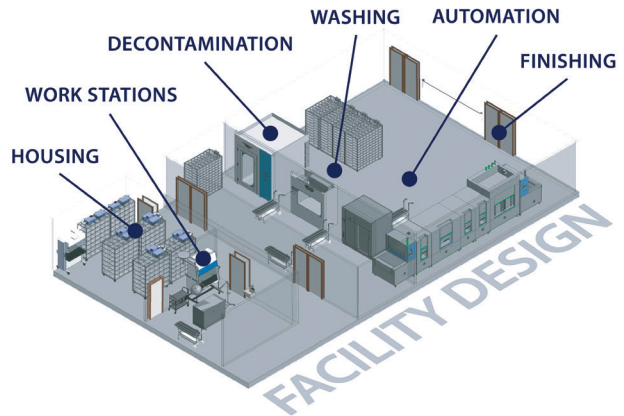


**Your trusted global partner  
providing critical solutions**

For over 50 years, Allentown has provided key solutions to the biomedical research community. Our high-quality equipment and advanced vivarium systems continue to define and exceed industry standards. Innovation, quality and service are at the heart of the customer experience.



# Automation

## AUTOMATED GUIDED VEHICLE (AGV)



**Omni directional**

Driving

**Up to 1.5 m/s**  
Speed

**Up to 1,200 kg**  
Lifting Weight

**360°**  
Safety



**Forklift power in the footprint of a pallet truck**

The Nipper AGV V4 is a compact autonomous mobile robot designed for internal horizontal transport of load carriers. Our AGV is the safe, reliable co-worker in dynamic environments where people and machines are continuously moving. Missions (tasks) for the Nipper AGV V4 are optimised by the Fleetmanager. The Nipper AGV V4 is the next step in automation of animal facilities offering a scalable and flexible solution.



**Heavy Lifting in a Small Footprint** – Delivers forklift-level lifting capacity (up to 1,200 kg) in the footprint of a pallet truck, maximizing efficiency in tight facility layouts.

**Omni-directional mobility** – Four independent drive wheels allow smooth, precise navigation in any direction, even in congested or narrow corridors.

**Always Aware, Always Safe** – Integrated Sick nanoScan3 laser scanners ensure continuous environment monitoring, with emergency stop functions and STO SIL3 motor shutdown for maximum operator safety.

**Autonomous fleet operation** – FleetManager software assigns and optimizes missions, enabling multiple AGVs to collaborate seamlessly.

**Wireless fast charging** – LiFePO4 battery with inductive charging reaches 80% in just 20 minutes, reducing downtime and simplifying operations.

**Scales with Your Facility** – Easily integrated into existing workflows, from single-unit deployments to full-facility fleets, providing a future-ready automation solution

**Human-friendly design** – Equipped with HMI touchscreen, manual override controls, and acoustic/visual signals for intuitive use and safe human-robot interaction.

