

KAR KIMYA LTD.

Washability and Scrub Resistance Tester User Manual

OTA
2000

KAR KIMYA SAN. VE TİC. LTD ŞTİ.

Scrub Resistance Tester

Installation and User Manual

© Kar Kimya Ltd.

Fehmi Tokay Sok. 14/10 Örnek Mah. Üsküdar • İstanbul

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QC Certificate and Specifications

<i>Serial Number</i>	: 08-204
<i>Type</i>	: OTA 2000/2
<i>Supply Voltage</i>	: 220-240 VAC /50- 60 Hz
<i>Operating Ambient Temp.</i>	: (0) – (+50)°C
<i>Operating Ambient Humidity</i>	: < 85%
<i>DC Power Supply</i>	: S-100F-24 /24 VDC - 100 W CE
<i>Motor Type and Power</i>	: 24VDC – 30 W CE
<i>Speed Range*</i>	: 3,33-100 rpm

* Speed has been preset acc. to EN ISO 11998

<i>Motor Serial No.</i>	: AXH230KC-30 -
<i>Driver Serial No.</i>	: AXHD30K -
<i>Counter Type & Serial No.</i>	: OMRON H8GN CE -

Kar Kimya Ltd. hereby declares that the product mentioned on this declaration has been produced and comply with our internal standards and if applicable with the relevant international standards.

EN ISO 11998

Paints and varnishes -- Determination of wet-scrub resistance and cleanability of coatings

Section
2

Safety Instructions

IMPORTANT:

It is essential that all comments made in this section are carefully studied and understood by the following persons – before putting the equipment into operation.

- a-) The person or persons responsible for those members of staff who will be involved in the installation, commissioning, operation or maintenance of the equipment.
- b-) All persons whose duties will be involve the installation, commissioning, operation or maintenance of the equipment.

1 Basic Machine Details

1.1 Name and address of the manufacturer:

Kar Kimya San. ve Tic. Ltd. Şti.
Libadiye Cad. G-2 Sok. 14/10
Örnek Mah. Üsküdar 81190
İstanbul. / Türkiye

1.2 Description of machine

Name and/or Model No	:Scrub Resistance Tester OTA-2000-11998
Serial No	:08-204
Year of Production	:19.12.2008

1.3 Dangers when using the equipment:

The machine detailed in 1.2 (above) is designed and manufactured in accordance with European and national standards but must only be used:

***a. for the application for which it is intended
(see paragraph 1.4)***

b. With all safety features properly fitted and adjusted.

1.4 Proper use of the equipment

The machine detailed above (1.2) is intended for the following (dependent upon the equipment and accessories supplied).

Paints and Varnishes – Determination of Wet-Scrub Resistance and Cleanability of Coatings TS 4970 EN ISO 11998 (March 2003) and ISO 11998:1998

The machine is fitted with an electric drive motor and it should not be used in areas having hazardous classification.

If the machine is used for any other purpose or if the instructions given in the installation and working instructions manual are not observed, it

will be considered as improper use and Kar Kimya Ltd. Will not be liable for any resulting damage or injury to persons.

1.5 Modifications to the equipment

Modifications must not be made without written agreement from Kar Kimya Ltd. Replacements must be obtained from Kar Kimya Ltd. to ensure that these meet appropriate safety standards.

2 Safety Information:

2.1 ▲ Symbol

This symbol is used in the instruction manual to draw your attention to an instruction or guideline when non observance could result in injury, damage to the equipment or both.

