Con	ntents		
1. P	Product2		
1	I.1 Product description2		
1	1.2 Delivery contents2	VI	TO
2. L	egal information2		
3. P	Preface		CERMANNY
	General notes3		GERMANT
5. S	afety information / symbol explanation3		
6. V	/ITO® 60 / VITO® 90 usage4		
	5.1 Designated use4		
е	5.2 Non designated use4		
7. P	Preparation before use4		
7	7.1 Safety guidelines4		
7	7.2 Storage of VITO [®] 4		
7	7.3 Filtration duration4		
7	7.4 Checking the factory settings5		
7	7.5 Programming the cycle time5		
7	7.6 Activate / deactivate the beep and set sound level (VITO [®] 90 only)5		
8. F	iltration process5		
8	3.1 Requirements5		
8	3.2 Operation notes5		
8	3.3 Starting the filtration process6		
8	3.4 Finishing the filtration process prematurely6	,	
	afety functions6		
ç	9.1 Tilt and vibration protection (VITO [®] 90 only)6		
ç	9.2 Acoustic signal (VITO [®] 90 only)6		
9	9.3 Temperature control6		
g	9.4 Memory6		
10.	Care and servicing7	,	
1	10.1 Notes7		
1	10.2 Cleaning preparation7		
1	10.3 Manual cleaning7		
1	10.4 Machine cleaning7		
	Polyester filter change7		
12.	Accessories		
	Waste disposal		
	13.1 Packaging disposal9		
1	2.2 Filter disposal9		
	L3.3 Device disposal9		
	L3.4 WEEE (Waste Electrical and Electronic Equipment) Statement9		
	Storage recommendations for polyester filters9		
	Troubleshooting10		
	Technical data11		
17.	Declaration of conformity12		

VITO

1. Product



1.1 Product description

- 1. Cable protection
- 2. Power cord
- 3. Touch panel
- 4. Electrical unit
- 5. Filter box Front vent
- 6. Drip pan
- 7. Pump-filter unit
- 8. Star handles (on both sides)
- 9. Vent slots
- 10. Handles
- 1a Start / Stop button
- 2a. Power indicator (red LED)
- 3a. Filtration indicator (green LED)

2. Legal information

VITO AG

Eltastrasse 6 78532 Tuttlingen (Germany) Phone: +49 (0) 7461 / 1508050 Fax: +49 (0) 7461 / 1508051 info@vito-industrial.com www.vito-industrail.com CEO:

Andreas Schmidt (MBA, Dipl.-Wirt.Ing) Headqarter: Tuttlingen, Germany Registry court: Stuttgart HRB 760227



1.2 Delivery contents

- VITO[®] Filtration system system
- User manual
- · Warranty card
- Quick guide
- Drip pan



In cooperation with: University Albstadt-Sigmaringen (Germany) - Industrial engineering with business studies -Jakobstrasse 1 72458 Albstadt (Germany)

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3. Preface

Dear VITO® customer,

thank you for choosing this product by VITO AG.

Please read the manual carefully to familiarize yourself with the handling of your VITO[®] Filtration system for coolant lubricants, oil and watery solutions to ensure proper use. Your local dealer and the customer service are available to answer your questions and provide support. We are grateful for comments and suggestions concerning the VITO[®] Filtration system for coolant lubricants, oil and watery solutions and / or the manual. (Please find contact information contained in this manual.)We hope that you enjoy your VITO[®] Filtration system for coolant lubricants, oil and watery solutions for a long time and increase the efficiency in your establishment. Wit h VITO[®] you own a high-quality lubricants, oil and watery solutions filter system from which you can expect a long life and efficient support for your work.

4. General notes

These operation instructions contain important information about the handling of the VITO[®] Filtration system for coolant lubricants ,oil and watery solutions. Read this information carefully before using your VITO[®]. Keep this manual available for more information. VITO[®] is an coolant lubricants ,oils and watery solutions filtration system, designed for the cleaning of coolant lubricants ,oil / watery solutions. With VITO[®], the coolant lubricants ,oils and watery solutions. With VITO[®], the coolant lubricants ,oils and watery solutions. Filtering with VITO[®] prolongs the performance of your industrial fluids.

