



## **WOMA® ULTRA HIGH PRESSURE UNITS** WITH HIGH PRESSURE FOR YOUR SUCCESS.

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# **USE THE POWER OF WATER**

The power of water has been used by people since the time of the ancient world. Water power has propelled mills and lifted heavy loads. Water power is an important regenerative energy source. However, water can be much more. The revolutionary idea of using the mechanical effects of flowing water for cleaning with enormous pressure formed the foundations of WOMA® in 1962. Since then, this idea has become the driving force across businesses.

WOMA<sup>®</sup> is one of the leading producers of high pressure pumps, high pressure devices and accessories. Through consequent research and development, we have today mastered systems with water pressure of up to 4000 bar. WOMA<sup>®</sup> has delivered high pressure technology to customers across the world for over 50 years. As part of the Kärcher group, through the international distributor and service network of the market leader in cleaning technology we are able to reach a growing international target market.



### WOMA® standard units cover the entire performance spectrum:

## **ECORUNNER** FLEXIBLE AND DIVERSE.



The new EcoRunner quickly delivers high pressure where it is needed. The vehicle and water jet combination unites transport and operation of ultra high pressure technology in one device. This modular design enables quick and flexible conversion for all high pressure water jetting applications.

- The modular high pressure unit is quickly and easily exchanged via forklift truck. This simple Plug & Spray design allows the vehicle to be equipped with a ready to use high pressure unit delivering up to 3000 bar or 235 l/min to suit the task at hand.
- The high pressure unit is driven by the vehicle's engine via an integral split shaft gearbox. This saves space and weight, as an additional motor and fuel tank are no longer needed.
- Particularly low noise pollution thanks to the complete enclosure of the high pressure device and motor by the vehicle.
- An electric 24-Volt device with an E-EXIinterface is included in the high pressure unit for use in areas operating under risk of explosion.
- A Class B EU driving licence is sufficient for operating the vehicle, which has a total weight of approximately 3.5 tonnes.



**01\_**The high pressure module can be switched quickly and easily using a forklift truck.

**02\_**The 250M module can be used for concrete refurbishment or any surface preparation.

**03**\_The 250Z module is usable for all tasks in the industry, such as the cleaning of heat exchangers, pipes or tanks.

**04\_**The 250ARP module is highly suitable for sewage cleaning.

- Plentiful storage room is available for work tools, clothes and equipment.
- Thanks to an additional trailer hitch, a further high pressure unit or tank, for example, can be attached and taken along.
- The vehicle can be used at any time without the high pressure unit as a regular transportation vehicle.

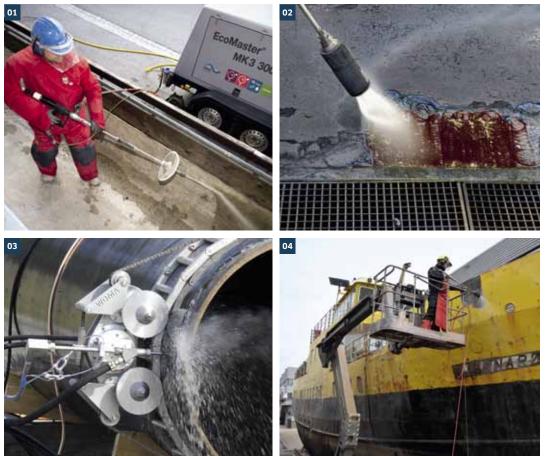
Technical Data			
Unit type	EcoRunner 250M	EcoRunner 250Z	EcoRunner 250ARP
Max. pressure in bar	2000-3000	750-1500	170 - 300
Max. volume flow in l/min	20	60	235
Max. water temperature in °C	60	60	60
Gross vehicle weight in kg	3500	3500	3500
Part Number	9.916-702.0	9.916-574.0	9.916-703.0

### **ECOMASTER MK3** THE WATER JETTING POWER PACK.



The Ecomaster MK3 is a compact power pack for the maintenance of large constructions and industrial facilities, but has many other uses in industry, construction and municipal services. The ultra high pressure water jet unit comes as a mobile trailer with an economic diesel engine.

