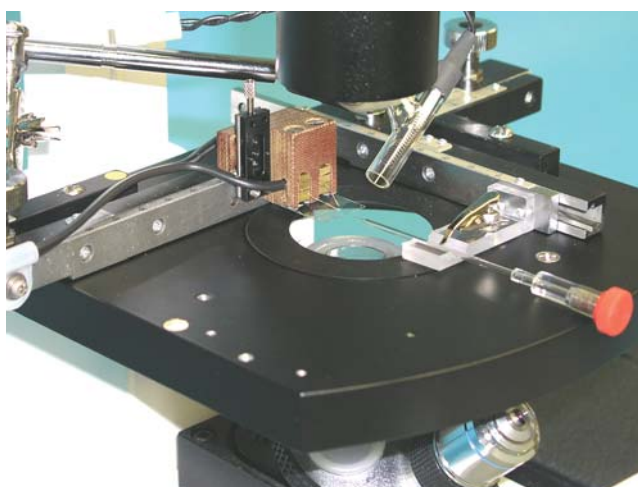


CPM-2 Coating and Polishing Microforge

Increase efficiency and lower the cost of patch pipette production by using ALA's CPM-2 Coating and Polishing Microforge. The CPM-2 is designed to be a complete system for processing pulled patch pipettes. It is available as a kit that mounts on a microscope or as a complete system with an inverted microscope.

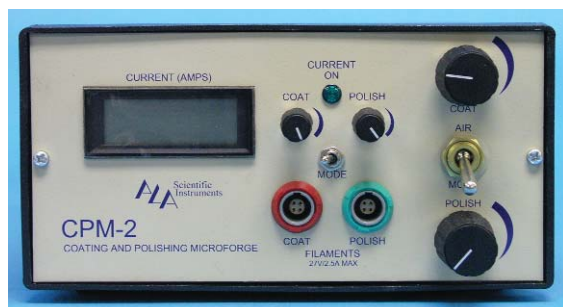
Electrophysiologists polish patch pipettes because pipette pulling often leaves sharp surfaces that can damage delicate cell membranes. Coating of pipettes is often necessary with the excised patches or cell-attached configurations to reduce noise from pipette capacitance and dielectric loss¹. Pressure polishing, a recent innovation in pipette processing, minimizes series resistance with small-tip pipettes to facilitate whole-cell recording of small cells².

Features of CPM-2:

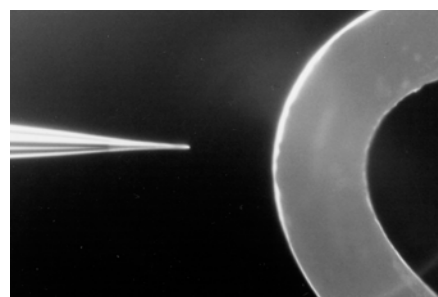


CPM-2 stage assembly

- *Available as kit to mount on inverted scope with fixed stage.
- *Available as complete system that includes inverted microscope with parfocal optics.
- *Coating and polishing on one instrument; transferring pipettes unnecessary.
- *Pressure polishing accessories to produce small tip low-resistance pipettes.
- *Convenient control of heat timing with foot-pedal switch.
- *Heating and air pressure controls conveniently located in one unit.
- *Micrometers on manipulator axes for rapid and convenient pipette positioning.
- *Electrode holder can be rotated in place for convenient, even coating of pipettes.



CPM-2 controller front panel



25x magnification showing pipette tip and polishing filament

¹ Hamill, O.P. et al. Improved patch clamp techniques for high-resolution recording from cells and cell free membrane patches. *Pflugers Arch.* **391**, 85-100 (1981).

² Goodman, M.B. & Lockery, S.R. Pressure polishing: a method for re-shaping patch pipettes during fire polishing. *J. Neurosci. Methods.* **100**, 13-15 (2000).

CPM-2 Coating and Polishing Microforge

ALA XDS-2 Inverted Microscope features:

- * Wide field 10x and 16x eyepieces
- * LWD 10x, 25x, and 40x objectives
- * LWD phase contrast 25x objective
- * Binocular head inclined 45°
- * Blue, green, amber, and grey filter
- * Phase contrast annular 25x

When combined with the CPM-2:

- * Pipette holder
- * XY manipulator for pipette
- * XYZ manipulator for polishing filament
- * All parts mounted on microscope stage
- * All for one excellent price



CPM-2 when combined with the XDS-2 Inverted Microscope forms a complete coating and polishing microforge system

Ordering Details - Accessories

ALA CPM-2	Coater/Polisher Microforge Kit - for use with inverted microscopes: includes controller, coating & polishing filament, footswitch, and XYZ polishing manipulator
ALA CPM-2w/scope	Coater/Polisher Microforge including XDS-2 inverted microscope
ALA PR-60	60 psi High Pressure Regulator for use in the Pressure Polishing Method
ALA CPM-HOTJET	Replacement CPM-2 hot air jet filament assembly
ALA CPM-PTIR	Replacement PtIR polishing filament - package of 3
ALA CPM-XY	CPM-2 XY stage manipulator for pipette movement
ALA IPH-THP	Pressure injection pipette holder for use in the Pressure Polishing Method

Specifications

power output	27VDC / 2.5A
controller dimensions	7.65x9.85x3.85"
weight	6lbs 0.2 oz (2.82kg)
polishing filament	PtIr(90%/10%), 0.25mm diameter / 0.4Ω
input pressure (Min/Max)	12/30 psi (83/200kPa)
power input	110-120/220-240VAC - 0.5/0.25A, 60/50Hz
polishing manipulator travel	70mmx40mmx3mm
output pressure (Min/Max)	0/5 psi (0/34.6kPa)
footswitch	push current on

Specifications are subject to change without notice