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Data Sheet

MR3000 -Libra Manual Rotary Microtome



Version 1.1

Histo-Line Laboratories

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Manufacturer: Histo-Line Laboratories s.r.l

In vitro diagnostic -medical device

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1.Features



1.1 Information and specified use

The microtome Histo-Line Libra is a rotary microtome particularly suitable for manual cutting of paraffin sections, for normal use in clinical histology and histopathology, but also to the finest cuts used in the research field.

The retraction of a constructive feature that offers a variety of advantages in the cutting process, in addition to extend the life of the blade. If you are using the microtome in the retraction mode, thanks to the next full rotation of the flywheel the whole block will advance the value of the retraction plus the thickness of the selected section.

Moreover, the microtome is equipped with the **doubling of the mechanical trimming** device at the bottom left to speed up the roughing time.

The microtome is coated by a body in a special plastic material resistant to solvents and free of edges thus minimizing the risk of danger to the operators.

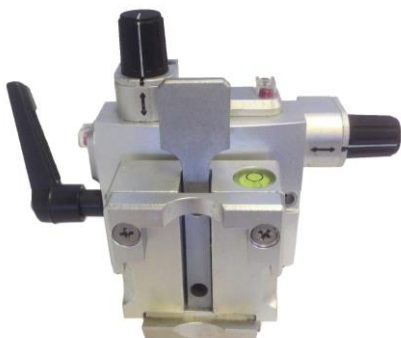
1.2 Safety and operator comfort

The flywheel is equipped with ergonomic handle for ease of cutting.

The upper space of the microtome is equipped **with a large area of work surface**, covered with a sheath slide that allows the operator to support the accessories needed for cutting (the package of disposable blades, the brush collect slice, etc.)

The flywheel, which has low friction for good cutting comfort, is equipped with an easily operable dual rotation flywheel lock system through which the sample arm can be stopped in any position. LIBRA is equipped with **two mechanical safety stops**:

- placed on the insertion cutting flywheel.
- the other placed under the toggle flywheel.



The steel clamp is equipped with a device to "clamp" for quick change of the sample and sample holder fixed tilt.

The clamp is suitable for all types of **standard biocassettes**, and is interchangeable by the operator with the clamp to the biocassettes ring (optional).

The clamp allows easy and precise orientation of specimens with

the help of two red "**indicator lights**," which if clearly visible indicate that the orientation plane is in the absolute zero position.

On the right side of the clamp is a "bubble" for precise orientation on the three axes of the sample.

Replacing the standard specimen holder clamp is possible through an Allen wrench (included) to use the clamp for super mega cassettes, with a convenient quick coupling.

1.3 Reliability and precision of the cut



The "**dual profile**" blade holder, suitable for **any type of low- or high-profile disposable blades**, is equipped with the swing-action finger guard. Through the spring-loaded pin, it is possible to extract or insert the blade **without touching it**.

The blade holder **has three-position** (left, right, center) side-shifting capability to use the entire blade wire without removing the blade. This clearance range corresponds to the length of a standard biocassette so that the entire blade of the microtome can be used without loosening its lock.

High-precision cutting for any type of section included in kerosene, suitable for routine and laboratory research activities via low-maintenance, backlash-free roller bearings.

The microtome has the **completely silent sample retraction system** suitable for preserving the life of the blade and the sample, the latter during the return movement is moved to the upper initial position away from the blade. Automatic sample retraction can be excluded by the operator.

The micrometric orientation device, located on the left side of the operator, gives the indication of the cutting thickness.

Through the small steel knob, the cutting thickness of the microtome can be set between 1.0 μm and 60 μm .