- Ideal for the removal of coating and concrete refurbishment, as well as for the separation and cutting of various materials.
- Three versions with operational pressure of up to 2500 3000 bar are available.
- The easy to understand WOMATIC 4-Control with operational status monitoring, pressure-rpm regulation and pressureless circulation ensures high operational safety, low wear and tear, long service life, and last but not least, minimal fuel consumption.
- Highest environmental standard: Possible leakages from operational liquids can be prevented through the included safety trough.



**01\_**Equipped with up to 3000 bar, the removal of stubborn concrete is possible.

**02\_**The EcoMaster MK3 is most suited to the removal of coating and covering.

**03**\_The cutting and separation of various materials is possible with pressure from 2500 bar.

**04\_**The removal of lacquer and multilayered coating can be done easily with the EcoMaster MK3.

- The appropriate ultra high pressure pump 250M works with particularly low wear and tear and ensures a long service life.
- Maximum safety for the user: The system is pressure-less as long as the high pressure gun is not activated.
- Low noise operation due to a noise protection hood made from aluminium (<85 dB(A)).</li>
- Approved as a trailer of up to 80 km/h.

Technical Data			
Unit type	EcoMaster MK3 3000/18	EcoMaster MK3 2800/20	EcoMaster MK3 2500/26
Max. pressure in bar	3000	2800	2500
Max. volume flow in I/min	18	20	26
Max. water temperature in °C	60	60	60
Weight in kg	approx. 2700	approx. 2700	approx. 2700
Measures in mm (L $\times$ W $\times$ H)	approx. 4200 × 2030 × 2200	approx. 4200 × 2030 × 2200	approx. 4200 × 2030 × 2200
Part Number	9.914-267.0	9.914-267.0	9.914-267.0
Included standard equipment 30 m electric cable 20 m high pressure hose DN8 up to 3010 bar Round jet nozzle			

### ECOMASTER CLASSIC SIMPLY ROBUST, SIMPLY EFFICIENT.



The EcoMaster Classic is developed especially for use in rough conditions. It boasts a compact design, a robust and low-maintenance construction, and simple operation. The high pressure units are diverse, flexible and usable, even in extreme climates or difficult environmental conditions.

- The EcoMaster D 250M Classic offers the optimal equipment for the refurbishment and removal of concrete or coating, as well as for the separation and cutting of various materials.
- For particularly stubborn dirt and residue in the industry, which is often found in heat exchangers, sieves, filters and pipes, the EcoMaster D 250Z Classic is proven to operate with up to 1500 bar.
- The EcoMaster D 1502 Classic is ideally suited to the external cleaning of tanks up to the removal of dirt and corrosion, for example, as well as the removal of coating.
- The application fields of the EcoMaster D 150Z Classic are the internal cleaning of tanks, containers or autoclaves, as well as the cleaning of large pipes.
- All devices are fitted with robust, lowmaintenance and strong performance WOMA<sup>®</sup> high pressure pumps.



- The compact design with stable frame construction enables easy usage in difficult areas.
- Fitted with crane hooks for simple transportation.
- Effortless regulation optional via manual pressure control or Dump Gun.
- The large water tank ensures a calm water cycle.
- Very good price performance ratio thanks to functional construction and proven mechanical components.
- Low operational costs due to high service life, minimal maintenance costs and simple servicing.