The VITO[®] polyester filter can be used several times before changing. Once the coolant lubricant ,oil and watery solution stops flowing through the front vents, replacing the filter. Used filters should be disposed according to local regulations.

5. Safety information / symbol explanation

Wrong treatment of the VITO[®] can lead to dangers and injuries. The following should be observed. Possible dangers are marked with these signs:



Warning Danger of injury if this is not observed

Danger of slipping if coolant lubricants oil and watery solutions is spilled to the floor



Caution Hand protechtion must be worn



Caution foot protection must be worn



Operation instruction Information about the handling of VITO[®] Filtration system



Risk of electric shock by incorrect use or case opening



Caution

Caution Safety goggles must be worn

Important security tip



Caution Protective clothing must be worn



6. VITO[®] 60 / VITO[®] 90 usage

6.1 Designated use

- VITO[®] is designed for cleaning and ventilation of industrial basins.
- Follow the safety instructions! Filtration is only possible for the coolant lubricants ,oil and watery solutions.
- VITO[®] should only be used by suitably trained staff!
- VITO[®] Filtration system for coolant lubricants ,oil and watery solutions designed for intermittent duty

6.2 Non designated use

The nonobservance of the contents described in the manual can lead to damage or malfunction of VITO®

- Do NOT use or store VITO[®] outside! It will be damaged by rain or humidity!
- VITO[®] is **NOT** designed for continuous duty! Risk of overheating/fire hazard!
- Do NOT cover vent slots (VITO[®] 60 / VITO[®] 90) (9)!
- Do NOT touch the power cord (2) with wet hands!
- Do NOT jam or bend the line cord (2)!
- The use of VITO[®] is strictly prohibited for children!
- VITO® must NOT be operated on a connection other than protection class!

No liability will be accepted for improper use!

7. Preparation before use

7.1 Safety guidelines

- Don't plug the VITO[®] machine when you get it immediately for the first time wait until VITO[®] can acclimate
- IN SOME CASES BEFORE START WORKING WITH VITO® YOU NEED TO TURN OFF THE MACHINE.
- Clean VITO® before using it the first time. (See chapter 10 Care and servicing)
- Make sure that the local voltage is conform to the voltage on the type label of VITO®!
- DO NOT MOVE VITO[®] WHILE FILTRATION IS IN PROGRESS!
- Do NOT get the power cord in contact with coolant lubricants oil and watery solutions! (2)
- The maximum operating temperature is 175°C/357°F!
- Do NOT run the pump-filter unit (9) outside basins or machine tanks!
- To lift or transport VITO[®] only pick it up using the black handles (10)!

7.2 Storage of VITO®

The handles of the drip pan (6) can be fastened optionally at the short or the long side.

- Place VITO[®] always into the drip pan (6), after use or for transport
- Store VITO[®] only in the drip pan (6)
- Allowed ambient / storage temperature: +10 to +35°C (60° to 95°F)

7.3 Filtration duration

The factory settings for one filtration cycle of VITO[®] is:

- VITO® 60: 4,5 min (adjustable)
- VITO[®] 90: 4,5 min (adjustable)

Upon reaching the maximum number of cycles, VITO[®] must cool down before using for the next filtration. **Cool down phases**

• up to 2 hours:

VITO® 60 and VITO® 90 (if power cord (8) is pulled out)

• approximately 15 min

VITO® 60 and VITO® 90 (if power cord (8) is plugged in)

If the temperature of $\mathsf{VITO}^{\circledast}$ is too high, the overheat protection will activate.

- (VITO® 90 has additional acoustic beep signal)
- Power Indicator (red LED) (2a) "Power" is flashing.
- The filtration process will stop.

7.4 Checking the factory settings

Pressing the start/stop button (1a) will be confirmed by one flash of the Power indicator (red LED) (2a)

- 1. Press and hold the start/stop button (1a)
- 2. Plug VITO® in.
- 3. Hold the start/stop button (1a) for 5 seconds. (VITO® 90 will beep)
- 4. Programmed cycle time is displayed by flashing of the indicators
- 5. The red LED (2a) indicates 1 minute per flash
 - The green LED (3a) indicates 30 seconds per flash

```
e.g. 4x red = 4 min
1x green = 30 seconds
```

= duration of filter cycle: 4min 30sec.

