

# Leica Microsystems – the brand for outstanding products

Leica Microsystems' mission is to be the world's first-choice provider of innovative solutions to our customers' needs for vision, measurement, lithography and analysis of microstructures.

Leica, the leading brand for microscopes and scientific instruments, developed from five brand names, all with a long tradition: Wild, Leitz, Reichert, Jung and Cambridge Instruments. Yet Leica symbolizes innovation as well as tradition.

## Leica Microsystems – an international company with a strong network of customer services

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and representatives of Leica Microsystems in more than 100 countries.

The companies of the Leica Microsystems Group operate internationally in five business segments, where we rank with the market leaders.

### Microscopy

Our expertise in microscopy is the basis for all our solutions for visualization, measurement and analysis of microstructures in life sciences and industry.

### Specimen Preparation

We specialize in supplying complete solutions for histology and cytopathology.

### Imaging Systems

With confocal laser technology and image analysis systems, we provide three-dimensional viewing facilities and offer new solutions for cytogenetics, pathology and material sciences.

### Medical Equipment

Innovative technologies in our surgical microscopes offer new therapeutic approaches in microsurgery. With automated instruments for ophthalmology, we enable new diagnostic methods to be applied.

### Semiconductor Equipment

Our automated, leading-edge measurement and inspection systems and our E-beam lithography systems make us the first choice supplier for semiconductor manufacturers all over the world.



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## Leica EM TP Tissue Processor

For Electron and Light Microscopy  
Resin Processing

## Introducing the NEW Leica EM TP Resin Processor for EM and LM

With 125 years experience in the manufacture of scientific instruments, Leica has developed a new resin tissue processor, the EM TP. From the wealth of knowledge gained in the fields of histology and electron microscopy the EM TP meets all the needs of today's demanding laboratory. This versatile, very compact instrument can be used for resin processing for electron microscopy (EM) and light microscopy (LM). Reproducibility, the need for a low hazard environment and ease of use were the key reasons for developing the EM TP.

The EM TP consists of a base unit onto which an EM or LM processing outfit can be added. Interchange between EM and LM processing takes only moments.

The latest technology is used for interfacing user and instrument. A simple to use control panel allows data storage of up to 99 programmes, all of which can be named. Reagents can be selected from a reagent list which can be customised by the user. If a mistake is made during programming or selection of a field then the EM TP gives an audible warning and shows on the screen what the error means. Processing can be started immediately or with delay. Programming can also be carried out while the instrument is processing.



Designed by Werner Hölbl

Independent vial seals for each vial provide a stable environment for each reagent. The vials sit in a carousel designed for both EM and LM vials. To provide a safe environment for the user in case of reagent spillage the processing chamber is enclosed. The chamber is also ventilated via a fume extraction system.

The specimens are supported in various baskets depending upon their size, the mesh varying in accordance with sample size. The baskets are located on an arm which can move vertically up and down to allow agitation when required. The speed of agitation is variable.

For processing at specific temperatures the EM TP has a heater and cooler system allowing temperature control between +4°C and +60°C even during a delayed start or finish. For EM the system also has pre-heat and pre-cool. This means that all reagents coming into contact with the tissue will be at the desired temperature, important for high quality EM processing.

Programming is via a membrane-covered keyboard. A delay and 'time to end' feature makes setting delay times simple.

The programmes are protected by battery back-up and for specimen safety the instrument has a second battery back-up enabling processing to continue through a power shortage. The heater/cooler (H/C) unit closes down but the carousel continues to operate thus preventing the specimens remaining in processing reagents for too long a period and damaging them.

### Display

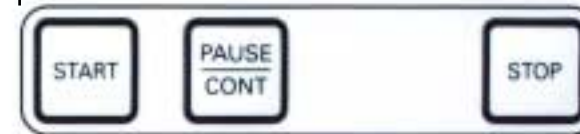
(The example shows the screen during programming an EM run)

- Programme number and name
- Vial number and reagent name
- Processing parameter for selected vial
- Total processing time for EM samples

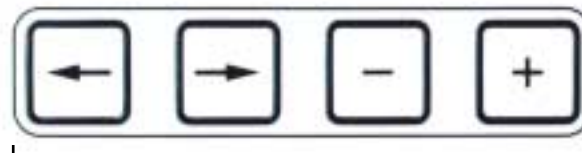


PROG01 EPON  
VIAL01 Glutaraldehyd  
R61 01h01 28°C CONT  
EM TOTAL 4h06

Keys for starting and interrupting a programme



Display a programme  
Lock function  
Time setting to adjust clock  
Printing – to print programmes and reagent list



Selection and adjusting of programmes



Keys for manual operation

- Rotation of carousel
- Lowering carousel
- Raising carousel
- Agitation
- Temperature setting

Leica



## EM Processing

24 polypropylene vials of 20ml are available to the user for one processing run. The vials are attached to the carousel by a twist fit only.

Reagents can be pre-loaded into the vials attached to the carousel in a fume cupboard. Toxic reagents can be sealed with individual vial caps before taking them over to the EM TP. The heater/cooler (H/C) unit flips back allowing direct access of the carousel to the processing area. The H/C unit has pre-heat and pre-cool thus allowing reagents to be at the correct temperature before coming into contact with the tissue.



H/C unit shown in loading position for safe and convenient access



Loading plate and consumable



Processing of EM samples

## LM Processing

12, 100ml vials can be twist fitted to the carousel for processing large samples or high volume of specimens into resin. The EM TP has a holder for standard histology cassettes thus allowing very large specimens such as bone to be decalcified and processed. CellSafe holders can also be used for processing.



Moveable H/C unit for safe and easy access of carousel



Processing of LM samples



Cassette holder