beevision

BeeVision 180
User Manual

Version 1.4.0

3DTIM

C Contents

1   Overview

This document describes the usage of the BeeVision™ 180 dimensioning and weighing system.

BeeVision dimensioners are provided with Volumizer™ software that enables users to easily self-calibrate the device, perform measurements and share results. Users can use the BeeVision Dimensioners with Volumizer-GUI available on an attached monitor or with Volumizer-WebUI from their browser on their PC, tablet or smart-phone. For more details about the Volumizer, please refer to the Software Guide document.

With Volumizer-API, users can control their dimensioner remotely and integrate it into their software infrastructure.

BeeVision dimensioners are designed as stand-alone devices. There is no need to have a PC or install a software to get the results from BeeVision devices.

2   Installation

BeeVision 180 static dimensioning system comes with a BeeVision dimensioner, 12′ touch screen, integrated scale and handheld barcode scanner as depicted in FIGURE 1.
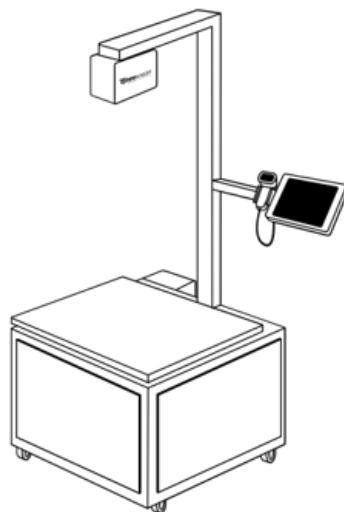

Figure 1: BeeVision 180

Users just need to mount the dimensioner to the base and the can start measuring. For detailed information on the installation of BeeVision 180, check out our installation manual.

There is no need for an external monitor, the user can control all device features on the integrated touch screen.
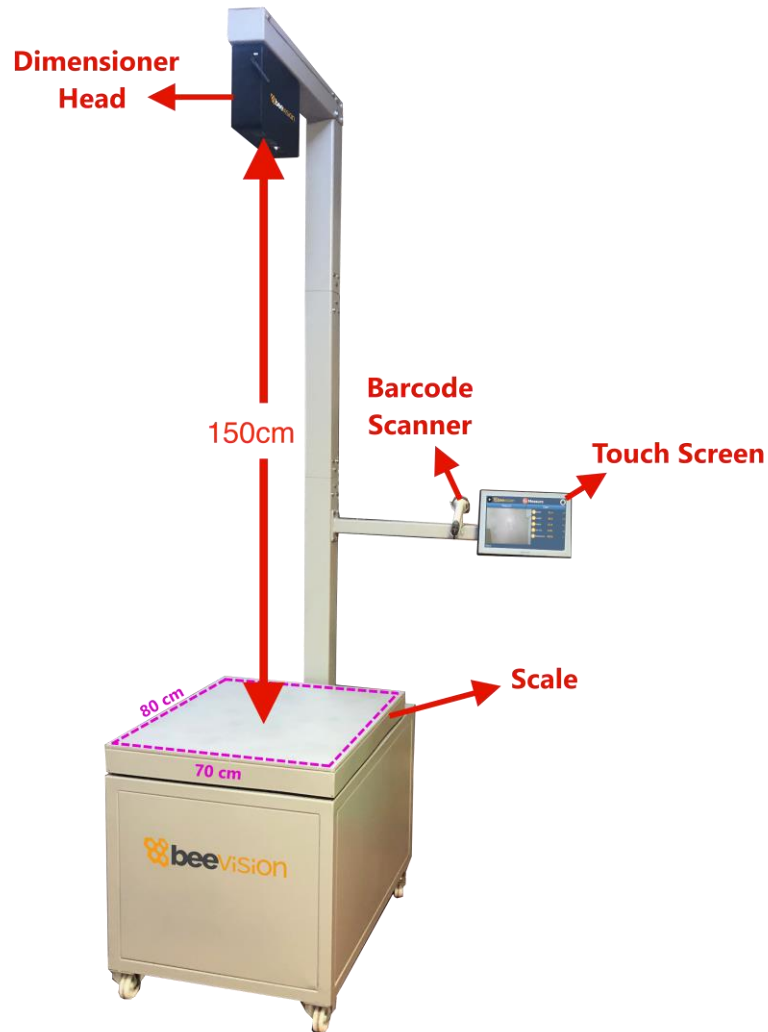

FIGURE 2: SYSTEM COMPONENTS

The distance between BeeVision 180's dimensioner and the scale is 150 cm as depicted in Figure 2. Please refer to the brochure of the BeeVision 180 to find out more about the dimensioning range.

