

# Technical Data Sheet

## USLPore® Mobile Plant 500

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### Product specification

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1.1. **Trade name: USLPore® Mobile Plant 500**

1.2. **Manufacturer / Supplier**

USLPore Europe GmbH

[info@uslpore.com](mailto:info@uslpore.com)

1.3. **Description / Components**

The USLPore® Mobile Plant 500 is a truck- / trailer-based USLPore® Plant. It contains a three-step mixing system. The whole mixing and dosing tower contains the following components:

1.3.1. **Slurry Mixer**

The slurry mixer is preparing as a high-suspension mixer with high shearing forces the pre-mix out of water, cement, filler and other chemical additives before pumping it into the USLPore® Aerated Concrete - Mixer 500.

1.3.2 **USLPore® Aerated Concrete - Mixer 500 with weighing scales**

The USLPore® Aerated Concrete - Mixer 500 is equipped with special mixing devices by USLPore Europe to avoid any shearing forces while mixing whereas ordinary planetary mixers for mortar can destroy the foam and are mostly resulting in inconsistent wet densities of the end product. Furthermore, weighing scales are also integrated to enable a precise gravimetric dosing control of water, cement, aggregates/fillers, additives and foam. The mixing speed and therefore the interferential speed of the mixing devices can be regulated through a frequency inverter.

### 1.3.3. Discharge Mixer

The discharge mixer is having a sufficient capacity for minimum 1.5-2 batches of the USLPore® Aerated Concrete - Mixer 500. A spiral is keeping the USLPore® with its thixotropic characteristics under permanent movement and is therefore keeping its consistency.

Through the secondary mixer a continuous dosing process can be arranged without being affected by the previous batch mixer.

### 1.3.4. General Control Panel

The USLPore® Mobile Plant 500 is well suitable for high scale production in a fully automatic mode.

### 1.3.5. Foam Generator FG350

The Foam Generator FG350 is a ready to use foaming system with integrated air system. No additional requirements are necessary to run this system.

The machine is working fully automatic, therefore no manual dilution of water and foaming agent is necessary and the foam can be produced continuously. The whole system is running at a low air pressure (100-200 mbar) and is producing a very strong foam bubble membrane. The system is developed by USLPore Europe for the worldwide unique advanced foaming agent and additive brand USLPore®.

The Foam Generator FG350 is equipped with a PLC from Siemens. An automatic cleaning system is also part of the machine. Thus the cleaning of the system is avoiding troublesome manual cleaning. The foam density can be adjusted precisely in accurate steps.

### 1.3.6. Networkformer Dosing System

The networkformer USLPore® NWF S is an essential component of the USLPore® technology, specifically for lower densities ( $\leq 400 \text{ kg/m}^3$  dry density). It will be dosed through an automatic dosing system.

### 1.3.7. Stabilizer Dosing System

The stabilizer USLPore® MRF 2000 is an essential component of the USLPore® technology, specifically for lower densities ( $\leq 400 \text{ kg/m}^3$  dry density). The product has to be diluted with water in a 1000 liter tank (IBC) with integrated agitator. The agitator is frequency controlled. A special high viscosity pump is dosing the stabilizer dilution into the water scale of the USLPore® Mobile Plant 500 automatically in addition to the primary water.

### 1.3.8. Water Dosing System

The USLPore® Mobile Plant 500 is equipped also with a water pump for the primary water of the cementitious slurry. It will deliver the water directly into a water scale.

## Technical Data

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### 2.1. General Powerage

electrical generator 66 kW  
cold starting kit (- 25°C)

### Major components

USLPore® Aerated Concrete - Mixer 500:	17.50 kW
Slurry Mixer:	7.50 kW
Hydraulic pump for discharge:	4.00 kW
Voltage of mixing motor:	400 V, 50 Hz

### 2.2. Slurry Mixer

Type:	High suspension mixer
Dry filling capacity:	Subject to intended mix designs
Storing / operating temperature:	+5°C to +60°C
Modes:	Recycling mixing and pumping

### 2.3. USLPore® Aerated Concrete - Mixer 500 with weighing scales

Type:	Pan turbine mixer
Dry filling capacity:	750 l
USLPore® output per cycle (fresh):	500 l
Electrical protection class:	IP 55
USLPore® Aerated Concrete – Capacity:	10 - 20 m <sup>3</sup> /h
Mixing blades:	5 pcs
Scraping paddles:	2 pcs

Weight / empty mixer:	2670 kg
USLPore® density:	150-400 kg/m <sup>3</sup>
Storing / operating temperature:	+5°C to +60°C
Motor/mixing speed:	inverter controlled
Discharge:	hydraulic discharge gate

### Accessories

- 1 x Cover
- 1 x Maintenance / inspection flap
- USLPore® mixing devices for low shearing forces
- Framing system (subject to adaptation)
- 1 x cylindrical tank on load cells (weighing scale), stainless steel, (subject to adaptation for dry raw materials)
- 1x discharge screw conveyor, inverter controlled into slurry mixer
- 1 x cylindrical tank on load cells (weighing scale), stainless steel, (subject to adaptation for water, networkformer and stabilizer dosing)

