



BeeVision 19x

Dynamic Dimensioning System

User Manual



Manual version 1.5.0

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Safety Precautions

WARNING - Moving machinery and hazardous voltage can cause serious injury or death. Read these precautions before use. Only trained, authorized personnel may operate the system.

Electrical power and grounding

Use only the supply shown on the system rating plate: 220 V or 380 V, 50 Hz, as supplied. Protective grounding is required. Electrical installation, cabinet access and servicing are restricted to qualified personnel. Contact info@beevision.ai if the supply requirements are unclear.

Moving belts and pinch points

Belts, rollers and transfer gaps can trap or draw in hands and clothing. Keep hands, hair, jewelry and loose clothing clear. Never reach into the measurement tunnel or between, beneath or around moving conveyors. Do not climb, sit, stand or ride on the conveyor.

Guards and prestart checks

Operate only with guards, covers and safety devices fitted and functional. Never bypass a guard or safety device. Check for damage before use and report defects. Before starting, confirm that nobody is working on or reaching into the system.

Automatic movement and restart

The feed conveyor stops and restarts automatically. If handheld recovery after a barcode no-read is enabled, scanning can restart the conveyors. A stationary belt may move again without another press of Start. Keep the conveyor path clear whenever the system is enabled.

Jams cleaning and maintenance

Before clearing a jam, cleaning, adjusting, removing guards or servicing, stop the system and follow the site lockout/tagout procedure. Authorized personnel must isolate all affected energy sources, including connected equipment, secure stored energy and verify isolation before work. Emergency Stop and software Stop do not isolate power.

Emergency Stop

Know the location of Emergency Stop controls and keep them accessible. Press Emergency Stop immediately if a person is in danger. Do not reset until the hazard is resolved and the area is clear. Follow the authorized restart procedure; isolate and lock out before entering a danger zone.

Parcels and work area

Use parcels within the limits approved for the installed system. Keep aisles and loading areas clear and well lit. Remove loose packaging safely. Use suitable lifting aids or assistance when handling heavy parcels.

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Overview

The BeeVision 19x Dynamic Dimensioner system consists of an in-motion dimensioner, an optional scale and an optional barcode reader.

This manual describes installation, calibration and use of the BeeVision 19x Dynamic Dimensioner System.

BeeVision dimensioners include Volumizer software for calibration, measurement and result sharing. Use the Volumizer graphical interface on the system operator interface to operate the device.

Volumizer API supports remote control and integration with your software infrastructure. Connect to an external computer or network through the LAN port on the system panel.

BeeVision dimensioners operate as standalone devices. A separate computer or additional software installation is not required to obtain measurement results.

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Installation

Install the system in accordance with the Installation Manual supplied with your equipment. The illustration below identifies the main external features of the enclosed BeeVision 190.



FIGURE 1 BEEVISION 190 SYSTEM COMPONENTS

- | | |
|----------------------------|------------------------|
| 1 Mounted touchscreen | 5 Measurement conveyor |
| 2 Measurement housing | 6 System panel |
| 3 Start and Emergency Stop | 7 Status light |
| 4 Feed conveyor | |

The feed conveyor admits parcels to the second conveyor for weighing and measurement inside the enclosed housing. An optional exit conveyor can be fitted downstream (Figures 2 and 3).

Keep at least **20 cm** between incoming parcels (Figure 4). See Auto Feeding in Section 5. Refer to the supplied installation layout for your configuration.

Conveyor configurations

Parcels travel along one aligned conveyor path. These functional schematics show the order of the conveyor sections.

