

**TECHNICAL TERMS OF DELIVERY**  
**FOR**  
**MOBILE WATER TREATMENT PLANTS**

Alfa 2,2 DW

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Attachments:

Mobile treatment plant scheme

**1.GENERAL PRINCIPLES**

- The equipment can only be operated by a person physically and mentally qualified for the operation.
- The operator should be acquainted with the machinery, its functioning and contents of these working regulations.
- The operator must abide by the instructions given in the operational and safety regulations.
- The operator keeps operational records, writes in notes about functioning of the equipment, its defects and ways how these were removed.

**2. FUNCTIONAL PRINCIPLE**

Mobile water treatment plants Alfa are small semi-automatic purification equipment put into a steel container. The equipment works on the principle of conventional and well-tried batching of coagulant chemistry with the use of energy and space undemanding equipment. It exploits principles of oxidation of certain polluting water components by air, sedimentation, filtration and sorption. The water is transported from the water source to the treatment plant by a submersible pump, it is disinfected before it leaves the treatment plant.

The treatment plant is not supposed for purification of water with high content of ammonium ions, nitrates and RAS.

**3.TECHNICAL PARAMETERS**

Mobile water treatment plants are produced with the performance of 2m<sup>3</sup> of purified water per hour. Different sizes of treatment plants can be designed on the basis of consultation with the producer.

| Treatment plant performance (l/h) | Width (mm) | Length (mm) | Height (mm) | Max. height (mm) | Weight (kg) | Input (kW) |
|-----------------------------------|------------|-------------|-------------|------------------|-------------|------------|
| 2000                              | 1400       | 2250        | 2100        | 2150             | 800         | 1.6        |

- Operational voltage of the treatment plant.....230V/50Hz

**4. EQUIPMENT DESCRIPTION**

*The treatment plant is assembled as a monoblock and consists of the following parts:*

1. Two pairs of mechanical pre-filters
2. Strengthening filter
3. Aeration equipment with a fan and dust filter
4. Deaeration tank
5. Cylindrical settling tank
6. Accumulation water tank for sand filter
7. Pressure filter with manual fitting
8. gravity carbonaceous filter
9. chemical management
10. automatic control unit
11. automatic control system arranged in the switch cupboard.

**Accessories:**

- ❖ adjusting shoes
- ❖ submersible pump for treatment plant filling
- ❖ analytic set for water purification control

**5. WORKMANSHIP AND ANTICORROSIVE PROTECTION**

Equipment coming into contact with drinking water is made of chemically resistant plastic. A supporting frame is made of steel welded pieces with anticorrosive surface treatment. The treatment plant is covered with infilling panels made of UV stabilised lexane.

**6. TESTING AND CONTROLS MADE BY THE PRODUCER**

**Sealing test**

All joints and welds are seal-tested for liquid seepage.

**Revision of wiring**

A report on initial wiring revision is a requisite of every treatment plant. A record of revision is a part of technical documentation.

**Functional test**

Functional test is carried out by an authorised serviceman in the course of putting the treatment plant into operation.

**7. SELECTION OF WORKPLACE**

A mobile unit can only be installed on a firm bottom (soil, gravel, concrete, tar, wood) with an inclination less than 5°. The bottom must be adapted so that it did not soak in rain or by evolving washing waters.

**8. USED CHEMICALS AND THEIR CONSUMPTION**

- **Recommended coagulating agent:**  
Polyaluminium chloride 50% \_\_\_\_\_ dissolve 1:7 \_\_\_\_\_ 0,10 l/m<sup>3</sup>
- **Recommended coagulating agent:**  
Aluminium chloride 30% \_\_\_\_\_ dissolve 1:7 \_\_\_\_\_ 0,10 l/m<sup>3</sup>
- **Substitute coagulating agent:**  
Ferric sulphate concentrated 50% \_\_\_\_\_ dissolve 1: 7 \_\_\_\_\_ 0,25 l/m<sup>3</sup>
- **Neutralising agent:**  
Caustic soda 40% \_\_\_\_\_ dissolve 1 : 5 \_\_\_\_\_ 0,2 l/m<sup>3</sup>
- **Recommended disinfecting agent:**  
Sodium hypochlorite concentrated dissolved ratio 1: 25 \_\_\_\_\_ 0,10 l/m<sup>3</sup>

**9. CHECKING THE QUALITY OF TREATED WATER**

**The operator checks the quality of purified water with the help of a small field portable laboratory.**

To ensure mobility, simplicity and reliability a control is selected in accordance with the standards of the given country. Individual measurements and the way they are carried out are a part of this laboratory set.

A portable laboratory can be supplied together with the mobile treatment plant.

#### **10. CHECKING AND PURIFICATION**

The operator in regular intervals checks performance of the unit, replenishes chemicals and checks the clearness of filters. As far as the purification operations are concerned, he carries out regularly purging of pre-filters, purging of filters and tanks, pressure plant, and possibly other connection tanks. Water quality is checked with the help of some of the portable lab tests of water quality. All measurements, corrections and findings are recorded in the operation book.

**Disinfecting purification of a treatment plant** is carried out once a week or depending on weather conditions. The purification must be carried out only when purified waters accumulated and put aside.

#### **11. REFILLS**

The STS Slovácko, Ltd. or its contractual partner supplies refills for filters of all types, sets of spare parts for equipped pumps and pumps. Information about their type, size and amount are supplied with the product.

#### **12. SAFETY AND HYGIENE REGULATIONS**

In the course of treatment plant operation it is necessary to observe all safety regulations for the work with chemicals and regulations for the work with live equipment.

The operation can only be done by an authorised person, who is trained and equipped with appropriate protective equipment.

Reparations of electric equipment can only be carried out by a qualified person.

#### **13. FIRE PROTECTION RULES**

When the treatment plant is installed it is necessary to fulfil the requirements relating to the fire safety of the construction.

#### **14. SERVICE, SPARE PARTS**

The producer provides himself or in co-operation with his contractual partners:

- Warranty service
- After-warranty service
- Supply of refills
- Supply of chemicals used
- Consultancy

# Mobile treatment plant scheme *Alfa Classic 2,2 DW*

