

The total solution for emptying and cleaning underground containers.

A unique and efficient design.

A user-friendly, durable and cost-effective powerhouse!



AW Machinery, Materieel & Academy

AW is a versatile company specializing in sustainable mobile solutions for the waste and cleaning sector. As an innovative player in the market, we produce powerful + practical products and services. User-friendly, of good quality and of course as efficient as possible. We follow trends and developments closely, look to the future and attach great importance to sustainability. We add this not only to our products and services, but also to our way of working. When you choose AW, you get what you need and more!



AW consists of three companies

AW Machinery

At AW Machinery, we design, draw and build special projects and vehicles. All under our own management. With our knowledge and experience we are able to innovate or develop new and existing (cleaning) machines. Our designs are characterized by quality and simplicity. We look at every facet of the project or vehicle and put efficiency and return for the user first. In every technical solution we take into account accessibility, ease of maintenance and attractive design. One of our products is the wash and suck unit. A surprising new concept for effective emptying and cleaning of underground containers, even in the smallest corners. The main construction and the locations of the various components are covered by our European patent. We also build various other machines; including pit elevators, crane attachments and washing units.

AW Materieel

In addition to designing and building our own machines, you can also contact us to rent vehicles. Our rental fleet consists of a wide variety of modern, safe and innovative collection vehicles such as rear loaders, crane trucks, (crane) hook trucks and side loaders. AW Materieel is ahead of the market with ergonomically well configured vehicles, a lot of knowledge in the workshop and short lines to the customer. Therefore, we offer only high quality products.

Service & maintenance

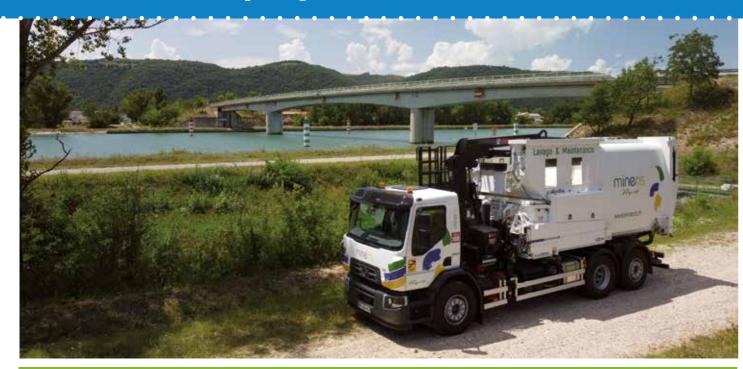
In our specialist workshop, in addition to servicing our own equipment, we also provide overhauls, repairs and maintenance of superstructures from various suppliers such as Geesink, Haller, VDL Translift and VDK. We also provide on-site repairs with our service technicians.

AW Academy

Working together by sharing knowledge! For years we have worked in an open, informal atmosphere. There is always room for development, training and personal input. This way of working applies to both our colleagues and our relations. We provide various training courses, but a good, open conversation and sparring are also among the possibilities. This can take place at our location in Emmeloord, at the client's location or via an online meeting.

Innovative and progressive

AW wash and suck unit



Honest, open & committed. That's how we work at AW.

This includes involvement with the world, in the broadest sense of the word. Consciously located on an eco-park, in an energy-neutral building and with a fleet of vehicles in which we strive for the highest emission standard. We try to go one step further every day.

By reserving a portion of the proceeds from our rental fleet, and the activities in our AW Machinery, we want to work with you to do something for the environment and preferably as locally as possible. When selling from AW Machinery, for example a washing unit, we are happy to to find a good use for this money. From every rental day at AW Materieel we reserve an amount for which we search for a good cause every six months.

