



## **Citymaster 1600**

*Professional sweeper –  
with multifunctional employment options!*

## Setting new standards



*“Offers more options  
than any other vehicle  
in the 3.5 t class.”*

### *Sweeper or implement carrier? All in one!*

#### **Setting new standards**

Are you aiming at carrying out all your tasks reliably by having your machines constantly and readily available? Are you looking for an efficient, professional sweeper that meets your individual requirements? Does your daily routine involve more than just carrying out sweeping tasks? The Citymaster 1600 meets your demands perfectly – with maximum operating and driving comfort – now available in the 3.5 t class. Whether used exclusively as a compact sweeper or as a versatile implement carrier – this machine embodies Hako's many years of experience in manufacturing sweepers, compact tractors and implement carriers as well as transporters. Benefit from our expertise and experience!

#### **New dimensions of economic efficiency**

The Citymaster 1600 combines the many qualities and functions usually found in larger sweepers while keeping to the permissible total weight of 3.5 t. The spacious and comfortable workplace makes long working days easier. The vehicle's directional stable articulated steering and manoeuvrability make even narrow working areas easily accessible and safe for the driver. Highly flexible employment as well as the quick-change system ensure low operating costs. You buy only the functions and tools you really need – either right away or later as an addition. Thanks to its robust and maintenance-friendly design, the Citymaster 1600 is also an economically efficient investment in the long term. Hako quality pays off quickly. Simply ask your local Hako Sales & Service Partner for more information!





### *Flexibility*



The Citymaster 1600 is both a sweeper with articulated steering and a multifunctional implement carrier, all in one. The 3.5 t-class vehicle performs on the road just as well as on footpaths and green areas.

With comfortable quick-change system.

### *Comfort*



The full-suspension chassis and the spacious cabin go easy on both the driver and the vehicle. The driver has everything under control thanks to the integrated operating panel – and everything in view thanks to the central display and the panoramic view!

### *Economic efficiency*



The driver can change the machine's attachments and functions all on his own within minutes, no tools needed. Quickly back on the road and off to the next job site at high driving speed. No other machine saves more time!

### *Possibilities*



With its permissible total weight of 3.5t, the vehicle can be employed on footpaths and operated by drivers holding a Class B driving licence. Low noise levels allow for employment in sensitive areas.

## For more flexible employment



*Can access nearly all areas.*

*For Class B driving licence holders.*

### **Environmentally friendly sweeper**

Particularly low consumption- and emission values characterize the sweeper Citymaster 1600. The low-emissions engine with particle filter combined with our ultra-modern, low-noise and low-dust-emissions sweeping technology allows for employment not only in the city but also in quiet residential areas – even early in the morning or late at night. With the sweeping performance of a 2m<sup>3</sup>-sweeper but without its limitations regarding employment on footpaths or driving license requirements. Class B driving licence holders can drive the Citymaster 1600 without restrictions. .

### **Versatile implement carrier**

No matter whether the machine is used solely as a sweeper or, by combining different functions, as a fully-fledged implement carrier - there are hardly any limits. The directional stable articulated steering, permanent all-wheel-drive with automatic load distribution as well as the powerful and extremely efficient attachment working drive provide for variable on- and off-road employment. Numerous different quick-change attachments enable a particularly flexible and economic operation of the basic unit.





## More comfort for the driver



### *Spring-suspended chassis meets ergonomic cabin*

#### **The workplace**

Enhanced interior space, scaled up in both width and length, increases the comfort level and the adjustment range of the seat. The air-sprung driver's seat is ideally tuned to the chassis and offers various adjustment options, providing optimal suspension comfort for long working days. Both the armrest – integrated in the seat and containing all the operating elements that control the different work functions – and the adjustable steering column allow the driver to furnish his workplace individually. One-button operation and the central display make the machine very easy to operate. Excellent visibility conditions and additional assistance systems enable a panoramic and all-round view – for efficient working and high levels of safety. The optional air conditioning guarantees comfortable temperatures on hot days.

#### **The chassis**

The sophisticated chassis of the Citymaster 1600 does two jobs in one. Axles with coil springs and shock absorbers as well as a stabilizer installed in the rear part of the machine enable stable driving even when the vehicle is fully loaded or when climbing kerbs. The maintenance-free articulated joint with extended bearing distance transmits load movements of the rear body to the front of the vehicle, giving the driver a very direct feeling of being-in-control and safety. This together with the big wheels makes driving on bumpy roads particularly comfortable and material friendly. The intelligent drive control and a disc brake system ensure safe braking even at high speed.