7.5 Programming the cycle time

To re-program the cycle time, start with the steps in 7.4 checking the factory settings, then:

- 1. Press start/stop button (1a) instantly after cycle length was displayed
- Press start/stop button (1a) to increase the cycle time by 30 sec. (Re-program starts at 0 sec!)

(e.g. press 3x for 1,5min etc.)

- Once the designated cycle time is set, wait for the green LED (3a) to flash once (VITO[®] 90 beeps).
- 4. Pull out the power cord (8).

The new cycle time is now saved.

7.6 Activate / deactivate the beep and set sound level (VITO® 90 only)

To set the sound level of the beep, start with the steps in 7.4 checking the factory settings, then:

1. After the cycle time is displayed wait for the green LED (3a) to flash (VITO[®] 90 will beep additionally)

2. Set the beeper status using the start/stop button (1a)

3. The indicators show the selected status:Red

LED (2a) = beeper off Green LED (3a) = half volume Red LED + green LED = full volume (2a) + (3a) Pull out the power cord (2). **The new settings are now saved.**

8. Filtration process

8.1 Requirements

VITO[®] 60 / 90

• Insert polyester fibre filter into the pump-filter unit (7) (See chapter 11 Polyester filter change)

- Latch filter-lid
- Put Electrical unit (6) on pump-filter unit (7)
- Tighten the star handles (8).

8.2 Operation notes

\bullet IN SOME CASES BEFORE START WORKING WITH VITO $^{\circ}$ YOU NEED TO TURN OFF THE MACHINE.

- Filtration cycle can be stopped at any time by pressing Start/Stop button (1a).
- Do NOT move VITO[®] while filtration is in progress!
- Only use VITO[®] in a straight position!

• The Power indicator (red LED) (2a) and Filtration indicator (green LED) (3a) are lit during filtration process.



VITO₽

8.3 Starting the filtration process

- 1. Take VITO[®] out of the drip pan (6)
- 2. Make sure that the polyester filter is in the pump filter unit (7)
- 3. Put VITO[®] into the industrial basin or machine tank .
- 4. Ensure a secure standing (for holding brackets see chapter 12 Accessories)
- Check the coolant lubricant oil level or watery solutions level (The coolant lubricant oil level or watery solutions level must be between the MIN and MAX marking of the pump-filter unit (7)!)
- Plug in VITO[®]: Power indicator (red LED) (2a) is active

Cooling fan is running (VITO[®] 60 / VITO[®] 90)

- 7. Press start/stop button (1a)
- 8. Filtration indicator (green LED) (3a) is lit during the filtration.

8.4 Finish the process prematurely

- 1. Press start/stop button (1a)
- Filtration indicator (green LED) (3a) is off
- 2. Keep power cord (2) VITO[®] 60 / VITO[®] 90 plugged in!
- 3. Lift VITO[®], let the coolant lubricant, oil or watery solution flow back in the industrial basin
- 4. Place VITO[®] in the drip pan (4)

9. Safety functions

9.1 Tilt and vibration protection (VITO[®] 90 only)

If VITO[®] 90 is tilted more than 15°, topples over or vibrates too strong because of bad placement or mechanical defect, the machine will switch off. Both indicators start flashing and a repeating beep will be heard.

9.2 Acoustic signal (VITO[®] 90 only)

At the end of each cycle VITO® 90 beeps for 5 seconds. VITO® 90 will also beep if any error occurs.

9.3 Temperature control

If the temperature of the electrics is exceeded, VITO[®] stops the filtration. The power indicator (red LED) (2a) starts to flash and VITO[®] 90 starts to beep continuous. VITO[®] must be taken out of the tank to confirm the error by pressing the start/stop button (1a) The power indicator (red LED) (2a) will continue to flash until VITO[®] is cooled down.

