

WATER AND SANITATION PROMOTION
COMPANY

WASAP



CATALOGUE of WASH Self Supply Services

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The use of appropriate technologies in water supply and sanitation has proven to be sustainable, economical and ideal for 'doing-it-yourself' (without professional training or assistance)

Order #: WASAP/WHH/EMAS001

Type: Catalogue

Catalogue

This is a catalogue of WASH Self-Supply using EMAS technology. The catalogue outlines the products and services we offer at Water and Sanitation Promotion Company (SL) Ltd (WaSAP). It gives a comprehensive list of the products, specification and the materials used to construct them. The prices for the different products will be made available upon request.

WATER AND SANITATION PROMOTION COMPANY SL LTD (WaSAP)



Who we are

WaSAP is a social business registered in Sierra Leone that provides water, sanitation and hygiene (WASH) services. Through its low-cost technology products and services, the company contributes to the health and wellbeing of people, especially those living in marginalized communities. The company was founded by Welthungerhilfe (WHH) and EMAS International e.v with both organizations owning a fifty percent stake each. The head office is located in Crossing, Off Waterloo, Western Area Rural District with a fully equipped WASH Technology Training Center; and a field office in Matru Jong, Bonthe. The company has a defined organizational structure of both project and core staff and a pool of over 100 technicians who have received training in water and sanitation facilities construction using low cost EMAS technologies.

Partnership

WaSAP has existing opportunities that will enhance its work, including the commitment and support from EMAS and WHH to promote the EMAS self-supply technology in Sierra Leone. We also partner with other NGO's/INGO's including Action Against Hunger, SEND Sierra Leone, MoPADA Sierra Leone, Safe Capital) and government/authorities like the Ministry of Water Resources and Sanitation and the Ministry of Health, District Councils, etc.

EMAS International e.V.

EMAS is a German-based Non-Governmental Organization (NGO) promoting the application of simple and affordable water and sanitation technologies to support efforts and strengthen the capacity of households and communities to solve problems in WASH service delivery.

Welthungerhilfe e. V.

Welthungerhilfe (German for World Hunger Aid) for short – is a German non-denominational and politically independent non-profit and non-governmental aid agency working in the fields of development cooperation and emergency aid. It is one of the largest private aid organizations in Germany

What we do

We engage in the application of appropriate technologies for WASH self-supply such as EMAS. Our promotion includes but not limited to;

- a. Training of technicians in a large spectrum of approved appropriate EMAS Technologies including well drilling and construction, sanitation and hygiene facilities construction, fabrication of EMAS pump spares and components, etc.
- b. Create new jobs for local water suppliers and well drillers in the rural or suburban areas
- c. We design, construct various water, sanitation and hygiene infrastructure including hand drill shallow EMAS boreholes , hand dug wells, mechanized boreholes, latrines, EMAS handwashing stations, showers, etc., for interested customers
- d. We fabricate and sell various components and spare parts of the EMAS pumps and related technologies
- e. We partner with NGO's and MDAs in WASH service delivery in deprived communities Integrate the population totally in the process of development to solve water and
- f. sanitation problems through the application of low-cost technologies.



Our Vision

A Sierra Leone free of water-borne diseases



Mission Statement

A social business that contributes to improving the health, livelihood, and wellbeing of people living below the poverty line in rural communities in Sierra Leone through the provision of safe water and dignified sanitation and hygiene services



Core Values

Integrity: We uphold high standards throughout our processes

Quality: We provide standard technology for our customers

Empathy: We are in this together

Fairness: No segregation among our customers and beneficiaries



Operational Areas

The WASAP Company is an off-shoot of the SLE-1026 Welthungerhilfe project funded by GIZ, Welthungerhilfe and EMAS International e.V. using the EMAS technology to promote the self-supply approach in WASH in Bonthe Island. The technology was first piloted in Pujehun and Western Rural District. Because of its acceptance and affordability, the technology has been scaled up in Kenema under three projects, SLE 1045, SLE 1045—SEND and SLE 1053—LANN, including SLE 1045 under the waste management project for Bo, Makeni and Kenema. With a partnership with CONCERN Sierra Leone, we have done two demonstration sites and rehabilitated some wells in Tonkolili district using the EMAS technology.

Currently WaSAP is actively implementing two WASH projects in Bonthe District: 'Demand Driven WASH Self Supply' with funding from Charity Water and WHH; and the BMZ funded 'WASH Systems Strengthening (Sustainable Services Initiative) Global WASH project. We intend to extend to other parts of the country where the technology is applicable taking into consideration the geology of the soil.



