



Operating Instructions Handheld Vibration Meter

P/N VIBMET-UN
Revision 1.0
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Revision History

Rev.	Description	Revised By	Revised On	Approved By	Approved On
A	Initial Release	CRL	5/07/19	CRL	5/07/19



1.0 General Information

1.1 Introduction

Thank you for purchasing the QLA Digital Verticality Meter. Vibration is one of the more common input variables producing unwanted variation in dissolution data. The U.S. Pharmacopoeia, 711 Dissolution states: “No part of the assembly, including the environment in which the assembly is placed, contributes significant motion, agitation, or vibration beyond that due to the smoothly rotating stirring element”. The term significant requires further definition in order to establish useful Pass/Fail criteria. The Pass/Fail criteria recommended in this manual is based on recommendations made by The subcommittee on Dissolution Calibration, Pharmacopial Forum, Volume 26, number 4. The most satisfactory method of monitoring vibration requires the use of a vibration meter. The QLA vibration meter measures true vibration in terms of displacement, velocity and acceleration. A special probe facilitates vibration measurements in all three axis and is easily placed on the dissolution bath baseplate and other key locations. The meter is also useful in identifying external sources of vibration when vibration measured at the dissolution test station is excessive.

1.2 Product Specifications

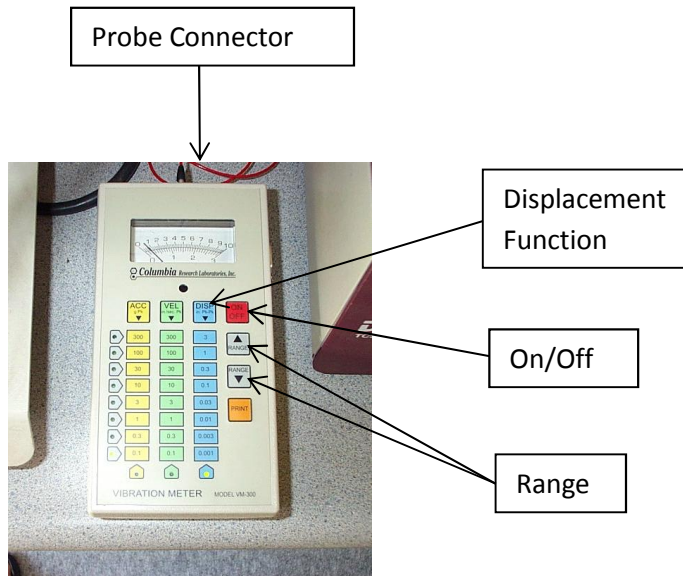
Parameter	Specification
Accuracy	± 4% of full scale
Measurement Functions/Ranges	Acceleration: 0.1 g to 300 g F.S. Velocity: 0.1 in/sec to 300 in/sec F.S. Displacement: 0.00001 in to 3 in F.S.
Sensor Type	Piezoelectric accelerometer
Detector type	Integrated true-RMS responding detector
Display	Analog
Frequency Response	10 Hz – 1000 Hz
Low Frequency Rejection	40 db down (min) at 1 Hz
Size	7.5 in X 4.0 in X 2.0 in
Weight	Approx 2.0 lbs with Probe

2.0 Unpacking

The Handheld Vibration Meter is shipped in a foam padded storage case to minimize any damage that may occur during transport. Check the shipping container for any damage during transport. Unpack the meter carefully. After unpacking, check the meter for possible damage. Report any damage to the forwarding shipper immediately and inform QLA or your local representative.

3.0 Meter Set-up

- 3.1 Connect the probe lead to the probe connector and turn the Vibration Meter On.
- 3.2 Set the meter mode to displacement by pressing the “DISP” function button on the instrument.
- 3.3 Set the range button to the 0.001 inches position. With this range setting, the upper full-scale (10) reading equals 0.001 inches displacement when on the number ‘10’.



