

# Instruction manual

Original instructions



## Mobile Filter System

SMFS-U-CM-110

To prevent injury and damage, read this instruction manual carefully and attentively and retain it for future reference.

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Additional instructions in other languages can be downloaded from:  
[www.stauff.com](http://www.stauff.com)

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# 1 Information on this manual

This instruction manual contains important notes and information on proper use. The instruction manual must be kept accessible for the operating staff.

## 1.1 Structure of the warnings

Warning notices are made particularly obvious via colour-shaded signal word panels. Always read the complete text of the warning notice to ensure you are fully protected against hazards.

The following signal word panels use different colours and signal words to indicate different levels of danger:

### DANGER

**Failure to heed this warning notice will result in serious or fatal injury.**

### WARNING

**Failure to heed this warning notice may result in serious or fatal injury.**

### CAUTION

**Failure to heed this warning notice may result in slight or moderate injury.**

### NOTICE

**Failure to heed this warning notice may result in damage to property.**

Warning notices always have the same structure. They contain the signal word, nature and source of the danger, the consequence of failure to heed the notice and measures designed to prevent/avoid the danger.

**Example:**

### WARNING

#### Tasks on electrical equipment

Severe or fatal injury due to electrical voltage

- ▶ Work on electrical equipment may only be performed by trained electricians.
- ▶ Switch the machine off and safeguard it from being restarted.
- ▶ Perform work on live parts only under the supervision of a second person.

## 1.2 Structure of the operating instructions

Operating instructions request you to carry out an activity directly. They have an action-oriented structure. Always carry out the individual action steps in the specified order.

Operating instructions are structured as follows and are identified by corresponding symbols:

- ▶ Objective of the operating instruction
  1. Action step
    - ✓ Effect of the action step to check whether it has been carried out correctly.
  2. Further action step
- ☑ Result of the complete operating instruction.

## 1.3 For better orientation

For better orientation, this instruction manual provides the following:

- Table of contents at the beginning
- Title of the main section in the header
- Links to other sections, for example to „Information on the manual“ (▶ Section 1, P. 5)
- Additional information and tips marked with an i-symbol



Example for additional information

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## 2 For your safety

### 2.1 Intended use

The mobile filter system is designed for cleaning hydraulic and lubricating oil systems in machines and plants or for filling in new oil.

The mobile filter system is only intended for use with commercial mineral oils.

The intended use includes:

- observation of all safety instructions and warnings of this instruction manual (► Section 2.2, P. 8)
- utilisation only within the specifications given in section "Technical Data" (► Section 3.3, P. 13)
- consideration for the maintenance intervals and requirements (► Section 7.2, P. 31)

Modifications, extensions or conversions are not permitted without prior discussion with the manufacturer. Such modifications can jeopardise the operational safety and are considered as non-intended use.

### Misuse

Any use other than that stated in the „Intended Use“ section is not permitted.

The mobile filter system must not be used

- in explosive atmospheres
- in unventilated rooms

The mobile filter system must not be used with the following media:

- explosive substances
- aggressive substances
- toxic substances
- highly abrasive substances
- faeces

The basic contamination of the conveyed liquid must not exceed category 22/20/16 as per ISO 4406.

## 2.2 General safety instructions

Safety instructions help you to prevent injuries and damage to property. Ensure that you have read and understood all safety instructions in this instruction manual.

For safe working, it is not sufficient to only read the general safety instructions in this section. You must also read and follow the special safety instructions in all sections concerning your work. Note and follow also the information and instructions in the reference documents.

### The following safety instructions apply generally:

- Comply with the respective relevant national and international safety regulations regarding health and safety at work.
- Operate the machine only ...
  - if it is in perfect technical condition,
  - safely and aware of the hazards,
  - as intended (▶ Section 2.1, P. 7),
  - paying attention to this instruction manual,
  - with unchanged, fully installed, properly installed and fully functional safety devices and
  - with properly installed and functioning control.
- Wear personal protective equipment (▶ Section 2.6, P. 11).
- Correct immediately any faults that could have a negative effect on your safety or on safe operation of the machine. Shut down the machine until the fault is corrected and safeguard it against restarting.
- Adhere all inspection and maintenance dates, including information concerning part replacement.
- For maintenance and repair work, switch off the machine and disconnect the mains plug.
- Work on electrical installations may only be carried out by qualified electricians. Work on live parts may only be carried out under the supervision of a second person.
- Be aware of the presence of possible residual energies in mechanical and electrical components.
- Use spare parts authorised by the manufacturer to replace components. Unauthorised spare parts can endanger the operating safety.
- Check electrical equipment regularly. Remove loose connections and braised cables immediately.

## 2.3 Specific safety instructions

The product is designed in line with the best technology available and the recognized safety-relevant regulations. Even so, its use can entail risks to the life and limb of the operator and third parties or damage to the product and its operating field.



Electric shock from live components

- All electrical installation and maintenance work is to be carried out only by qualified electricians
- Disconnect unit from power supply prior to performing work
- Check components for electric charge prior to performing work



Burns from hot surfaces

- Let hot components cool down before starting any work
- Wear protective gloves

## 2.4 Tasks and duties of the operating company

To ensure safe operation of the machine the operating company has at least the duty ...

- to ensure that the machine is only operated according to its intended use, in a proper condition, with completely assembled safety equipment and without damage.
- to define the area of use and draw up corresponding operating instructions (standard operating procedures).
- procure the respective latest version of the regulations concerning operation and to familiarise the operating personnel with these regulations.
- to provide the operating instructions always legibly and complete near to the operating site.
- to ensure adequate stability.
- to avoid tripping hazards.
- to ensure adequate ventilation and illumination of the work areas.
- Instruct personnel in safe working practices and regularly check that personnel work with an awareness for safety and hazards.
- to ensure that unauthorized persons have no access to the danger zone.
- to provide the necessary personal protective equipment.
- have electrical installations tested at least once a year by electrical specialists.

