

To reduce the tip size, reduce the velocity in Line 2 by five units at a time.

To increase the tip size, increase the velocity in Line 2 by five units at a time.

➤ *Example results when adjusting Line 2 Velocity settings:*

VELOCITY (UNITS)	TIP (OD) (MICRONS)
60	10
65	20
70	30-40
75	50
80	>100

Or install the following program:

Line 1) Heat = Ramp Pull = 40 Vel = 40 Time = 150

Line 2) Heat = Ramp-20 Pull = 40 Vel = 65 Time = 150

Line 2) Heat = Ramp-40 Pull = 125 Vel = 65 Time = 150

As the jaws heat up, the tip will get smaller (12 μ to 15 μ). To adjust for this change, take a five minute break after pulling a set of ten pipettes or use compressed air to cool down the brass jaws. These programs will give you about an 80% yield. Good Luck! Adair

Sutter Instrument Company

One Digital Drive, Novato CA 94949

tel: (415) 883-0128 fax: (415) 883-0572 email: info@sutter.com