



Ultrasonics.Steam.Ultraclean.

Version 0

21/02/2017

Operating Instruction



Elmadry TD

Hot air dryer

english

Item No. 108 3106

Elma units are fitted with noise suppression, tested for electromagnetic compatibility and meet the CE marking criteria relating to low voltage directives and EMC.

The copyright for this documentation is held by

Elma Schmidbauer GmbH, 78224 Singen, Germany.

© by Elma Schmidbauer GmbH

This documentation is intended for operators and their personnel only.

No part of the content of this documentation (text, images, diagrams, graphics, plans etc.) may be reproduced or distributed without our written permission, nor may it be used in an unauthorised manner for the purpose of competition, nor passed to third parties or made accessible to them.

Elma Schmidbauer GmbH

Gottlieb-Daimler-Str. 17

D-78224 Singen

Headquarters:

Tel.: + 49 7731 882-0

Fax: + 49 7731 882-266

E-mail: info@elma-ultrasonic.com

Visit our website for useful advice and information on our wide range of products:

www.elma-ultrasonic.com

Technical Support:

Tel.: + 49 7731 882-171

Fax: + 49 7731 882-172

E-mail: support@elma-ultrasonic.com

Contents

1 General	4
1.1 About this manual.....	4
1.2 CE compliance	4
2 Proper use	5
3 Performance specification	6
4 Technical specifications	7
5 General safety instructions	8
5.1 Structure of the safety instructions	8
5.2 Meaning of the symbols used.....	9
5.3 Safety information on the unit.....	9
5.4 Safety information on using the unit	10
6 Product contents	11
6.1 Optional accessories	11
7 Unit description	12
8 Unpacking and mounting the unit	15
9 Connecting the network cable	16
10 Operating the unit	17
11 Maintenance	19
11.1 Cleaning the unit.....	19
11.2 Changing or cleaning the dust filter	19
12 Troubleshooting	21
13 Disposal	22

1 General

1.1 About this manual



NOTICE

Please read the manual before using the unit.

This manual forms part of the contents supplied with the unit. It must be kept in an accessible place close to the unit and must be retained with the unit if the unit is resold.

Meaning of the symbols used:

- This symbol denotes lists.
- ✓ This symbol denotes requirements.
- 1. Numbers with a dot denote actions.
- This symbol denotes individual actions.
- ➔ This symbol denotes interim results.
- ⇒ This symbol denotes the result of your action.
- 1 Numbers without a dot denote image labels.

1.2 CE compliance

This unit meets the CE marking criteria.

The compliance declaration can be requested from the manufacturer.

If the unit is opened by unauthorised electricians, it will no longer be CE compliant.

Technical changes to the unit must be approved by the manufacturer.

2 Proper use

NOTICE

Only use the unit in accordance with the listed specifications.

Using it in any other way is considered improper use.



- The purpose of the unit is to dry objects after wet cleaning.
- It is suitable for drying clock movements, metal strips, clock parts, large silverware and housings.
- Do NOT dry objects with solvents on them.
- The unit is only intended for use in commercial applications.
- Only authorised specialist personnel who are familiar with this manual may use this unit. Unauthorised persons, in particular children, must not use this unit.
- Only use accessories made for this unit.
- Do not dry living creatures in the unit.

3 Performance specification

- Drying objects with warm or cold air
- Max. drying temperature 70 °C
- Temperature of the cold air: room temperature
- Automatic safety switch-off at excessive temperature
- Quick and easy to operate using the rocker switch with three positions: OFF, HOT (hot air), COLD (cold air)
- Dust filter (replaceable) prevents dust in the ambient air from re-contaminating the item
- Cooling unit plug-in connection: optimum mobility since the network cable on the unit can be unplugged
- Lid saves energy and creates effective flow turbulence to ensure the item is fully dried
- Stainless steel enclosure, protected against dripping water
- Suitable for use with different stainless steel basket sizes

