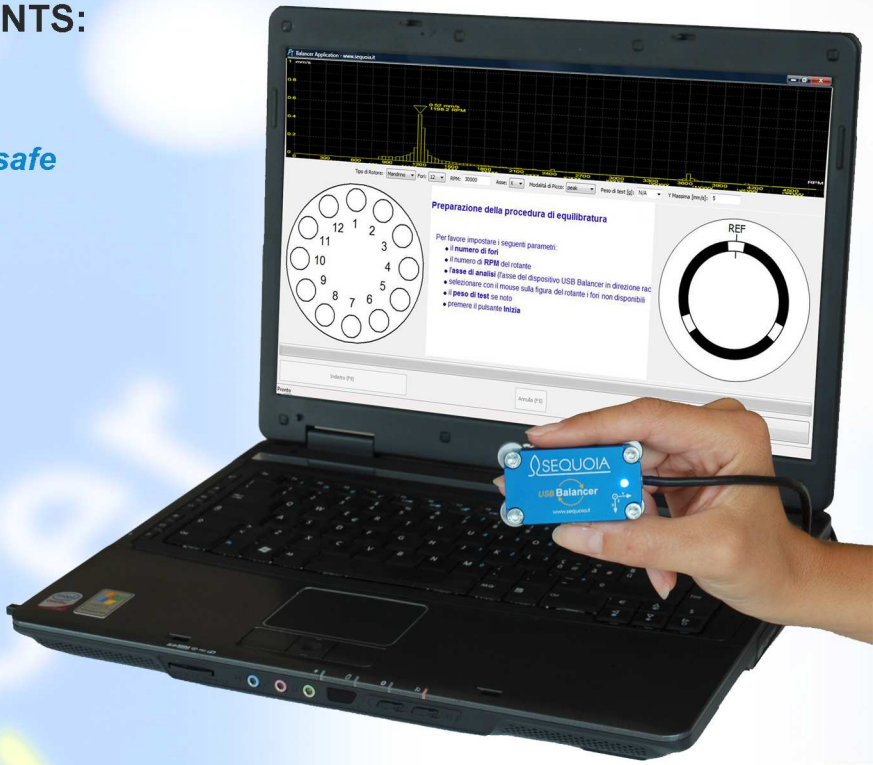
USB Balancer

BALANCING OF ROTATING ELEMENTS: *A NEW APPROACH*



Simple, cost-effective, practical, precise, safe

Thanks to USB Balancer your PC is transformed into a sophisticated balancer that does not require any other accessory to balance your rotating elements.

Your PC with its large screen and the USB Balancer allow the expert operator to diagnose vibration phenomena displaying:

-the spectrum of all occurring vibrations (FFT)
-the rotation speed
-the eventual harmonics
-the unbalance on the three axes in order to select the balancing plan.

Those who prefer a simple procedure will be guided step by step by the user interface up to the final printout of the balancing report.

Innovation

The use of MEMS (Micro Electro-Mechanical Systems) type capacitive sensors for acquisition has made it possible to realize a reduced footprint triaxial instrument able to guarantee constant reliability of measurements through a self-diagnosis system, thereby avoiding expensive periodic calibration checks.

Digital

Another important advantage of using MEMS sensors is the possibility of calculating and transmitting signals in digital form, thus preventing the electro-magnetic fields that are often present (for example in electro-spindles) from interfering with correct functioning of the instrument.

Memory

Automatic filing of reports at the end of the diagnosis for a rapid check of the wear and remote data sharing via Internet.

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Expert vibration monitoring solutions

Easy to use

The balancing through USB Balancer which is installed on the rotating element during normal functioning simplifies operations and avoids unbalance caused by the assembly of separately balanced parts. The handy magnetic supports and the possibility of balancing a rotating element without the need of accessory instruments such as photocells make the entire procedure fast and simple.

Technical specifications

Acquisition

Full scale
+/- 5g optional: +/- (2g, 18g)
Bandwidth
10 - 150000 rpm
Resolution
0,0025 m/s²
Noise
0,075 m/s²

Physical

Dimensions
30 x 55.5 x 15 mm
Weight
55 g
Cable length
3m (optional up to 30m)

Electrics

Communication
USB 2.0
Totally powered by USB
(power consumption 200mA)

Environmentals

Protection level
IP67
Shock resistance
10.000 g
Temperature range
0-70°C
CEI UNI - EN 61000-6-2
CEI UNI - EN 61000-6-4

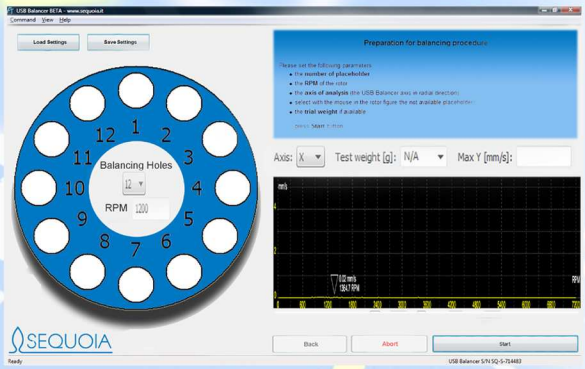
Functioning principle

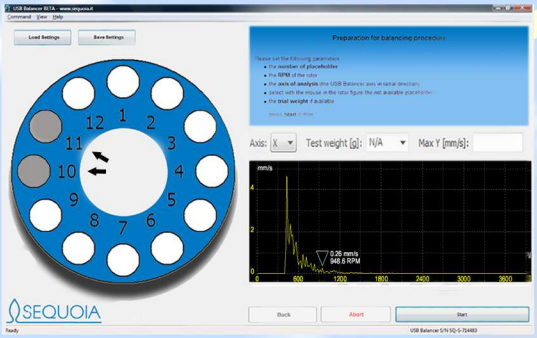
If it is not possible to disassemble the parts to be balanced and when the use of a complicated balancer with a strobe light is to be avoided, with USB Balancer you can balance a rotating element knowing three values only:

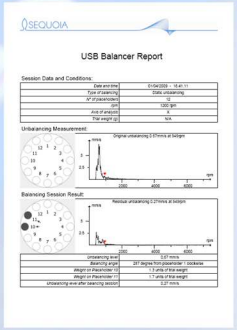
1.the initial unbalance

2.the unbalance determined adding a known weight in an angular position

3.the unbalance determined moving by 90° the weight added in the previous step







Measurements

Unbalancing level (mm/s)

Static Balancing Procedure
on three axes with indication of unbalancing angle and corrective weight

Residual Unbalancing level

Automatic Report
with results exposition, corrective actions, graphs and value comparisons pre and post balancing.

Thanks to its reduced footprint, high robustness and high level physical (IP67) and electro-magnetic protection, the USB Balancer is the ideal instrument to be used in the most difficult industrial environments.

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SEQUOIA IT srl Sede Legale ed Operativa: Via Einaudi 25 10024 Moncalieri (TO)
Tel. +39 011 6402992 Fax +39 011 6402985 www.sequoia.it