Leave VITO[®] 60 & VITO[®] 90 plugged in. VITO[®] is operational again after approx. 15 min. It takes up to 2.5 hours if VITO[®] is unplugged.

If VITO[®] takes too long to cool down after a temperature based shutdown. VITO[®] 90 will continue to beep every 40 seconds. Take VITO[®] to a cool place and plug it back in to allow the cooling fan to work.

Do NOT put VITO[®] into a cold-storage room! Condensation can destroy the electrics.

9.4 Memory

VITO[®] records the operating times and usage values. These values can be readout using the VITO[®] Data Reader.

(see chapter 12 Accessories)

10. Care and servicing

10.1 Notes

- Clean pump-filter unit (7) at every polyester filter change
- Clean VITO[®] only if cooled down
- Do NOT use abrasives
- Do NOT use wire brushes or similar tools

10.2 Cleaning preparation

- 1. Make sure VITO® is cooled down
- 2. Unfasten star handles (8) on both sides
- 3. Remove electrical unit (4) from pump-filter unit (7)
- 4. Open pump-filter unit (7)
- 5. Dispose polyester, cellulose fibre filter
- 6. Manual or machine cleaning

10.3 Manual cleaning

1. Clean electrical unit (4) only with damp cloth!

2. DON'T put VITO[®] under running water! This can destroy the

electronics!

- 3. Clean the pump-filter unit (7) with system cleaner or water.
- 4. Dry VITO[®] with a towel.

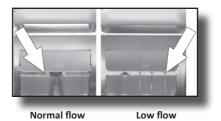
10.4 Machine cleaning

1.Clean electrical unit (4) only with a damp cloth! Do **NOT** put the electrical unit (4) into a dishwasher! This will destroy the electrics

11. Polyester filter change

Change the polyester filter only if necessary. The time of change is based on usage of VITO® and the

degree of pollution of coolant lubricant, oil or watery solution.



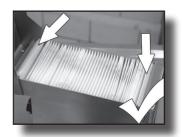
Pay attention to the cleaning efficiency and the spill of coolant lubricant, oil or watery solution coming out of the pump-filter unit. (9)

Change the polyester fibre filter only at a low filtration performance.





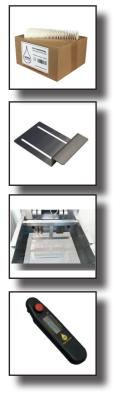
Do not leave gaps between the filter and the edges of the pump-filter (9) unit



Overlap the last fold on both sides (9) of the pump-filter unit

12. Accessories

Additional accessories for your VITO® are available:



Spare filters for VITO®

 $\begin{array}{ll} \mbox{bundle size: 1 box (50 pcs.)} \\ \mbox{filter area:} & \mbox{VITO}^{\otimes} \ 60/90: 0.26 \ m^2 \ (2.77 \ ft^2) \\ \mbox{material:} & \mbox{polyester, cellulose fibre filter} \\ \mbox{mesh size:} & \mbox{nom.20 } \ \mu m \ / \ eff. 5 \ \mu m \end{array}$

Holding Brackets

Keep VITO[®] in secure standing Customisable for all industrial tank Reduce vibration

Clip on Frame Attach VITO[®] directly in the tank Customisable for all industrial tank



If you need anything else? Contact us for other solutions. Our customer support will gladly assist you with all questions.

13. Waste disposal

13.1 Packaging disposal

The packaging should be recycled

or

• Keep the packaging carefully

13.2 Filter disposal

• Used filters must be disposed in the country-specific way

13.3 Device disposal

If VITO[®] reaches the end of life it must be disposed accordingly. This disposal is handled by VITO AG as defined by law.

Send VITO® to:

VITO AG

Eltastrasse 6 78532 Tuttlingen (Germany) For further questions please contact your local dealer or the VITO AG customer support

13.4 WEEE (Waste Electrical and Electronic Equipment) Statement

To protect the global environment and as an environmentalist, VITO AG must remind you that: Under the

European Union ("EU") Directive on Waste Electrical and Electronic Equipment, Directive 2012/19/EU, which

takes effect on February 14 , 2014, products of "electrical and electronic equipment" cannot be discarded as

municipal waste anymore and manufacturers of covered electronic equipment will be obligated to take back

such products at the end of their useful life. VITO AG will comply with the product take back requirements at

the end of life of $\mathsf{VITO}^\circledast\text{-}\mathsf{branded}$ products that are sold into the EU. You can return these products to local

collection points.

