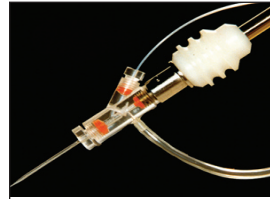


Microelectrode holders provide an important link between the living cell and high impedance amplifiers. Most holders are used to hold glass electrodes made from drawn capillary glass. The holder provides a stable

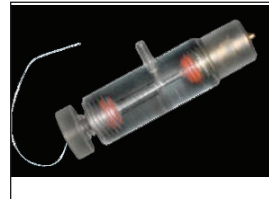
connection between the amplifier head stage and the electrode. Typically a silver wire or silver chloride pellet is used to form a half-cell so that the electrolyte in the holder can form an electrical connection to the amplifier.

BNC Type Holders



PPH-2P-BNC-0-1.5

For use with all Heka amplifiers, most NPI electronic amplifiers, Dagan amplifiers, and any amplifier whose input uses a BNC type of connector. All BNC type holders are made of low noise polycarbonate (Teflon available upon request). All come standard with a Ag wire (Ag/AgCl pellet available upon request). Standard glass outside diameter is 1.5mm (other sizes available).



PPH-1P-BNC-0-1.5

Axon / Molecular Devices Type Holders



PPH-2P-AXU-90-1.5

For use with all Axon amplifiers including Axopatch 1 series, 200A, Axoclamp-2A series, and all Axon amplifiers with the universal connector input. All Axon style holders are made of low noise polycarbonate (Teflon available upon request). All come standard with a Ag wire (Ag/AgCl pellet available upon request). Standard glass outside diameter is 1.5mm (other sizes available).



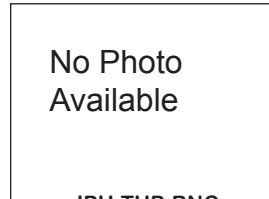
PPH-1P-AXU-0-1.5

Injection / Ejection holders



IPH-THP-2MMP-90-1.5

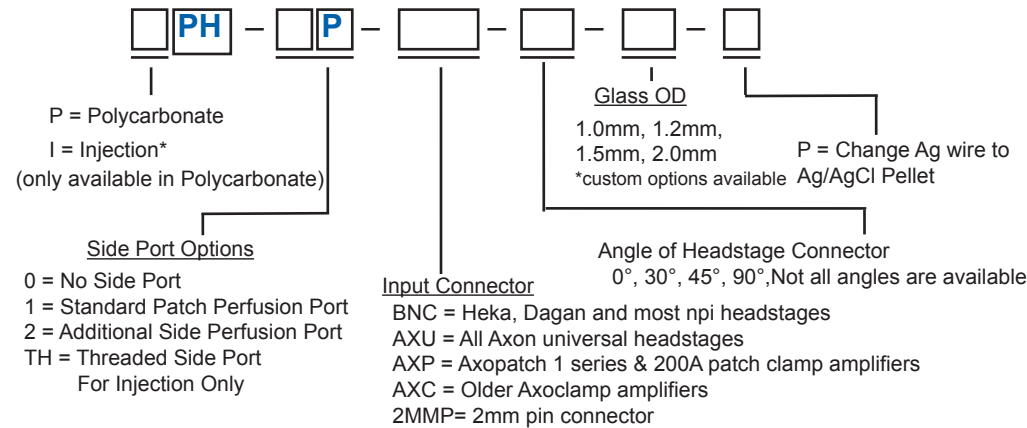
All injection/ejection holders come with Al bar for easy mounting on a manipulator. Female luer fitting for pressure inputs are included as well. Connections to different amplifier headstages are available as well. Standard glass outside diameter is 1.5mm (other sizes available)



IPH-THP-BNC

No Photo Available

Ordering Information



Pipette Holder Replacement Parts

COM O'RINGS-S	Replacement silicone O'rings for pipette seals - for all pipette holders - pack of 10
COM O'RINGS-P	Replacement silicone O'rings for pierced Ag wire seal - for all pipette holders with Ag wire - pack of 10
ENDCAP	Replacement end cap for pipette holders - specify diameter and holder type
PPH-BNC-PIN	Brass pin insert for BNC holders
PPH-BNC-TOOL	BNC holder wrench - polycarbon

A range of Ag/AgCl electrodes suitable for use as reference electrodes are available. Made from very high purity materials using a careful proprietary process which

results in a fine grain, homogeneous mixture of silver and silver chloride. A careful sintering process strengthens and stabilizes the entire electrode assembly.

