MANUAL
ABOVE GROUND TANK FOR INSITE STORAGE OF
ADBLUE WITH PUMP
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1) **Introduction**

This document has been prepared for the tank AdBlue. This tank is suitable for the storage of AdBlue according DIN 70700.

This document gives you a short description of the steps to take for handling and use of this tank.

This document can be used by the user, maintaining company and delivery company of the AdBlue.

2) **Product overview**

This tank is manufactured in polyethylene (PE). It consists of an inner tank, and a bund with a volume of 110% of the volume of the inner tank.

2.1 **Standard equipment:**

- Pump equipped with a suction tube and filter met filter, hose of 4 meter, and automatic pistol in stainless steel.
- Flow rate of the pump of 30 l/min nominal
- Stainless steel filling cap
- Ventilation with cap in stainless steel.
- Overfill device

2.2 **Possible options:**

- Pistol with digital counter
- Leak proof filling cap
- Hose of 6 meter in stead of 4 meter
- OCIO UREA level indicator
- OCIO pc interface for 1 tank
- OCIO pc interface for 4 tanks
- OCIO pc interface for 8 tanks
- OCIO pc interface for 12 tanks
- OCIO mobile module
- OCIO mobile extension unit for 2 to 4 tanks
- OCIO mobile extension unit for 5 to 8 tanks
- OCIO MC BOX 120 users badge registration
- OCIO MC box PC interface with USB convertor
- OCIO MC box Key Kit
- OCIO users keys (set of 10)
- OCIO K24-Urea Pulse meter

3) **Transport and installation**

3.1 **Transport**

The installation should be manipulated with a fork lift. Please note that he can not tilt

The installation should not be manipulated if there is liquid in it.

If there is no fork lift, the installation may be manipulated by people.

Treat the tank carefully (especially in case of frost).

Avoid shocks or knocks.

3.2 **Installation**

Install the tank inside, on a constant temperature between -10 and +30 °C

Install the tank on a horizontal (max. 1% slope), flat and stable liquid-tight concrete plate.

Be sure the surface is at least 10 cm longer and wider than the tank.

Do not install the tank on Sharp items.
Do not install the tank in the neighbourhood is a heating source.

Provide enough space between the tank and the wall so it is possible to remove the hood.

Be sure the space is good ventilated. There may be a release of fumes (carbon monoxide, carbon dioxide, nitrogen, ammonia)

Take enough measurements so that it is impossible to damage the tank in any way.

4) Connecting the installation

4.1 General

After the installation is placed according to the instructions above, it can be connected electrically.

4.2 Connecting the installation

Before filling the tank with AdBlue, the installation has to be connected electrically. Do this according to the rules in force in the country.

It is forbidden to drill a hole in the tank. If so, the installation loses its warranty. Use the watertight connection.

4.3 Electrical connection

All connections are pre-connected. There is a cable of 5 meter, yet to be connected to the power supply. The cable is not fitted with a plug. Do this according to the rules in force in the country.

Your tank is standard equipped with an opening with screw thread (M20x1.5), stop, swivel with nut, for the watertight connection of your suction. The device is suitable for suction diameters 6 to 13 mm.

Procedure:

1) Remove the screw on the back site of the cover
2) Turn the swivel in the hole from the outside of the tank
3) Turn the nut on the swivel from the inside of the tank
4) Introduce the suction through the swivel
5) If you need an additional connection, Make in a professional way a hole of 18,5 mm, make some treat from M20x1.5, and install en additional swivel.

The use of this device is required. If not, the warranty is not applicable.

The overfill protection alarm goes off for 5 seconds, as well as a red light. Then burns a green light.

5) First filling of the tank

The first filling should be done under the responsibility of the driver of the delivery truck. Take into account the local safety standards for humans, animals and the environment in.

NEVER FILL THE TANK IF IT IS NOT CONNECTED TO THE ELECTRICITY.

Follow the next procedure, in that order:

- Open the door of the installation.
- Inspect if the tank is clean. If there is liquid or dirt visible, than remove it.
- Keep the counter of the truck in the eye, to avoid over filling.
- Check if the overfill device works.
- Stop immediate the filling when the alarm of the overfill device is going
- You can disconnect the filling hose.
PLEASE NOTE:
Do not fill with more than 200 l/min
Clean the eventually spilled liquid with water.
Take the pistol out of the tank, put the pump on and rinse the installation (for example in a bucket) until clean AdBlue comes out.
After rinsing, check if there is no leakage.
These pumps are membrane pumps, and can work in bypass. However, maximum 30 minutes continuously!!