4.0 Operating Instructions

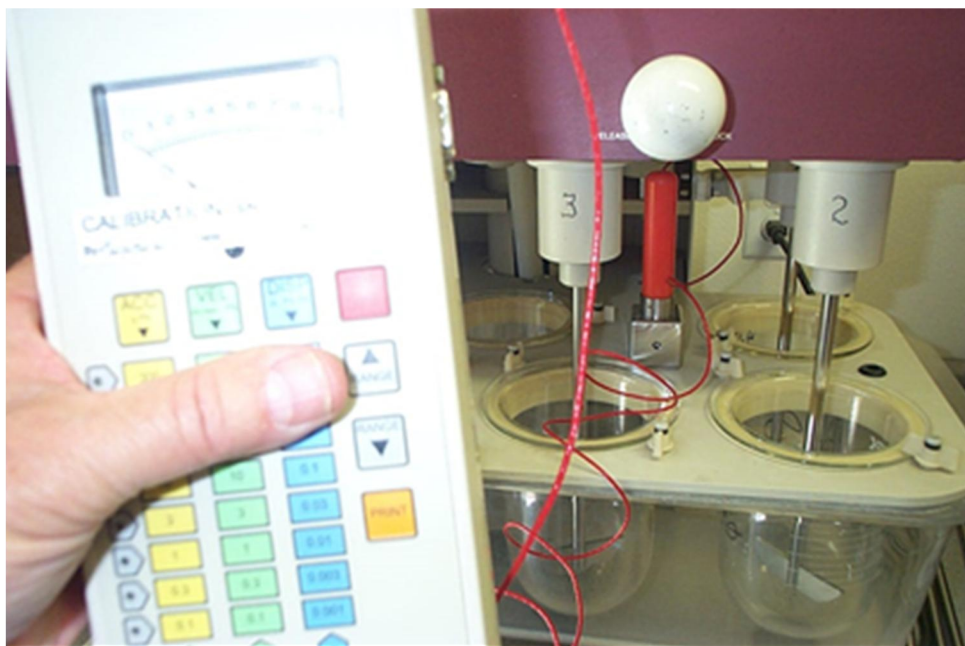
- 4.1 Checking vibration at the dissolution instrument baseplate

CAUTION! Prior to turning on power to the dissolution control, make sure the vibration meter's probe cable is not close to paddle or basket shafts and will not interfere with or wind up on rotating shafts.

Place the probe in the vertical position on the counter top adjacent to the Dissolution Instrument with the Dissolution Instrument's shafts not rotating. Verify that the ambient vibration is as low as possible before testing the baseplate. Note that ambient vibration can be caused by excessive foot traffic, nearby equipment, building features such as elevators or stairways and vehicle traffic external to the building. Care must be taken in choosing placement of your Dissolution Instrument.

Place the probe in the vertical position on the baseplate as shown below. With paddle or basket shafts in place, set speed to 100 rpm. Turn the dissolution instrument's control on and make sure the bath circulator is running and the shafts are rotating. Turn the meter on and record the vibration.

USP Chapter 711 states "No part of the assembly, including the environment in which the assembly is placed, contributes significant motion, agitation, or vibration beyond that due to the smoothly rotating, stirring element." Due to this absence of vibration requirements from governing bodies, QLA recommendation is that the vibration be below .0002 max. inch displacement. This will be the number '2' on the upper scale when the Displacement is set to .001.





5.0 Key Functions

5.1 ON / OFF Key

This key is used to turn the meter on or off.

5.2 Displacement Key

This key sets the meter to measure the displacement.

5.3 Range Key

Use this key to select the desired sensitivity range, use the and buttons to advance to a range that gives a usable reading.

6.0 Recalibration

6.1 Recalibration

The vibration meter is calibrated at the factory and packaged in a protective case to maintain calibration. After each use the instrument should be immediately returned to the protective case for storage. It is recommended that the complete kit be returned to Quality Lab Accessories every twenty four months for recalibration and certification. The meter has a calibration tag on the outside which indicates the last calibration date and the next required calibration date.

Please contact Quality Lab Accessories to make arrangements to return the instrument for calibration.

7.0 Maintenance

The Handheld Vibration meter is designed to be maintenance free.



8.0 Warranty

This Handheld Vibration Meter is warranted to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchase order receipt.

The obligation of QLA under this warranty shall be limited to repair or replacement (at our option) during the warranty period, provided the product is returned to QLA, transportation charges prepaid.

This warranty shall be invalid if the product is damaged as a result of defacement, misuse, accident, destruction or alteration of the serial numbers, repair alteration or maintenance by any person or party other than our own service facility or authorized QLA service technician.