## 2.5 Personnel qualification

Any work on the machine is only be carried out by qualified and authorised personnel. Personnel trained in the work involved as backed up by appropriate certificates are considered to be qualified.

### Qualifications

The personnel approved for particular tasks belong to the following target groups, based on the qualification:

- **Operating personnel** has been instructed in how to operate the machine and how it works. They enter the data required for operation and carry out the steps necessary for operation of the machine. They are also responsible for simple maintenance work.
- **Setup and maintenance personnel** are responsible for commissioning and decommissioning as well as for setting up and retooling the machine. The responsibilities of the setup and maintenance personnel also extend to performing extensive maintenance work and to instructing the operating personnel on how the machine operates.
- **Qualified electricians** are responsible for all work on the electric components.
- **Qualified transport personnel** are qualified for proper and secure loading and transport of heavy goods.

### Skilled jobs

Certain qualifications are needed for a number of jobs. Only those with the specified qualifications are allowed to perform the listed jobs.

Job	Qualification
Transporting the machine to the destination	Qualified transport personnel
Installation	Setup and maintenance personnel
Fault rectification	Set-up and maintenance personnel
Maintenance and troubleshooting of electrical equipment	Electrician
General inspection and maintenance work	Setup and maintenance personnel

### Safety briefing

All persons working on the machine must receive a safety briefing at least once a year. Indispensable elements of this briefing are:

- Personnel qualifications and authorisations
- Functionality and operating
- Area of application and surrounding conditions
- Personal protective equipment
- Transport to the place of installation
- Regular maintenance work

## 2.6 Personal protective equipment

To limit hazards during work, use the required personal protective equipment:

Symbol	PPE	Life phase	Job
	Close-fitting work clothing	all	all
	Safety shoes	all	all
	Protective gloves	Operation	When working on the system before it has cooled down
		Startup	
		Troubleshooting	
		Maintenance	
	Eye protection	Operation	When working on the system under pressure
		Startup	
		Troubleshooting	
		Maintenance	

## 3 Machine description

### 3.1 Overview

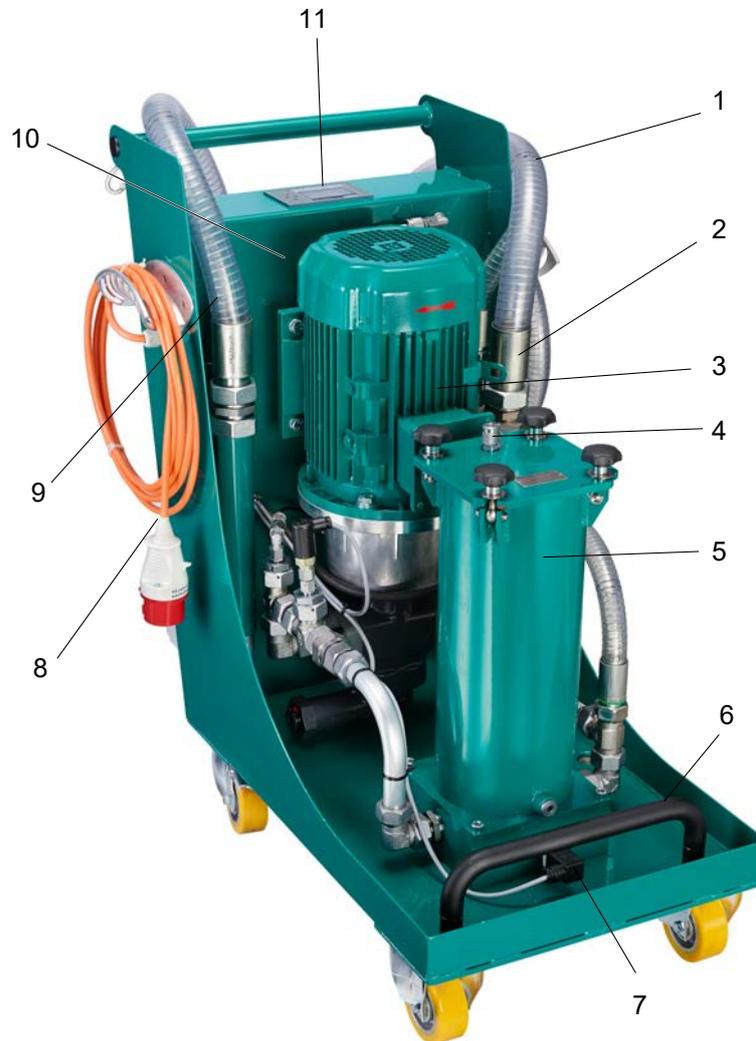


Fig. 1: Overall view

- |                                          |                                  |
|------------------------------------------|----------------------------------|
| 1 Hose on delivery side                  | 7 Clogging indicator             |
| 2 Lance                                  | 8 Power cable and power plug     |
| 3 Gear pump with pressure limiting valve | 9 Hose on intake side            |
| 4 SMK                                    | 10 Electrical main switch (rear) |
| 5 Filter housing with filter element     | 11 Particle counter              |
| 6 Handle                                 |                                  |

## 3.2 Function

The mobile filter system is connected to the external power supply after installation and connection of the hoses at the installation site. After switching on, the medium is aspired by the pump, cleaned in the filter and discharged again through the hose on the delivery side.