14. Storage recommendations for polyester filters

During storage do not expose the polyester filters to extreme temperature or humidity, for example near a heat source, air conditioning or direct sunlight. Heat and cold have a negative effect on the properties of the polyester fibre filter, especially after removing or opening the bag packaging.

The polyester fibre filter must not be exposed to frost, as this can cause damage to the microstructure of the polyester fibre filter, which impairs the functionality of the polyester filter.

- Store dry at 60-65% relative humidity
- Room temperature 24°C \pm 5°C (78°F \pm 40°F)
- Do NOT put weight on pallets
- Avoid sudden temperature changes
- Store in the cardboard packaging in sealed bag
- Maximum height of the filter stack 185cm (6 ft)

Under observance of the above conditions, the storage period will be 3 years.



15. Troubleshooting

Malfunction	Possible cause	Remedial action
Power indicator (2a) stays inactive	 Power cord (2) not plugged in Connector is defective 	 Plug in VITO[®] Please contact service
VITO [®] makes loud noises at filtration	 Star handles (8) are too loose Rotor scratches on the tank Rotor defective 	 Tighten star handles (5) Alter position of VITO[®] in the tank Please contact service
(1) Power indicator flashes and/or acoustic indicator is beeping	 overheating protection is activated 	 let the device cool down
 (1) Power indicator and filtration indicator 90 °flashing (VITO (2) (beeps additionally 	 VITO[®] is tilted more than °15 Strong vibrations defective turning part 	 Check position of VITO[®] Check position of VITO[®]
VITO [®] cannot be started	• Electrical unit (6)defective	Please contact service
Line fuse / Ground fault circuit interrupter (GFCI) blowout	 Net protection or other electronic components are blocking Rotor defective Circuit overloaded 	 Change power outlet, elec. circuit Please contact service Change power outlet, elec. circuit
Low filtration performance	 Polyester filter is full Pump pipe is blocked Motor is defective 	 Change filter Empty pump-filter unit (9) Please contact service
Coolant lubricant, oil or watery solution splashes at sides / on top	 Polyester filter blocked Too much space between filter lid and pump filter unit (9) Filter is inserted incorrectly 	 Change filter / clean unit Adjust filter sealing sheet Insert filter correctly Please contact service
sec. after 10 LEDs flash plugging in	• Start/stop button (3) is defective	Please contact service

Should other issues appear, get in contact with the customer support or your local dealer!

Contact details on page 2 chapter Legal information.

16. Technical data

	VITO [®] 60	VITO [®] 90	
Nominal voltage according to country, see type sign	220 to 240 V ~ %10± 60 to 60Hz 100 to 120 V ~ %10± 60 to 60Hz	220 to 240 V ~ %10± 60 to 60Hz 100 to 120 V ~ %10± 60 to 60Hz	
Nominal current under load	Approx 1,2 A at 230 V Approx 2,4 A at 115 V	Approx 2,0 A at 230 V Approx 4,0 A at 115 V	
Max.power / Nomial power	300 W / 276 W	500 W / 460 W	
Noise level	85db >	85db >	
User control	(1a) start/stop button		
Temperatures in use	Electrical unit (4) up to max. 75°C (167°F) pump-filter unit (7) up to max. 200°C/392°F (short time) pump-filter unit (7) up to max. 190°C/356°F (permanent) (recommended frying temperature max. 175°C/347°F)		
Storage temperatures	10°C/60°F to max. 30°C/86°F (At higher temperature less cycles)		
Dimensions (W x H x L) (without handles) (7)	116 x 400 x 191 mm 4.6 x 15.8 x 7.5 in	116 x 485 x 185 mm 4.6 x 19.3 x 7.3 in	
(with handles) (7)	195 x 400 x 205 mm 7.7 x 15.8 x 8.1 in	210 x 485 x 200 mm 8.3 x 19.3 x 7.8 in	
With drip pan (4)	195 x 425 x 325 mm 7.7 x 16.8 x 12.6 in	210 x 550 x 324 mm 8.3 x 21.6 x 12.8 in	
Weight	VITO [®] : 7,4 kg (16.2 lbs) Drip pan: 1,3 kg (2 lbs)	VITO [®] : 9,7 kg (21.4 lbs) Drip pan: 1,6 kg (3.5 lbs)	
Acoustic signal	no	yes	
dirt hold capacity	1.4L (3.08 lbs)	2,5 L (5.5 lbs)	
Application	up to 500L tanks	all tanks	
Filter	ca. folds: 43 Material: polyester cellulose fibre	ca. folds: 43 Material: polyester cellulose fibre	
Operation	Intermittent operation		



