

Cleaning Technology
Municipal Technology
Waterjet Technology

Hako



Citymaster 1650_{ZE}

Multifunctionality goes all-electric!

All-electric multifunctional outdoor cleaning machine

CITYMASTER 1650 ZE

The all-electric alternative

The municipal vehicle fleet is becoming more climate- and environmentally-friendly: locally emission-free and with minimised noise and particulate pollution.

A big plus in terms of comfort

More driving and user comfort for the machine operator: thanks to the ergonomically designed workplace and Hako's back-friendly quick-change system.

Full flexibility

Sweeping, wet cleaning, light winter service – all fully electric: with efficiency advantages over diesel or electrohydraulic drives.

3.5t

Low-noise. Multifunctional. All-electric.

With electric drives into the future

With our first all-electric sweeper, we are setting new standards of efficiency in the 3.5-t class. Developed for the most demanding municipal and commercial applications, the Citymaster 1650 ZE combines proven functionality with a future-oriented, sustainable drive concept. The result: maximum efficiency with minimum environmental impact. The Citymaster 1650 ZE is emission-free, significantly reduces noise emissions and meets all requirements for performance, range and ease of use in daily operation.



Highlights:

- Climate-friendly and emission-free
- Low noise levels during operation
- Up to nine hours of operation without recharging
- Spacious cab for improved ergonomics at the workplace
- Efficient year-round operation thanks to fully electric drives





Heating system and air conditioning combined in an energy-saving concept

In order to go easy on the battery capacity, the cabin can already be preheated or air-conditioned while the battery is charging. The heated windscreen and heated seats as standard ensure that both the ventilation power and the interior temperature in the cabin can be reduced – for a clear view, to increase the driver's sense of well-being, and to save energy. During winter operations, a battery heater ensures unrestricted availability. When outdoor temperatures begin to rise, the side windows can be opened to let in fresh air. And in the summer the air conditioning ensures a pleasantly cool cab.



Pleasantly quiet
Electric drive and "Silent Brooms" for low noise values – also inside the cab.

Comfortable, safe, efficient

Equipped with clever details, the Citymaster 1650 ZE offers significantly increased driving and operating comfort: for example, thanks to the cab design with many ergonomic features – from the steering column to the driver's seat. All functions can be controlled at just the push of a button via Hako's one-button operating system integrated in the armrest. And the large display provides at-a-glance information on all relevant operating data.



A good view ensures safe working

Sophisticated safety concepts protect both the driver and the environment. The ROPS-tested safety cab with large windows ensures a good view at any time. The bright and energy-saving full-LED lighting system provides excellent illumination of the working area even in low-light conditions. Camera systems ensure a good all-round view and offer additional assistance when reversing or turning at junctions.



Increased comfort at the workplace

The ergonomic machine concept comprising an adjustable comfort seat, Hako's no-tools-needed quick-change system and a comfort suspension system (including chassis suspension at the front as well as vibration- and noise-dampening bearings) – which reliably levels out even big bumps – make the Citymaster 1650 ZE a particularly back-friendly workplace.



AGR quality label: Awarded for the overall machine concept, i.e. the machine as a workplace, the chassis and the quick-change system.
www.agr-ev.de



365 days. Countless tasks. One machine!

Each season comes with different challenges for Municipal Technology products. Hako masters each challenge with consistent multifunctionality. Thanks to the wide range of different attachments and superstructures available, you only need one machine to carry out almost any task – 365 days a year. At Hako, we call it “One for All”. And our customers say: “The right machine for every application.”



Sweeping



Wet cleaning



Transport



Sweeping 2 brooms



Scrubbing



Tipper



Sweeping 3 brooms



Sluicing



Lattice box



Dirt sweeper



High pressure washer



Trailer



Leaves collecting



Watering arm

The new electric multifunctionality

The compact sweeper Citymaster 1650 ZE follows Hako’s multifunctionality principle, which means that the machine also provides highly efficient all-season use as a versatile implement carrier. In all applications, the electric drives impressively demonstrate their efficiency advantages over classical diesel-hydraulic drives – with significantly reduced energy costs.



As quiet as it is efficient

With a 2- or 3-broom sweeping system, the Citymaster 1650 ZE offers a wide range of options for municipal use. Equipped with an additional front broom, it can sweep particularly flexibly under park benches and obstacles, for example. But no matter which system you opt to choose, both are characterised by their low operating noise. This makes the Citymaster 1650 ZE ideal for use in noise-sensitive areas.



Quickly ready for use

The no-tools-needed quick-change system allows fast retooling of the Citymaster 1650 ZE for a wide range of additional applications.



Hako-Fleet-ready!

Hako Municipal Technology thinks ahead – and is even smarter when you monitor its use with Hako-Fleet-Management. The data collection can not only serve as a basis for even more economical use, but also helps you to be one step closer to a solution in the event of a service call. Hako Fleet Management allows you to track the route of the Citymaster 1650 ZE. If a fault causes the vehicle to come to a standstill, its location is sent to the Fleet Portal and shown on the map. Operational results and statistics are clearly displayed in the web portal.



Hako-Fleet-Management: here's why!

- Recording of all important service data and operating states
- Clear presentation in the web portal, available 24/7
- Full cost transparency and control
- High machine availability
- Avoidance of machine damage
- Provision of performance records
- Compatible with machines from other manufacturers



Service makes the difference



Always quickly on site

Qualified service technicians with fully equipped service vehicles carry out service work promptly and efficiently directly on site.

Professional service

Whether you need repairs, maintenance or safety inspections, your machine is in the best hands in the modern workshops of our subsidiaries, authorised dealers or service partners.

Service via scan

Full access to all machine details and data as well as digital service requests – simply via QR code scan.

