

Neo

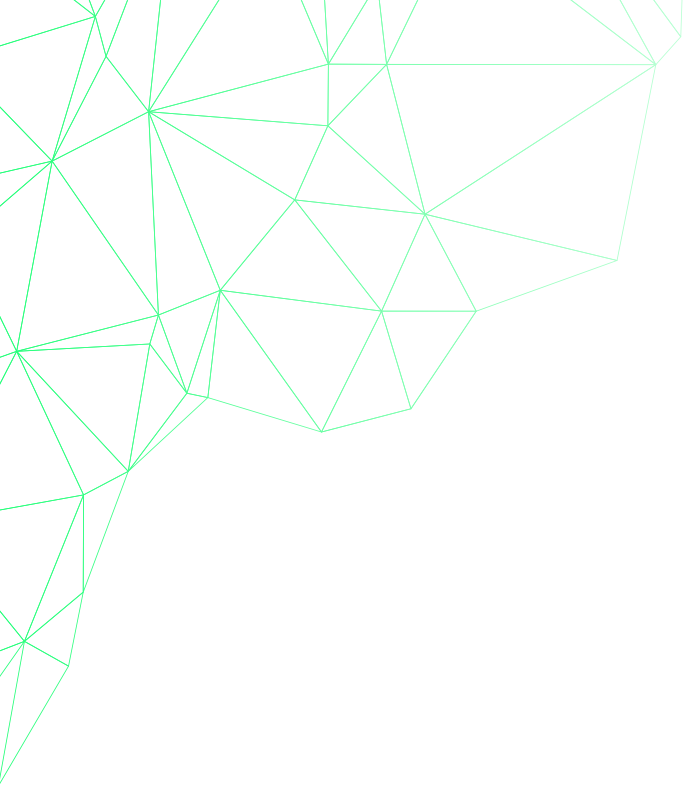
by **Avidbots**[®]

Frequently Asked Questions

Avidbots robotics solutions are used throughout the world in various environments such as manufacturing, warehousing, healthcare, airports and transit, education and retail. Neo™, the fully autonomous floor scrubbing robot, is boosting productivity at locations around the world. We hope you're as excited about the potential of commercial floor cleaning robots as we are, but we also understand you may have questions about working with Neo at your facility. We're here to help! You'll find a list of FAQs below. Not finding the answers you need?

[Contact us to learn more.](#)





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Introducing Neo

Neo is the most advanced fully autonomous commercial floor scrubber robot on the market. Powered by Avidbots Autonomy and using insightful analytics from the proprietary Avidbots Command Center, Neo optimizes your cleaning operations.

Neo has been engineered from the ground up to be the highest in quality, with industry-leading technology and software, reliability and serviceability.

Tackling the time-consuming and tedious job of scrubbing floors, Neo frees your cleaning staff to concentrate on other business-critical or high-value tasks, increasing the productivity of the entire cleaning function.

Read the introductory FAQs below to get to know Avidbots better and discover the features and benefits of the Neo floor scrubbing robot.

[Contact us to learn more](#) or to inquire about a demonstration of Neo at your premises.

What is Avidbots?

Avidbots is a robotics company with a vision to bring robotic solutions into everyday life to increase organizational productivity and to do that better than any other company in the world. Its ground-breaking product is Neo, an autonomous floor scrubbing robot widely deployed by the world's leading facilities, including airports, warehouses, manufacturing sites, shopping malls, universities and other commercial spaces worldwide.

Founded in 2014 by two robotics engineers from the University of Waterloo, Pablo Molina and Faizan Sheikh, the company today has a rapidly expanding customer base in over a dozen countries and offers comprehensive service and support to customers on five continents. Avidbots has grown to be a global leader in commercial service robots, achieving many important industry firsts along the way. Avidbots was delighted to be named part of [Deloitte's 2020 Technology Fast 50](#) in 2020.

[Read more](#) about the growth of Avidbots, our vision and values.

How do I find out about career opportunities at Avidbots?

As a pioneer in facility management and robotics, we're always keen to meet with designers, engineers, and other innovators seeking to build the future of the industry with us.

Check out the [Avidbots Careers](#) page for a list of current opportunities or feel free to send your resume, outlining your career objectives, to hr@avidbots.com.

What is Neo, the floor scrubbing robot?

Neo, the fully autonomous commercial robot floor scrubber, turns conventional floor cleaning upside down. Built from the ground up to be a robot, Neo is optimized for autonomous cleaning and sanitization. You won't find a cup holder, seat or steering wheel on Neo — they're not needed, and make the robot's design less optimal, while reducing your team's efficiency and your return-on-investment.

Powered by Avidbots Autonomy, Neo automates the cleaning process. Leave floor care to Neo, and let your team focus on higher value tasks. Neo is so much more than your typical semi-autonomous floor scrubber.

Read more about [Neo, the fully autonomous floor scrubbing robot](#).



Why is a robot floor scrubber better than a manual (ride-on or push-behind) scrubber?

While manual scrubbers have dominated commercial cleaning for many years, floor scrubbing robots are next-generation solutions delivering substantive benefits over aging technology. The Neo fully autonomous floor scrubbing robot offers significant operational and business advantages over manual cleaning with a ride-on or push-behind scrubber.

► Fully autonomous cleaning

Driven by the [Avidbots Autonomy](#) featuring advanced dynamic planning and obstacle avoidance, and equipped with a market-leading sensor suite with 360° visibility, Neo can autonomously map and clean your premises without the need of a manual operator. Neo detects and navigates around anyone or anything in your environment and continually updates its cleaning routes to optimize cleaning performance.

► Maximum uptime and productivity

With labor costs rising, especially in the wake of the pandemic, and continued risk of sickness and absence, managing a productive, cost-effective cleaning operation is a challenge for any facility manager. Neo is always ready and eager to clean, supporting up to six hours of run time on a single battery charge, with extended operating time available by simply swapping batteries over. Neo is equipped with a 109 liter (28.8 gallon) solution tank and a 135 liter (35.7 gallon) recovery tank. Viruses, bacteria and other contaminants are picked up during cleaning, held in the separate recovery tank, and not spread to other parts of your facility.

► Consistent, high quality cleaning performance

Neo never misses a shift. With a choice of cylindrical or disc cleaning heads, you can select a cleaning configuration that best suits your location's unique cleaning requirements. Neo tracks every square foot of every cleaning operation and, via the proprietary [Avidbots Command Center](#), delivers timely, objective performance reports to your desktop, phone or tablet, with visual cleaning maps, at-a-glance cleaning quality ratings and deep, granular insight on demand. You can also keep tabs on your Neo — or entire fleet of Neos — at all times through the fleet dashboard. You can view the online status and location of your robots, as well as the success of each cleaning plan by robot and location. Finally, if the floor layout changes seasonally or for maintenance, facility managers can request map updates. Optimized cleaning plans are just another way Neo lets you and your managers continuously improve your cleaning operation.

