

BioMicroLab

VC100



# automated non-contact liquid level detection

The VC100 uses ultrasonic technology to measure the height of the sample meniscus without coming into contact with the sample. The volume of each well of a 96 well plate is returned in 1 minute. This easy to use system provides a robust alternative to manual or visual well plate inspection.

## applications

- Low or high sample volume detection in uncapped consumables
- Sample library inventory management
- Assay plate quality control
- QC/QA for assay development and DNA processing
- Detect sample volume for incoming plate samples
- Volume verification for plates before and after liquid handling operations

## features

- Scans a 96 well plate in one minute
- Collects and outputs sample volume data for each well position
- Works with common lab solutions such as water, alcohol, DMSO and more
- Outputs data in easy-to-use LIMS formats

## software

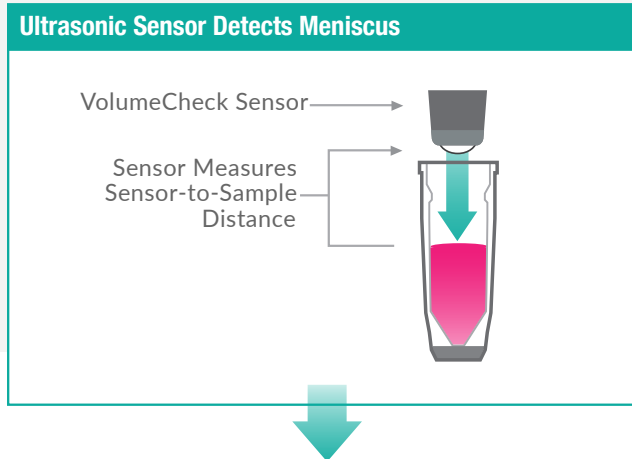
- Graphically displays the well plate volumes in columns and rows
- User interface designed for quality control applications
- Project-based software for multiple types of applications and labware
- Select or deselect rows and/or columns to scan for efficient throughput
- Includes plate data calibration table utility
- Easy-to-use Windows based software
- ActiveX toolkit available for integration projects
- Prints plate data reports

## labware compatibility

- Compatible with a wide variety of consumables such as 24, 48, 96 well ANSI/SLAS standard racks, PCR plates, deep well blocks and assay plates
- Vials or tubes up to 92 mm in height (VC384 model compatible with labware up to 92 mm in height)
- No consumables – works with your sample racks and plates

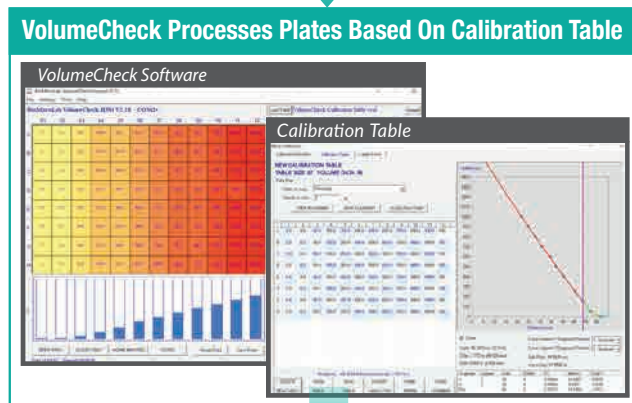
# how it works

VolumeCheck measures sensor-to-sample distance of known sample volumes to create a calibration table. The sensor-to-sample distance decreases as larger amounts of sample are added to the well. Using a reference curve specific to each well plate or tube rack, the VolumeCheck instrument returns the volume of sample or compound in each well position.



## VC100™ calibration table

A sensor distance-to-volume calibration plot is generated by scanning known sample volumes in specific well plates or tube racks. The VolumeCheck software provides a utility to efficiently generate the data to establish the distance-to-volume reference tables. The volumes of unknown samples are scanned and extrapolated from a reference table.



## system resolution and accuracy

The VolumeCheck system is a general purpose volume detection system for a wide variety of labware. The VolumeCheck liquid level sensor is capable of sensing changes in sample volume in the sub 10 µL range. Resolution is dependent on labware and lab processes when using the system.

