Cleaning Technology Municipal Technology Waterjet Technology



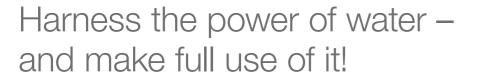


Waterjet Technology

Performance without compromise

Powerful. Versatile. Efficient.





Water has always been of great importance when it comes to cleaning surfaces. As cleaning experts, our goal is to use the enormous cleaning power of water in such a way that resources and materials are conserved, the consumption of chemicals is reduced and, at the same time, optimal cleaning results are achieved. This is what our wide range of professional high-pressure cleaners, high-pressure fire extinguishing equipment and weed control units with additional functions stands for.



Contents

Always the right solution

With Hako, you get more than just a product – you get a reliable partner at your side who understands your requirements and challenges. With accessories perfectly matched to your tasks and individual applications plus great services – from personal advice and tailor-made financing to fast on-site service – we offer efficient, durable and sustainable solutions that not only make your work easier but also create long-term value.

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Oertzen extinguishing technology

High-pressure extinguishing equipment for efficient firefighting without set-up times

- Working pressures of up to 230 bar
- Flow rate of up to 2,250 l/h
- As a drive-on or built-in version
- Wide range of accessories



Hako Waterjet Technology

Pressurised water can be a powerful tool for efficiency and safety. This is why Hako Waterjet Technology combines powerful cleaning, effective extinguishing and versatile application options in a product range that sets standards: with maximum user-friendliness, high-quality materials and a robust design for use even in extreme conditions.

Oertzen high-pressure cleaners

Cold and hot water high-pressure cleaners for use in industry and trade

- Cold and hot water units
- Working pressures of up to 500 bar
- With electric motor or combustion engine
- From stationary to mobile
- High application diversity
- Modules and extensive accessories
- Individual special solutions

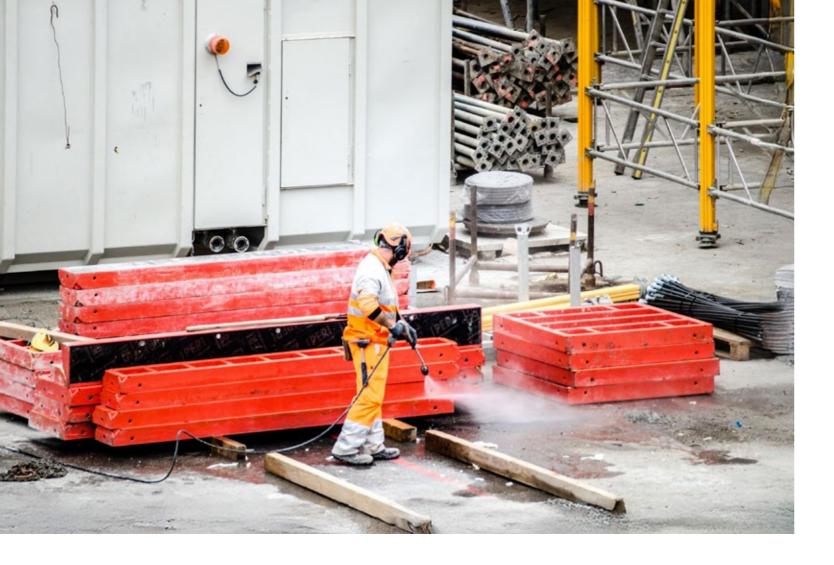


Weco weed control units

Combination units for weed control, high-pressure cleaning and irrigation

- 3-in-1 solution for use in municipal, industrial and commercial applications
- Models in different sizes, from mobile to trailer-based
- Matching accessories





Oertzen high-pressure cleaners

Cold and hot water high-pressure cleaners

Where the performance of standard devices ends, Hako continues. The professional Oertzen high-pressure cleaners for industry and trade set standards in terms of efficiency, durability and sustainability. With a complete range of cold and hot water units, various performance classes, different drive types and extensive accessories, we offer the right solution for every application.



High-pressure cleaners with electric motor

- Zero emissions: for use indoors and in poorly ventilated areas
- Quiet: low noise for use in noise-sensitive environments
- Low maintenance: no oil



High-pressure cleaners with combustion engine

- Independent: for areas without power sources
- High performance: easily handle demanding cleaning tasks
- Robust and durable: designed for use in extreme conditions
- Flexible: ideal for mobile use

In-line piston pump

High-quality, low-speed high-pressure in-line piston pump for maximum efficiency and durability.