► Simple to deploy, easy to operate

While getting Neo up and running is a simple task, you'll benefit from dedicated support from the [Avidbots Customer Success team](#). They'll oversee your Neo deployment and training, guide your team through configuration and operation, as well as create cleaning plans unique to your facility. They'll train your staff on operating and maintaining your Neo, and teach them about Avidbots Command Center. Neo's easy-to-use touchscreen controls and familiar steering column ensure operators can quickly get up to speed. With [24/7/365 Real-Time Monitoring and Remote Assistance](#) from Avidbots experts, your Neo will always perform at its best.

► Always connected, always improving

With Wi-Fi, 3G and 4G LTE network support, Neo can be monitored and managed by your team in real time, so you're always in the know. Layout changes or location-specific adjustments to cleaning plans or settings can quickly be synced with Neo. [Avidbots Autonomy](#) seamlessly updates via the Cloud with manual updates being a thing of the past. The machine learning equipped Avidbots Autonomy will continually get "smarter", recognizing different objects in different environments and floor plans. This is similar to self-driving cars powered by AI that learn from other self-driving cars on the road and get smarter over time.

► Safe and secure operation

With the [Avidbots Autonomy](#), Neo is able to adapt to changes in the environment, leading the industry with real-time obstacle avoidance! Neo's state-of-the-art technology combines with advanced safety features including e-stop buttons, bumpers, beacons, integrated signaling lights, and a Blue Light and sound system to ensure environmental safety.

► Untapped performance and productivity insight

Take the guesswork out of cleaning performance. Neo and the proprietary [Avidbots Command Center](#) provide a deep understanding of your facility operations, with enhanced visibility and accountability for your cleaning performance. This baseline productivity data also helps for auditing purposes or when comparing to other parts of your business or market. You want metrics? Whether you're running one Neo or a global fleet, you'll be able to access highly detailed reports of every cleaning operation, including precision productivity metrics and sector-level coverage maps.

► Enhanced brand and customer experience

While the "connected facility" or "facility automation" are great industry buzzwords, often the technologies powering these advances are hidden behind the scenes or taken for granted. Automated, low-energy lighting, solar panels tucked away on a roof, and intelligent HVAC systems are fantastic assets to the organization, but are likely to be ignored by customers and co-workers alike. A robot cleaning your floors every day, working side-by-side with your operations team in public spaces? That's a mobile innovation showcase that demonstrates your organization's progressive outlook and commitment to future technologies. It's no surprise to see our customers around the world outfitting Neo in branded graphics or using Neo for mobile advertising.

What type of industries are the best fit for Neo?

Neo has been successfully deployed in a wide range of industries around the world, including:



Transit
& Airports



Warehousing
& Logistics



Retail &
Shopping
Centers



Manufacturing



Education



Healthcare


Where can I see Neo in action?

Neo has been deployed in businesses across North America, Europe, Asia, South America and Australia, so you may well see it cleaning the floors on your next visit to the airport, hospital or retail mall!

We hold regular demonstrations and demos for businesses interested in purchasing Neo as well as roadshow events around the world.

Interested to see Neo in action?

[Book a demo](#) with one of our experts and discover how Neo is so much more than your average cleaning robot.

 [Discover why Neo is a great choice for boosting productivity in your industry.](#)



What is Avidbots Command Center?

Avidbots Command Center is the management and reporting platform that supports one Neo — or entire fleet of Neos — remotely and in real-time.

Neo provides you with a level of oversight and performance measurement that you won't find in other commercial floor scrubbers. The proprietary Avidbots Command Center lets you remotely monitor, manage and track your Neo(s) in real time. You'll be able to access highly detailed reports of every cleaning operation, including precision productivity metrics and sector-level coverage maps. With the Neo floor scrubbing robot and supporting Avidbots Command Center, you and your managers will always be in the know.

Learn more about [Avidbots Command Center](#).

What questions can Avidbots Command Center help me answer?

Avidbots Command Center provides visibility into a part of your business that is often unseen or can't be subjectively assessed:

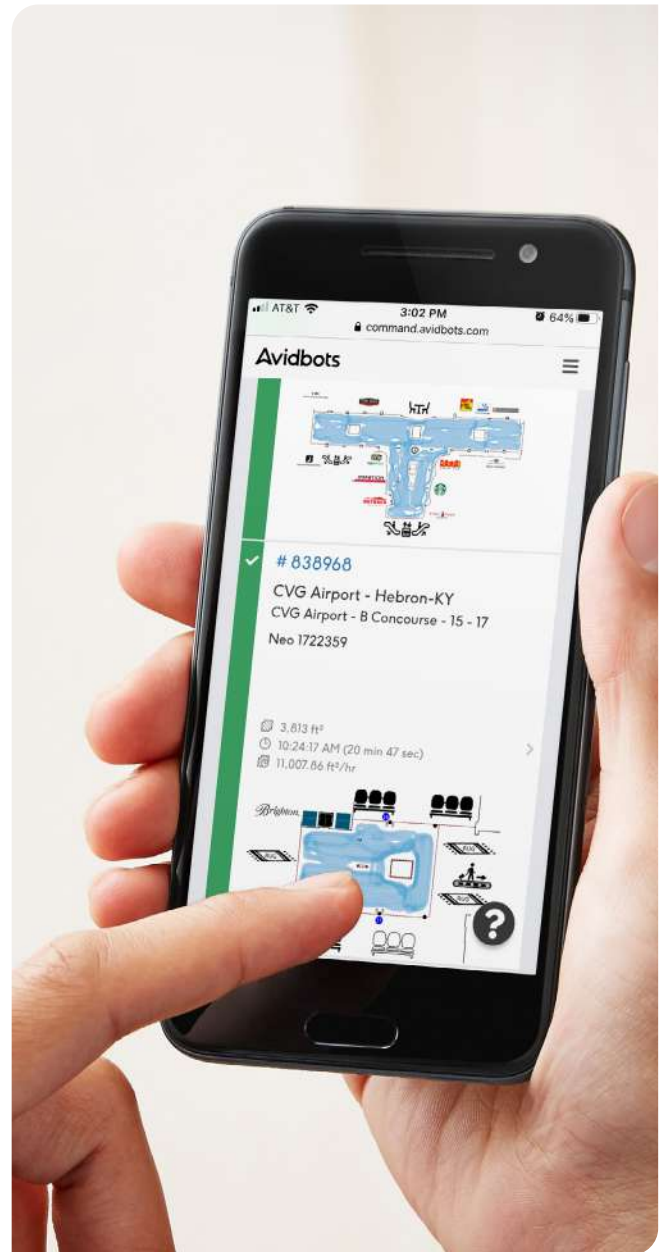
- ▶ Was my facility cleaned last night?
- ▶ How well was my facility cleaned?
- ▶ How long did it take?
- ▶ How much floor area was actually covered?
- ▶ How productive was the cleaning operation?
- ▶ How much water did I use?
- ▶ What brush pressure was used?
- ▶ Where exactly in the facility was cleaned (and what was not)?

