

# Professional cleaning made simple

## Nanjing TVX Cleaning Equipment Co., Ltd.

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## **TVX Intelligent** Cleaning Robot



**TVX Robot** Series

## **IIIT/X**<sup>°</sup> Highlights

## TVX Full Scene Intelligent Cleaning Robot



#### Intelligent Supply

Unattended and safe operation, environmental perception, autonomous obstacle avoidance Vehicle regulations and standards, reliable technology, continuous sweeping after power failure, supplementary sweeping for missed areas

Cleaning Efficiency

Automatic Driving

Continuous operation, lasting endurance, synchronous operation, dust removal without trace Graded cleaning on-demand, intelligent path and reasonable planning

#### Flexible Performance

Smooth movement, flexible turning, linked scenes for cross-area cleaning Rapid mapping, accurate and efficient, cleaning for close edges and dead corners Self-charging, rapid replenishment, water filling and drainage, intelligent pile supply for multi machines with cross matching

#### Convenient Maintenance

Cloud operation, remote upgrade, quick start and simple interaction Easy to disassemble and maintain, supports manual operation for effective complementation

#### Safe and Reliable

Hardware algorithm, comprehensive support, electromagnetic braking, safe parking Electrical protection, man-machine safety, voice broadcast, safety reminder

## **Comprehensive Service Guarantee**

One-to-one butler services
7×24 online services
General knowledge of machine operation,
troubleshooting and consulting services

Follow up the progress of machine fault resolution until resolved

Free engineer on-site maintenance within the warranty period, and extra charges may apply outside the warranty period

Lifelong free remote hardware and software support services



## **Product** Value

Self-cle

Effort-Saving

Self-cleaning, cost reduction and efficiency increase All weather operation, unlimited endurance Full protection, safe and reliable Cloud management, decision basis

Satisfactory Service

Professional strength, comfortable communication Business team, considerate services Brand raw materials, assured quality Agile after-sales, easy maintenance







#### Powerful Support

Patent granted, leading technology Linked scenes, outstanding performance Scientific layout, improved image Case verification, rich experience





#### Application scenarios / Floors

## **TVX ROBOT Scrubber 50**

Dust pushing / Sweeping / Floor scrubbing / Dirt suction Efficient, intelligent, safe and professional driverless floor scrubber

#### **Professional Cleaning**

Dual roller brush, dual side brush, washing and sweeping in one, greatly reducing the blocking chance of air suction pipe; Support various cleaning methods such as floor scrubbing / dust pushing, adaptive to various types of hard floors; 1.5kwh large battery and 72L large water tank greatly extend the battery duration of single operation

#### Automatic Driving

Fast and efficient mapping on site, supporting map expansion and automatic map update; Multi sensor fusion supports intelligent perception and accurate positioning of complex scenes; Automatic full coverage path planning, supporting intelligent obstacle avoidance and precise control

#### Safe and Reliable

Outdoor driverless safe driving with an accumulated one million plus kilometers; Multiple safety guarantees such as anti-collision, anti-falling and anti-skidding; Comply with EU safety certification and vehicle regulation and standards, assured and reliable quality





fusion





Navigation and positioning





Business building

Shopping mall





Hotel

Factory





Community

Airport







Cement ground Terrazzo

Epoxy floor

#### Parameters

TVX ROBOT Scrubber 50					
Overall Dimensions	800x700x1200mm	Solution tank capacity	42L		
Net weight of unit	200Kg	Squeegee width	706mm		
Maximum cleaning efficiency	1800 m²/h	Recovery tank capacity	30L		
Battery specification	Lithium-iron battery 24V/60Ah	Garbage container capacity	1.5L		
Battery duration	2.5-3h	Operation noise	<70dB(A)		
Cleaning width	800mm	Climbing gradient	8°		
Floor scrubbing width	500mm	Sensor configuration	Laser radar, ultrasonic radar, visual sensor, wheel speedometer, IMU, collision sensor, anti-fall sensor		

