



AQUASTYL®
SLOVAKIA, s.r.o.

DEVICE FOR MEASURING AND EVALUATION OF VIBRATIONS IN ROLLING BEARING
IL 400 ARPZ



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DEVICE FOR MEASURING AND EVALUATION OF VIBRATIONS IN ROLLING BEARINGS IL 400 ARPZ

The device is intended to measure the vibration level of rolling bearings with outer diameter up to 400 mm. Its universal character predestines it for production, measuring centres and laboratories.

DEVICE DESCRIPTION

IL 400 ARPZ 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 electronic 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
- band	TH	50 - 10 000 Hz bands with the possibility of swithing off one or two bands
- band	IL 100	300 - 10 000 Hz. it depicts the vibration values in the band of the older device IL 100

TECHNICAL DATA

Measurement vibrations - the sensor head with an accelerometer Brüel&Kjaer Type 4393 with preamplifying electronics

- Sensitivity of the sensor head	2,33 mv/ms ⁻² (1592Hz)
- Frequency band of the sensor head	50 - 10 000 Hz ±1,5 dB

Measurement

Measuring range - acceleration	0 - 300 ms ⁻² RMS
Measuring range - speed	0 - 1000 mms ⁻¹ RMS
Measuring time	3s, 5s, 10s, 15s

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	8000 / 99
/storing of charges	

Filtration of the measured signal	digital according to DIN ISO 15 242
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