

# X BALANCER + TM

SMART PRODUCTS FOR SMART PEOPLE





## X BALANCER +™



Front view containing vibration inputs for left and right plane and the tachometer sensor



Back view containing USB Type - C for fast charging and communication with the application in the PC



## X BALANCER + <sup>TM</sup>

### Introducing the innovative features of the X BALANCER + <sup>TM</sup>

- **Easy to Use:** The X BALANCER + is designed to be user-friendly, with all necessary knowledge available in the application, presumably making it easy for operators to perform balancing tasks.
- **Speed range:** An extended range of rotor speeds, spanning from a remarkable low of 30 RPM up to an astonishing 180,000 RPM.
- **Wireless:** Bluetooth communication establishes a seamless connection between the device and the X BALANCER + application, enhancing the convenience of its use on Android tablets or Windows-based PCs/tablets. This wireless technology eliminates the hassle of wires, allowing users to effortlessly engage with the application. It empowers users to access services, data, and functionalities wirelessly, resulting in a smoother and more user-friendly experience on their chosen device.
- **Applicability:** It can be used for a variety of rotating machines, encompassing pumps, fans, mills, mowers, stirrers, and blowers.
- **ISO Standards:** The balancing process can be conducted in accordance with ISO Standards, ensuring that the balancing is performed to internationally recognized standards.
- **Multiphase:** The device is capable of performing balancing in either one or two planes, which allows for comprehensive balancing adjustments.
- **Weight Distributions:** Weight distributions can be fixed to specific positions, likely enabling precise adjustments during the balancing process.
- **Standard Rotors:** The software includes standard rotors, simplifying the implementation process by providing predefined options.
- **Add vector:** The process of adding vectors enables the combination of unbalanced weights to visually represent a single weight at a specific angle.
- **Material reduction:** Allow the user to reduce mass by drilling a hole on the plane instead of adding weight.
- **Balancing Reporting:** Balancing results can be easily reported, allowing users to document the outcomes of their balancing efforts.



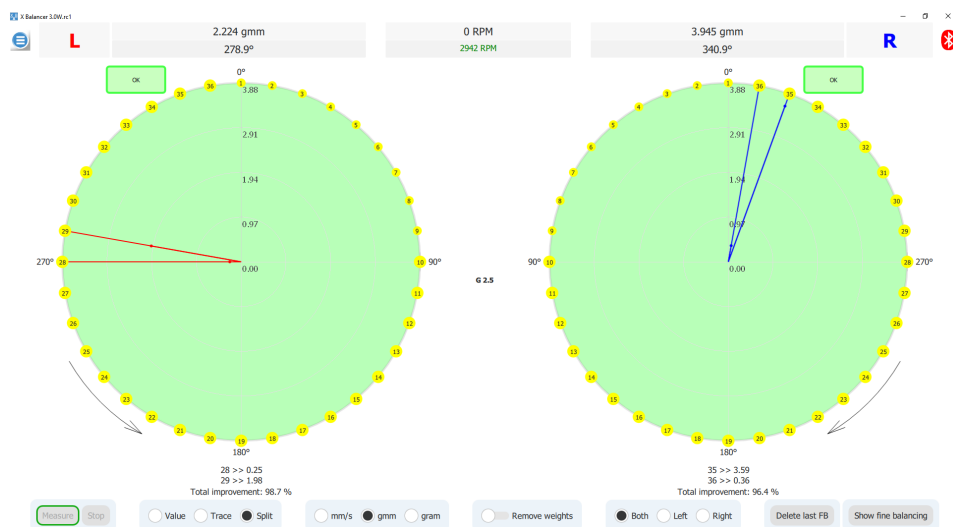
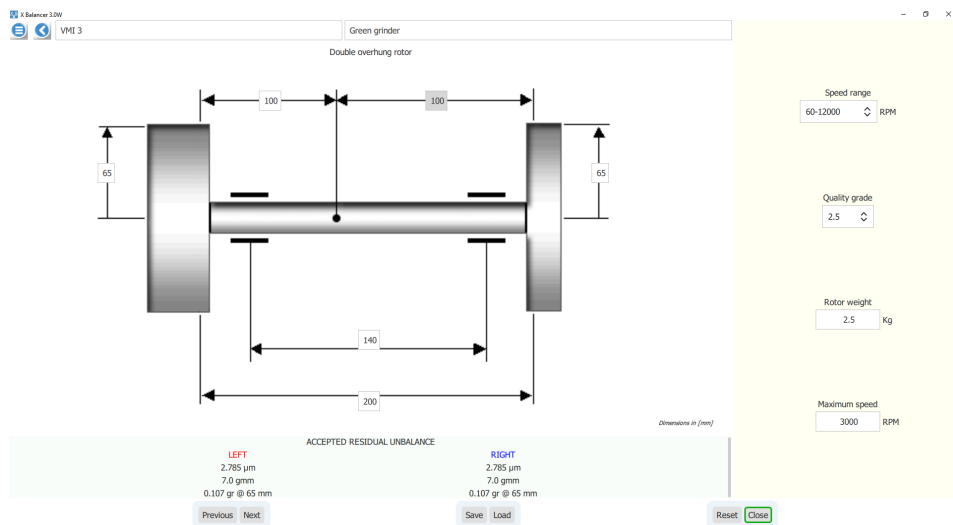


