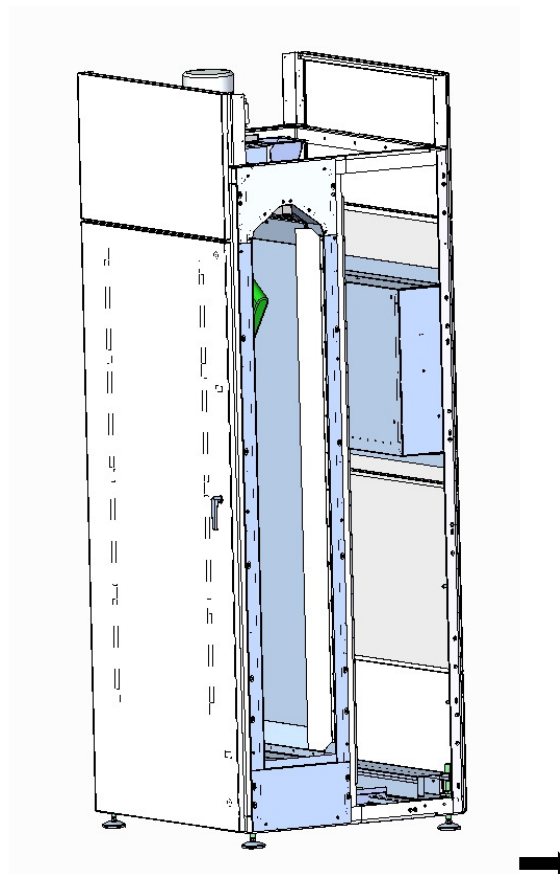


Original operating instructions



BE8657
MOISTURE UNIT

Copyright

This document as well as the information contained in it are protected by copyright and must not be copied as a whole or in part or made available to third parties without the written consent of the editor.

© Copyright Veit GmbH, D-86899 Landsberg am Lech, Germany

Inhaltsverzeichnis

1.	Intended use	1
1.1.	Overview of the unit	2
1.2.	Function	4
1.3.	Technical data.....	6
1.4.	Installation.....	8
1.5.	Scope of delivery	14
2.	Safety.....	17
2.1.	Warning symbols and danger signs.....	17
2.2.	General safety instructions.....	18
2.3.	Safety measures	19
3.	Potential dangers	21
3.1.	Veit Finish Optimizer.....	21
4.	Control panel - visualisation	23
4.1.	Keypad.....	23
4.2.	Operating mode display	24
4.3.	Rinsing the filter	25
4.4.	Manual mode 1 setup setting options 2	26
4.4.1.	Moisture unit.....	28
5.	Maintenance.....	31
5.1.	Maintenance and inspection table	32
5.2.	High-pressure pump.....	35
5.3.	Basic setting.....	36
5.3.1.	Setting: Water flow pressure	36
6.	Troubleshooting	39
6.1.	Error messages on the display.....	39
6.2.	Errors that are not indicated by the system.....	55
6.3.	Error, cause, remedy.....	56
7.	Emergency	57

8.	Disassembly/disposal	59
9.	Spare parts lists	61
9.1.	Ersatzteilliste / <i>Spare Parts List</i>	62
9.1.1.	Overview	62
9.1.2.	Ersatzteilliste Elektrik / <i>Spare Parts List Electric</i> ...	68
9.1.3.	Ersatzteilliste Schaltschrank/ <i>Spare Parts List Switch cabinet</i>	69
9.1.4.	Ersatzteilliste Mechanik / <i>Spare Parts List Mechanic</i> 70	
10.	Appendix	71
10.1.	Safety data sheet	71

1. INTENDED USE

This machine has been developed, designed and built for industrial and commercial use only.

The BE8657 moisture unit is a module integrated in the tunnel finisher. Integration into the finishing process improves the options for working with natural fibres. The complete finishing unit is called the Cotton Care Tunnel Finisher.

Note

The unit is intended for the processing of textiles only. The manufacturer will not assume any responsibility for modifications and changes that are not stated in the declaration of conformity.

If the place of installation does not comply with the intended use, rebuilding measures must be taken to ensure a higher protection class (see chapter 1.3, Technical data).

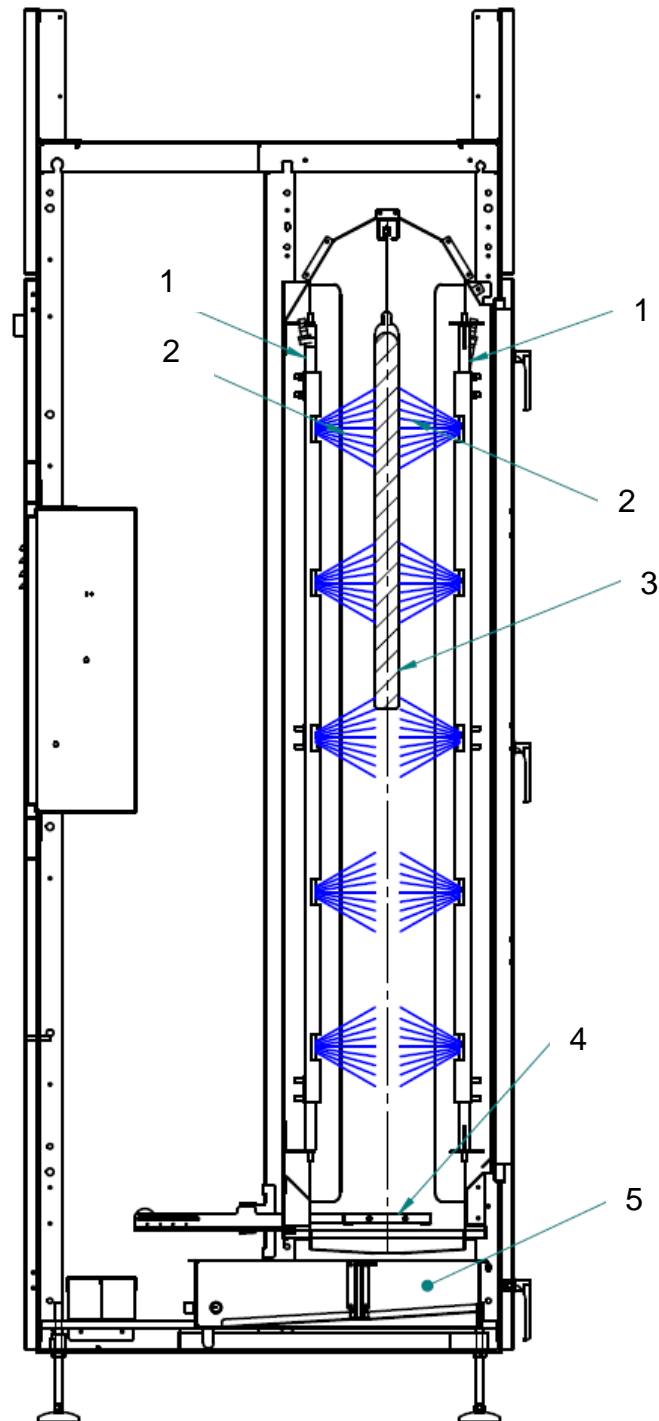


This unit is intended for the above-mentioned purpose only. Any other or further use as well as any rebuilding or retrofitting of the unit without the written consent of the manufacturer will be deemed as not in accordance with the intended use. The manufacturer shall not be held liable for damages caused by such use. The user alone bears the risk.

This also applies to the installation and setting-up of safety equipment and valves as well as to any changes in the supporting parts of the unit.

Intended use also includes adherence to operating instructions and compliance with the inspection and maintenance intervals prescribed by VEIT GmbH.

1.1. OVERVIEW OF THE UNIT



F. 1, Overview of the unit

1	Spray rows	4	Rocker
2	Nozzles	5	Process water tank
3	Garment		

1.2. FUNCTION

In order to process natural fibers in the tunnel finisher, garments are dampened during the aforementioned process with the TF8657 moisture unit to improve the removal of creases.

Water is sprayed onto the surface of the garment using special nozzles. The spray pressure of the nozzles determines the depth of penetration into the fibers and the amount of moisture applied.

The nozzles are supplied by a flow-regulated high-pressure pump. The spray nozzles are arranged on spray tubes that can be switched on and off and are centrally supplied by the pump. The amount of water required for a garment depends on the type of material and its thickness.

A separate water buffer tank with monitored water level is integrated into the moisture unit. Water that is not absorbed by the garment runs out of the chamber back into the water tank and is thus available for reuse.

The water tank can be drained via a lye pump and the collected dirt can be disposed of via a drainage system.

Alternatively, waste water can be fed to the drain from the tunnel finisher using an additional waste water system.

The water tank is supplied with fresh cold water at constant pressure via a supply line. The line is opened via valves and closed again once the maximum level is achieved in the container.

The high-pressure pump draws the water out of the tank. A filter is also included in the line to prevent any particles of dirt from blocking the nozzles. This is a backwash filter, which has an additional outlet for filtered particles during cleaning.

The degree of contamination of the filter element is monitored by two pressure sensors upstream and downstream of the filter. These initiate cleaning of the filter element when required.

The operator uses the display to set the theoretical amount of water that will be absorbed by each garment as a variable. The pump self-regulates to this value.

As an additional option for the moisture unit, the "VEIT Finish Optimizer" softener can be added to the fresh water in order to improve the smoothing effect during the finishing process. The


amount of concentrated softener added to the fresh water via a dosing pump can be adjusted by the operator.


1.3. TECHNICAL DATA

Product-related data

Note

The unit is intended for processing textiles only. The manufacturer will not assume any responsibility for modifications and changes that are not stated in the declaration of conformity.

		Electrical Connection		Water		Compressed Air		Vacuum Connection	Steam Connection	Condensate	Exhaust Air	Sound Level
		Voltage	Se-cured	Power	Consumption	Pressure	Connection	Consump-tion	Vacuum Connection	Convec-tion	Convec-tion	Sound Level
unit / Einheit		Volts/Hz	A	kW	in	bar	mm	l / Zylinder	Zoll	bar	mm	dB(A)
Tunnel Finisher												
TF 8657 C+1+1+2 (18)		400/50 (1)	20 (8)	7,7 (8)	1/2"	60	1/4" 6mm	10	2"	6-8	1 1/4"	Normal=77 Chamber entry and exit/kammer-eingang & -ausgang=81 (6)
TF 8657 C+1+2+2 (18)		400/50 (1)	20 (8)	9,7 (8)	1/2"	60	1/4" 6mm	10	2"	6-8	1 1/4"	Normal=77 Chamber entry and exit/kammer-eingang & -ausgang=81 (6)
TF 8657 C+1+2+3 (18)		400/50 (1)	25 (8)	10,2 (8)	1/2"	60	1/4" 6mm	15	2"	6-8	1 1/4"	Normal=77 Chamber entry and exit/kammer-eingang & -ausgang=81 (6)
TF 8657 C+1+3+3 (18)		400/50 (1)	25 (8)	10,7 (8)	1/2"	60	1/4" 6mm	20	2"	6-8	1 1/4"	Normal=77 Chamber entry and exit/kammer-eingang & -ausgang=81 (6)

		Dimension				Average Consumption				maximum Consumption			
		Weight	Maße	Maße	Maße	Maße	Maße	Maße	Maße	durchsch. Verbrauch (l)	maximaler Verbrauch	maximaler Verbrauch	maximaler Verbrauch
unit / Einheit		kg	mm	mm	mm	mm	mm	mm	mm	kg/h	l/h	l/h	l/h
Tunnel Finisher													
TF 8657 C+1+1+2 (18)		2850	2780 (10)	1850	1200	7035 (9735)	165	285	105				
TF 8657 C+1+2+2 (18)		3250	2780 (10)	1850	1200	8035 (10735)	255	395	110				
TF 8657 C+1+2+3 (18)		3750	2780 (10)	1850	1200	9295 (11995)	280	440	115				
TF 8657 C+1+3+3 (18)		4150	2780 (10)	1850	1200	10295 (12995)	370	570	120				

Comments on the table with connected loads:

- (1) If the supply voltage is different, the voltage may deviate according to customer requirements.
- (6) This value was measured at a distance of 0.5 m and at a working height of 1.6 m in front of the tunnel finisher. Slightly higher values may occur at the tunnel inlet and outlet, however this is not part of the working area of the machine operator.
- (8) Data applies to minimum configuration, final data is determined on a project-specific basis.
- (9) These values depend on the length of the suction pipe, the number of bends and the connecting elements in a pipeline; the value specified is valid for pipe lengths of 10 m with one bend
- (10) If an air lock is fitted, then the max. total height increases to 100 mm
- (11) The values specified here are average values, individual consumption may be lower/higher depending on the throughput volume and the type of garment
- (18) The moisture unit is connected upstream of the tunnel finisher and is fitted in between the entry roller and an additional centre roller

1.4. INSTALLATION

Water supply

Only clean water which is free of particles must be used. If necessary, a water filter must be installed or treated water must be provided.