Avidbots Command Center provides answers to these questions and more. For every cleaning operation, on every floor, every day. Reports are available for a single Neo — or an entire fleet of Neos — including productivity metrics, trend reports and visual ratings for each cleaning operation.

View the online status and location of your robots at a high level or take a closer look at the cleaning process via the [Avidbots Command Center: Real-Time Monitor](#) for real-time video monitoring of your Neo(s) and transparency into operations when you're not there.

On the go? The Avidbots Command Center supports automated alerts to mobile devices for events such as cleaning completion and performance, required water changes and other activities. With Avidbots Command Center, you'll never be in the dark about your cleaning operation.

Understand fleet performance at a glance with configurable cleaning targets to define success and transform data into meaningful results, enabling you to optimize your cleaning operation over time.



 [Learn more about Avidbots Command Center.](#)

Using Neo

Neo turns conventional floor cleaning upside down. Built from the ground up to be a robot, Neo is optimized for autonomous cleaning and sanitization. You won't find a cup holder, seat or steering wheel on Neo — they're not needed, making the robot's design less optimal while reducing your team's efficiency and your return-on-investment.

There's no need for extensive training. Neo's large, 25 cm full color rear touch screen allows for easy control, while the use of a familiar steering column and twist throttle support precise steering and acceleration when cleaning manually.

Extensive language support allows operators from numerous countries to become friends with Neo, ensuring easy configuration of custom cleaning settings as required. Of course, as a fully autonomous cleaning robot, Neo can be set to clean your facility using your preset cleaning configuration with just a couple of taps.

Read the FAQs below to discover the simplicity of cleaning your facility with Neo. [Contact us to find out more](#) or to enquire about a demonstration of Neo at your premises.

How does an operator control the Neo floor scrubbing robot?

Neo is equipped with a large, 25 cm full color rear touch screen, which is used to control the robot, launch auto cleaning operations or configure manual settings. With access secured by a four-digit passcode, managers can ensure that only authorized operators are able to view and adjust Neo's operation. A simple and intuitive user interface allows operators to easily set Neo cleaning in autonomous or manual modes.

Does Neo support forward and reverse gears?

Neo's drive wheel supports three forward gears, a reverse gear as well as park — just like you'd find on a car with automatic transmission. In autonomous mode, local cleaning plan settings allow granular adjustment of Neo's speed throughout your premises to maximize cleaning performance. In manual operation, gears can be selected easily with a simple tap of the screen, while Neo's twist-grip throttle provides precision speed control for operators.

Does Neo support manual operation?

Absolutely. In autonomous mode, Neo can navigate and clean your facility without any human intervention, but it also offers a manual cleaning mode. Once set via a simple button tap on Neo's touchscreen interface, operators use a handlebar and twist-grip throttle to steer Neo and control its speed. Manual cleaning settings allow easy adjustment and monitoring of Neo's water flow, brush pressure and rear vacuum.

How can an operator understand Neo's current status?

Alongside messages displayed on Neo's touchscreen, the robot is equipped with LED safety indicators around the front and side of its chassis. As well as clearly displaying turn notifications, the status lights improve the robot's visibility and serve as status indicators, changing colour to denote specific operating conditions.

- **Auto cleaning mode**
- **Manual cleaning mode**
- **Learning mode**
- **Obstacle Detected**
- **Emergency Stop Activated**
- **Turning Indicator**
(a blinking side light indicates the direction Neo is turning)

What languages does the Neo automated floor scrubbing robot support?

As of January 2021, the languages for the robot GUI are English, French, Spanish, Japanese, Korean, Finnish, German, Traditional Chinese and Simplified Chinese.

Customers are able to easily change Neo's user interface locale via Avidbots Command Center, to suit operators' native languages.

We are rapidly adding support for more languages, as Neo expands across the globe.

Please [contact us](#) to request details.

Mapping and navigation

Our proprietary AI software, [Avidbots Autonomy](#), powers Neo, enabling the fully autonomous floor scrubbing robot to understand its operating environment and take actions to maximize cleaning productivity while minimizing human intervention. The industry-leading Avidbots Autonomy means Neo outshines the rest in true autonomous cleaning and sanitization.

How does Neo automatically navigate around commercial premises?

When Neo is deployed in a new facility, the entire space is mapped and a fully-customizable cleaning plan is generated. From that point forward, using the onboard suite of sensors at the start of each cleaning session, [Avidbots Autonomy](#) compares what the space looks like this time to the original cleaning plan. The system then determines the best path to maximize cleaning productivity and coverage. Essentially, Neo knows the room and then determines the best route in real time.

Avidbots' advanced localization algorithms, engineered on the experience of hundreds of thousands of operating hours, allow continuous operation in even the most dynamic and challenging environments where off-the-shelf SLAM (Simultaneous Localization And Mapping) algorithms used by many robots fail. Avidbots' proprietary algorithms result in fewer stoppages and more consistent cleaning. By interpreting long-range lidar sensor data and taking advantage of large and detailed cleaning maps, Avidbots Autonomy provides location level awareness to Avidbots robots — Avidbots robots understand their location relative to items in their immediate vicinity as well as in a wider context, such as where they are in a large facility.



Avidbots Autonomy means Neo is unmatched in obstacle avoidance performance, avoiding anyone or anything. Using a variety of sensors, Avidbots Autonomy consistently evaluates the data being collected to ensure Neo can avoid anyone or anything and stop when unexpected obstacles appear. Unlike other semi-autonomous machines that get confused and typically stop when multiple obstacles get in the way, Avidbots Autonomy enables Neo to handle navigating dynamic environments with ease. Neo is the best in keeping the operational environment safe.

An industry-leading suite of lidar (light detection and ranging) and 3D sensors provide Avidbots Autonomy with a constant stream of information and data that is analyzed to make informed decisions on a continuous basis. In addition to providing Avidbots Autonomy with this data, the sensors share their data with our Customer Success Team who leverage it to work directly with our customers and optimize their cleaning operation, delivering the best floor care possible.

Can Neo detect obstacles and prevent collisions?

Absolutely! Neo is equipped with a sophisticated array of sensors that allow the robot to identify anyone or anything in its path and safely navigate around your facility.

In autonomous cleaning mode, Neo will identify obstacles in its path and, if possible, navigate around objects that are up to 5 meters away. If an obstacle is too large to navigate around or moves within 2 meters of the front of the robot, Neo will slow to a halt and plan a new path around the object. When the path is clear (whether due to the obstruction moving or a new path being generated), Neo will resume operation automatically.

How are Neo's mapping capabilities different from other cleaning robots?

Cleaning robots can typically be grouped into two categories: semi-autonomous or fully autonomous.

