CURALIS24

INNOVATION | AUTOMATION | FUTURE

INTELLIGENT DIAGNOSTICS AND ROBOTICS SOLUTIONS
FOR MEDICINE AND LABORATORY DIAGNOSTICS

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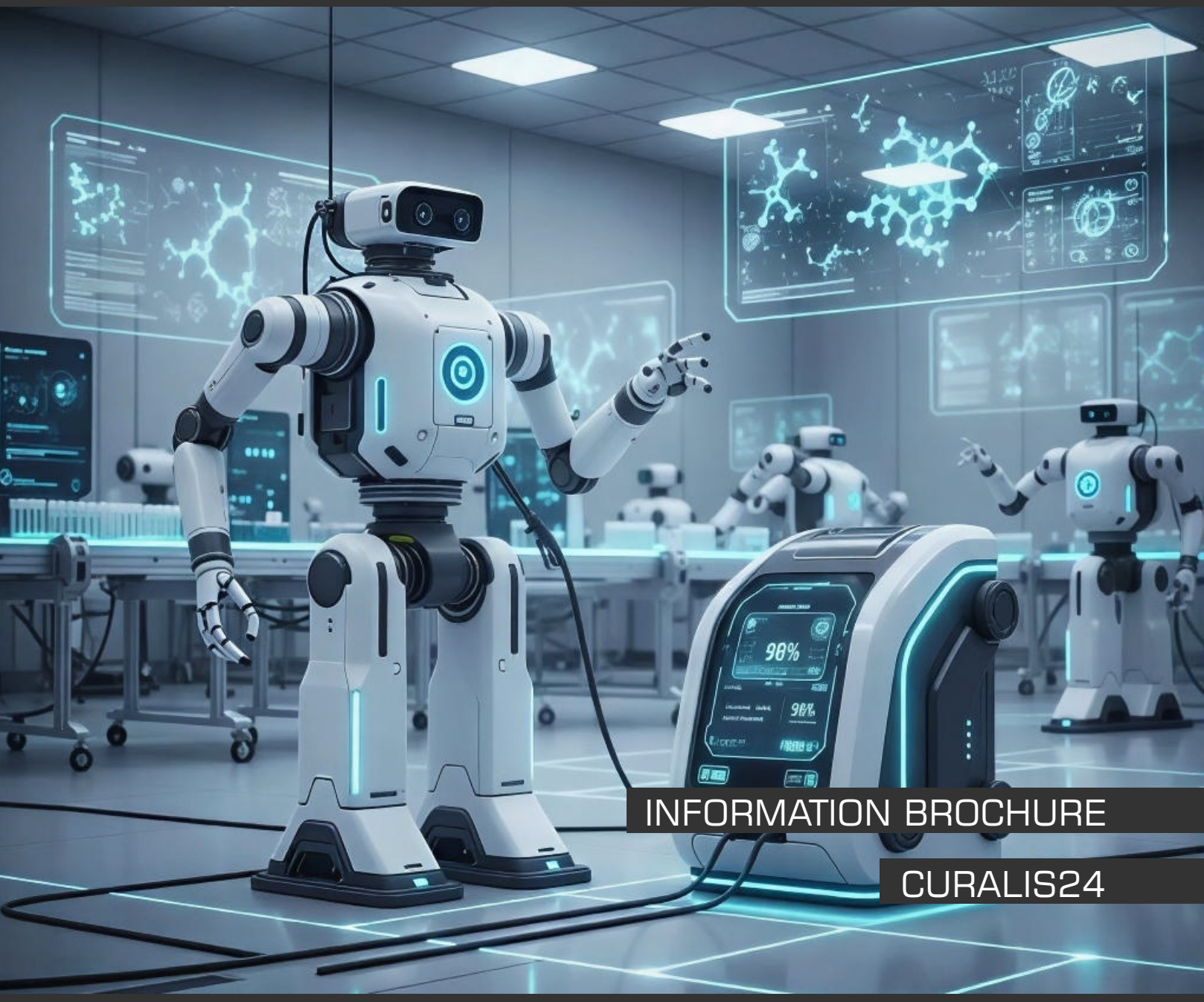


INFORMATION BROCHURE

CURALIS24

Our slogan:

Different from everyone else By design

CURALIS24

About Us

INDEPENDENT STRATEGIC SYSTEM PARTNER FOR ROBOTIC-, DRONE-, AUTOMATION- & HYGIENE SYSTEMS

Holistic, end-to-end system solutions for healthcare, industry, mid-sized businesses, and large enterprises.

No products. No individual components. Just fully integrated, intelligent full systems.

What makes us special:
- System provider & system integrator – not a product seller
- In-house software developers
- Healthcare + industry + enterprise + infrastructure from one single source
- Robotics, AI, hygiene, sustainability & processes seamlessly integrated
- ISO:9001 certified quality & validated hygiene standards
- In-house banking expertise for financing & risk management
- Public funding strategies (municipal · state · federal · EU)
- International operations & strong partnerships
- Dedicated quality management, back office & customer support

Our Philosophy:
We don't think in products
We don't think in projects
We think in systems — and in responsibility

Welcome to our family

Managing Directors:
Murat Ural & Nejat Catalbas
Independent Strategic System Partners

Expertise. Trust. Systems. Vision.

Curalis 24 GmbH

Robotics solutions are no longer a luxury, they are core components of modern laboratory and clinical operations.

They enable high-precision analytics, relieve qualified staff, and ensure continuous availability, especially during off-hours.

We focus on three key areas: laboratory robots, service robots & true 24/7 operating models.

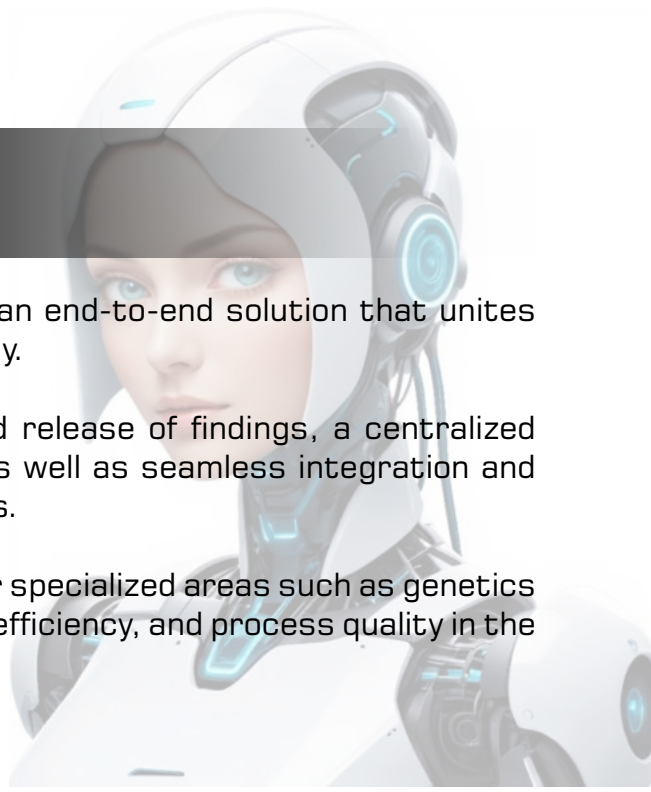
All manufacturer-independent and eligible for public funding.

Service Robots & Automation
Efficiency in Transport and Logistics

Service robots take over tasks that consume time but create no direct medical value - **such as the transport of samples, materials, and consumables.**

Key benefits:
- Staff relief – fewer walking distances, more time for patient care and analysis
- Hygiene & safety – no manual transport, reduced risk of contamination
- Seamless integration – autonomous navigation through labs and hospital corridors, automatic docking at charging spots, and full alignment with existing workflows

The result:
Faster processes, reduced workload, and higher operational efficiency.



AI-Powered Laboratory Platform
for Validation, Control & Analysis

The AI-powered laboratory platform from Curalis24 is an end-to-end solution that unites artificial intelligence, device control, and cloud technology.

It offers automated, AI-based plausibility checking and release of findings, a centralized real-time dashboard for key performance indicators, as well as seamless integration and control of analytical instruments and laboratory robotics.

In addition, it enables GDPR-compliant cloud modules for specialized areas such as genetics or microbiology. The platform thus optimizes validation, efficiency, and process quality in the modern laboratory.

Laboratory Robots
Automated Precision in Everyday Lab Operations

Laboratory robots handle tasks that are still often performed manually today:
sample intake, sorting, instrument loading, labeling, and archiving

The advantages are clearly apparent:
- Reduced error rates through standardized processes
- Higher throughput, even during peak workloads
- Flexibility through modular systems that grow with demand

From small hospital labs to highly specialized high-volume central laboratories - laboratory robots ensure consistent quality and create valuable capacity for medical professionals.

