

Cleaning Technology  
Municipal Technology  
Waterjet Technology

**Hako**



# Municipal Technology

Multifunctionality without compromise

For efficient all-season use.



One machine for all applications: with a wide range of different attachments and superstructures available, Citymaster and Multicar vehicles can be equipped for almost any application and working condition.

Contents

Our efficient all-rounders

Spring, summer, autumn and winter: Each season presents its own unique challenges for municipal technology. We develop future-proof vehicles that meet the changing demands of municipalities, service providers and industry with economic efficiency: through high quality, absolute reliability and consistent multifunctionality. This means: all applications can be flexibly covered with just one machine. For lower investment costs and a decisive increase in efficiency.

BLUECOMPETENCE

Alliance Member

Partner of the Engineering Industry Sustainability Initiative

DEKRA

PM 2.5

PM 10

United

PM 2.5

PM 10

AGR

Aktion Gesunder Rücken e.V.

www.agr-ev.de

TUV NORD

ISO 9001

TUV NORD

ISO 14001

Hako, here's why!

What you can expect from us: high-quality products that meet the highest standards in terms of material, technology and functionality. You can rely on both our compact sweepers with additional benefits and our multifunctional load and implement carriers – under all conditions. This is what we stand for with over 75 years of experience, outstanding in-house development expertise and a high vertical range of manufacture as well as excellent customer service: with our comprehensive sales and service network, we are always close by with sound advice and well-coordinated services. For maximum machine availability over the entire long service life. When developing our products, we always consider the entire life cycle – from CO<sub>2</sub>-saving production to economical, environmentally friendly use to recycling and disposal.

Municipal Technology made by Hako	4
We focus on safety	6
More comfort at the workplace	8
Citymaster	10
Implement carriers and sweepers with articulated joint and all-wheel steering	
Citymaster 400	12
Citymaster 650	14
Citymaster 1650	16
Citymaster 1650 ZE	18
Citymaster 2250	20
Multicar	22
Multifunctional narrow-gauge implement carriers, load- and implement carriers	
Multicar M29	24
Multicar M31	26
Hako-Fleet-Management	28
Services	30



# Providing the perfect solution for every application

As a full-range supplier, we meet this objective by providing a comprehensive product programme comprising implement carriers and sweepers with articulated joint and all-wheel steering as well as multifunctional narrow-gauge load- and implement carriers. When developing our products, we always give top priority to safety, comfort, efficiency and environmental protection.

## Citymaster

**Sweepers with articulated joint or all-wheel steering – and additional benefits**



### **Citymaster 400**

Articulated multifunctional implement carrier and sweeper in the 2-t class.

Output 23.4 kW, driving licence Class B



### **Citymaster 650**

Sweeper with articulated joint and additional benefits in the 2-t class.

Output 25.5 kW, driving licence Class B



### **Citymaster 1650**

Sweeper with articulated joint and additional benefits in the 3.5-t class.

Output 55 kW, driving licence Class B



### **All-electric Citymaster 1650 ze**

Implement carrier and sweeper with articulated joint in the 3.5-t class.

Output 50 kW, driving licence Class B



### **Citymaster 2250**

Sweeper with all-wheel steering and additional benefits in the 6-t class.

Output 80 kW, driving licence Class C/C1/C1E



## Multicar

**Multifunctional load- and implement carriers**



### **Multicar M29**

Narrow-gauge load- and implement carrier in the 6-t class.

Output 80 kW, driving licence Class C/C1/C1E



### **Multicar M31 Euro VI-E**

Load- and implement carrier in the 6-t class.

Output 110 kW, driving licence Class C/C1/C1E



### **Multicar M31 Hydrostat Euro VI-E**

Load- and implement carrier in the 6-t class.

Output 108 kW, driving licence Class C/C1/C1E

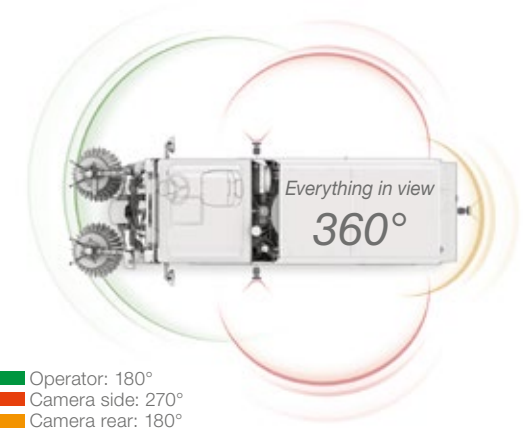




State-of-the-art technology produced in-house:  
Our qualified employees in the Hako factories ensure that all components meet our high quality and safety standards.