Connection (1x):	½"
Connected load:	2.0 - 8 bar/0.2 - 0.8 MPa
Water hardness:	1-3°dH (German hardness)
Water pressure setting via pressure regulator:	The flow pressure of the water supply must be set to 1.5 bar on the pressure regulator (setting during filling of process water tank). (see 5.3.1)



Water connection ½"

During machine downtime, the stop valve of the water supply must be closed.

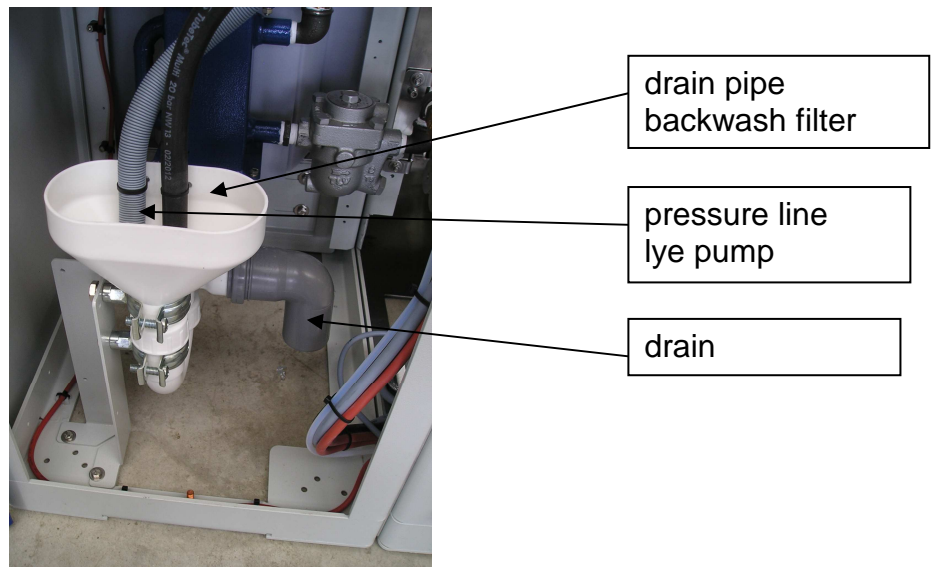
Waterrainage without optional waste water unit

The drain must be arranged by the customer in such a way that both waste water lines of the moisture unit can be discharged into it. Both waste water lines form the backwash line of the water filter and the pressure-side connection of the wastewater pump for emptying the process water tank. Their dimensions are as follows:

- Backwash filter drain pipe:
rubber hose ½"
- Pressure-side line of the lye pump:
Washing unit waste water tube with 21 mm diameter

The waste water tubes must not be installed on a slope. The waste water lines must withstand temperatures of up to 50°C.

The drain must be arranged by the customer in the form of a funnel, for example, so that both lines can be combined there. It is advisable to drain the waste water with a HT pipe (DN 50).



Water drainage with optional waste water unit

The optional waste water unit acts as a buffer store into which both waste water pipes of the unit are fed.

The waste water system works as a self-contained system via the integrated fill level sensor and the immersion pump.

The drain pipe of the waste water system is already installed on the moisture unit and has a 1 ¼" screw connection fitted at the end.

Connection:	1 ¼"
Recommended material/pipe:	PVCU pipe ø40 x 3 mm
Max. temperature of the waste water:	50 °C
Min. diameter of the waste water pipes with wall thickness of 4 mm	40 mm

Max. flow rate of the pump: 7 m³/h

In the case of a horizontal path, the waste water pipes must be installed with a min. slope of 4° from the tunnel finisher to the drain.

The water level in the waste water pipes must not exceed 5 m (incl. existing standpipe in the unit).

The waste water system must be water tight.

The following max. conveying distances and bends can be overcome with the Veit waste water system:

Vertical:	2.5 m (above connection point) 5 m (in total)
Horizontal:	50 m
Max. number of 180° redirections:	1
Max. number of 90° elbows:	4



Waste water connection via 1 ¼" screw connection

PVCU pipe ø40 x 3 mm

Moisture unit exhaust air

General

Each moisture unit has a separate suction system with an integrated fan wheel.

In the idle state (clean state), each suction cycle provides a maximum flow rate of 1200 m³/h.

The connected pipes are used to transport the excess moisture from the hall to the environment.

This section explains how to install, design and lay the tunnel exhaust air pipes.

Exhaust air parameters

- Flow rate: max. 1200 m³/h for each suction cycle (depending on the operating parameters and the exhaust air pipe installation)
- Exhaust air temperature: max. 130°C (depending on the distance to the moisture unit)
- Relative humidity: approx. 90%

Criteria for the design of the exhaust air system

- Number of moisture units
- The suction system of the moisture unit suction system must always be led outside separately from the other suction systems.
- Flow losses as low as possible - determining factors:
 - Length of the exhaust air pipe (horizontally and vertically)
 - Number of bends and connecting elements
- Diameter of the exhaust air pipe

Material selection for exhaust air pipes

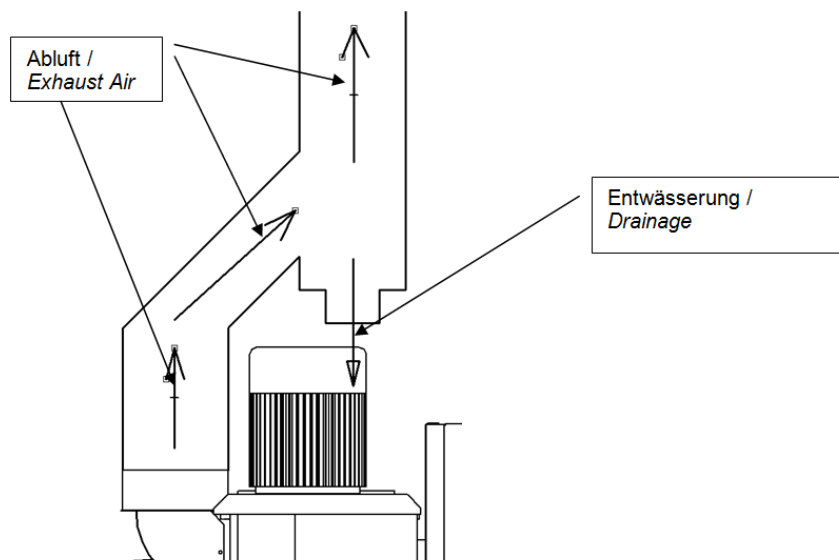
- HT pipe
 - Characteristics:
 - Max. diameter: 150 mm
 - Temperature resistance: max. 130°C
 - Suspension is required on each pipe element to prevent water deposits
 - Embrittlement of the sealing ring during operation
- Stainless steel chimney pipe (recommended in general)
 - Characteristics:
 - Max. diameter: 500 mm
 - Temperature resistance: max. 1,000 °C
 - Permanent corrosion resistance
 - Permanently sealed

Installation instruction for exhaust air pipe

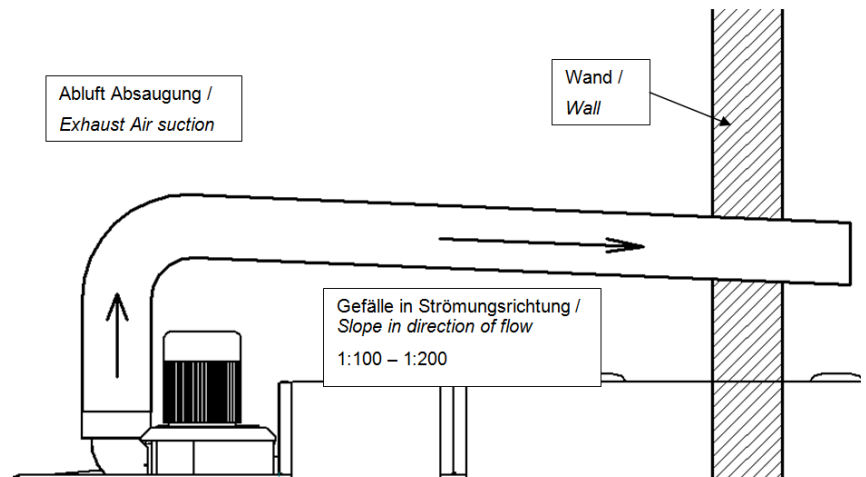
- Diameter min. 150 mm
- Use 45° bend elements only (reduces the flow resistance)
- The exhaust air pipe can be insulated to prevent condensation
- The outlet must be unobstructed and must not be covered
- When using horizontal pipes, a slope to the outside is required to prevent condensate from flowing back into the tunnel.
- When using longer pipes (approx. > 15 m) or numerous elbows the pipe diameter needs to be increased, e.g. from DN 200 to DN 315. Veit offers support in designing your exhaust air installation system.
- In the case of longer pipes, it may be necessary to install an additional fan.
- Adequate sealing of the exhaust air connection on the fan (e.g. using a u-shaped seal)

Installation examples for exhaust air pipe

1.) Installation above roof



2.) Installation via wall



1.5. SCOPE OF DELIVERY

Note

These operating instructions cover the maximum scope of delivery.

The individual scope of delivery is detailed in the purchase contract.

2. SAFETY

2.1. WARNING SYMBOLS AND DANGER SIGNS

The following designations and symbols are used on the unit and in these operating instructions for particularly important information:



Reference to external **operating instructions**



Danger symbol for the prevention of accidents and damage

Note

Request for **particular attention**



Symbol indicating **danger due to electric current**



Indicates that **safety goggles** must be worn



Indicates that **gloves** must be worn



Indicates that **smoking** is prohibited

2.2. GENERAL SAFETY INSTRUCTIONS

- Only additives approved by VEIT may be used.
- Switch off the tunnel finisher at the main switch before opening the unit.
- Only spare parts and accessories approved by VEIT may be used.
- Faults in the electrical system must only be resolved by qualified electricians.
- If the equipment is shut down for a long period of time:
 - Shut off the fresh water supply
 - Empty and clean the process water tank
 - Empty and clean the drainage tank (if applicable)

2.3. SAFETY MEASURES

(to be carried out by the operating company)

The operating company must:

- Train their operating and maintenance staff in the use of the safety devices,
- Monitor adherence to the safety measures by operating and maintenance staff,
- Ensure that unauthorised staff are prevented from entering the danger zone of the unit (i.e. no operating or maintenance staff).

The statutory minimum age for operating and maintenance staff must be observed.

These operating instructions must be retained for future use.

The prescribed frequency of inspection and control measures must be observed.

In these operating instructions, the operations to be carried out are described in such a way that

- a **trained person** can understand the instructions given in the chapter OPERATION/OPERATING MODES,
- an **authorised person** can understand the instructions given in the chapter MAINTENANCE and
- a **qualified person** can understand the instructions given in the chapters TRANSPORT, INSTALLATION, SETUP/ADJUSTMENT and MAINTENANCE.

In the chapter TROUBLESHOOTING, the person/specialist responsible for each type of fault is stated.

Trained person

A person who has been introduced to the tasks assigned to him/her and the possible dangers that can result from improper behaviour, who has been appropriately trained and who has been instructed in the necessary safety devices and safety measures.

Authorised person

A person who operates the unit on a regular basis and who has been instructed by a VEIT GmbH specialist, particularly with regard to setting-up and servicing the unit, unless agreed otherwise in the purchase contract.

Qualified person

A person who is capable of assessing the tasks assigned to him/her and of identifying dangers due to his/her technical training, knowledge and experience as well as knowledge of the relevant industrial standards.

3. POTENTIAL DANGERS

3.1. VEIT FINISH OPTIMIZER

1. Use of the Finish Optimizer: The additive may only be added to the water in the moisture unit. The additive and water solution must only be used for spraying garments in the moisture unit.
2. The additive must **not** be used as a fragrance or steam additive in the steam generator either in concentrated or diluted form.
3. Pay attention to the following when working with the additive:



- a. Avoid contact with eyes and skin, **risk of burns**.
- b. Only use in ventilated areas.