### Transport dimensions USLPore® Aerated Concrete - Mixer 500

Diameter:	1.98 m
Height:	1.345 m
Storing / operating temperature:	+5°C to +60°C

### 2.4. Discharge Mixer

Type:	Spiral mixer, stainless steel
Dry filling capacity:	Subject to intended mix designs (standard 1000 l)
Storing / operating temperature:	+5°C to +60°C

### 2.5. Pumping system

USLPore® screw pump stator / rotor principle  
Inverter-controlled for adjustable speed range from 0 to max rpm

## 2.6. Foaming System FG350

### Foaming agent dosing tank

Polyethylene tank for USLPore® foaming agent (volume 700 l), cylindrical shape

Minimum level sensor

Connection to the foam generator

Integrated heater

### Foam Generator

Capacity:	300-500 liters / minute
Pressure:	100-200 mbar
Power:	1.2 kW
Foam density:	electronically/mechanically adjustable
Foam consistency:	electronically adjustable
Dimensions:	835 mm x 400 mm x 1500 mm
Storing / operating temperature:	+5°C to +60°C

### Low pressure air system

Power:	1.85 kW
Voltage:	400 V
Weight:	24 kg

### Water pump

Power:	1.5 kW
Voltage:	400 V
Weight:	13.2 kg
Speed:	2800 rpm

### **Foaming agent pump**

Voltage:	24 V
Amperage:	5 A
Weight:	1.2 kg

### **Foam Pipe**

External diameter/length:	90 mm / 450 mm
Nominal diameter, outlet:	40 mm
Hose:	50 mm
Connection:	C-cupling

### **Automatic Cleaning System**

#### Water Pump

Voltage:	24 V
Amperage:	5 A
Weight:	1.2 kg

### **Heating System**

Power:	6.5 kW
Maximum temperature:	≤ 50 °C

### **Transport dimensions Foam Generator FG350**

Length:	1.50 m
Width:	0.90 m
Height:	1.70 m
Weight:	160 kg

### **Tempered foaming agent dosing**

For countries with lower temperatures it is recommended to acquire in addition from USLPore Europea doing vessel with integrated temperature control for the foaming agent as the optimum dosing temperature and foaming effect takes place at around 20 °C.

### 2.7. Networkformer Dosing System

2x polyethylene tank for the additive (volume 700 l each), cylindrical shape

Minimum level sensor

Dosing by flowmeter

With integrated agitator inside the two tanks

### 2.8. Stabilizer Dosing System

2x dosing tank

1 x agitator, inverter controlled

1 x high viscosity pump

**each:**

Power:	1.5 kW
Voltage:	400 V
Speed	2800 rpm
Weight:	20 kg

### Transport dimensions Stabilizer Dosing System

Length:	1.20 m
Width:	1.00 m
Height:	1.60 m
Weight:	125 kg

### 2.9. Water system

1x water tank (volume 600 l) right-hand side, stainless steel

1x water tank (volume 600 l) left-hand side, stainless steel

inlet filter, level sensor

drain faucet

manual hose reel for water supply line complete with 2x20 meters of tubes ¾ “

## 2.10. **Cement feeding**

bunker volume: 18 m<sup>3</sup>

1x manhole ø 500mm for the gravity load

dosing by screw conveyor (diam. 160mm) with inverter into cement scale

integrated vibrators for permanent flow

max. pressure relief valve

pipes for pneumatic loading of the cement with Storz coupling (positioned in right trailer side)

level sensor on the top of cement bunker with alarm siren

## 2.11. **General Control Panel**

Stainless steel

Dosing system by weight

LCD color display

## 2.12. **Additional features**

### 2.12.1. **radio remote control, coded transmission, for:**

start/stop pumping

start/stop cycle

manual activation of vibrator on binder compartment

hose roller in/out

### 2.12.2. **Pressure washer**

Capacity: 15 lit/min

Pressure: 150 bar

pipng 20 m, high pressure lance, flexible hose and rotating nozzle

hose reel with automatic spring re-winder

2x filter bags for filtering the washing water



### 2.12.3. **Electrical hose reel for the USLPore® hose**

80 m of hose DN 51x68

driven by the radio remote control: in/out

complete of:

4 x 20 m plastic hose DN50

1 x 20 m rubber hose DN50

### 2.12.4. **Polar version (optional)**

Insulating box +60 °C / -20 °C

walls and top, thickness 70 mm: polyurethane between two pre-painted fiberglass layers  
(black color)

bottom, thickness 30 mm: marine plywood

doors to be opened on the back for all the height

doors to be opened on the sides

hatch to be opened on the top (in correspondence of the manhole for the cement)

### 2.12.5. **WEBASTO diesel heating system**

Nominal power 7.6 kW

Water version

Diesel tank (transparent)

One heating exchanger inside the foam additive tank

6x air/water exchangers for heating the vans

### 2.12.6. **Videocamera**

Videocamera on the back (for reverse driving) with video color 5

### 2.12.7. **Waste water tank**

Stainless steel tank (volume 300 l) for waste water

## Application

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**USLPore® Mobile Plant 500** is only suitable for intense wet mixtures of agents as cement, fine sand, fly ash, organic and inorganic fibres etc. for densities of up to 400 kg/m<sup>3</sup> (ready mixed material) with a maximum grain size of the raw materials less than 2 mm.

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