**Safety first**

Tested and approved – Citymaster with ROPS-tested safety cab and Multicar with ECE R29-certified 2-person safety cab. Both our Citymaster and Multicar vehicles comply with the high standards required to obtain EC type approval.



# We focus on safety

With our sophisticated safety concepts, ranging from a fully-glazed cab, additional work lights and a camera system to assistance systems such as ABS and ESP, we actively protect the health and safety of both machine operators and other road users.

**Keeping an eye on what's important**

Fully glazed cabs offer the driver a good view onto his surroundings. The camera system including a rear-view camera ensures that his viewing angle is extended by a further 270° to provide an all-round view of the machine's surroundings and increased safety when turning or reversing.

**Always on the safe side**

When working in cities and residential areas, drivers of municipal vehicles are often confronted with challenging traffic situations, for example through cyclists or pedestrians located in the vehicle's blind spot when turning right. Hako's Turning Assistant supports the driver in his daily routine and helps to avoid potentially dangerous situations. The innovative camera system detects other road users located in the vehicle's immediate vicinity and issues visual and acoustic warning signals. For more safety in road traffic.



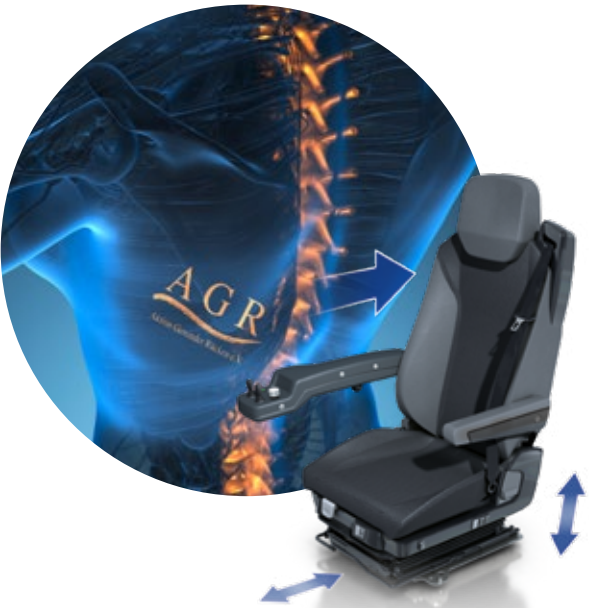


**Changing attachments made easy:**  
Our quick-change systems and the quick-coupling triangle provide easy and back-friendly changing of attachments without the need for tools.

# More comfort at the workplace

## Designed with the operator in mind

Even the best machine is only as efficient as its operator. That’s why Hako noticeably increases driving and operating comfort with ergonomic details such as individually adjustable steering columns, operating armrests with integrated functional elements and fully electric accelerator pedals with improved foot ergonomics. This is also confirmed by the AGR quality label awarded to the Citymaster models 1650, 1650 ZE and 2250 as well as the Multicar M29.



## Award-winning comfort

Our ergonomic machine concept comprising an adjustable comfort seat, our no-tools-needed quick-change system and a full-suspension chassis turns Citymaster and Multicar vehicles made by Hako into particularly back-friendly workplaces – certified and recommended by AGR (Aktion Gesunder Rücken e.V. [www.agr-ev.de](http://www.agr-ev.de)).

Protect both the environment and people’s health. Awarded with the “Blue Angel” environmental label: the Citymaster models 1650 and 2250 meet the criteria for particularly low-noise and low-emission municipal machines according to RAL-UZ 59.



Changing attachments made easy:  
Our quick-change systems and the quick-coupling triangle provide easy and back-friendly changing of attachments without the need for tools.



Hako’s 1-button operating system enables the driver to start the automated function sequences of even particularly complex machine configurations at the push of a button.  
The operator’s mobile phone can be used as a hands-free system via the radio and charged via the USB interface. Ensures reachability and safety.



## Optimally tempered

The hot-water and footwell heating ensures pleasant temperatures in the cab to provide comfortable working conditions even in the winter, and the optional air conditioning helps the driver to keep a cool head in the summer.

## Superb roadholding characteristics

The sprung chassis (not Citymaster 650) and the air-sprung driver’s seat, which is perfectly matched to the chassis of the respective model, ensure optimal suspension comfort. This not only protects the driver on long working days, but also the vehicle.