Funding & Financing
Unlock Opportunities / Secure Investments

Robotics and automation are eligible for public funding —
but only when the right programs are identified and applications are professionally prepared. We support you with this:

- Identification of suitable funding programs (regional, national, EU)
- Strategic financing advice: purchase, leasing, or pay-per-use
- Business case development and ROI calculations

This creates a solid foundation for investments that pay off quickly while significantly reducing your financial risk.

The advantages at a glance:

- **Exclusivity & Uniqueness:** Benefit from technologies that you will find exclusively with us.

- **Modular & Scalable:** Our solutions grow with your requirements – from single-workstation solutions to fully automated concepts.

- **Eligible for Funding & Cost-Effective:** We support you in identifying suitable funding programs and prepare a viable cost-effectiveness calculation for your investment.

- **Efficiency & Safety:** Whether through robot-assisted transport or fully automated analysis processes – we increase your efficiency while simultaneously enhancing safety for your staff.

Combine the power of robotics with the precision of exclusive medical technology and shape your processes for the future.

CURALIS24

Our slogan:

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Welcome to **Curalis24**

Innovation. Precision. Future.

Curalis24 is an independent international technology and distribution partner for Germany, Austria, Switzerland, Europe, and North America.

Together with world-leading manufacturers, we combine **Artificial Intelligence (AI), robotics, software, IT, laboratory automation, and cutting-edge diagnostics** to create forward-looking solutions for the healthcare sector.

Our focus is on the successful introduction of medical world first as well as the digital transformation of laboratories, hospitals, and healthcare facilities.

With innovative technologies, sound market expertise, and a strong international network, we create sustainable added value for our customers and partners.

Curalis24 – Together, we are shaping the future of diagnostics.

Sperm Quality Analyzer

The world's first and only automated sperm quality analyzer

Automated Tests

The analyzer automatically performs the following tests:

- Liquefaction
- Viscosity
- Appearance
- pH value
- Volume
- Concentration
- Motility
- Morphology – research parameter

Application Scenario

The analyzer is ideally suited for use in urology practices, andrology centers, and fertility clinics.

Technical Highlights

- 10 samples can be loaded simultaneously
- Throughput of up to 20 tests per hour
- Patented sample cup system – odor-free during sampling and testing
- Complies with WHO standards of the 4th, 5th, and 6th editions
- Results at the push of a button (one-click)
- Operating modes: Short mode, Normal mode
- Minimum sample volume: 200 μL

High-Resolution Phase-Contrast Microscope

- Automated switching between 10x and 20x objectives
- Capture of high-resolution sperm images and motion videos

AI-Powered Intelligent Analysis (DeepCell-Engine)

- Automated detection of sperm agglutination
- Tracking of movement trajectories
- Color-coded path visualization

Automated Sample Dilution

- For highly concentrated samples, the device intelligently selects the optimal dilution ratio
- Performs automated dilution
- Ensures optimal movement space for highly active sperm

Clinical Parameters & Reference Values

Liquefaction
Normal ejaculate liquefies within 15–30 minutes. Delayed liquefaction (>30 minutes) may indicate male infertility.

Appearance
Normal semen is whitish-gray. Brownish or reddish discoloration often indicates infections or inflammation in the prostate, urethra, epididymis, or seminal vesicles.

Viscosity
High viscosity can impair the determination of motility, concentration, and other parameters.

Motility Grades
- PR – progressively motile
- NP – non-progressively motile
- IM – immotile

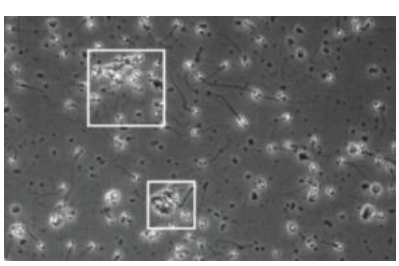
Volume
Normal range: 2–6 mL. Values below 1.5 mL or above 8 mL may indicate male infertility.

pH Value
Normal range: 7.2–8.0. A lower pH (acidic) may indicate blocked seminal vesicles, while a higher pH (alkaline) may indicate an infection.

Concentration
Normal: ≥15 × 10 sperm/mL. Total sperm count per ejaculate: ≥39 × 10. Total sperm count is an indicator of male fertility.

CASA Parameters (Computer-Assisted Sperm Analysis)
VCL, VSL, VAP, ALH, LIN, WOB, STR, BCF, MAD

Sperm Morphology (Research Parameter)
Can be automatically detected via the software.



Automated Gram Staining & Microscopic Examination – Standardized

AI-powered detection accuracy: ≥90 % accuracy in the classification of cells and bacteria

Compatible with various sample types: vaginal secretion, blood, sputum, and more

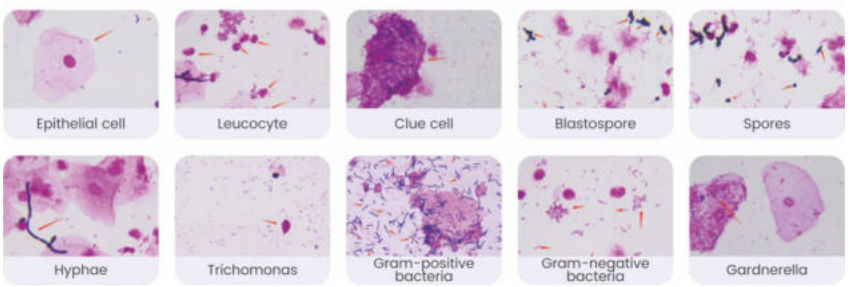
Vaginal Microecology – Assessment

The system for assessing vaginal microecology is a key to maintaining the health of the female genital tract. It enables a comprehensive evaluation of the vaginal environment under various health conditions and supports the diagnosis and treatment of gynecological diseases.

The system is widely used in obstetrics and gynecology – including in vaginal infections, gynecological cancers, reproductive medicine, and prenatal care.

Clinical Significance
- Vaginal microbial dysbiosis
- Vulvovaginal candidiasis (VVC)
- Aerobic vaginitis (AV)
- Bacterial vaginosis (BV)
- Trichomoniasis (TV)
- Mixed vaginal infections

Example of Vaginal Microecology Atlas



Blood Culture – Diagnosis of Bloodstream Infections

Blood culture is considered the gold standard for the diagnosis of bloodstream infections (BSI) – including toxemia, bacteremia, sepsis, and pyemic septicemia. It provides valuable information for diagnosis and therapy.

Gram staining and microscopic examination are essential steps in every blood culture with a positive finding. However, this step is often manual and time-consuming. The **Microbiology Analysis System** has been developed to solve this clinical problem.

Clinical Significance
In positive blood culture samples, Gram staining and microscopy are critical findings. They provide the first warning in bloodstream infections and assist physicians in making initial therapeutic decisions.

Example of Blood Culture Atlas

Sputum Examination – Respiratory Tract Infections

Special slides for sputum ensure a large, sample-rich observation area – this prevents Mycobacterium tuberculosis from being overlooked.

Staining Compatibility
- **Acid-fast staining:** For TB screening (staining required prior to scanning)
- **Complete Gram staining & scanning:** For general bacteria and fungi

Key Indicators – Acid-Fast Staining
- Mycobacterium tuberculosis

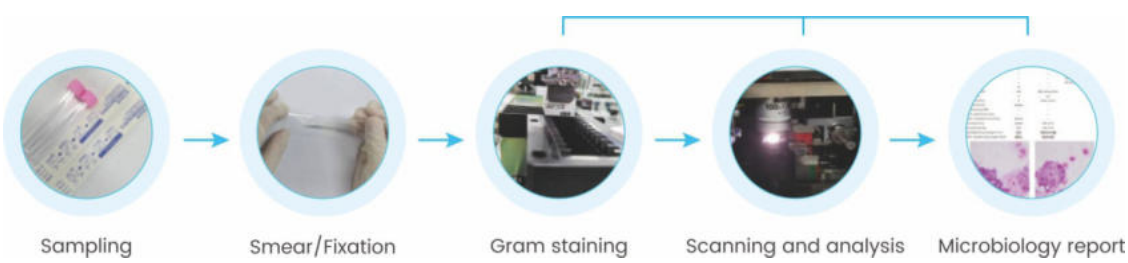
Key Indicators – Gram Staining
- Gram-positive streptococci
- Gram-positive cocci
- Gram-positive staphylococci
- Gram-negative long rods
- Gram-negative short rods
- Spores, blastospores, hyphae (e.g., Candida)

Automatic Stainer

- **Throughput:** 50 slides / hour
- **Capacity:** 50 slides
- **Automatic loading, fixation, staining, drying, and unloading**
- **Gram staining** via automated immersion staining
- **Closed process** and automatic rinsing cycle to prevent cross-contamination

Microscope Scanner
- **Scanning speed:** 35 slides / hour
- **Scan magnifications:** 20×, 100×
- **Automatic oiling** with immersion oil
- **Interval scanning** and **intelligent puzzle scanning**

Fanaly-100 – Microbiology Analysis Software
- **Detection of:** cells, bacteria, fungi, protozoa, etc.
- **Automatic** morphological detection and report generation
- **≥90 % accuracy** in morphological detection



SGTi Allergy Screen

Intelligent screening of allergen-specific IgE

A comprehensive range of profiles, tailored to clinical needs. Flexible integration into semi- and fully automated workflows. Precise result interpretation through specialized analysis software.