**Output Data File Created (.csv)**

RACKID	TUBE	SAMPLES	STATUS	VOLATED	VOLAVE	VOLMIN	VOLMAX	VOLSTD	DISHES	DGAVE	DGMIN	DGMAX	DGSTD	DATE	TIME
2005 A01	1	1	1	1.8679	1.8676	1.8676	1.8676	0	37.433	37.432	37.432	37.432	0	8/20/2014	9:56:38
2005 B01	1	1	1	0	0	0	0	0	37.548	37.548	37.548	37.548	0	8/20/2014	9:56:38
2005 C01	1	1	1	0.0223	0.0230	0.0226	0.0226	0	37.499	37.499	37.499	37.499	0	8/20/2014	9:56:38
2005 D01	1	1	1	0	0	0	0	0	37.811	37.811	37.811	37.811	0	8/20/2014	9:56:38
2005 E01	1	1	1	0	0	0	0	0	37.722	37.722	37.722	37.722	0	8/20/2014	9:56:38
2005 F01	1	1	1	0	0	0	0	0	37.689	37.689	37.689	37.689	0	8/20/2014	9:56:38
2005 G01	1	1	1	0	0	0	0	0	37.618	37.618	37.618	37.618	0	8/20/2014	9:56:38
2005 H01	1	1	1	0	0	0	0	0	37.755	37.755	37.755	37.755	0	8/20/2014	9:56:38
2005 A02	1	1	1	96.3453	96.3453	96.3453	96.3453	0	51.673	51.673	51.673	51.673	0	8/20/2014	9:56:37
2005 B02	1	1	1	105.89	105.89	105.89	105.89	0	51.3	51.3	51.3	51.3	0	8/20/2014	9:56:37
2005 C02	1	1	1	89.227	89.227	89.227	89.227	0	51.434	51.434	51.434	51.434	0	8/20/2014	9:56:37
2005 D02	1	1	1	95.2327	95.2327	95.2327	95.2327	0	51.47	51.47	51.47	51.47	0	8/20/2014	9:56:37
2005 E02	1	1	1	83.9569	83.9569	83.9569	83.9569	0	51.841	51.841	51.841	51.841	0	8/20/2014	9:56:36
2005 F02	1	1	1	96.3789	96.3789	96.3789	96.3789	0	51.671	51.671	51.671	51.671	0	8/20/2014	9:56:35
2005 G02	1	1	1	96.5151	96.5151	96.5151	96.5151	0	51.667	51.667	51.667	51.667	0	8/20/2014	9:56:35
2005 H02	1	1	1	96.3988	96.3988	96.3988	96.3988	0	52.054	52.054	52.054	52.054	0	8/20/2014	9:56:34
2005 A03	1	1	1	137.3413	137.3413	137.3413	137.3413	0	48.204	48.204	48.204	48.204	0	8/20/2014	9:56:37
2005 B03	1	1	1	155.257	155.257	155.257	155.257	0	48.274	48.274	48.274	48.274	0	8/20/2014	9:56:29
2005 C03	1	1	1	139.5474	139.5474	139.5474	139.5474	0	48.131	48.131	48.131	48.131	0	8/20/2014	9:56:27
2005 D03	1	1	1	206.5645	206.5645	206.5645	206.5645	0	47.957	47.957	47.957	47.957	0	8/20/2014	9:56:34
2005 E03	1	1	1	216.89	216.89	216.89	216.89	0	47.783	47.783	47.783	47.783	0	8/20/2014	9:56:37
2005 F03	1	1	1	204.3152	204.3152	204.3152	204.3152	0	47.973	47.973	47.973	47.973	0	8/20/2014	9:56:34
2005 G03	1	1	1	131.8453	131.8453	131.8453	131.8453	0	48.411	48.411	48.411	48.411	0	8/20/2014	9:56:34
2005 H03	1	1	1	131.8425	131.8425	131.8425	131.8425	0	48.387	48.387	48.387	48.387	0	8/20/2014	9:56:34

## VC100™ system resolution can be maximized by:

- Centrifuging sample plates to provide a consistent sample level
- Ensuring the reference table is optimized to the consumables and type of sample
- Reducing dimensional variation in labware

specifications	models	throughput speed	labware supported	48 and 24 well	96 well	384 well
	BioMicroLab VC100	one minute per plate	up to 52mm High	yes	yes	no
BioMicroLab VC384	30 sec-3 min per plate	up to 92mm High	yes	yes	yes	
	Dimensions:	28cm x 68cm x 28cm (11"W x 24.5"D x 11.5"H)				
	Weight:	15 kg (33.25 lbs.)				
	Electrical:	110-220 VAC 50/60Hz				
	System Requirements:	Windows 10, 8, 7 • 512MB RAM • One USB port				
	IQ/OQ:	Installation Qualification / Operational Qualification Available				