## 3.3 Technical Data

Measures and weights	
Dimensions (width x depth x height)	947 x 620 x 984 mm
Weight	220 kg

Media compatibility	
Suitable for:	Mineral oils
Upon consultation with Walter Stauffenberg GmbH&Co.KG:	<ul style="list-style-type: none"> <li>• water, especially drinking water</li> <li>• food</li> <li>• flammable liquids</li> <li>• liquids with degreasing action</li> <li>• DOT brake fluids</li> <li>• phosphate esters (e.g. Skydrol, Hyjet)</li> <li>• HFDR liquids as per ISO12922 based on phosphoric acid esters</li> <li>• HEPG liquids as per ISO15380 based on polyglycol</li> <li>• MIL-L-7080 E</li> <li>• caustic liquids</li> </ul>

Hoses and lances	
Material	PVC, reinforced with internal spiral
Length of hose, intake side	3 m [9.84ft] on the intake side
Length of hose, delivery side	3 m [9.84ft] on the delivery side
Dimensions, intake side	DN 38
Dimensions, delivery side	DN 28

Flow rate	

Flow rate	
110 l/min (depending on viscosity)	

Temperature	
Medium temperature	-20° C ... +60° C
Ambient temperature	-20° C ... +40° C

Viscosity	
Permitted	12 ... 800 mm <sup>2</sup> /s
Recommended (with continuous use)	20 ... 100 mm <sup>2</sup> /s

Pressure	
Operating pressure	4 bar
Intake pressure	- 0,4 bar
Switch-off pressure for electric motor	7 bar overpressure

Pressure	
Burst pressure on the intake side	11 bar
Burst pressure on the delivery side	15 bar
Test pressure	24 bar

Motor with CEE connector 3P+N+PE	
Voltage/frequency	400 V AC/50 Hz
Phase	3
Power	4 kW

Pump	
Gear pump with pressure limiting valve	

### 3.4 Type plate



The type plate is located on the side of the machine.

## 3.5 Display and operating elements

The following display and operating elements are available for monitoring and control.

### 3.5.1 Electrical main switch



Fig. 2: Electrical main switch

The main switch has two positions:

- 0 OFF (horizontal): Machine switched off and voltage-free
- 1 ON (vertical): Machine under electrical voltage

### 3.5.2 Clogging indicator



Fig. 3: Clogging indicator

The clogging indicator shows how clogged the filter element is while a medium flows through the filter cartridges.

- Green: The filter element is OK.
- Yellow: The filter element is 75% clogged.
- Red: The filter element is very clogged and has to be replaced  
 ▶ Section 7.4, P. 32

## 3.6 Spare and wear parts

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### NOTICE

#### Replacing components

Machine damage, malfunctions, faults

- ▶ Work which involves opening up the machine may only be carried out by Walter Stauffenberg GmbH & Co. KG!
  - ▶ Maintenance work may only be carried out by authorised setup and maintenance personnel!
  - ▶ Only use appropriate tools in proper condition!
  - ▶ Replace components only with genuine spare parts or those authorised by the manufacturer!
- 

Lists of authorised spare and wear parts can be obtained from Walter Stauffenberg GmbH & Co. KG.

#### Replacement filter elements:

Filter element NR-630E series

## 4 Transport and storage

### 4.1 For your safety

#### WARNING

##### Lifting loads

Severe injury or death from falling / oscillating loads

- ▶ Attach all load moving parts before lifting!
- ▶ Use only undamaged lifting devices that are approved for the weight of the load to be lifted!
- ▶ Attach slings only to the designated lifting points!
- ▶ Do not let loads unattended while suspended from the lifting device!
- ▶ Never walk under suspended loads!

#### WARNING

##### Transporting the machine

Severe injury or death due to tipping over or slipping load

- ▶ Fix all movable components of the machine before transport!
- ▶ Secure the machine against tipping over or slipping during transport!
- ▶ Only use transport vehicles that are approved and/or licensed for the weight of the machine!

### 4.2 Transport



Dimensions and weight information are provided in the section "Technical data" (▶ Section 3.3, P. 13) and in the overview drawings.

Note the following during transport:

- Transport may only be carried out by an authorised specialist company or by qualified personnel.
- Dispose of all packaging material in a proper and environmentally compatible manner after transport.
- Use the handle bar to lift the mobile filter system.
- Secure the mobile filter system against rolling away and, on inclines, against tipping over.
- The design allows for the attaching of suitable lifting equipment. The attachment positions must be selected carefully by the operator.

### 4.3 Storage

Observe the following principles when storing:

- The storage location must be clean and dry.
- The ambient temperature must be at least 5 ° C.
- After a period of more than one year, all moving parts must be tested for sufficient lubrication.

During storage, protect the mobile filter system from the following influences:

- strong sunlight
- high humidity
- strong vibrations
- extreme temperatures

# 5 Installation

## 5.1 For your safety

### Installation principles:

Note the following rules before installation:

- The task may only be carried out by qualified personnel.
- Place the mobile filter system in direct proximity to the tank to be cleaned or filled.
- Keep space for maintenance work clear around the mobile filter system.
- Place the mobile filter system horizontally on a level surface.
- Keep access to the main switch clear at all times.
- Keep access to the control elements clear at all times.
- Models delivered with CEE plugs are intended for fields with clockwise rotation.

---

### WARNING

#### Work on electrical equipment

Serious or fatal injury due to dangerous voltage

- ▶ Work on electrical equipment may only be carried out by qualified electricians!
  - ▶ Work on live parts may only be carried out under the supervision of a second person!
- 

### WARNING

#### Execution of installation tasks

Severe injury or death or machine damage due to faulty installation

- ▶ Installation tasks must only be executed by authorised and qualified personnel!
  - ▶ Only use suitable tools that are in faultless condition!
  - ▶ For all tasks, wear your personal protective equipment!
-

## 5.2 Initial commissioning



Fig. 4: Main switch

### CAUTION

#### Hot machine parts

Burns on hands and arms

- ▶ Never let the pump run dry for longer than 2 to 3 minutes.
- ▶ Before carrying out any maintenance work, let components which have become hot during operation cool down.
- ▶ Wear your personal protective gear for all work carried out on the machine.



