



SUSTAINABLE WEED MANAGEMENT WITH HOT WATER

The environmentally friendly solution for effective weed management



EXPERTS TO THE CORE

For more than 40 years, Empas has been the specialist in spraying equipment for crop protection in (greenhouse) horticulture and has been active in the field of weed management since 1999.

This includes weed management on (semi-)paved surfaces and public areas. Innovation, simplicity, professionalism and a responsible approach to the environment are core values within the company. Customers can be certain of quality machines that are easy to use and easy to operate. Thanks to years of experience, you can rely on our advice. Empas specialists work with you in developing practical solutions.

KNOWLEDGE

Professional knowledge. Just one of the advantages of Empas. Years of experience in machine construction guarantees products that are reliable. Experience in greenhouse horticulture forms the basis for all the modular equipment the company now produces.

SERVICE

After purchasing a hot water unit, Empas ensures it is delivered to you in top condition. One of our specialists explains precisely how the machine works and how to make the most of all it has to offer. A reputable dealer in your area provides guaranteed service, so you can always rely on the quality of your machine.





SUSTAINABLE HOT WATER TECHNOLOGY

Machines from Empas feature innovative and environmentally friendly hot water technology. The use of boiling water to control weeds does not burden the groundwater with chemicals. This means machines from Empas are one step ahead of the restrictions that governments (will) apply to the use of chemicals for weed management. The cell structure of the plant is heated by the 102 °C water. This temperature shock bursts the cell structure of the plant, causing it to die. Repeated treatment provides a preventive effect. Algae, mosses and the seeds of most weeds are eradicated.

No species of weeds is resistant to this method. There are also no restrictions on using this method near open water or in bad weather. The result and surface performance depend on the amount of green cover, age and type of weeds. On average, three treatments per year provide an excellent result.

EXTRA COMPACT EXTRA DURABLE

Empas is a company committed to continuous innovation with an emphasis on sustainability. The MCE has been developed with this in mind. The electrical unit is extremely compact, making the MCE perfect for use in, for example, gardens and other small areas. The MCE uses a standard domestic hosepipe connection and power supply (low power). This unit therefore does not require a water tank. The 230V power supply ensures the durable MCE creates minimal emissions and operates quietly.

The compact size of the MCE makes it easy to transport. This unit is perfect for horticulturists and home rental. A robust pull handle and three wheels allows the MCE to be used on any surface. The unit is available in any RAL colour.

CONSTRUCTION

The manoeuvrable MCE features a slender design to allow easy access to even the smallest surfaces. Low power consumption allows any outdoor power supply to be used. The MCE is fitted with a 20 metre hose, a hand-held lance with flow head and a 10 metre power cable.

POWER

At maximum power, this little powerhouse delivers up to 110 bar of pressure and 9 litres per minute. The MCE heats the water to 102 °C. For cleaning, the temperature is adjustable.

MAINTENANCE

The MCE is very easy to maintain. A single cover provides easy access to all the vital components.





MCE

MCE TECHNICAL SPECIFICATIONS

No water tank, connects to any tap | Power supply: 230 V | Boiler 230V | Internal diesel tank 23 litre | 20 metre hose 1/4" | 10 metre power cable | Capacity: 9 litres per minute | Water temperature: 102°C | Adjustable temperature for cleaning | Cleaning pressure: maximum 110 bar | High pressure nozzle | Burner control and safety: 12V DC | Hand-held lance with flow head | Hour meter | Length, width, height: 125x80x95cm | Weight: 180 kg.

WEED FREE IN EVERY CORNER

MCB is the compact hot water unit from Empas. Now also available with 72 V electric drive, the MCB-E and on gas (propane). This unit is extra durable and quiet. Both machines are specially designed for hard to reach places. These units are ideal for playgrounds, health care facilities, children's farms, cemeteries, schools, small passageways and tree canopies. The MCB(-E) eradicates weeds in difficult to access areas in an environmentally conscious manner.

And since it is an autonomous machine, the MCB can be used in various ways. The machine can be transported by an electric vehicle, a 24V traction chassis, a pick-up or a trailer. The E-model connects to the electric vehicle's 72V traction system. Maintaining the machines is very simple. The large cover provides easy access to all the essential components. The professionals at Empas use conventional hot water components for the construction. This allows for easier service and maintenance. Both units are available in any RAL colour.