For maximum availability

To ensure that our machines perform optimally at all times, we offer customised and scalable services along the entire product life cycle.

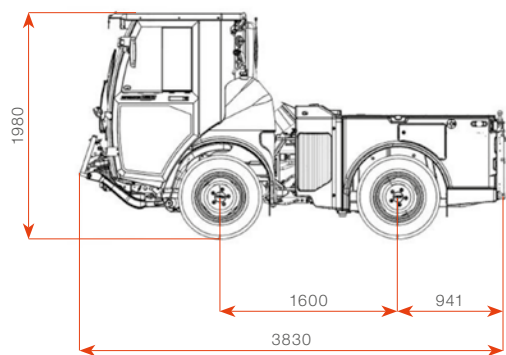
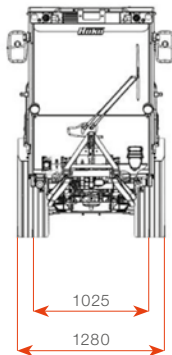
- Right from the start: with solution-oriented advice directly on site as well as attractive financing and rental options
- After purchasing: with smooth procurement and provision including user training
- During use: with individual service contracts and 24/7 support for fast and professional troubleshooting, high efficiency and permanent machine availability
- At the end of the product's life: with take-back and recycling as well as machine upgrades



Technical data

Basic vehicle Citymaster 1650 ZE		
Engine and drive	Drive/ Battery system (HV)	· All-electric, multifunctional work machine with high-voltage lithium-ion traction battery · Usable capacity 55 kWh (SOC 0–100 %) (1), system output up to 50 kW · Machine running time up to 9 hours of operation (2) · On-board charger up to 22 kW, charging time for total battery capacity 2.5–3 h (3) · Charge connector IEC 62196 Type 2
	Approval	· EU type approval for the basic unit as a tractor T2a (LoF) (agricultural and forestry machine)
	Ground drive (HV)	· All-electric ground drive via 2 rear-wheel motors (2 x 10 kW (S1) / 35 kW maximum output (S8)) · Automatic load and slip compensation, dynamic load control · 1 accelerator pedal with F/R switch integrated in the armrest
Driving and working characteristics	Speed and climbing ability	· Driving speed 0–40 km/h · Work-travel speed 0–24 km/h · Reverse 0–12 km/h · Climbing ability 25 %
	Hydraulic system (HV)	· Demand-controlled high pressure hydraulics with high-voltage drive supplying the steering system and the actuating shafts of both the vehicle and the attachments · Hydraulic hand pump for emergency actuation (hopper)
	Attachment drives (48 V)	· All-electric attachment drives with 48 V/10 kW (2 x 5 kW or 1 x 10 kW summation circuit) system output for rotary front and rear-mounted attachments · Quick-couplings (one-man operation) at the front and rear of the vehicle provide power supply for the attachments and the attachment control system (as part of the quick-change system)
	Steering and chassis	· 4-wheel chassis with maintenance-free articulated joint · Fully hydraulic steering with 45° steering angle · Spring-suspension chassis with coil springs and shock absorbers at the front · Attachment quick-change system
	Braking system	· Hydraulic dual-circuit disc brake acting on all 4 wheels · Wear-free auxiliary brake (via ground drive), with adjustable recuperation · Electro-magnetic parking brake acting on the rear axle
	Tyres	· 255/65 R16C (M+S universal tyres § 35 StVO, German Road Traffic Act)
	Cab	· ROPS-tested 1-person safety comfort cab · Electrically heated windscreen, electric heating system and air conditioning (HV) · 2 frame doors with sliding windows, completely foldable wing mirrors · Driver seats and safety belt systems, see options · Multi-adjustable steering column, see options · Multifunctional display for the machine control system / current operating states · 1-hand operating system integrated in the armrest
Load values	Empty weights	2,100 kg (implement carrier), 2,630 kg (sweeper)
	Permissible values	Total weight 3,500 kg, axle loads 1,700/2,400 kg (front/rear)
Dimensions	H/W/L	Basic unit: 1,970 x 1,280 x 3,830 mm (universal tyres, without trailer-towing device) Sweeper: 1,970 x 1,210 x 4,510/5,170 mm (standard tyres 2B/3B)
	Wheelbase	1,600 mm
	Track width	975–1,055 mm
	Inner turning circle	2,575 mm

HV: High Voltage; (1) Please read the notes concerning operating and warranty conditions;
(2) Depending on the respective application and operating conditions;
(3) Charging time depends on the remaining battery capacity and the capacity output of the mains terminal/ charging pole



Hako



For a clean future

To ensure that our solutions meet the increasing demands for sustainability, we are constantly developing them further: in dialogue with our users, closely oriented to current trends, and by taking into account the requirements of the future. That is why we are constantly driving our research and development in the direction of efficiency-increasing and even more environmentally friendly measures as well as important future topics – for example, electromobile solutions in Municipal Technology or digitalised processes.

Far ahead even today

Taking more responsibility for the environment: due to their low emission values and minimal noise levels, our vehicles can work also in environmental zones and other sensitive areas.



We are also active in the field of Cleaning Technology and Waterjet Technology

The requirements for professional indoor and outdoor cleaning are just as extensive as the options we offer our customers: from sweepers and vacuum sweepers to scrubber-driers and combination machines to efficient waterjet technology for use in industry and commerce.

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Blue Competence is an initiative of VDMA (www.vdma.org). By engaging in this partnership, we are committed to comply with the twelve sustainability principles applied in the field of mechanical and system engineering (www.bluecompetence.net/about).

For the sake of readability, Hako has opted for gender-neutral terminology throughout this document. This includes all people, regardless of their gender or identity.

About our products: We reserve the right to make changes to the shape, colour and design in the interest of technical development. Illustrations may contain optional extras. Services and products may vary from country to country.