Semi-autonomous robots often rely on the teach-and-repeat planning method, only knowing the routes an operator has taught them. This means they are prone to stoppages when environments change (e.g. holiday display set up or seating area moved). Once stuck, the operator has to rescue the floor scrubber and teach it the new environment/layout. This is a time-consuming task that results in non-productive downtime. Imagine having to do this each time the environment changes. This method of operation is less than ideal for commercial spaces as the majority of commercial environments are dynamic. If the robot is getting stuck as items within the environment change/move, the robot will not deliver the value-add it's supposed to.

Neo is a fully autonomous floor scrubbing robot powered by Avidbots Autonomy. Our proprietary AI software enables Neo to understand its operating environment and take action to maximize cleaning productivity while minimizing human intervention. Our industry-leading Avidbots Autonomy means Neo outshines the rest in true autonomous cleaning and sanitization. The platform — leveraging data from a variety of robot sensors — provides situational awareness, enables advanced decision-making capabilities and reliably completes its two key objectives: determining the robot's position within space and finding the best path for the task at hand. Avidbots Autonomy delivers true autonomy, rarely getting lost, stuck or needing to be rescued by a local operator. As a result, it reduces reliance on local operators when compared with other methods of operation such as teach-and-repeat.

How are Neo's cleaning plans created?

A combination of leading-edge technology and human expertise combine to ensure the creation of effective and efficient cleaning plans, with safety and productivity as top priorities.

Neo is equipped with an array of bleeding-edge sensors, including front and rear lidar sensors and 3D cameras. Those sensors, in combination with Avidbots Autonomy and web services, allow the creation of bespoke cleaning plans for each location during initial deployment.

An operator (supported on-site by Avidbots' Customer Success Team) places Neo in Learning mode, then drives the robot around a location manually.

Neo's sensor array scans the environment to create an initial floor plan. That plan is transmitted to Avidbots' Cleaning Plan team, who check and analyze the layout in detail to ensure all fixed obstacles and potential hazards (such as walls, pillars, steps and so on) have been correctly identified as "no-go zones".

The Cleaning Plan team also works closely with local facility managers to define the optimal cleaning route for each area of your premises.

Over the first few weeks of deployment, the Avidbots Customer Success team reviews cleaning operations and productivity metrics to look for opportunities to further optimise performance.

Can cleaning plans be updated if my floor layout changes?

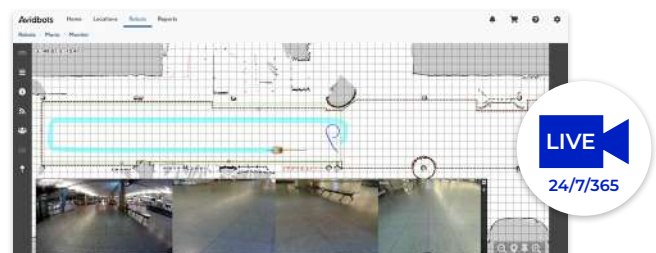
Absolutely. Neo supports Wi-Fi, 3G and 4G LTE networking which allows us to sync cleaning plan changes to Neo whenever required.

If your floor layout undergoes major changes — for example, maintenance or to incorporate seasonal changes — simply contact the Avidbots Cleaning Plan team with the details. Requested cleaning plan updates can be created and synced to the robot within 24 hours.

Can I edit my cleaning plans through the Avidbots Command Center?

If you need to update your cleaning plans, for example, due to a floor layout change or planned maintenance work, we ask that you contact the Avidbots Cleaning Plan team to perform and sync the map edits. This ensures the continued accuracy of your plan and safe operation of Neo at your premises.

Requested cleaning plan edits can be created and synced to the robot within 24 hours.



Avidbots Home Base



Home Base is a new software feature for Neo that enables it to travel to/from its home to the cleaning area autonomously and return to home when the work is done. With Home Base, customers just move Neo[†] out from its home to the predefined start position* and press go! Neo will travel autonomously to the cleaning area and get to work. The operator will no longer have to manually move Neo to a start position in the cleaning area or go to get Neo once it is done.

Why would you want Home Base?

Home Base provides pure convenience — one place to start/stop. Neo can start and stop its commute at a location that is convenient to you*. A requirement for any other cleaning machine involves manually walking it to/from the start and end position for a cleaning run. This can be time consuming. The Home Base feature will reduce the time spent by your team walking to/from the cleaning location. You can then redeploy your team's time spent walking to/from the cleaning area to more core business activities. No other cleaning robot on the market can offer this feature!

What is the expected time savings?

Although it'll depend on many factors including how far the storage closest is from the cleaning area, here's an example. If your team cleans 10 times a month and spends 45 minutes walking to/from the location each time, Home Base more than pays for itself saving 450 hours a month. You can then redeploy your operators time spent walking to/from the cleaning area to more core business activities.



Before: Staff manually walks or rides the floor scrubber to and from the storage location to the cleaning area start position.

Just press go!