Highly stable frame design

High-quality, robust frames reliably protect the components of the high-pressure cleaners from damage.

Pneumatic tyres

Pneumatic tyres provide greater mobility, shock absorption and durability, making them ideal for use on uneven terrain.

Independent hot water generation

Mobile operation without electricity. Petrol-driven hot water high-pressure cleaners are ideal for cleaning in different locations.



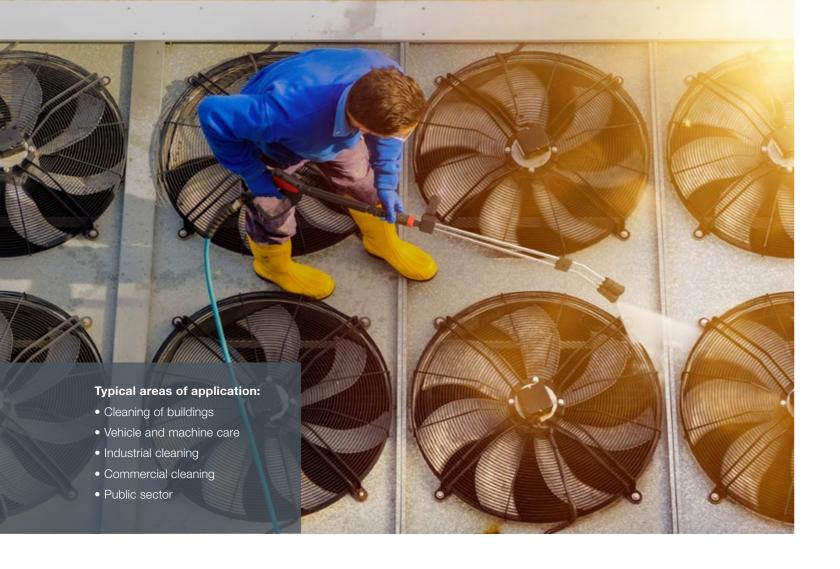
Powerful engine

The engine offers high performance and reliability, efficient fuel consumption and protection against damage thanks to the low oil cut-off.



Stationary high-pressure cleaners

- Cost-efficient in continuous use: for regular and continuous cleaning tasks
- Space-saving: fixed installed and ready for immediate use, designed for multi-user operation
- High power reserves: developed for industrial applications with high demand
- Individually customisable: integration into existing systems and adaptation to special requirements possible



Oertzen cold water high-pressure cleaners with electric motor

Powerful cleaning performance at the push of a button: With our wide range of mobile and stationary cold water high-pressure cleaners, even demanding cleaning tasks indoors and outdoors can be carried out economically, reliably and sustainably.

Compact class



Oertzen C.X305

Technical data	
Working pressure	160 bar
Flow rate	600 l/h
Voltage	230 Volt
Connected load	3 kW



Oertzen C.X322

Technical data	
Working pressure	150 bar
Flow rate	960 l/h
Voltage	400 Volt
Connected load	5.1 kW



Oertzen C210-16 E

Technical data	
Working pressure	210 bar
Flow rate	960 l/h
Voltage	400 Volt
Connected load	6.4 kW

Industrial class



Oertzen C140-12 E C170-9 E

Technical data	
Working pressure	140 – 170 bar
Flow rate	540 - 720 l/h
Voltage	230 Volt
Connected load	3.5 kW



Oertzen C150-21 E

Technical data	
Working pressure	150 bar
Flow rate	1,260 l/h
Voltage	400 Volt
Connected load	6.5 kW



ertzen C230-15 E C230-21 E C200-30 E

Technical data	
Working pressure	200 – 230 bar
Flow rate	900 - 1,800 l/h
Voltage	400 Volt
Connected load	6.5 kW

Stationary units



Oertzen C.S140-12 E C.S170-9 E C.S120-21 E/30 E/50 E

Technical data	
Working pressure	120 – 170 bar
Flow rate	720 - 3,000 l/h
/oltage	400 Volt
Connected load	3.5 kW



Oertzen C.S210-15 E C.S210-21 E/30 E

Technical data	
Working pressure	210 bar
Flow rate	900 - 1,800 l/h
Voltage	400 Volt
Connected load	6.5 kW



Oertzen C.S310-21 E

Technical data	
Working pressure	310 bar
Flow rate	1,260 l/h
Voltage	400 Volt
Connected load	12.5 kW