3   Connection Ports

FIGURE 3 below shows the connection ports and power switch that are located on the back of the base scale plate.

FIGURE 3: PORTS AND POWER SWITCH OF THE BEEVISION 180

USB 3.0 port: There is one USB 3.0 port. The handheld barcode scanner is provided with the BeeVision 180 can be connected to this USB port or can be used for connecting printer and flash storage devices. If required, users can connect a USB port.

Ethernet port: To communicate with any computer or server system for the data transfer.

Power switch: Used for switching on or off the system. When the switch is off, all components of the system turned off.

Power port: To supply 220V to the device.

Wireless antenna: Antenna, which is mounted on the dimensioner, performs data transfer by establishing wireless communication with a wireless modem device/PC.

4 Turning ON/OFF

When the power cord is inserted into the power port and given mains voltage, turn the power switch to on state and the system will be ready for use. The input mains voltage BeeVision dimensioner must be at an interval between **100V–240V and 50Hz/60Hz.**

To connect the BeeVision dimensioner to a computer or a local network for data transfer, simply use an Ethernet cable. Please refer to the Software Guide for more details on how to integrate BeeVision to your system.

⚠️ The mouse cursor is by default hidden in Volumizer UI. If you would like to connect a mouse and a keyboard, you can enable/disable mouse cursor with **Ctrl+Shift+M** combinations in your keyboard.

To turn off the device, simply unplug the power cord or turn the power switch to the off state.

5 Field of View

Field of View

The field of view of BeeVision is 60°x40° as illustrated in FIGURE 4. There should be at least 40 cm distance between the object and the device for proper measurement operation.
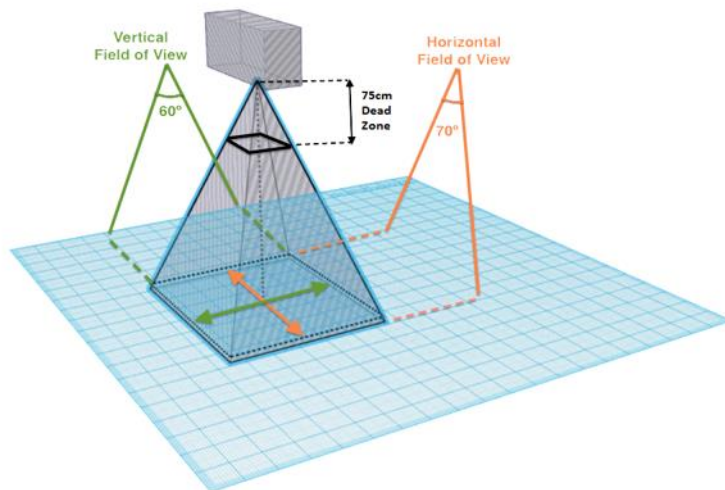
FIGURE 4: HORIZONTAL AND VERTICAL FIELD OF VIEW

The measurement area of the BeeVision 180 dimensioner can be changed on the calibration page. The measurement area should be in the field of view of the device. Some parts of irregular objects may remain out of sight of the device as illustrated in FIGURE 5. Only the surfaces that are visible to the device are included in measurement calculations.
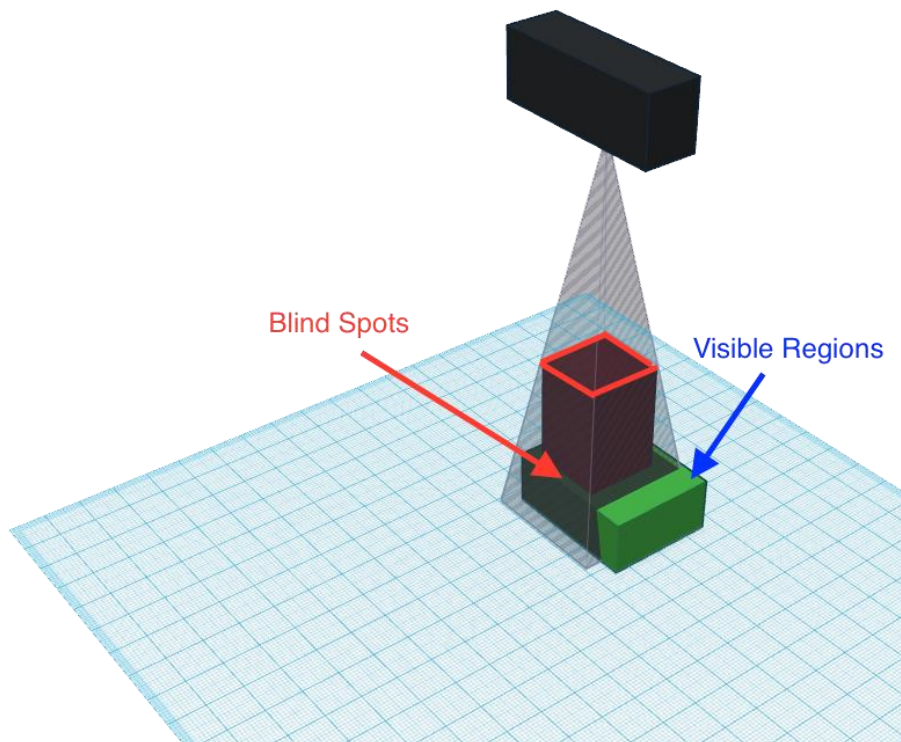

