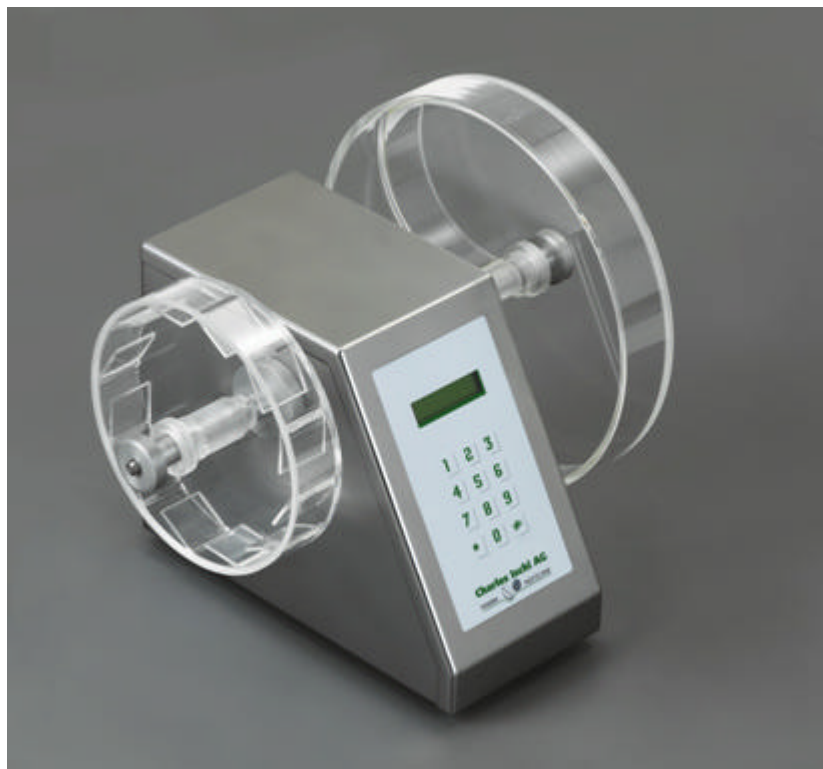


OPERATING INSTRUCTIONS

ABRASION AND FRIABILITY TESTER

AE-1



Version 2.06
14.11.2006

Rights reserved for technical changes

TABLE OF CONTENTS

	Page
1. START UP	3
2. USER GUIDANCE.....	4
3. TECHNICAL DATA.....	6
4. FINAL ASSEMBLY CONTROL TEST	7
5. SERVICING.....	8
6. TROUBLESHOOTING.....	9
7. SPARE PART LIST	10
8. CE – CONFORMITY DECLARATION	11
9. DECLARATION OF CONFORMITY WITH PH-EUR5.0/2005 AND USP29 NF2006.	12
10. DRAWINGS	13
11. TECHNICAL INFORMATION – Install support 10° angle	15

1. START UP

1. Operating voltage

Before plugging the machine in, check the voltage selector on the rear panel.

2. Mounting the test drums

The tester is delivered with power cable and operating manual. The test drums are available as an option in 2 versions: Friability test or abrasion test. The test drums are prevented from rolling by tabs on the inside and a quick release nut on the outside of the shaft.

3. Connecting power

After the correct operating voltage (point 1) has been selected the power cable can be connected to the machine.

2. USER GUIDANCE

2.1. Switch machine on

After the machine is switched on the machine version is shown in the display first, then the actual operating parameters:

Line 1: Preset rotation speed / PARAM *
Line 2: Time or total counts / START #

The machine can be operated using preset time or total counts, as desired.

2.2. Setting time or rotations:

- (Press * (PARAM) button
- (With the button # (R or TIME) you can chose the mode of operation
R = test with number of rotations
TIME = test with preset time
- (Press * (MODIFY) button
- (Chose the speed
- (Setting preset time or number of rotations
- (Press * (OK) button

2.3. Load test drums

By removing the quick release nut either the drum lid or the complete drum can be removed from the machine. The tablets are loaded into the test drum and the drum is held in place on the shaft by means of the quick release nut. The test drum is correctly mounted and closed when the quick release nut snaps into the groove on the shaft.

2.4. Starting the test

- (Press # (START) button
- (The machine begins to test
- (The tester shows the residual time or number of rotations

2.5. Ending the test

At the end of the test time or total counts the machine stops. The preset time or number of rotations will be restored.