2.2 Electrical Equipment

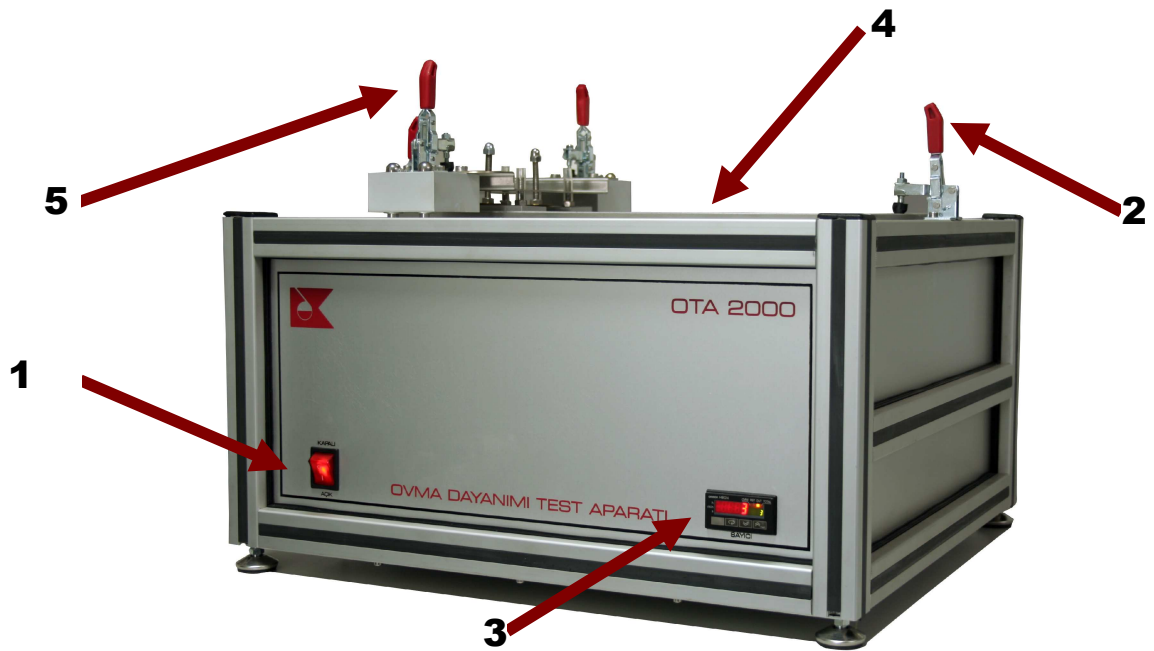
Work on electrical equipment must be carried out by a qualified electrician. Electrical equipment which is connected to the power supply via plug and wall socket must have the plug removed from the socket before commencing maintenance work.

Section

3

User Manual

Scrub Resistance Tester OTA 2000



Picture 1

1 Installation

▲ **NOTE** Instrument should not be used in areas having a hazardous classification.

- 1.1. ▲ Check that the voltage shown on the inspection certificate and on the label at that back of the machine is correct for your supply.
- 1.2. Fit an appropriate plug to mains trailing lead (if not already fitted.)
- 1.3. The wires in the mains lead(s) are coloured using following codes.
Brown - Live (L)
Blue - Neutral(N)
Green & Yellow - Earth (E)

▲ **WARNING ! THIS EQUIPMENT MUST BEEN EARTHED**

- 1.4. Ensure that the main power switch (Picture 1-1) is its “**OFF**” position.
- 1.5. Switch mains supply on at the wall socket.

2 Use of the Instrument

2.1 Setup for a test

- 2.1.1 Unmount the clamps of the pushing device (Picture 1-5) and take it away as well as the pad holders.
- 2.1.2 Unmount the clamps of the frame (Picture 1.2) and take the frame (Picture 1.4) away.
- 2.1.3 Place the test panels which has been prepared and conditioned as mentioned in EN ISO 11998 norm section 8.1 on the glass bed which is inside the tray. Make sure that the tray is centered .
- 2.1.4 Place the fixing frame inside the tray on the test panel.
- 2.1.5 Put the 2 pad holders on each window of the frame and place the pushing device on the pad holders making sure that the 2 rods of each holder are positioned inside the appropriate holes of the pushing device.
- 2.1.6 Unmount the clamps of the pushing device (Picture 1-5) and take it away as well as the pad holders.
- 2.1.7 Unmount the clamps of the frame (Picture 1.2) and take the frame (Picture 1.4) away.
- 2.1.8 Place the test panels which has been prepared and conditioned as mentioned in EN ISO 11998 norm section 8.1 on the glass bed which is inside the tray. Make sure that the tray is centered .
- 2.1.9 Place the fixing frame inside the tray on the test panel.
- 2.1.10 Put the 2 pad holders on each window of the frame and place the pushing device on the pad holders making sure that the 2 rods of each holder are positioned inside the appropriate holes of the pushing device.
- 2.1.11 Place the pushing device on its position by placing the guiding rods inside the appropriate holes of pushing device. And than mount the clamps to fix the pushing device.
- 2.1.12 Make sure that there is enough distance (2-4mm) between the top of the pad holders and the pushing device. IMPORTANT! Pushing device should not put pressure on the pad holders.
- 2.1.13 Make sure that the pads will move on the paint film by moving the tray.
- 2.1.14 Mount the clamps of the frame to fix the tray, glass bed and test panel.

