

# *POWER*TOME≡3D™



## The Million-Nanometer Ultramicrotome

The PT3D features a full 1 mm of advance, permitting uninterrupted, ultra thin, sectioning to a depth of one millimeter. This unique advantage is especially beneficial for 3D reconstruction work, array tomography, and any situation where high amounts of precision specimen trimming are involved.

The all-in-one computer controller features a slim design 21.5" touch screen control monitor, including wireless mouse & keyboard, interconnect cables & accessories. All control functions can be activated by touching the control monitor screen, or by mouse, while maintaining use of the tactile digital controller. The color monitor displays a bright and user friendly control interface with intuitive control icons logically arranged around the video display.

Various add-on components for array tomography and cryo applications are also available

**FEATURES**

- Produce high quality semi- and ultra-thin sections for TEM, SEM, block facing for AFM, TOFSIMS, LM, and CEMOVIS.
- Hybrid control system includes touch screen monitor with Visutrac™ cutting zone control, plus digital tactile controller
- High-definition video package showing work area with built-in video measuring system
- Record & save video clips & still images
- Built-in report generator, database, & diagnostic routines for automatic documentation of sectioning parameters
- Ergonomic stereo microscope system with unique lateral viewing control
- Four Types of LED illumination are provided. All are independently adjustable.
  - Overhead bright diffuse LED illumination
  - Backlighting for careful approach of the knife to the specimen
  - Transillumination through the specimen holder for viewing details of the specimen within the block  
(Transillumination LED can also be used for spot illumination by pointing it towards the specimen or knife edge)
- Patented Power Drive© cutting stroke for large blocks & hard materials
- Electronic step advance for final specimen approach to the knife edge
- High stability mechanical advance system for reproducible section thickness
- Dual foot switch control with trim function
- Built-in calibration & service diagnostics instantly confirm functionality & simplify maintenance procedures

**SPECIFICATIONS**

- Specimen auto feed: 1 mm (1,000 µm; 1,000,000 nm)
- Section thickness: 0nm to 15µm
- Cutting speed: 0.1 to 100mm/sec in 0.1mm/sec increments  
Variable return speed over entire cutting speed range
- Knife stage movement: 50mm gross advance  
25mm E-W travel  
12mm N-S advance

**KNIFE OPTIONS**

- Glass knives up to 12mm wide
- Triangular tungsten carbide knives
- Any commercial brand of diamond knives

**STEREO MICROSCOPE TRINOCULAR ZEISS STEMI 508**

- 8:1 zoom
- 6.3x to 50x magnification
- 10x WF (23mm) eyepieces
- 35° viewing angle

**POWER SUPPLY (SPECIFY UPON ORDER)**

- 100/120/220/240V 50/60HZ

**SHIPPING SPECIFICATIONS**

- PowerTome crate: 865mm x 560mm x 660mm 54.5kg / 34" x 22" x 26" 120lbs
- Two accessory cartons: 660mm x 660mm x 660mm 36.5kg / 26" x 26" x 26" 80lbs  
660mm x 660mm x 305mm 11.5kg / 26" x 26" x 12" 25lbs
- Total weight: 102.5kg / 225lbs

<u>PART #</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
<b>75501</b>	<b>PTXL</b>	
- 75637	Lower Stage Assembly	1
- 75635	Upper Stage Assembly	1
- 75541	Hand Wheel	1
- 75670	PowerTome Controller	1
- 75205	Breath Shield, Stage	1
- 71171-5	Breath Shield, Microscope	1
- UM117	Scope Mount	1
- 75590	Dust Cover	1
- 50609	Binocular Stereomicroscope	1
- Per Cust.	Power Cord	1
- 79960	Foot Switch	1
- 50038	Cable, Interconnect	1
- 56AC104	Power Conditioner 110V / 120V	1
or		
56AC102	Power Conditioner 220V / 240V	
<b>75593</b>	<b>ACCESSORY KIT</b>	
- 75699	Accessory Box	1
- 75413	Specimen Holder, 7mm	1
- 75413S	Specimen Holder, Stepped	1
- 75368	Specimen Holder, Universal	1
- 75150	Arc Segment Holder	1
- 75340	Wrench Specimen	1
- 75155	Arc Mounting Stub	1
- 75335	Trimming Block	1
- 75353	Trimming Post	1
- 75815	8" LED Cable	1
- 75816	12" Transillumination LED	1
- 56AC100	1.6 amp Fuse	3
- 311310	Wrench, Allen (Hex) 1.3mm	1
- 317198	Wrench, Allen (Hex) 2.0mm	1
- 315979	Wrench, Allen, (Hex) 2.5mm	1
- 311309	Wrench, Allen (Hex) 3.0mm	1
- 316749	Wrench, Allen (Hex) 4.0mm	1
- 61823	Wrench, Allen(Hex) 3/16"	1
- 19652	Wrench, Ballpoint 2.0mm (Bondhus)	1
- 75340-2	Wrench, Specimen 4.0mm	1

