



**HV-100**  
Plant Handling Robot

## SMART ~ PRACTICAL ~ TOUGH

### // WHO WE ARE

Harvest Automation is based near Boston, MA, USA and our robots have been working for growers since 2013 across the US and Canada as well as in the EU and Australia. We offer new and used robot sales, rentals, training, service contracts and a full world-wide warranty on everything we deliver.

Benefit	Reduces Cost	Reduces Risk	Increases Quality
50% unit handling cost reduction	•		
Long-term cost visibility		•	
Less susceptible to worker availability		•	•
Better immigration compliance	•	•	
Improved worker safety/health	•	•	
Less susceptible to labor law changes	•	•	
Less susceptible to healthcare changes	•	•	
More container handling flexibility	•		•
Efficient water, pesticide, herbicide usage	•		•

Specification	Performance
<b>Peak Throughput</b>	240 pots/hour under ideal conditions
<b>Environment</b>	24-Hour Operation Indoor/Outdoor Typical Nursery & Greenhouse Environment: Dirt/Dust/Rain/Sprinklers Temp: 32°F-105°F
<b>Robot Size, Weight</b>	24" Wide X 21" Tall, 100 lbs.
<b>Battery Run Time</b>	4-6 hours depending on terrain
<b>Payload/Containers</b>	Container Weight: Up to 25 lbs. Container Diameter: 5" to 12.5" Container Height: 5.75" to over 15" All Common Materials and Shapes
<b>Compliance</b>	FCC Class A CE
<b>Data Connectivity</b>	Wi-Fi Ethernet

### // FUNCTIONS:

- Spacing
- Collection
- Consolidation
- Follow-Me

### // FEATURES:

- For use in all greenhouse and nursery environments
- Scalable: start with a few and add more as your needs grow
- High placement accuracy
- Quick swap rechargeable battery
- Simple training and setup
- No programming required
- No complex service requirements
- All-weather 24 hour operation, full sun to full dark



## HV-GEW-501: GreenElf 501 Applicator Kit

// Our fully automated system applies a precise dose of granular fertilizer while moving plants

Clear hopper lets the operator know when to refill

Wide mouth cap for easy hopper refill

The famous GreenElf 501 Applicator as seen at [www.greenelfworks.com](http://www.greenelfworks.com)

Rechargeable battery for up to 45,000 shots

Easily program the exact dose for your application

Limit switch triggers a dose only when the robot picks up

Adjustable delivery tube puts the dose exactly where you want it

Easy bolt on assembly fits all models of HV-100



### // ABOUT HARVEST AUTOMATION

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## Harvest Knowledge: New Real-time Dashboard



The dashboard displays the following information:

- Header:** Harvest Knowledge logo, user email (jose@bestnursery.com), Best Nursery, and Logout button.
- Navigation:** Documentation and Stats tabs.
- Date:** Fri, Jun 07
- Stats Table:**

Robot	Wrench Status	SW	Plants	Operating Hours	Plants/Error	Last Update
HAI-1030	Clear	1.32	1159	6.8	579.5	3:41 PM
HAI-1031	Clear	1.32	1204	6.9	1204.0	3:43 PM
HAI-1033	Clear	1.32	1255	7.0	418.3	3:43 PM
HAI-1222		1.32	0	0.0	--	--
HAI-1237	Clear	1.32	1198	6.9	599.0	3:41 PM
HAI-1238	Clear	1.32	397	2.9	44.1	11:17 AM
<b>TOTAL</b>			<b>5213</b>	<b>30.5</b>	<b>306.6</b>	
- Error Breakdown:**
  - HAI-1030:**

Error	Count	More Info
OUT OF SPACE	2	<a href="#">More Info</a>
  - HAI-1031:**

Error	Count	More Info
CANT CLOSE GRIPPER	1	<a href="#">More Info</a>
  - HAI-1033:**

Error	Count	More Info
TEAMMATE TIME OUT	2	<a href="#">More Info</a>
LOW BATTERY	1	<a href="#">More Info</a>
  - HAI-1222:**

Error	Count	More Info
SYSTEM FAULT	3	<a href="#">More Info</a>
  - HAI-1237:**

Error	Count	More Info
CANT REACH BOUNDARY	2	<a href="#">More Info</a>
  - HAI-1238:**

Error	Count	More Info
CANT FIND BOUNDARY	8	<a href="#">More Info</a>
OUT OF SPACE	1	<a href="#">More Info</a>
- Latest Report:** Best Nursery Dashboard (Generated Wed May 1 01:45:20 2024)
- Contact Us:** 85 Rangeway Road, Building 1 - 1st Floor, Billerica, MA 01862, tel 978-528-4250, info@harvestai.com