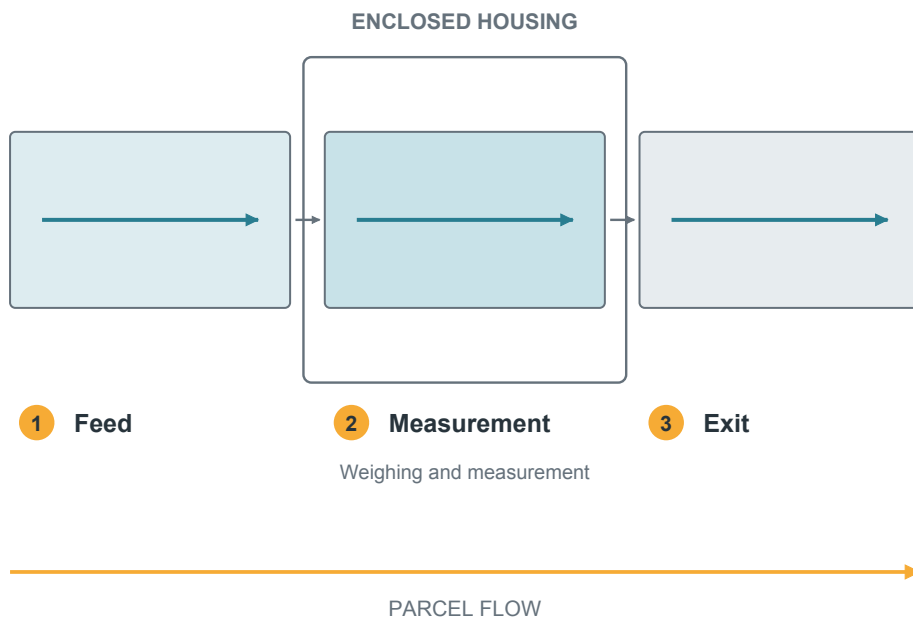


FIGURE 2 THREE CONVEYOR FUNCTIONAL LAYOUT

The third conveyor provides optional outfeed after measurement.

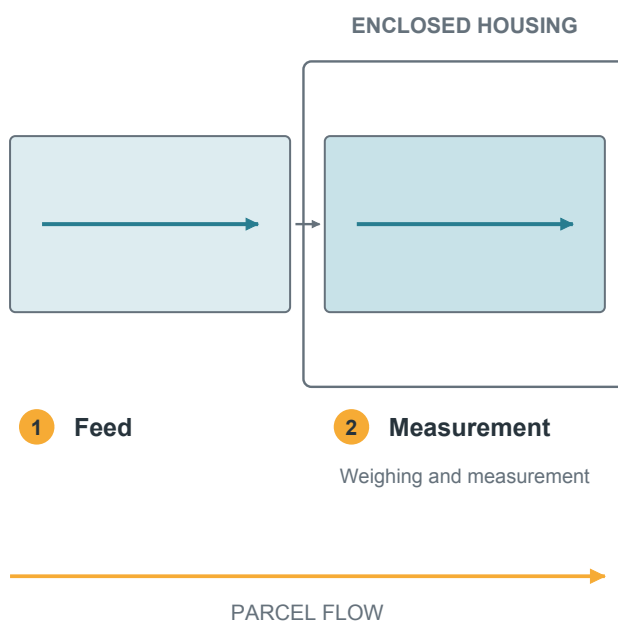


FIGURE 3 TWO CONVEYOR FUNCTIONAL LAYOUT

Parcel spacing

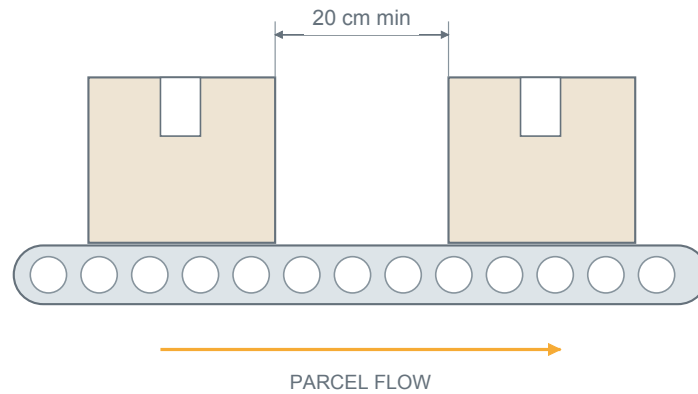


FIGURE 4 MINIMUM GAP BETWEEN CONSECUTIVE PARCELS

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LAN Connection

Only a **LAN connection** is supported for connecting the system to an external computer or network. The **LAN input port is located on the system panel**.