ИТО₿

17. Declaration of conformity

Issued by VITO AG | Eltastrasse 6 78532 Tuttlingen (Germany) | Phone:+49 (0) 7461 / 1508050 Fax : +49 (0) 7461 / 1508051 | Email: info@vito-industrial.com - www.vitoindustrial.com for the products VITO[®]60, VITO[®]90 EU Patent No. 1326692 U.S. Patent No. US7.052.605.B2

The professional of filtration equipment is manufactured and tested according to the following standards:

For the purposes of the EU directives :

- 2006/42/EG Machinery Directive
- 2014/30/EU Electromagnetic Compatibility
- 2014/35/EU Low Voltage Directive
- 2011/65/EU Restriction of use of certain hazardous substances in electrical and electronic equipment
- 2003/10 / EC minimum requirements to protect the safety and health of workers
- 2012/19 EU Waste Electrical and Electronic Equipment

The risks from physical effects of (noise) ,the filtration devices VITO[®] 30, VITO[®] 60, VITO[®] 90 meet the relevant community harmonization legislation of the european union.

- EN 61000-6-1: 2007 Immunity
- EN 61000-6-2: 2005 Immunity
- EN 61000-6-3: 2007 + A1: 2011 Emission
- EN 61000-6-4: 2007 + A1: 2011 Emission

with German, European and International (Non-European) standards

German Standard DIN EN		European Standard EN		(International Standard IEC (IEC/CISPR
DIN EN 61000-6-1:2007-10	based on	EN 61000-6-1:2007	based on	IEC 61000-6-1:2005
DIN EN 61000-6-2:2006-03	based on	EN 61000-6-2:2005	based on	IEC 61000-6-2:2005
DIN EN 61000-6-3:2011-09	based on	EN 61000-6-3:2011-09	based on	IEC 61000-6-3:2006 + A1:2010
DIN EN 61000-6-4:2011-09	based on	EN 61000-6-4:2011-09	based on	IEC 61000-6-4:2006 + A1:2010
DIN EN 61000-3-2:2010-03	based on	EN 61000-3-2:2010-03	based on	IEC 61000-3-2:2005 + A1:2008 + A2:2009
DIN EN 61000-3-3:2014-03	based on	EN 61000-3-3:2014-03	based on	IEC 61000-3-2:2005 + A1:2008 + A2:2009
DIN EN 60335-1:2014-11	based on	EN 60335-1:2014-11	based on	IEC 60335-1:2010
DIN EN 12100:2011-03	based on	EN 12100:2011-03	based on	ISO 12100:2011-03
DIN EN 60204-1/A1	based on	EN 60204-1/A1	based on	IEC 60204-1:2005+AMD1:2008 CSV
DIN EN 56014-1:2012-05	based on	EN 56014-1:2012-05	based on	CISPR 14-1:2005 + A1:2008 + Cor. :2009 + A2:2011
DIN EN 56014-2:2016-01	based on	EN 56014-2:2016-01	based on	CISPR 14-2:2015
-	-	EG) Nr. 2023/2006)	-	-
-	-	EG) Nr. 1935/2004)	-	-

Tuttlingen, December 08, 2014

Andreas Schmidt CEO VITO AG