CONSTRUCTION

The MCB(-E) comes standard equipped with a 550 or 800 litre tank. An 800 or 1000 litre water tank is also available, depending on the carrying vehicle selected. The filling pump and filter system allow the tank to be filled with surface water in only a few minutes. The piston pump is fitted with a pressure regulator/unloader. A Honda petrol engine powers the entire MCB. The MCB-E is powered by a 48V or 72V DC motor. The units include a stainless steel spring reel with a 20 metre work hose. The standard package for the MCB(-E) includes a hand-held lance with flow head.

POWER

The MCB(-E) heats the water to 102 °C and operates without pressure (12 litre per minute) for weed control. The standard cleaning pressure is 50 bar; choose the high-pressure cleaning option for pressures up to 150 bar.



MCB (GAS) ON
TRACTION
CHASSIS



MCB OP
AANHANGER





MCB-E ON
ELECTRIC
TRUCK

TECHNICAL DETAILS GENERAL MCB

Water tank: 500 litres | 2-stage water filter | Honda petrol motor for plunger pump drive gear | Pressure regulator unloader | Dynamo 12 V | Burner boiler | Stainless steel spring-loaded reel with 20-metre hose | Fuel tank | Capacity: 12 litres per minute | Water temperature: 102 °C | Pressure: maximum 55 bar | Burner control and safety: 12 V DC | Gun with lance and nozzle | Dimensions 500L (L x W x H): 176 x 103 x 110

SPECIFIC PROPERTIES OF THE MCB-E

Water tank: 550 or 800 litres in combination with electrical truck as pictured | Dimensions 550 litres (L x W x H): 212 x 103 x 110 | Electric motor: 72 V DC instead of Honda petrol motor | No fuel tank, works on battery pack | Combination with gas possible | The E-design is also available in the standard dimensions, for example for on a trailer (excl. battery pack)

SPECIFIC PROPERTIES OF THE MCB GAS

Liquid propane | No fuel tank but an internal gas cylinder with fast-change system | Capacity: 11 litres per minute | Combination with electrics possible

OPTIONAL (ALL TYPES)

Filler pump incl. suction hose | High pressure: up to 150 bar | Second spring-loaded reel with 35 metre hose (for cleaning) | Larger water tank: 800 or 1,000 litres | Dimensions 800 litres (L x W x H): 212 x 103 x 110 | Dimensions 1,000L (L x W x H): 237 x 103 x 110 | Traction chassis 24 V for a maximum of 800 litres (MCB and MCB Gas)



HIGH CAPACITY, CONSIDERABLY LESS FUEL AND EMISSIONS

The MCB-TWIN is a new hot water unit, developed to meet market demand to allow two people to work at the same time. The machine is just as powerful as two MCBs and offers the advantage of allowing two people to independently perform weed management, cleaning or a combination of the two. The innovative regulated burner technology provides significant fuel savings and emission reduction. The TWIN is ideal for hard-to-reach areas and larger areas.

As an autonomous unit the MCB-TWIN can be used in various ways. The machine can be transported with a pick-up or trailer, and when mounted on a vehicle it can be used with a flow container. Thanks to the large access panel the inner workings are easily accessible for maintenance. The technical experts at Empas build the machines using standard hot water system parts, so service and maintenance are simple.

CONSTRUCTION

The TWIN has a 1000 litre water tank as standard but can also be fitted with a 1500 litre water tank as an option. We are also willing to discuss any other tank size you may require. The optional filling pump and the filter system make it possible to fill the tank with surface water within minutes. The MCB-TWIN features no fewer than three heat exchangers. A Yanmar diesel engine drives the complete hydraulic system. Innovative regulated burner technology ensures the proper operating temperature while reducing fuel consumption and emissions. The unit is standard equipped with two stainless steel retractable hose reels, each with 35 metres of hose.

CAPACITY

The machine has a capacity of two times 12 litres per minute, allowing two people to work independently at the same time. One person working alone can even utilize the full 24 litre per minute capacity. The capacity for hot water cleaning is up to 120 bar per person.