FIGURE 5: BLIND SPOT ILLUSTRATION

6   Communication Interfaces

Following communication interfaces are supported by BeeVision devices.

- **USB interface** for connection of barcode scanner, printer or similar

- **Serial interface** for connection of scale or data transfer to user computer

- **Ethernet interface** for communicating over the internet or local network to a central server of user

7   Volumizer

Volumizer is the software installed in the BeeVision dimensioners that enables users to control the device, perform calibration and measurements. It has a graphical user interface (GUI) that can be used when BeeVision is connected to a monitor. It also has a web-based user interface (WebUI) that can be accessed from a browser with the following address: http://IP_address_of_device. Google Chrome browser is officially supported.

Users can navigate to the pages from the main menu as shown in FIGURE 6 and FIGURE 7.

⚠️ If you use a different browser than Google Chrome, some functions may not work as expected.
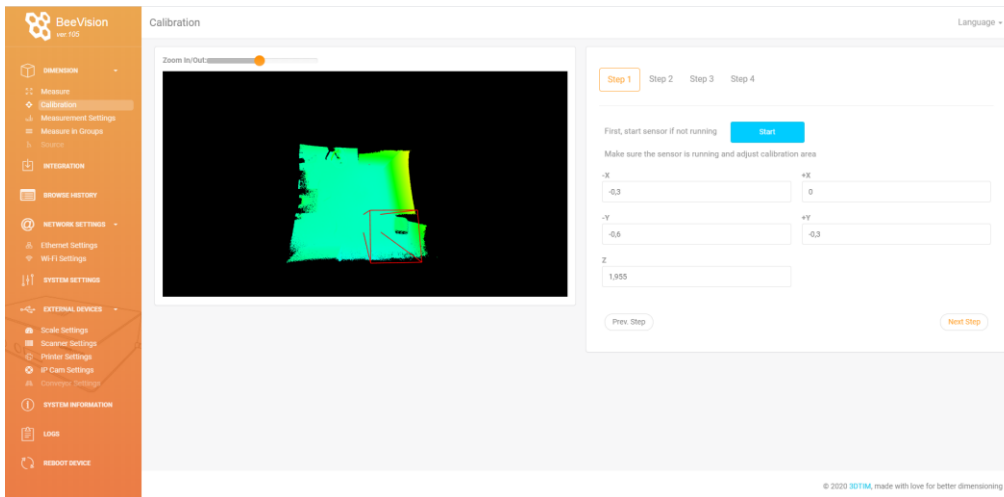
FIGURE 6: MAIN MENU OF VOLUMIZER GUI

FIGURE 7: VOLUMIZER WEBUI

Following pages are included in Volumizer GUI and WebUI:

Dimension	Brings up dimensioning submenu	
Measure	Trigger measurement and display results	

 Calibration	Perform calibration and view 3D, 2D and model data
 Measurement Settings	Change measurement settings
 Measurement in Groups	Perform measurements in groups and save results to a remote address as an XML file per group
 Source	Merge 3D data with a slave, remote BeeVision device
 Decode	Brings up barcode decoding submenu (might be disabled depending on the model)
 Integration	Change result sharing options
 Network Settings	Change Ethernet and Wi-Fi settings
 System Settings	Change system settings such as language, time, date and device operation mode
 External Devices	Brings up external devices submenu
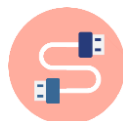
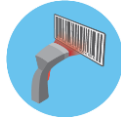|		
Scale Settings	Change scale connection settings	
Scanner Settings	Change handheld and fixed-mount barcode scanner connection settings	
Printer Settings	Change label printer settings	
Conveyor Settings	Change conveyor and PLC connection settings (might be disabled based on the model)	
Ip Cam Settings	Change IP camera settings (might be disabled based on the model)	
Browse History	Browse previous measurement results	
System Information	View information about the system such as model name, certification status, SW checksum, etc.	
Reboot	Restarts the device	