## Increased economic efficiency through short set-up times



### Quickly (back) in operation

40

#### Quickly and economically to the job site

Rendering the machine ready for operation – made easy: Easy access to all consumables and overfill-safe connections for both the freshwater and circulation water systems make the early-morning maintenance routine extremely quick and easy before travelling speedily to the next job site. On arrival, it is just as easy to put the machine back in operation at the push of a button, using the previously set parameters. The intelligent hydraulic drive in transport mode as well as the hydraulic system in work mode always provide the exact power required to carry out the job at hand. For reduced fuel consumption, more economic efficiency and less environmental pollution.

#### The quick-change system

No matter what kind of job the Citymaster 1600 returns from, no vehicle in its class is faster back on the road again. Both the driver and the technician in the garage benefit from the quick-change system, even if the machine is used exclusively as a sweeper. All components of the sweeper can be mounted and dismounted easily, no tools are needed, allowing for both the sweeping unit and the suction duct to be checked, cleaned and – if necessary – repaired separately; and the hopper can be removed just as easily for major maintenance work. Cleaning the hopper is just as easy as it is effective thanks to the smooth inner surfaces, easy-to-clean sieves and two service flaps. Once the sweeping task is completed, the machine can be refitted to carry out other tasks in no time at all. By the driver, easily and without the need for tools.

## For better planning



### *More than just sweeping*

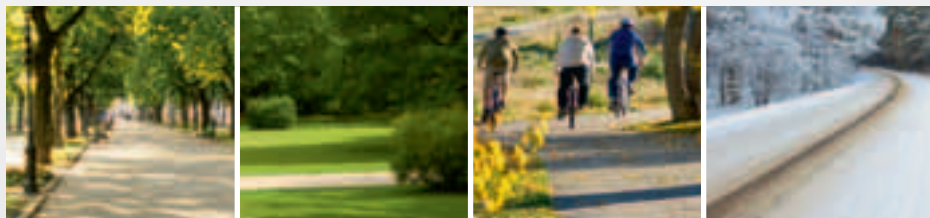
#### **Job planning made easy**

The Citymaster 1600 can be employed in the city in all paved or hard-surfaced areas, fully loaded and without restrictions.

Due to its excellent sweeping performance and high payload, the machine covers the entire range of services usually attributed to a larger sweeper, from simple maintenance cleaning to thorough basic cleaning tasks (i.e. after the winter). Hako-Fleet-Management-Solutions provide customized reports from and about the machine. For more transparency and clarity of costs.

#### **Working in all seasons**

The Citymaster 1600 has been designed as an all-season machine, combining the advantages of a professional road sweeper with those of a powerful implement carrier. If the sweeper is underutilized or cannot be employed due to seasonal weather conditions, providing winter services offers additional utilization options. Another possibility is to use the Citymaster 1600 as a versatile implement carrier right from the start, to maintain green areas and roadside greenery in addition.