Our Impact

Through sales and the implementation of donor funded projects in partnership with WHH, WaSAP has drilled over 3,500 shallow boreholes (EMAS pumps), constructed over 20 open diameter hand dug wells, constructed over 1,600 EMAS latrines and about 50 VIP and flush latrines for schools and health centers. We have reached over 500,000 people in over 150 communities in Bonthe, Kenema and Western Area Rural districts with safe water, dignified sanitation and hygiene promotion messaging.



We have also trained over 100 youths in WASH facilities construction using low cost EMAS technologies. Most of them are now private sector actors engaged in the business of drilling and construction of water and sanitation facilities. WaSAP also calls upon this pool of technicians to support in the delivery of project activities whenever the need arises.
for rural areas and technical training

We look forward to increase impact of our work over the next couple of years by establishing successful partnerships with state and non state actors in the delivery of WASH services. Potential areas for successful application of the EMAS Self Supply concept and areas for partnerships include health, rural development, food security, emergency response to disasters, agriculture and irrigation, environmental protection, water supply





Wash Hand Basin/Kitchen Sink

45cm x 45cm

Installed on a timber sandcrete platform as a hand basin or kitchen sink. Made from cement, sand, plastic and PVC pipe

Order #: EMAS/WHH/0001

Type: Wash Hand Basin/Kitchen Sink



Surface Storage Ferrous Tank-5,000 Ltrs

Dimension: 180cm x 200cm

Classic ferro-cement/fine (1:3) sand tank, more compact and more resistant to fissures. Composed of 6mm MS rod, chicken wire and binding wire. Can be used for rain harvesting

Order #: EMAS/WHH/0002

Type: Surface Storage Ferrous Tank



Underground rain harvesting ferrous tank-500 Ltrs

Dimension 80cm x height 200cm

Underground tank coated with a thin layer of cement and mortar

Can also be used for rain harvesting

Order #: EMAS/WHH/0003

Type: Underground Storage Ferrous Tank



Small ferrous tank - 50 Liters

very economical and has a very long life span. Used for storage to kitchen sink, hand basins, showers, iron extraction, filter box for rain harvesting system, etc. Dimension varies to give 50 litres to 200 litres

Order #: EMAS/WHH/0004

Type: Small Ferrous Tank (pitcher)



EMAS Toilet Seat

36cm–38cm diameter x 38cm–40cm high

Comfortable and durable. Made from cement mortar mix of 3:1, plastic cover and a plastic seat. Can also be used for other latrines constructed with other superstructure other than EMAS latrines

Order #: EMAS/WHH/0005

Type: EMAS Toilet Seat

Squat Slab

Squatting slab suitable for most toilets in rural communities



Order #: EMAS/WHH/0006

Type: Squat Slab



Ferro Cement Tile Platform

Used in portable elevated toilet construction

and can be removed when toilet is full for

emptying. Laid over sandcrete block (150mm thick) and 127cm

high. Made of cement, sand and 8mm rod with binding wire;

Size 100cm x 150cm x 5cm thick

Order #: EMAS/WHH/0007

Type: FCT Platform



Ferro Cement Tile Roof

used in any EMAS toilet construction as roof top. Made of cement, sand and 8mm rod with binding wire. Size 70cm x 120cm x 1.5cm thick with a provision for the installation of air vent

Order #: EMAS/WHH/0008

Type: FCT Roof



Local Pit toilet slab (precast)

100cm x 150cm x 10cm thick

Made of cement, sand, 12mm aggregate, 12mm MS rod, timber for formwork, and binding wire. Cast separately and laid over an excavated pit (60cm width x 100cm long x 150cm to 200cm depth)

Order #: EMAS/WHH/009

Type: Precast Concrete Slab

Pedal Adapted EMAS Pumps 7m – 100m depth



37mm to 50mm diameter, depth varies (7m to 100m— in fine sediment soil). Made from PVC pipes with couplings/other fittings, metal handle, filter material, timber footrest, and solvent with metal/timber pole for support when pumping. Suitable for distance pumping of 200m horizontal and 50m vertical height or 0.75liters/stroke. installed with air chamber and 3/4" rubber hose with non-return valve (3/4"). It involves manual drilling by expulsion (washing) or suction with self made equipment

