

## **RAVO 5 iSeries**



## OVER 50 YEARS OF EXPERIENCE PASSIONATE ABOUT SWEEPING

In 1964, when RAVO was established in The Netherlands, the foundation for the first compact vacuum street sweeper was laid. Since then RAVO has grown into the world leader in innovative sweeping. Nowadays we are part of the Fayat Environmental Solutions Group providing a complete sweeping solution for customers all over the world.

Our international dealer network allows us to provide superior service to customers worldwide. These customers include cities like Rome, Amsterdam, Dubai, Saint Petersburg, Washington DC, Berlin, Montreal, San Francisco, Porto and Bordeaux.

RAVO successfully supports customers to find solutions for modern day issues. RAVO has helped Rome to lower the noise emission of its sweepers by developing a special silent package. The city of Barcelona needed a sweeper that could sweep and wash simultaneously; RAVO developed the swasher option and currently we are very excited about our latest development, the 5 eSeries, being the first electric compact sweeper in the market.

RAVO values close relationships with its customers; With support and high service RAVO helped Berlin to achieve a longer uptime. These relationships and our one product focus has made the RAVO 5 iSeries into what it is today: World's best and most sold street sweeper.

And not without reason, RAVO delivers at all levels; whether it is about the incredible uptime, fuel savings compared to truck mounted sweepers, operator's comfort or the state of the art build quality. We will keep on going that extra mile to make the RAVO 5 iSeries to what it has become today: the benchmark in sweeping.



## DESIGNED TO PERFORM THE RAVO 5 iSERIES



#### A SOLID FOUNDATION

Equipped with a powerful engine, an attractive cabin interior design and a state of the art intelligent sweeper monitoring system the 5 iSeries sets the benchmark in sweeping.

The unmatched performance is the result of a pure vacuum suction line combined with RAVO's unique brush system.

Spring or Autumn, sand with pine needles or leaves, main streets or bicycle lanes, smooth tarmac or cobblestones, the 5 iSeries will clean every street in one pass. Storing all debris in its spacious 5 cubic meter stainless steel hopper with an unrivalled compaction rate.

#### Every RAVO is standard equipped with:

- An ergonomically designed cabin with adjustable steering column, dashboard, arm rest and lockable doors from inside.
- Air conditioning.
- A powerful IVECO or Cummins engine.
- Linde hydraulics.
- A stainless-steel container with a volume up to 5m<sup>3</sup>.
- Loading capacity of 5500 KG.
- Extreme manoeuvrability with a turning circle of only 5m (curb to curb).
- A unique pulled brush system:
  - Constant brush pressure extends the brush life with 50%.
  - Maintenance friendly: no greasing required.
- Hydraulic front suspension with automatic levelling system.
- Only 15 easy accessible greasing points on the whole machine.
- Stainless steel suction tube.
- High waste compaction rate.
- Wide suction tube (225 mm).



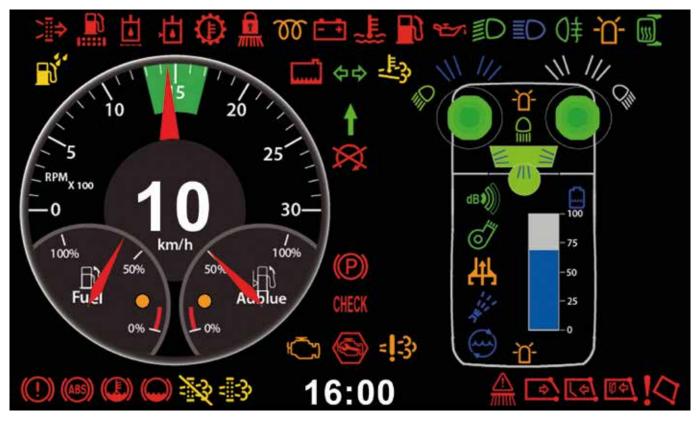


### THE RAVO ISYSTEM: INTELLIGENCE MEETS CONVENIENCE

At RAVO we continuously improve and develop our products. The RAVO intelligent electronic monitoring system, which we named the iSystem, is an excellent example of our innovation power. It has been specially developed to be in full control of your sweeper.

This robust control system has been tested exhaustively to meet the high RAVO standards. The use of nodes guarantees stability and the build in LCD screen enables you to check the parameters of the electronical & hydraulic system. This system will ease maintenance of your machine by informing you the status of the functionalities of your sweeper.

At one glance you can view all functions of the sweeper. Via the various available screens you can for example keep track of your sweeping and engine hours, service intervals or check your hydraulic system, lights, gauges, various pressure and voltage levels, etc.



