

Operating and installation instructions



Switch-Over Automatic

Type UMAP NT35-R



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These operating instructions are an English translation of the original German version by the company WDT.

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1 About these instructions / general

1.1 Scope of applicability

These instructions describe the functioning, installation, commissioning and operation of the switch-over automatic type **UMAP NT35-R** along with the corresponding accessories.

The operating instruction must be read carefully before use and kept on the device for direct use!

1.2 Target group

Only our authorised partners and people who have been trained in the device functions are permitted to work on the device, provided that they have read and understood these Operating Instructions. Electrical connection work may only be carried out by appropriately trained specialists!

1.3 Symbols used

This document uses the following types of safety notices as well as general notices:



DANGER!

"DANGER" denotes a safety notice which, if disregarded, may lead to **serious or life-threatening injuries, or serious material damage!**



CAUTION!

"CAUTION" denotes a safety notice which, if disregarded, may lead to **injuries, damage to health or material damage!**



ATTENTION!

"ATTENTION" denotes a safety notice which, if disregarded, may lead to **material damage!**



CORROSIVE!

"Corrosive" denotes a safety notice which, if disregarded when handling chemicals, may lead to **injuries or material damage.**



ESD SENSITIVE!

"ESD SENSITIVE" denotes electronic components that may be damaged by electrostatic discharges. The generally accepted safety precautions for ESD-sensitive devices must be observed when handling the devices!



NOTICE!

A notice denotes information which, if disregarded, may lead to **malfunctions.**



Tip!

A "Tip" denotes information that may result in **improvements in the operating process.**



Mandatory sign

Use face protection!



Mandatory sign

Use protective gloves!

In accordance with DIN EN 374, protective gloves against chemicals and microorganisms.



Mandatory sign

Use protective apron!



Mandatory sign

Use protective boots!

1.4 Warranty

All WDT devices and equipment are manufactured using modern production methods and are subject to comprehensive quality control. However, should there be a reason for complaint, any compensation claims shall be directed to the company WDT in accordance with the general terms and conditions of warranty

General terms and conditions of warranty

The company WDT assumes a 2-year warranty, starting with the commissioning, up to 27 months after delivery; subject to correct installation and commissioning.

Exempt from this are wear parts such as seals, hoses, diaphragms, dosing screws, electrodes, roller carriers and other parts that are subject to mechanical or chemical wear and tear. For these we assume a warranty of 1/2 year.

Our merchandise management programme requires an invoice for each delivery (including warranty services). When returning a defective component, upon review you will receive a corresponding credit, if applicable. We request a return within 14 days.

The costs for subsequent damages and for the processing of warranty claims are excluded.

There are no warranty claims for damage caused by frost, water and electrical overvoltage or by improper handling.



CAUTION!

In the event of any unauthorised modifications to the device the warranty and product liability will be voided!

1.5 Further information

Further information about special topics is available from your specialist dealer or directly from:

WDT Werner Dosierttechnik GmbH & Co KG

Hettlinger Strasse 17

D-86637 Wertingen - Geratshofen, Germany

Phone +49 8272 98697-0

Fax. +49 8272 98697-19

<http://www.werner-dosierttechnik.de>

1.6 Information regarding support queries

For spare part orders, we require the following data. You can find these on the identification plate.

- device designation
- device serial number
- year of manufacture

2 Safety

2.1 Intended use

The switch-over automatic must only be used for the purposes described in Chapter 3.2 *Product description!* The locally applicable regulations concerning accident prevention, occupational safety and drinking water protection must also be observed!

2.2 Safety notices

Carefully read and comply with the operating instructions prior to installation and use of the device! Work on the device and changes in the settings may only be carried out by properly instructed persons!

2.2.1 Handling of chemicals, risks to humans and the environment

In case of emergencies when handling chemicals, contact the emergency poison centre!

Emergency number:

Munich Emergency Poison Centre (or any other Poison Centre)

Phone: +49 89 19240

Excerpt from the Accident Prevention Regulations, GUV-V D 5

Installation rooms for chlorination systems and storage rooms

Section 3a. (1) Chlorination systems must be installed in lockable rooms and the chemicals intended for the chlorination must be stored in lockable rooms.

Re Section 3a Para. 1:

This requirement ensures that chlorination systems and chemicals shall be protected against weather effects and unauthorised access.

(2) Rooms in accordance with Para. 1 must not be intended for the permanent presence of persons.

Re Section 3a Para. 2:

..... A "permanent" presence is given when persons are present in the room for more than 2 hours per day.

Repair and maintenance work on the chlorination system are exempt from this.

2.2.2 Protective measures and rules of conduct



DANGER! CORROSIVE! SAFETY EQUIPMENT!

The switch-over automatic is used to dose chemicals such as chlorine solution, pH reducer (acid) or flocculant from the delivery container.