Connect an Ethernet cable from the LAN port on the system panel to your local network. Refer to the Software Guide for network configuration and result-sharing settings.

Connecting to the network

1. Locate the LAN port on the system panel.
2. Connect the Ethernet cable to the port and your network.
3. Configure the network and verify result transfer.

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Turning the Device ON/OFF

The mains supply must match the installed system: **220 V or 380 V, 50 Hz**. A grounded connection is required. Contact info@beevision.ai if the required supply is unclear.

Start

Apply mains power to start the system. Once the area is safe, press the **green Start button** to run the conveyors. See the labeled controls in Section 5.

Start is disabled while Emergency Stop is engaged. Clear the cause, make sure the area is safe, release Emergency Stop and press Start to restart.

Stop and power off

Use a Stop button to halt the conveyors. To turn off the complete system, disconnect its power supply as instructed for the installation. Do not turn off only the operator interface.

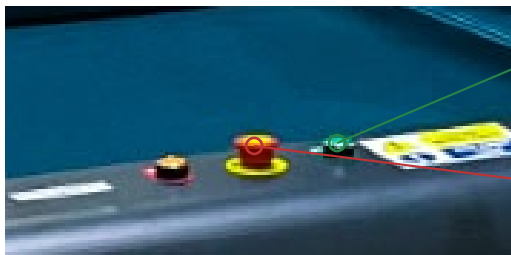
Before clearing a jam or working on the conveyor: isolate and lock out the affected equipment as described in Safety Precautions on page 2. Emergency Stop does not isolate power.

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Operation

The system measures dimensions and, with the fitted options, weighs parcels, reads barcodes and captures images. Parcels are fed one at a time.

Operator controls



Start

Green pushbutton

Emergency Stop

Red mushroom on yellow base

Press **Start** to run the conveyors. In an emergency, press **Emergency Stop**. Start is disabled while it is engaged. Clear the cause, make sure the area is safe, release Emergency Stop and press Start to restart.

Before any intervention, follow Safety Precautions on page 2.

Auto Feeding

The feed conveyor stops and restarts automatically to admit one parcel at a time to the measurement conveyor. Leave at least **20 cm** between incoming parcels.

The photoelectric feed sensors may miss objects below **2 cm** high, such as documents. Process these as a separate group; do not feed them directly after a parcel or bag. Early transfer can cause **Objects too close** warnings and interrupt measurement.

Dimension Measurement

The system is factory-calibrated. Recalibration after installation is unnecessary unless the conveyor speed changes. Consult BeeVision before changing speed.

Dimensions are captured while the parcel moves between conveyors. After it leaves the dimensioning frame, its 3D view appears on the Volumizer **Measure** page. Results appear once weighing and barcode scanning finish on the second conveyor.