BMP .8 .8MM DIA X 3MM 70MM EXPOSED WIRE	BMD 4 4MM DIA X 1MM 10MM EXPOSED WIRE
BMP 1 1MM DIA X 2.5MM 70MM EXPOSED WIRE	BMD 8 8MM DIA X 1MM 10MM EXPOSED WIRE
BMP 2 2MM DIA X 4MM 10MM EXPOSED WIRE	BMD 12 12MM DIA X 1MM 10MM EXPOSED WIRE

Ag/AgCl disk reference electrodes

Ag/AgCl electrodes are embedded on a .25 x 70 mm silver wire, in which the last 10 mm of the wire is uniformly coated with Ag/AgCl to a maximum diameter of 0.8 mm. They are reusable, resurfaceable, never needs chloriding, and are essentially non-polarizable. The BMP-0.8, and BMP-1 have a 70mm Ag wire. All others have a 10mm Ag wire.

Ordering Information	
P-BMP-0.8	0.8mm x 3mm Ag-Ag/Cl pellet with 70mm embedded Ag wire
P-BMP-1	1mm x 2.5mm Ag-Ag/Cl pellet with 70mm embedded Ag wire
P-BMP-2	2mm x 4mm Ag-Ag/Cl pellet with 10mm embedded Ag wire
P-BMD-4	1mm x 4mm Ag-Ag/Cl disc pellet with 10mm embedded Ag wire
P-BMD-8	1mm x 8mm Ag-Ag/Cl disc pellet with 10mm embedded Ag wire
P-BMD-12	1mm x 12mm Ag-Ag/Cl disc pellet with 10mm embedded Ag wire

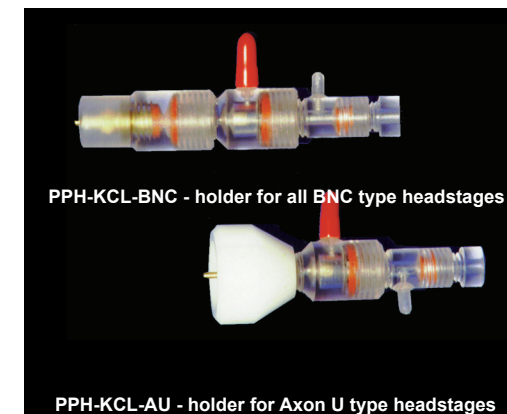
Electrical Specifications:

Typical values of the key parameters, measured in 0.9% saline, between pairs of Ag-AgCl electrodes of the same size

- DC offset Voltage: 180µ V
- Drift: 25µ V/hr
- Noise: 1µ V p-p (0.1-1 kHz with 50/60 Hz eliminated)

KCl Bridge Electrode Holder

Easy-to-use electrode holder for microelectrodes to stabilize electrode potentials and eliminate Cl⁻ from recording solution



Reference: Snyder, Kriegstein, & Sachs, A convenient electrode holder for glass pipettes to stabilize electrode potentials, Pflugers Arch. 438: 405-411 (1999).

- Provides stable offset potential
- Eliminates need for Cl⁻ containing solutions in recording pipettes
- Improves noise performance
- Easy set-up and disassembly
- KCl bridge completes circuit from Ag/AgCl pellet to recording electrode via quartz capillary
- Connections for all amplifiers (BNC & AU type standard)
- Available for all size glass (1.5mm standard)
- Comes as a kit with parts needed to get started

Ordering Information

PPH-KCL-AXU	KCl bridge pipette holder for Axon universal type headstages
PPH-KCL-B	KCl bridge pipette holder for BNC type headstages