Simultaneous detection of multiple allergen-specific IgE

SGTi Allergy Screen

Why the SGTi Allergy Screen Series?

Simultaneous detection of up to 102 allergen-specific IgE targets using a dual-line strip system (inhalation and food allergens combined).

Comprehensive allergen coverage: 50 inhalation and 53 food allergens, suitable for various testing requirements.

Rapid results with a test duration of approximately 3–4 hours. Flexible workflow options, from semi-automated to fully automated processing, compatible with the S-Blot series analysis instruments. Low sample volume required (only 50 µL serum or plasma), ideal for pediatric and adult testing. High reliability and traceability through QR-code-based lot calibration for consistent quality management.

Standardized result reporting using specific IgE class grades for clear clinical interpretation. A proprietary analysis algorithm verifies test performance and ensures accuracy and safety of the results.

S-Blot 3 (Fully Automated)

• Fully automated from start to finish – optimized workflow with end-to-end automation
• High throughput with processing of up to 48 samples per run – designed for efficient high-throughput testing
• Advanced liquid handling technology – ensures precise pipetting and stable performance
• Proprietary analysis algorithm – delivers high accuracy and sensitivity for reliable results

S-Blot 2 Easy (Semi-Automated)

• Semi-automated device – all processes after sample loading are fully automated
• Simultaneous testing of up to 12 samples per run
• Compact allergy screening device in laptop size
• Proprietary analysis algorithm with high accuracy and sensitivity

SGTi Allergy Screen Strips

Inhalation allergens

Food allergens

Versatile Workflow Solutions with the SGTi Allergy Screen

The SGTi Allergy Screen is designed to support a wide range of laboratory environments and offers flexible options for sample processing:

For laboratories with lower sample volumes or limited automation, tests can be performed manually using standard laboratory tools – easy to implement without the need for special equipment. For higher throughput, the S-Blot 2 Easy provides a semi-automated solution that enables efficient processing of multiple samples in a single session. For fully automated high-capacity testing, the S-Blot 3 system controls every step – from pipetting through incubation to washing and image capture – allowing seamless processing of up to 48 samples per run.

Regardless of the method chosen, results are interpreted quickly and accurately using the integrated software. Semi-automated and fully automated workflows utilize a built-in camera that optimizes the process by capturing and directly transferring images for analysis. This adaptability ensures that the SGTi Allergy Screen fits smoothly into any laboratory workflow, supporting both efficiency and reliability.

Fully Automated Digital Feces Analyzer

AI-powered localization and tracking technology

Fully Automated Digital Feces Analyzer
AI-powered localization and tracking technology

The fully **automated digital Feces analyzer** is an intelligent system for clinical diagnostics that analyzes feces samples quickly, precisely, and safely.

At its core is an **AI-powered localization and tracking technology** that automatically detects and captures high-resolution images of pathogenic components such as parasite eggs (e.g., liver fluke, hookworm, roundworm, tapeworm), red and white blood cells, fungal spores, Charcot-Leyden crystals, and fat droplets.

The analyzer operates with a **fully enclosed, odor-tight, and leak-proof sample system – from collection through analysis to disposal**. This ensures maximum biosafety and protects personnel as well as the environment from contamination.

Technical highlights include **intelligent, automatic two-step dilution** (depending on sample turbidity), **constant-temperature incubation** for stable reaction conditions, **three-channel multifield imaging** with CMOS microscopes, and six test chambers for up to 300 test kits. This enables up to **80 tests per hour**.

In addition, the device supports the parallel determination of **biomarkers** such as occult blood (hemoglobin + transferrin), calprotectin, lactoferrin, lactose, Helicobacter pylori antigen, as well as rotavirus, norovirus, and adenovirus antigens. Results are automatically interpreted, and **remote support** enables remote maintenance and software updates.

Overall, the system offers a **fully automated, standardized, and safe feces analysis** – ideal for laboratories with high sample volumes that rely on precise parasitology and biomarker diagnostics.

Before Analysis

Sample collection tube is fully sealed after sampling.

During Analysis

Tube system is fully sealed during analysis.

After Analysis

Waste samples, test kits and liquid are collected in a sealed manner.

1. **AI-powered detection** of parasite eggs (e.g., liver fluke, roundworm, hookworm), red/white blood cells, fungal spores, fat droplets, and crystals.

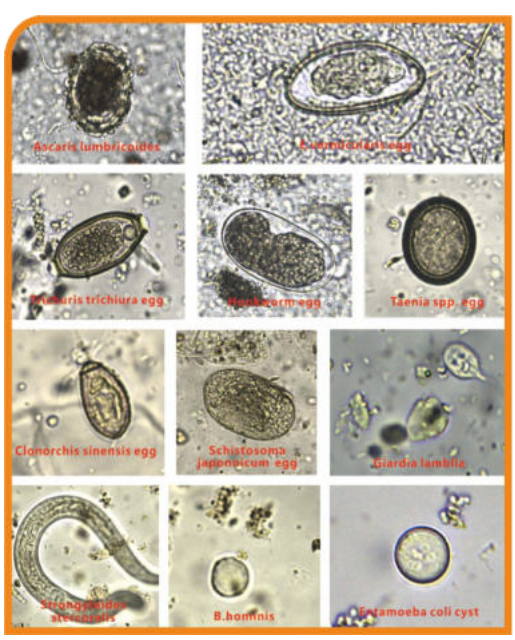
2. **Fully enclosed, odor-tight system** for biosafety (no leakage, no contamination).

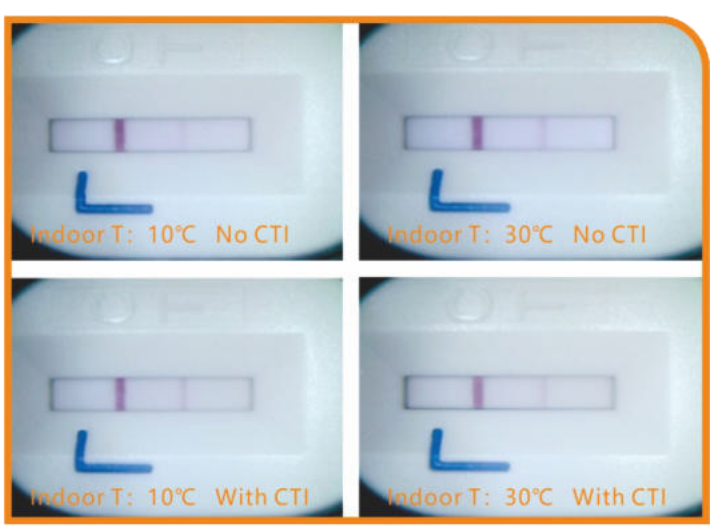
3. **Intelligent dilution** and **constant-temperature incubation** for precise results.

4. **Three chambers & six test kit positions** for high throughput (80 tests/hour) and parallel biomarker analysis (e.g., occult blood, transferrin, calprotectin, Helicobacter pylori, rotaviruses).

5. **Automatic image analysis with zoom function**, as well as remote maintenance and cloud database.

The goal is rapid, accurate, and safe stool testing in laboratories or clinics.





Urine Hybrid Analysis System

Automated analysis, puristic simplicity.

All-in-One
A single machine automates the analysis of dry chemistry, formed elements, and physical parameters in a fully integrated workflow.

Patented Design
Disposable counting chambers with five independent chambers – five tests simultaneously, increased throughput, no cross-contamination.

Patented roller mechanism – test strips can be fed in any direction, automatic detection of strip orientation.

Microscope
High-quality 6.3-megapixel optical system for crystal-clear images.

Automatic switching between 10x and 40x objectives as well as multi-layer dynamic focusing (= 3 levels).

Up to 20 fields of view at 10x and 80 at 40x – highest detection rate for rare components.

AI DeepCell Engine
Artificial intelligence based on deep learning and convolutional neural networks (CNN). Automatic detection, classification, and counting of formed elements with specialist medical accuracy.