Order #: EMAS/WHH/0010

Type: EMAS Pedal Pump



EMAS Hand Pump 7m-100m

37mm to 75mm diameter, depth varies (7m to 60m— in fine sediment soil). Made from PVC pipes with couplings/other fittings, metal handle, filter material, and solvent. Also suitable for distance pumping with just rubber hose. It involves manual drilling by expulsion (washing) or suction with self made equipment

Order #: EMAS/WHH/0011

Type: EMAS FLEXI Pump EMAS FLEXI Pump



Solar Hot Water Heater

Size varies

Different types of solar Water heaters, corrosion resistant, long lasting and night frost resistant. Made from 2" PVC sanitation pipes, discarded bottles, bends, T's, and 1/2" screw thread nipples, pieces of PVC hose, lashing wire, paint and aluminium paper including a wooden box, and glass to cover it.

Order #: EMAS/WHH/0012

Type: Solar Water Heater



Rain Harvesting System

Consist of pvc or zinc plates roof gutter, filter box (pitcher), filter screen (synthetic blanket) with a lid that accommodate a 1/2" pvc pipe as inlet and outlet at the base of the pitcher.

Order #: EMAS/WHH/0013

Type: Rain Harvesting System



EMAS Latrine with CI Sheet with chimney chamber

80cm—100cm x 120cm x 180cm—200cm high
It is odourless, very economical, and its content becomes a good manure. Made from CI tin plate sheets N° 33, or even better N° 28, 12m wooden laths or 15 mm x 15 mm profile pipe, aluminum rivets, 2 hinges, 2 knobs and 2 latch keys. Ferro-cement base and roof are use and built over a pit of 60 cm - 80 cm diameter and a depth of 1 m to 1.20 m with air chimney and chamber.

Order #: EMAS/WHH/0014

Type: EMAS Toilet/CI



Elevated EMAS Latrine with CI Sheet with chimney chamber

80cm—100cm x 120cm x 180cm—200cm high
Possesses the same qualities as EMAS/WHH/0015— EMAS Toilet and built with the same materials for superstructure with substructure built with 150mm thick sandcrete block and 127cm high. The air chimney is connected directly from the sandcrete pit

Order #: EMAS/WHH/0015

Type: E-EMAS Toilet/CI



Elevated EMAS Latrine with bamboo stick and chimney chamber

80cm—100cm x 120cm x 180cm—200cm high
Possesses the same qualities as E-EMAS/WHH/0016— EMAS/CI Toilet and built with the bamboo stick for superstructure and roof and substructure built with 150mm thick sandcrete block and 127cm high. The air chimney is connected directly from the sandcrete pit

Order #: EMAS/WHH/0016

Type: E-EMAS Toilet/CS



EMAS latrine with bamboo stick without chimney chamber

80cm—100cm x 120cm x 180cm—200cm high

Similar in construction with EMAS Toilet/CI and with the same qualities. The superstructure is made from bamboo stick built over pit of 60 cm - 80 cm diameter and a depth of 1m to 1.20m with air chimney and chamber, and Ferro-cement base.

Order #: EMAS/WHH/0017

Type: EMAS Toilet/CS



EMAS latrine with mud blocks

80cm—100cm x 120cm x 18cm—200cm high

Similar in construction with other EMAS toilets and with the same qualities. The superstructure is made from mud blocks built over a pit of 60 cm - 80 cm diameter and a depth of 1 metre to 1.20 metres with palm leaf or zinc as roof, air chimney and chamber (optional), ferro cement base

Order #: EMAS/WHH/0018

Type: EMAS Toilet/MB



EMAS latrine with Mud Dabbing

80cm—100cm x 120cm x 180cm—200cm high

Similar in construction with EMAS Toilet/MB and with the same qualities. The superstructure is made from mud dabbing to properly arranged bush sticks built over a pit of 60 cm - 80 cm diameter and a depth of 1 metre to 1.20 metres with palm leaf as roof, air chimney and chamber ferro-cement base and elevated pitcher for hand washing (optional).

Order #: EMAS/WHH/0019

Type: EMAS Toilet/MD



EMAS latrine with talla mat

80cm–100cm x 120cm x 180cm–200cm high
Similar in construction with the other EMAS toilets and with the same qualities. The superstructure is made from talla mat to a wooden/bush or bamboo stick framed structure built over a pit of 60 cm - 80 cm diameter and a depth of 1m to 1.20m with air chimney.