The filter element is not included in the delivery.

- ▶ Note the following steps during Initial commissioning:
  1. Ensure that all filter elements have been installed in the housing and securely attached to the filter housing Replacing the filter element.
  2. Before the pump is switched on, the tube ends of the hoses have to be immersed into the vessels to be drained/filled and secured against sliding out or held in place by someone.
  3. Plug the connector into the appropriate socket.
  4. Turn the main switch to I.
  5. Note that the unit takes about 10 to 15 seconds to completely fill the filter elements, depending on the pumping height and viscosity. Shortly afterwards, the pumped medium has to be emitted on the discharge hose.

**After the pump has been switched off, residual liquid can be emitted from the hoses.**

**i**

During initial commissioning and after each filter element change, the housing has to be vented at the cover of the filter housing using the provided STAUFF test hose (SMS) on the already installed STAUFF test coupling (SMK).



Fig. 5: SMK position on the housing



Fig. 6: SMK



Fig. 7: SMS

► Please follow these steps when venting the filter housing:

1. Unscrew the protective cap of the SMK.
2. Place one side of the SMS in the tank or a suitable vessel and screw the other side onto the SMK.
3. As soon as oil is emitted on the test hose end in the tank, the SMS can be unscrewed from the SMK again.

## 5.3 Particle counter



Fig. 8: Particle counter

The filter trolley SMFS-U-CM-110 is equipped with a condition monitoring system. This shows the purity level, operating hours, relative humidity rh in % and the temperature of the filtered medium on the dedicated display.

In addition, a desired purity level up to which filtration is required can be specified for the trolley. 1 minute after reaching this purity level, the filter trolley switches off automatically.

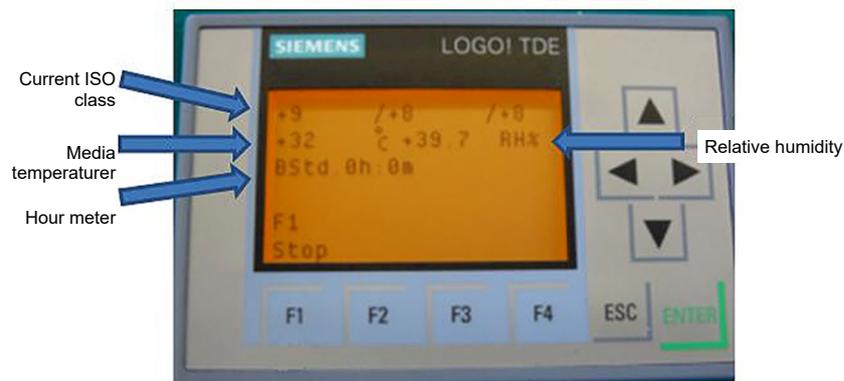


Fig. 9: Information on the display

### 5.3.1 Operation

- ▶ Note the following steps in the event of an emergency shut-off:

1. Switch off the filter trolley on the main switch.

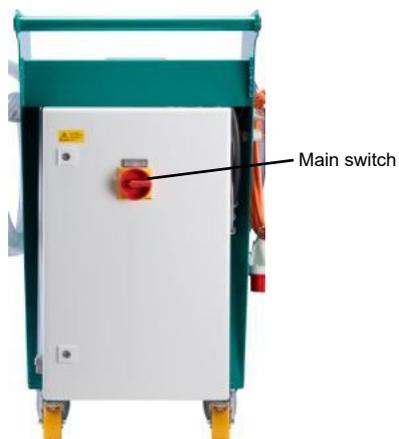


Fig. 10: Main switch at the rear

- ▶ Note the following steps for operating the particle counter:

1. Switch on the filter trolley on the main switch.
2. Wait until the display shows the start screen.

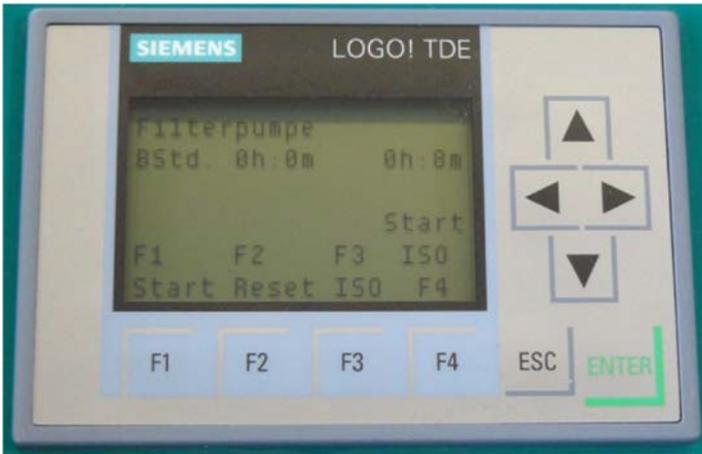


Fig. 11: Menu of the start screen

- 3. Start the filter trolley.
- ✓ To do this, press the **F1** button for 3 seconds.