- Displays the productivity and status of all robots working that day in real-time
- Operators can see if they are on track for daily targets and get help with troubleshooting steps for errors and faults to keep productivity up
- Also access the latest report for your fleet with lifetime details by robot, by day, and by week
- Requires WiFi
- API for integration with production systems

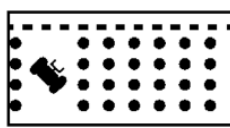
Stats update every minute

Wrench indicates a hardware problem  
Link to fault details

**HAI-1222**

```
2000-01-01 00:00:12 0 invalidSystemTime Invalid date (2000-01-01)
2000-01-01 00:00:12 0 invalidSystemTime Invalid date (2000-01-01)
2000-01-01 00:00:12 0 invalidSystemTime Invalid date (2000-01-01)
```

**OUT OF SPACE**



**Possible Cause**

Source plants are too close to the placed plants. An obstacle such as a person, large weeds, or plant material could have triggered this.

**Resolutions**

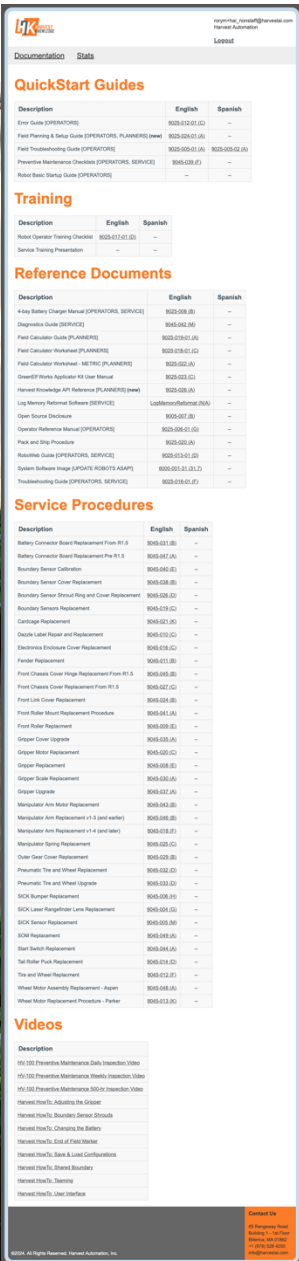
The robot requires a frontier at least 2.5m (8ft) long. Check for and remove obstacles in the robot's path.

Link to error details

Link to spreadsheet complete history

## Harvest Knowledge: Online Documentation

// Comprehensive and up to date documentation for setup, training, service, and more



### QuickStart Guides

Description	English
Error Guide [OPERATORS]	9025-012-01 (C)
Field Planning & Setup Guide [OPERATORS, PLANNERS] (new)	9025-024-01 (A)
Field Troubleshooting Guide [OPERATORS]	9025-005-01 (A)
Preventive Maintenance Checklists [OPERATORS, SERVICE]	9045-039 (F)
Robot Basic Startup Guide [OPERATORS]	--

### Training

Description	English	Spanish
Robot Operator Training Checklist	9025-017-01 (D)	--
Service Training Presentation	--	--

### Reference Documents

Description	English
4-bay Battery Charger Manual [OPERATORS, SERVICE]	9025-008 (B)
Diagnostics Guide [SERVICE]	9045-042 (M)
Field Calculator Guide [PLANNERS]	9025-019-01 (A)
Field Calculator Worksheet [PLANNERS]	9025-018-01 (C)
Field Calculator Worksheet - METRIC [PLANNERS]	9025-022 (A)

### Videos

Description
<a href="#">HV-100 Preventive Maintenance Daily Inspection Video</a>
<a href="#">HV-100 Preventive Maintenance Weekly Inspection Video</a>
<a href="#">HV-100 Preventive Maintenance 500-hr Inspection Video</a>
<a href="#">Harvest HowTo: Adjusting the Gripper</a>
<a href="#">Harvest HowTo: Boundary Sensor Shrouds</a>

### Service Procedures

Description	English	Spanish
Battery Connector Board Replacement From R1.5	9045-031 (B)	--
Battery Connector Board Replacement Pre R1.5	9045-047 (A)	--
Boundary Sensor Calibration	9045-040 (E)	--
Boundary Sensor Cover Replacement	9045-038 (B)	--
Boundary Sensor Shroud Ring and Cover Replacement	9045-026 (D)	--

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