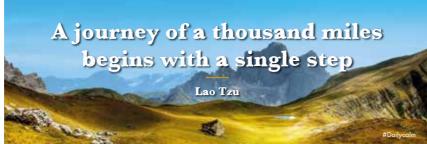


ISO 26000 & ISO 9001

As the first company in the Northeast Polder (Dutch Region), we started implementing ISO 26000 several years ago through ISOFastTrack. In 2019, we also achieved ISO 9001 certification. Every year we work through the questionnaire again, and every month we address relevant action points. Having a certificate is of course nice, but what matters most to us is that we actually do something with it!

Family business

In our small family business we have a fantastic team; colleagues who are self-reliant, can make decisions independently and want to put their shoulders to the wheel so that together we can do something for our customers and for each other. All this in an open, informal atmosphere, where there is always room for new developments, training and personal input. The door to the consulting room is never closed, and information is available to everyone. We have a lot of knowledge, can switch quickly, and our clients notice that every day!





Description

AW Machinery's washing and suction unit 3.0 heralds a new generation of machines for the waste and cleaning sector. This 3.0 unit is absolutely the solution for quickly and thoroughly emptying and cleaning any underground container. This all in one smooth working passage. The unique design far surpasses all traditional machines. Every detail has been thought through. Both with regard to the machine and the process. Quality and

practice fit together seamlessly.

The compact unit contains a generous capacity of clean water and enough space to collect the dirty water. This allows you to empty many containers on one route. Emptying and cleaning underground containers at the front of the unit creates a smart, yet fast cleaning cycle per container. Our patented wash arm and wash heads clean even the smallest corners of containers and valves. With the deployment

of suction systems, the use of your vehicle becomes even more efficient. In addition to cleaning containers in one pass, it is also possible to clean the pit.

The third generation wash and suck unit is developed by our engineers, with the input and experience of our relations. An innovated machine, where ease of use and durability are key. The AW Machinery wash and suck unit is an attractive European patented combination of technology and durability.

A user-friendly and certainly cost-effective powerhouse!

Features

- ZERO emission
- Powerful, efficient and low maintenance
- Modular construction
- Windows on both sides
- Prepared for electric control / battery pack / E-PTO
- Optimal weight distribution
- Low noise level
- Hydraulic hose reel for water suctioning
- Hydraulic suction arm for waste suctioning
- Radio control

Technical specifications

- Clean water capacity: 2600 / 2800 / 3000 liters (depending on model)
- Dirty water tank: 2700/2800/3000 liters (depending on model)
- Hopper capacity: 6.2 m³
- Waste compartment: 9 / 11 / 13 m³ (depending on model)
- Length: 5973 / 6373 / 6773 mm
- Width: 2550 mm
- Height: 2660/ 2750 mm
- Materials body: Hardox,
 \$ 420 and stainless steel Asi 304

Press mechanism

Patented wash arm and wash pattern



AW Machinery's wash and suck unit has a full press mechanism. Waste is compressed as many as four to five times. The design of this press block is also one of a kind. It is a double parabolic press block that ensures even distribution of the pressing force as well as minimal contamination behind the press block. It is a powerful and above all reliable mechanism.

The unit's design has even more thoughtful applications. The press block comes standard with an (adjustable) full indicator on the control station on the left and right side on te machine. On the side of the press chamber is a hatch for easy cleaning behind the press blocks, the press is placed at an oblique angle which reduces waste and water behind the press.

High-pressure water pump

The beating heart of the washing and suction unit is the water pump. This high-pressure water pump forms the basis for the washing power and effortlessly delivers the necessary flow and overpressure required for container cleaning. With one pump and the accompanying developed electro hydraulic control, the water pressure for the washing heads and the high-pressure sprayer (lance) is realized. Due to the unique fully IQAN control, the operator does not have to worry about the pump. The pump smoothly regulates the required liters of clean water for the high-pressure spray or washing, but also for both at the same time if necessary. AW likes to go for sustainable and efficiency. The standard water pump control is always fully on. The high-pressure water pump used in this unit uses only what is needed. Sustainable in energy use and therefore also sustainable for your wallet. In short, a high-quality pump and a cost-saving investment for the future.