High-performance class



Oertzen C310-21 E C350-21 E C500-16 E

Technical data	
Working pressure	310 – 500 bar
Flow rate	960 - 1,260 1/1
Voltage	400 Volt
Connected load	12.5 kW



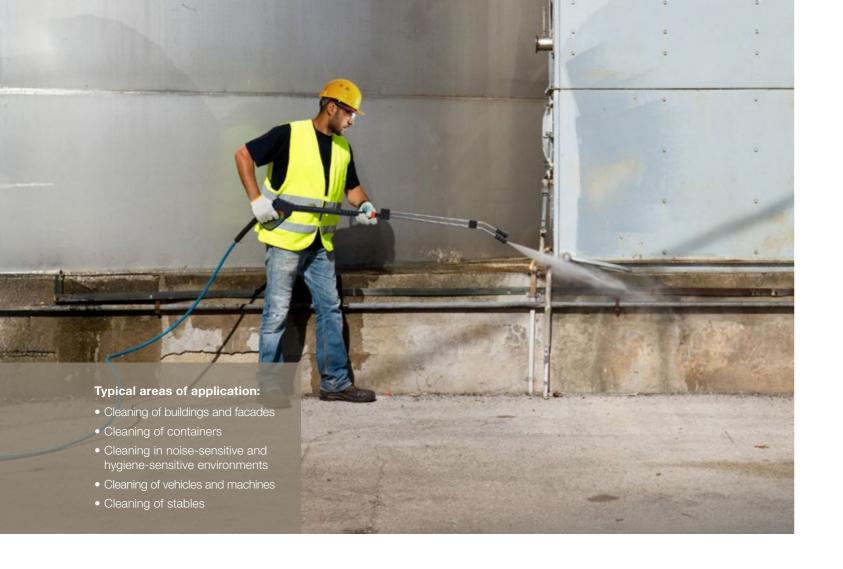
Oertzen C500-27 E

Technical data	
Working pressure	500 bar
Flow rate	1,620 l/h
Voltage	400 Volt
Connected load	28 kW



Roof cleaning

Thorough and pressure-regulated removal of moss, algae, dirt and other deposits, without damaging sensitive roofing materials due to thermal stress or high working pressure.



Oertzen hot water high-pressure cleaners with electric motor

Electrically powered high-pressure cleaning with hot water is efficient, cost-effective, quiet – and environmentally friendly. This is because electric motors work with zero emissions and the high water temperature reduces the amount of cleaning chemicals needed, while at the same time meeting the highest hygiene requirements.

Mobile hot water units



Oertzen H120-9 E.D

Technical data	
Working pressure	120 bar
Water temperature max. (oil-heated)	140 °C
Flow rate	540 l/h
Voltage	230 Volt
Connected load	2.8 kW



Oertzen H170-13 E.D H180-15 E.D

Technical data	
Working pressure	170 – 180 bar
Water temperature max. (oil-heated)	140 °C
Flow rate	800 - 900 l/h
Voltage	400 Volt
Connected load	4.3 – 5.2 kW



Oertzen H200-21 E.D

Technical data	
Working pressure	200 bar
Water temperature max. (oil-heated)	140 °C
Flow rate	1,300 l/h
Voltage	400 Volt
Connected load	8.5 kW

Efficient and effective

The combination of heat, pressure and, if necessary, cleaning chemicals makes it possible to remove stubborn dirt such as caked-on grime, graffiti or dried mud more effectively. Hot water also dissolves grease and oil residues better.





Disinfection

Hot water effectively kills bacteria, viruses and fungi – without the need for chemicals. Thanks to their emission-free electric motor, the high-pressure cleaners are ideal for use in kitchens, food laboratories or stables, for example.

Container cleaning

Hot water high-pressure cleaners clean containers made of metal, plastic or coated materials particularly thoroughly and gently – right into every corner.

Stationary units



Oertzen H.S160-15 E.D H.S165-18 E.D

Technical data	
Working pressure	160 – 165 bar
Water temperature max. (oil-heated)	140 °C
Flow rate	900 - 1,080 l/h
Voltage	3 x 400 Volt
Connected load	6.5 – 7.2 kW



Oertzen H.S170-9 E

Technical data	
Working pressure	170 bar
Water temperature	delta T 30K
Flow rate	540 l/h
Voltage	400 Volt
Connected load	21.5 kW



Oertzen cold water high-pressure cleaners with combustion engines

Wherever mobility, high performance and independence of power sources are necessary, the robust all-rounders with petrol engines offer decisive advantages; for example, long, uninterrupted use on large areas.