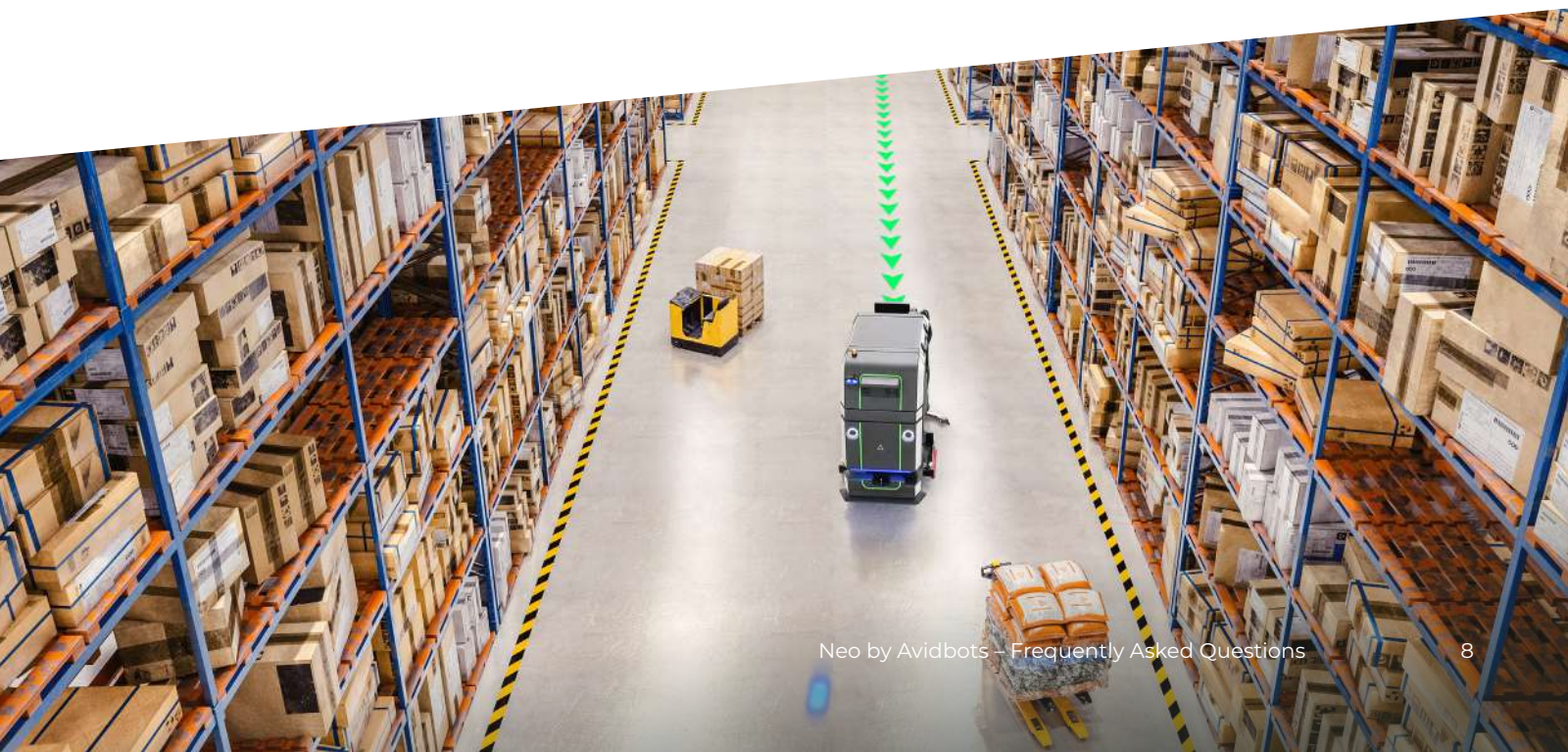


After: Neo drives itself to and from the cleaning area autonomously.

Note: Home Base implementation is subject to review and approval by Avidbots.

*Start location subject to review by Avidbots.

[†]Limited to Neo 1.7 and 2.0.



Avidbots robot network security

Neo is equipped with secure Wi-Fi, 3G and 4G LTE networking features that enable advanced performance reporting, cleaning map optimizations, 24/7/365 Real-Time Monitoring and Remote Assistance with regular software updates. Together, these important features keep Neo performing at its best when cleaning your facility.

Avidbots is committed to secure operation, employing the most advanced security methods available. Our engineers and security specialists work closely with customer IT teams to ensure our robots always operate within corporate network security policies. Platform flexibility and our collaborative approach to deployment enables Neo to clean high-security facilities such as airports, hospitals and nuclear power stations.

Not finding the answers you need? [Contact us to learn more.](#)

How is the Avidbots Command Center portal secured?

Avidbots Command Center employs the most advanced security methods available. Data at rest is encrypted using AES-256 (Advanced Encryption Standard), the same standard used by the U.S. government to protect classified information. In transit, secure TLS encryption protects against unauthorised data access.

Portal account access is secured via complex passwords and two-factor authentication, using Google Authenticator and supporting iOS/Android mobile hardware. Two-factor authentication is a globally recognized method for preventing unauthorised account access, as it requires knowledge of a password as well as an additional secure, always-changing passcode that's only available on mobile hardware.

All passwords are salted and hashed and no individual at Avidbots can see your password. A blacklist of 30,000 common and easily-guessable passwords is employed for additional security protection.

How does Neo send and receive data, such as performance reports, cleaning plan updates and software updates?

Neo is equipped with an industry-standard network gateway supporting Wi-Fi, 3G and 4G LTE network support connections. Wi-Fi network connections are recommended for optimal reliability, with cellular data connections optionally supported for network failover in Wi-Fi cold spots. An Ethernet port, reserved for diagnostic support, is also included.

How are remote monitoring and support connections to the robot secured?

Neo is equipped with an industry-standard network gateway supporting Wi-Fi, 3G and 4G LTE network support connections. Wi-Fi network connections are recommended for optimal reliability, with cellular data connections optionally supported for network failover in Wi-Fi cold spots. Reserved for diagnostic support, Neo is also equipped with an Ethernet port.

How secure are Neo's network communications?

Avidbots is committed to supporting the highest levels of network security. Neo robots are protected by a firewall, with a minimum number of ports open for authorized connections. All data transmitted between Neo and Avidbots secure servers is encrypted using modern TLS, SSH or OpenVPN encryption protocols.

What other measures are employed to secure Neo?

Neo's internal controllers are configured to only run software specifically approved and installed by Avidbots engineers. All software updates are delivered using **TLS-encrypted channels**, managed by Avidbots. Neo cannot be powered on and operated without the insertion of a physical key, while access to the robot's touch screen is secured via an operator-specific passcode, preventing unauthorized use.

Could someone tamper with Neo's hardware?

While Neo supports fully-automated cleaning, we do recommend that a local operator supervises Neo as it cleans. It is possible that a determined, malicious person with unrestricted access to the robot and specific tools could access and tamper with internal hardware (moving sensors, cutting wires and so on). This is the case with any device running in public spaces and is not unique to Neo.

Which network gateway model does Neo use for data connections?

The gateway model selected varies by country, to ensure compatibility with local cellular network operators. Options for network hardware and secure configuration are agreed with your Corporate IT team before deployment.

Is a Wi-Fi connection a mandatory requirement?

No. Neo requires a network connection, but this can be either cellular or Wi-Fi. We successfully deploy Neo at facilities where Wi-Fi is not available, using a 3G or 4G LTE network connection.

Does Neo support Wi-Fi WPA2-enterprise encryption?

Yes. All Neo robots purchased directly from Avidbots feature WPA2-enterprise encryption.

Is a 3G or 4G LTE cellular data connection a mandatory requirement?

No. However, we do recommend a cellular data connection, if available, to support Avidbots' secure Real-Time Monitoring, Remote Assistance and support services in areas of your premises suffering poor Wi-Fi service.

Can Neo work with specific corporate IT security policies?

Absolutely. We've successfully deployed Neo robots around the world in high-security locations such as airports (landside and airside), healthcare facilities and nuclear power stations. Our expert Customer Success, Deployment and Network Engineering teams always work in partnership with Corporate IT teams to protect the integrity of network communications, across a wide variety of locations, security policies and network topologies.

Does Avidbots use public data centers?

Avidbots partners with Amazon Web Services (AWS) for secure Command Center hosting. AWS has been awarded **ISO 27001** certification — a security management standard which defines best practices and comprehensive security controls. Find out more about **AWS Security Processes**.

Where is the data captured by Neo stored?