- c. Wear personal protective clothing:
 - i. Close-fitting safety goggles

- ii. Wear gloves



Note

Observe the notes on the safety data sheet (see page 70, chapter 10.1)

4. CONTROL PANEL - VISUALISATION

Note

The buttons of the selected functions are highlighted.


- ON is indicated by a "green tick"
- OFF is indicated by a "red cross"

4.1. KEYPAD



Fig 2, Keypad

Note

All numerical entries are made via the keypad and confirmed with .
The keypad is assigned to the relevant entry options and appears automatically when pressing the button.

4.2. OPERATING MODE DISPLAY

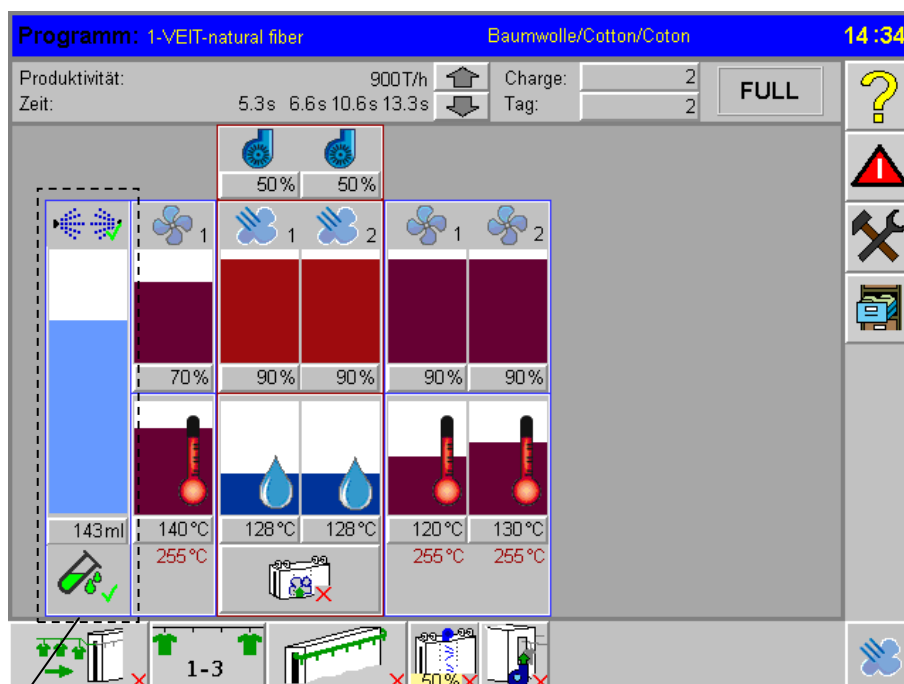



Fig. 3, Operating mode display

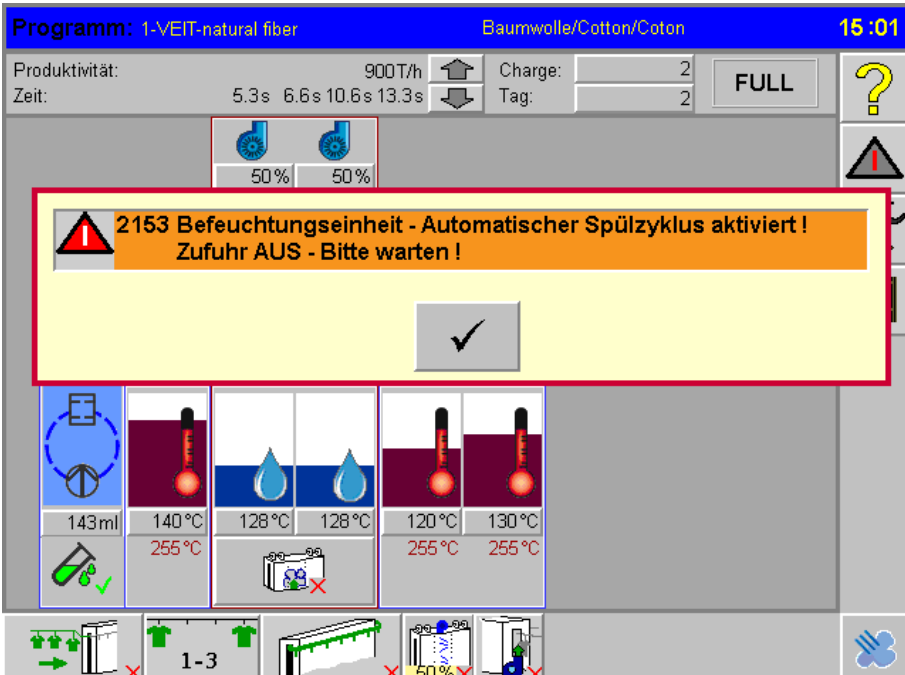


This image is a close-up of the moisture unit control interface. It shows a vertical bar with a blue liquid level. At the bottom of the bar, there is a '143ml' label and a green checkmark icon. To the right of the bar, there is a red cross icon. The interface is designed to show the status of the moisture unit and allow for switching it on and off.

Switching the moisture unit on and off

- ON is indicated by a "green tick"
- OFF is indicated by a "red cross"
- Errors are indicated by flashing

4.3. RINSING THE FILTER

	 <p>The screenshot shows the control panel interface for a Veit machine. At the top, it displays 'Programm: 1-VEIT-natural fiber' and 'Baumwolle/Cotton/Coton' with a time of '15:01'. Below this, there are fields for 'Produktivität: 900T/h' and 'Zeit: 5.3s 6.6s 10.6s 13.3s'. A 'Charge:' field shows '2' and a 'Tag:' field shows '2'. A 'FULL' button is visible. A large yellow warning box in the center contains the text: '2153 Befeuchtungseinheit - Automatischer Spülzyklus aktiviert! Zufuhr AUS - Bitte warten!' (2153 Humidification unit - Automatic rinsing cycle activated! Supply OFF - Please wait!). Below the warning box, there are several temperature and pressure indicators: '143ml', '140 °C', '128 °C', '128 °C', '120 °C', '130 °C', and '255 °C'. At the bottom, there are icons for various functions, including a '1-3' button and a '50%' button.</p>
	<p>The rinse cycle is activated.</p> <p>The rinse cycle is started automatically. There are three ways to start the rinse cycle:</p> <ul style="list-style-type: none"> • If Δp (setup parameter A76) is exceeded, then the rinse cycle is started the next time the unit is switched on. • If Δp (setup parameter A77) is exceeded, the rinse cycle starts immediately. The supply is stopped. • If the operating time (setup parameter A82) is exceeded, then the rinse cycle is started the next time the unit is switched on.

4.4. MANUAL MODE 1 SETUP SETTING OPTIONS 2

Setup Einstellungen
02:23

Optionen 2
Ebene C

C67: Befeuchtungseinheit

Standard + Zusatzstoffe

C83: Trockenlaufschutz Prozesspumpe 0.3bar

C84: Bypass Anlauf Prozesspumpe 0.5bar

A76: ΔP -> Wasserfilter spülen 0.5bar

A77: ΔP -> Wasserfilter sofort spülen 2.0bar

A82: Betriebszeit -> Wasserfilter spülen 40Std

A85: Stillstandstage --> Brauchwassertank leeren 7

A75: Anzahl Spülzyklen --> Brauchwassertank leeren 5

A71: Sollwert Prozesspumpe Standbybetrieb 30%

A69: Istwerttoleranz (+/-) 30%

A70: Istwerttoleranzzeit 30s

A78: Rückspülzeit Wasserfilter 5s

A79: Dosierung Zusatzstoffe 1%

Setup setting options 2

Authorization	No	Designation	Explanation	
A	69	Actual value tolerance (+/-)	This parameter determines the permissible tolerance window for the spray water quantity. The actual value for the spray water quantity must lie within this window.	
A	70	Actual value tolerance time	The spray water quantity must lie within the pre-set tolerance window during the pre-set time.	
A	71	Process pump set value in standby mode	Pressing the button enters the % value of the maximum speed for standby mode.	
A	75	Number of rinse cycles - empty process water tank	Once the pre-set number of water filter rinse cycles has been	

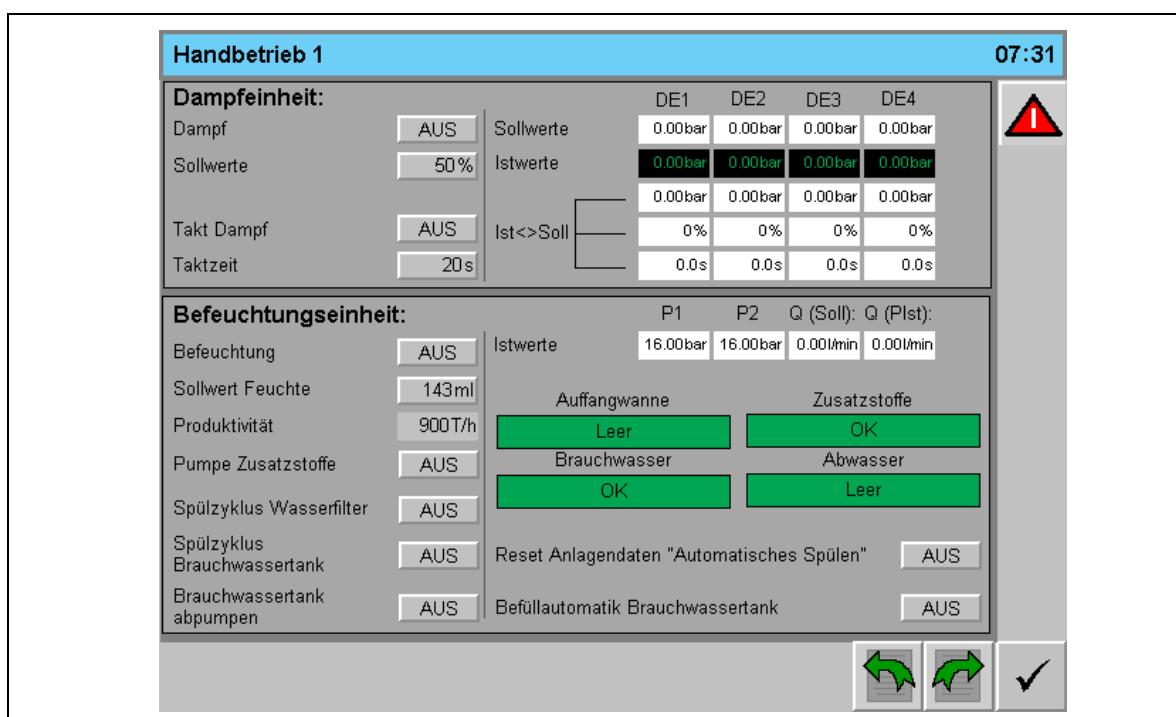
			completed, the water tank is emptied (cleaning).	
A	76	Rinse water filter	The water filter is rinsed the next time the unit is switched on if the set differential pressure between the P1 sensor (upstream of the water filter) and P2 (downstream of the water filter) is exceeded.	
A	77	Rinse water filter immediately	If the pre-set value is exceeded, the supply is stopped, the water filter is rinsed and then the supply is enabled again.	
A	78	Water filter backwash time	The filter is rinsed with fresh water for the pre-set period of time. The dirty rinse water flows into the drain or the waste water tank.	
A	79	Additive dosing	The additive is added according to the pre-set value.	
A	82	Operating time - rinse water filter	The water filter is rinsed after pre-set time has elapsed and when the unit is next switched on.	
A	85	Downtime days -> empty process water tank	If the moisture unit is shut down for longer than the set number of days, then the water tank is emptied when the moisture unit is switched on (prevents microbial contamination).	
C	67	Moisture unit	Factory specification "type of moisture unit"	

C	83	Process pump dry run protection	Factory specification min. limit for "process pump dry run protection" error detection	
C	84	Bypass process pump start-up	Factory setting limit bypass function moisture unit quick start	

Note

The "Authorization C" factory functions can only be used with the appropriate password. The corresponding operating fields are also only visible with active "C authorization".