4 Technical specifications

Elmadry TD	TD 30	TD 120	TD 300
Mechanical data			
Tank internal dimensions W/D/H (mm)	240/137/100	300/240/200	505/300/200
Unit external dimensions W/D/H (mm)	300/186/219	362/285/322	568/347/322
Weight (kg)	3,6	6,1	10,2
Maximum load (kg)	1	7	12
Mesh width of wire mesh (mm)	2	2	2
Wire diameter of wire mesh (mm)	0,63	0,63	0,63
Material (tank/ enclosure)	Chrome steel	Chrome steel	Chrome steel
Electrical data			
Mains voltage (VAC) (50/60 Hz)	100-120 / 220-240	100-120 / 220-240	100-120 / 220-240
Heating power at 110 and 230 V (W)	480	550	1100
Power at 110 and 230 V (W)	500	570	1140
Max. temperature (°C)	70	70	70
Heating time (min.)	~15	~15	~15
Air output max. (m ³ /h)	160	160	320
Accessories			
Suitable basket sizes	1x 30	2x 30/40 1x 100/120	3x 60 1x 60 + 1x 100/120 2x 100/120 1x 150/300

5 General safety instructions

5.1 Structure of the safety instructions



SIGNALWORD

Type and source of the danger







Possible consequences of the danger if disregarded.

➤ Measures to prevent the danger.

Signal word	Meaning	Consequences if disregarded
DANGER	Immediate danger	Death or serious injury
WARNING	Possible dangerous situation	Death or serious injury
CAUTION	Possible dangerous situation	Slight injuries, damage to components or units
NOTICE	Useful advice or tip	No risk of personal injury, but possible damage to components or units

Table 1: Meaning of the signal words

5.2 Meaning of the symbols used

Symbols on the unit:	
	Read the manual
	Hot surfaces
Symbols in the manual:	
	Risk of electric shock
	Risk of explosion due to oxidising substances
	Note about damage to unit, or tip
	Disposal information

5.3 Safety information on the unit



CAUTION

Hot surfaces

Burns

- Allow unit, stainless steel basket and objects to cool down.
- Only touch hot surfaces or objects with suitable gloves.

5.4 Safety information on using the unit



⚠ DANGER

No explosion protection

Very serious injuries, burns

- Do not place the unit near flammable substances.
- Do not dry objects with solvent adhered to them (alcohol, benzine etc.).



⚠ DANGER

Liquid ingress

Electric shock

- Do not immerse unit in water or rinse it under running water.
- Make sure that no water enters the unit.
- If the unit becomes damaged or water gets into it, disconnect it immediately from the power supply by pulling out the plug.

6 Product contents

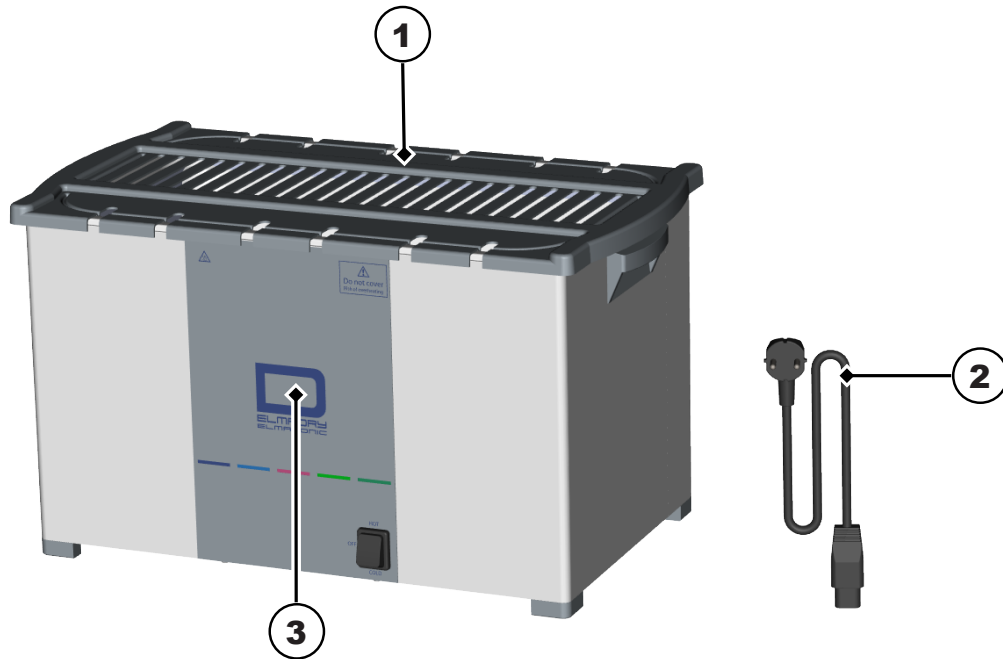


Illustration 1: Elmadry TD product contents

1	Lid
2	Network cable
3	Elmadry TD
4	Manual (not pictured)

6.1 Optional accessories

- **Silicon mat** to place on the bottom of the tank, prevents scratching of parts
- **Stainless steel basket** in different sizes, for easy loading and unloading of the unit