Integrated analysis of:
- Urine dry chemistry
- Formed elements
- Physical parameters

AI DeepCell Engine: ≥90 % accuracy in the detection of formed elements

Throughput:
- Chemistry mode: 120 tests/hour
- Formed elements/Hybrid mode: 100 tests/hour

Disposable counting chambers (patented): No cross-contamination

Physical Parameters:
- Principle: Color: CCD camera
- Turbidity: Transmission turbidity measurement
- Test parameters: Color, turbidity

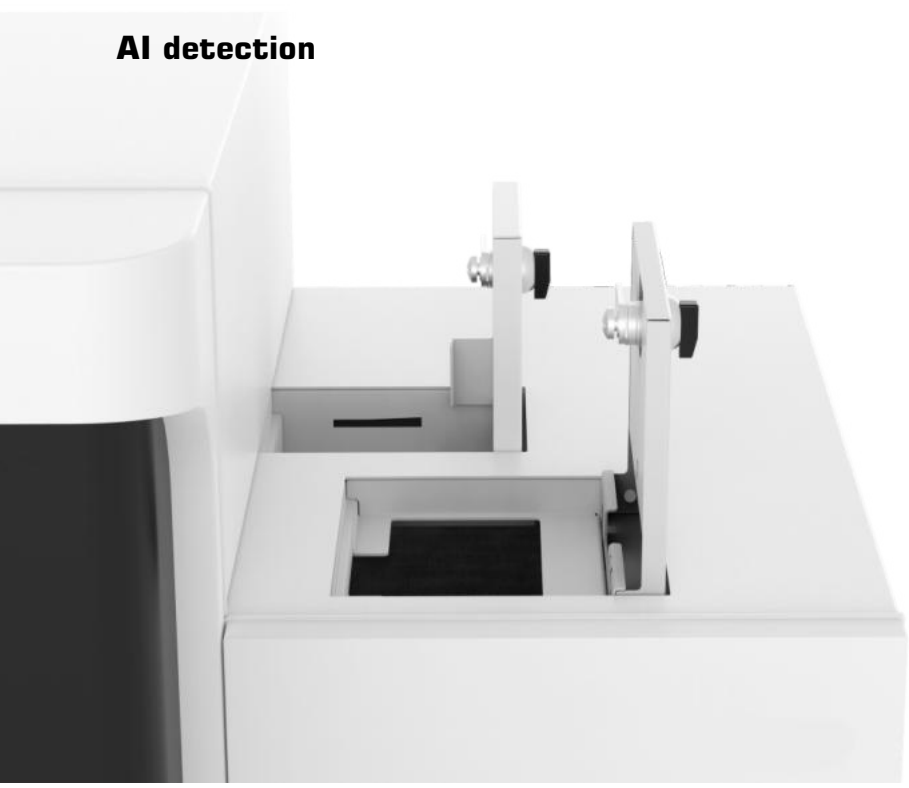
Dry Chemistry Parameters:
- Principle: Reflectance spectroscopy
- Test parameters: 11/14 parameters: BLD, BIL, KET, GLU, PRO, NIT, LEU, pH, SG, URO, VC, CRE, Ca, mALB

2 ratios: Ca/CRE ratio, mALB/CRE ratio

Formed Elements Parameters:
- Principle: Digital image recognition (automatic)
- Test parameters: Up to 50 types of formed elements, including:

Erythrocytes, leukocytes, hyaline casts, granular casts, epithelial cells, calcium oxalate crystals, uric acid crystals, cystine crystals, squamous epithelial cells, small round cells, clue cells, bacteria, yeasts, spermatozoa, mucus, etc.

AI detection



CLIA Instruments

Chemiluminescence Immunoassay Analyzer

This compact device is a fully automated immunoassay analyzer that performs a wide range of clinical diagnostic tests. It is used for the quantitative and qualitative determination of biomarkers associated with various diseases and physical dysfunctions.

Here is an overview of the main test categories covered by the device:

Infectious Diseases:
Hepatitis (e.g., HBsAg, Anti-HCV), HIV, Tuberculosis (TB-IGRA), Rubella, Toxoplasmosis (TORCH), respiratory pathogens

Tumor Markers:
Markers for various types of cancer for disease monitoring and early detection

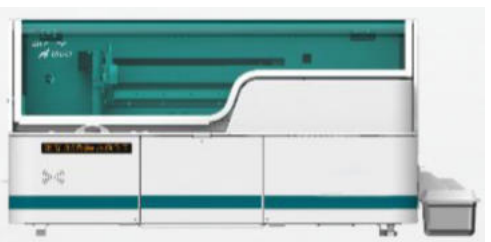
Autoimmune Diseases:
Diagnostics of autoimmune diseases using specialized autoimmune panels

Cardiovascular Diseases:
Cardiac markers such as cardiac troponin, inflammatory markers

Metabolism & Hormones:
Thyroid function (e.g., TSH, FT3, FT4), sex hormones, diabetes, bone metabolism, anemia diagnostics, growth hormones

Other Areas:
Liver fibrosis, prenatal care, allergy diagnostics, coagulation diagnostics

This device is a true all-rounder and supports over 150 different tests, covering a broad spectrum.



Here is an overview of the main test categories covered by the device:

Tumor Markers (AFP, CEA, PSA, CA19-9, etc.)

Infectious Diseases (Hepatitis, HIV, Syphilis, TORCH panel)

Thyroid & Hormone Diagnostics (TSH, FT3/FT4, sex hormones)

Cardiac Markers (Troponin, NT-proBNP, CK-MB)

Autoimmunology, Diabetes, Bone Metabolism, Inflammation, Anemia, and much more.

This device is a high-performance CLIA analyzer (chemiluminescence immunoassay) for high-throughput laboratories, with a throughput of up to 600 tests per hour per module. It was awarded the iF Design Award 2024.

Technical Specifications:

Feature	Value
Throughput	Up to 600 tests/hour (single module)
System integration	Up to 4 modules connectable – up to 2400 T/h
Time to first result	From 19 minutes
Sample capacity	Up to 150 samples (continuous loading)
Reagent positions	50 (2 independent cooling blocks with 25 positions each)
Reaction vessels	3600 pieces (bulk)
Carryover	≤ 5 × 10 (very low)
Dimensions (W×D×H)	2355 × 1352 × 1300 mm
Weight	approx. 865 kg

Diagnostic Spectrum:
Supports over 150 different tests, including:

- Infectious diseases (Hepatitis, HIV, TORCH, respiratory pathogens)
- Tumor markers (AFP, CEA, PSA, CA19-9, and many more)
- Thyroid & hormone diagnostics (TSH, FT3/FT4, sex hormones)
- Cardiac markers (Troponin, NT-proBNP, CK-MB)
- Autoimmunology, allergens, diabetes & bone metabolism

Target Group:

Large laboratories with high sample volumes such as central laboratories, commercial laboratory service providers, blood donation centers, and hospitals with high testing volumes.

AI-Powered Laboratory Platform

for Validation, Control & Analysis

Curalis24 unites artificial intelligence, device control, and cloud technology in an end-to-end platform for modern laboratories.

The following core functions form the foundation of the solution.

AI Validation Support
Automated, AI-powered plausibility checking and release of laboratory findings. Outliers, delta checks, and critical values are reliably detected, documented, and prioritized – for faster, more consistent, and traceable validation.

AI Dashboard
Central, real-time updated dashboard with key figures on sample throughput, capacity utilization, turnaround times, and quality indicators. Individually configurable views for laboratory management, quality management, and operational teams.

Seamless Integration & Control of Devices & Robotics
End-to-end connectivity to existing LIS and HIS systems as well as centralized control of connected analytical instruments and laboratory robotics. Existing infrastructure is preserved – Curalis24 integrates without system disruptions.

AI-supported sample control station
Intelligent prioritization, routing, and bottleneck detection in the sample flow. Samples are automatically assigned to the appropriate instrument or workstation, bottlenecks are identified early, and proactive countermeasures are taken.

Cloud Solutions for Specialized Laboratory Areas
Scalable, GDPR-compliant cloud modules for specialized laboratory fields such as genetics, microbiology, or special diagnostics. Secure data storage, flexible scaling, and easy expandability as needed.

