

ChronoMaster® Auto



ChronoMaster Auto, the automatic microphone with infinite possibilities

The ChronoMaster Auto measures the beat noise of mechanical watches. It moves to all main test positions and any intermediate positions automatically and precisely. The movement in two axes is smooth and silent. It can measure while in motion and thus reveals new dimensions in the measurement of mechanical watches.

Compact and innovative drive solution

The high-quality drive unit was developed to fit the needs of the ChronoMaster Auto. The motors are stowed in the foot section of the device to prevent magnetic fields from affecting the function of the movement. The compact design with a low centre of gravity occupies little space and provides a high degree of stability.

USB and Bluetooth interfaces

The ChronoMaster Auto requires a single USB cable for data connection and power supply for operation with a PC or the Witschi terminal. Alternatively, the measurement data can also be transmitted wirelessly via Bluetooth.

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- Acoustic microphone with integrated measuring electronics for the measurement of mechanical watches
- Smooth and silent drive unit
- 360° rotation axis and the 180° tilting axis
- Precise position control based on gravity thanks to the integrated acceleration sensor
- One single USB cable for power supply and data transmission
- Wireless data transmission via Bluetooth
- Integrated fixation for large and heavy watches
- Convenient operation with the to built-in control buttons
- Ergonomic regulation of movements thanks to stable hand rest for left- and right-handers

| | ChronoMaster Auto | ChronoMaster Auto PRO |
|--|-------------------|-----------------------|
| Automatic change to the 6 main, 4 intermediate and 2 special positions | • | • |
| Arbitrary test positions in 1° steps** | | • |
| Dynamic movement with simultaneous measurement** | | • |
| Tourbillon measurement** | | • |
| New measurement functions (Witschi Lab) | | • |

General

| | |
|-----------------|--|
| Operation | 4 push-buttons |
| Display devices | Windows PC* Windows tablet* Witschi Terminal |
| Software | WiCoTRACE Chronoscope Service |
| Interfaces | USB type C Bluetooth |
| Dimensions | 150 x 220 x 150 mm (W x H x D) |
| Weight | 980 g |
| WiCoTRACE | yes |

Measurement

| | |
|-----------------------|-------------------------------------|
| Measurement principle | Acoustic measurement of beat noises |
| Rate | -1'000 ... +1'000 ± 0.1 s/d |
| Amplitude | 70 ... 360° ± 1.0° |
| Beat error | 0 ... 9.9 ms ± 0.1 ms |

Measuring conditions

| | |
|-----------------------|---|
| Test positions** | 12 standard test positions and arbitrary intermediate positions ^{PRO} |
| Drive unit | Low-noise drive unit with 2 axes. Rotation angle main axis 360°, rotation angle tilt axis 180°. |
| Rotational speed | 0 ... 20 min ⁻¹ |
| Positioning precision | ± 1° |
| Stabilisation time | Manual |
| Amplification modes | 1 ... 4 |
| Measurement time | Manual, 2 s to 300 h |
| Frequency | Automatic or manual, 3,600 to 72,000 A/h |
| Lift angle | Manual, 10 to 90° |
| Time base | TCXO (± 0.004 s/d) |

- * Not compatible with ARM processors (e.g. Microsoft Surface X)
** Depending on the software or display device used