

## designed for precision reliable. comfortable. accurate.

HM 430 and HM 450 microtomes offer the utmost reliability and operator comfort. Decades of experience and input from scientists combined with superior engineering have led to this exceptional line of instruments.







# Thermo Scientific Microm HM 430 and HM 450 sliding microtomes – smart choices for reliability, comfort and versatility.

## The true innovation in microtome engineering

The design of the Thermo Scientific<sup>™</sup> Microm<sup>™</sup> HM 430 and HM 450 sliding microtomes is built on experience gained through decades of close relationships with scientists and engineers throughout the world. When combined with our daily effort to achieve better engineering solutions this results in products with the utmost reliability, user benefit, and ergonomic comfort.

## **Outstanding performance**

The reliability, ergonomics, and design of the HM 430 and HM 450 make these instruments popular in the most demanding laboratories. The roller-guided knife sledge offers a highly sought-after level of precision, stability, and smooth movement.

## **Design and ergonomy**

The elegant housing's streamlined shape is sculpted for comfort and intuitive operator interaction with the instruments. Users enjoy a comfortable and non-tiring operating experience.

## **Versatility**

A large variety of accessories for most different applications in medicine and industry will satisfy all applications needs.



## HM 430 – ideal for routine and research settings

The long sledge of the HM 430 offers new application ranges in histology, pathology, research, and industry.

## Ergonomically shaped sledge handle for easy control of sectioning

The HM 430 combines simple, non-tiring operation with an elegant design. Operators can easily adjust the handle angle to fit their individual posture. Operating elements are easily accessed and the selection between manual and automatic feed by simply turning a single knob offer ease of use to operators. Ergonomy without compromises!

## **Large-volume waste tray**

The easily removable section waste tray is integrated below the specimen holder.

## HM 450 – unique sliding microtome with stepping motor feed and retraction

The integration of the stepping motor technology for the specimen feed offers a high level of operator comfort. Cutting-edge electronic control systems coupled with high-precision, fine mechanics result in optimal section quality and best reproducibility. Even difficult paraffin-embedded specimens, botany, and industrial preparations are handled with ease.

The HM 450 has a retraction during the return travel that can be turned off. The automatic feed facilitates sectioning by a reproducible exact feed. The feed process is carried out by the reversing movement of the sledge after any sectioning move. This way, large specimens as well as biopsies can be sectioned with the respective adjusted length of sectioning travel, without having to pass a defined feed point.

## **Innovative memory function**

By storing a specimen position before the first cuts, a high level of comfort during the approach of the specimen towards the knife is possible. Briefly press the knob to bring a new specimen into first cut position. A button on the handle allows for ease in switching between preselected trim and fine section thickness.

## **Graphic display in two different sizes**

Another feature is the backlit graphic display with a choice of two different sizes. In the large display mode, the section range (fine or trim sectioning) is shown by a symbol and the respective section thickness in large numbers.









## Technical data/accessories



## **Technical data HM 430**

Cat #910010

Stable, distortion-free basic construction with zero-backlash and maintenance-free cross roller bearings

Enclosed housing with protected, interior feed mechanism

Automatic and manual feed from 0.5 to 60 µm

Automatic feed via turning knob can be selected in addition

Feed position can be selected via clamping lever

Section thickness feed: 0.5 µm to 60 µm:

 $0.5 \, \mu m$  for 0 to  $5 \, \mu m$ 1 μm for 5 to 10 μm  $2 \mu m$  for 10 to  $20 \mu m$ 5 μm for 20 to 60 μm

Vertical feed range: Max. 40 mm

Horizontal knife stroke: Max. 190 mm

Cutting drive: Manual sliding movement

Coarse feed: Manual via coarse feed wheel

Feed: Automatic via sliding movement or manual via feed lever

Maximum sledge travel: 190 mm

Specimen orientation via co-axial one-handed adjustment

Quick change system of the specimen clamping

Co-axial knife angle adjustment without having to open the knife clamping

Integrated knife guard

**Dimensions:** (D x W x H): 490 x 360 x 320 mm

Weight: 23 kg

## Various accessories for all applications

For applications in medicine, biology and industry both standard specimen clamps and universal cassette clamps are available. A large variety of knife types and sizes as well as disposable blade rails cover all applications. For industrial applications numerous specific clamping devices are also available or can be produced upon demand.

### **Technical data HM 450**

Cat #910020

up to 30 µm in 5 µm steps

up to 100 µm in 10 µm steps up to 200 µm in 20 µm steps

up to 500 µm in 50 µm steps

Stable, distortion-free basic construction with zero-backlash and maintenance-free cross roller bearings

Trimming thickness: 5 to 500 µm:

Enclosed housing with protected, interior feed mechanism via stepping motor

Automatic and manual feed from 0 to 100 µm

Automatic feed independent of specimen size via reversing the sledge (can be turned off)

Specimen retraction during knife return travel (can be turned off)

Section thickness feed: 0.0µm to 100µm:

up to 5 µm in 0.5 µm steps

up to 20 µm in 1 µm steps

up to 30 µm in 2 µm steps

up to 60 µm in 5 µm steps

up to 100 µm in 10 µm steps

Compensation for heat extension via stepping motor: 2 µm

Total specimen stroke: 40 mm

Maximum sledge travel: 190 mm

Specimen orientation via co-axial one-handed adjustment

Quick change system of the specimen clamping

Co-axial knife angle adjustment without having to open the knife clamping

Integrated knife guard

**Dimensions:** (W x D x H): 370 x 460 x 320 mm

Weight: 23 kg

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