**Technical Data** EcoMaster D 150Z Classic EcoMaster D 1502 Classic Unit type EcoMaster D 250M Classic EcoMaster D 250Z Classic Max. pressure in bar 2000 - 3000 1000 - 1500 750 - 1500 750 Max. volume flow in I/min 18-32 49 - 78 37-71 72 Max. water temperature in °C 60 60 60 60 approx. 2500 approx. 2500 approx. 2500 Weight in kg approx. 2500 Measures in mm (L  $\times$  W  $\times$  H) approx. approx. approx. approx. 2880 × 1510 × 1930 2880 × 1510 × 1930 2880 × 1510 × 1930 2880 × 1510 × 1930 Part Number 9.911-574.0 9.911-575.0 9.911-569.0 9.911-566.0

**01\_**The EcoMaster D 250M Classic, with an operational pressure of up to 3000 bar, offers the necessary performance for the removal of concrete and coating.

**02\_**All stubborn cleaning work in the industry, for example heat exchanger cleaning or the cleaning of sieves, filters and pipes, can be effortlessly completed with the EcoMaster D 250Z Classic.

**03\_**The EcoMaster D 150Z Classic is ideal for the external cleaning of tanks and the removal of coating, for example.

**04\_**With a volume flow of up to 72 l/min, the EcoMaster D 1502 Classic is the optimal system for internal tank cleaning combined with the WOMA<sup>®</sup> TankMaster.

### **ECOTHERM** HIGH PRESSURE WITH SYSTEM.



The hot water cleaner EcoTherm is driving forward in the power range, which can only be achieved using bigger high pressure devices. Cleaning with hot water is often more effective than with cold water. This means that mostly low pressures are sufficient for comparable cleaning tasks.

- With up to 98 °C façades, small pipes, industrial flooring and other surfaces can be easily cleaned, oil and grease can be washed away and coating can be removed.
- The compact and light single-axle trailer can be brought to site with almost any middle class car.
- Robust diesel motor (38 kW), stable design.
- The easy to understand WOMATIC 4-Control with operational status monitoring, pressure-rpm regulation and pressureless circulation ensures high operational safety, low wear and tear, long service life, and last but not least, minimal fuel consumption.
- The tank system with 5 chambers including a safety trough hinders operational fluids escaping, such as fuel, oil or softeners.
- The extremely accessible and long-life high pressure pump 70Y boasts a compact construction and low weight.



**01**\_The EcoTherm works quickly, thoroughly and efficiently with hot water.

**02**\_Graffiti and coating can be effortlessly removed from walls and façades.

**03**\_The high pressure hot water is particularly suited to cleaning oil and grease.

**04\_**Soiled floors and surfaces can be washed using the EcoTherm.

- The heating elements automatically turn themselves off in the absence of water supply.
- Maximum safety for the user: The system is pressure free as long as the high pressure gun is not activated.
- Integrated frost protection technology.
- Approved as a trailer of up to 80 km/h.

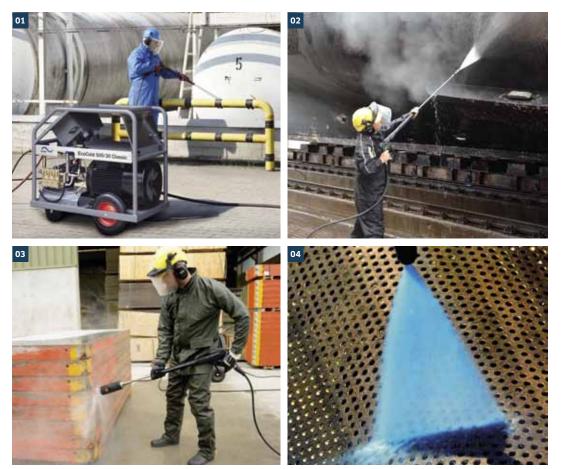
Technical Data	
Unit type	EcoTherm 800/21
Max. pressure in bar	800
Max. volume flow in I/min	21
Max. water temperature in °C	98
Heating capacity in kW	132
Heating oil tank in l	100
Fuel tank in l	100
Water tank in I	200
Weight in kg	approx. 1300
Measures in mm (L $\times$ W $\times$ H)	approx. 4100 × 1940 × 2000
Part Number	9.911-612.0
Included standard equipment	High pressure gun for hot water applications up to 1500 bar 30 m electric cable 20 m high pressure hose DN10 for hot water Flat jet nozzle