Industrial class



Oertzen C230-21 P

Technical data	
Working pressure	230 bar
Flow rate	1,260 l/h
Type of drive	Petrol
Engine power output	10.3 kW



Oertzen C230-15 P

Technical data	
Working pressure	250 bar
Flow rate	900 l/h
Type of drive	Petrol
Engine nower output	8 7 kW

Mobile and powerful

Thanks to their combustion engine, the cold water high-pressure cleaners can be used even in remote locations without a power supply, such as on farms, in forestry or on construction sites. The powerful cleaning performance removes even stubborn dirt such as oil, mud or construction site debris efficiently yet gently. Their mobility and high pressure performance make them the ideal choice for large-scale or intensive cleaning projects.





Use in shipyards

Stable, resilient, ideally suited for harsh working environments and particularly powerful when it comes to removing rust, paint and varnish, as well as grease and oil.

Ship cleanin

With their compact design, simple operation and ease of maintenance, Oertzen high-pressure cleaners ensure greater cleanliness and safety on ships.

High-performance class



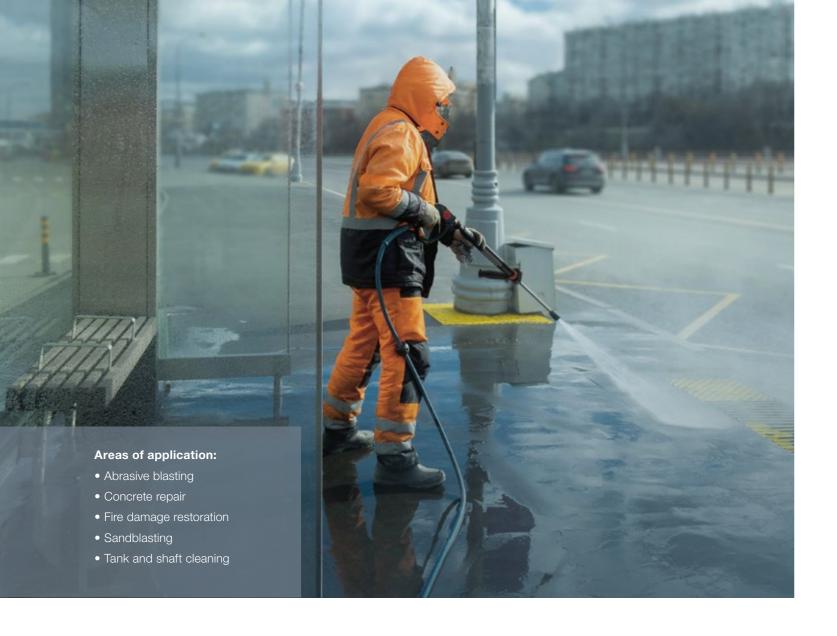
Oertzen C500-16 P

Technical data	
Working pressure	500 bar
Flow rate	1,020 l/h
Type of drive	Diesel
Engine power output	18.6 kW



Oertzen C310-21 P C350-21 P

Technical data	
Working pressure	310 – 350 bar
Flow rate	1,020 - 1,260 l/h
Type of drive	Petrol
Engine power output	16.2 – 16.9 kW



Oertzen hot water high-pressure cleaners with combustion engine

Maximum cleaning performance meets flexibility: Independent of power sources, the hot water high-pressure cleaners remove even stubborn dirt such as oil, grease, paint and concrete residue quickly and effectively.



Oertzen H180-18 P.D

Technical data	
Working pressure	180 bar
Water temperature	98 °C
Flow rate	1,080 l/h
Type of drive	Petrol + Diesel
Engine power output	11.7 kW

Maximum cleaning performance from a standing start

When demanding cleaning jobs need to be done, hot water highpressure cleaners with a combustion engine are the right solution. The use of hot water increases the cleaning performance – while reducing the need for cleaning chemicals.



Flexibility on wheels

Thanks to their small dimensions and ease of assembly, Oertzen high-pressure cleaners can be quickly and easily fitted into emergency vehicles or transported on the loading bed of a Hako Multicar, for example.