Sweeping mode





Diagnostic mode

Info mode

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Parameter mode



## THE CABIN ATTRACTIVE & COMFORTABLE

The cabin has been designed with the input of experienced international RAVO operators. When entering the cabin with a floor height of only 78 cm, you will notice the ample interior space. Once seated in the air ride operator's seat the logical layout of the dashboard will amaze you. Add to that the fully adjustable armrest and steering wheel, the slightly tilted panoramic windscreen for ultimate visibility and you will agree that new standards have been set. These standards include:

- iSystem.
- Sound isolation.
- Panoramic view.
- Adjustable steering column, dashboard and arm rest.
- Lockable doors from inside for safety of the driver.
- Rear view and suction mouth camera.
- Air-conditioning.
- 12V plug.
- Radio with MP3 and USB.
- 2 Cup holders.
- Lockable storage space.
- Hatch to see inside the hopper.



#### EASE OF MAINTENANCE

To ensure proper maintenance of the machine in a smart way the RAVO 5 iSeries comes with the following features:

- RAVO's unique maintenance friendly brush system.
- Fan cleaner.
- Two big service doors for easy access.
- Easy changeable brushes.
- Optional electrical lowerable grid inside the hopper.
- Optional high-pressure water pump
- Long lasting water spray nozzles.
- Easy accessible greasing points.

# RAVO 5 iSeries, INNOVATIO KEEPS YOU GOING



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## **A VERSATILE PERFORMER**

For those who need specific requirements RAVO offers a range of options to customize your RAVO 5 iSeries. Below are some examples of the available options.

#### **Container dump**

This option allows you to dump your debris directly into a container and has a dumping height of 1550 mm.

#### Third brush/Weed cutter

The third brush increases the sweeping range of the RAVO 5 iSeries. This option enables drivers to clean pavements and road gutters more efficiently. When used in combination with the weed cutter brush, it is extremely suitable for the environmental friendly removal of weeds. This option can be equipped with a 'quick release' feature, which allows quick removal or installation of the third brush.

#### SAIGA PM 2.5 fine dust filtration system

The innovative and patented SAIGA Particle System has been TÜV PM 2.5 certified. This means that the RAVO sweeper will filter all fine dust out of the outgoing air. Contributing to a cleaner environment wherever you sweep.

#### Heavy duty suction line

Equip your sweeper with a coated suction line to extend its lifetime when working under the heaviest conditions.

#### High pressure water pump

The high-pressure water pump feature is perfect for quickly cleaning the inside of the container, brush and suction system or street furniture.

#### Brush angle adjustment

With the brush angle adjustment, you can position the brushes into the optimal angle to sweep gutters, which makes sweeping more efficient.

#### Independent brush lifting

The independent brush lifting enables you to reduce brush wear and achieve a longer lifetime of the brushes.

#### Swasher installation

Sweep and spray roads and pavements in just one go. The pressurized swasher allows sweeping crews to clean the most difficult reachable places, street furniture and traffic signs. Various configurations in terms of water pressure, water tanks and pumps are available.

#### Water recycling (improved, easy to clean)

This option doubles your action radius and reduces dust emission at the same time.

#### Wander hose

The wander hose is perfect for sucking up leaves and for emptying gutters and waste bins.

#### Silent package

The silent package reduces the noise level of the RAVO 5 iSeries by 15%. The package includes special software, sound absorbing materials and special silent brushes.

#### **Cruise control**

Set the speed to a certain level while sweeping so the operator can fully concentrate on the road and his sweeping job.

#### 360 Degree view camera

RAVO values safety and is therefore proud to present this new option for even better views of the road around the sweeper.





## **RAVO 5 iSeries:** MADE IN HOLLAND

Being Europe's number one producer of street sweeping machines and having over 50 years of experience makes RAVO a true specialist in the sweeping branch. We have the know-how and skills to meet your wishes. The RAVO 5 iSeries is build according to Dutch standards; high quality, robustness, superior technology and innovative design.



## RAVO: YOUR PREFERRED PARTNER IN SWEEPING SOLUTIONS

Together with our certified and dedicated dealer network we help you exceed your expectations and overcome all challenges.

We know that your equipment must work 24/7. To proof our trust in the quality of our product we offer a standard warranty of two years or 2000 hours on every sweeper that leaves our factory. On top of that we offer a 5-year warranty on the container and chassis.



### **RAVO GENUINE PARTS,** DESIGNED TO FIT!



Genuine RAVO parts are produced according to the highest standards of quality, durability and performance that is why they are such a good match for your RAVO sweeper.

To assure you always have the right parts available for scheduled service we have composed various service and parts kits, it's that easy!

#### **Using RAVO Genuine Parts means:**

- Receiving 12 Months warranty on parts.
- Meeting the OEM specifications.
- Increase the lifetime of your RAVO sweeper.
- Always the right fit.
- Cost savings over the long run.

For more information you can contact your local dealer who has RAVO trained parts specialists with the right knowledge and experience to assist you. They can further inform you about the possibilities of full service contracts and other service and maintenance options.

### **RAVO ACADEMY**

Training & education is highly valued by RAVO. Whether it is training of our employees and dealers or your operators and engineers. We have different training programs which are available at our own training facility. This is the RAVO Academy.

The RAVO academy enables our dealers and their customers to use and maintain the RAVO sweepers in the most efficient way. This high-quality training facility at the RAVO factory in Alkmaar provides trainings on different skill levels.

Our professional RAVO trainers also offer training on location, either at the dealer or at the customer.