Measurement results

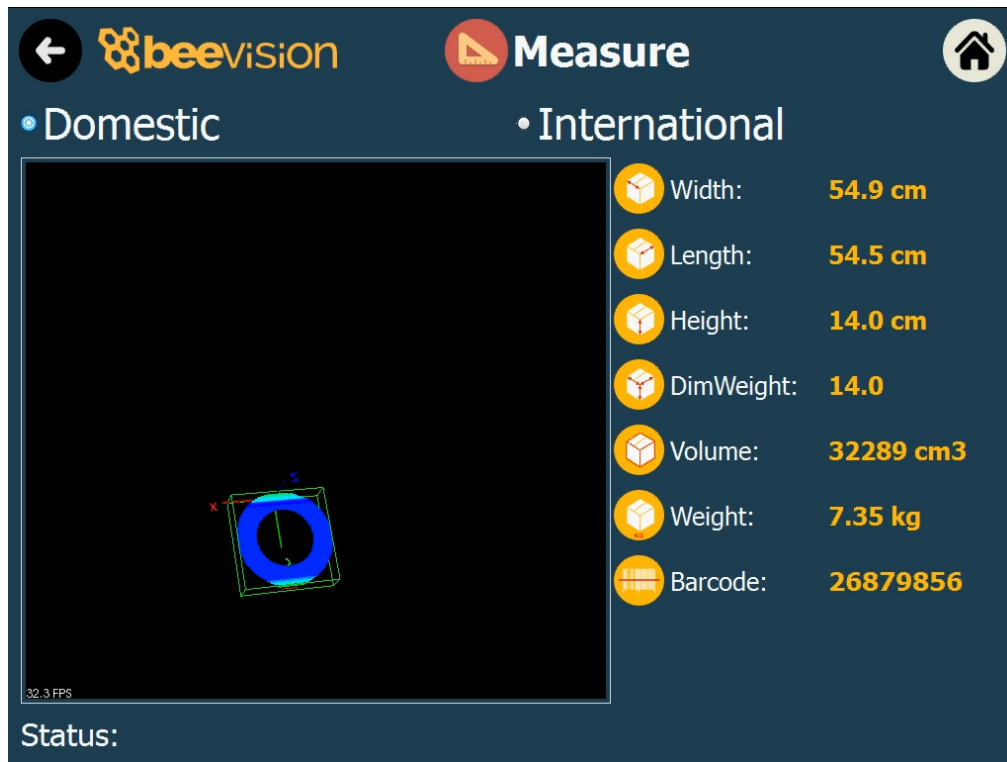


FIGURE 5 RESULTS AND 3D REPRESENTATION OF OBJECT

The conveyors must be moving to capture dimensions. Dimensioning stops automatically when the conveyors stop.

Interrupted measurement: If a conveyor is stopped while a parcel is beneath the dimensioning frame, the result may be affected. Re-feed the parcel and repeat its measurement.

Weight Measurement

The typical weighing range is **100 g to 60 kg**; the actual range depends on the supplied configuration. Use the approved limits for your installed system.

Weighing takes place while the parcel moves on the second conveyor. Feed parcels one at a time, with at least **20 cm** between them, so that each parcel is weighed independently.

Weighing precautions

Transport restraints protect the weighing equipment during shipment. Remove the protection screws and plates at both load cells before weighing, as instructed in the Installation Manual. Follow the isolation precautions on page 2 before this work.