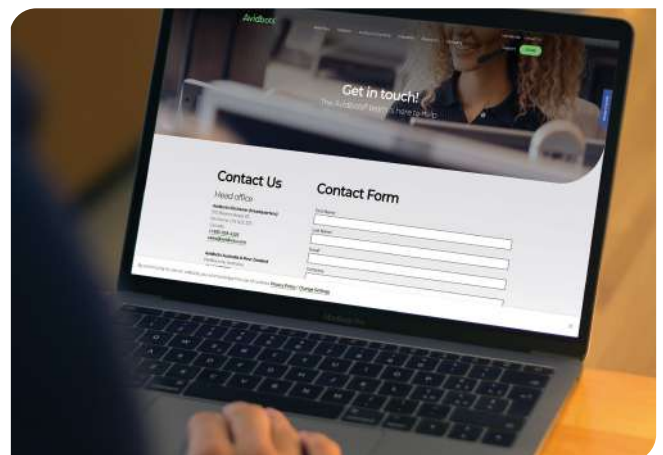
Video and performance data is stored both on the robot's internal hard drives and on our Avidbots Command Center servers, located in Virginia, USA. However, we are happy to discuss alternative options, if desired, to conform with corporate IT policies or regional regulatory requirements.

For how long does Neo store data?

All video data recorded by Neo is stored for 90 days before automatic deletion. We keep the recorded data for a short time to allow historic review of specific cleaning operations, in case of a performance issue. Performance reports are stored indefinitely on our servers, to provide cumulative, historic productivity analysis for customers.

How can I learn more about Avidbots' network security?

We understand the importance of network security to your operation and would be delighted to discuss your requirements. **Contact us** to discuss the technical details of Neo's advanced security protection and our experience partnering with corporate IT teams across a wide variety of industries to safeguard network integrity.



Customer Success

Neo is the most sophisticated fully autonomous floor scrubbing robot on the market; just as revolutionary is the support provided by Avidbots and behind each Neo. Avidbots Customer Success fundamentally changes the game and provides a level of support yet unseen in the industry by leveraging Neo's connected nature. Whether you are purchasing one Neo — or entire fleet of Neos — our world class Avidbots Customer Success is here to help you.

The Avidbots Service Plan maximizes productivity, limits downtime and protects your investment. The Service Plan covers the inspection, adjustment and replacement of all components needed to keep your Neo operating at peak performance, including features unique to your state-of-the-art Neo. Regularly scheduled maintenance and comprehensive inspections extend Neo's lifespan, ensuring reliable cleaning and safe operation.

Read the FAQs below to discover more about Neo's support and servicing plans.

What is Avidbots Customer Success?

Avidbots Customer Success is designed to help you get the most value from your Neo. By engaging with you as a trusted partner through training, monitoring and assisting wherever needed, **Avidbots Customer Success** is as revolutionary as Neo itself.

▶ White-glove treatment for a white-hot robot

Neo is the most sophisticated autonomous floor scrubbing robot on the market; just as revolutionary is the support provided by Avidbots behind each Neo. Because Neo is a connected robot, Avidbots Customer Success fundamentally changes the game and provides a level of support yet unseen in the industry.

▶ World-class training

Getting your maintenance and cleaning team quickly trained and running is one of our primary goals during your Neo deployment. We employ multiple tools to support your setup: training, educational videos, written documentation, a quarterly newsletter to update you on new or enhanced features and intuitive, multi-language user interfaces. Our comprehensive training package gives your staff everything they need to succeed with Neo.

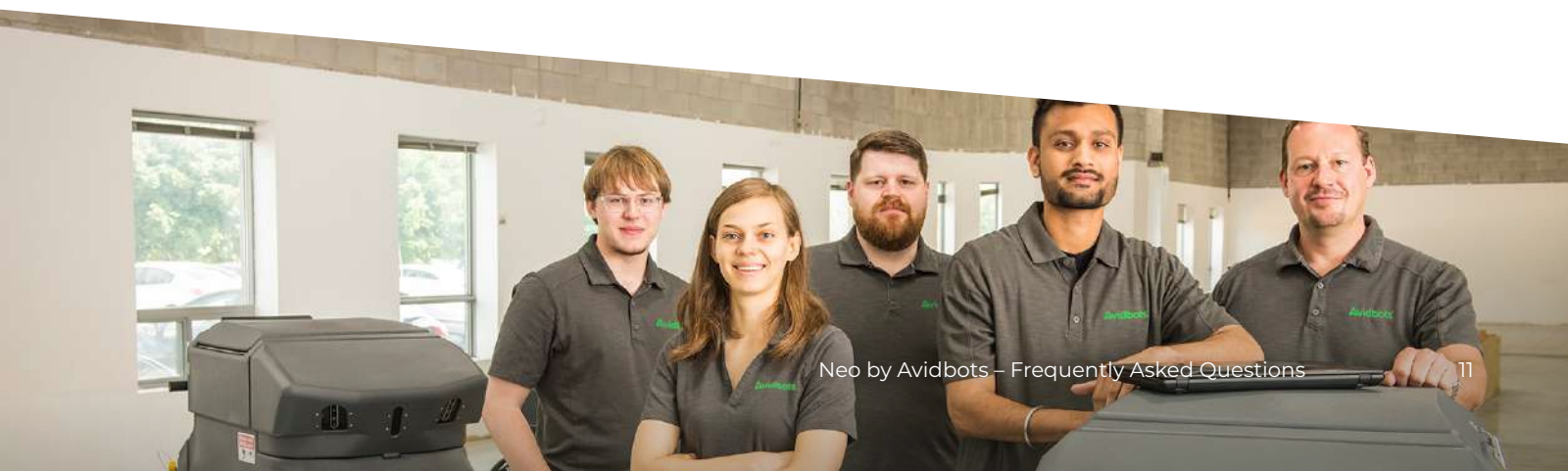
▶ Ongoing monitoring and continuous improvement

Avidbots customer service does not end after Neo's deployment; it transforms into a new and ongoing relationship. Because Neo is connected, our Customer Success Team monitors your Neo, working with you to continuously improve performance as changing environments, construction, temporary obstructions, weather or traffic patterns necessitate modifications.

▶ Multi-channel communication

We strive to make **Avidbots Customer Success** as easy to use as our robots. You can be assured of a quick response when you reach us by either phone or email. We strive to keep your Neo up and running at peak performance at all times. You can even shop for replacement consumables on our online store anytime, day or night.

Contact us to find out more about **Avidbots Customer Success**.



What is the Avidbots Service Plan?

The **Avidbots Service Plan** is tailored to the specialized needs of your Neo. Service is provided by Avidbots-trained and certified technicians who know your Neo inside and out. These robotics experts know how to keep Neo running at peak performance, will tailor preventative maintenance to your unique needs, and ensure that your Neo gets the care and attention it deserves.

► Specialized service

Maintenance is done by Avidbots-trained and certified technicians, who are familiar with the unique features of Neo. The Avidbots Service Plan includes proactive inspection, adjustment and maintenance of features exclusive to your Neo.

► Additional cost savings

Preventive maintenance reduces the chance of costly emergency repairs. Fewer breakdowns means less downtime. Service Plans offer superior control and predictability to your budget, through reduced, locked-in prices for both parts and labor.

► Increased efficiency

When Neo is operating with all parts and systems in top condition, you'll ensure fast, uninterrupted and problem-free performance.

► Peace of mind

Catch any potential problems before they become an emergency, so management can rest assured that staff won't get distracted and jobs will get done!