6) Use of the installation
Role after refueling the hose up and place the back in the holder.
Close the door of the tank.

7) Description of the different parts and options

7.1 Pump
- Self suctioning
- No moving seals
- EPDM membrane
- 230 V/50Hz
- Hose connection ¾"
- ON/OFF switch
- 2 meter cable
- Flow rate 30 l/min nominal

7.2 Pistol
- Stainless steel
- Connection ¾
- Equipped with a rotary fitting

7.3 Pistol with counter (option)
- Stainless steel
- Connection ¾"
- Equipped with a rotary fitting
- Equipped with a counter
The counter gives the number of tanked litres, and can be reset.
There is also a counter for the total amount, which you can not reset.

7.4 Filling cap
- Stainless steel
- Diameter 2"
- With fire service coupling

7.5 Aeration
Manufactured in stainless steel
Equipped with a lid, so the air can go in and out.

7.6 Leak proof filling cap (option)
- Stainless steel Mann Tek connection 2"
- Diameter 2"
- Working:
To connect: Push and turn
- The connection is made, the use is secure

To disconnect: Turn and pull
- The disconnection is made, without leakage

A unique design with several advantages:
- Easy to handle
- Time saving: You do not need the to empty the filling hose
- Economic: No lost of liquid while connecting and disconnecting.
- Safe.
- Environmental friendly: Leakage impossible.

7.7 Overfill device

With the overfill device, you can fill the tank for maximum 95%. This to prevent over filling.

It exists of a control box and a sensor, connected to each other.
The sensor is equipped with a PTC thermocouple, who is warmed up during filling an a contact is closed.

When the PTC comes in contact with liquid, it cools of and the contact is opening.

On that moment there is an alarm: stop immediately with filling. You can reset the alarm by pushing the button Quittieren (e)

Clean eventually spilled liquid.

The over fill protection alarm goes off for 5 seconds, as well as a red light. Then burns a green light.

To test, push the top button (b, prufen). The alarm goes, and the red light is burning.

This is what you get when the tank is full. You can reset the alarm by pushing the button Quittieren (e)
Description:

a) Green light (betrieb)
b) Test button (prufen)
c) Red light (alarm)
d) Reset button (Quittieren)
e) Not in use

7.8 Level indicator (option)

De OCIO level indicator detects the static pressure generated by the fluid in the tank via a 10 metre tube with a stainless steel probe inserted into the tank.

The commissioning is done in the factory. The low alarm is set on 20%.

The configuration is based on the density of the liquid, 1.090. The density of AdBlue is between 1.087 and 1.092, which can cause a slight difference.

The system consists out:
- A tube to measure the static pressure, with a probe.
- A control unit where you can see the volume.

The system has build-in software for:
- Entering the tank type
- Entering the levels
- Entering the used probe
- The calibration of the device

7.9 PC connection and software for level indicator (option)

By means of an interface you can connect up to 12 level gauges.

Dedicated software has been developed to permit storing historic tank level data according to different criteria.

The recorded data is displayed as a diagram showing the historical tank levels data. Software permits configuration of each tank and alarm type.

There are 4 software packages:
- OCIO PC interface for 1 tank
- OCIO PC interface for 4 tanks
- OCIO PC interface for 8 tanks
- OCIO PC interface for 12 tanks

7.10 Mobile module (option)

This transmitter with GSM modem is connected to the OCIO tank level indicator and via one or more expansions controls up to 8 tanks. Each tank is supplied with a level indicator connected via cable to the OCIO GSM unit or a single expansion.

Configuration of the system is carried out by sending a coded message over the telephone.

The following systems are available:
- OCIO GSM module
- OCIO extension for 2 to 4 tanks
- OCIO extension for 5 to 8 tanks
7.11 Badge registration (option)

The MC Box is a management system that receives information from multiple pulse meters, flow meters, and the OCIO Tank Level Indicator as well as managing alarms set into the program.