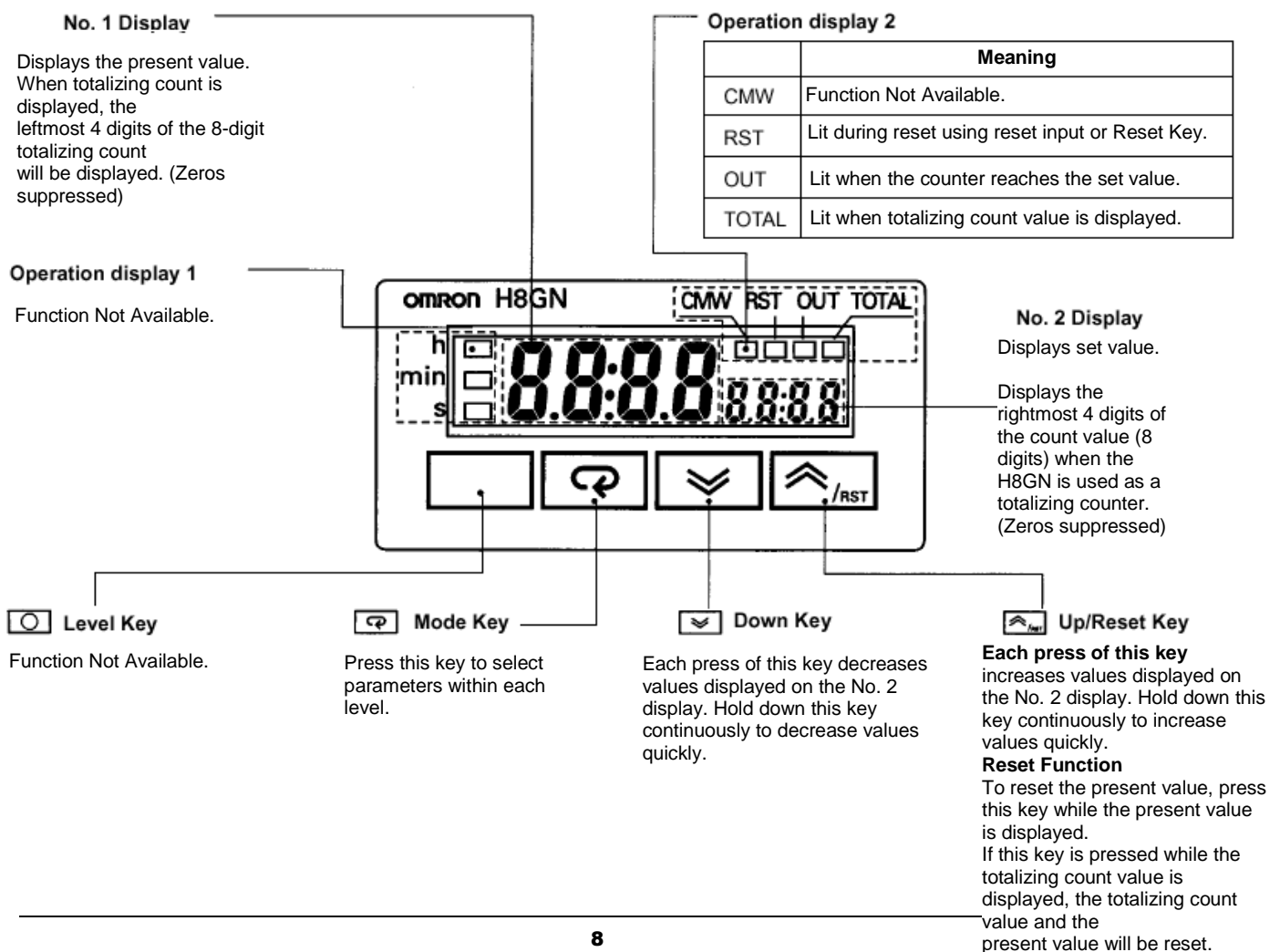
▲ WARNING!!! Do not switch the instrument ON until you make the a/m steps with correct order.

2.2 Switching the Instrument ON

Please note that if the instrument has been stopped at previous use under control of the counter, the instrument will move for 210ms due to high start-up current and then stop.

If the instrument has not been stopped by counter at previous use, but it has been stopped due to some other reason (power cut, switch off while working, or overcurrent failure) then;

- to continue the test that has been stopped because of a/m reasons, you shall not do anything. The counter will start from the already counted value and will count until it reaches the set value and then will stop automatically.
- To start a new test from the beginning, please adjust the set value to a some 5-10 more of the actual value and let the instrument stopped by the counter output. Then set a new value as it is described below example and press "RESET" button of the counter to start the test.