Contact us to find out more about the Avidbots Service Plan for Neo.

Does Neo support remote control?

Neo supports secure monitoring and remote control via the **Avidbots Command Center Remote Assistance**, but this feature is only available to authorized support technicians at Avidbots HQ.

Avidbots Remote Assistance service supports every Neo robot 24/7/365 with a dedicated Avidbots team, who are on stand-by for each cleaning operation around the world in real time, tracking Neo as it cleans. Should an issue occur, our experts can remotely assist Neo in getting back on track using the onboard cameras. Additionally, our experts have the ability to investigate and often resolve stops.

Does Neo support remote monitoring?

Yes. Every Neo deployment is supported 24/7/365 by a dedicated team of Avidbots technical experts, who remotely monitor cleaning operations around the globe in real time with **Avidbots Command Center Remote Assistance**.



When Neo is online, the Avidbots Remote Monitoring and Real-Time Assistance team is able to track the robot as it cleans and view output from Neo's cameras. Should an issue occur, our experts can remotely intervene, investigate and assist the robot to steer around obstacles, and often resolve safety stops.

Should an issue occur that can't be resolved remotely by our support specialists, the team will contact local operators to notify them of the problem and provide ongoing support.

How often should Neo be serviced?

For optimum cleaning performance and productivity, we recommend that Neo receives regular servicing through an available planned maintenance program.

The **Avidbots Service Plan** for Neo covers a full inspection, adjustment and replacement of parts that receive heavy wear during cleaning operations. Scheduled maintenance, performed by Avidbots-trained and certified technicians, is typically performed three times a year, extending Neo's lifespan and ensuring reliable cleaning and safe operation.

Contact us to find out more about the Avidbots Service Plan for Neo.

Product features

Neo is equipped with advanced cleaning features that allow the robot to scrub floors for up to six hours between battery charges.

Integrated, high-capacity water tanks ensure floors sparkle, while squeegees around the sides and rear of the robot catch dirty water, which is then vacuumed up into a recovery tank for later disposal. The result? Clean, dry, streak-free floors.

Read the FAQs below to discover Neo's advanced product features. [Contact us to find out more](#) or to enquire about a demonstration of Neo at your premises.

How does Neo clean floors?

Neo is designed to clean hard floors with a versatile array of cleaning settings and configurations. You can scrub floors for up to six hours between battery charges.

Neo dispenses a solution of clean water and detergent from one of two water tanks and, depending on the model, scrubs floors using twin cylindrical brushes, disc brushes or standard floor pads. All dispensed solution is filtered to ensure no dust or grit is passed through Neo's cleaning system to the floor.

Replaceable rubber squeegees positioned around the sides and rear of the robot retain dispensed, dirty water, with any excess fluid vacuumed up into the second 135 liter (35.7 gallon) recovery tank for later disposal. Cylindrical cleaning systems sweep light debris into a removable garbage tray for easy disposal. The result? Clean, dry, streak-free floors.

How is Neo powered?

Neo is powered by six 6V rechargeable AGM lead-acid batteries, totaling 36 V and with 220 Ah of capacity.

What are the dimensions of the Neo floor scrubbing robot?

The dimensions* of the Neo floor scrubbing robot are as follows:

Length: 152 cm (59.8 in)

Width: 76 cm (29.9 in) - 94 cm (37 in)

Height: 137 cm (53.9 in)

Gross Vehicle Weight: 581.5 kg (1,282 lbs) - 688 kg (1,518 lbs)

Additional technical information can be found here:

[Disc Cleaning Head](#) [Cylindrical Cleaning Head](#)

*Dimensions differ based on the cleaning head selected.

What is Neo's operating time between charges?

Operating time varies by cleaning plan and settings but should always be in the 4-6 hour range.

How can I maximize cleaning time with the Neo floor scrubbing robot?

To maximize cleaning time, we recommend the purchase of two sets of batteries, along with a dual battery cart. The battery sets can be recharged perpetually and their use in Neo alternated.

What is the capacity of Neo's water tanks?

The Neo autonomous floor scrubbing robot is equipped with two generously-sized water tanks, ensuring maximum cleaning time between fill and/or empty.

Neo's solution tank provides 109 liter (28.8 gallon) capacity while its recovery (dirty water) tank provides 135 liter (35.7 gallon) capacity.

Does Neo monitor its water tank levels?

Yes, Neo's twin water tanks are equipped with sensors that will alert you when it's time to fill the solution tank or drain the recovery tank. Notifications on Neo's 25 cm touchscreen provide clear and simple instructions for operators, while individual water hoses make filling up and draining a cinch.

What floor surfaces are most suitable for Neo?

The Neo fully autonomous floor scrubbing robot is designed to clean the following commercial floor surfaces:

- ▶ Non-Slip Tiles
- ▶ Concrete (polished, unpolished, tiles)
- ▶ Epoxy
- ▶ Granite
- ▶ Limestone (honed)
- ▶ Linoleum & Marmoleum
- ▶ Marble
- ▶ Resilient
- ▶ Stone Carpet
- ▶ Terra Cotta
- ▶ Terrazzo
- ▶ Travertine
- ▶ Vinyl & Vinyl Composite Tile

Can Neo clean carpeted floors?

Neo is a fully autonomous floor scrubbing robot that uses brushes, water and detergent to clean **hard** floors, such as concrete, tile, terrazzo and other hard surfaces. Neo should not be used in carpeted areas.

Can Neo clean outdoor areas?

Neo is designed to clean indoor commercial environments and should not be operated outdoors.

What type of floor cleaning detergent does Neo use?

Neo can accommodate the same industry-standard floor cleaning detergents that are commonly used with manual scrubbers. You should only use non-foaming or low-foaming detergents when cleaning with Neo.

What brush, pad and cleaning head configurations are available for Neo?

Neo is available with cylindrical brush or disc cleaning heads, in the following configurations:

Nominal Cleaning Head Applied Weight:

| Cylindrical | Level 1 | Level 2 |
|-------------|------------------------|-------------------------|
| 24 in. | Up to 15 kg (33 lb) | Up to 25 kg (56 lb) |
| 32 in. | Up to 45 kg (99 lb) | Up to 47 kg (103 lb) |

| Disc | Level 1 | Level 2 | Level 3 |
|--------|------------------------|-------------------------|-------------------------|
| 26 in. | Up to 30 kg (65 lb) | Up to 41 kg (90 lb) | Up to 53 kg (117 lb) |
| 32 in. | Up to 32 kg (71 lb) | Up to 58 kg (128 lb) | Up to 87 kg (193 lb) |

Where can I purchase parts, accessories and consumables for the Neo floor scrubbing robot?

If you purchase Neo directly from Avidbots, you'll find a range of supported parts, accessories and consumables available for purchase directly from us, via the [Avidbots Command Center](#).

Customers purchasing Neo from one of our [global distribution partners](#) should contact them for details of available parts, accessories and consumables.

