

The Harmony
of
Solutions



Vibration transducer calibration system by **RULA** Technologies combines an easy-to-use automated calibration module of TestUp software with a flexible hardware setup to provide verification of all major types of vibration transducers.

The system uses a well-established method of comparison with a reference transducer according to **ISO 16063-21**.

The automated calibration module of TestUp provides the following technical capabilities:

- User-defined sine excitation
- Random signal excitation
- Calibration by substitution method
- Automatic calibration of 3-axial sensors
- Transverse sensitivity test
- Manual signal mode

Technical Features

Frequency range, Hz	0.1 ÷ 105 000
Supported accelerometer types	Charge, IEPE, TEDS
Supported TEDS templates	25
Excitation types	Sine, Random
Calibration by substitution	Supported
Supported Shakers	Any electrodynamic shaker, e.g. TIRA TV51110, TMS K394B30, APS 113-AB

The calibration module provides convenient databases for saving shakers and sensors and automatically generates comprehensive reports after each calibration procedure.

The system comprises **RL-C21** or **RL-C25** vibration control unit and a specialized sensor calibration module of TestUp.

The product is intended for R&D, quality control in production, and laboratories.



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Vibration Transducer Calibration by **RULA** Technologies



Advantages of the system:

• *The highest accuracy of measurement*

The subsystem provides fail-proof accuracy greater than other systems on the market.

• *Shorter calibration time*

Using the calibration module considerably decreases calibration time. For example, it only takes 3 minutes to determine sensor FRF, when using random signal.

• *Intuitive Interface*

Thanks to our user-friendly interface and reliable technical support, the subsystem is easy to learn and operate.

• *Fully automated procedure*

The module performs calibration automatically, providing comprehensive instructions for operating the hardware.

• *Compliance with international standards*

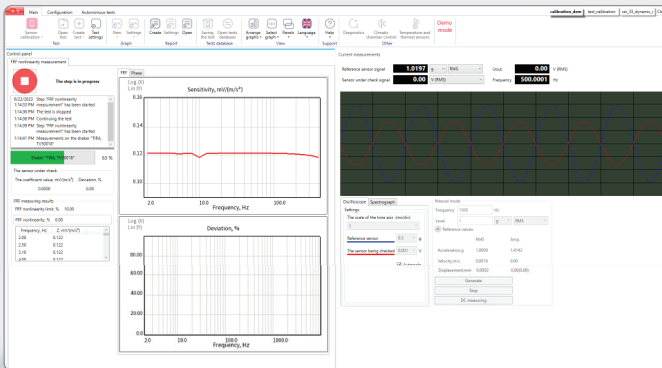
The system provides calibration procedures complying with **ISO 16063** and other international standards.

• *Safety checks*

In the course of calibration the software automatically takes into account shaker limits and selects the required values of acceleration to make sure that your equipment is safe.

• *Report generation made easy*

The software provides user-defined templates to create full and comprehensive reports on the calibration procedures.



Conditions of calibration		State no. 1 May 21, 2015 LPM II	
Accelerometer			
Model	1067	Ampl. range	0.130-200.00 m/s ² (90dB)
Manufacturer		Shake frequency	3000.00 Hz
Serial num.	12240	Frequency range	2.00-2000.00 Hz
Environmental conditions		Measurement settings	
Temperature	24.00 °C	Method	Shaker
Humidity	80.00 %	Shake method	No
Pressure	1013.00 hPa	Shake realization	ISO 16063
Calibration equipment			
Reference accelerometer: 8592.012 g/(m/s ²) calibrated on 12/12/2014 at 19:50:50			
Desired results:			
Frequency, Hz	Sensitivity, m/s ² /g	Deviation, %	Phase shift, °
2.00	0.02028	10.13	170.99
3.00	0.02028	10.13	170.99
5.00	0.02028	10.13	170.99
10.00	0.02028	10.13	170.99
20.00	0.02028	10.13	170.99
30.00	0.02028	10.13	170.99
50.00	0.02028	10.13	170.99
100.00	0.02028	10.13	170.99
200.00	0.02028	10.13	170.99
300.00	0.02028	10.13	170.99
500.00	0.02028	10.13	170.99
1000.00	0.02028	10.13	170.99
2000.00	0.02028	10.13	170.99
3000.00	0.02028	10.13	170.99
4000.00	0.02028	10.13	170.99



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