Contact your local dealer for more information regarding the training possibilities.



## **RAVO 5 iSeries** TECHNICAL SPECIFICATIONS

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Suction system Airflow capacity	14.000 m³/h
Suction nozzle dimensions I x w	112 x 630 mm
Suction nozzle material	Corten steel (optional linatex lining available)
Suction tube diameter	225 mm
Suction tube material	Stainless Steel (optional linatex lining available)
Brush system	Stamess Steel (optional imates inning available)
Туре	RAVO maintenance free pulling brush system
Available brush diameter	750 mm - 900 mm
Brush rotation speed	0 - 210 rpm
Well-being	0 - 210 rpm
	109 dBA
Noise emission Lwa	74 dBA / 76 dBA
Noise level operator seat Lpa Euro 6/Tier 4	74 UBA / 76 UBA
Brakes & Electricity	Understice the exercised distribution
Front brakes	Hydraulically operated disk brakes
Rear brakes	Hydrostatic hydraulically actuated servo drum brakes
Front suspension	Independent hydro-pneumatic suspension
Rear suspension	Rubber cone springs
Battery	2 x 12 V/Ah
Alternator	90 amperes
Voltage (V)	24 with running engine 28
Maintenance	
Container Material	Stainless Steel inside / ABS cover outside
Total amount of greasing points in sweeper	15
Warranty	2 years or 2000 engine hours whichever comes first
Optional Equipment	
Max. sweeping width incl. third brush	3400 mm
Wander hose	200 mm diameter
Third brush / Weed cutter	750 mm diameter / 900 mm diameter
Silent package Lwa	97 dBA
High pressure water pump	15 L per min. @ 150 bar
Camera	Suction mouth, side view and rearview
Extra water capacity	Up to 1250 Liter
Heavy duty suction line	-

### **RAVO 5 iSeries** ENGINES

Our machines are equipped with engines which comply with the most stringent emissions legislations. The RAVO 5 iSeries engines are available in Tier 3, Tier 4 and Euro 6.

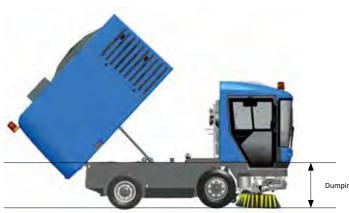


Emission level Tier 3	Emission level Tier 4 final	Emission level Euro 6
4.5 L	3.8 L	4.5 L
560 Nm @ 1400 rpm	360 lb.ft @ 1600 rpm	580 @ 1250-1940 rpm
104 kW @ 2200 rpm	138 hp @ 2300 rpm	118 kW @ 2500 rpm
Iveco Diesel 4 Cylinder	Cummins QSF3.8 Diesel 4 Cyl.	lveco Diesel 4 Cylinder
25 - 60 km	25 - 60 km	25 - 80 km
	Linde / Hydrostatic Continuously Variable	
	4.5 L 560 Nm @ 1400 rpm 104 kW @ 2200 rpm Iveco Diesel 4 Cylinder	4.5 L 3.8 L   560 Nm @ 1400 rpm 360 lb.ft @ 1600 rpm   104 kW @ 2200 rpm 138 hp @ 2300 rpm   lveco Diesel 4 Cylinder Cummins QSF3.8 Diesel 4 Cyl.   25 - 60 km 25 - 60 km

\*Depending on local legislation.

### **RAVO 5 iSeries** DIMENSIONS, WEIGHT, CAPACITIES

Tipping



Volume	5 m³
Dumping height	850 mm
Min. total empty weight (curb weight)*	5950 kg
Max. payload*	5450 kg

Dumping height: 850 mm

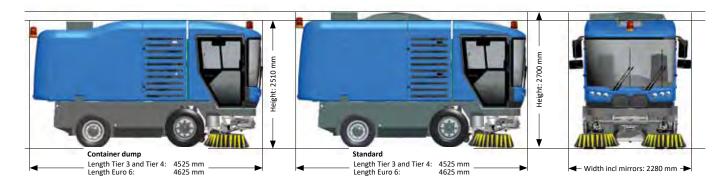
Container dump



Volume	4 m <sup>3</sup>
Dumping height	1550 mm
Min. total empty weight (curb weight)*	6220 kg
Max. payload*	5180 kg

Dumping height: 1550 mm

Dimensions



Dimensions, Weight, Capacities	Emission level Tier 3/Tier 4 final	Emission level Euro 6	
Length	4525 mm	4625 mm	
Width incl mirrors	2280 mm	2280 mm	
Wheelbase	1816 mm	1916 mm	
Sweeping width	2200 - 2500 mm	2200 - 2500 mm	
Gradeability [%]	Up to 30%	Up to 30%	
Gross vehicle weight	11400 kg	11400 kg	
Capacity fuel tank	105	120	
Capacity water tank	600 l	600 l	
Turning distance curb to curb*	5070 m	5070 mm	

\*Depending on model.

Every effort has been made to ensure that the information in this brochure is accurate. RAVO B.V. is not responsible for printing or clerical errors.







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