4.4.1. Moisture unit



The screenshot shows the 'Handbetrieb 1' control interface. At the top, it displays 'Handbetrieb 1' and the time '07:31'. Below this, there are two main sections: 'Dampfeinheit:' and 'Befeuchtungseinheit:'. The 'Dampfeinheit:' section includes settings for 'Dampf' (AUS), 'Sollwerte' (50%), 'Takt Dampf' (AUS), and 'Taktzeit' (20s). It also shows a table of 'Istwerte' for DE1, DE2, DE3, and DE4, all at 0.00 bar. The 'Befeuchtungseinheit:' section includes settings for 'Befeuchtung' (AUS), 'Sollwert Feuchte' (143ml), 'Produktivität' (900T/h), 'Pumpe Zusatzstoffe' (AUS), 'Spülzyklus Wasserfilter' (AUS), 'Spülzyklus Brauchwassertank' (AUS), and 'Brauchwassertank abpumpen' (AUS). It also shows a table of 'Istwerte' for P1, P2, Q (Soll), and Q (Ist), with values 16.00 bar, 16.00 bar, 0.00l/min, and 0.00l/min respectively. There are buttons for 'Auffangwanne' (Leer), 'Zusatzstoffe' (OK), 'Brauchwasser' (OK), and 'Abwasser' (Leer). At the bottom, there are buttons for 'Reset Anlagendaten "Automatisches Spülen"' (AUS) and 'Befüllautomatik Brauchwassertank' (AUS). Navigation arrows and a checkmark are at the bottom right.

Note

The "Authorization C" factory functions can only be used with the appropriate password. The corresponding operating keys are also only visible with active "C authorization".

Factory functions:

Function	Explanation
Moisture ON/OFF	Switches the moisture test function on or off
Moisture set value	Moisture set value setting
Productivity	Conveyor speed setting

Additive pump ON/OFF	Switches the additive pump test function on or off
---------------------------------	--

Customer functions:

Function	Explanation
Water filter rinse cycle ON/OFF	Switches the water filter rinse cycle test function on or off
Process water tank rinse cycle ON/OFF	Switches the process water rinse cycle test function on or off
Drain process wa- ter tank ON/OFF	Switches the process water tank drainage test function on or off
Actual value	Current actual values (for diagnostic purposes)
Collecting bin	Collecting bin operating state
Additive	Additive tank operating state
Process water	Process water tank operating state
Waste water	Waste water tank operating state
Reset system data "Automatic rinse" ON/OFF	Resets the stored operating data for the moisture unit (number of rinse cycles, operating times, etc.)
Process water tank automatic filling ON/OFF	Switches the process water automatic filling test function on or off

5. MAINTENANCE

Note

See original operating instructions for Tunnel Finisher 8657.

Ordering spare parts:

When ordering in writing or on the phone, please always quote:

- Type of machine (see cover)
- Article number of the relevant component.

Address

Manufacturer

Service

Veit GmbH

Justus-von-Liebig-Str. 15
D-86899 Landsberg am Lech, Germany
Tel.: +49 (0) 8191/479-0
Fax: +49 (0) 8191/479-149
E-mail: info@veit.de
www.veit-group.com

5.1. MAINTENANCE AND INSPECTION TABLE

INSPECTION AND MAINTENANCE SCHEDULE			
Interval	Part to be inspected	Work to be carried out	Remarks
40 hrs	<ul style="list-style-type: none"> Pump system (high-pressure pump) 	<ul style="list-style-type: none"> Check foot valve for contamination 	<ul style="list-style-type: none"> Clean if necessary
		<ul style="list-style-type: none"> Check lines for leaks 	<ul style="list-style-type: none"> Seal if necessary
		<ul style="list-style-type: none"> Check the pump oil level 	<ul style="list-style-type: none"> Top up oil if necessary
		<ul style="list-style-type: none"> Check oil for contamination 	<ul style="list-style-type: none"> Change oil if necessary
		<ul style="list-style-type: none"> Check system for clicking and loud noises 	<ul style="list-style-type: none"> If any are heard, locate the source of the noise and replace the pump, filter or valve if necessary
1000 hrs	<ul style="list-style-type: none"> High-pressure pump 	<ul style="list-style-type: none"> Oil change 	<ul style="list-style-type: none"> Change the oil.
	<ul style="list-style-type: none"> Circulation filter 	<ul style="list-style-type: none"> Clean the filter 	<ul style="list-style-type: none"> Replace if necessary

Oils to be used:	<ul style="list-style-type: none"> Lubrificanti U.T.T.O. (Universal Tractor Transmission Oil) API GL-4 FORD M2C-86 B FORD M2C-134B/C JOHN DEERE J20A MASSEY - FERGUSON M-1135 Esso TORQUE FLUID 62 Mobil MOBILFLUID 422 Shell DONAX TD
------------------	---

Wartungsplan (Monat)/Maintenance schedule (monthly)

Warning information:	Warning:
Die Wartungsarbeiten dürfen nur durch geschultes und eingewiesenes Wartungspersonal durchgeführt werden!	<i>Maintenance work may only be carried out by skilled and trained maintenance personnel.</i>
Vor Arbeiten am Gerät den Hauptschalter in Stellung "0" bringen und mit einem Vorhängeschloss sichern!	<i>Turn the main switch to position "0" and secure with a padlock before starting maintenance work on the machine.</i>
Gerät vor Durchführung der Wartungsarbeiten abkühlen lassen, ansonsten besteht Verbrennungsgefahr!	<i>Allow the machine to cool down before starting maintenance work, otherwise there is a risk of burns.</i>
Allgemeiner Hinweis:	General information:
Die Wartungsintervalle können je nach Betriebszeit des Tunnelfinishers und Art der Kleidung variieren und müssen ggf. öfter durchgeführt werden als im Wartungsplan vorgeschlagen!	<i>The maintenance intervals may vary depending on the operating time of the tunnel finisher and the type of garment. If necessary, maintenance work must be carried out more often than advised in the maintenance schedule.</i>

Tag/Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Clean the fluff filter																															
Clean the suction openings																															
Check the switch cabinet fan, clean filter if necessary																															
Check the moisture unit for leaks																															
Woche/Week																															
Pump system/high-pressure pump: Check the foot valve for contamination, clean if necessary. Check lines for leaks																															
Pump system/high-pressure pump: Check the pump oil level, check oil for contamination, change oil if necessary																															
Check the pump system/high-pressure pump for clicking and loud noises																															
Carry out a visual inspection of the spray nozzles (check the spraying pattern), remove and clean with compressed air if necessary.																															
Empty and clean the process water tank assembly																															
Monat/Month																															
Clean the fan wheel of the suction fan with vacuum cleaner																															
Halbjährlich/Twice a year	1. Halbjahr/First six months of the year															2. Halbjahr/Second six months of the year															
High-pressure pump: Change oil (see table for oils to use)																															
Backwash filter: Open the filter housing, remove and clean the filter element, replace the filter element if necessary																															

5.2. HIGH-PRESSURE PUMP



Fig. 4, High-pressure pump

Motor data:

Insulation class:	H
Degree of protection:	IP 54
Speed:	1400 rpm
Connection:	3/50 Hz/400 V
Motor output:	0.9 kW

Pump data:

Maximum flow:	5.4 l/min
Maximum system pressure:	16 bar
Maximum water temperature:	50 °C
Maximum suction lift with cold water:	1 m

5.3. BASIC SETTING

5.3.1. Setting: Water flow pressure

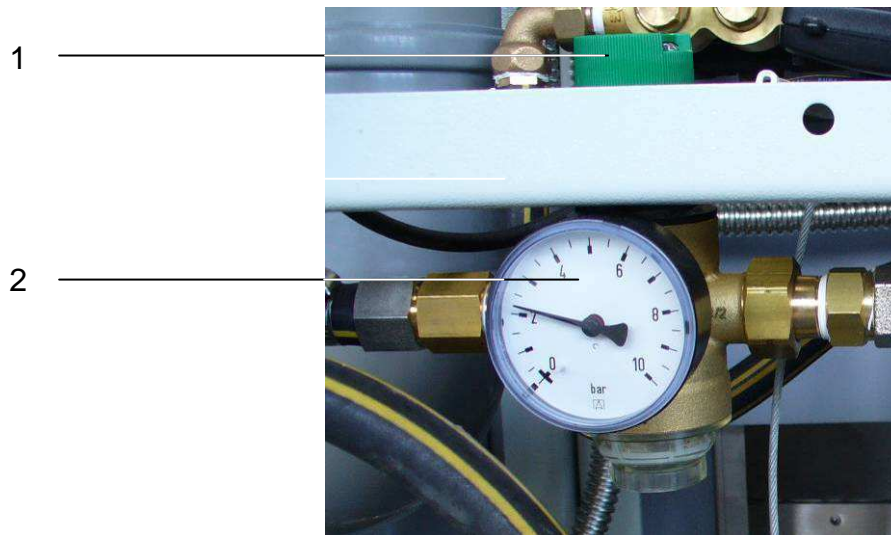
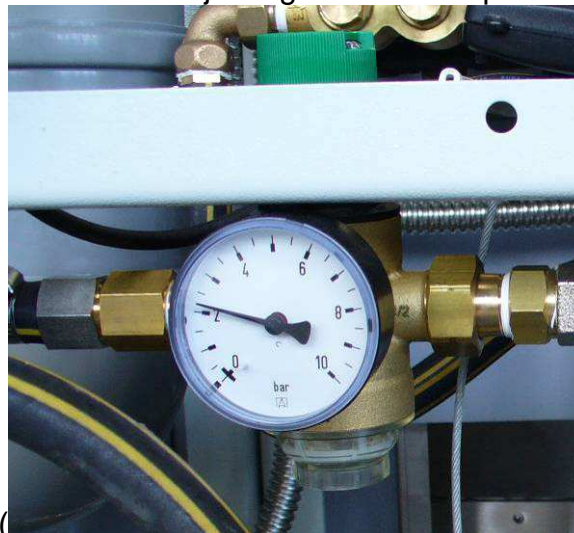


Fig. 5, Water flow pressure setting

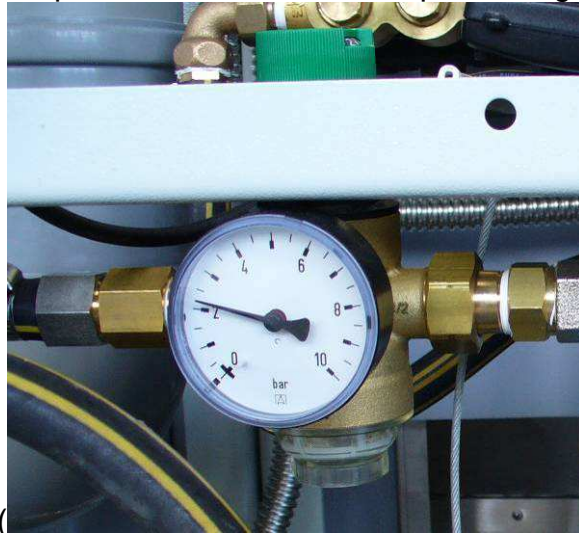
- Pull out the adjusting knob on the pressure reducer



- Fig. 5, pos. 1).
- Set the flow pressure while the water flows on the pressure reducer by turning the adjusting knob.

- Turn clockwise: Pressure is increased, basic setting 1.5 bar (0.15 MPa).
- Turn anticlockwise: Pressure is reduced.

The set pressure is shown on the pressure gauge



- Fig. 5, pos. 2).
- Lock the adjusting knob.

6. TROUBLESHOOTING

6.1. ERROR MESSAGES ON THE DISPLAY



If faults occur on the unit, the following error messages are displayed.

The moisture unit is only active when there are no errors.

The facts and information listed as **error messages** in this chapter are described in such a way that the remedy may be understood by a **trained person**.

If a fault cannot be remedied, a **qualified person** must be informed.



During a fully automatic process water maintenance process (filter rinse, change process water in tank, etc.), the supply is automatically stopped, once the rinsing process is complete, the previously active supply starts again automatically.

The facts and information listed as **error messages** in this chapter are described in such a way that the remedy may be understood by a **trained person**.

If a fault cannot be remedied, a **qualified person** must be informed.