**Citymaster 400****Citymaster 650****Citymaster 1650****Citymaster 2250****Citymaster 1650ze**

## A strong basis for various applications

No matter what the season or the application or the surface, or whether the conditions change constantly or you need to consider specific regional circumstances: the machines of our Citymaster range master every task efficiently and they are highly flexible. Because, in addition to carrying out professional sweeping tasks, they can be re-tooled and equipped with a wide range of different attachments and chassis-mounted equipment for any kind of seasonal application – 365 days a year, from efficient city cleaning to green area maintenance or winter service. That's what we call "One for All". And our customers put it like this: "The optimal machine for every application."



Multifunctional working throughout the year: for example, with attachments providing efficient maintenance of green areas and swift re-tooling enabled by the quick-change system.

A strong partner even in the cold season: with all-wheel drive and a wide range of attachments for every type of winter service.



For even more efficient work results: cab with ergonomic comfort seats and consistent operating concept.

At a glance: the high-resolution colour display provides a good overview of the machine's current operating states and parameters.

Fast, easy, no tools needed: thanks to the quick-change system, the Citymaster can be re-tooled for the next job in no time at all.

# Citymaster

## Sweepers with articulated joint or all-wheel steering – and additional benefits

If you can hardly see or hear it, it's municipal technology at its best. Because it means that the machines carry out their tasks in a clean, rapid and efficient manner. The key factors are, for example, that the machines are as compact, manoeuvrable and flexible as possible while offering a high payload at the same time. Moreover, they need to be safe on the road and provide low-noise operation as well as lowest possible emission and consumption values combined with best possible dust control during sweeping.

**Sweeping****Wet cleaning****Winter service****Green area maintenance****Transport****Waterjet technology****Weed control**





Compact powerhouse – with multiple benefits

With a turning circle of only 120 cm and compact dimensions, the Citymaster 400 can go almost anywhere – also because it can be transported from job site to job site on a trailer. No matter what tasks await the compact vehicle: The quick-change system and the wide range of available attachments and superstructures ensure the machine is quickly ready for use – for example, with a weed brush for mechanical, pesticide-free weed removal, with a snow plough or spreader for more safety on ice and snow, or with a sweeper unit or front sweeper to remove dirt and leaves.



Small but spacious: ergonomic workplace design and well-thought-out details enable back-friendly, fatigue-free working.



Citymaster 400

The small and efficient one

The Citymaster 400 brings economic efficiency to a wide variety of outdoor areas. Its use is worthwhile even where shorter cleaning tasks occur regularly throughout the year. This is because even our smallest implement carrier is consistently multifunctional: The vehicle can be converted quickly and without tools for sweeping tasks, green area maintenance and winter service. And it is so compact, manoeuvrable and comfortable that the work becomes pure pleasure.



Clean sweeping: thanks to the hydraulically driven 2-broom sweeping unit and patented circulating water system.

Economical use all year round. Equipped with various attachments and superstructures for almost every seasonal task – for example, green area maintenance and winter service.

Bigger than you thought!

Despite its compact dimensions, comfort is a top priority on the Citymaster 400: with an optional air-suspended comfort seat, individually adjustable control armrest, full-suspension chassis with all-wheel drive and true-to-track articulated steering.

Technical data Citymaster 400	
Engine	Petrol/23.4 kW
Vehicle drive system (type/formula/Vmax.)	Hydrostat/4x4/0-25 km/h
Chassis, general	Full-suspension chassis with articulated steering
Interfaces/attachment points	Quick-change system/3
Hydraulic system (power circuits)	2/48 l/min/180 bar
Dimensions basic unit (L x W x H)	2,637 x 1,132 x 1,998
Weight basic unit (GVW/payload)	1,850 kg/up to 665 kg
Sweeper: working width Effective hopper capacity	1,550 mm/ 450 litres
Driving licence	Class B



The quick-coupling triangle enables simple, tool-free and back-friendly implement changes. Rear attachments can also be changed by just one person thanks to unique quick couplings.





Freedom through flexibility

Working in the city comes with a wide range of different demands posed on Municipal Technology equipment – and these demands change with the seasons. The Citymaster 650 meets all seasonal requirements with its small vehicle width, directionally stable steering and a small turning circle ensuring excellent manoeuvrability in confined areas. In addition, the vehicle's multifunctional design ensures economically efficient use all year round.



Quickly off to the next job site: on its own axles if the job is nearby, or transported on a trailer to cover larger distances.



Easy to change – comfortable, back-friendly changing of the hopper and different attachments via our quick-coupling system and a trolley.