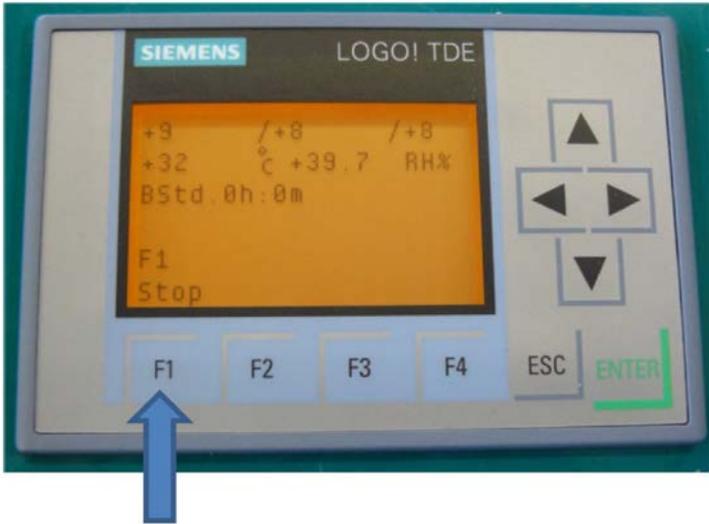


Fig. 12: F1 button

- 4. Stop the filter trolley.
- ✓ To do this, press the **F1** button for 3 seconds.



Fig. 13: F1 button

5. Reset the operating hours counter to "0".
  - ✓ To do this, press the **F2** button for 3 seconds.

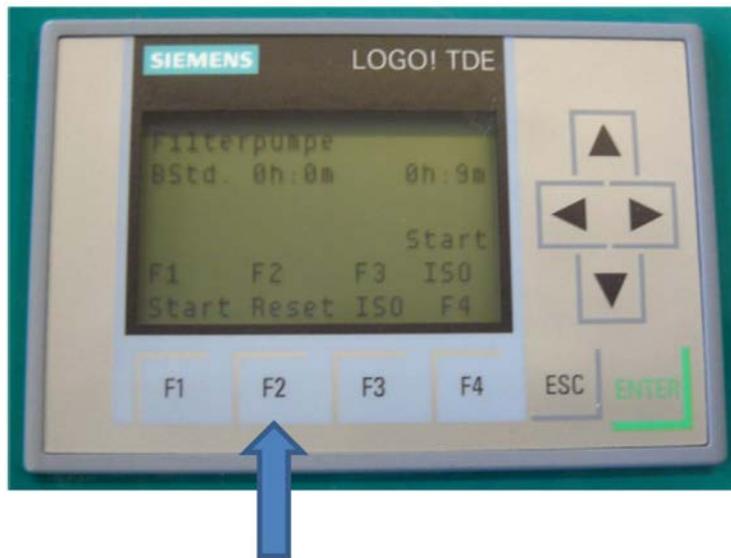


Fig. 14: F2 button

### 5.3.2 Entering the purity level

To start to ISO program, press the **F3** button.

- Note the following steps when entering the ISO codes:
  1. Set the first ISO code by pressing the **F2** button.

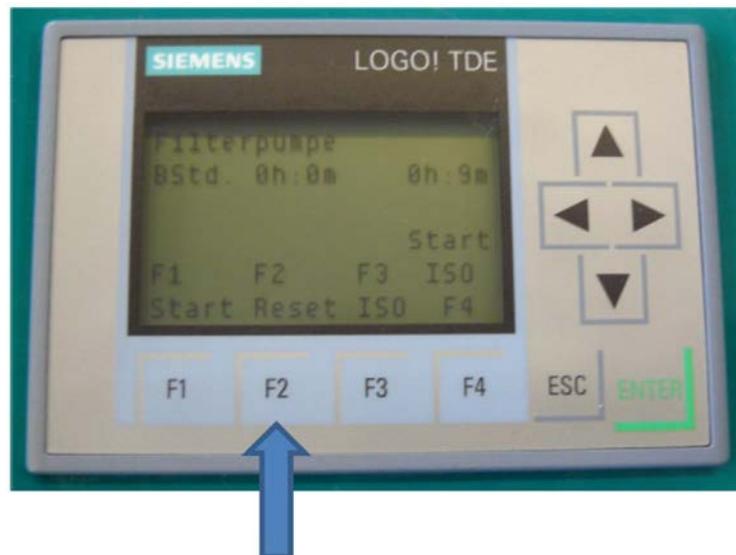


Fig. 15: F2 button

2. Set the ISO code by pressing and holding the **ESC** button while pressing the respective buttons.

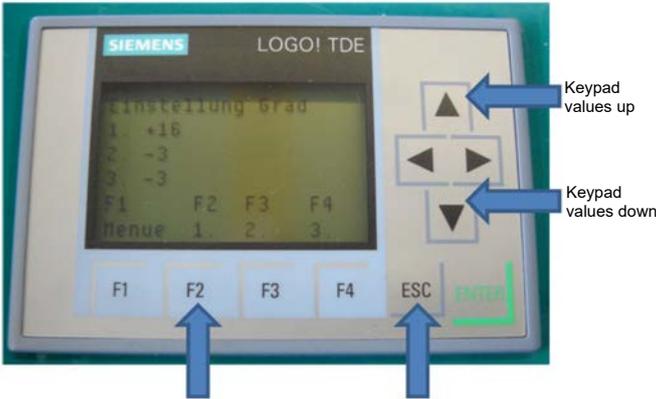


Fig. 16: Setting the ISO code

- ✓ Then confirm with **F2**.
- 3. Set the second ISO code by pressing the **F3** button. Set the ISO code (see item 1) and then confirm with **F3**.