An error within the moisture unit is indicated by a flashing alarm signal. To resolve the error, proceed as follows:

- Manually stop the supply
- Correct the cause of the error
- Manually restart the supply

Error messages on the display

Error message	Cause	Remedy
Error 1067 Moisture unit pump does not rotate despite having been enabled	<ul style="list-style-type: none"> Moisture unit pump does not work despite having been enabled 	<ul style="list-style-type: none"> Check the wiring, shield and winding cover contacts and connections
Error 1188 The CAN node moisture unit, A090 does not respond	<ul style="list-style-type: none"> CAN module A090 has a bus connection problem or no power supply 	<ul style="list-style-type: none"> Check the supply wiring and the relevant bus cable/module plug
		<ul style="list-style-type: none"> If necessary, replace the module
Error 1238 CAN node A090, no output voltage	<ul style="list-style-type: none"> Module A090 has no voltage at its outputs 	<ul style="list-style-type: none"> Check the supply wiring and the relevant bus cable/module plug
		<ul style="list-style-type: none"> Check the F090, F092, F093 fuses
		<ul style="list-style-type: none"> If necessary, replace the module
Error 1248 CAN node A090, no input voltage	<ul style="list-style-type: none"> Module A090 has no voltage at its inputs 	<ul style="list-style-type: none"> Check the supply wiring and the relevant bus cable/module plug
		<ul style="list-style-type: none"> Check the F090, F092, F093 fuses
		<ul style="list-style-type: none"> If necessary, replace the module
Error 1258 CAN node A090 analogue problem	<ul style="list-style-type: none"> Module A090 wire break or analogue input signal outside the measuring range 	<ul style="list-style-type: none"> Check the supply wiring, the voltage at the analogue inputs and the corresponding bus cable/module plug

Error message	Cause	Remedy
Error 1268 CAN node A090 overcurrent 1	<ul style="list-style-type: none"> Module A090 overcurrent at digital outputs 5 & 6 (> 4 A) 	<ul style="list-style-type: none"> Check the connected electric load at the digital outputs 5 & 6.
		<ul style="list-style-type: none"> If necessary, replace the module
Error 1278 CAN node A090 overcurrent 2	<ul style="list-style-type: none"> Option 1 A090 overcurrent at digital outputs 7 & 8 (> 4 A) 	<ul style="list-style-type: none"> Check the connected electric load at the digital outputs 7 & 8.
		<ul style="list-style-type: none"> If necessary, replace the module
Error 1380 Moisture unit - water level in the collecting bin too high	<ul style="list-style-type: none"> Water inside the collecting bin 	<ul style="list-style-type: none"> Determine and resolve cause (possible leak, process water tank overflow, etc.) In the event of overflow, check the position, function and wiring of the S190 sensor "upper process water tank fill level", replace the sensor if necessary Check position, function and wiring of B190 sensor "collecting bin fill level" and replace if necessary
	<ul style="list-style-type: none"> Y191 solenoid valve "fill process water tank valve" (no longer closes correctly) 	<ul style="list-style-type: none"> Check and replace if necessary
	<ul style="list-style-type: none"> Faulty K090 relay 	<ul style="list-style-type: none"> Check and replace if necessary
	<ul style="list-style-type: none"> Switching off the TF 8657 at the main switch also closes the 190 solenoid valve "process water tank emergency shut down valve". 	<ul style="list-style-type: none"> Disconnect the water supply and check the Y191 solenoid valve and K090 relay.

Error messages on the display

Error message	Cause	Remedy
Error 1381 Moisture unit - process pump dry run protection has been triggered	<ul style="list-style-type: none"> No process water or water lines blocked, faulty 	<ul style="list-style-type: none"> Check the process water and fresh water supply Clean the pressure reducer filter/process water tank foot valve Check the lines Check the water level in the process water tank
	<ul style="list-style-type: none"> Y192/Y194 solenoid valves "circulation/bypass" solenoid valve faulty 	<ul style="list-style-type: none"> Check solenoid valves/coil, replace if necessary
	<ul style="list-style-type: none"> K096 relay set incorrectly or faulty 	<ul style="list-style-type: none"> Check and replace if necessary
	<ul style="list-style-type: none"> N191 sensor, "P2" "pressure after filter" faulty 	<ul style="list-style-type: none"> Check and replace if necessary
		<ul style="list-style-type: none"> To acknowledge the error, either the moisture unit or the tunnel supply must be switched off and on again.
Error 1382 Moisture unit - fill level sensors signals (process water tank full/empty) not plausible	<ul style="list-style-type: none"> S190/S191 sensors "upper/lower process water tank fill level" faulty 	<ul style="list-style-type: none"> Check and replace if necessary
Error 1383 Additive container empty - not possible to fill the process water tank	<ul style="list-style-type: none"> Empty additive container 	<ul style="list-style-type: none"> Fill/replace additive container
	<ul style="list-style-type: none"> S193 sensor "additive fill level" faulty 	<ul style="list-style-type: none"> Check and replace if necessary

Error message	Cause	Remedy
<p>Error 1384 Moisture unit - water level in waste water tank too high</p> <p>(only with waste water tank option)</p>	<ul style="list-style-type: none"> ■ S194 sensor "waste water tank fill level" faulty <p>Waste water tank immersion pump not working (M194)</p>	<ul style="list-style-type: none"> ■ Check position, function and wiring, replace faulty sensor if necessary ■ Check the voltage supply (F095) for the waste water pump (M194), replace fuse if necessary ■ Check that the waste water tank (M194) immersion pump is working correctly, replace immersion pump if necessary
<p>Error 1385 moisture unit rocker</p>	<ul style="list-style-type: none"> ■ Goods fallen down ■ S192 sensor "rocker" faulty 	<ul style="list-style-type: none"> ■ Open door, remove fallen goods ■ Check and replace if necessary
<p>Error 1386 Moisture unit process water supply too low</p>	<ul style="list-style-type: none"> ■ No process water supply ■ Water pressure too low ■ Water lines blocked, faulty ■ Pressure reducer blocked, faulty ■ S191 sensor "lower process water tank fill level" faulty ■ F095/F091 fuses faulty ■ K090 relay "fill process water tank valve" faulty 	<ul style="list-style-type: none"> ■ Check process water supply ■ Check pressure regulator (1.5 bar flow pressure) ■ Check the lines ■ Check and replace if necessary ■ Check and replace if necessary ■ Check and replace if necessary ■ Check and replace if necessary

Error messages on the display

Error message	Cause	Remedy
	<ul style="list-style-type: none"> Y191 valve "fill process water tank valve" faulty 	<ul style="list-style-type: none"> Check solenoid coil and replace if necessary
Error 1387 Moisture unit - door opened	<ul style="list-style-type: none"> Door opened 	<ul style="list-style-type: none"> Close door
	<ul style="list-style-type: none"> Door recognition sensor faulty 	<ul style="list-style-type: none"> Check and replace if necessary
Error 1388 Moisture unit - process water tank discharge time exceeded	<ul style="list-style-type: none"> Waste water pump not working 	<ul style="list-style-type: none"> Check and replace if necessary
	<ul style="list-style-type: none"> F095/F091 fuses faulty 	<ul style="list-style-type: none"> Check and replace if necessary
	<ul style="list-style-type: none"> K92 relay faulty 	<ul style="list-style-type: none"> Check and replace if necessary
	<ul style="list-style-type: none"> Waste water pipes blocked, faulty 	<ul style="list-style-type: none"> Check the lines
	<ul style="list-style-type: none"> S191 sensor "lower process water tank fill level" faulty 	<ul style="list-style-type: none"> Check and replace if necessary
		<ul style="list-style-type: none"> To acknowledge the error, either the moisture unit or the tunnel supply must be switched off and on again.

Error message	Cause	Remedy
Error 1389 Moisture unit - set value not reached	<ul style="list-style-type: none"> Incorrect settings in setup "options 2" 	<ul style="list-style-type: none"> Change or correct settings in setup "options 2"
	<ul style="list-style-type: none"> Nozzles contaminated 	<ul style="list-style-type: none"> Check nozzles for contamination and clean if necessary
	<ul style="list-style-type: none"> Water filter contaminated 	<ul style="list-style-type: none"> Check water filter for contamination and clean if necessary
	<ul style="list-style-type: none"> Water lines blocked, faulty 	<ul style="list-style-type: none"> Check the lines
	<ul style="list-style-type: none"> N190/N192 sensors "P1" "pressure before filter" and "P2" "pressure after filter" faulty 	<ul style="list-style-type: none"> Check and replace if necessary
Error 1390 Moisture unit motor suction system winding cover contact has tripped Attention: Only carry out the work and checks described with the voltage supply switched off (turn the main switch to position 0).	<ul style="list-style-type: none"> Ambient temperature too high 	<ul style="list-style-type: none"> Check the fan wheel cover for contamination Clean the fan wheel cover
	<ul style="list-style-type: none"> M1 process pump motor current too high 	
	<ul style="list-style-type: none"> Process pump motor sluggish, incorrectly connected or faulty 	

Error messages on the display

Error message	Cause	Remedy
Error 3018 FC communication moisture unit water pump	<ul style="list-style-type: none"> ■ Data connection cable broken or connection interrupted ■ Station address incorrectly set on FC 	<ul style="list-style-type: none"> ■ Check the bus connection cable and the shielding ■ Check that the station address is correctly set Parameter Y001 → see FC station addresses

Error message	Cause	Remedy
<p>Error 3038 OCx overcurrent FC moisture unit water pump</p> <p>Attention: Only carry out the work and checks described with the voltage supply switched off (turn the main switch to position 0).</p>	<ul style="list-style-type: none"> ■ M1 process pump motor sluggish, incorrectly connected or faulty 	<ul style="list-style-type: none"> ■ When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting) ■ Check the motor wiring for the M1 process pump for short-circuit, earth fault ■ Check the wiring for the M1 process pump (delta) ■ Connect the pump correctly ■ Replace the pump motor ■ Replace the corresponding FC ■ Compare your procedure with that in the manufacturer's documentation for the FC (chapter 6, troubleshooting) ■ Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.
	<ul style="list-style-type: none"> ■ Pump runs dry 	<ul style="list-style-type: none"> ■

Error messages on the display

Error message	Cause	Remedy
Error 3058 OCx overvoltage FC moisture unit water pump	■ Input voltage too high	■ When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting)
		■ Measure the input voltage. → Reduce the input voltage to the permissible value for the converter.
		■ Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.

Error message	Cause	Remedy
Error 3078 LU undervoltage FC moisture unit water pump	<ul style="list-style-type: none"> Input voltage too low, possible temporary power failure 	<ul style="list-style-type: none"> When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting)
	<ul style="list-style-type: none"> Main circuit input cable faulty, 	<ul style="list-style-type: none"> Check the input cables for the FC
	<ul style="list-style-type: none"> Clamp loose 	
	<ul style="list-style-type: none"> The frequency converter was switched on again too quickly 	<ul style="list-style-type: none"> Wait a little longer than last time before switching on the frequency converter
		<ul style="list-style-type: none"> Measure the input voltage. → Increase the input voltage to the permissible value for the converter.
		<ul style="list-style-type: none"> Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.

Error messages on the display

Error message	Cause	Remedy
Error 3098 Lin failure mains phase FC moisture unit water pump	<ul style="list-style-type: none"> ■ Process pump overload 	<ul style="list-style-type: none"> ■ When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting)
	<ul style="list-style-type: none"> ■ There should be 3-phases at the FC output, one or more phases are missing 	<ul style="list-style-type: none"> ■ Check the motor wiring
		<ul style="list-style-type: none"> ■ Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.
Error 3118 OH1 cooling element over-heating FC moisture unit water pump	<ul style="list-style-type: none"> ■ The temperature has increased around the cooling element 	<ul style="list-style-type: none"> ■ When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting)
	<ul style="list-style-type: none"> ■ The ambient temperature of the frequency converter exceeded the permissible values 	<ul style="list-style-type: none"> ■ Lower the ambient temperature for the frequency converter (e.g. ventilation in closed housing).
	<ul style="list-style-type: none"> ■ The interval for replacing the M090 switch cabinet fan was reached or the fan is faulty 	<ul style="list-style-type: none"> ■ Check and replace if necessary
	<ul style="list-style-type: none"> ■ F094 fuse is faulty 	<ul style="list-style-type: none"> ■ Check and replace if necessary
	<ul style="list-style-type: none"> ■ Ventilation blocked 	<ul style="list-style-type: none"> ■ Reduce the load

Error message	Cause	Remedy
		<ul style="list-style-type: none"> Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.
Error 3138 OH2 external error input FC? Attention: Only carry out the work and checks described with the voltage supply switched off (turn the main switch to position 0).	<ul style="list-style-type: none"> Overheating of one of the monitored motors (see e-plan) 	<ul style="list-style-type: none"> Determine which of the monitored motors is causing the error (measure the status of the winding cover contacts)
	<ul style="list-style-type: none"> Ambient temperature too high 	<ul style="list-style-type: none"> Provide adequate ventilation for the affected motor
	<ul style="list-style-type: none"> Motor current too high 	<ul style="list-style-type: none"> Check that the component is running smoothly and resolve the cause of the error
	<ul style="list-style-type: none"> Motor connected incorrectly 	<ul style="list-style-type: none"> Check the wiring and the cable connections of the winding cover contacts
	<ul style="list-style-type: none"> Motor sluggish or faulty 	<ul style="list-style-type: none"> Replace the motor
	<ul style="list-style-type: none"> Fan wheel jammed 	<ul style="list-style-type: none"> Check whether the fan wheel is jammed clear the jam if necessary
	<ul style="list-style-type: none"> Fan wheel cover is dirty 	<ul style="list-style-type: none"> Check whether the fan wheel cover is dirty clean the fan wheel cover if necessary
	<ul style="list-style-type: none"> Wiring of the winding cover contacts not correct 	<ul style="list-style-type: none"> Connect the winding cover contacts correctly