Citymaster 650

The compact all-rounder

The basic version of the Citymaster 650, designed as a compact implement carrier, already sets new standards in the 2-t class: for example, with articulated steering, permanent all-wheel drive with a fully electronic control system and extensive features providing increased comfort and safety at work. Thanks to its multifunctional design, the Citymaster 650 can be re-tooled quickly and easily, for example as a professional sweeper or an efficient snowplough for winter service tasks, which makes this machine not only extremely versatile in use but also particularly economical as it provides multiple application options.

Flexible winter service applications: for example, with a front sweeper for reliable snow sweeping, or with snow blades and a snow blower for safe snow ploughing.



Compact, highly manoeuvrable, and economically efficient: for best results also on footpaths and in confined areas.

The lawn specialist: equipped with different mowers and grass collecting systems, and a large universal hopper.

The green area expert: equipped, for example, with an irrigation system for flower beds, bushes and trees, or a hedge trimmer.

Sustainably on the road

The Citymaster 650 meets the emission limit requirements of the Stage V Exhaust Emission Standard. Clever details such as the energy-saving drive control system and three different performance levels reduce the machine's fuel consumption both in work mode and during road travel. When working in ECO mode, a standard feature which is not only good for the environment but also for applications in noise-sensitive areas, the Citymaster 650 works at 85 % of its maximum performance capacity and saves up to 40 % fuel.

The vehicle easily circumnavigates any obstacle: thanks to its compact dimensions, directionally stable steering and particularly small turning circle.



Technical data Citymaster 650	
Engine	Diesel/25.5 kW
Vehicle drive system (type/formula/Vmax.)	Hydrostat/permanent all-wheel drive/25 km/h
Chassis, general	Chassis with articulated steering, quick-change system for attachments
Hydraulic system (power circuits)	2/66 l/min/195 bar
Dimensions basic unit (L x W x H)	3,163 x 1,090 x 1,969 mm
Weight basic unit (GVW/payload)	2,200 kg/up to 770 kg
Driving licence	Class B





Multifunctional all along the line

As a multifunctional implement carrier with a powerful, particularly efficient hydraulic work drive for the attachments, there are virtually no limits to the Citymaster 1650's range of applications. For example, in winter service. This means that the sweeper can be used all year round thanks to additional utilisation options.



Safe: the camera system widens the driver's viewing angle by 270°.



Mowing-suction combi unit with universal hopper: mows lawns, maintains road-side greenery and works close to kerbs and edges on either side.

Powerful against ice and snow: the wide range of attachments available allows flexible adaptation to different snow and weather conditions.

Improved ergonomics: extended seat options, foot pedals with improved ergonomics, steering wheel with two adjustment options.

Citymaster 1650

The multifunctional pro

The Citymaster 1650 offers all the benefits and application options of a larger sweeper by taking full advantage of the Class B driving licence range – and the vehicle can also work on footpaths. Thanks to its directionally stable, articulated steering, the smallest turning circle in the 3.5-t class and permanent all-wheel drive, the vehicle can access almost all areas. And what's more, a comprehensive range of new features provides increased working comfort, safety and efficiency – no matter whether the machine is used exclusively as a sweeper or as a versatile implement carrier for all-season municipal applications.

Highly manoeuvrable: with the smallest turning circle in its class, the vehicle ensures excellent manoeuvrability.

Can easily reach the next level: the additional broom provides simultaneous cleaning on different levels.



Ergonomic, back-friendly, safe

The cab of the Citymaster 1650 offers an excellent workplace for the driver – independently certified and recommended by AGR! In addition, coil springs, shock absorbers and stabilisers as well as the vehicle's intelligent drive control and disc brake systems provide high levels of safety.

Technical data Citymaster 1650	
Engine	Diesel/55.4 kW
Vehicle drive system (type/formula/Vmax.)	Hydrostat/permanent all-wheel drive/40 km/h
Chassis, general	Chassis with hydraulic articulated steering, fully suspended with coil springs and shock absorbers, quick-change system for attachments
Hydraulic system (power circuits/l/min/bar)	2/102 l/min/225/195 bar
Dimensions basic unit (L x W x H)	3,829 x 1,210 x 1,970 mm
Weight basic unit (GVW/payload)	3,500 kg/up to 1,465 kg
Driving licence	Class B

A strong team against weeds: the Citymaster 1650 equipped with Weco M900 City – the perfectly matched superstructure for ecological and effective weed control with hot water.





## New energy

Even though we focussed on technological aspects when developing the Citymaster 1650 ZE, we wouldn't be Hako if we didn't think about the driver as well. Hence, the Citymaster 1650 ZE also convinces with its ergonomic workplace design – from the adjustable steering column and the comfort seat to the 1-button operating system integrated in the armrest, which controls all functions at just the push of a button.