Ensure that the correct container / chemical is used! Different chemicals can react strongly with each other when mixed and release toxic fumes. For this reason, the greatest possible care must be taken when working with chemicals! Face protection, protective gloves, protective apron, boots.



Store chemicals in such a way that they are not accessible to unauthorised persons.

When storing chemicals, the chemical manufacturer's safety data sheets must be complied with.



For more information, see the chemical manufacturer's safety data sheets!



ATTENTION! ESD SENSITIVE!

The electronic components in the device controls are sensitive to electrostatic discharge. For this reason, the generally accepted safety precautions for ESD-sensitive devices must be observed when handling the devices, including:

- Discharge of personal static charge
- Dissipative clothing
- Disconnect the device from the voltage supply

3 Product description – Functional description – (scope of delivery)

3.1 Scope of delivery / accessories

The scope of delivery includes the following assembly groups:

- Control electronic
- 2 suction sets with empty indicator, foot valve and container cover
- 3/2 way switchover solenoid valve for switching between containers



Figure 1, Switchover solenoid valve

Options:

- Suction set with return line – necessary for operation with solenoid diaphragm pump and suction ventilator
- Stand console with collecting tub
- Collecting tubs

3.2 Product description - Function

When dosing chemicals from two containers, the “switch-over automatic” automatically switches the suction to the full container as soon as one container has been emptied. The empty container can then be exchanged for a full one at any time. This **ensures a continuous supply** of chemicals to the swimming pool circuit, and there will be no interruption in dosing due to an empty container. In addition, the time window for changing the empty container increases considerably.

3.3 Identification of the device / identification plate

Identification plate Switch-over automatic type NT 35-R

Enter the data from the identification plate of your device here.

Typ: Umschaltautomatik NT35-R	
Art.: 19563-1	Serien Nr.: <input type="text"/>
230V/AC 1Ph ~ 50Hz I max. 100 mA	
CE	Herstellung <input type="text"/>
EAC	WDT - Werner Dosiertechnik GmbH & Co. KG
	Hettlinger Str. 17
	D-86637-Wertingen

Field 1: Enter serial number

Field 2: Enter date of manufacturing

3.4 Technical data

	Switch-over automatic type UMAP NT35-R
Dimensions and weights:	
Dimensions	W 20 cm, D 11 cm, H 40 cm
Space requirement, including operation and maintenance	W 70 cm, D 100 cm, H 200 cm
Empty weight / operating weight	approx. 2 kg / 25 kg
Connection data	
Electrical connection data	110-240VAC, 50-60Hz; safety plug
Fuse	Round fuse 1A slow
Hydraulic connection data	Hose connection for suction lances: 4x1, 1/4" (standard)
Sewer connection (recommended)	At least DN25
Protection class	IP44
Operating data:	
Medium temperature	5°C to 35°C
Ambient temperature	5°C to 35°C
Humidity technical room	max.: 80% (non-condensing)
Room ventilation (in and out)	According to DIN 19643
Material	Mounting plate: PP Housing: PS Seals: EPDM, Viton

3.5 Transport / storage

Please check the devices immediately upon receipt for potential transport damage.



ATTENTION!

The device may be damaged by frost or high temperatures.

Do not store the device near objects with significant heat radiation or in direct sunlight. The device may only be transported and stored in its original packaging.

Please ensure careful handling.

Storage of chemicals



DANGER!

Pay attention to the chemical suppliers' safety data sheets!

In addition, please pay attention to the provision regarding the storage of chemicals TRGS 515.

4 Installation / Commissioning / Operation

4.1 Select the installation site

The following should be observed in regard to the installation site:

- a) A freely accessible installation site should be selected to facilitate operation and subsequent maintenance tasks.
- b) Protection tubs must be available for the chemical containers.
- c) Observe the temperature specifications for the surrounding air and medium in accordance with *Chapter 3.4 Technical data*. No flammable vapours, dust or gases may be present in the immediate vicinity of the device. A floor drain is recommended.
- d) The device must not be exposed to the elements. It may not be installed outdoors. The system must be protected from frost and direct sunlight.
- e) An isolated ground socket is required.
- f) The installation site must comply with the accident prevention regulations (Germany BGR-GUV-R 108) and should not be accessible to unauthorised persons. A separate storage room must be available for stocking the chemicals.
- g) It must be possible to vent and aerate technical areas so that hazardous substances do not occur in health-hazardous concentrations (from accident prevention regulations BGR-GUV-R 108).
- h) A pump for dosing the chemical must be available on site or must be ordered separately. Pay attention to the durability of the pump materials!

4.2 Installation instructions / installation

The “switch-over automatic” is preinstalled on a mounting plate and is delivered ready to plug in. The device must be supplied with continuous voltage.