Washing power and optimal results. These are the features of AW Machinery's wash and suck unit. The patented washing arm together with the double washing heads guarantees that the water jet under high pressure cleans all corners of the valves. Manual stabbing of residual waste is now a thing of the past!

Due to the double washing heads, the distance to the surface to be cleaned is as short as possible and the washing power increases enormously. Thereby, the rotating washing heads can be targeted and powerfully directed at most dirty areas of the (underground) container and valves. With our authentically developed washing pattern, your container will be absolutely spotless.

AW's wash arm has another attractive feature. The washing arm is operated by means of an air cylinder. The arm can even spring along if the operator lowers the crane and container too far. Protective brackets over the washing heads ensure good protection of the material. An optimal number of deployable working hours (up-time) and adequate damage prevention ensure maximum efficiency.





renewed spray n

Semi-container and glass washing arm

The patented solution for cleaning containers with two bottom valves comes standard with AW's wash and suck unit. Of course, cleaning semi-containers and three-color glass containers is also possible. AW developed a special arm for this purpose that thoroughly cleans the glass container and the inside of the bag from a semi-container per section.

Windows on both sides allow the operator to hang the bag from a semi-container or a glass container in an easy way, in the right place. In the AW washing and vacuum unit 3.0, the washing arm for semi- and glass containers has its own chamber, in this chamber the washing arm is automatically stowed again after the cycle is completed.





Description

For the dirty water, which remains in the pit of the underground container, we have a solution; a dirty water suction unit. The wash and suck unit is equipped with a lobe pump and, as an extra option, a hose reel. High capacity, low driving movements, ease of use and a low-noise process are highly recommended. In addition to sucking up the dirty water, you can also run the lobe pump in the opposite direction, in which case the dirty water can be returned to the desired location from the dirty water tank.

Hose reel

On the left side of the machine we have the option to install a hydraulically operated hose reel, the suction hose is stored here during transport. Rolling up and unrolling is controlled hydraulically, by the remote control. With the hose reel, working with the machine becomes lighter and more efficient for the user!

The dirty water suction system creates an efficient deployment with your vehicle. There are few driving movements and with one vehicle the container and pit can be completely cleaned. The pump has a high pumping capacity and the dirt water sucked up enters the dirty water tank through the sludge chute. With the included suction hose, the pit is emptied.

- Börger PL 200 lobe pump
- Ball passage: max 40 mm

Technical specifications

- Capacity up to 50 m³/hour



Description

Loose trash or glass at the bottom of the pit. Grit along the pit edges, as well as leaves in the fall. The powerful centrifugal pump in AW's The wash and suck unit removes everything with ease. The continuous air flow makes the waste and the last wet dirt in the corner of the pit disappear.

The waste you suck up enters the waste compartment with a considerable volume. The clever placement of the compartment ensures this high fill rate, with no chance of clogging. The virtually straight tube prevents that. Due to the size of the tube, even whole bottles or cans can be sucked up. Compared to a regular gully cleaner or vacuum tank, the biggest advantage of this pump is its continuous application. The machine keeps sucking, hour after hour.

Suction arm

A lighter and more efficient way of working, is created by our hydraulic suction arm. By placing the suction hose on a pivoting lifting arm, the user no longer has to lug it around. This allows a larger diameter (Ø 200 mm) suction hose to be used. The lifting of the arm is done hydraulically end controlled via remote control. The user can easily swing the arm manually above the pit.

Features

- Makes spotless and dry
- Large waste compartment for lots of waste volume
- The nearly straight tube prevents clogging
- The pump can continuously clean and dry

Technical specifications

- SU60Hy Centrifugal Pump
- Turbine diameter: Ø 600 mm
- Hydraulically driven
- Mounting: fully independently suspended in rubber buffers
- Oil capacity vehicle: 280 bar - 60 l/min
- Extra weight: 300 kg
- Air capacity (m³/min.): $175 \text{ m}^3/\text{min}$
- Sound power level: 90 dB(A)

Brushes Hot water installation



Description

Besides emptying waste, cleaning and hosing down underground and aboveground containers, the AW wash and suck unit 3.0 can also clean the outside of both underground and aboveground containers. Our brushes are the solution for this. The brushes are mounted in the hopper and can be activated by remote control. With the extra boost function, the brushes are pressed against the container hanging above the hopper, for cleaning the outside completely!