Error messages on the display

Error message	Cause	Remedy
		<ul style="list-style-type: none"> Once the cause of the error has been resolved, the error must be acknowledged on the FC by pressing the PRG/RESET button
Error 3158 OLU overload FC moisture unit water pump	<ul style="list-style-type: none"> The temperature inside the frequency converter is increasing to excessively high levels 	<ul style="list-style-type: none"> When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting).
	<ul style="list-style-type: none"> The ambient temperature of the frequency converter exceeded the permissible values 	<ul style="list-style-type: none"> Lower the ambient temperature for the frequency converter (e.g. ventilation in closed housing)
	<ul style="list-style-type: none"> The interval for replacing the fan was reached or the fan is faulty 	<ul style="list-style-type: none"> M090 switch cabinet fan or F094 fuse faulty.
	<ul style="list-style-type: none"> Ventilation blocked 	<ul style="list-style-type: none"> Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.
Error 3178 Er8 RS485 FC communication moisture unit water pump	<ul style="list-style-type: none"> Data connection cable broken or connection interrupted 	<ul style="list-style-type: none"> Check the bus connection cable and the shielding
	<ul style="list-style-type: none"> Station address incorrectly set on FC 	<ul style="list-style-type: none"> Check that the station address is correctly set Parameter Y001 → see FC station addresses
	<ul style="list-style-type: none"> The RS485 card on the FC is faulty 	<ul style="list-style-type: none"> Replace the RS485 card for the FC

Error message	Cause	Remedy
<p>Error 3198 OL1 motor current monitoring FC moisture unit water pump</p> <p>Attention: Only carry out the work and checks described with the voltage supply switched off (turn the main switch to position 0)</p>	<ul style="list-style-type: none"> ■ Load too high 	<ul style="list-style-type: none"> ■ When troubleshooting, proceed as instructed in the manufacturer's documentation for the FC (chapter 6, Troubleshooting)
		<ul style="list-style-type: none"> ■ Pump runs dry. → Check the water level in the process water tank.
		<ul style="list-style-type: none"> ■ Check the oil level in the pump, change oil if necessary.
		<ul style="list-style-type: none"> ■ Check the wiring of the pump motor for short-circuit, earth fault
		<ul style="list-style-type: none"> ■ Check the wiring for the corresponding pump motor (delta)
		<ul style="list-style-type: none"> ■ Connect the pump motor correctly
		<ul style="list-style-type: none"> ■ Replace the pump motor
		<ul style="list-style-type: none"> ■ Replace the corresponding FC
		<ul style="list-style-type: none"> ■ Compare your procedure with that in the manufacturer's documentation for the FC (chapter 6, troubleshooting)
		<ul style="list-style-type: none"> ■ Once the cause of the error has been resolved, the error must be acknowledged via the control panel by pressing the flashing motor symbol.

Error messages on the display

Error message	Cause	Remedy
Error 3218 Undefined error FC moisture unit water pump	■ All other possible FC error conditions	■ Contact your VEIT subsidiary
	■ Steam or moisture is escaping from the moisture unit	■ Check the lines and connections. Check the water levels in the process water and waste water tank.
	■ M196 motor "suction" faulty	■ Check and replace if necessary
	■ F094/F091 fuses faulty	■ Check and replace if necessary
	■ Poor spraying pattern	■ Increase ml setting on control panel
		■ Nozzles or lines contaminated
		■ Check function Y194 "valve bypass", K096 and Y192 "valve circulation standby"
	■ Entire moisture unit does not work	■ Check the voltages at the X090/X091/X092 input terminals
		■ If there is no voltage at X092 (24 V DC), check all the F090/F092/F093 fuses and replace if necessary
		■ If necessary, replace G090 power supply unit

6.2. ERRORS THAT ARE NOT INDICATED BY THE SYSTEM

Error	Cause	Remedy
Spray is delayed	<ul style="list-style-type: none"> ■ Circulation pressure set too low 	<ul style="list-style-type: none"> ■ Check the value set for the overflow valve ■ Min. set pressure 0.6 bar
Spraying is continuous	<ul style="list-style-type: none"> ■ Circulation pressure set too high 	<ul style="list-style-type: none"> ■ Check the value set for the overflow valve ■ Max. set pressure 0.8 bar
Backwash filter rinse cycle is not carried out	<ul style="list-style-type: none"> ■ Ball valve on backwash filter is closed 	<ul style="list-style-type: none"> ■ Open ball valve
	<ul style="list-style-type: none"> ■ Solenoid valve faulty 	<ul style="list-style-type: none"> ■ Check solenoid coil and replace if necessary
Water leaks through the door	<ul style="list-style-type: none"> ■ Door locking system damaged 	<ul style="list-style-type: none"> ■ Check and replace if necessary
	<ul style="list-style-type: none"> ■ Sealing damaged 	<ul style="list-style-type: none"> ■ Check and replace if necessary
	<ul style="list-style-type: none"> ■ Suction not working 	<ul style="list-style-type: none"> ■ Contact VEIT service
Water overflow into neighbouring units or damp roller covers	<ul style="list-style-type: none"> ■ Suction not working 	<ul style="list-style-type: none"> ■ Contact VEIT service
	<ul style="list-style-type: none"> ■ Suction slots dirty 	<ul style="list-style-type: none"> ■ Clean suction slots
	<ul style="list-style-type: none"> ■ Fan wheel dirty 	<ul style="list-style-type: none"> ■ Clean fan wheel
	<ul style="list-style-type: none"> ■ Exhaust air pipe is too small 	<ul style="list-style-type: none"> ■ Check exhaust air system, redimension if necessary
Moisture blotches on the garment surface	<ul style="list-style-type: none"> ■ Nozzles blocked 	<ul style="list-style-type: none"> ■ Check spraying pattern, clean nozzles if necessary
	<ul style="list-style-type: none"> ■ Roller speed set too high 	<ul style="list-style-type: none"> ■ Synchronise the roller speed with the conveyor speed

Error, cause, remedy

Error	Cause	Remedy
Moisture blotches on the garment surface	■ Suction system not working	■ Clean suction slots
		■ Clean fan wheel
		■ Check direction of rotation of suction motor
		■ Exhaust air pipe drainage, clean/install if necessary

6.3. ERROR, CAUSE, REMEDY



The facts and information listed as **errors** in this chapter are described in such a way that the remedy may be understood by a **qualified person** (see definitions in chapter 2.2) in

- Electrics/electronics
- Mechanics/maintenance

The machine components mentioned in the column "Cause" are detailed in the supplied electric circuit and pneumatic diagrams.

These members of staff must be equipped with the necessary tools and test equipment.

If the remedy described here is not successful, please contact the Veit GmbH service department,

7. EMERGENCY

In case of danger, an emergency shut-down must be carried out.

In case of emergency:

- Activate the EMERGENCY STOP equipment or
- Switch off main switch in the switch cabinet.

The following procedure is triggered:

- The system will immediately stop

In **the event of a fire**, switch the unit and all supplies off (electric, compressed air, water).



Before operating the unit:

- Find out where the fire extinguisher is located, □
- Learn how to use the fire extinguisher, □
- Make sure you know how to report fires without delay.

Inflammable liquids and mixtures of liquids and gases (e.g. oil/oxygen mixture) pose fire hazards.

Fire extinguishers to be used in accordance with fire classification DIN EN 2:

- Dry powder fire extinguishers for class A, B, and C fires designed for use on solid combustibles, flammable liquids and gases,
- Dry powder fire extinguishers for class D fires designed for use on combustible metals,
- Carbon dioxide fire extinguishers designed for use on flammable liquids, gases and solid combustibles.

8. DISASSEMBLY/DISPOSAL

The moisture unit is mainly built of steel (apart from the electrical equipment) and must be disposed of in accordance with applicable local environmental regulations.

Oil and cleaning agents must also be disposed of in accordance with the local regulations.

Residues as well as buck covers must be disposed of in accordance with the instructions provided by the manufacturer or the local regulations.

The process water and additive must be removed before the moisture unit is disassembled:

- Avoid contact with eyes and skin
- Wear protective clothing
- Additive must not enter the sewage system
- Dispose of the additive in accordance with local regulations

9. SPARE PARTS LISTS



We would like to emphasise that we cannot test and release spare parts and accessories which have not been supplied by us. The fitting and/or use of such products may therefore, under certain circumstances, have a negative effect on the construction characteristics of the unit.

Veit GmbH will accept no liability for any damage that arises due to the use of non-original parts or accessories.

Ordering spare parts:

When ordering in writing or on the phone, please always quote:

- Type of machine (see cover)
- Article number of the relevant component.