## Technical specifications

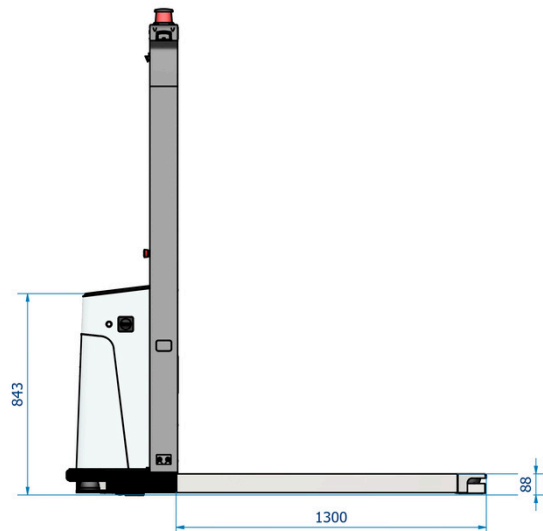
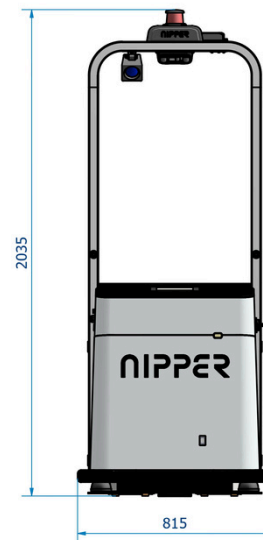
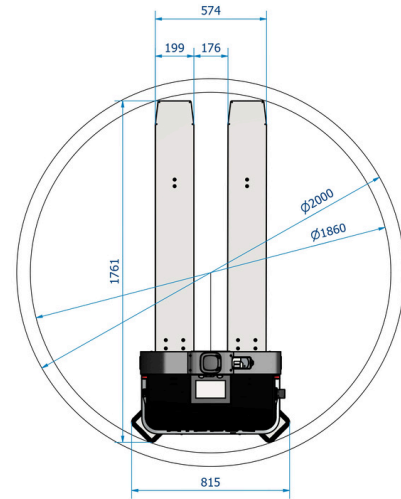
Driving – 4 omnidirectional drives
Dimensions – 1767 x 814 x 2035 mm (LxWxH)
Tare weights – 310 kg
Material forks – Stainless Steel
Fork Height – 88 mm (one way pallet)
Lifting Height – 140 mm (low 88 mm - high 228 mm)
Battery – LiFePO4 (wireless charging)
Charging Time – 20 min (from 20% to 80%)
Operation Cycle – Approx. 4 hour, depending on conditions
Optional object detection
Voltage: 48V
Controls
■ Manual Control: Joystick and/or touchscreen
■ HMI: 7" full colour touchscreen
■ Navigation: Natural feature navigation
■ Fleetmanager: Server, web based access
■ Connectivity: Wifi

## Operating Conditions

Operating temperature: 0-40° C
Relative humidity: 0-95%, non condensing
Ground clearance: 10 mm
Unevenness floor: Max. 5 mm
Floor*: Dry, flat, non-dust
*Detailed "Required Floor Conditions" applicable

## Safety

360° safety PLd (performance level d)
Sensor Sick nanoScan 3 for 360° environment scanning
Two emergency stops
Human-Robot interaction module
Main switch with Lockout Tagout
STO SIL3: Certified safe motor shutdown to prevent any unintended movement
Acoustic warning signal
Conformity and Compliance
■ CE certification
■ 2006/42/EC
■ ISO 3691-4



## Charger



The wireless charger V4 is an inductive fast charging system with an output power of 3 kW. The Nipper AGV V4 automatically activates the charging process, and deactivates at the desired battery level. The charger works contactless, is safe and maintenance free.

### Electrical Data

Input voltage: 1-phase, 230 V~ +/- 10%

Input frequency: 150/60 Hz

Input power: 3.3 kW

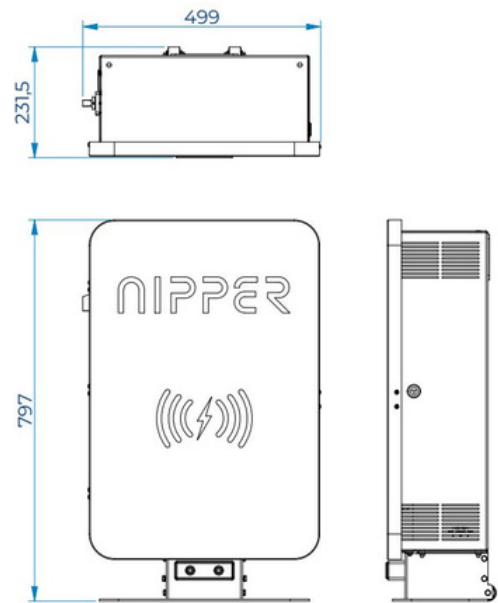
Circuit breaker size: 16A

Voltage, Power and Current:

- Nominal output voltage: 48V
- Maximal output Voltage: 60V
- Maximum output Power : 3 kW
- Maximum output Current: 60A CD

Charging system: Inductive

Power Plug: EU/Type C



### Mecanical Data

Dimensions: 499 x 797 x 238 mm (W x h x D)

Weight: 20 kg

Protection class: IP20

### Environmental

Ambient temperature: -10 to +40° C

Storage temperature: -20 to +55°C

Relative Humidity: 0-95% non condensing; no condensation or icing

Noise: 55 db (A)

### Compliance

Safety: EN 60335-2-29, EN 62311

Emissions: EN 55011

Immunity: 6100-6-2

RoHS: Compliant

CE: Compliant

Protection class: Electronics = 1 ; Charging coil = 2