7 Unit description

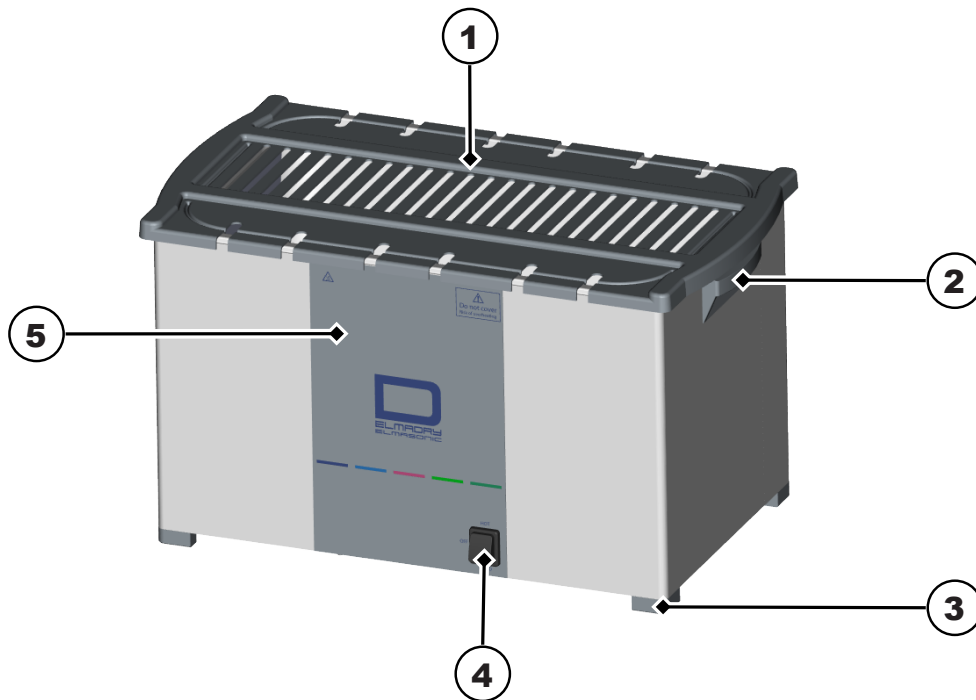


Illustration 2: Front of Elmadry TD 300

- 1 **Lid** to cover the unit, or as a place to temporarily stand a stainless steel basket
- 2 **Handle** for transporting
- 3 **Foot**
- 4 **Rocker switch** for switching hot or cold air on or off
- 5 **Elmadry TD**