Address

Manufacturer

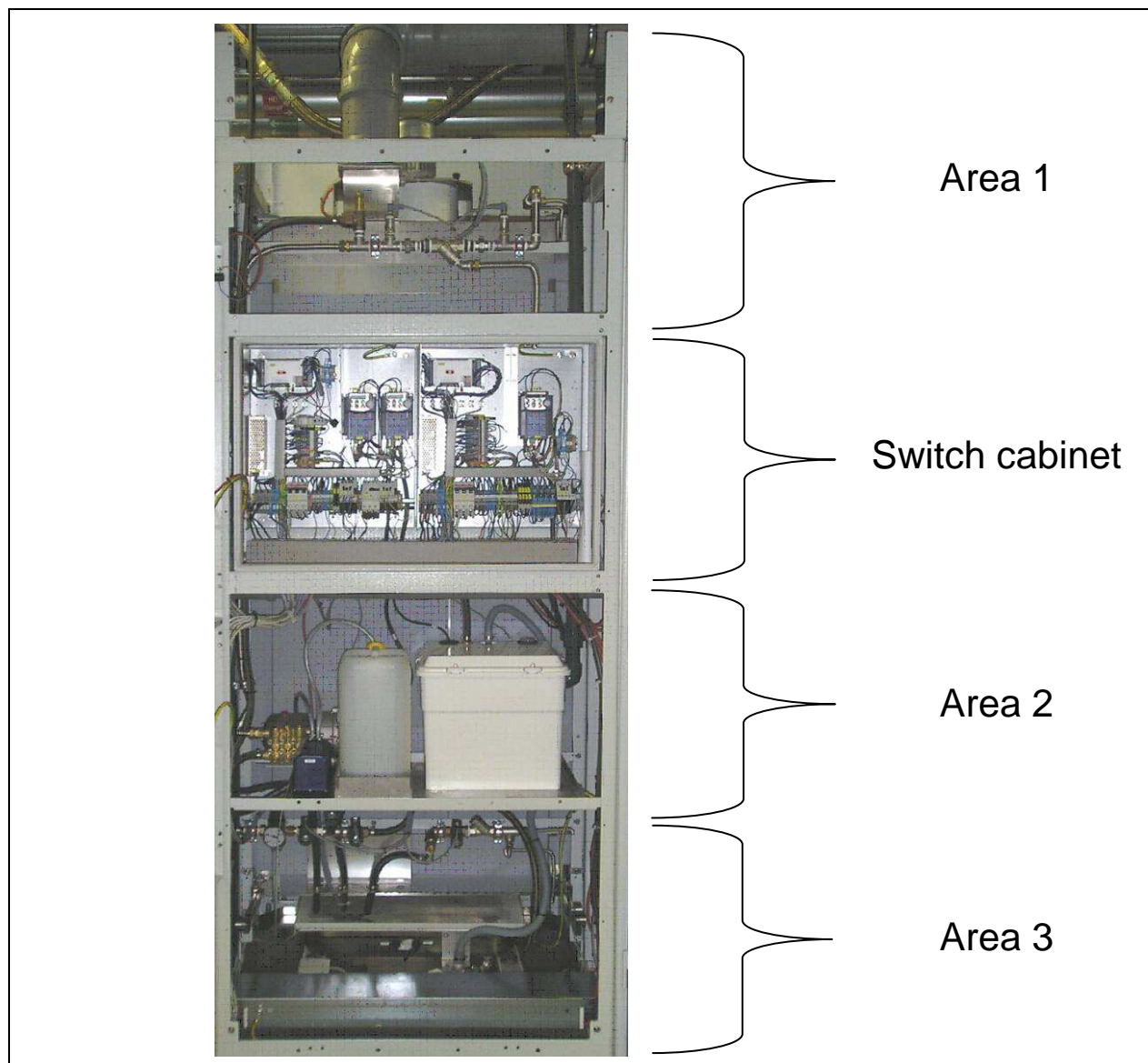
Service

Veit GmbH

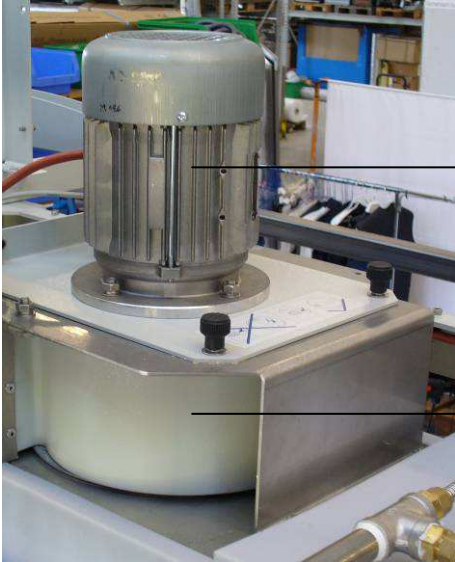
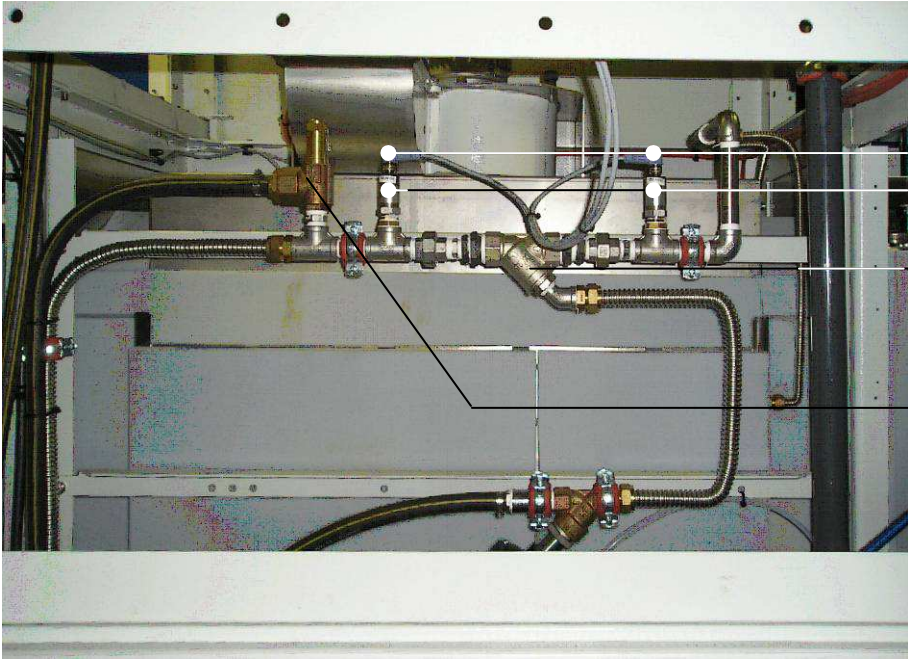

Justus-von-Liebig-Str. 15
D-86899 Landsberg am Lech, Germany
Tel.: +49 (0) 8191/479-0
Fax: +49 (0) 8191/479-149
E-mail: info@veit.de
www.veit-group.com

9.1. ERSATZTEILLISTE / SPARE PARTS LIST


9.1.1. Overview



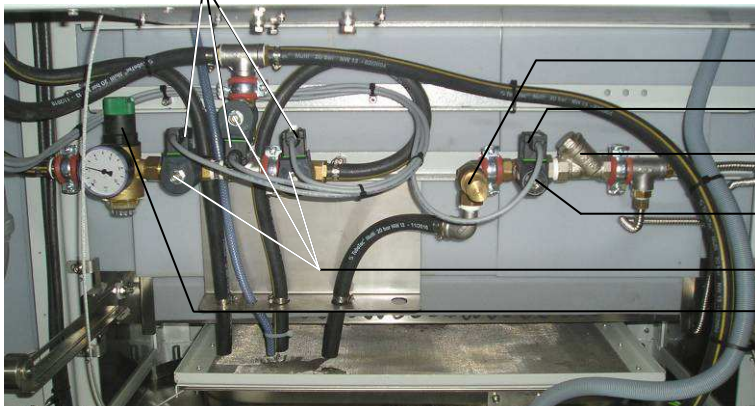
Area 1

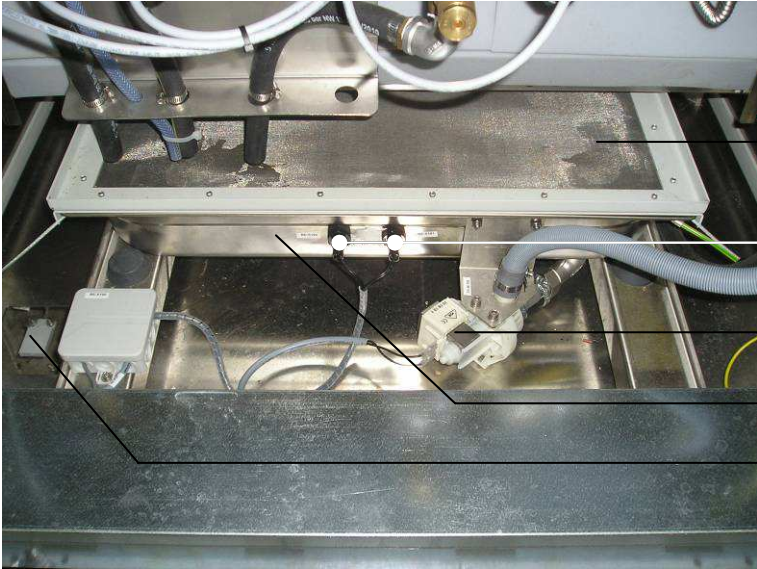

Bild / Picture	Pos.
	<p>211</p> <p>313</p>
	<p>207</p> <p>208</p> <p>309</p> <p>308</p>
	<p>303</p>

Area 2



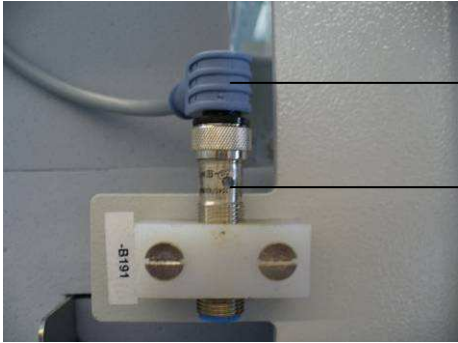
Bild / Picture	Pos.
	306
	307
	205
	206

Area 3


Bild / Picture	Pos.
	204
	310
	203
	315
	302
	305
	304

	<p>314</p> <p>201</p> <p>200</p> <p>300</p> <p>202</p>
	<p>301</p>

Revisionsseite

Bild / Picture	Pos.
	<p>311</p> <p>312</p>
	<p>311</p>
	<p>209</p> <p>210</p>

Technikseite Ventil

Bild / <i>Picture</i>	Pos.
	212

9.1.2. Ersatzteilliste Elektrik / Spare Parts List *Electric*

Pos.	Artikel-Nr. Article-No.	Bezeichnung	Designation
200	137972	Laugenpumpe DPS-25	DPS-25 lye pump
201	130441	Schwimmerschalter RSF40 mit Kabel	RSF40 float switch with cable
202	131141	Niveausensor kapazitiv	Capacitive level sensor
203	131259	Ventilstecker 24V+Entstörung	Valve connector 24 V+interference suppression
204	124937	Ventilstecker 230V+Entstörung	Valve connector 230 V+interference suppression
205	130502	Hochdruckpumpe 20 bar WS	High-pressure pump 20 bar
206	4236520130	Pumpengruppe	Pump assembly
207	124595	Anschlußkabel 5m	Connecting cable 5 m
208	131140	Analoger Drucksensor 1-16bar	Analogue pressure sensor 1-16 bar
209	4837110750	Anschlußkabel 5m	Connecting cable 5 m
210	123552	Näherungsschalter SA4mm	Proximity switch SA 4 mm
211	112779	Motor 0,55kW/180-254V310-440V/50	Motor 0.55 kW/180-254 V 310-440 V/50
212	126752	5/2 Wegeventil VQZ-M5-C6	5/2 directional control valve VQZ-M5-C6

9.1.3. Ersatzteilliste Schaltschrank/ Spare Parts List Switch cabinet

Kenn- zeichen Schalt- plan/ Marking circuitplan	Artikel-Nr. Article-No.	Bezeichnung	Designation
A090	122313	Steuereinheit	control unit
G090	9290751080	Schaltnetzteil S-60-24	power supply S-60-24
F091	116292	Sicherungsautomat B16A 3pol.	cutout B16A 3pol.
F090 F092 F093 F094	9230350850	Sicherungsklemme 4mm ²	fuse clamp 4mm ²
F094	9290550150	SICHERUNG 0,63A MTR 5X20	fuse 0,63A mtr 5x20
F092 F093	9290550160	SICHERUNG 1,25A TR 5X20	fuse 1,25A delay 5x20
F090	9290550030	SICHERUNG 2,0A TR 5X20	fuse 2,0A delay 5x20
U090	9290950660	Frequenzumrichter 1ph. 0,4kW	frequency convertor 1ph. 0,4kW
U090	9290950650	RS485-Busschnittstelle FU	RS485- interface FC
Z090	9290752010	Filter FU 0,4kW	filter FC 0,4kW
R090	124167	Temperaturfühler Schaltschrank	temperature sensor control cabinet
K090 K091 K092 K093	9290750740 9290750730 9280151880	Relais 40.31 Relaissockel 5pol. Freilaufdiode	Relay 40.31 Relay socket 5 pole Free-wheeling diode
K093	9290752080 9290752100	Schütz 3RT1016-2BB41 Varistor	Contactor 3RT1016-2BB41 Varistor

9.1.4. Ersatzteilliste Mechanik / Spare Parts List Mechanic

Pos.	Artikel-Nr. Article-No.	Bezeichnung	Designation
300	130408	Brauchwassertank kpl. montiert	Process water tank assembly mounted
301	130515	Fußventil ½"	Foot valve ½"
302	130499	EM Ventil 25 bar ½" H ₂ O	EM valve 25 bar ½" H ₂ O
303	135524	Hochdruckventil DN15 pneumatisch	DN15 pneumatic high-pressure valve
304	130514	Druckminderer ½"	Pressure reducer ½"
305	137971	EMV NW 7,0 230V/60Hz	EMV NV 7.0 230 V/60 Hz
306	137970	Abwassertank mit Pumpe	Waste water tank with pump
307	9380130180	Plastikkanister 13l o. Deckel	Plastic canister 13 l without cover
308	130498	Überdruckventil 16bar	Pressure control valve 16 bar
309	130500	Wasserfilter 100 ym WS	Water filter 100 ym
310	130518	Überströmventil	Overflow valve
311	138065	Nebeldüse	Spray nozzle
312	130507	Flachdichtung Solar DN8	Solar gasket DN8
313	120952	Gebläserad	Fan wheel
314	130413	Flusensieb BE kpl.	Fluff filter assembly
315	133914	Wasserfilter 3/4" 50µm	Water filter 3/4" 50 µm

10. APPENDIX

10.1. SAFETY DATA SHEET

Seite: 1/5

kreussler co

Sicherheitsdatenblatt
gemäß 1907/2006/EG, Artikel 31

Druckdatum: 15.04.2009

überarbeitet am: 15.04.2009

1 Bezeichnung des Stoffes/der Zubereitung und des Unternehmens

- **Angaben zum Produkt**
- **Handelsname:** Ottalin ODX
- **Artikelnummer:** 2309
- **Verwendung des Stoffes / der Zubereitung**
Geruchsabsorber für Wäsche zur Entfernung von Fremdgerüchen.
- **Hersteller/Lieferant:**
Chemische Fabrik Kreussler & Co. GmbH
Postfach 120454
D-65082 Wiesbaden
- **Auskunftgebender Bereich:**
Abteilung TQM
Herr Vogel
+49 (0) 611 9271-175
Stefan.Kopp@kreussler.com
- **Notfallauskunft:** +49 (0) 611 9271-0

2 Mögliche Gefahren

- **Gefahrenbezeichnung:** Entfällt.
- **Besondere Gefahrenhinweise für Mensch und Umwelt:**
Das Produkt ist nicht kennzeichnungspflichtig auf Grund des Berechnungsverfahrens der "Allgemeinen Einstufungsrichtlinie für Zubereitungen der EG" in der letztgültigen Fassung.
- **Klassifizierungssystem:**
Die Klassifizierung entspricht den aktuellen EG-Listen, ist jedoch ergänzt durch Angaben aus der Fachliteratur und durch Firmenangaben.