- a) Mount the device in a suitable location in the technical room using 4 screws.
- b) Mount the external dosing pump in a suitable location, for example next to the mounting plate.
- c) Attach warning and notice signs in accordance with the locally applicable accident prevention regulations (Germany: BGR-GUV-R 108) at the designated positions. **In particular for the labelling of the chemicals used!**

4.3 Commissioning

When using a peristaltic pump

- a) Venting of the peristaltic pump is not necessary. The type of pump to be used must already be taken into account when ordering.
- a) Place the containers under the switch-over automatic in suitable collecting tubs and open them. **Ensure that the correct chemical is used!**
- b) Place the suction sets in the containers and lightly screw on the lids
- c) Plug in the switch-over automatic; **caution, the dosing pump may start!**

After a power failure, suction continues at the most recently activated container.

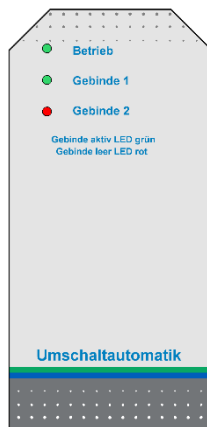
When using a solenoid diaphragm pump

- a) Solenoid diaphragm pumps **must always be vented on the suction side**. The type of pump to be used must already be taken into account when ordering.
- b) Place the containers under the switch-over automatic in suitable collecting tubs and open them. **Ensure that the correct chemical is used!**
- c) Place the suction sets in the containers and lightly screw on the lids
- d) Connect the suction line of the dosing pump to the outflow of the switchover valve and the return line to the pump’s ventilator.
- e) Install the on-site suction ventilator and ventilate with a manual vacuum pump until the suction ventilator is $\frac{3}{4}$ full.
- f) Keep the dosing pump running
- g) Check if the suction hose from the suction ventilator to the pump and the pump head are completely vented (pump head must fill with liquid). The pump is now vented. The dosing hose from the pump to the injection point does not need to be vented.
- h) Plug in the switch-over automatic; **caution, the dosing pump may start!**

After a power failure, suction continues at the most recently activated container.



4.4 Description of the control



The switch-over automatic control is fully automated.

When power is supplied to the device, it automatically enters the operation mode.

Operation states:

LED Operation lights up green → The device is in operation

LED Container 1 lights up green → Chemicals are suctioned from Container 1.

LED Container 1 lights up red → Container 1 is empty

LED Container 2 lights up green → Chemicals are suctioned from Container 2.

LED Container 2 lights up red → Container 2 is empty

Process description

- Suction starts from Container 1. If Container 1 is empty, the solenoid valve switches to Container 2.
- Now, chemicals are suctioned from Container 2. The **LED Container 1** switches to red. This **reserve indication** can be retrieved from the control unit as a potential-free contact.
- If the empty Container 1 is replaced with a full container, the LED Container 1 goes out. Suction continues from Container 2.
- Only once Container 2 is empty, the system switches back to Container 1. If Container 1 is still empty, the dosing is automatically switched off.
- The **reserve indication** and the **fault indication** are pending. Both messages can be retrieved from the control unit.

After a power failure, suction continues at the most recently activated container.

4.5 Replenish consumables

Replace container



DANGER! CORROSIVE! SAFETY EQUIPMENT!

Ensure that the correct container / chemical is used!

Different chemicals can react strongly with each other when mixed and release toxic fumes. For this reason, the greatest possible care must be taken when working with these chemicals! Face protection, protective gloves, protective apron, boots.

The safety data sheets for each chemical must be observed.

- Remove the empty container from the protection tub.
- Place the full container in the protection tub and unscrew the lid.
- Unscrew the screw cap with the suction lance from the empty container.
- Insert the suction lance into the full canister all the way to the bottom and close it with the screw cap.
- Close the empty container and safely dispose of it.

5 Maintenance, care, faults

5.1 Device maintenance

The “switch-over automatic” is a low-maintenance device.

5.1.1 Open and close the housing



DANGER DUE TO ELECTRICAL VOLTAGE!

This work may only be carried out by qualified electrical technicians! Before any electrical work is carried out, the power supply must be switched off and secured against being reactivated!



ESD SENSITIVE!

The electronic components in the devices are sensitive to electrostatic discharges. The generally accepted safety precautions for ESD-sensitive devices must be observed when handling the devices.

In particular, the following applies for work on electronic components:

- Never plug in or remove connectors unless the power has been deactivated.
- As the person handling the device, please discharge yourself electrostatically for at least 5 seconds prior to directly touching the devices, e.g., by touching a grounded part of the system or by wearing an ESD antistatic wrist strap connected to ground.