2.3 Example Application

To test the scrub resistance of a panel for 350 double rubs with checking the surface in every 100 cycles:

- 2.3.1 Press MODE key to change the to *Set Value Mode*. In this mode you can see both the actual value (0) in display 1 and set value in display 2.
- 2.3.2 Press “UP” key until the set value reaches to 100.
- 2.3.3 Press MODE Key for 2 times to put the counter to *Totalizing Mode*. (TOTAL indicator will lit.)
- 2.3.4 Press “UP/RESET” Key to start the test.
The instrument will run for 100 cycles and stop.
- 2.3.5 Press MODE Key for 2 times to put the counter to *Actual Value Mode*. In that mode only Display 1 is visible and there is no value at the Display 2.
- 2.3.6 Press “UP/RESET” Key to continue the test.
The instrument will run for another 100 cycles and stop.
- 2.3.7 Repeat the steps 2.3.5. and 2.3.6..
The instrument will run for another 100 cycles and stop.
- 2.3.1 Press MODE key to change the to *Set Value Mode*. In this mode you can see both the actual value (0) in display 1 and set value in display 2.
- 2.3.2 Press “UP” key until the set value reaches to 100.
- 2.3.3 Press MODE Key for 1 times to put the counter to *Actual Value Mode*. In that mode only Display 1 is visible and there is no value at the Display 2.
- 2.3.4 Press “UP/RESET” Key to continue the test.
The instrument will run for another 50 cycles and stop.
- 2.3.5 Press MODE Key for 1 times to put the counter to *Totalizing Mode*. (TOTAL indicator will lit.)
- 2.3.6 Read the total counted value as 350.

▲ WARNING ! If you press the gray LEVEL Key for 3 secs. you will enter the *Parameters Setup Mode* of the counter. In this mode the instrument will start working but counter will not count. The counter has already been setup for the most efficient use of OTA 2000. Changing the initial parameters of the counter MAY BRING THE COUNTER AND/OR THE INSTRUMENT OUT OF SERVICE. For your own safety we strictly advise you not to enter the *Setup Mode* of the counter.

2.4 Ending the test

Please follow the b/m steps while ending the test.

- 2.4.1 In order not to face a problem in your next test be sure that instrument is stopped by the counter as it reaches the set value.
- 2.4.2 Using the ON/OFF switch off the instrument
- 2.4.3 Unmount the clamps of the pushing device (Picture 1-5) and take it away as well as the pad holders.
- 2.4.4 Unmount the clamps of the frame (Picture 1.2) and take the frame (Picture 1.4) away.
- 2.4.5 Displace the test panel carefully, and put it in a safe place for further evaluation.
- 2.4.6 Clean the tray, glass bed, and fixing frame and the pad holders.
- 2.4.7 Either keep the tray glass bed fixing frame and the pad holders away or mount them again on the instrument after cleaning and drying. Never leave the a/m parts over the instrument unless they have been mounted and fixed correctly.

Section**4**

Maintenance and Other Safety Issues

In order to get the maximum performance out of your OTA 2000 and for a longer service life please keep the following points in your mind.

- Please do not let fluids like solution, water, solvent or paints inside the passing channels of the top cover.
- Please keep the instrument OFF and preferably out of power unless its not working.
- Please do not keep the instrument in dusty environment. It is better to keep it covered in case that it will not be used for a long period.
- The necessary consumables like pads brushes and scrub solutions can be purchased from Kar Kimya Ltd.
- Please NEVER try to check the deformation on the test panel while instrument is working. If it is necessary to check it, please pause the test by switching the instrument OFF first and then make the necessary examination. After the examination you can switch it ON to resume the test. The counter will resume to count from the count value that the test has been interrupted.
- Fixing clamps and the rods on the pad holders can get loosen my time. Please check them time to time and tighten them if necessary.
- There is no user serviceable part inside the Instrument. If the instrument is not working properly or if you hear abnormal noise during the operation immediately switch the unit off and contact your local dealer.
- Instrument has 2 Year part and service warranty The following are not covered by the Warranty: faults arising from misuse, accidental or deliberate damage to your Instrument; damage arising from use of equipment that is not supplied by or on behalf of Kar Kimya for use with your Scrub Resistance Tester; cosmetic damage which does not affect the functionality of your Scrub Resistance Tester.