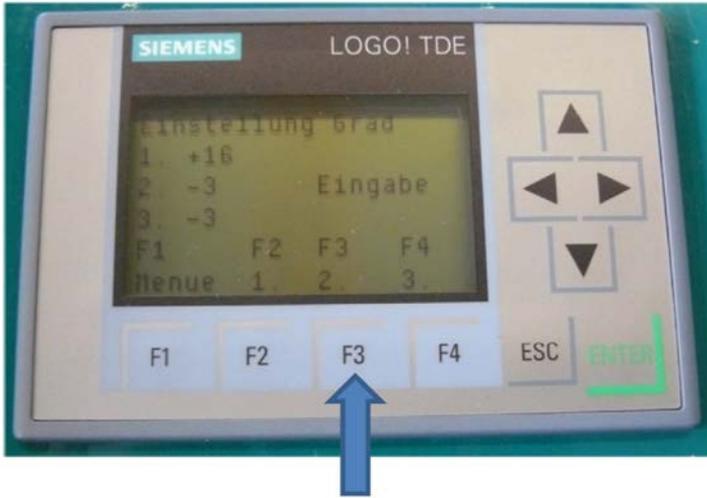


Fig. 17: 2nd ISO code

- 4. Set the third ISO code by pressing the **F4** button. Set the ISO code (see item 1) and then confirm with **F4**.

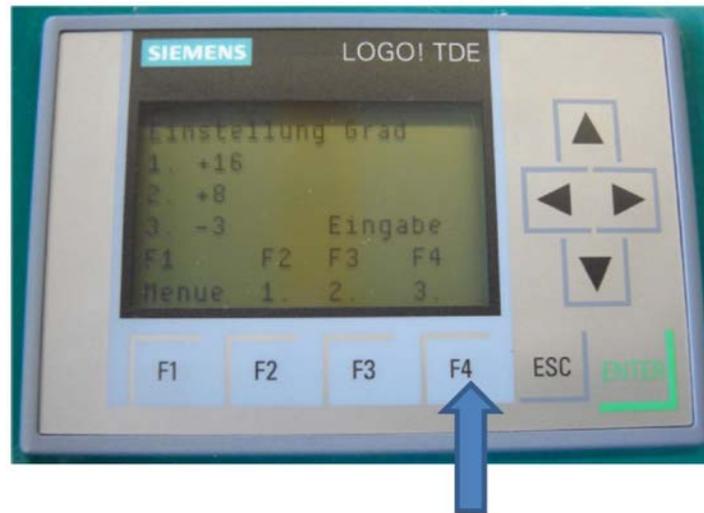


Fig. 18: 3rd ISO code

5. Press the **F1** code to access the start screen menu.



Fig. 19: Start screen menu

6. To start to ISO program, press the F3 button.

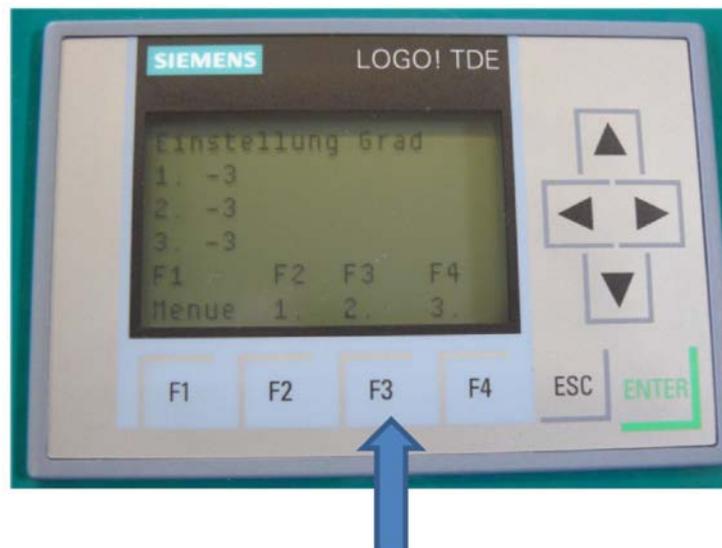


Fig. 20: Starting the ISO program



1 minute after reaching the specified purity code, the filter system switches off automatically. The menu then returns to the start screen.

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### 5.3.3 Evaluating the measurement data

The STAUFF Particle Monitor LPM II integrated in the filter trolley includes a data logger. This records the registered system, time and test results locally in an internal memory, even when no computer is connected. The LPM II is located in the control cabinet of the filter trolley and is connected to an interface module. This makes it possible to send the measurement data to a PC and to evaluate them with the provided LasPac-View software. For this purpose, the filter trolley is equipped with a USB port on the right side of the control cabinet.

More information on the LPM II and on evaluating the measurement data can be found on the Internet at <http://www.stauff.com>.

Operating instructions and software can be downloaded in the Diagtronics/ LMP II product section.

## 6 Operation

To ensure safe operation, the machine may only be operated for its intended use (► Section 2.1, P. 7).

### 6.1 For your safety

---

**CAUTION****Faulty operation or malfunctions**

Injury or machine damage

- ▶ Read the instruction manual before working on the machine!
  - ▶ Take regularly part in a safety training!
- 

**CAUTION****Hot machine parts**

Burns on hands and arms

- ▶ Never let the pump run dry for longer than 2 to 3 minutes.
  - ▶ Before carrying out any maintenance work, let components which have become hot during operation cool down.
  - ▶ Wear your personal protective gear for all work carried out on the machine.
-

## 6.2 Starting the pumping process

Before switching on the machine, observe the general safety instructions (► Section 2.2, P. 8).

► How to start the pumping process:

1. Switch the electrical main switch to "On".
2. Wait until the display shows the start screen.
3. Start the filter trolley. To do this, press the **F1** button for 3 seconds.
  - ✓ Depending on pumping height and viscosity, the mobile filter system requires approx. 10 – 15 seconds to fill the filter elements completely.
  - ✓ The pumped medium is emitted on the outlet hose.
4. **CAUTION! Risk of overheating** Never let the pump run dry for longer than 2 – 3 minutes.

The pump is running

## 6.3 Stopping pumping

► How to stop pumping:

1. Stop the filter trolley. To do this, press the **F1** button for 3 seconds.
2. Switch the electrical main switch to "Off".