Be sure to check out the [Avidbots Service Plans](#) available in your region, which include the supply and replacement of some parts and accessories during scheduled maintenance visits at your premises.

[Please contact us](#) for details.

Does Neo support the use of industry-standard cleaning consumables?

Where possible, yes. Neo's floor pads and pad drivers are industry-standard consumable items which can be purchased directly from us via the [Avidbots Command Center](#), our [distribution partners around the world](#), as well as other stockists. We recommend using Avidbots-provided consumables whenever possible, rather than 3rd party parts in order to ensure optimal performance.

What are consumables on Neo?

Consumables are defined as any part that wears down over a period of time due to regular use that can be replaced by the operator. On Neo this includes floor pads, pad drivers, cylindrical brushes, side squeegees, rear squeegees and detergent.

What is Neo's noise level during operation?

During operation, Neo's maximum environmental sound level is 72 dBA.

Safety features

Safety is a critical requirement of any autonomous system. **Avidbots Autonomy** means Neo is unmatched in obstacle avoidance. Using a variety of sensors, Avidbots Autonomy consistently evaluates the data being collected to ensure Neo can avoid anyone or anything and stop when unexpected obstacles appear. Unlike other semi-autonomous machines that get confused and typically stop when multiple obstacles get in the way, Avidbots Autonomy enables Neo to handle navigating dynamic environments with ease. Neo is the best in keeping the operational environment safe.

Neo is equipped with a market-leading suite of sensors with 360 degree visibility. Its advanced obstacle avoidance prevents collisions and stops Neo if an obstacle is introduced during motion.

Alongside 3D cameras and lidar sensors, Neo is equipped with **additional hardware safety features** to protect the robot, the people around it and its environment.

Read the FAQs below to discover the safety features protecting people and property at your facility. [Contact us to find out more](#) or to enquire about a demonstration of Neo at your premises.

What are Neo's safety features?

Neo's state-of-the-art technology combines with advanced safety features including e-stop buttons, bumpers, beacons, integrated signaling lights, and a Blue Light and sound system to ensure environmental safety.

▶ Emergency stop button

A physical button on the rear of the robot can be quickly activated by an on-site operator. This immediately pauses Neo's operation. The operator can then investigate and resolve the issue before continuing the cleaning operation.

▶ Safety bumpers

Front and side safety bumper switches detect if Neo touches a fixed obstacle, such as a wall or other objects. At this point, an emergency stop is triggered, and operation is halted immediately.

▶ Electronic brake

To prevent damage to Neo or other property, if a fixed object is pressing against one of Neo's safety bumpers and the safety bumper remains engaged, an operator must manually activate a brake release switch in order to move the robot.

If Neo detects a safety risk, can it automatically trigger a stop?

Yes. Neo's advanced safety system will automatically pause operation in certain scenarios and await manual investigation and permission to resume from an operator. Scenarios include:

- ▶ Activation of the front safety bumper.
- ▶ An obstacle being introduced dangerously close to Neo in its safety zone.
- ▶ Activation of the right or left safety bumpers.
- ▶ An alert from Neo's internal safety monitor process.



Disinfection Add-On

With Neo's Disinfection Add-On, you'll achieve a consistent, fully autonomous and measurable disinfection every time, giving your staff more time to focus on your core business.

What is an Add-On?

An Add-On is an optional product that extends the service of Neo. With an Add-On, Neo becomes a multi-application robot. Neo can support additional needs and take on additional tasks for customers.

What is the value of the Disinfection Add-On?

Neo powered by Avidbots Autonomy is a fully autonomous robot platform. Equipped with its Disinfection Add-On, Neo provides a multi-application solution that cleans and sanitizes floors and consistently disinfects high-touch surfaces. Detailed reports and proof of disinfection are available for easy reference on the Avidbots Command Center. Trust Neo to keep people safe and healthy and redeploy your team's efforts to value-added tasks while building customer confidence. With Neo's Disinfection Add-On, you'll achieve a fully autonomous, consistent, efficient and measurable disinfection every time, giving your staff more time to focus on value-added activities.

What is the Disinfection Add-On used for and what are common targets for disinfection?

Neo's Disinfection Add-On offers an additional application capable of disinfecting high-touch surfaces. Common surfaces Neo can disinfect include:

- ▶ **Seating** (benches, chairs)
- ▶ **Work surfaces** (tables, desks)
- ▶ **Doors** (including lockers)
- ▶ **Garbage bins**
- ▶ **Check In kiosks**
- ▶ **Fountains**



What are the advantages of Neo's autonomous Disinfection Add-On solution?

Neo's Disinfection Add-On offers a number of benefits over manual spraying, including the following:

- ▶ Leveraging the latest electrostatic spraying technology ensures uniform 3-D coverage of surfaces, including hidden and indirectly sprayed ones, for the most complete coverage
- ▶ This proven approach uses less disinfection solution than traditional approaches
- ▶ Automated spraying keeps customers, employees and visitors safe and healthy
- ▶ Automated spraying leverages an existing robot/ investment for another activity and provides employees with more time to focus on revenue-generating activities (which delivers a quicker return on investment)
- ▶ Automation takes the guesswork out of high-touch surface disinfection and ensures the highest accuracy. Neo's Disinfection Add-On can be adjusted before the run to optimize the application
- ▶ Available reporting shows what was disinfected to a level of detail and accuracy not available on the market today
- ▶ The ability to produce analytical reporting on disinfection coverage is extremely useful for facility inspections and cleaning audits

What is electrostatic spray technology and how does it work?

Electrostatic sprayer technology is the most efficient method to ensure uniform 3-D coverage on surfaces, including ones hidden or indirectly sprayed. An electric charge is applied to the disinfectant solution creating double-charged particles that repel each other, allowing them to easily wrap around surfaces. This proven approach produces a thin, even spray pattern that also ensures disinfection chemicals do not dry out in the air before reaching the target. The result is effective coverage and proper dwell time on high-touch surfaces. This state-of-the-art technology uses less disinfectant than traditional approaches.

Why Avidbots?

Buying an Avidbots Neo isn't just buying a floor scrubber. It's investing in a technological future that can redefine your cleaning function, making it more productive, more cost effective and easier to run. More importantly, our robotics and AI technology open up new opportunities to make your business even more successful. We realize this isn't just about buying a product, or a technology, or even a business proposition. You want to buy into a trusted partner who can take you into the future of automated operations using cutting edge robotics. At Avidbots, we work side-by-side with our customers to earn that trust and realize all the benefits that robotics can bring them.



About us

Avidbots is a robotics company with a vision to make robots ubiquitous to unlock humanity's potential with a hyperfocus on autonomous cleaning. Our groundbreaking product, the Neo fully autonomous floor scrubbing robot, is deployed around the world and trusted by leading facilities and building service companies. Headquartered in Kitchener, ON, Canada, Avidbots is offering comprehensive service and support to customers on 5 continents.

Contact us

Learn more about Neo.

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