## Citymaster 1650ZE

### The all-electric sweeper

The Citymaster 1650 ZE stands for “Zero Emissions” in the 3.5-t class. As the first all-electric sweeper with additional benefits made by Hako, the Citymaster 1650 ZE guarantees reliably clean results and zero exhaust emissions. While noise pollution and fine particulate emissions are reduced to a minimum, the vehicle offers maximum efficiency, safety and user comfort. Providing up to nine hours of working without recharging, the compact and highly manoeuvrable Citymaster 1650 ZE is well equipped for long running times and optimal work results – also on footpaths and in confined areas. Thanks to its top speed of up to 40 km/h, the Citymaster 1650 ZE can quickly travel from one job site to the next.



Your ZE alternative: equipped with all-electric components, the Citymaster 1650 ZE makes your municipal fleet eco-friendly and future-proof.

Fully electrically fuelled for more sustainable outdoor area maintenance.

Quick changing of attachments provides efficient cleaning.

### The new all-electric multifunctionality

All-electric sweeping, wet cleaning and light winter service: this is how the Citymaster 1650 ZE follows Hako's multifunctionality principle. Whether collecting light debris and leaves, scrubbing and removing particularly stubborn dirt or oil spills, or clearing roads and paths from small amounts of snow – the Citymaster 1650 ZE carries out a wide range of municipal tasks in all seasons.



Technical data Citymaster 1650 ZE	
Engine	All-electric/50 kW
Vehicle drive system (type/formula/Vmax.)	All-electric via 2 rear-wheel motors/40 km/h
Chassis, general	Chassis with fully hydraulic articulated joint, semi suspended chassis with coil springs and shock absorbers, quick-change system for attachments
Dimensions basic unit (L x W x H)	3,829 x 1,210 x 1,970 mm
Weight basic unit (GVW/payload)	3,500 kg/up to 1,360 kg
Driving licence	Class B

### Pleasantly quiet

For applications in noise-sensitive environments: electric drive plus “silent brooms” for low noise values – also inside the cab.





Clean results on all levels

When used as a sweeper, the Citymaster 2250's large 2-cubic metre dirt hopper is impressive in itself. Equipped with a 2 or 3-broom sweeping unit, the Citymaster 2250 easily cleans even difficult-to-access areas or traffic islands and multi-level surfaces. The circulating water system prevents dust from rising and ensures optimal dust control.



Great performance, small turning circle: thanks to its compact dimensions and all-wheel steering.



Citymaster 2250

The large all-rounder

The Citymaster 2250 simply offers more in the 6-t class: more room and comfort for the operator, more safety and application options for more economic efficiency. Whether sweeping, wet cleaning or winter service: the multi-functional implement carrier with all-wheel steering convinces with heavy-duty, high-quality components and professional functionality in any situation. Offering plenty of space with variable utilisation options, state-of-the-art air conditioning, intuitive operating elements and sophisticated safety features such as large windows and an intelligent wing mirror concept, the crash-tested cab has been designed to provide excellent user comfort.



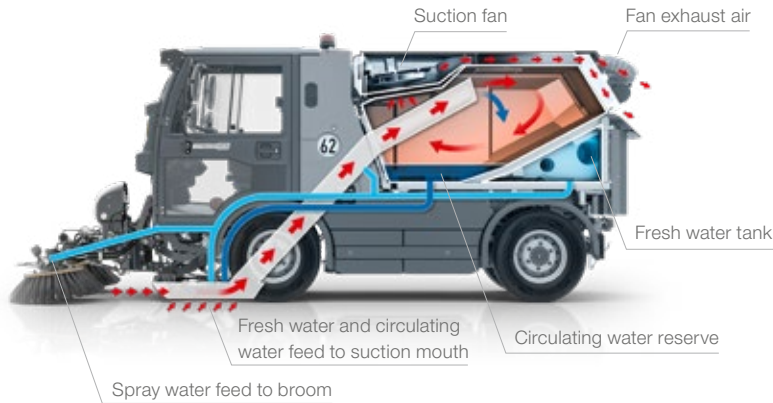
Made for the driver: different seat configurations – with or without storage compartments – not only provide variable utilisation options but also offer the driver significantly more space in the cab.

Provides excellent flexibility: equipped with a 2 or 3-broom sweeping unit, the Citymaster 2250 can access all areas.

For effective chemical-free removal and direct collection of weeds: the mechanical weed broom.

Accurate performance from collection to disposal

The broom sweeps dirt and debris in the path of the suction mouth, from where it is transferred directly into the dirt hopper. The hopper can be filled to 100 % to provide long emptying intervals. When finally filled to capacity, a remote control provides safe, uncomplicated and contact-free emptying and disposal.