MCB-TWIN WITH (OPTIONAL)
SWIVEL ARM ON TRAILER



TECHNICAL SPECIFICATIONS MCB-TWIN

Stainless steel water tank 1000 litre | 2-stage water filter | Yanmar diesel engine for hydraulic system drive | 2 boilers | 3 heat exchangers | 12V alternator | 2x stainless steel retractable hose reel with 35 metre hose | 1 fuel tank | Capacity: 2x 12 litres or 1x 24 litres | Water temperature 102 °C | Consumption: 70 litres of diesel per day on average (8 hours) | Pressure cleaning: 120 bar per person | PLC module for control and safety | 2x pistol grip with lance, spray head and high pressure nozzle | dimensions 1000 L (LxWxH) 235 x 125 x 135 cm

OPTIONAL

Filling pump incl. suction hose and filter | swivel arms for easily working behind objects, such as cars | 1500 litre water tank

HIGH CAPACITY FOR BIG JOBS

The MCP has a significantly higher capacity than the MCB. This unit is specially designed for weed control by garden contractors. The powerful MCP is ideal for use in public areas. By combining the MCP with an articulating tool carrier, the machine can be used for a large number of applications. The MCP can also be used for treatments around poles and bollards. The combination of the work beam and the hand-held lance make the hot water unit the perfect partner for weed control and cleaning tasks. Small in size, big in performance.

Empas delivers the MCP as a mountable unit. The unit can be mounted on various tool carriers. The hydraulic PTO from the tool carrier provides the drive for the mounted unit. The mounted unit can be easily tilted (if feature is present), to allow easy access to the tool carrier. The MCP is multifunctional. The removable unit ensures the tool carrier can also be used for other tasks, such as ice prevention and blowing leaves. This quick changeover capability ensures your tool carrier remains its most cost-effective.

CONSTRUCTION

The mountable unit includes a 550, 750 or 900 litre water tank. The size of the tank depends on the load capacity of the tool carrier. The filling pump and filter system allow the tank to be filled with surface water in only a few minutes. In addition, the mounted unit comes standard equipped with a hydraulically driven piston pump which is operated by the vehicle's PTO. Especially for those smaller and hard to reach areas, the MCP includes a spring reel with a 20 metre work hose and a hand-held lance with flow head.

POWER

The 140 centimetre wide work beam can be shifted 25 centimetres to the left or right. Boilers heat the water in the MCP to an operating temperature of 102 °C. Heat exchange is also utilised which results in less energy being needed to heat the water. The maximum pressure of the MCP is 120 bar for cleaning.



MCP ON
HOLDER



MCP ON
MULTIHOG



MAINTENANCE

The MCP is easy to maintain. Two large doors on the side and rear provide access to the spacious machine compartment. During construction, Empas uses conventional building components and parts for easy service and maintenance.

MCP TECHNICAL SPECIFICATIONS (MCP24 AND MCP32)

Water tank: 550, 750 or 900 litre | 2 boilers | Capacity: 24 or 32 litres per minute | Water temperature: 102 °C | Consumption: ±60 litres diesel per day (8u) | Cleaning pressure: maximum 120 bar | Operating width of front beam: 100, 140 or 150 cm | Spring reel with 20 metre hose | Hand-held lance and flow head | PLC module for control and safety | Reversing camera | Heat exchanger

REQUIRED TOOL CARRIER

35 litre oil flow at 180 bar | 12V alternator with continuous 90 Ampere | Rear axle load capacity ± 1,500 KG

OPTIONS

Filling pump (petrol or hydraulic) | Contact us to discuss bespoke work tools.

MULTIFUNCTIONAL MEANS COST-EFFECTIVE

Empas is not only innovative, but is always focused on identifying opportunities for improvements. An important part of this is carefully listening to our customers. Because Empas designs and constructs its machines in-house, a solution can be developed for any need. For example, the MCP-T and the MCP have been designed to be mounted on an Kärcher MIC50. Do you have a vehicle that you are not currently using throughout the entire year? Our professionals can deliver the optimal solution, so your vehicle is both multifunctional and cost-effective.

The MCP on a MIC 50 is very compact and manoeuvrable which allowed Empas to achieve the desire to develop a more versatile model alongside existing machines with the same power. Even this compact model has a 550 litre water tank.