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AI for the for the future laboratory

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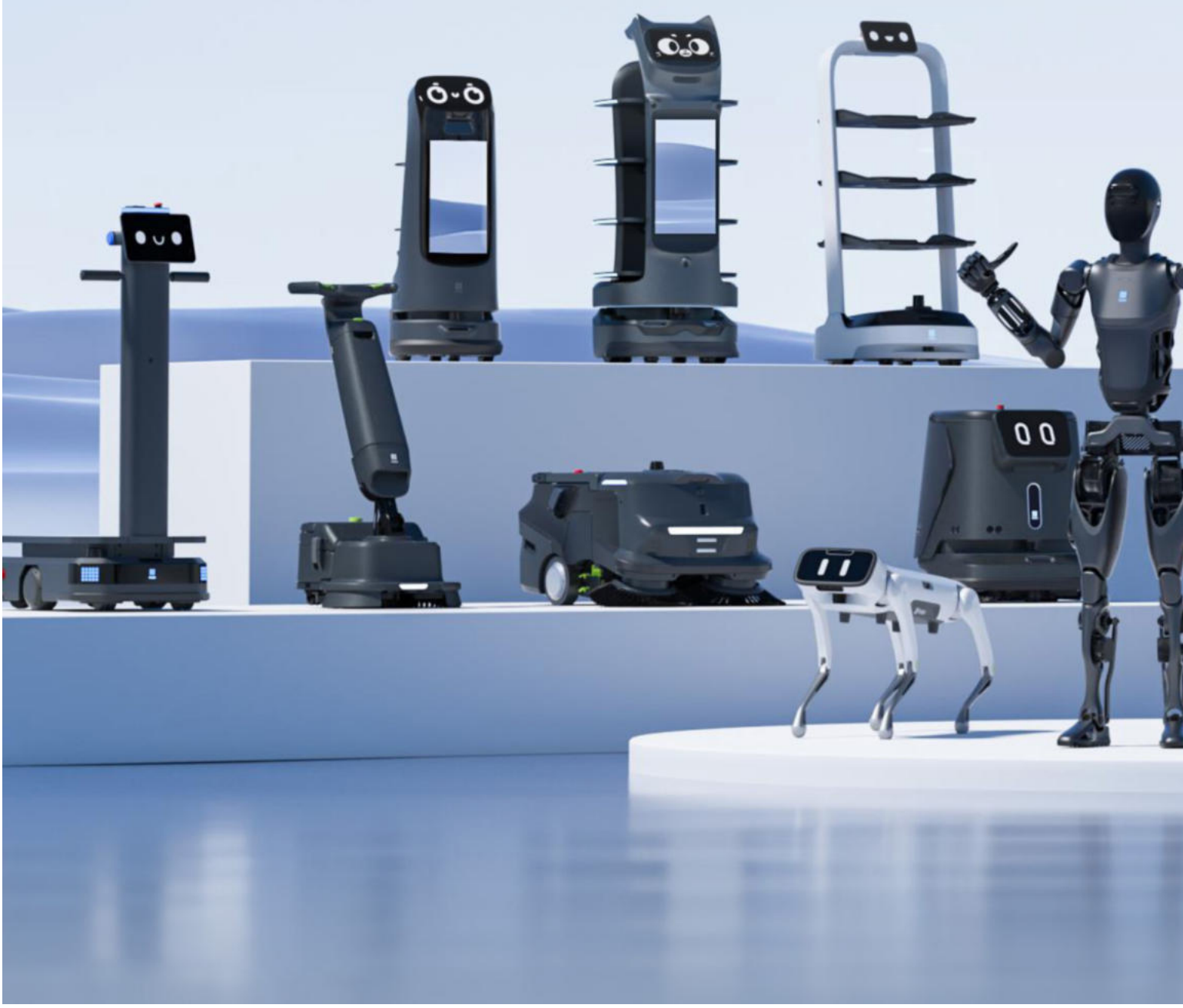


PUDU D7

DJI Matrice 4D – AI for the Laboratory of the Future

The DJI Matrice 4D is a versatile and robust aerial vehicle designed for demanding professional applications.

The construction complies with IP55 ingress protection rating against water and dust. The model can be operated either as a standalone device with the DJI RC Plus 2 Enterprise remote controller or integrated into the DJI Dock 3 system.

Sensors and Imaging

The aerial vehicle is equipped with three specialized camera systems that deliver high image quality:

- Wide-angle camera: Equipped with a 20-megapixel 4/3-inch sensor and a fixed focal length of 24 mm. A mechanical shutter is included.

- Medium tele camera: Uses a 48-megapixel 1/1.3-inch sensor with a focal length of 70 mm.

- Tele camera: Operates with a 48-megapixel 1/1.5-inch sensor and a focal length of 168 mm.

The camera system is supplemented by an integrated laser range finder. This measuring device enables **distance measurement of up to 1800 meters**.

Flight Characteristics

The system's maximum flight time is 54 minutes in forward flight and 47 minutes in hover flight. The propellers used are designed for reduced noise levels and feature an anti-icing function that enables operation in freezing rain. The aerial vehicle has a wind stability of up to 12 m/s.

Navigation and Safety Systems

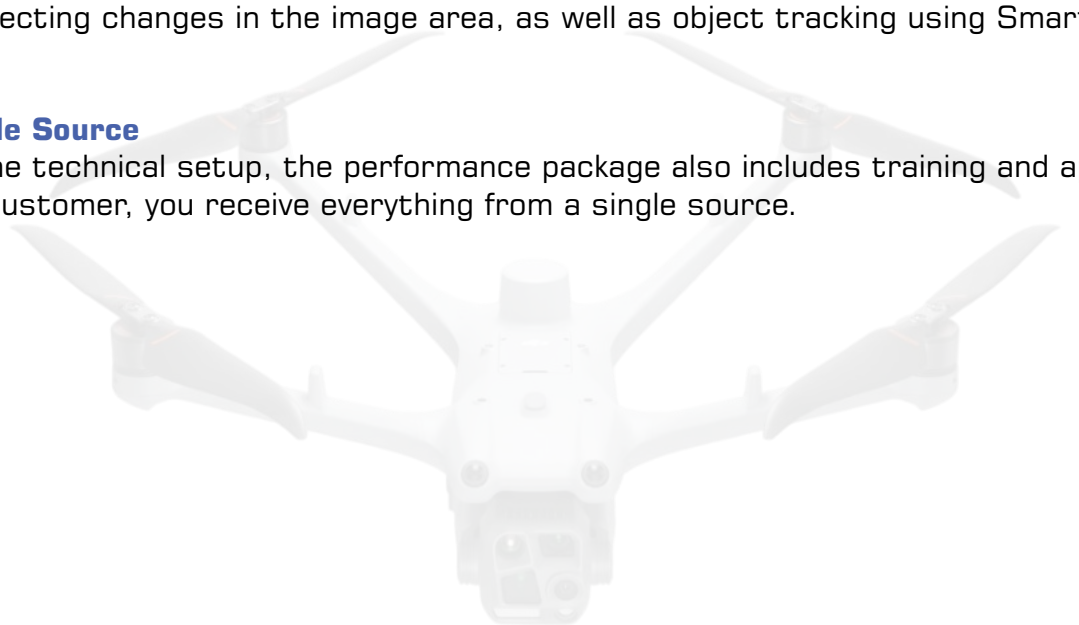
Obstacle detection utilizes a combination of LiDAR and millimeter-wave radar technology. The detection accuracy of the system is specified at 12 mm. For orientation in difficult lighting conditions, fisheye lenses as well as a special night mode are available. The stabilization of the medium tele and tele cameras enables detailed shots even at high magnification.

Flight Control and Automation

The system supports various automated functions. These include flight route planning, a function for detecting changes in the image area, as well as object tracking using Smart-Track technology.

All from a Single Source

In addition to the technical setup, the performance package also includes training and approval planning. As a customer, you receive everything from a single source.



Technical Specifications

- **Weight:** 1.850 g
- **Dimensions (without propellers):** 377,7 × 416,2 × 212,5 mm (L × B × H, ohne Propeller)
- **Max. takeoff weight:** 2.090 g
- **Flight time:** bis zu 54 Minuten
- **Maximum service ceiling:** 6.500 m
- **Maximum speed:** 21 m/s
- **Wind resistance:** bis zu 12 m/s
- **Ingress protection:** IP55
- **RTK module:** im Fluggerät integriert
- **Signal light:** im Fluggerät integriert
- **Operating time:**
  - Standard mode: 70 min
  - Eco mode: 100 min
- **Battery capacity:** 18 AH

Camera Specifications

Camera Specifications

- **Wide-angle camera:** 4/3 CMOS, Effective pixels: 20 MP
- **Medium tele camera:** 1/1.3-inch CMOS, Effective pixels: 48 MP
- **Tele camera:** 1/1.5-inch CMOS, Effective pixels: 48 MP

Compact in size / Comprehensive in capability

All-in-One / One Robot for All

Phantas is a commercial floor-cleaning robot, creating exceptional versatility and usage across multiple surface types with four integrated cleaning modes:

- Vacuuming
- Sweeping
- Scrubbing
- Dust mopping
- Wet cleaning

Phantas automatically detects different floor surfaces and adjusts brush height accordingly, protecting floors while delivering optimal cleaning results.

Vacuum Mode
The high-end professional robot automatically activates vacuum cleaning mode before transitioning onto carpeted surfaces. This advanced technology ensures both floor protection and outstanding cleaning efficiency.