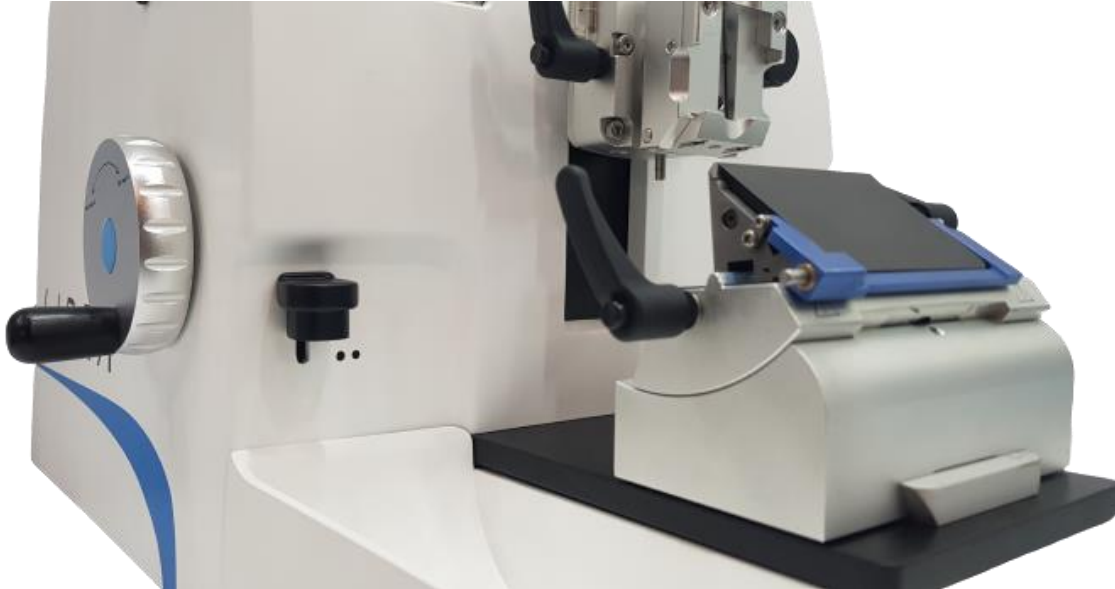
The structure of the microtome is extremely stable, and is reliable even for execution of particularly hard cuts.

Possibility of using either regrindable blades (by changing the blade holder, an optional accessory) or any type of disposable blades available on the market.

Equipped with an antistatic tray for collecting waste sections surrounding the front working area, including the part below the blade holder, which is large, ergonomic for the operator and removable from the instrument for easy cleaning.

It is held by two magnets placed in front of the microtome base

The micrometer orientation device, located on the left side of the operator, gives an indication of cutting thickness.



Microtome Libra at a glance

- Overall compact and ergonomic design
- Smooth manual safety flywheel
- Ergonomically arranged feed flywheel for comfortable working
- Quick sample change system possible with only one hand
- Blade holder with integrated finger guard
- Section counter
- Low-maintenance roller bearing guides for high cutting stability and repeatability
- Precise lateral movement of the blade holder for optimal utilisation of the blade
- Universal blade holder base for different blade holders
- Safety applied and integrated into the overall design
- Large, easy-to-clean waste tray
- Complete range of accessories for various applications

2. Technical specifications

2.1 Thickness section and advancement

The minimum cut thickness that can be set is 1 μm .

For the "Cut" setting, the setting range is 1-60 μm . The settable values and cutting increments are:

- 1.0 μm from 0 to 20 μm
- 5.0 μm from 20 to 60 μm

The display of the cutting thickness is given by the control window

2.2 Control features and functionality

Specimen feed: 28 \pm 1 mm

Vertical stroke: 70 mm

Maximum specimen size:

Large standard clamp: 55 x 50 x 30 mm

Super Cassette clamp: 68 x 48 x 15 mm

Trimming section thickness setting range: 1 step: 15 μm | 2 step: 30 μm

Movable range for the blade holder basal

Forward/Backward: \pm 65 mm | Left / Right: \pm 40 mm

Sample orientation: Axes X and Y: 0 to \pm 8 $^\circ$, with the zero point.

Z axis: 360 $^\circ$ rotation

Specimen retraction range of 90 μm can be off

2.3 Dimensions and weight

Width: 500 mm

Depth (including tray): 570 mm

Depth (excluding tray): 500 mm

Height: 300 mm

Weight: 37 kg

2.4 Instrument equipment

1 collection tray sections

1 holder blades

1 clamp for standard samples

Manual instructions

Code: MR3000