The machine is switched off.

## 7 Maintenance

The maintenance includes all measures to maintain or restore safe condition and full functionality.

They include:

- Maintenance work to maintain functionality.
- Inspection to determine any signs of wear.
- Repair as repair or replacement of defective components.
- Administrative and technical improvements to increase functional safety.

The inspection and maintenance schedule provides an overview of the regular maintenance measures ▶ Section 7.2, P. 31.

### 7.1 For your safety

#### WARNING

##### Tasks on electrical equipment

Severe or fatal injury due to electrical voltage

- ▶ Work on electrical equipment may only be performed by trained electricians.
- ▶ Switch the machine off and safeguard it from being restarted.
- ▶ Perform work on live parts only under the supervision of a second person.

#### WARNING

##### Carrying out maintenance work

Severe or fatal injuries or machine damage

- ▶ Maintenance work only by suitably trained and authorised staff!
- ▶ Disconnect the machine from the power and pressure supply and safeguard it against restarting!
- ▶ Only use suitable tools and in proper condition!
- ▶ Wear your personal protective equipment when carrying out all work!

## 7.2 Inspection and maintenance schedule

The following inspection and maintenance schedule provides an overview of all tasks to be carried out. Carry out these tasks by following the detailed instructions given in the respective subsections. Please also note and follow the warnings given in the sections and in the general safety instructions (► Section 2.2, P. 8).

Interval	Task	Personnel
Before each operation	Visual check for leaks on pump, valves, tubes and hoses	Setup and maintenance personnel
Check regularly during operation	Check the clogging level of the filter element on the clogging indicator and replace the element if necessary ► Section 7.4, P. 32	Operating, setup and maintenance personnel
20 operating hours	Check that the pre-filter is clean, clean if necessary ► Section 7.3.1, P. 31	Setup and maintenance personnel
Annually	Visual check of the hoses for wear	Setup and maintenance personnel
Annually	Test run in an area protected against leaking fluids	Setup and maintenance personnel
Annually	Check that all connections and hoses are tight and that no unusual noises come from the motor/pump unit.	Setup and maintenance personnel

## 7.3 Cleaning

The machine must be cleaned regularly. The components to be cleaned, the procedure and the designated cleaning products are defined in a corresponding operating procedure.

### 7.3.1 Cleaning the pre-filter

► How to clean the pre-filter:

1. Ensure that the mobile filter system is disconnected from the power supply.
2. Open the sealing plug.
3. Remove the screen.
4. Clean the screen.
5. Install the screen again.
6. Close the sealing plug.

## 7.4 Replacing the filter element

### CAUTION

#### Leaking liquids

Risk of injury

- ▶ Note that there will be residue of the conveyed medium in the spent element!
- ▶ Wear your personal protective equipment when changing filters!

Leaking liquids

Environmental pollution

**i** If the differential pressure becomes too high, the electric motor switches off at an overpressure of 7 bar (101 psi).

**i** To read out the clogging indicator or to enable it to send a signal to the controller, a conveyed medium has to flow through the filter element.

Due to the universal application options of the filter system, it is not possible to make any statements on the service life of the filter elements. A clogging indicator is absolutely necessary, especially if medium is often pumped out of highly contaminated vessels.

This type of filter trolley is equipped with an electrical clogging indicator which forwards a signal to the controller. When **“change filter”** is shown on the display, the filter element has to be replaced.

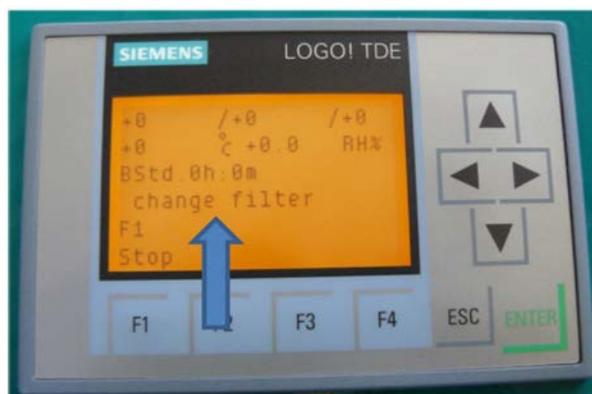


Fig. 21: Changing the filter

- ▶ How to change the filter element:
  1. Remove the intake hose from the tank.
  2. Switch on the filter trolley and wait until no more oil is emitted from the delivery hose.

3. Switch off the filter trolley at the main switch and pull the mains plug.
4. Release the threaded fittings on the cover of the filter housing and fold it over.
5. If necessary, use a rubber mallet to release the cover by lightly tapping from underneath.
6. Remove the clogged element and place it into a leak-proof container for temporary storage.
7. Check the filter housing for any dirt residue and clean it if necessary.
8. Insert a new filter element.
9. Assemble in reverse order.

## 8 Faults

### 8.1 For your safety

#### WARNING

##### Remedying faults

Severe injuries or machine damage

- ▶ Troubleshooting only by personnel who are authorised and qualified to do so!
- ▶ Wear the relevant personal protective equipment during all work on the machine!

#### WARNING

##### Work on electrical equipment

Serious or fatal injury due to dangerous voltage

- ▶ Work on electrical equipment may only be carried out by qualified electricians!
- ▶ Work on live parts may only be carried out under the supervision of a second person!

Mechanical parts in the hazard area of the machine can cause a malfunction in the process due to poor maintenance or continuous use (e.g. by jamming). Note the following for malfunctions in the hazard area:

- Before troubleshooting in the hazard area, switch off and depressurise the machine if possible.
- Note that any stored residual energy on clamped parts can cause uncontrolled movements.
- Use tools or other means to prevent injuries to limbs.