- (The test can be stopped by the button # STOP or interrupted and be continued later at any time, before the end of the testing time or number of rotations.

The preset parameters are retained in the machine when it is turned off by means of a battery.

3. TECHNICAL DATA

Power connection	200-240V / 50-60Hz
Fuses	2x M1A/250V
Speed	10 – 99 rpm
Preset time	1min – 23h 59min
Number of rotations	10 – 999999 r
Drums	Friability drum Abrasion drum

4. FINAL ASSEMBLY CONTROL TEST

Each machine undergoes, as a minimum, a 12-hour final assembly control test prior to delivery. During this test all machine functions are checked.

5. SERVICING

The servicing contains a periodical cleaning of the tester. There are no wearing parts. The spare part list you can find under point 7.

6. TROUBLESHOOTING

Machine malfunctions should only be repaired by an authorized school trained technician. In the case it is not possible to correct the malfunction, Charles Ischi AG, or the responsible representative should be contacted for repairs.

7. SPARE PART LIST

Description	Art. no.
Base plate	310901
Cover	310902
Display complete	310903
Main board	310904
Front foil	310905
Display board	310906
Sensor speed	310907
Sensor rotations	310908
Motor	310909
Axis left	310910
Axis right	310911
Fixing / drum left	310912
Fixing / drum right	310913
Mortor holder	310914
Control system unit	310915

8. CE – CONFORMITY DECLARATION

Wir / We Charles Ischi AG
Langfeldstrasse 26
4528 Zuchwil
Schweiz / Switzerland

**Erklären hiermit, in alleiniger Verantwortung, dass dieses Produkt,
Declare sole responsibility for our product,**

**Abriebs- und Friabilitäts-Testgerät
Abrasion- and Friability Tester**

Typ AE-1

**Auf die sich diese Erklärung bezieht, die Normen und normativen Dokumente der
EG-Richtlinien für Maschinen 89/392/EWG berücksichtigt wurden.**

**To which this declaration document relates is in conformity with the standards and
norms for machines of the EC.**



Zuchwil, 28.04.2004

.....

**Ort, Datum
Place, Date**

**rechtsverbindliche Unterschrift
Signature**

9. DECLARATION OF CONFORMITY WITH PH-EUR 5.0/2005 AND USP29 NF2006

Wir / We Charles Ischi AG
Langfeldstrasse 26
CH-4528 Zuchwil
Switzerland

**Erklären hiermit, in alleiniger Verantwortung, dass dieses Produkt,
Declare sole responsibility for our product,**

**Abriebs- und Friabilitäts-Testgerät
Abrasion- and Friability Tester**

Typ AE-1

**mit den Anforderungen der European Pharmacopoeia 2005 und USP29 NF2006
übereinstimmt, soweit diese für Abriebs- und Friabilitäts-Testgeräte anwendbar sind.**

**is conform with the requirements of the European Pharmacopoeia 2005 and USP29
NF2006, concerning the regulations for Abrasion- and Friability Testing.**



Zuchwil, 14.11.2006

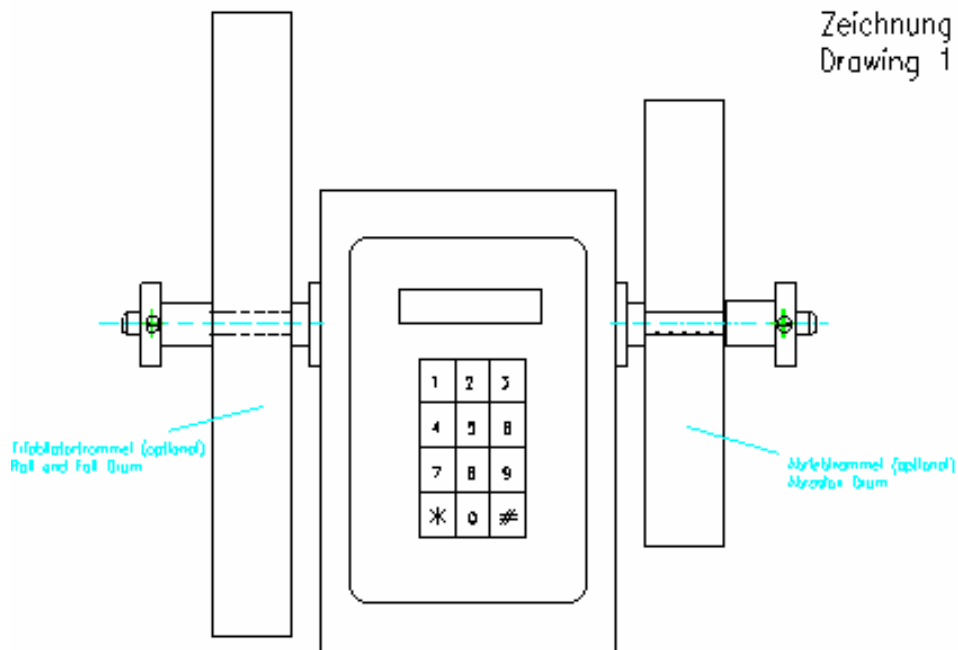
.....