Technical data Citymaster 2250	
Engine	Diesel/80 kW
Vehicle drive system (type/formula/Vmax.)	Hydrostat/rear wheel drive with optional differential lock/ 62 km/h with rpm reduction
Chassis, general	Ladder frame chassis with hydraulic front wheel or all-wheel steering, fully suspended chassis with coil springs and shock absorbers, quick-change system for attachments
Hydraulic system (power circuits)	2/90 l/min/200 bar
Dimensions basic unit (L x W x H)	3,975 x 1,330 x 2,095 mm
Weight basic unit (GVW/payload)	6,000 kg/up to 3,365 kg
Driving licence	Class C/C1/C1E//Class B/L as work machine 25 km/h







The basis for multifunctionality is our quick-change system – for example as a front lift with attachment plate according to DIN EN 15432-2 providing lifting, lowering and swivel functions to facilitate easy connection of front attachments.



# Multicar

## Multifunctional load- and implement carriers

Sweeping in the spring, green area maintenance in the summer, collecting leaves in autumn, providing winter service in the cold season, or carrying out different transport tasks throughout the year – thanks to the interfaces suitable for universal use, the Multicar can easily be re-tooled for every application. A wide range of different attachments, driven by either the powerful on-board hydraulic or electrical systems, can be connected to the vehicle with effort-less ease. Our customers decide what they want their Multicar to look like. We will be happy to assist you in finding the right solution for your individual needs.



Multicar M29



Multicar M31  
Euro VI-E



Multicar M31  
Euro VI-E Hydrostat

## Only a Multicar can do that

Three basic models are available to meet the highest demands in terms of comfort, safety, robustness and efficiency: ranging from compact and manoeuvrable to extremely powerful and professional, and equipped with our unique Hydrostat-ABS, ESC and independent suspension at the front axle. Both the Multicar M29 and M31 models comply with the strict ECE guidelines regarding occupant protection and high-quality braking systems, which have even obtained EC type approvals. No matter which model you choose: it's always the right one.



Green area  
maintenance



Sweeping



Winter  
service



Wet cleaning



Waste  
management



Transport



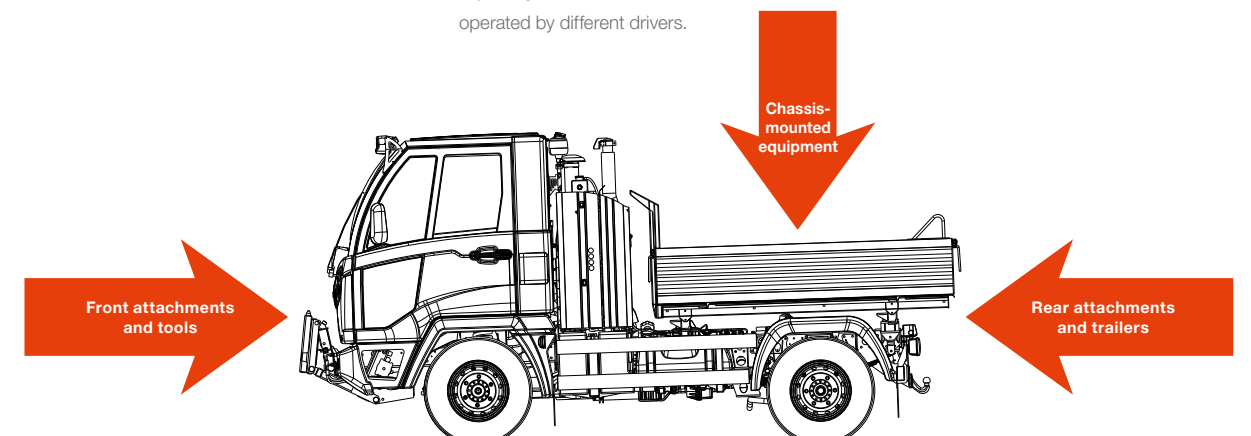
Waterjet  
technology



Weed control

Everything in view, all under control: centrally arranged operating elements and displays ensure both ease-of-use and short response times.

Made for the operator: adjustable seats, height-adjustable safety belts as well as an adjustable steering column – all very practicable features, especially when the vehicle is often operated by different drivers.







Sufficient space for maximum performance

A width of only 1.33 m and a turning circle of only 3.25 m enable the Multicar M29 to be used on narrow roads, farm tracks and cemeteries. The vehicle can handle payloads of up to 3.2 t. When going steeply downhill, the hydrostatic drive with variable hydrostatic braking force protects the service brake. This is an advantage on uphill gradients as well: by means of mechanical reduction, the working speed can be precisely adapted to the tasks, freeing up additional tractive power reserves.