3 Zusammensetzung/Angaben zu Bestandteilen

- **Chemische Charakterisierung**
- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

· Gefährliche Inhaltsstoffe:

	Duftstoffe		
CAS: 110615-47-9 Polymer	Degluco-pyranose oligomer C10 – C16 alkylglucosid	Xi, N; R 43-51/53 Xi; R 41	≤1 % 1,0-5,0%
CAS: 69227-21-0 Polymer	Alkohols C12 – C18 ethoxyliert, propoxyliert	Xi; R 38	1,0-5,0%
CAS: 161074-93-7 NLP: 500-529-1	D-Glucopyranose, Oligomere, 2-ethylhexyl glycosid	Xi; R 41	1,0-5,0%

· Inhaltsstoffe gemäß der Verordnung über Detergenzien EG 648/2004

nichtionische Tenside	5 - 15%
Duftstoffe, BENZISOTHIAZOLINONE, METHYLISOTHIAZOLINONE	< 5%

· Zusätzliche Hinweise:

Der Wortlaut der angeführten Gefahrenhinweise ist dem Kapitel 16 zu entnehmen.

4 Erste-Hilfe-Maßnahmen

- **Allgemeine Hinweise:** Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
- **Nach Einatmen:** Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.
- **Nach Hautkontakt:**
Mit warmem Wasser abspülen.
Bei andauernder Hautreizung Arzt aufsuchen.
- **Nach Augenkontakt:**
Augen mehrere Minuten bei geöffnetem Lidspalte unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.

(Fortsetzung auf Seite 2)



Sicherheitsdatenblatt gemäß 1907/2006/EG, Artikel 31

Druckdatum: 15.04.2009

überarbeitet am: 15.04.2009

Handelsname: Ottalin ODX

(Fortsetzung von Seite 1)

- **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.

* 5 Maßnahmen zur Brandbekämpfung

- **Geeignete Löschmittel:**
CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser im Vollstrahl
- **Besondere Gefährdung durch den Stoff, seine Verbrennungsprodukte oder entstehende Gase:**
Produkt selbst brennt nicht.
- **Besondere Schutzausrüstung:** Die bei Bränden üblichen Schutzausrüstung verwenden.
- **Weitere Angaben**
Produkt selbst brennt nicht.
Brandrückstände und kontaminiertes Löschwasser müssen entsprechend den behördlichen Vorschriften entsorgt werden.

* 6 Maßnahmen bei unbeabsichtigter Freisetzung

- **Personenbezogene Vorsichtsmaßnahmen:**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **Umweltschutzmaßnahmen:**
Mit viel Wasser verdünnen.
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **Verfahren zur Reinigung/Aufnahme:**
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
- **Zusätzliche Hinweise:**
Es werden keine gefährlichen Stoffe freigesetzt.
Informationen zur sicheren Handhabung siehe Kapitel 7.
Informationen zur persönlichen Schutzausrüstung siehe Kapitel 8.
Informationen zur Entsorgung siehe Kapitel 13.

7 Handhabung und Lagerung

- **Handhabung:**
- **Hinweise zum sicheren Umgang:** Keine besonderen Maßnahmen erforderlich.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Keine.
- **VCI Lagerklasse:** 12
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -

* 8 Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstung

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Punkt 7.

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

64-17-5 Ethanol (1,0-5,0%)

AGW 960 mg/m³, 500 ml/m³
2(II);DFG, Y

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

- **Persönliche Schutzausrüstung:**

- **Allgemeine Schutz- und Hygienemaßnahmen:**

Die üblichen Vorsichtsmaßnahmen beim Umgang mit Chemikalien sind zu beachten.
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

(Fortsetzung auf Seite 3)



Sicherheitsdatenblatt gemäß 1907/2006/EG, Artikel 31

Druckdatum: 15.04.2009

überarbeitet am: 15.04.2009

Handelsname: Ottalin ODX

(Fortsetzung von Seite 2)

- Vor den Pausen und bei Arbeitsende Hände waschen.
- Berührung mit den Augen und der Haut vermeiden.
- Bei der Arbeit nicht essen, trinken, rauchen, schnupfen.
- Nach der Arbeit und vor den Pausen für gründliche Hautreinigung sorgen.

- **Atemschutz:** Nicht erforderlich.
- **Handschutz:**



Schutzhandschuhe

- **Handschuhmaterial**
Handschuhe aus PVC oder PE
Empfohlene Materialstärke: $\geq 0,4$ mm
- **Nicht geeignet sind Handschuhe aus folgenden Materialien:**
Handschuhe aus Leder
Handschuhe aus dickem Stoff
- **Augenschutz:**



Dichtschließende Schutzbrille

- **Körperschutz:** Arbeitsschutzkleidung

* 9 Physikalische und chemische Eigenschaften

· Allgemeine Angaben	
Form:	Flüssig
Farbe:	Hellgelb
Geruch:	Angenehm
· Zustandsänderung	
Schmelzpunkt/Schmelzbereich:	Nicht bestimmt.
Siedepunkt/Siedebereich:	Nicht bestimmt.
· Flammpunkt:	66°C
· Selbstentzündlichkeit:	Das Produkt ist nicht selbstentzündlich.
· Explosionsgefahr:	Das Produkt ist nicht explosionsgefährlich.
· Dampfdruck:	Nicht bestimmt.
· Dichte bei 20°C:	1,01 g/cm ³
· Löslichkeit in / Mischbarkeit mit Wasser:	Vollständig mischbar.
· pH-Wert bei 20°C:	8
· Lösemittelgehalt:	
Organische Lösemittel:	3,0 %

10 Stabilität und Reaktivität

- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **Gefährliche Reaktionen:** Keine gefährlichen Reaktionen bekannt.
- **Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

(Fortsetzung auf Seite 4)

D —



Sicherheitsdatenblatt gemäß 1907/2006/EG, Artikel 31

Seite: 4/5

Druckdatum: 15.04.2009

überarbeitet am: 15.04.2009

Handelsname: Ottalin ODX

(Fortsetzung von Seite 3)

11 Toxikologische Angaben

- **Akute Toxizität:**
- **Einstufungsrelevante LD/LC50-Werte:**
Akute orale Toxizität: >2000mg/kg
berechnet nach den Daten der Inhaltsstoffe.
- **Primäre Reizwirkung:**
- **an der Haut:** Keine Reizwirkung.
- **am Auge:** Keine Reizwirkung.
- **Sensibilisierung:** Keine sensibilisierende Wirkung bekannt.
- **Zusätzliche toxikologische Hinweise:**
Das Produkt ist nicht kennzeichnungspflichtig aufgrund des Berechnungsverfahrens der Allgemeinen Einstufungsrichtlinie für Zubereitungen der EG in der letztgültigen Fassung.
Bei sachgemäßem Umgang und bestimmungsgemäßer Verwendung verursacht das Produkt nach unseren Erfahrungen und den uns vorliegenden Informationen keine gesundheitsschädlichen Wirkungen.

* 12 Umweltspezifische Angaben

- **Angaben zur Elimination (Persistenz und Abbaubarkeit):**
- **Sonstige Hinweise:** Das Produkt ist biologisch leicht abbaubar.
- **Allgemeine Hinweise:**
Das in dieser Zubereitung enthaltene Tensid erfüllt (Die in dieser Zubereitung enthaltenen Tenside erfüllen) die Bedingungen der biologischen Abbaubarkeit wie sie in der Verordnung (EG) Nr. 648/2004 über Detergenzien festgelegt sind. Unterlagen, die dies bestätigen, werden für die zuständigen Behörden der Mitgliedsstaaten bereit gehalten und nur diesen entweder auf ihre direkte oder auf Bitte eines Detergentienherstellers hin zur Verfügung gestellt.
Produkt nicht unkontrolliert in die Umwelt gelangen lassen.

13 Hinweise zur Entsorgung

- **Produkt:**
- **Empfehlung:** Entsorgung in Übereinstimmung mit Örtlichen-, Landes- und Bundesvorschriften.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Die Verpackung kann nach Reinigung wiederverwendet oder stofflich verwertet werden.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

14 Angaben zum Transport

- | |
|--|
| · Landtransport ADR/RID und GGVS/GGVE (grenzüberschreitend/Inland): |
| · ADR/RID-GGVS/E Klasse: - |
| · Seeschifftransport IMDG/GGVSee: |
| · IMDG/GGVSee-Klasse: - |
| · Marine pollutant: Nein |
| · Lufttransport ICAO-TI und IATA-DGR: |
| · ICAO/IATA-Klasse: - |

15 Angaben zu Rechtsvorschriften

- **Kennzeichnung nach EWG-Richtlinien:**
Die beim Umgang mit Chemikalien üblichen Vorsichtsmaßnahmen sind zu beachten.
Das Produkt ist nach EG-Richtlinien/GefStoffV nicht kennzeichnungspflichtig.

(Fortsetzung auf Seite 5)

D —



Sicherheitsdatenblatt gemäß 1907/2006/EG, Artikel 31

Druckdatum: 15.04.2009

überarbeitet am: 15.04.2009

Handelsname: Ottalin ODX

(Fortsetzung von Seite 4)

· Nationale Vorschriften:**· Wassergefährdungsklasse:** WGK 1 (Selbsteinstufung): schwach wassergefährdend.

16 Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

Die Angaben der Position 4 bis 8 und 10 bis 12 sind teilw. nicht auf den Gebrauch und die ordnungsgem. Anwendung des Produktes bezogen (siehe Gebrauchs/Produktinformation), sondern auf das Freiwerden größerer Mengen bei Unfällen und Unregelmäßigkeiten.

Die Angaben beschreiben ausschließlich die Sicherheitserfordernisse des Produktes/der Produkte und stützen sich auf den heutigen Stand unserer Kenntnisse.

Nichtionische Tenside können trotz gleicher CAS-Nr unterschiedliche Eigenschaften und Einstufungen haben.

· Relevante R-Sätze

38 Reizt die Haut.

41 Gefahr ernster Augenschäden.

43 Sensibilisierung durch Hautkontakt möglich.

51/53 Giftig für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben.

· Datenblatt ausstellender Bereich:

Abteilung TQM

Herr Vogel

+49 (0) 611/9271-175

· Ansprechpartner: Herr Vogel**· * Daten gegenüber der Vorversion geändert**

D —

Stichwortverzeichnis

A

Accessories	61
Address	61
Allgemeine Safety instructions	18
Appendix.....	71
Authorised person.....	20

B

Basic setting	36
---------------------	----

C

Control panel - visualisation	23
-------------------------------------	----

D

Disassembly	59
Disposal	59

E

Emergency	57
Error	56
Error messages on the display.....	39
Error, cause, remedy	56
Errors that are not indicated by the system.....	55
Ersatzteilliste.....	62
Ersatzteilliste Elektrik.....	68
Ersatzteilliste Mechanik.....	70
Ersatzteilliste Schaltschrank	69

F

Faults.....	39
Fire	57
Function.....	4

I

Installation	8
Intended use.....	1

K

Keypad.....23

M

Maintenance31

Maintenance and inspection table.....32

Manual mode 1 moisture unit.....28

Motor data.....35

O

Operating mode display24

Ordering spare parts61

Overview of the unit 2

P

Potential dangers21

Product-related data 6

Pump data35

Q

Qualified person.....20

R

Rinsing the filter25

S

Safety17

Safety data sheet.....71

Safety measures.....19

Safety valves pressure test.....35

Scope of delivery14

Setting

 Flow pressure Water.....36

Setup setting options 226

Spare Parts List Elektric.....68

Spare Parts List Mechanic70

Spare parts lists61

T

Technical data	6
Trained person.....	20
Troubleshooting	39

W

Warning symbols	17
Water supply.....	8, 9, 10