## **ECOCOLD 500/30 CLASSIC** COMPACT, MOBILE, STRONG.



The compact and mobile EcoCold 500/30 Classic removes dirt from the narrowest corners. The high pressure water unit was developed by WOMA<sup>®</sup> specifically for use in professional high pressure cleaning. It offers a work pressure of up to 500 bar, an output of up to 30 l/min as well as many features to promote efficient and safe work.

- Suitable for the cleaning of: Concrete formwork, façades, cleaning of filters in the industry as well as the removal of organic growths on ship hulls and buoys.
- The pressure-controlled water switch turns off the power in the absence of water supply to prevent dry operation.
- The gentle start of the electrical motor allows the motor and pump to initiate slowly. This avoids leakages and increases the life expectancy.
- The wheels and steering of the machine are equipped with breaks so that the EcoCold can also be driven on slopes.



**01\_**Compact, mobile and high performance: The EcoCold 500/30 Classic masters multiple tasks in high pressure cleaning.

**02\_**The removal of growth on ships and buoys is quick and easy to perform using the device.

**03** With the EcoCold 500/30 Classic, concrete formwork can be cleaned without damaging the surfaces.

**04\_**An immense number of cleaning tasks can be completed using the compact device.

- The wheels are made of solid rubber for easy relocation.
- Easy loading due to hitching for crane hooks.
- Industry tested, reliable and long-life high pressure pump.
- With manual pressure control.

Technical Data	
Unit type	EcoCold 500/30 Classic
Max. pressure in bar	500
Max. volume flow in I/min	30
Max. water temperature in °C	60
Weight in kg	approx. 520
Measures in mm (L $\times$ W $\times$ H)	approx. 1200 × 700 × 1200
Part Number	9.916-704.0
Included standard equipment	High pressure gun up to 650 bar 30 m high pressure hose DN10 up to 600 bar Round jet nozzles

## **INDIVIDUAL SYSTEMS** FITTED TO YOUR REQUIREMENTS.



As well as the standard units, we design and produce individual high pressure water jet devices in accordance with our customer needs. The configuration is flexible to respective requirements. Whether it is mobile or stationary, with diesel engine or electric motor – our experts find the best solution even for complex applications or problematic work conditions.

- The construction is fundamentally modular and can be either stationary as a Skid Unit respectively with container housing, or can be mobile as a trailer, as a truck installation or even as a flat wagon.
- All pressure stages and volume flows of the WOMA<sup>®</sup> pumps of the WOMA<sup>®</sup> portfolio are available – with up to 3000 bar, and approximately 1700 l/min.
- Powered by diesel engine with EU emissions 3A and 4FINAL or alternatives with electronic drive.



struction of the WOMA® units enable customers to configure the high pressure devices to their individual needs.

02\_Whether it is a stationary or mobile unit, whether it is with container enclosure or without. Flexible unit modification is available at any time.

03\_Various control systems enable us to meet the optimal requirements of our customers.

**04\_**For particularly harsh environments, we offer the Crash Frame structure which provides the necessary protection.

- The following designs are available:
  - Classic Model According to needs for operation with Dump Gun or with manual overflow valve for mechanic water tools.
  - Advanced Model Fitted with pneumatic overflow valve. Suitable for the operation of electronic water tools.
- Expert Model

With pneumatic overflow valve and automatic pressure-rpm regulation equipped. Suitable for operation of electronic water tools. Additional optional multi-user solutions are possible.

- Examples of further options:
  - Container enclosure
  - Flat wagon or trailer solution
  - EXI control
  - Sound insulation
  - Diesel motor with spark catchers
  - and much more

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