WisioScope®

Combined acoustic and optical measurement for the most demanding applications!
The WisioScope is a revolutionary measuring instrument which can test mechanical watches both acoustically and optically: beat noises are measured acoustically and balance wheels optically. The highly efficient WisioScope hardware in combination with intuitive WisioScope Labor PC software result in a powerful measuring device for the most demanding applications, yet is easy to install and operate.

Greatest precision down to the finest detail
the combined measurement system enables new and more detailed test options: actual lift angle in real time, as well as immediate determination of actual amplitude, independent of lift angle. Even watches with special escapement noises, where pure acoustic measurement is rarely possible, can now be measured accurately.

Unlimited analysis options with long-term measurement
Extended Isochronism, Fast Fourier Transform and Q-factor display modes provide in-depth views into the watch movement mechanism. All functions are designed for a measurement time of up to 300 hours.

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witschi
LEADING SWISS PRODUCTS

WisioScope®

WisioScope

- Simultaneous acoustic and optical measurement of rate variation, amplitude and Q-factor
- Measurement of special mechanical watch movements with quiet or unusual escapement noises
- Insensitive to background noise
- Determination of actual lift angle and actual amplitude
- Compact, space-saving standalone device
- Powerful WisioScope Labor PC software with expanded measurement and analysis options
- Intuitive operation and display of results thanks to tilting 7" touchscreen or via PC software.
- Position measurement with automatic identification of 6 main positions
- Automatic determination of all popular stroke rates
- Long-term measurement of up to 300 hours

	WisioScope S	WisioScope EXPERT
Actual lift angle	•	•
Display modes: TRACE, VARIO, DIAGRAM, SCOPE and SEQUENCE	•	•
Display modes: ISOCHRONISM and FFT (Fast Fourier Transform)		•
Display mode: Q-factor		•
Long-term measurement up to 300 h		•
Results memory and export (Excel)		•
WisioScope Labor PC application		•

General

Operation	Touchscreen or PC software
Display	7" colour display, resolution 800 x 480 px
Languages	German, French, English, Spanish, Italian, Chinese, Russian
Interfaces	2x USB Type A 1x Ethernet 1x RS232 Bluetooth for thermal printer (optional with dongle)
Dimensions	225 x 191 x 85 mm (W x H x D)
Weight	3.2 kg
Laser	Class I, safe for the eyes
WiCoTRACE	Limited (recording up to 8 mins. measurement time in TRACE mode and actual lift angle per watch movement)

Result management

Print-out	Label printer or PC printer
Results memory	Yes
Export	Excel, PDF

Measurement

Measurement principle	Simultaneous acoustic measurement of beat noises and optical measurement of balance wheel
Rate variation	-999 to +999 s/d ± 0.1 s/d, from 115,200 A/h ± 0.5 s/d
Amplitude	70 to 360° ± 1.0°
Beat error	0 to 9.9 ms ± 0.1 ms
Q-factor	0 to ∞
Lift angle	10 to 90°

Measuring conditions

Stabilisation time	Manual, 2 s to 2 mins.
Amplification control	Automatic or manual
Measurement time	2 s to 160 h (300 h)
Number of measuring positions	Automatic recognition of 6 main test positions
Beat rate	Automatic or manual, acoustic 3,600 to 72,000 A/h, optical 3,600 to 720,000 A/h
Lift angle	10 to 90° adjustable
Time base	TCXO (± 0.08 s/d)

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