5.2 Trouble-shooting

Possible fault indications during normal operation:

LED	Message / fault	Function	Remedy
Container 1 lights up red	Container 1 empty	Solenoid valve is switched on, switchover to Container 2; Reserve indication on	Replace Container 1
Container 2 lights up red	Container 2 empty	Solenoid valve is switched on, switchover to Container 1; Reserve indication on	Replace Container 2
Container 1 and Container 2 lights up red	Both containers empty	No switchover; collective fault on	Replace both containers (at least one); Control unit starts again

6 Decommissioning – Storage – Disposal

6.1 General

In the event of decommissioning, the devices must be emptied completely or protected against frost!

6.2 Decommissioning of the switch-over automatic

1. Remove both suction lances from the containers and place them in a bucket filled with clean water.
2. Close the containers.
3. Flush the suction lances until the lines are clean (control via the float switches).
4. Disconnect the device from the power supply.



ATTENTION!

When recommissioning, observe the instructions in the “Commissioning” chapter.

6.3 Disposal of used parts and operating materials






Thoroughly clean any removed, contaminated parts and dispose of or recycle them in accordance with the regulations applicable at the operating location. Pay attention to the relevant instructions on the packaging for the operating materials. In case of doubt, information may be obtained from the authorities responsible for disposal at your location.

If this is not possible, dispose of the parts/substances as hazardous waste.

7 Documents

7.1 Declaration of conformity

<p>WDT Werner Dosiertechnik GmbH & Co. KG Hettlinger Straße 17 D-86637 Wertingen Tel. 0049 8272 98697-0 Fax 0049 8272 98697-19 info@werner-dosiertechnik.de www.werner-dosiertechnik.de</p>		 Werner Dosiertechnik	
<p>EG-Konformitätserklärung EC declaration of conformity Déclaration de conformité UE</p>			
<p>Hersteller WDT - Werner Dosiertechnik GmbH & Co. KG Manufacturer Hettlinger Str. 17 Fabricant 86637 Wertingen-Geratshofen</p>			
<p>Beschreibung und Identifikation des Produktes: Description and identification of the product: Description et identification du produit :</p>			
<p>Typenbezeichnung:</p> <ul style="list-style-type: none"> Umschaltautomatik Typ NT35 		<p>Art:</p> <p>Steuerung</p>	
<p>Funktion: Steuerung zur Sicherstellung einer kontinuierlichen Dosierung durch automatische Gebinde-Umschaltung Function: Controller to ensure continuous dosing through automatic canister switch-over Fonction: Commande pour assurer un dosage continu grâce au changement automatique de récipient</p>			
<p>Es wird ausdrücklich erklärt, dass das Produkt allen einschlägigen Bestimmungen der folgenden EG/EU-Richtlinien entspricht: It is expressly stated that the product complies with all relevant provisions of the following EC directives Il est explicitement dit que le produit est conforme à toutes les dispositions pertinentes des directives CE suivantes :</p>			
2011/65/EU	RICHTLINIE 2011/65/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 8. Juni 2011 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten (ROHS-Richtlinie)		
2014/30/EU	RICHTLINIE 2014/30/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Neufassung) (EMV-Richtlinie)		
EU 2018/849	Richtlinie über Elektro- und Elektronik-Altgeräte - WEEE		
<p>Die folgenden harmonisierten Normen wurden angewandt: The following harmonized standards were applied: Les normes harmonisées suivantes selon ont été appliquées :</p>			
EN 61439-1:2011	Niederspannungs-Schaltgerätekombinationen – Teil 1: Allgemeine Festlegungen IEC 61439-1:2011		
EN 61439-2:2011	Niederspannungs-Schaltgerätekombinationen – Teil 2: Energie-Schaltgerätekombinationen IEC 61439-2:2011		
EN61000-3-2:2014	Elektromagnetische Verträglichkeit (EMV) - Teil 3-2: Grenzwerte - Grenzwerte für Oberschwingungsströme		
EN61000-3-3:2013	Elektromagnetische Verträglichkeit (EMV) - Teil 3-3: Grenzwerte - Begrenzung von Spannungsänderungen		
<p>Die in der Gemeinschaft ansässige Person, die für die Zusammenstellung der technischen Unterlagen bevollmächtigt ist: The designated person who is authorized to draw up the technical documentation: La personne établie dans la communauté qui est autorisée à constituer le dossier technique:</p>			
Name:	Werner Dosiertechnik GmbH & Co KG		
Straße/Nr.:	Hettlinger Straße 17		
PLZ Stadt:	86637 Wertingen		
<p>Wertingen, 24.07.2020</p>		 Unterschrift/signature Jochen Rieger, Director	
<p>Ort/City/Place, Datum/Date</p>			
			
<p>CE SW 005 Konformitätserklärung Umschaltautomatik UMAP NT35.docx</p>			

7.2 Wiring diagrams



DANGER!

Risk of death due to high voltage. All electrical work on the device must only be carried out by trained specialists in accordance with the applicable safety regulations! Fuses on the control boards must only be renewed once the power has been disconnected and secured against being reactivated!