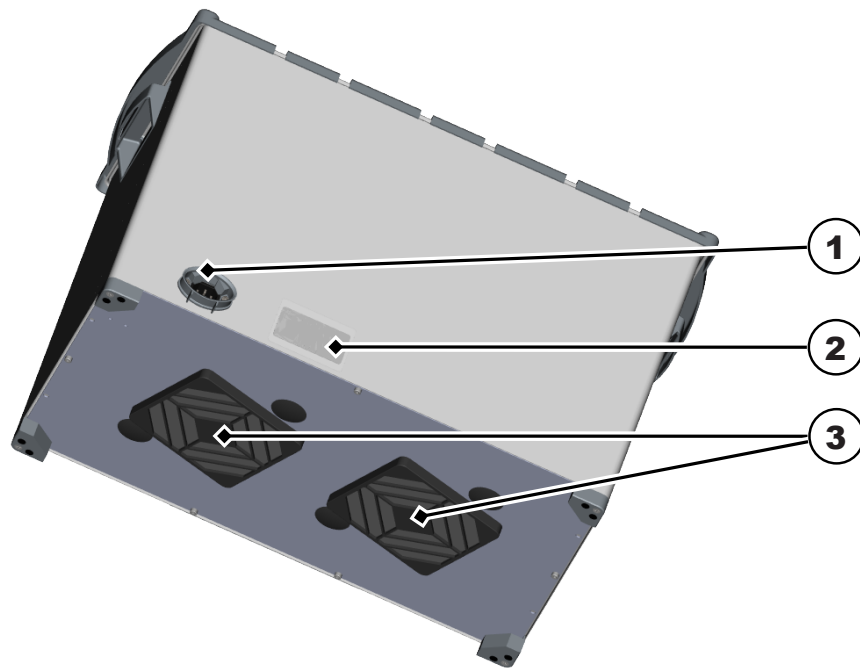


Illustration 3: Rear of Elmadry TD 300

- 1 **Mains connection** for connecting with the network cable
- 2 **Name plate** shows the technical specifications for the unit
- 3 **Dust filter** (replaceable) prevents dust from getting into the tank through the blower

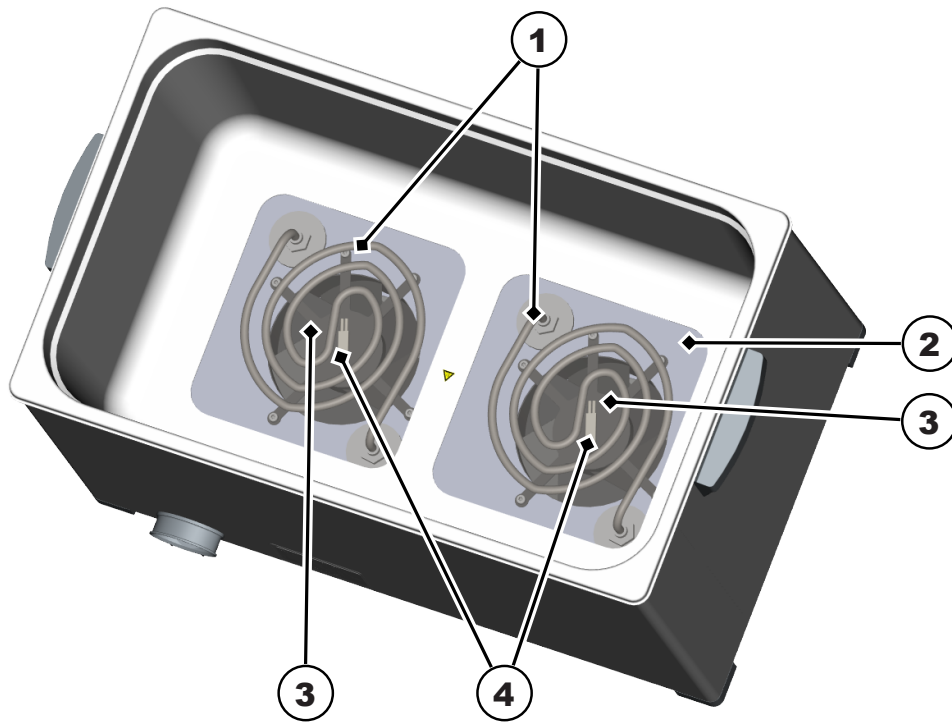


Illustration 4: Dryer tank of Elmadry TD 300

- 1 **Tubular heater** for heating the air
- 2 **Wire mesh** for protection of the blower system
- 3 **Blower** generates a stream of air to dry the parts
- 4 **Over-temperature fuse** switches off the heating if the temperature becomes too high (not visible in the unit)

8 Unpacking and mounting the unit



⚠ CAUTION

Transport damage

Electric shock

- Do not put the unit and network cable into operation if they are damaged.
- Contact the supplier or the shipper.



NOTICE

The packaging protects the unit from transport damage. If the packaging is damaged, we recommend you take a photograph of the damage.

- Keep the packaging for servicing purposes.
- Only dispose of it in accordance with the applicable disposal guidelines.
- The packaging can be sent back to the manufacturer.



NOTICE

Permissible ambient conditions

Incorrect ambient conditions lead to damage to the unit.

- Permissible ambient temperature: +5 °C to +40 °C (41–104 °F)
- Permissible relative humidity: max. 80%
- Condensation must not form on the enclosure. Do not expose the unit to any extreme temperature changes.
- Only use the unit indoors.
- The supporting surface must not be soft, as this will block the air inlets.

1. Remove the packaging from the unit.
2. Check that all the contents are present.
3. Check the unit and the network cable for damage.
4. Place the unit on a stable, even and dry surface.

