



AQUASTYL®
SLOVAKIA, s.r.o.

DEVICE FOR MEASURING AND EVALUATION OF VIBRATIONS
IN ROLLING BEARINGS
IL 100R/2000



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The devices are intended for measuring and evaluation of vibrations in rolling bearings. Thanks to its universal character the above measuring devices can be used in the production, laboratories and workshops. The electronic unit facilitates measurements both in the manual and automatic regime. The devices can be used in the industry where vibrations of rolling bearings are measured.

DEVICE DESCRIPTION

IL 100R/2000 consists of the mechanical part, electronic control unit and a sensor.

The mechanical part consists of the electric motor, spindle, measuring plugs, adjustable sensor holder, sensor body which serves also as a radial load, axial loading equipment and accessories.

The electronic unit consists of digital electronics which serves for sorting out three basic groups and nine subgroups. The three basic groups which are shown on the screen with big digits are also represented on the electronic panel as colour light signals. The electronic unit contains a loudspeaker box with a broad band loudspeaker which serves for acoustic monitoring of the measured signal in the whole frequency range from 50 to 10 000 Hz.

The main part is the sensor head consists of a Brüel&Kjaer sensor with a conceptionally new arrangement.

The sensor head also includes amplifying electronics which also serves as a radial load.

The accessories consist of an axial loading equipment with holding-down discs and measuring plugs.

PROPERTIES

- The device measures and evaluates the speed or acceleration of vibrations in rolling bearings in three frequency bands according to DIN ISO 15 242:
 - first band 1 NF 50 - 300 Hz
 - second band 2 SF 300 - 1800 Hz
 - third band 3 VF 1800 - 10 000 Hz
 - NF + SF + VF bands with the possibility of swithing off one or two bands
 - IL 100 band - 300 - 10000 Hz. It depicts the vibration values in the band of the older device IL 100.

TECHNICAL PARAMETERS

Measurement vibrations - the sensor head is compatible with the IL 100 head with an accelerometer Brüel&Kjaer Type 4393 with pre-amplifying electronics.

Sensitivity of the sensor head 2,33 mv/ms² (1592 Hz)

Frequency band of the sensor head 50 - 10 000 Hz ± 1,5 dB

Measurement

Measuring range - acceleration 0 - 300 ms⁻² RMS
 - speed 0 - 1000 mm/s RMS

Measuring time 3 s, 5 s, 10 s, 15 s

Evaluated frequency bands

- band 1 NF 50 - 300 Hz
 - band 2 SF 300 - 1800 Hz
 - band 3 VF 1800 - 10 000 Hz
 - band NF + SF + VF total of switched on bands
 - IL 100 band 300 - 10 000 Hz

Sorting

- sorting of measured values 3 classes + % or 9 subclasses + %
- optical signalization of sorting three colour lights
- sound monitoring of the selected band integrated loudspeaker box
- according to the preset sorting level from the available 120 types of rolling bearing
- memory of measurement results/storing of charges 8000/99
- Filtration of the measured signal according to DIN ISO 15 242 digital
- Feeding + 9 V/1,5 A