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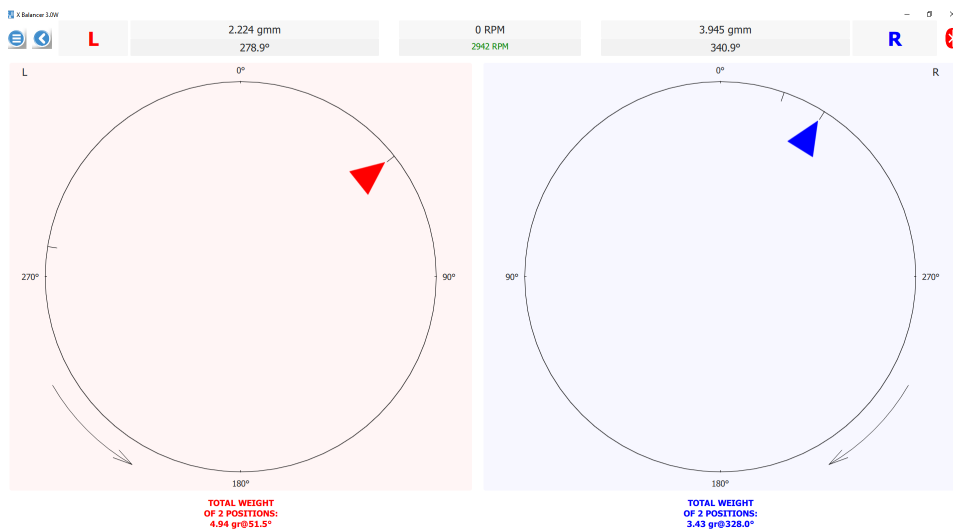
- **Spectra measurement:** The task involves analyzing the spectra of a system's vibrations. This is done within a broad frequency range, ranging from as low as 1 Hz to as high as 12800 Hz. The level of detail in the analysis varies, with resolutions ranging from 0.5 Hz to a maximum of 1 Hz. This analysis is conducted both before and after a balancing process, which aims to optimize the system's behavior. The results can be visually represented in graphs, showing how the frequency components change over the frequency range. These graphical representations are potential components of a balancing report, which provides insights into the effects of balancing on the system's spectral characteristics.
- **Coast-down analysis:** It is a method for identifying mechanical resonances and critical speeds in machines. It involves gradually decreasing machine speed during shutdown while measuring vibration levels and phase angles. The results are presented in diagrams showing vibration levels and phase angles as functions of speed. These diagrams help pinpoint resonance points and critical speeds for maintenance and avoidance of issues.
- **Battery and charging:** The product features an extended battery life, allowing it to be used continuously throughout an entire day without requiring a recharge. In the event that a recharge becomes necessary, the device incorporates a rapid charging system that can restore the battery to 80% capacity in as short as two hours. This combination of long-lasting battery performance and efficient charging ensures a seamless user experience with minimal interruptions due to battery-related concerns. Simultaneously, the device incorporates a finely tuned fuel gauge system that actively monitors the battery's capacity. This information is then accurately displayed within the corresponding application, providing users with real-time updates on the exact remaining battery percentage. Additionally, intuitive icons are also utilized to visually convey the battery's status. This integrated feature enhances user awareness of the battery's condition, allowing for better management and planning of usage patterns.
- **Protection:** The X BALANCER + offers a range of intelligent functionalities and impressive precision. These advanced features are safeguarded within a secure enclosure that boasts an IP65 seal, providing excellent protection against dust and water ingress. Additionally, the enclosure is designed to endure harsh conditions and potential impacts, thanks to its robust impact protection capabilities.

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A summary of some selected menus from the application



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### Electrical properties

Digital	ADC	24 bit	
	Dynamic range	120 dB	
Rotor speeds	Low range	30 - 1200 RPM	
	Medium range	60 - 12000 RPM	
	High range	6000 - 18000 RPM	
Signals in	AC inputs	All standard ICP accelerometers (4mA/24V), velocimeters or displacement sensors	
	External reference	0.5 to 24 V	
Measurements	Amplitude range	0 to 80 g, peak	Depending on transducer
	Accuracy	0.01 g ± 1 % for non integrated 0.1 mm/s ± 2 % for single integrated	
	FFT lines	Up to 12800	
	Resolution	0.5 Hz or 1 Hz	Depending on frequency range
	Spectrum range	From 1 Hz up to 12800 Hz	
Power	Battery	3.7 V, 6.8 Ah Li-ion	Fuel gauge smart battery pack
	Operating time	12 hours typical use	
	Charging	2 hours up to 80% with fast charger	4 hours fully charged
	Charger	Fast charger QC 3.0 compatible	
Temp.	Operating Storage	-20 °C to +70 °C (-4 °F to 158 °F) -30 °C to +80 °C (-22 °F to 176 °F)	
Size	Dimensions L x W x H Weight	215 x 150 x 46 mm 700 gr	





# **VMI International AB**

Sweden

[www.vmiab.com](http://www.vmiab.com)