Logs	View system log and parameter change log

GUI Navigation Icons:

 Opens up the previous upper menu page

 Opens up the main menu page

8 Operation

BeeVision 180 static dimensioning system is delivered as pre-calibrated. If the distance between the dimensioner and the measurement surface is not changed, there is no need to recalibrate the device. The measurement area is by default the same size as the measurement platform size. Users can freely decrease or increase the size of the measurement area in Step-3 on the Calibration page.

To perform a measurement, an object must be placed into the measurement area and measurement should be triggered either automatically or manually depending on the selected trigger mode. During the measurement, there must be only one object in the measurement area. Objects can be placed with any orientation to any location in the defined measurement area. BeeVision dimensioners cannot measure transparent objects such as glass.

If the dimensions of the object are outside of the limits of devices range, then an error message is displayed if the corresponding check is activated on the Measurement Settings page.

There are several trigger modes in BeeVision dimensioners that can be selected on the Measurement Settings page:

Manual Triggering: Manual operation mode. The user needs to press the Measure button in GUI or WebUI to perform the measurement.

Barcode Scanner Triggering: The user needs to scan a barcode with an attached barcode scanner to start a measurement. Measurement is triggered after the scan event. In addition to the dimensioning results, the barcode is also shown.

Automatic Triggering: Automatic operation mode. Whenever a package is placed into the measurement area, its dimensions are measured and shown.

Manual & Bar. Scanner Triggering: Manual and Barcode Scanner triggering methods can be used at the same time.

Scale Triggering: When a package is placed on the scale, measurement is automatically triggered after a certain time of delay.

Trigger settings can be changed on the Measurement Settings page of GUI or WebUI.

Calibration

If you need to re-calibrate the dimensioner in BeeVision 180, navigate to the Calibration page of UI or WebUI and follow the steps explained below. You do not need to repeat the calibration process unless the dimensioner is relocated.

Step 1: Crudely select the measurement area using (+) and (-) buttons. The selected area must on the scale. Go to the next step.

Step 2: Remove any objects from the calibration area defined in the previous step and press the Calibrate button. Measurement surface is detected and indicated in white color. Then, go to the next step.
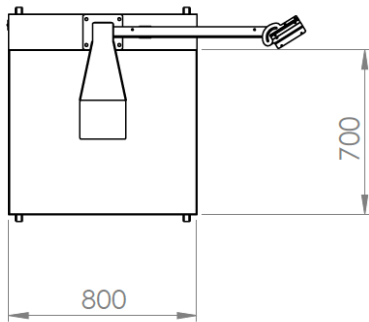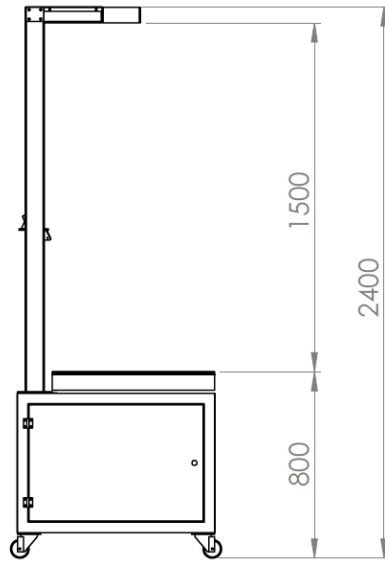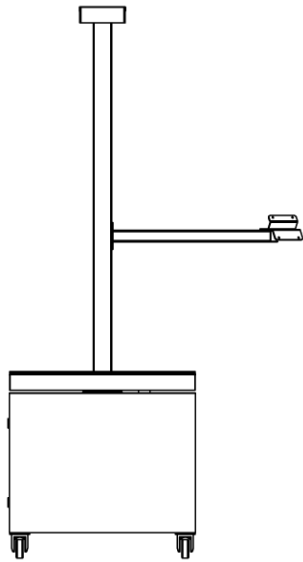
Step 3: Define the measurement area finely using (+) and (-) buttons and go to step-4.

Step 4: Make test measurements. If the height is a little off, go back to Step-2 and manually adjust the ground height for your convenience and retry measurement in Step-4. Finally, save the calibration. If not saved, calibration results are reset after a reboot.

After the calibration, you can go to the Measure page to start measuring.

9 Technical Drawings

Notes