The MCP-T, specially designed for tractors, allows your vehicle to be utilised throughout the entire year. The tractor PTO drives the unit's hydraulic motor. The MCP-T is fitted with its own on-board power and hydro facility and can be used for a variety of tasks. The MCP-T is very easy to install and remove since the unit hangs into the tractor's three-point attachment. This allows the vehicle to also be used for other tasks such as ice prevention.



MCP ON
KÄRCHER
MIC50



MCP-T

MCP-T TECHNICAL SPECIFICATIONS (MCPT-24 AND MCP-T32)

Water tank: 800 litres with heat exchanger | 2 boilers | Capacity: 24 or 32 litres per minute | Water temperature: 102 °C | Consumption: ± 60 litres diesel per day (8u) | Cleaning pressure: maximum 120 bar | Operating width of front beam: 100 or 140 cm with side shift | Spring reel with 20 metre hose | Hand-held lance and flow head | PLC module for control and safety | Weight: ± 1600 kg (with water) | Reversing camera

OPTIONAL

Filling pump | 2nd reel

TOOLS

Different tools are available to make use of our hot water units even more effective. Each tool has a unique function and helps you to get the best out of the units. Five tools are described below: the feeder head, the flow pipe, the ergo-tool, the spraying boom construction for the MCB with traction chassis and the high pressure nozzle.

ERGOTOOL

Stainless steel | Coarse tyre profile

The Ergo-tool is ideal for weed control on medium-sized surface areas such as parking areas.



FLOW PIPE

Stainless steel | 250 mm | Rubber guide wheels

Specially developed for weed control in narrow channels and borders.



SPRAYING BOOM

Stainless steel | 450 mm | Construction | adjustable in height

The spraying boom construction was specially developed for the MCB with traction chassis. Ideal for pavements and footpaths.



HIGH PRESSURE NOZZLE*

Stainless steel | Quick-release coupling

With this high pressure nozzle the spray lance is also suitable for cleaning to make your unit multifunctional.



FEEDER HEAD*

Stainless steel | 60mm | Quick-release coupling

Specially for weed control between plants: light, versatile and easy to use.

*Standard with each hot water unit

TIPS

1. WORK AROUND THE WINTER: SALT SPRAY UNIT

It is more cost-effective to be able to use your vehicle throughout the year for various tasks. In winter, your tool carrier is also an invaluable machine in combination with one of our salt spray units. Through innovative technology, our units are now even more durable. The salt spray units are equipped with optional speed control using GPS and based on fluid delivery. In addition, you can prepare your route using the Geographic Information System (GIS).



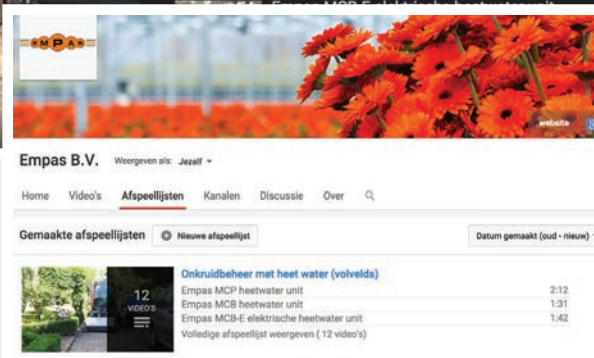
2. SEE THE HOT WATER UNIT IN ACTION?

You can see various hot water units in action on our YouTube channel (Empas B.V.). You can also see videos of the MCP, the MCB and the MCB-E. You can see the relevant pictures in the 'Onkruidbeheer met heet water' (weed control with hot water) playlist. You can also subscribe to the channel to be kept up to date on the latest videos.



Onkruidbeheer met heet water (volvelds)
van Empas B.V. • 1/12 video's

- Empas MCP heetwater unit
Empas B.V.
- Empas MCB heetwater unit
Empas B.V.



SUSTAINABLE WEED MANAGEMENT WITH HOT WATER

Choose consciously



EMPAS BV
KRUISBOOG 43
3905 TE
VEENENDAAL
NETHERLANDS
T +31 (0) 318 525 888
E DUURZAAM@EMPAS.NL
WWW.ONKRUIDKOKEN.NL



THE ENVIRONMENT IS
IMPORTANT TO US, SO WE USE
FSC-CERTIFIED PAPER.