De MC Box permits:
- Identification of users or machine via a password or optional key
- Monitoring the volume of fluid used
- Dispensing of preset volume
- Control of systems via information from level indicator or fluid meters.
- Control of power to pump – stop or start pump based on user authority, tank levels, nozzle hang-up triggers.
- Printing of dispensing summaries via optional external remote printer.

Specifications:
- Keyboard and key reader
- Controls up to 120 users
- Records last 255 operations
- Can record vehicle registration details
- Records kilometres, date and time of dispensing
- Capable of connecting to PC via MC Self Service PC interface software.

To record the dispensing volume, you need to install a pulse meter.

MC Box Self Service pc interface software: available in two packages:

- MC BOX PC interface: that permits data to be directly sent to a pc via a cable, and consists of USB converter and CD with software to install on PC.
- MC BOX Key Kit: that stores data on an electronic key with memory and a key reader for connecting to a PC, and consists of 1 manager key, 10 user yellow keys, key reader to transfer data to PC, CD with PC software and key to USB adaptor.
The following systems are available:
- OCIO MC Box to 120 users badge registration
- OCIO MC Box PC interface with USB convertor
- OCIO MC Box Key kit manager and user key
- OCIO Users keys (10 yellow)
- OCIO Pulse meter type K24

7.12 Pulse counter K24

A flow meter for delivering low viscosity fluids with a turbine measuring system. Easy to install, in line or at the end of a delivery pipe. Thanks to its strong casing and a sealed plug-in electronic card, this sturdy meter can be used in practically all conditions. The card can be rotated for easy display reading from all angles. The microprocessor is powered by two easily replaceable, long-lasting batteries. Simple, reliable, versatile, economic, the perfect instrument for managing liquid deliveries.

8) Cleaning of the installation

Cleaning of the bund can be done with water.
Don’t use cleaning agents.
Don’t use high pressure lance.

9) Damages

The outer tank (bund) is used to hold the liquid of the inner tank in case of a leak. Be sure that it not get damaged.

10) Technical specifications

<table>
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<th>Description</th>
<th>Volume</th>
<th>Length (mm)</th>
<th>Width (mm)</th>
<th>Height (mm)</th>
<th>Weight (kg)</th>
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<td>3.300 L</td>
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</tr>
</tbody>
</table>

11) Properties of AdBlue

AdBlue is a urea solution of 32,5 %

It is a clear, colourless liquid with a odour of ammoniac

The properties are described in the DIN 70700

However AdBlue is not classified as dangerous product, there can come odor free while heating the product (carbon monoxide, carbon dioxide, nitrogen, ammonia)

AdBlue has a freezing point of -10,5 °C. Be sure that the liquid is not going under -10 °C or above +30°C

In case of spillage or leakage, the liquid will crystallize. These crystals are white, and can be cleaned with water. Take immediate contact with your deliverer in case of spillage or leakage.
12) **Safety information for AdBlue**

A safety data sheet (MSDS) must always be with the installation. This sheet contains specific information on the field of occupational safety and health. You can get this sheet at your provider of AdBlue.

12.1 **First aid**

- **Swallowing**: If large quantities of this material are swallowed, consult a doctor immediately. Do not put to vomiting, unless medical staff says to do so. Never give an unconscious person anything by mouth.

- **Skin contact**: Avoid prolonged or repeated contact with the skin. After dealing with the product, always wash hands thoroughly with SOAP and water. Consult a physician if irritation occurs.

- **Eye contact**: In case of contact with eyes, immediately rinse with water. Consult a physician if irritation occurs.

12.2 **Fire fighting**

In the event of fire, use water spray (fog), foam, dry chemical or carbon dioxide.

Fire fighters should wear their full equipment and independent compressed air breathing apparatus.

When heating the liquid can toxic fumes (carbon monoxide, carbon dioxide, nitrogen, ammonia)

12.3 **Unwillingly release of the liquid**

Avoid contact with liquid spills and prevent run off in the soil and surface waters.

Absorb spilled liquid with dry Earth, sand or other non-flammable material.

Use tools to absorbed material to brag to a suitable waste bin (with label on it).

Avoid dusty conditions and prevent spread by the wind.

13) **Warranty**

We offer a 10-year warranty on all our facilities as far as evident manufacturing faults are concerned. Failure to comply with installation procedure and guidelines void warranty. All electronic and mechanic parts have a 2-year warranty.

The general sales and warranty conditions of Boralit count.