# Uncompromised multifunctionality



Snow clearing and gritting



Mowing



Sweeping



Spraying and washing







### *Special tasks*



### *Transport and attachment*



*For inner-city employment*

## *The professional machine for every sweeping task*



*Fast, manoeuvrable – and downright efficient!*



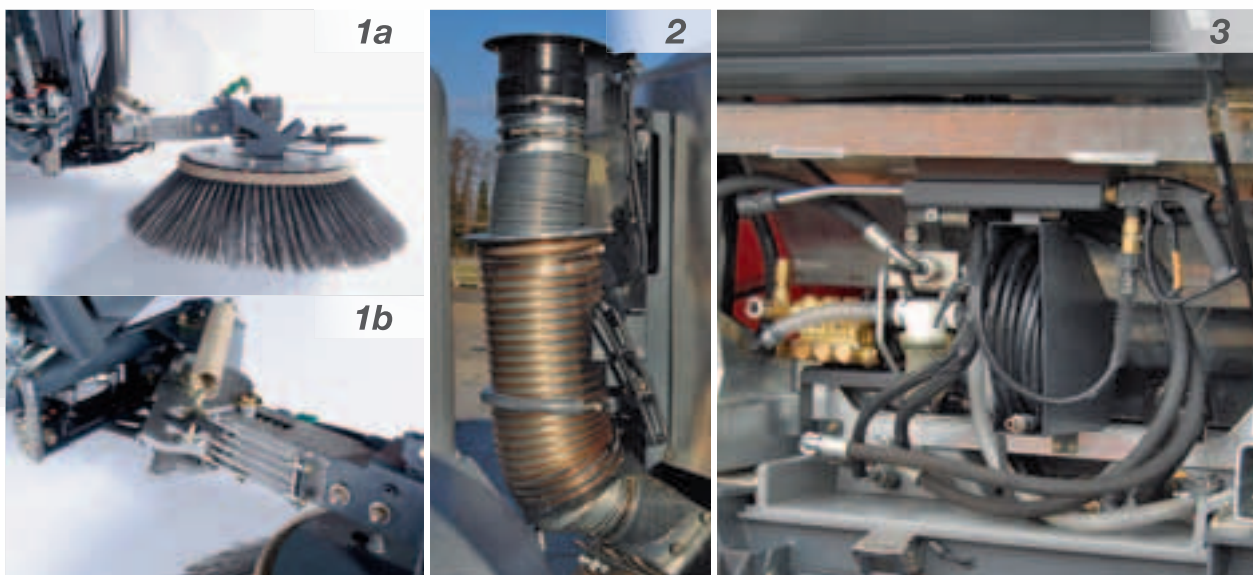
### **The professional sweeper**

Large disc brooms with dual angle adjustment, infinitely and individually adjustable contact pressure and hydraulic single-broom adjustment: this is where the sweeper story begins. The suction duct with semi-automatic 'Intelli-Flap' coarse dirt flap and tangential air extraction for joint-protecting working enables the efficient intake of sweepings. The suction-hose system with patented circulation-water feed for a maximum dust-binding effect and efficient rinsing provides for a clean transport of the sweepings to the large universal hopper with integrated flow-optimized suction van. The patented airflow system ensures that the hopper can be filled to capacity and enables the low-noise and efficient separation of sweepings and circulation water, which is subsequently fed back to the suction duct.

### **All-round environmental protection**

The Citymaster 1600 meets the requirements for employment in noise-sensitive areas. The standard ECO mode equally reduces both the fuel consumption and noise emissions of the machine and – in the case of stubborn dirt or difficult driving conditions – maximum performance is available on demand at the push of a button. The engine complies with strict national road approval regulations and is equipped with a non-wearing particle filter. The combined dust-binding system of feeding fresh water to the disc brooms and additionally directly to the suction duct as well as the patented circulation-water feed guarantee lowest possible dust emissions – EUnited-PM10 tested and certified.





## *Economical, safe and versatile*

### **The safety package**

Functional certainty and reliability of the machine and its devices are essential for an economically efficient operation. That is where the Citymaster 1600 offers great advantages due to numerous active and passive safety measures. The sweeping unit is equipped with a fully automatic all-dimensions collision protection system, which can be replaced without using any tools. The suction duct is roller-guided and allows for sweeping in reverse gear in corners without lifting or loss of suction power. Buffers protect the rear of the vehicle against collision when tipping out loads into a container. When the hopper is lifted, the vehicle can only be driven at low speed to safeguard both the driver and the machine.

### **Powerful accessories**

Practise-oriented accessories are available to complement the sweeper Citymaster 1600. For instance, water connections equipped with regular free-fall sections and adapters for different hose formats; a particularly efficient hand-held suction hose of sufficient length to cover the area on both sides of the vehicle, providing high suction power and proper dust-binding over the main suction-hose system of the hopper; an integrated high pressure cleaner to clean areas the sweeper cannot reach – or to clean the machine itself. Both a footstep and handholds mounted to the hopper as well as the practical cover- opening mechanism facilitate checking the hopper content or inserting bulky items.

### **Picture 1a/b**

Non-destructive overload protection of the broom arms, tool-free re-installation possible

### **Picture 2**

Hand-held suction hose continuously ready for operation, can be used on both sides, self-retracting

### **Picture 3**

High pressure cleaner with hose and spray lance integrated at the rear end of the hopper and ready for use

*Uncompromised multifunctionality*

## *The grounds maintenance expert*



*For variable employment, with an excellent area performance*



### **The mowing-suction combination with universal hopper**

The universal hopper of the Citymaster 1600 can also be used for lawn-mowing purposes. Together with the central suction system, maintaining roadside greenery amidst flowing traffic and working close to the edges on both sides can be carried out in a safe and easy fashion. The vacuum suction system is basically wear-free and easier to clean at the same time. Blockages are reduced to a minimum. The vacuum compresses the grass cuttings. The compact mower can be used as a rear-discharge or mulch mower in addition.

