

## MICROPIPETTE PULLER COMPARISON CHART



Features	P-1000	P-97	P-2000	P-30
<b>Heat Source</b>				
Platinum Filament with Safe Heat Mode	■			
Platinum Filament		■		
CO <sub>2</sub> Laser			■	
Platinum or Nichrome Filament				■
<b>Glass Type</b>				
Borosilicate and Aluminosilicate	■	■	■	■
Quartz Glass or Fiber <sup>1</sup>			■	
<b>Max. Glass Size (OD)</b>				
4 mm	■	■		
2 mm				■
1.65 mm Quartz, 1.8mm Borosilicate			■	
<b>Tip Size</b>				
0.06 μ–3 μ	■	■		
0.01 μ–5 μ			■ (Fiber)	
0.03 μ–5 μ			■ (Glass)	
0.30 μ–2 μ				■
<b>Max. Taper Length</b>				
1 cm				■
1.8 cm			■	
2 cm	■	■		
<b>Program Lines</b>				
8		■	■	
1 Stage or 2 Stage with manual adjustment				■
4 plus Line Repeat Mode	■			
<b>Type of Cooling</b>				
Compressed Dry Air with Humidity Control Chamber	■	■		
NA (Laser On/Off)			■	
None				■
<b>Usable Pipettes/Pull</b>	2	2	2	1
<b>Price<sup>2</sup></b>	\$9,379	\$8,960	\$18,255 (Glass) \$19,380 (Fiber)	\$4,160

1. Outer diameters < 600 μm require P-2000/F.

2. U.S. prices. International prices vary by country.

## P-100 / P-97 COMPARISON CHART



Features	P-1000	P-97	Notes
<b>Tip Size Range</b>	0.06 $\mu\text{m}$ –3 $\mu\text{m}$	0.06 $\mu\text{m}$ –3 $\mu\text{m}$	Two identical pipettes with the same taper length and same tip size.
<b>Taper Length Range</b>	3 mm–15 mm	3 mm–15 mm	For longer or shorter tapers, contact Sutter Technical Support.
<b>Two Identical Pipettes</b>	Yes	Yes	To make overall length identical, please purchase and install the optional Glass Stop (part # GS) onto your puller bar.
<b>Program Looping</b>	Yes	Yes	4–5 loops is ideal for thick walled glass, while 2–3 loops is ideal for thin walled glass.
<b>Multi-line Programming</b>	Yes	Yes	The P-1000 has an additional feature “Line Repeat” (see below).
<b>Humidity Control Chamber</b>	Yes	Yes	This chamber is purged with dry air before and after the pull to remove humidity and control for the ambient conditions in the lab.
<b>100 Program Spots</b>	Yes	Yes	Ideal for labs with multiple users.
<b>Two Cooling Modes: Time &amp; Delay</b>	Yes	Yes	Delay mode is recommended when making patch pipettes with thick walled glass.
<b>Program Lock</b>	Yes	Yes	On the P-1000, the PROGRAM LOCK feature is on the Menu Screen of the program.
<b>Safe Heat Mode</b>	Yes	No	The SAFE HEAT mode helps prevent filament burn-out.
<b>Pipette Cookbook</b>	Yes	No	The PIPETTE COOKBOOK can be used to search for a program that is appropriate for the filament installed in your puller, the glass dimension you are using, and your application.
<b>Programming Touch Screen Display</b>	Yes	No	The color TOUCH SCREEN DISPLAY provides an intuitive interface that allows more information to be displayed.
<b>Temperature Sensor</b>	Yes	No	The JAW TEMPERATURE SENSOR helps define ideal pulling conditions.
<b>Pre-heat Mode</b>	Yes	No	The ThermoLock™ technology in the PRE-HEAT mode assures that the jaws have reached a specific temperature before the glass is pulled. This can increase the stability of the program from pull to pull.
<b>Copy &amp; Paste Function</b>	Yes	No	The COPY & PASTE feature simplifies writing and editing a program.
<b>Line Repeat</b>	Yes	No	The LINE REPEAT feature simplifies writing multi-line programs.
<b>Ramp Test Specific to Each Program</b>	Yes	No	The RAMP TEST VALUE is linked and specific to each program.
<b>Diagnostics</b>	Yes	No	The DIAGNOSTIC feature can be used to check the Heat, Pull, Velocity Sensor, and Air/Cooling System functions of the puller.
<b>Error Messages &amp; Warnings</b>	Yes	No	The P-1000 will alert the user if a system error occurs when pulling a pipette (filament burn-out, air leak, failed to melt glass, etc).
<b>Pull Results</b>	Yes	No	The PULL RESULTS feature displays the heat-on times line by line for the last two pulls.
<b>Glossary</b>	Yes	No	The GLOSSARY is a built-in dictionary of terms associated with the pipette puller.
<b>Price <sup>1</sup></b>	<b>\$9,379</b>	<b>\$8,960</b>	

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