Concrete repair

By thoroughly removing dirt, grease and old
In this process, a water sandblaster is used to paint, hot water high-pressure cleaners prepare concrete surfaces perfectly for further work such as coating, sealing or repairing.

Rust removal

remove the paint and rust. The result: a clean surface that is less susceptible to corrosion, providing the ideal basis for further treatments.



Oertzen hot water modules and accessories

Combined with modules or original accessories, Oertzen high-pressure cleaners are even more versatile in use, even more functional and even more efficient. For example, the Hotbox hot water modules turn certain cold water high-pressure cleaners into hot water high-pressure cleaners.

Hot water modules - Hotbox



Oertzen H.B250

Technical data	
Working pressure	230 bar
Water temperature max. (oil-heated)	150 °C
Flow rate	540 - 1,260 l/h
Voltage	230 Volt
Type of drive	Electric + Diesel



Oertzen H.B520

Technical data	
Toomiour data	
Working pressure	500 bar
Water temperature max. (oil-heated)	150 °C
Flow rate	600 - 1,260 l/h
Voltage	230 Volt
Type of drive	Electric + Diesel



Oertzen H.B20

Technical data	
Working pressure	20 bar
Water temperature max. (oil-heated)	120 °C
Flow rate	540 - 1,260 l/h
Voltage	230 Volt
Type of drive	Flectric + Diesel

Even more flexible: with original accessories



Scan the code and discover our range of accessories!

With our wide range of perfectly matched original accessories, your high-pressure cleaner can be individually adapted to any cleaning task – for example, for even more targeted cleaning performance with special nozzles, greater reach with longer lances or to expand the range of applications beyond cleaning.



Turbo nozzle

For an optimal flushing and washing effect: special nozzles with a rotating spot jet and thus high impact pressure



Protective equipment

Well protected: durable, waterproof overalls, protective helmets, ear defenders and safety goggles



Jet pipes

The perfect hand piece for every application: washing lances and double jet pipes with infinitely variable pressure regulation, available in various different lengths



Safety high-pressure guns

Comfortable and safe: ergonomically shaped with the best heat insulation and servo-assisted for fatigue-free working



Floor cleaning trolleys

For non-slip floors: cleaning trolleys made of stainless steel with rotating nozzle elements



Hose reels

Easy to transport and store: with high-quality swivel joints for long high-pressure hoses, with spring balancer or for wall mounting





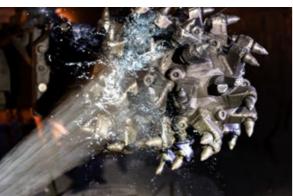


Oertzen customised solutions

For individual cleaning tasks

Oertzen high-pressure cleaners are always more than standard. Some cleaning tasks and areas of application are so specialised that the units themselves cannot be 100% adapted to them even with our extensive range of accessories. As we strive for nothing less than maximum performance, cost-effectiveness and user-friendliness, we build the optimum unit for your needs - from high-pressure cleaners for potentially explosive environments to certified solutions for cleaning sewage systems including faeces tanks in aeroplanes – tailor-made, unique and effective.







Oertzen VacLav Cleaner

Complex pipe systems, narrow, winding places, deposits in areas that are difficult to access - cleaning vacuum toilet systems places specific demands on personnel and technology. To ensure that these sensitive systems function properly and hygienically at all times, we have developed a solution in the form of the Oertzen VacLav Cleaner, which cleans and disinfects the waste tank preventively and also clears blockages. The high-pressure cleaner Oertzen VacLav II removes urine scale from pipes with up to 400 bar working pressure and vacuums the loosened deposits. Both devices can be operated by only one person and are approved by renowned aircraft manufacturers.





Easily accessible Simple operation





Technical data	
Working pressure	210 bar
Flow rate	1,260 l/h
Voltage	400 Volt
Type of drive	Electric



Oertzen VacLav II

Technical data	
Working pressure	400 bar
Flow rate max.	2,160 l/h
Water consumption vacuum injector	20 I/min
Injector pressure	200 bar
Type of drive	Electric



Hose reel with counter For easier hose unrolling, optimised efficiency, and increased safety and control



Oertzen extinguishing technology

High-pressure extinguishing equipment for efficient firefighting without set-up times

Often fractions of a second determine whether a fire can be successfully extinguished. To ensure fast response in the case of fires, Oertzen high-pressure extinguishing equipment is always ready for immediate use, easy to handle and particularly efficient. The water is atomised by means of high-pressure technology. This allows it to evaporate faster and considerably improves the extinguishing effect – while significantly reducing water consumption and possible consequential damage.