Phantas requires no manual maintenance. It autonoumously connects to its docking station, where it recharges, refills clean water and disposes wastewater.

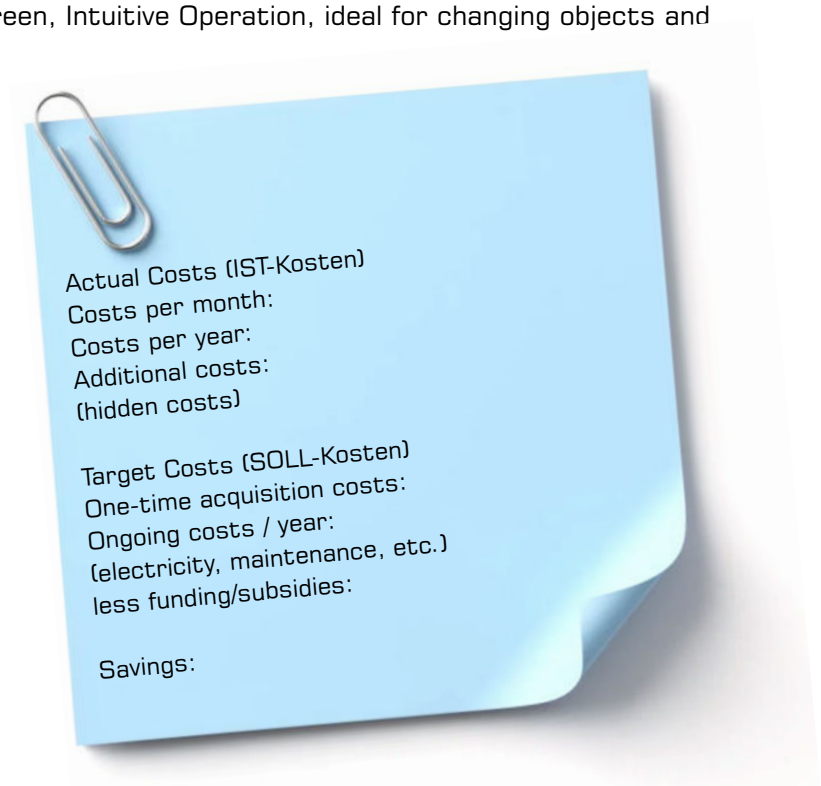
- Optional Features for Maximum Autonomy
- External water tank trolley for extended cleaning cycles
- Automatic return to charging station for uninterrupted operation
- Sustainable & Cost-Efficient Cleaning
- Up to 70% more efficient than conventional cleaning solutions
- Reduced water and energy consumption through intelligent dosing
- Minimal maintenance thanks to automated functions

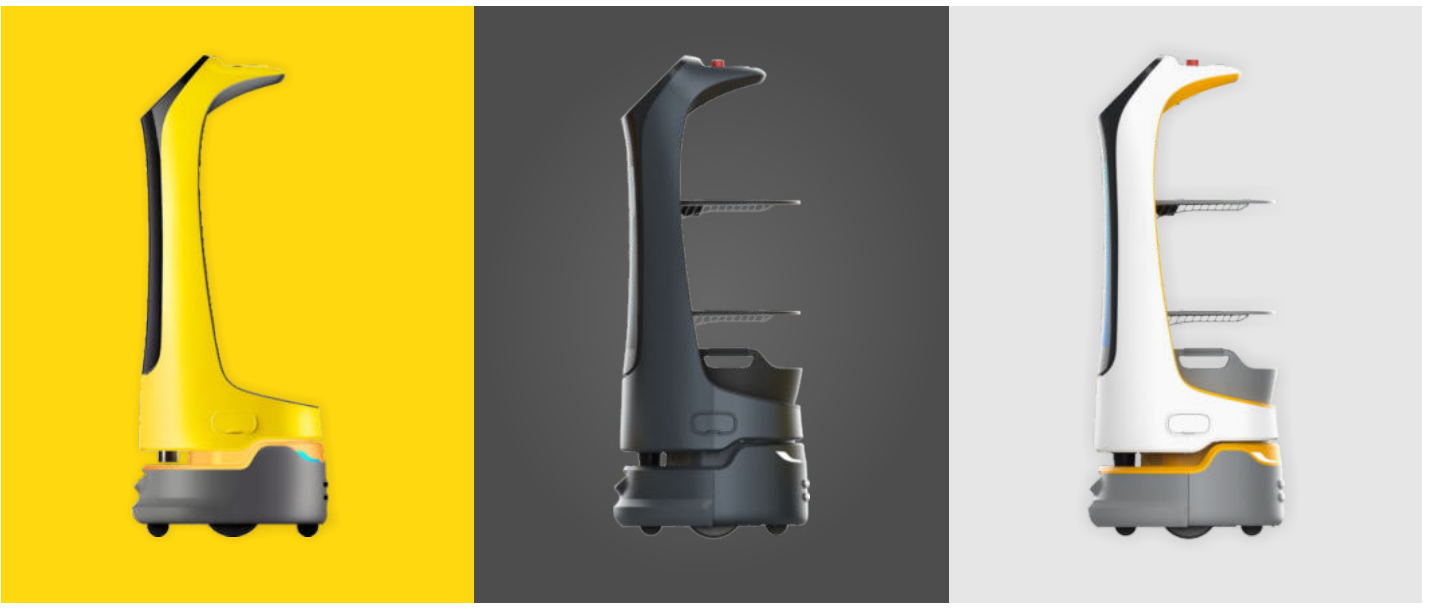
Key Features

Cleaning Functions:	4-in-1: vacuuming, sweeping, scrubbing, mopping; wet & dry cleaning; ideal for complex environments.
Application Areas:	Optimized for small to medium-sized spaces: offices, hotels, care facilities, commercial properties, rental units.
Mobility & Agility:	Ultra-compact and highly agile — cleans efficiently under tables, shelves, in narrow corridors, and complex room layouts.
Navigation & Sensors:	Advanced AI navigation, 3D sensors, camera fusion, precise mapping, and excellent obstacle detection.
Maintenance & Operation:	Modular design and intuitive operation, ideal for changing environments and complex floor plans.
Strengths:	Perfect for complex layouts, mixed-use spaces, high flexibility, and professional-grade performance.

Key Specifications & Technical Data

- **Dimensions & weight:** 540 × 440 × 617 mm (L × W × H), approx. 48 kg (empty)
- **Cleaning performance:** up to 700 m^2/h (theoretical max. 950 m^2/h for scrubbing/mopping)
- **Working width:** 410 mm (vacuum/sweeping), 330 mm (scrubbing)
- **Tank capacity:** approx. 11.5 L clean water, 10.5 L wastewater, 0.7 L debris container
- **Battery runtime:** approx. 4.5 h (scrubbing/vacuuming), up to 18 h (sweeping)
- **Charging time:** approx. 2 hours
- **Navigation & sensors:** LiDAR, 3D depth cameras, RGB camera, anti-collision sensors, SLAM navigation
- **Special features:** 0 mm edge cleaning, automatic stain detection and targeted spot cleaning (Auto Spot Cleaning)
- **Noise level:** < 65 dB
- **Control interface:** 7-inch touchscreen, Intuitive Operation, ideal for changing objects and complex room layouts





KettyBot helps you attract new customers while serving as a mobile advertising platform. Powered by artificial intelligence, it detects people, approaches them proactively, and presents your offerings in an engaging way.

KettyBot also acts as a personal guide, escorting visitors directly to their desired destination.

Gastronomy:

Enables the delivery of
- Used Dishware
- Clean dishes
- Towels
- Additional supplies

Ideal for restaurants and hotels.

Waiting Areas:

Welcomes visitors in public offices and service facilities.

- Provides
- Snacks
- Beverages
- Additional services.

Trade Shows & Catering:

Delivers
- Drinks
- Snacks
- Information materials

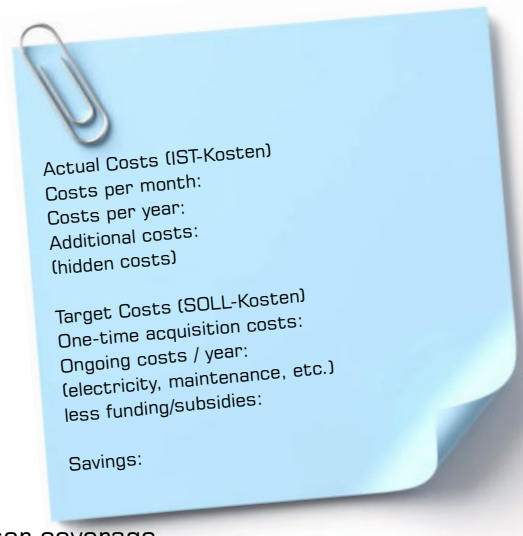
Directly to guests and exhibition booths. Actively interacting with visitors.