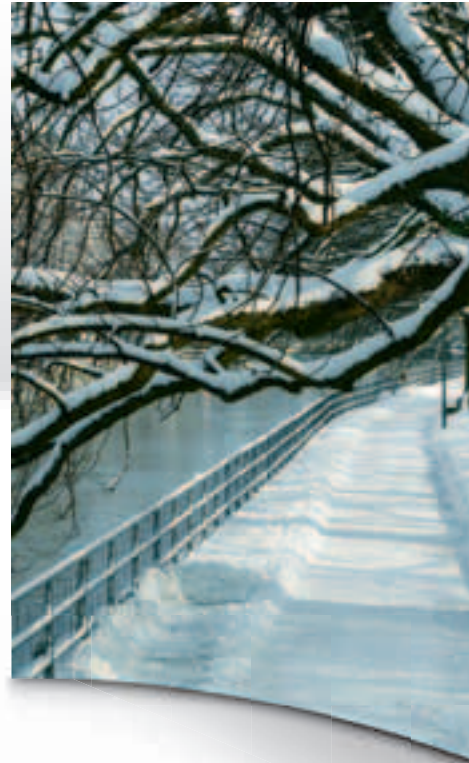


### **Maintenance of large or less work-intensive areas**

The Citymaster 1600 also makes for versatile employment on large areas. A large-area sickle mower, either used as a rear-discharge or alternatively as a mulch mower, is available for demanding maintenance tasks in parks or on sports grounds. Different flail mowers, cutting back high scrub and brushwood efficiently, are available for extended, low-maintenance or hardly-used areas.



# *The power machine against ice and snow*



*Challenges all weather conditions – with top performance*



## **Snow clearing**

With the Citymaster 1600 you are well equipped for snow-clearing tasks. A wide range of perfectly aligned snow ploughs, universal front sweepers or genuine winter sweeping machines with a particularly high output enables the flexible adaption to all kinds of weather conditions and different amounts of snow. Moreover, powerful snow blowers in various sizes are available to cope with extensive amounts of snow.



## **Fighting black ice**

Whether equipped with loading bed and rear attachment spreader or with top-mounted silo spreader – the Citymaster 1600 adapts to your individual spreading requirements. Whether sand, grit, granules or salt – you can choose between cylinder spreaders for employment on footpaths, combi-spreaders for employment in car parks or silo spreaders in various sizes. In addition, a brine-spraying system is available for special applications.

## *The universal implement carrier*



### *One basic unit, plenty of options!*

#### **The basis for uncompromised multifunctionality**

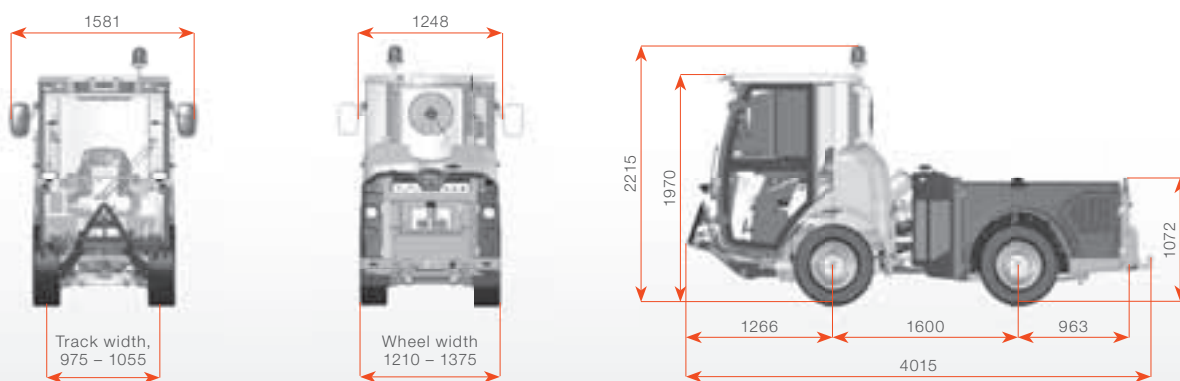
Versatility is the characteristic feature of every implement carrier. The quick-change system offers four interfaces for easy, tool-free, one-man operation. The quick-coupling triangle at the front enables the quick and easy changing of attachments and is fully compatible with older attachment devices. The interface at the suction device enables working with full ground clearance whenever the suction-hose system is not needed. The rear attachments are installed via a mounting frame, which can easily be removed by using a trolley. The rear attachment frame allows the uptake of further accessories and of the tow bar.

Permanent all-wheel drive during road use, two automatically switching and load-dependent drive control levels for a constantly optimized tractive force, with maximum tractive force and axle load regulation in work mode.

The thermostatically controlled engine- and hydraulics cooling – optionally available with swivel van – reduces noise-levels and guarantees safe operation at any given outside temperature. The load-sensing hydraulic system is adjustable and provides only as much power as is effectively required. For lowest possible consumption and emissions.