Order #: EMAS/WHH/0020

Type: EMAS Toilet/TM



Wash Hand Basin/Kitchen Sink with system

Small ferro-cement (cistern/pitcher) - 100 liters to 200 liters installed on 127cm high sandcrete block in combination with hand basin/kitchen sink installed on 102cm high sandcrete blocks, finished smooth with all PVC pipe work and tap

Order #: EMAS/WHH/0021

Type: EMAS system/WHB /KS



Elevated Rain Harvest System

5,000 litres capacity , diameter 180cm x height 200cm
Classic ferro-cement/fine (3:1) sand tank, more compact and more resistant to fissures. Compose of 6mm MS rod, chicken wire and binding wire mounted on reinforced concrete tower 1.8m to 2.4m high complete with rainwater harvest

Order #: EMAS/WHH/0022

Type: Elevated Rain Harvesting System



EMAS Shower with CI Sheet and EMAS Solar Hot Water Heater

80cm–100cm x 120cm x 180cm–200cm high EMAS shower economical and is made from CI tin plate sheets N° 33, or even better N° 28, 12m wooden laths or 15 mm x 15 mm profile pipe, aluminium rivets, 2 hinges, 2 knobs and 2 latch keys. Ferro-cement base and roof are use complete with 100 liters to 200 liters ferro-cement tank mounted on the roof including all PVC connections and tap for hot from solar heater and cold water from cistern

Order #: EMAS/WHH/0023

Type: EMAS Shower



EMAS shower with CI sheet and EMAS solar hot water heater and flask

80cm–100cm x 120cm x 180cm–200cm high EMAS shower economical and is made from CI tin plate sheets N° 33, or even better N° 28, 12m wooden laths or 15 mm x 15 mm profile pipe, aluminum rivets, 2 hinges, 2 knobs and 2 latch keys. Ferro-cement base and roof are use complete with 100 liters to 200 liters ferro-cement tank mounted on the roof including all PVC connections and tap.

Order #: EMAS/WHH/0024

Type: EMAS Shower



Improved Hand dug well with EMAS Pump

Open wells can be improved to avoid using buckets that carry dirt and dust into the well while drawing water from the well, thus acting as a source of contamination. To improve the well, we dig a hole of approximately 1.50 meters deep next to the well, down the jacket of the well. And passes a PVC pipe (1½" - 2" sanitary) pipe through the aperture. This will serve as casting for the pump.

Order #: EMAS/WHH/0025

Type: Improve Hand dug well with Emas pump



Solar Powered gravity tank & tower system

We use a solar water pump system to provide water for households and institutions (schools, health facilities etc.). The solar systems we provide consist of a solar panel array that powers an electric motor, which in turn powers a bore or surface pump. The pump will send water to an elevated tower and tank that is used to serve the facility.

Order #: EMAS/WHH/0026

Type: Gravity tank & tower solar pump



Protected hand dug well with Indian Mark II pump

We construct new protected hand dug wells and we can also do rehabilitation

Order #: EMAS/WHH/0027

Type: Protected Hand dug well with Indian Mark II pump



Toilet for health facility

Construction of latrines blocks that have hand-washing facilities, and pipe connections

Order #: EMAS/WHH/0028

Type: Toilet for health facility



Toilet for school

The school latrines comprise separate latrine blocks for boys and girls. Provision for menstrual hygiene and a ramp for disabled pupils is also in place

Order #: EMAS/WHH/0029

Type: Toilet for school



EMAS well construction training

Local technicians are trained on EMAS well construction and drilling, fabrication of EMAS pump and spares and welding. Training can be done for individual or a group of technicians and will last 3 weeks

Order #: EMAS/WHH/0030

Type: Training of EMAS well construction



EMAS latrine or shower construction training

Local technicians are trained to construct EMAS latrine, shower system, ferrous water tanks and handwashing stations.

Order #: EMAS/WHH/0031

Type: Training of emas latrine or shower construction



Smart Family Gravity Water filter

The smart family gravity water filter uses a ceramic carbon filter which has been tested to remove most large particles, taste and odor contaminants and bacteria. The ceramic filter will last you 5,000 litres. This is two fills or 14L over the course of 1 year.

Order #: EMAS/WHH/0032

Type: Small Water filter



Tulip Water filter

The Tulip water filter has the following outstanding features:

- Removes 99.9% of bacteria and protozoa
- Prevents re-contamination. The filter elements leach out 4 to 8 ppb nano silver to avoid recontamination of filtered water
- The candle last about 7,000 litres or 1 to 2 years
- Ensures good taste and clear water
- Easy filter replacement

Order #: EMAS/WHH/0032

Type: Big Water filter



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