**Ort, Datum
Place, Date**

**rechtsverbindliche Unterschrift
Signature**

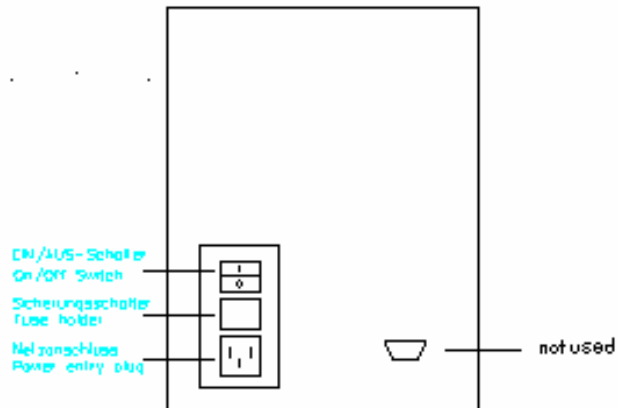
10. DRAWINGS

Drawing no.	
1	Machine overview
2	Rear panel

Geräteübersicht
Machine overviewZeichnung
Drawing 1

Rückwand
Rear panel

Zeichnung 2
Drawing 2



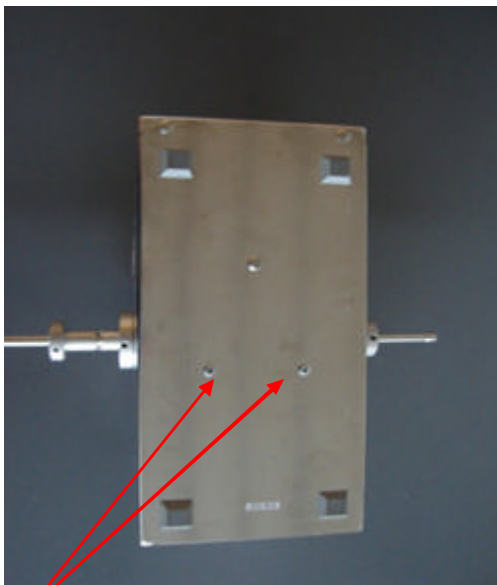
11. TECHNICAL INFORMATION – Install support 10° angle



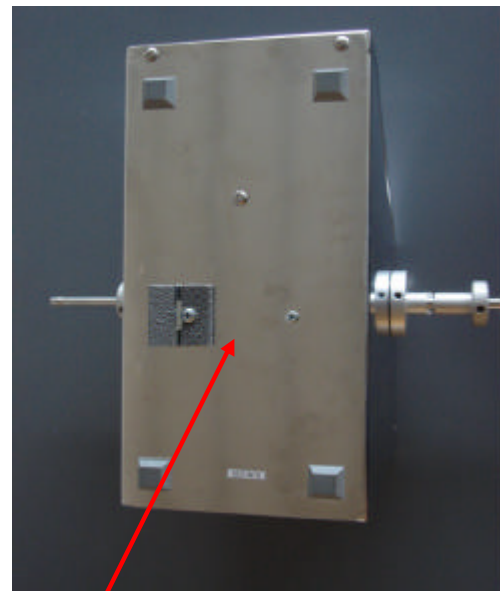
Machine with angle



10° angle with screw



Take out one of these two screws left or right and put on this place the 10° angle.



Use the screw which we deliver with this angle, see on the picture in which position you have to fasten the angle.