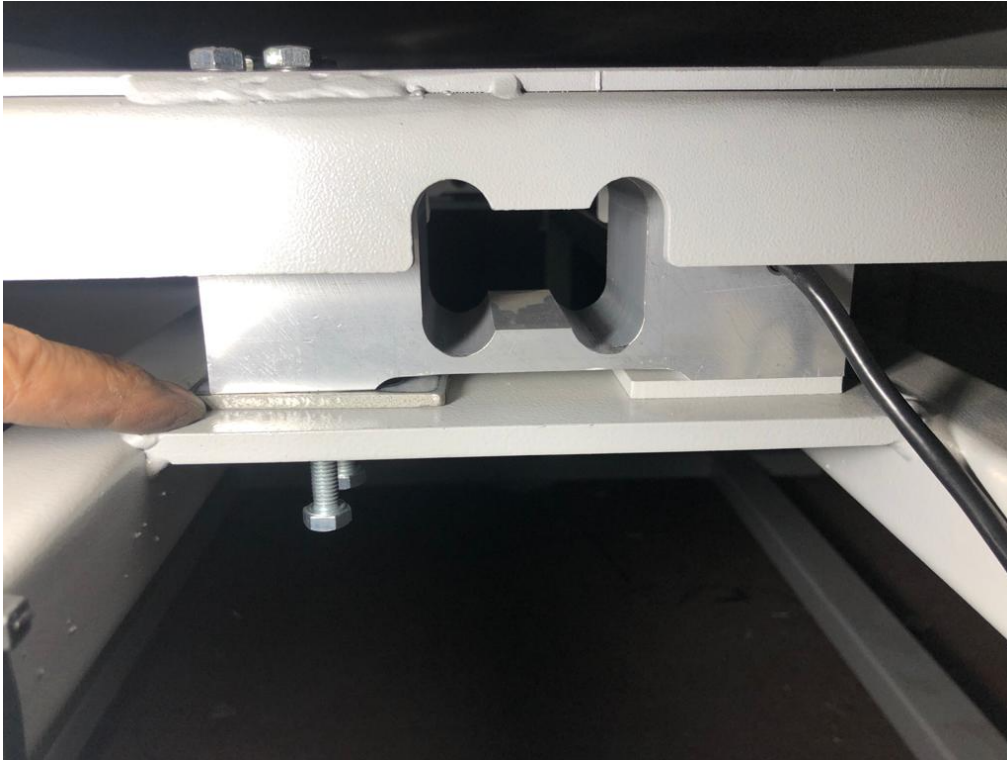


FIGURE 6 LOAD CELL TRANSPORT PROTECTION

Figure 6 shows the protection screws and plates beneath the measurement conveyor. Refer to the Installation Manual for their removal.

The feed conveyor pauses automatically until the parcel on the measurement conveyor passes to the next conveyor.

Do not disturb the conveyors while a parcel is being weighed. External contact or vibration can affect the weight result.

Audible indication

Successful weighing: No sound is emitted.

Unsuccessful weighing: A long beep is emitted.

Barcode scanning and image capture

Measurement limits

A parcel below the configured minimum weight may produce **ERR**. The typical minimum is 100 g. A parcel longer than the configured dimensioning limit can also cause a weight error; for example, a 90 cm parcel exceeds an 80 cm limit.

Conveyor speed is set for the requirements of the supplied system. Contact info@beevision.ai before changing it.

Barcode scanning

Scanning takes place while the parcel moves on the second conveyor and continues until it leaves. The system can read barcodes in different positions and orientations. Reader illumination switches on during scanning.

Successful scan: No sound is emitted.

No barcode found: A long beep is emitted. By default, the conveyors stop after the parcel leaves the measurement conveyor, and the result is shown as **NOREAD** or **ERR**.

Recovering a no-read

Re-feed the parcel or remove it from the system using the safe operating procedures. If handheld scanning after measurement is enabled, scan the barcode to complete the record.

Automatic restart: A successful handheld scan can restart the conveyors. Keep the path clear. Before reaching into a danger zone, follow the isolation precautions on page 2.

To change the default stop-on-no-read behavior, open **External Devices > Scanner Settings** and change the corresponding option.

If a barcode scan fails, the result is shown as **ERR**. This can happen when parcels are too close: the second parcel enters the measurement conveyor before the first leaves, interrupting the scan.

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Volumizer

Volumizer is the software supplied with the BeeVision system. It provides device control, calibration and measurement through its graphical user interface on the system operator interface.

Open the main menu to navigate between pages, as shown in Figure 7.



FIGURE 7 MAIN MENU OF VOLUMIZER GUI

The following pages describe the menus available in Volumizer GUI and WebUI.



Dimension

Opens the dimensioning submenu

Dimension and connectivity



Measure

Trigger a measurement and display the results. This is the default page.



Calibration

Calibrate the device and view 3D, 2D and model data.



Measurement Settings

Change measurement settings.



Measurement in Groups

Group sequential measurements and save one XML file per group to a remote address.



Source

Merge 3D data with a remote slave BeeVision device.



Decode

Open the barcode-decoding submenu. This function is disabled on BeeVision 170.



Integration

Configure how measurement results are shared.



Network Settings

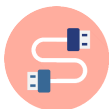
Configure the LAN connection.

System and external devices



System Settings

Set the language, date, time and device operating mode.



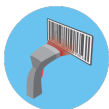
External Devices

Open the external-devices submenu.



Scale Settings

Configure the scale connection.



Scanner Settings

Configure handheld and fixed-mount barcode readers.



Printer Settings

Configure the label printer.



Conveyor Settings

Configure conveyor and PLC connections. Availability depends on the model.



IP Camera Settings

Configure the IP camera. Availability depends on the model.



Browse History

Browse previous measurement results.

Information and navigation



System Information

View the model name, certification status, software checksum and other device details.



Reboot

Restart the device.



Logs

View the system log and parameter-change log.

Navigation icons



Back

Return to the previous upper-level menu.



Home

Open the main menu.

For detailed Volumizer instructions, refer to the Software Guide supplied with the system.

Notes