Ease-of-use: all of the machine's functions as well as the hydrostatic drive are easily and centrally controlled via a joystick.



More freedom of movement: in the spacious cab with customisable passenger area.



The easily accessible controls and intuitive operating logic increase user-friendliness and working comfort.



The standard full LED lighting optimally illuminates the working area at any time of day.



High payload, little effort: quick installation of chassis-mounted equipment.

Multicar M29

The compact all-rounder

No matter what the seasonal challenge: Thanks to its modular concept, the multifunctional narrow-gauge implement carrier Multicar M29 masters any task with extreme flexibility. And it does so with the highest level of safety – oriented to the high standards that also apply to the construction of trucks. The vehicle's large driver's cab, for example, offers maximum occupant protection, which has been confirmed in safety tests according to ECE R 29 by DEKRA. All-wheel drive, disc brakes, a new type of hydrostatic ABS and heavy-duty axles are also part of the safety concept – for stable driving and braking behaviours in every situation, confirmed by tests according to ECE R 13.



The machine has the excellent manoeuvrability of a lorry implement carrier – and gets you around every corner easily thanks to all-wheel steering.

Economical in use – and quickly off to the next job site with a top speed of 62 km/h: the Multicar M29.



Technical data Multicar M29	
Engine (type/output/exhaust gas cleaning system)	Diesel/80 kW/DOC, DPF, SCR
Engine drive (type/formula/Vmax.)	Hydrostat/4x2 (4x4)/62 km/h
Exhaust emissions (standard)	EURO VI, stage E
Attachment docking system	front lift (attachment triangle/plate), tilt cross member, rear mounting frame
Work hydraulics	up to 2 work circuits (max. 110 l/min at 300 bar)
Dimensions basic vehicle (L x W x H)	3,955 x 1,330 x 2,090 mm
Weight basic vehicle (GVW/payload max.)	6,000 kg/3,150 kg
Driving licence	Class C/C1/C1E





Great performance in open terrain

Multifunctionality, economic efficiency and dynamics in a compact form: With a total towing weight of up to 7.5 t, variable, powerful hydraulics, three attachment points for countless implement combinations and a top speed of 90 km/h, the Multicar M31 is just as powerful a partner in the winter as it is in spring, summer and autumn. The version Multicar M31 Hydrostat with hydrostatic drive and unique Hydrostat ABS is a particularly safe option when it comes to working in slippery, uneven terrain. Two different driving modes and a mechanical crawler gear ensure that the vehicle always works at optimum speed.



Optimised drive, maximum braking power: an innovative Hydrostat ABS providing additional safety during braking is integrated in the model Multicar M31 Hydrostat. And the hydrostatic drive enables smooth but swift starting and infinitely variable propulsion.



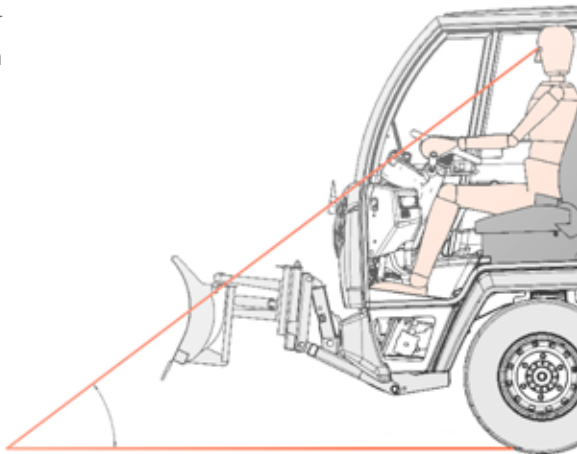
Snow fighter: efficient clearing of roads and paths.

Versatility only a Multicar can offer: from weed control using hot steam to common tasks such as green area maintenance and repair work on lifting platforms.

Multicar M31/M31 Hydrostat

The full-fledged powerful pro

The Multicar M31 redefines performance in the 6-t class by setting new standards: With its fuel-efficient turbo diesel engine, various exhaust gas purification systems such as a diesel oxidation catalytic converter, SCR-coated diesel particulate filter and second SCR catalytic converter, it fully complies with the Euro-VI-E standard for lower exhaust gas values without sacrificing performance! This makes municipal use even more sustainable and future-proof.



More space, a better view, increased safety: in the ergonomically designed space-frame cab with panoramic windscreen and integrated sun-glare filter.