➔ **NOTICE! Do not cover the air inlets on the underside of the unit.**

⇒ The network cable can be connected.

9 Connecting the network cable

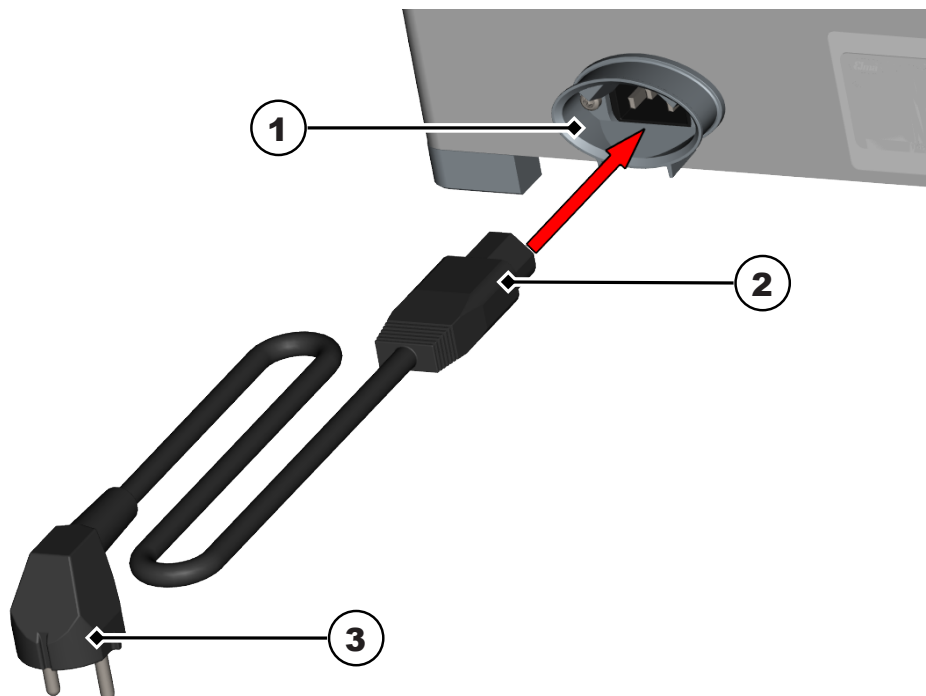
DANGER

Mains voltage

Serious injuries or death from electric shock



- Only use the original network cable.
- Check the network cable for damage. Do not use a damaged network cable.
- Choose an accessible socket. In emergencies, pull the plug out of the socket or the unit.
- Keep the supporting surface and the enclosure dry.
- The information on the name plate must match the electrical operating conditions (particularly mains voltage and connected load).
- Connect the unit to a suitable earthed safety socket.



- ✓ The unit has been unpacked.
- ✓ The unit has been mounted.
- 1. Connect the network cable (2) to the mains connection (1) on the unit.
- 2. Plug the mains plug (3) into a suitable socket.
- ⇒ The unit is ready to use.

10 Operating the unit



⚠ CAUTION

Hot surfaces

Burns

- Allow the unit to cool down or use suitable gloves when loading/unloading objects.

NOTICE



To prevent overheating of the unit:

- Do not use any other lid than the one supplied with the unit.
- Make sure that the air inlets are not blocked.
- The wire mesh on the bottom of the tank should not be covered more than 70%.

NOTICE



Too much water inside the unit leads to damage.

- Allow excess water to drip off the basket and the objects before drying.

NOTICE



To prevent stain formation, rinse the objects thoroughly in DI water before drying.

- ✓ The network cable has been connected.
 - ✓ The objects to be dried have been rinsed.
1. Allow the excess water to drip off the objects or the stainless steel basket.
 2. Place the objects on the grid inside the tank, or hang them in the tank in a stainless steel basket.
 - ➔ **NOTICE! The diameter of the objects must not be smaller than the mesh size of the wire mesh.**
 3. Replace the supplied lid.



4. To dry with hot air, set the rocker switch to "HOT".
 5. To dry with cold air or cool the objects, set the rocker switch to "COLD".
 6. To switch off the unit, set the rocker switch to "OFF".
 7. After drying, allow the objects to cool down if necessary and remove them.
- ⇒ The unit is being operated correctly.

11 Maintenance



⚠ CAUTION

Faulty network cable

Electric shock or damage to the unit

- Check the network cable regularly for damage.