Shopping Centers:

Assists shoppers with flyers and floor maps.

Offers small appetizers and uses the large display to showcase promotions, events, campaigns and more.

Key Features & Technical Specifications



- **Dimensions (L × W × H):** 435 × 450 × 1120 mm
- **Weight:** approx. 38 kg
- **Payload:** 10 kg per tray (total approx. 30 kg)
- **Battery capacity:** 20 Ah
- **Battery runtime:** up to 9 hours
- **Charging time:** approx. 3.5 hours
- **Maximum speed:** 1.2 m/s
- **Navigation:** Dual SLAM (Laser SLAM & Visual SLAM) with 360° sensor coverage
- **Cameras:** 2 RGBD depth cameras, 1 infrared camera, 360° fisheye camera
- **Advertising display:** 18.5-inch screen
- **Minimum passage width:** 52 cm (context-dependent)
- **Obstacle clearance:** up to 5 mm

GreetingBot Nova

is OrionStar's first robot with a large language model for the global market and stands out with first-class navigation and customization options.

It impresses with a modern design featuring more hardware interfaces and more space for peripheral devices.

Thanks to its extensive language model, Nova interacts with exceptional intelligence and effortlessly handles reception, guidance, and explanation tasks.

Intelligent Reception | Intelligent Q&A | Intelligent Guidance | Travel Companion | Promotion

Increase your company's success, delight your customers

Competitive advantage:

- Reduce labor costs
- Relieve employees of routine tasks
- Perfect process automation

Customer acquisition:

- Fast response
- Improved engagement
- Customer acquisition

Immersive human-robot experience

For a more vibrant and engaging interactive experience

GreetingBot Nova has been completely redesigned visually and presents itself even more impressively at reception.

Equipped with a 14-inch HD screen that supports personalized marketing materials, it creates an entirely new level of interaction that delights and engages.

Key Features & Technical Specifications

General Parameters:
Overall dimensions
558 x 525 x 1350 mm

Net weight
56 kg

Product color
Silver + anthracite gray

Screen size
14 inches; 1080p Full HD

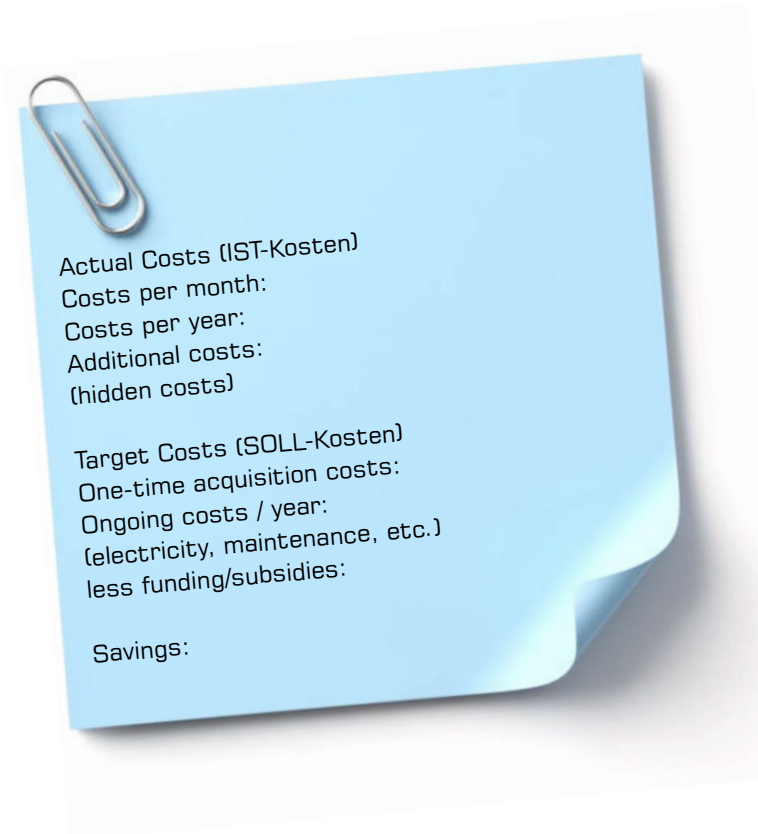
Head camera
13-megapixel HD camera × 1

Mobility Specifications:
Travel speed
0.5 ~ 1.2 m/s (adjustable)

Cruising time
12–14 hours (typical cruising scenario)

Charging Information:
Charging time
4.5 hrs (with charging station)

Charging mode
Automatic charging station, cable

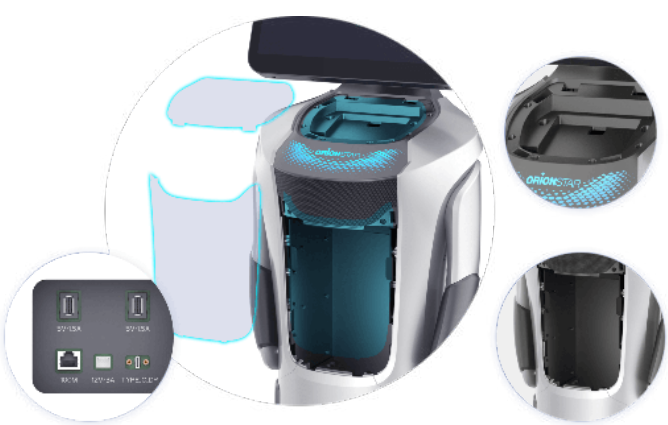


Advanced customization options

Fulfilling personalized needs in a wide variety of scenarios

GreetingBot Nova features a range of enhanced hardware interfaces and expanded connection space for peripheral devices, allowing a greater variety of equipment to be connected.

This flexibility ensures that our robots can be adapted to the individual requirements of the most diverse environments.



Sh1

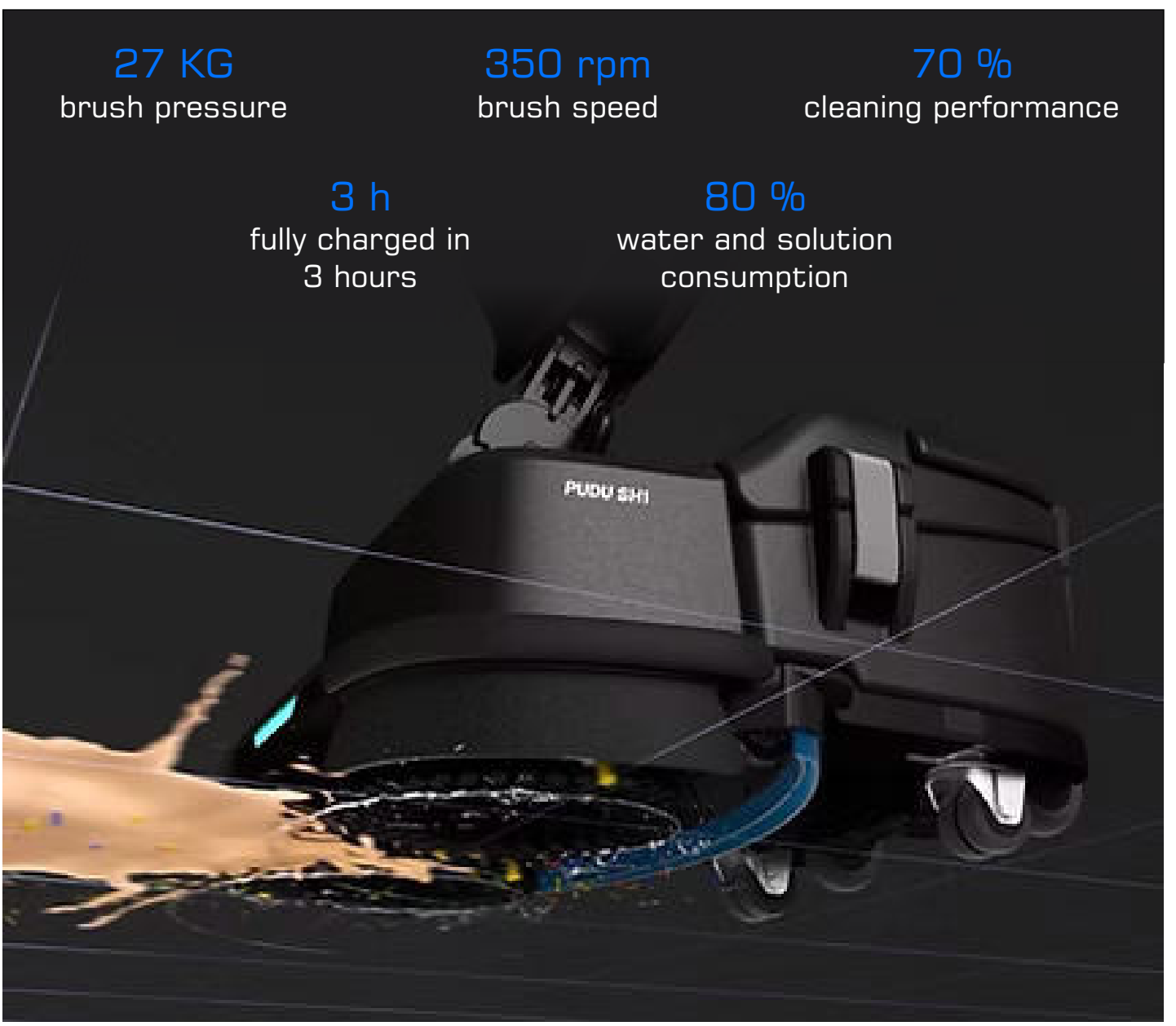
The Intelligent Scrubber Dryer

Hand-guided upright scrubber dryer

The SH1 is a compact upright scrubber dryer, ideal for greasy and dirty environments. It combines the deep-cleaning performance of a professional manual scrubber dryer with the ease of use of a traditional mop — delivering spotless clean results.