Features

- Brush material PE
- Mounted in a free moving frame, this prevents damage
- Stainless steel pipe with nozzles for the purpose of water supply
- Controlled by remote control
- Control over the brushes by controlling the tap
- PVC tarps to prevent overspray
- Custom hopper dimensions; 2400 x 1900 mm





Description

With the AW wash and suck unit, there is the possibility of washing with hot water. In our third generation, the fresh water tank is placed along the length of the machine and is fully insulated. As a result, the water temperature does not drop more than 5°C during the working day. The machine is equipped with an Eberspächer, which is a 35 kW burner that can heat the water up to 50°C. The burner can be fired on diesel as well as HVO. The Eberspächer is equipped with a timer, allowing the user to set the time at which the water must be at temperature. The water is then hot before the working day starts, this prevents the emission of exhaust fumes while washing in the residential area! The fresh water tank can also be filled directly with hot water or, for example, hot process water. Thanks to the insulated tank, this maintains the desired temperature throughout the day.

Electric preheating system

The third generation wash and vacuum unit offers an additional function for electric preheating of the wash water. Using a plug connection, the electric preheating system is activated. A circulation pump will start and the heating element is turned on. Once the water has reached the desired temperature, the system automatically shuts off. As long as the unit is connected to power, the system will reactivate itself to keep the water at the desired temperature. When washing and the unit is not connected to power, the insulated fresh water tank ensures that the wash water remains at temperature throughout the day.

The electric preheating option can be used in combination with or separately from the Eberspächer, allowing the user to heat the water in different ways.



Technical specifications

- Required connection: 400 V and 32 A socket
- Heating element of 20 kW with temperature limiter
- Circulation pump of 24 V
- Protected with temperature and level sensors

Full vehicle body

Service and advice



Description

A wash and suck unit is not complete without a completion of your vehicle. A wash truck is the ultimate combination of technology; the wash unit, the crane with attachment, the hook arm (or fixed frame) and all other necessary supports for your tools such as ladders and hoses.

Custom advice

At AW we are happy to advise you, possibly together with your home dealer, on the purchase of the chassis. We then build the complete vehicle for you. Your personal preferences, and of course purposes of use form the common thread in our advice. Not only do we incorporate the experiences of our other customers, we also take into account the latest developments in technology and legislation. A superstructure from AW is durable and contemporary.

A fixed unit or a flexible unit? The choice is yours and no problem for AW. The wash and suck unit is often purchased as a container and this gives a lot of flexibility in your fleet. A swap with another container is then easily made. But do you wash all year round? Then a fixed unit is a better solution for you. You then have no costs for the container system and benefit from the lower weight of the vehicle.

Your design in pictures

If your requirements are clear, our engineering will provide an original design of a (complete) wash and suck unit. We keep you informed about the design, both digitally (3D) and live. This leaves plenty of room to address any custom modifications immediately.

Training

From the AW Academy we offer various training courses, including training for our wash and suck unit. Both a user training and a technical training are possible.

User Training

- At AW on location (with extensive lunch) or at your own location
- Both theory and practical training
- All functions of the machine are highlighted
- Daily maintenance is explained
- Included with purchase of machine
- Also ideally suited as refresher training
- One working day

Technical training

- At AW on location (with extensive lunch) or at your own location
- Both theory and practical training
- Training for mechanics
- Learning to maintain the wash and suck unit
- All technology of the machine is covered
- One working day





Service & maintenance

AW Materieel, AW's service organization ensures the continued operability and reliability of your equipment.