Supermarket

Exhibition hall

Hospital



**Railway station** 



Warehouse

Underground garage





Marble



PVC ground



Granite

### 

### Application scenarios / Floors



Cement ground



Terrazzo

Ceramic tile

Epoxy floor

Marble

PVC ground Granite



Stadium







Business building

Restaurant



Hotel



Hospital

Shopping Mall

Logistics

Parking zone

Campus



Metro station

#### Parameters

Library

TVX ROBOT Scrubber 80						
Overall Dimensions	1340x1024x1350mm	Recovery tank capacity	170L			
Net weight of unit	430Kg	Garbage container capacity	1.5L			
Maximum cleaning efficiency	4000m²/h	Volume of cleaning solution	1000ml			
Battery specification	Lithium-iron battery 38V/200Ah	Operation noise	<70dB(A)			
Battery duration	5-6h	Climbing gradient	10°			
Cleaning width	1160mm	Minimum u-turn passage width	1540cm			
Floor scrubbing width	760mm	Sensor parameters	16-line laser radar, single-line laser radar, depth camera, ultrasonic radar, wheel speedometer, IMU, collision sensor, anti-fall sensor			
Squeegee width	1024mm	Solution tank capacity	140L			

## **TVX ROBOT Scrubber 80**

Dust pushing / Sweeping / Floor scrubbing / Dirt suction Efficient, intelligent, safe and professional driverless floor scrubber

#### Professional Cleaning

Dual roller brush, dual side brush, washing and sweeping in one, greatly reducing the blocking chance of air suction pipe; Support various cleaning methods such as floor scrubbing / dust pushing, adaptive to various types of hard floors; 7.2kwh large battery and 300L large water tank greatly extend the battery duration of single operation

#### Automatic Driving

Fast and efficient mapping on site, supporting map expansion and automatic map update;

Multi sensor fusion supports intelligent perception and accurate positioning of complex scenes;

Automatic full coverage path planning, supporting intelligent obstacle avoidance and precise control

#### Safe and Reliable

Outdoor driverless safe driving with an accumulated one million plus kilometers; Multiple safety guarantees such as anti-collision, anti-falling and anti-skidding; Comply with EU safety certification and vehicle regulation and standards, assured and reliable quality











#### Application scenarios / floors

### **TVX ROBOT Sweeper 100**

Cleaning / Vacuuming Driverless sweeper opens a new era of intelligence

#### Unattended operation

Fusion sensor provides redundant information security; Detailed safety strategy enables the safe product operation in various scenarios; Complete software security architecture ensures driverless security from end to cloud; Bad road test over 1,200 kilometers ensures the reliability of software and hardware



0

and positioning





Navigation

Perception fusion

Intelligent Operation

Auto wake-up for start-up operation, can tailor the cleaning plan based on your scenes; Intelligent voice reminder during cleaning process can help people understand the operation, with additional customized voice service available;

Data monitoring and cloud management throughout the cleaning process, background real-time display of machine information and historical operation data;

Featured with the intelligent functions such as breakpoint resume, automatic return in low power, automatic sprinkling, etc., which makes the cleaning ever simpler

#### **Cleaning Quality**

Truly solving the industrial pain points of zero-distance roadside cleaning, indoor + outdoor cleaning, so as to meet the multi-faceted needs;

The 100-cm cleaning width of dual side brush ensures the cleaning quality, avoids secondary dust pollution and improves the working efficiency;

The main and side brush linkage sweeping technology can efficiently clean the floor within a single pass; With double counter-rotating brushes and unique sweeping angle, only one machine is needed to sweep away all garbage



Park

Stadium



Street

Factory



Campus

Parking zone



#### Parameters

TVX ROBOT Sweeper 100						
Cleaning width	1000mm	Radius of turning circle	150cm			
Working efficiency	3000 m²/h	Dimension	1450×916×1196mm			
Gradeability	10°	Maximum running speed	5Km/h			
Dustbin capacity	60L	Net weight	395Kg			
Battery type	Ternary lithium battery	Battery performance	200Ah			
Charging duration	4-5h	Applicable environment (outdoor)	-15°C - 40°C			
Endurance mileage	30 - 40Km (comprehensive working condition)	Battery duration	6h (comprehensive working condition)			





Logistics



Commercial building



Rubble ground



Cement ground



Marble



Granite