NOTICE

To increase the service life of the unit, keep the unit clean and dry.

- Clean the unit regularly.
- Check the filter for soiling regularly, and change or clean it as necessary.

11.1 Cleaning the unit

- ✓ The network cable is unplugged.
- ✓ The unit has cooled down.
 1. Clean any dust residue on the wire mesh using suction.
 2. Remove other residue on the wire mesh with a damp cloth.
 3. Remove any residue on the tank with a damp – but not wet – cloth.
- ⇒ The unit has been cleaned.

11.2 Changing or cleaning the dust filter

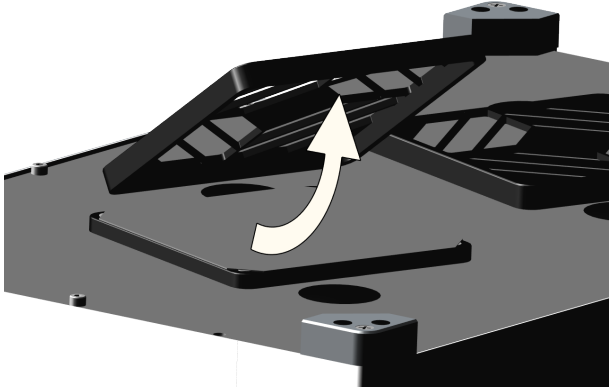


NOTICE

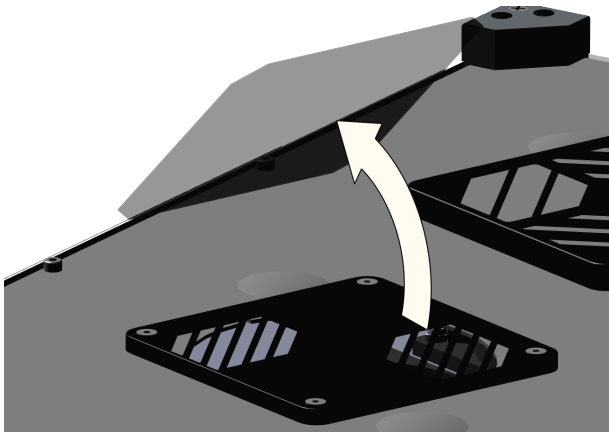
To prevent dust particles getting onto the objects to be dried, clean or change the dust filter if it is soiled.

The Elmadry TD 300 model has 2 dust filters.

- ✓ The network cable is unplugged.
- ✓ The unit has cooled down.
 1. Turn the unit over so that the dust filter on the underside is easily accessible.
 2. Remove the cover by pulling it off.



3. Remove the dust filter.



4. Insert a new dust filter, or clean and replace the old dust filter.

5. Replace the cover.

6. Turn the unit back to the upright position.

⇒ The dust filter is ready for use again.

12 Troubleshooting



NOTICE

Repairs and maintenance work that require the unit to be opened may only be carried out by authorised electrical specialists.

➤ Contact the manufacturer or supplier.

Fault	Possible cause	Resolution
The blower is not working.	Blower faulty, or blocked with dirt	<ul style="list-style-type: none"> • Contact the manufacturer.
The objects are dirty after the drying process.	Soiled dust filter	<ul style="list-style-type: none"> • Change or clean the dust filter.
Heating and/or blowing do not work.	Unit faulty	<ul style="list-style-type: none"> • Contact the manufacturer.
The unit becomes unusually hot (> 100 °C).	Over-temperature fuse faulty	<ul style="list-style-type: none"> • Contact the manufacturer.

Table 2: Troubleshooting

In case of faults that cannot be fixed, contact the manufacturer's Technical Support.

Technical Support:

Tel.: +49 7731 882-280

Fax: +49 7731 882-253

support@elma-ultrasonic.com

13 Disposal



NOTICE

To dispose of the unit, take it to a metal or electronics recycling facility or send it back to the manufacturer.

List of figures

Illustrati Elmadry TD product contents	11
on 1	
Illustrati Front of Elmadry TD 300	12
on 2	
Illustrati Rear of Elmadry TD 300.....	13
on 3	
Illustrati Dryer tank of Elmadry TD 300.....	14
on 4	

List of tables

Table 1 Meaning of the signal words.....	8
Table 2 Troubleshooting.....	21