Perfect for commercial spaces and high-traffic areas, the intelligent Pudu SH1 goes beyond floor cleaning. It effortlessly cleans hardly reachable areas under tables, in difficult corners, upholstery, and even vertical glass surfaces.

The SH1 simplifies cleaning by spraying water and detergent, scrubbing, and drying wastewater simultaneously. With multiple cleaning modes and versatile applications for different scenarios, it operates sustainably and is up to 70% more efficient than conventional mopping methods.



Fast • Thorough • Reliable

Efficient Cleaning Performance

Technical Specifications

Dimensions
490*530*1.200 mm

Dirty water tank
4 L

Clean water tank
4 L

Charging time
2,5 hours

Cleaning performance
1.100-1.600 m2/h

Weight
27 kg

Volumen Frischwassertank
4 l

Operating time
Standard mode: 70 min
Eco mode: 100 min

Battery capacity
18 AH

VSLAM+

Unlimited spatial coverage with uncompromising cleanliness: by combining VSLAM and LiDAR, the robot navigates complex environments with high precision — without the need for QR codes.

With AI-powered spot cleaning, it covers areas of 5,000 to 8,000 m², delivering intelligent efficiency gains in large-scale facilities.

Spot Cleaning

Targeted cleaning for precision and efficiency: Using AI-based image recognition and dynamic route planning, the system detects common contaminants such as coffee spills, sauces, and puddles in real time, instantly generating optimized cleaning routes.

With a **cleaning rate of 1,500–3,000 m²/h**, it ensures faster response times and superior area coverage.

AI-Controlled Cleaning Intensity

Stubborn stain detection
Identifies persistent stains and automatically increases cleaning power for deeper, more effective results.

Floor cleanliness monitoring
EContinuously assesses contamination levels and automatically switches modes — Eco mode for clean areas, deep cleaning for heavily soiled zones. That leads to optimized water and energy consumption.

Floor type recognition
Automatically adapts cleaning modes to the surface: sweeping and vacuuming on hard floors, vacuum-only mode on carpets — ensuring optimal dust and debris removal.

Technical Specifications

Operating voltage
23V~29.2V DC

Battery type
Lithium iron phosphate ($LiFePO_4$)

Battery capacity
50 Ah

Charging time
approx. 3 hours

Runtime
Scrubbing: 5 hours
Sweeping & vacuuming: 5 hours
Carpet vacuuming: 4 hours
Quiet mopping: 9 hours

Cleaning functions
Kehren, Staubsaugen (von Teppichen), Staubwischen, Schrubben

Weight
75 kg

Dimensions
629 x 552 x 695 mm

Display
10.1-inch LCD screen

Noise level
<75 dB

Threshold clearance
20 mm (non-cleaning mode)
8 mm (cleaning mode)

Cleaning width (with side brush)
500 mm

Cleaning efficiency
700-1000 ㎡/h (full cleaning)
1500-3000 ㎡/h (spot cleaning)

Dustbin capacity
2,5 L
6 l (dust bag)

Water tank capacity
Clean water: 15 L
Wastewater: 15 L

Navigation
LiDAR positioning and visual fusion

IP protection class
IPX4

Work smarter and easier with Gausium service robots

Basic Information

• Omnie is also available in two versions: as a disc brush and as a roller brush, just like the SC50 series.
• If required, an IEC version* is optionally available for the Omnie; the standard version is a non-IEC version.

Applicable Scenario Types:

• Shopping malls
• Transport hubs
• Factories & warehouses

The Omnie is equipped with 3D LiDAR and is ideally suited for cleaning large areas such as shopping malls, airports, train station concourses, factories, and warehouses.

Suitable Floor Coverings

Omnie can be used for floor coverings such as natural stone, artificial marble, granite, ceramic, PVC, vinyl, epoxy resin, concrete/cement, tiles, terrazzo, plastic flooring, etc.

PVC und Vinyl

Artificial marble / Granite

Epoxy resin

Concrete / Cement

Ceramic

Natural stone

Accessories:

Charging Station

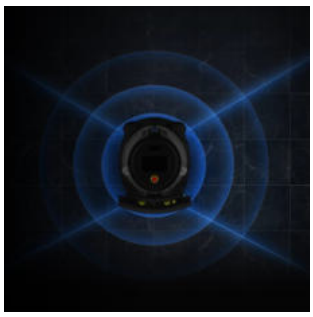
When the battery reaches the lower threshold, robots can automatically drive to the charging station to recharge.

Workstation:

The robots can drive to the workstation to recharge, refill with fresh water, and drain the wastewater when one of the following conditions is met:

1. Battery is less than 10 % charged
2. Fresh water tank is empty
3. Wastewater tank is full

Feature Highlight:
360° Bird's-eye view
360° LiDAR coverage
3D LiDAR



Never get lost
The robot navigates autonomously through expansive areas, without ever getting lost or requiring human assistance.

Feature Highlight:
A scrubber dryer that also sweeps

Versatile Cleaning
The roller brushes scrub the floor
and effectively collect small debris at the same time, so no manual pre-sweeping is required.

Actual Costs (IST-Kosten)
Costs per month:
Costs per year:
Additional costs:
(hidden costs)

Target Costs (SOLL-Kosten)
One-time acquisition costs:
Ongoing costs / year:
(electricity, maintenance, etc.)
less funding/subsidies:

Savings:

Work smarter and easier with Gausium service robots

The Beetle is the latest generation of autonomous industrial sweepers. With state-of-the-art AI technology, 3D LiDAR navigation, and seamless integration into existing facilities, it delivers efficient, reliable, and dust-free cleaning – even in demanding environments. Ideal for warehouses, production facilities, and large-scale industrial plants.

Benefits of the Beetle Pro

- Autonomous sweeping robot for industry and commerce
- 45 L large waste container for long missions
- Runtime of 6–10 hours, charging time only 3–4 h
- Precise navigation with advanced sensor system
- High area coverage of up to 2,000 m^2/h
- Maximum speed of 1.2 m/s

Key Features:

Long Runtime

Up to 8 hours of operation with a powerful 60 Ah LFP battery. Ideal for industry and logistics with long cleaning cycles.

High Cleaning Performance

Efficient sweeping and suction power for dust, sand, paper, and wood shavings. Perfect for large areas and demanding environments.

Precise Navigation

3D LiDAR technology for accurate mapping and reliable orientation – even in narrow aisles and complex halls.

Automatic Charging

When the battery is low, the Beetle automatically returns to the docking station and resumes cleaning afterwards.

Compact Design

With a cleaning width of only 750 mm, the Beetle cleans even narrow aisles. Agile deployment in warehouses, workshops, and production halls.

Efficient Dust Control

HEPA filter ensures clean air and traps even fine dust – hygienic cleaning for industrial and logistics environments.

Technische Daten

Dimensions:
960 × 650 × 680 mm

Cleaning width: 750 mm

Cleaning performance: up to 2,000 m²/h, 7,000 m²/h (spot)

Runtime: 3 h

Charging time: 2.5 h

Max. airflow: 1,500 m³/h

Waste container: 45 L

Speed: max. 1.2 m/s

Actual Costs (IST-Kosten)
Costs per month:
Costs per year:
Additional costs:
(hidden costs)

Target Costs (SOLL-Kosten)
One-time acquisition costs:
Ongoing costs / year:
(electricity, maintenance, etc.)
less funding/subsidies:

Savings:

A startup company powered by over 50 years of combined experience!

Founder and Managing Director Murat Ural

Founder and Managing Director Nejat Catalbas

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