Quickly on site

From compact mobile versions to solutions optimally fitted into transport or emergency vehicles: Oertzen high-pressure extinguishing units are always quickly available whereand whenever needed.

Integrated water tank

Self-sufficient operation thanks to the optional integrated light and compact water tank (capacity: 125 litres of water for up to 5 minutes of effective firefighting)



Easy operation

User-friendly control panel for easy operation by a single person

Integrated hose reel

Rapid operational readiness thanks to the integrated hose reel with up to 100 m of hose

Admixer

For the rapid use of foaming agent or mains supply water

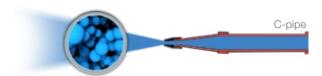
High quality with a long service life and high operational reliability





Fine atomisation of water for rapid extinguishing success

The atomisation of water into tiny droplets creates a larger surface area that absorbs heat more efficiently and displaces oxygen, thereby cooling and extinguishing the fire more quickly. This method not only significantly reduces water consumption, but also minimises water damage to buildings and inventory. In addition, the fine mist improves visibility for emergency crews and increases safety when fighting fires.



Droplet sizes of a hollow stream nozzle compared to the HDL nozzle



Finer = faster = better!



Original accessories for every application

Our accessories, which are perfectly matched to our high-pressure extinguishing units, make operations even more efficient, faster and safer. They also allow the equipment to be used in civil defence and disaster relief operations!



Triplex

Three spray patterns in one nozzle for quick changeover between fine mist, heavy foam and long-throw function



Medium foam pipe

Efficient firefighting with an optimal foam mixture, ideal for professional fire brigade operations



Duplex

Extinguishing with fine mist or heavy foam with maximum control over the spray pattern by simply swivelling



Piercing lance

Penetrates wood, glass and sheet metal to effectively extinguish fires in confined spaces or areas that are difficult to access



Water and sludge suction

For pumping up to 18,000 l/h of water with a delivery height of up to 5 m and large particle diameters



Vario lance

Perfect for cleaning vehicles and equipment efficiently yet gently

Oertzen high-pressure fire extinguishing equipment and accessories

High-pressure extinguishing equipment is used to extinguish fires involving solids (fire class A, primarily with water) and combustible liquids (fire class B, with the flexible and rapid addition of foaming agents possible).



Oertzen HDL200

Technical data	
Working pressure	200 bar
Flow rate	1,260 l/h
Type of drive	Petrol



Oertzen HDL250-23/32/42

Technical data	
Working pressure	150 – 230 bar
Flow rate	1,300 - 2,250 l/h
Type of drive	Petrol



Cleaning emergency vehicles

With the right accessories, Oertzen devices remove pollutants and residues of dirt and ash in the mechanical and electronic parts of the emergency vehicles effectively and quickly, while also conserving materials and resources.



Civil defence and disaster relief

To protect the population and infrastructure from danger in crisis and disaster situations and to support them, Oertzen equipment can be used, for example, to provide hot water for decontamination or disinfection or to suck up water and mud.



Weco weed control units

Combination units for weed control, high-pressure cleaning and irrigation

Weed removal, cleaning and irrigation: the maintenance of outdoor areas is diverse – and an important task for municipalities, industry and commerce. With Weco weed control units with additional functions, this task can be carried out economically, ecologically and sustainably without the use of chemicals. All the functions of the Weco models are operated by a lithium iron phosphate battery. This reduces fuel consumption and pollutant emissions as well as odour and noise emissions to a minimum.

Many tasks, one solution

At the push of a button, the Weco weed control unit turns into a high-pressure cleaner that quickly and reliably achieves excellent cleaning results. Another adjustment and it can also be used to water plants. This means that three different working steps can be carried out in the same place in the same operation – saving time and money!



Cold and hot water high-pressure cleaning

Temperatures between 50 °C and 100 °C and working pressures between 50 and 70 bar, continuously adjustable for many cleaning tasks.

Thermal weed control

Sustainable and effective against weeds with a constant high water temperature of 99 $^{\circ}$ C.

Irrigation

Care of urban greenery with a water output of 8 to 13 l/min and a powerful battery that lasts for up to a full working day.



With thermal effect

If weed is treated with hot water at a constant temperature of over 99 °C, the plant grows back much more slowly or even dies completely. With their electronic temperature control (ETC), Weco units achieve consistent results with the longest possible lasting effect.