Technical data basic unit Citymaster 1600	
<b>Engine and drive</b>	
Engine	<ul style="list-style-type: none"> <li>• water-cooled 4-cylinder VW industrial diesel engine with 1,968 ccm</li> <li>• exhaust gas turbocharging and charge air cooling, particle filter, performance 55 kW at 2,700 rpm</li> <li>• common-rail direct fuel injection, tank capacity 50 l</li> <li>• engine comes below the threshold value according to exhaust directive 97 / 68 / EC level IIIb</li> </ul>
Approval	<ul style="list-style-type: none"> <li>• EU type approval basic unit as a tractor (LoF)</li> </ul>
Drive	<ul style="list-style-type: none"> <li>• traction- and energy-efficient optimized hydrostatic drive with permanent all-wheel drive</li> <li>• drive control system with automatic load regulation in transport mode, 2-speed automatic transmission</li> <li>• 3-level fixed rpm in work travel mode (1,600 rpm [ECO] – 2,000 rpm [Standard] – 2,400 rpm [MAX])</li> </ul>
Hydraulics	<ul style="list-style-type: none"> <li>• load-sensing high pressure hydraulics with variable power distribution for rotatory consumers</li> <li>• circuit 1 (front) 0-50/0-70 l/min @ 225 bar</li> <li>• circuit 2 (rear) 0-20/25/30 l/min @ 195 bar</li> <li>• 2 hydraulic circuits at the front, 1 hydraulic circuit at the back</li> </ul>
<b>Driving and working characteristics</b>	
Speed	<ul style="list-style-type: none"> <li>• driving speed automotive 0 – 40 km/h</li> <li>• work travel hydrostatic 0 – 24 km/h</li> <li>• reverse 0 – 12 km/h</li> </ul>
Steering and chassis	<ul style="list-style-type: none"> <li>• hydraulic 4-wheel chassis with articulated steering, steering angle 45°</li> <li>• robust articulated joint with maintenance-free PTFE-coated bearings</li> <li>• trailing-arm-guided, suspended front and rear axles, coil springs and hydraulic shock absorbers</li> <li>• stabilizer at the rear axle</li> </ul>
Brakes	<ul style="list-style-type: none"> <li>• hydraulic brake on all 4 wheels. disc brake front with load depending support via HST transmission on both axles</li> <li>• electrically operated multi-disc stop brake at the rear axle</li> </ul>
Tyres	<ul style="list-style-type: none"> <li>• 225/70 R15C (M+S road tyres standard)</li> <li>• 255/65 R16C (M+S universal tyres § 35 StVO)</li> <li>• 320/55-15 (lawn tyres)</li> </ul>
Cabin	<ul style="list-style-type: none"> <li>• 1-seater comfort cabin with comfort driver's seat and operating panel integrated in the armrest</li> <li>• central display showing all the machine's functions, adjustable steering column</li> <li>• hot-water heating and optional air conditioning</li> <li>• robust doors with sliding windows</li> <li>• folding exterior mirrors, adjustable from the inside</li> </ul>
<b>Load data</b>	
Dead weights	1,990 kg (implement carrier), 2,490 kg (sweeper)
Permissible values	total weight 3,500 kg, axle load 1,550/2,400 kg (front/rear)
<b>Dimensions</b>	
H/W/L	basic unit: 1,970 mm x 1,210 x 3,830 mm (standard tyres, without tow bar) Sweeper: 1,970 mm x 1,248 x 4,510 mm (standard tyres)
Wheelbase	1,600 mm
Track width	975–1,055 mm
Inner turning radius	1,290 mm



## Hako: environmental-friendly right from the start

It is our legacy to leave behind a clean planet. That is why resources-, environmental- and climate protection characterize each and every process at Hako which has been certified by independent institutions. Learn more about our on-going commitment at [www.hako.com](http://www.hako.com)

## Close to you wherever you are

Our efficient close-knit sales & service network guarantees close proximity and rapid help.

## Cleanliness combined with safety

Our machines meet the highest standards. Reliable quality "Made by Hako".

## Buying, leasing, renting

We offer you a number of individual and attractive financing & procurement options.

## We are available 24/7

Hako's spare part express- and on-call service guarantees best possible availability.

**BLUECOMPETENCE**  
Alliance Member

Partner of the Engineering Industry Sustainability Initiative



DIN EN ISO 9001:2008  
DIN EN ISO 14001:2009

Hako GmbH  
Head Office  
Hamburger Str. 209-239  
23840 Bad Oldesloe  
Tel. +49(0)4531-806 0  
[info@hako.com](mailto:info@hako.com)  
[www.hako.com](http://www.hako.com)