To establish a long-term cooperation, we offer our customers the option of choosing a maintenance management program: a customized service level with fixed maintenance planning and service and spare parts packages. These service packages are flexible and in all cases assure you of a well-maintained and reliable product, without financial uncertainties.

Our technical support help desk is readily available daily. Whether you want to make a maintenance appointment, order parts or have a repair done, you will get immediate support.



Maximum return on your purchase

AW offers the possibility of a service contract on the machines purchased by the customer:

- A periodic maintenance contract in which we make annual arrangements for checks and maintenance. This also includes checking all
 safety devices that are required on the collection vehicle. A periodic maintenance contract includes inspection and control of the operation
 of your body. Should it appear during the inspection that a larger repair is necessary, an appointment will be made with you.
 We believe that preventive maintenance, as proposed by us, will contribute to an increase in the reliability of your body.
- An all-in maintenance contract where we take care of all body maintenance and repair for a fixed price.

Advice

In a personal meeting we will be happy to give you professional advice when it comes to the (new) construction of your vehicle.

A (wash) vehicle is a product made to measure. Suitable for your applications and based on your requirements. In addition, there are specific requirements for various aspects of the vehicle. For example, the wheelbase, PTO, power and so on. We are happy to help you make the right choice for the total product!



Attachment solutions



generation of attachment solutions!

As an innovative designer and builder of different types of waste handling machines, we know how difficult it can be to collect waste efficiently when there are different types of underground containers in one route. Therefore, we have designed and built combi and pick-up tools to collect different underground containers without changing the attachment.

combi and pick-up tools create a time- and cost-saving way of working for the driver, the environment and the surroundings. There are several options for combining 3-hook, mushroom, 2-hook and metro (1 hook) combi and pick-up tools.



Additional options / capabilities

In addition to our standard collection blocks, we like to think along with developing customized solutions. For example, we offer various options, this allows us to empty all underground and aboveground containers.

Some of our options:

- Adapter metro intake (1-hook):
- Chains attached to various attachments for emptying semi- or 2-hook containers;
- Outrigger for easy storage and changing of various attachments:
- Various attachment parts, to fix the attachments during transport;
- Slide plate for attachments serving crane vehicles.

By mutual agreement, anything is possible!

AW-3P

AW Combiblock, type AW-3P for emptying waste containers with a three-hook take-up system.

- 3 independently operated hooks
- Stroke: 60 cm
- Hook spacing: 25 cm
- L x W x H: 650 x 290 x 1325 mm
- Hydraulic hook lock for optimum safety
- Hook lock can only be opened when rod is fully retracted
- LED work lights for good visibility at work Spacious 4 ton lifting hooks making container easier to pick up
- Plastic protection plates at the rear
- Lifting capacity: 4,000 kg
- Net weight 250 kg
- CE & instruction manual



AWC-3(M)

AW take-up block, type AWC-3(M) for emptying waste containers with a three-hook or mushroom take-up system.

- 3 recording hooks with fixed width
- Mushroom recording system
- Middle hook releasing
- Outer hooks releasing simultaneously
- Stroke 60 cm
- Inverter crane
- Adapter plate for shaft 69 mm
- Hydraulic hoses equipped with ½" connections
- Color green / gray
- Own weight approximately 145 kg AWC-3
- Net weight approximately 245 kg AWC-3M
- Lifting capacity: 3,000 kg

(This block is also available with 5 hooks).

AWC-M

AW take-up block, type AWC-M for emptying waste containers with a mushroom take-up system. The implement has the following specificati-

- Mushroom recording system
- Adapter plate for shaft 69 mm (bottom of rotator)
- Stroke cylinder 60 cm
- Hydraulic hoses equipped with ½" connections
- Weight approx. 150 kg
- Lifting capacity: 5,000 kg
- CE and lifting certificate







Ecopark 28 8305 BK Emmeloord The Netherlands \$\cdot\ +31 (0)527 622882

Gert-Jan van Wieren +31 (0)6 53592584 Allard van Essen +31 (0)6 46664015