99,6 °C

The ETC offers temperature stability

98,6 °C

Unstable temperatures provide no or irregular results

Between 57 °C and 95 °C the roots do not die

57 °C

Temperatures below 57 °C have no effect whatsoever



Systems with 500- and 1,000-litre water tanks

Increased water output for use on larger areas: the Weco M500 Skid and Weco M1000 Skid models have large water tanks with volumes of 500 resp. 1,000 litres. Thanks to their fixed stainless-steel frame, they can be quickly and conveniently transported from one job site to the next.



Weco M500 Skid

Technical data	Weed control	High-pressure cleaning	Irrigation
Water flow rate	10 I/min	13 I/min	10-13 l/min
Water pressure at the lance	0.1 +/-bar	50-70 bar (infinitely adjustable)	
Water temperature	99°C	50-100°C (infinitely adjustable)	
Battery capacity	350 Ah		
Heating output	73 kW		
Volume water tank	500 I		
Dimensions (L x W x H)	1,650 x 1,000 x 950 mm		
Empty weight incl. battery	450 kg		
Noise level	< 58 db		
System voltage	24 V DC		
Diesel consumption (for the heating element)	6.0 kg/h		
Volume fuel tank	42 I		



Weco M1000 Skid

Technical data	Weed control	High-pressure cleaning	Irrigation
Water flow rate	10 I/min	13 I/min	10-13 l/min
Water pressure at the lance	0.1 +/-bar	50-70 bar (infinitely adjustable)	
Water temperature	99°C	50-100°C (infinitely adjustable)	
Battery capacity	350 Ah		
Heating output	73 kW		
Volume water tank	1,000		
Dimensions (L x W x H)	2,250 x 1,270 x	950 mm	
Empty weight incl. battery	550 kg		
Noise level	< 58 db		
System voltage	24 V DC		
Diesel consumption (for the heating element)	6.0 kg/h		
Volume diesel tank	42 I		

Systems with 350-litre water tanks

For precise work even in hard-to-reach areas, such as between flowerbeds and rubbish bins or on narrow paths: the Weco S350 Go, manoeuvrable with one hand, easy to move with a fixed substructure, the trailer-based Weco S350 T with a specially developed braked driving axle and integrated water tank, and the Weco S350 Skid with a fixed stainless-steel frame for easy transport.







Weco S350 Go

Technical data	Weed control	High-pressure cleaning	Irrigation
Water flow rate	6.5 I/min	8 I/min	8-10 l/mir
Water pressure at the lance	0.1 +/-bar	50-70 bar (infinitely adjustable)	
Water temperature	99°C	50-100 °C (infinitely adjustable)	
Battery capacity	350 Ah		
Heating output	42 kW		
Volume water tank	350 I		
Dimensions (L x W x H)	2,200 x 750 x 1	,400 mm	
Empty weight incl. battery	370 kg		
Noise level	< 58 db		
System voltage	24 V DC		
Diesel consumption (for the heating element)	4.50 kg/h		
Volume diesel tank	22		



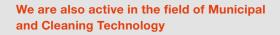
Weco S350 T

Technical data	Weed control	High-pressure cleaning	Irrigation
Water flow rate	6.5 I/min	8 I/min	8-10 l/min
Water pressure at the lance	0.1 +/-bar	50-70 bar (infinitely adjustable)	
Water temperature	99 °C	50-100°C (infinitely adjustable)	
Battery capacity	350 Ah		
Heating output	42 kW		
Volume water tank	350 I		
Dimensions (L x W x H)	2,993 x 1,210 x	1,292 mm	
Empty weight incl. battery	370 kg		
Noise level	< 58 db		
System voltage	24 V DC		
Diesel consumption (for the heating element)	4.50 kg/h		
Volume diesel tank	22		



For a clean future

There is more to cleanliness than just achieving excellent results. It starts long before that: with the development of our products and with every idea that makes them even more resource-friendly and efficient, and keeps the environmental impact as low as possible over the entire long product life. That is why we are constantly driving our research and development in Waterjet Technology forward to create a balance between economic use, efficiency and environmental protection.



We offer a complete range of solutions for professional outdoor and indoor cleaning: from flexible, manoeuvrable city sweepers, compact, multifunctional implement carriers and transporters for year-round use, to versatile sweepers, vacuum sweepers and scrubber-driers.

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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).