<b>75840</b>	<b>PTPC</b>	
	Includes all previously listed components for the PTXL plus:	
<b>75844</b>	<b>COMPUTER ASSEMBLY</b>	
- 50545	Computer with PTPC Control Software	1
	21.5" Touch Screen Display, 8 GB ram, 1TB HDD, Intel® Core™ i3-9100T processor, power supply, power cord, wireless keyboard and mouse	
- 55AH061	RS-232 Cable	1
- 50543	USB to RS-232 Adapter	1
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<b>75841Z</b>	<b>PTPCZ</b>	
	Includes all previously listed components for the PTPC plus:	
- 50549	1.3 megapixel USB color camera	1
- 5439	Camera Cable	1
- 50611	Trinocular Microscope w/ Camera Mount (Replaces Stereomicroscope P/N 50609)	1
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<b>75850</b>	<b>PT3D</b>	
	Includes all previously listed components for the PTPCZ plus:	
- 75790-1.1mm	1mm Advance Arm and Software Upgrade	1
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**POWERTOME ACCESSORIES**



50611 - ZEISS 508 TRINOCULAR  
(FOR USE WITH CAMERA P/N 50549)



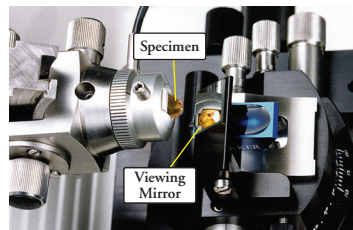
74800 - STATIC LINE IONIZER, 115VAC  
(P/N 74801 FOR 220-240VAC)



75370 -SP - AUTOMATED WATER SYSTEM  
(REQUIRES PTPCZ WITH VIDEO)



75370 - WATER TROUGH FILLER  
(PERISTALTIC WATER PUMP)



75380 - SPECIMEN VIEWING MIRROR



75638 - UNIVERSAL SPECIMEN HOLDER



79883 - DUAL FOOTSWITCH CONTROL

<u>PART #</u>	<u>DESCRIPTION</u>
<b>ROOM TEMPERATURE SPECIMEN HOLDERS</b>	
- 70597	Vise type flat specimen holder.
- 16801	Wrench for 70597 vise type holder.
- 75368	Universal transilluminated specimen holder.
- 75413	7mm flat specimen transilluminated holder.
- 75767	5.6mm flat specimen transilluminated holder.
- 75413S	Round block sample holder. Holds 4 to 8mm diameter blocks.
- 70340-2	4mm wrench, for specimen holders 75368, 75413, 75413S, 75767.
<b>STEREOMICROSCOPE ACCESSORIES</b>	
- 50549	1.3 megapixel USB color camera For use with computer upgrade
- 50609	Stemi 508 stereo microscope 8:1 zoom, 6.3x to 50x magnification, 10x WF (23mm) eyepieces
- 50601	10x WF(23mm) eyepieces For P/N 50600 and 50604 stereomicroscope. Per pair.
- 50611	Stemi 508 trinocular stereomicroscope 50/50% beam splitter, 8:1 zoom, 6.3x to 50x magnification, 10x WF (23mm) eyepieces, phototube with 50/50% right path and c-mount camera adapter.
- 50608	16x eyepieces For P/N 50600 and 50604 stereomicroscopes. Per pair.
- 71171-5	Stereomicroscope mounted breath shield
<b>OTHER POWERTOME ACCESSORIES</b>	
- 74800	Static Line Ionizer Ionization depolarization device, 115VAC
- 74801	Static Line Ionizer Ionization depolarization device, 220 - 240VAC
- 75205	Breath shield, for knife stage
- 75370	Water trough filler Includes reservoir/pump, tubing and filler tube
- 75380	Specimen viewing mirror Mounts on upper stage for straight-on viewing of specimen
- 75455	Easy-Lift glass knife spacer and post.
- 75590	PowerTome dust cover.
- 75844	Computer with control software and touch screen monitor
- 79883	Dual Footswitch Control
- 75790-1.1mm	1mm advance arm and software upgrade.
- 75370-SP	Automated water level control system Maintains constant water level in knife boat, automatically adjusting as required. Only available with PTPCZ.