### 8.2 Procedure for troubleshooting

- ▶ How to proceed in the event of a fault:
  1. Determine the subassembly in which the fault is present.
  2. Check the cause of the fault on the corresponding display element.
  3. Eliminate the cause of the fault and replace defective components if necessary.
  4. If you cannot identify surely the cause of the problem, contact the manufacturer.

### 8.3 Fault table

Fault	Possible reason	Troubleshooting
Motor does not start	<ul style="list-style-type: none"> <li>• Power supply interrupted</li> <li>• Motor defective</li> </ul>	<ul style="list-style-type: none"> <li>• Plug the plug into the socket</li> <li>• Check the fuses</li> <li>• Turn the electrical main switch</li> <li>• Check/replace the motor</li> </ul>
Motor protection switch triggered	<ul style="list-style-type: none"> <li>• Continuous operation at high ambient temperatures</li> <li>• Use of media with impermissibly high viscosity</li> </ul>	<ul style="list-style-type: none"> <li>• Leave to cool down for 10 – 15 minutes</li> <li>• Check whether the viscosity of the oil used is permissible</li> </ul>
Pump does not run smoothly/produces noise	<ul style="list-style-type: none"> <li>• Medium highly contaminated</li> <li>• Shaft bearing damaged</li> </ul>	<ul style="list-style-type: none"> <li>• Check pre-filter and clean if necessary</li> <li>• Check motor direction of rotation and swap the phases in the plug if necessary (CEE plug equipped with phase inverter)</li> <li>• Send pump to factory customer service for repair</li> </ul>
Flow rate is too low	<ul style="list-style-type: none"> <li>• Filter elements not yet filled</li> <li>• Intake line blocked</li> <li>• Pre-filter clogged</li> <li>• Pressure loss from leak</li> <li>• Filter elements blocked</li> <li>• Hoses kinked</li> <li>• Pump defective</li> <li>• Medium cold or with impermissibly high viscosity</li> </ul>	<ul style="list-style-type: none"> <li>• Wait 30 – 60 seconds</li> <li>• Clear the blockage</li> <li>• Cleaning the pre-filter</li> <li>• Identify the leak and eliminate it properly</li> <li>• Check the clogging indicator, replace the filter elements if necessary</li> <li>• Eliminate the cause</li> <li>• Send pump to factory customer service for repair</li> <li>• Use coarser filter elements if necessary</li> <li>• Check whether the viscosity of the oil used is permissible</li> </ul>
Clogging indicator in the red zone	<ul style="list-style-type: none"> <li>• Filter elements blocked</li> <li>• Medium cold or with impermissibly high viscosity</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the filter elements</li> <li>• Check again after 20 – 30 minutes, use coarser filter elements if necessary</li> <li>• Check whether the viscosity of the oil used is permissible</li> </ul>

## 9 Decommissioning

### 9.1 For your safety

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**WARNING****Lifting loads**

Severe injury or death from falling / oscillating loads

- ▶ Attach all load moving parts before lifting!
  - ▶ Use only undamaged lifting devices that are approved for the weight of the load to be lifted!
  - ▶ Attach slings only to the designated lifting points!
  - ▶ Do not let loads unattended while suspended from the lifting device!
  - ▶ Never walk under suspended loads!
- 

**WARNING****Carrying out dismantling work**

Severe injury or death

- ▶ Dismantling work may only be carried out by authorised, competent personnel.
  - ▶ Only use suitable tools, which are in proper condition!
  - ▶ Wear your personal protective equipment during all the work!
- 



To prevent substances that are hazardous to water from penetrating into the soil or the sewer system, collect operating fluids and cleaning fluids that contain solvent, in suitable containers!

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## 9.2 Disposal

After the final dismantling of the machine the operating company must dispose of all materials and components used according to the regulations applicable in the operating company's country.

Special care is required when disposing of environmentally harmful materials, for example:

- Plastic parts
- Rubber parts
- Electric parts
- Metal parts
- Operating fluids and auxiliaries



Water-polluting substances

Use suitable containers to collect, store and transport water-polluting substances.

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# 10 EC declaration of conformity

according to EC directive 2006/42/EC on machinery, annex II 1.A

We, **Walter Stauffenberg GmbH & Co. KG**, hereby declare that the filter **trolleys**

**SMFS-U-060-G-.../2 – STAUFF Mobile Filter System Unit**

**SMFS-U-110-G-.../2 – STAUFF Mobile Filter System Unit**

**SMFS-U-CM-110-G – STAUFF Mobile Filtration System Unit**

comply with the EC Machinery Directive and the applicable health and safety requirements based on their concept and design, as well as in the model marketed by us. Any changes to the filter trolley not agreed with us will invalidate this declaration.

## EC Directive with which the filter trolleys comply:

- 2006/42/EC Machinery Directive

## Other applicable EU Directives were complied with:

- 2014/30/EU Electromagnetic Compatibility Directive
- 2014/68/EU Pressure Equipment Directive (article 3, section 3)

The protection objectives set forth in Low Voltage Directive 2014/35/EU (Official Journal of the European Union L96/357 of 29.03.2014) have been complied with in accordance with Annex I No. 1.5.1 of Machinery Directive 2006/42/EC.

## Applied harmonised standards:

EN ISO 13857:2019	Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs
EN ISO 4413:2010	Hydraulic fluid power – General rules and safety requirements for systems and their components
EN 61000-6-2:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
EN 61000-6-4:2007/ A1:2011	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
EN 60204-1:2018	Safety of machinery – Electrical equipment of machines – Part 1: General requirements

A complete list of the applied standards, directives, guidelines and specifications is available from the manufacturer. The technical documentation is complete and available.

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If you have any queries, thoughts or criticism about your product or this documentation, please send them to us.