Comfortable workplace

Comfortable working increases efficiency – this is why we have integrated a number of comfort features into the Multicar M31 as standard: from the smooth power steering to the spring-mounted independent spiral suspension and the ergonomic comfort cabin with individually adjustable seats and practical storage compartments in the doors and centre console.



Increased loading capacity, more room: the Multicar M31 is also available with a long wheelbase.

Technical data Multicar M31/M31 Hydrostat	
Engine (type/output/exhaust gas cleaning system)	Diesel/110 kW (Hydrostat: 108 kW) DOC, DPF, SCR
Engine drive (type/formula/Vmax.)	5-gear/4x2 (4x4)/90 km/h (Hydrostat: 4x2 (4x4)/70 km/h)
Exhaust emissions (standard)	EURO VI, Stage D
Attachment docking system	front lift, ball coupling system, rear brackets
Work hydraulics	up to 2 work circuits (max. 110 l/min at 300 bar)
Dimensions basic vehicle (L x W x H)	4,115 (4,660) x 1,630 x 2,200 mm
Weight basic vehicle (GVW/payload max.)	5,600 kg/to 3,100 kg
Driving licence	Class C/C1/C1E



# Hako-Fleet-Management

More transparency, sustainability and economic efficiency

As the size of the machine fleet increases, so does the importance of effective management. Hako-Fleet-Management helps you to manage your fleet efficiently, coordinate its deployment and keep an eye on all relevant key figures in real time. As a central machine management tool, it ensures fully automated transparency and provides the data basis for optimising the use of resources. For increased efficiency, reduced costs and more sustainable fleet management.



More graphics, improved visualisations and interactive analyses for faster insights

The module **view.X** supports economically efficient utilisation and management of your fleet. All evaluations are available online 24/7, and are easy to retrieve thanks to the tool's intuitive user interface

- Cost/budget management
- Service and maintenance history management
- Excel export including information on costs and operating hours
- Mapping of organisational structures with rights allocation
- Viewing and maintaining contract data
- Pre-setting of recurring appointments
- E-mail notification in the event of changing machine conditions
- Service requests can be made (and traced) directly from the portal
- When service is required, direct transmission of machine status and service codes to regional service technicians



The **view.X.live** module makes organising the fleet both simple and efficient – with a modern, clearly designed user interface and optimised dashboard, clearly structured graphical display of information, rapid availability of data and detailed filtering options for optimum use and analysis of route information.

- Live operating times and statuses
- Location and route information (GPS)
- Cost/budget management
- Management of service and maintenance history
- Excel export including information on costs and operating hours
- Mapping of organisational structures with assignment of rights
- Maintenance and view of contract data
- Accurate hour-by-hour recording of operating times
- Notification when service and maintenance intervals are exceeded
- Live messages about availability with service and event codes
- Alarm function for recurring inspections/maintenance
- Specially customised display for the Scrubmaster B75 i autonomous scrubber-drier with cleaning report and resource display
- Keeping performance records



The **entry.X** module (optional) allows only authorised users to use the machine. By providing a structured usage framework, the electronic machine access authorisation helps to make fleet operation safer, more efficient and more cost-effective.



# Service from the professionals makes the difference!

Excellent service from Hako turns a premium quality machine into a top solution that fulfils all your requirements: with competent service technicians in the field, in fully equipped workshops, with a regular contact person and with uncomplicated, solution-oriented processing of your service requests.



## Customer service – full availability, full security

Our qualified service technicians are available for you around the clock. Another big plus: our efficient spare parts logistics, which delivers spare parts overnight if the worst comes to the worst.

## Customised and scalable services for:

- Maximum machine availability and high efficiency
- Cost transparency and greater cost-effectiveness
- Improved quality of results
- Sustainability in use and through extended service life and value retention of your machine



# 220 mobile service technicians with the shortest response times

## On-site service: always quickly on the spot

- Qualified service technicians – optimally prepared thanks to efficient deployment planning
- Fully equipped service vehicles with suitable spare parts for all common service cases
- Fast and professional troubleshooting



## Service is our DNA

Your satisfaction is our benchmark. That's why you get much more than a top product from Hako: you get a solution that always fits perfectly; to suit you, your goals, the area of application and our machines.

# Renting instead of buying!

## Scalable financing and rental options that always fit!

- Short-term hire for increased flexibility – the fleet can be quickly adapted to changing needs
- Always the latest technology at hand
- Lower investment costs and thus protection of liquidity
- Cost certainty and predictability
- All-round carefree package with maintenance and service contracts





# 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](http://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](http://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.