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**ISR-S400
ROUGHNESS TESTER
OPERATION MANUAL**

V0

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Attention

◆ To get the best results from this instrument and to use it satisfactorily, first read this manual. Observe the following precautions to obtain the best results from the instrument in the long term.

◆ this instrument uses a calibrated stylus on the end of the pick-up. Therefore always take great care when handling it and avoid shocks. Keep it permanently clean using a jet of dry air of pressure not more than two bar.

◆ For the mains power supply, follow the indications on the power supply and in this manual. Do not use power supplies other than the one supplied.

◆ Do not disassemble the instrument, with the exception of the parts specified in this manual. Damage or malfunctions may result.

◆ The pick−up is a delicate, precision part. Do not subject to stresses or shocks.

◆ Do not use the instrument in dusty environments and with strong vibrations. Where possible, keep it away from generators of noise, such as large power supplies or transformers, high voltage switches and relays.

◆ Do not use/leave the instrument in places where there may be excessive and sudden temperature excursions, or in closed rooms with very high temperature or with direct sunlight.

◆ Store the instrument in places where the temperature can be kept at between -10°C and +50°C.

◆ Before starting measurements, eliminate all oil residues and dirt from the surface to be measured.

◆ Do not subject the instrument to shocks or drops because its internal translator, in spite of being extremely robust, may become damaged and falsify the readings.

Product Introduction

1 General description:
The ISR-S400 palm-top roughness tester is a portable, light and compact instrument, extremely easy to handle and use. Controlled by a microprocessor, it uses an alphanumeric liquid crystal display (LCD) and the accumulator adopted permits considerable operating autonomy. All the messages and menus can be displayed in one of the following five selectable languages: Italian, English, French, German, Spanish and Portuguese.

The instrument consists of the electronic unit, the miniaturised traverse unit (incorporated) and – where applicable – a printer (optional); it is used to measure the main parameters of surface roughness with a resolution in hundredths. The versatility of the traverse unit permits all conditions of measurement to be resolved, whether held in the hand or fastened to a stand. In this last case, it is possible to turn on it and to start the measure with an external push-button, so that to avoid the vibrations that could distort the results.

The measurement range is set automatically when the cut-off is chosen from among the three available but it is possible to change it by selecting a cut-off number between 1 and 5.

The instrument prevents and reports on display any incorrect manipulations or irregularities that may occur during the measurement setting-up stages.

The instrument has a memory of 100 measurements, which may be recalled and printed at any time.

The most common functions, such as recalling results, or cut-offs and starting measurements, can be accessed directly using the keyboard, while others are available by activating suitable, easy to comprehend menus. Among other things, these menus permit the presetting of tolerance thresholds which, when linked to one of the measurable parameters, facilitate series checks. When it is switched off, the ISR-S400 maintains in its memory all the presettings and data relative to the last measurement made. The instrument switches itself off automatically if left idle for 40 seconds when powered by the battery (5 minutes when powered by the power supply).

All the settings are never lost even after the battery has been completely discharged since the instrument uses a particular MRAM internal storage memory.

Through a data output connector a link can be made to a dedicated printer or to a computer. This connection can only be made by using the cables supplied by the manufacturer. With the printer connection a header and 3 user-customisable lines can be printed; through the computer link, and with suitable software, it is possible to control all the functions of the roughness tester, transmit the measured profile to the computer and enter and change at will the 3 customizable lines.

The printout, in all the envisaged modes, can only be produced using the keys on the printer (optional).

② **Structure:**

The instrument can be controlled entirely using the keyboard on the top part of the ISR-S400. Some of the keys perform a function directly, while others are of assistance in handling menus and presettings. The function of some keys will even differ depending on the context. With reference to the figure, the main function of the items on the top part is as follows: The instrument can be controlled entirely using the keyboard on the top part of the ISR-S400. Some of the keys perform a function directly, while others are of assistance in handling menus and presettings. The function of some keys will even differ depending on the context. With reference to the figure, the main function of the items on the top part is as follows:

top panel
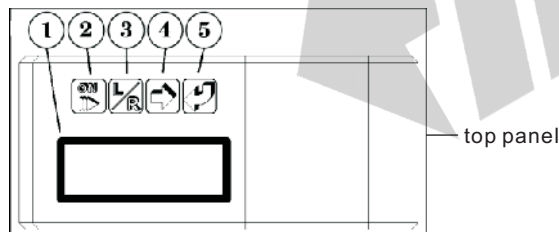
1. Liquid crystal display (LCD).
2. On-off / START (start measurement) - STOP (stop measurement) key.
3. Key for displaying the result of the measurement / displaying and presetting the cut-off and cut-off number. If pressed when in

the main menu, causes the higher level menu to return on display.
4. Scroll key. If pressed when the result of a measurement is on display, brings up the parameters after those on display; if pressed when selectable presettings are on display, moves the cursor between the presettings; if pressed when in the main menu, moves through the items on the main menu.
5. "ENTER" key. If pressed while the result of a measurement or the cut-off is on display, brings up the main menu, otherwise it confirms the selection made.

Auxiliary functions executed by means of the keys will be indicated during the detailed description of the commands. The active selection referred to above is shown on the display by applying a black background to the currently selected item. The function of the selection is to indicate the position of the currently active item or of the character on which to take action.

All the keys are provided with self−repeating function, that is to say the ability to repeat their assigned function continuously until such time as they are released. In addition, the key ④ assumes its second function, that of modifying the digit selected.

real panel
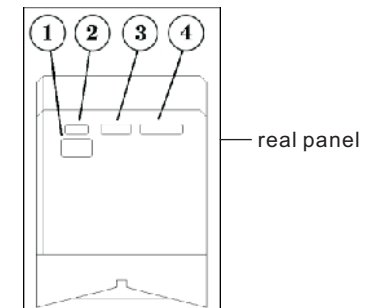
As may be seen from the figure, the following are found on the rear panel:
1. Connector for external power supply.
2. Battery on/off switch.
3. Connector for data output.
4. Connector for printer and for external push-button.

❸ **Switching on the instrument:**
The roughness tester is switched on by pressing the key 🔲. The ISR-S400, after a number of internal checks have been conducted quickly, indicates on the display 🔲 ISR-S400 Vers 5.0 🔲 for a few seconds before moving on to displaying the parameters. This indicates to the operator that the instrument is ready to be used. Switching-off, on the other hand, occurs automatically 40 seconds after the last operation effected. If a key is pressed within the 40 seconds, the on time count is reset to zero and, from that precise time, extended for another 40 seconds.
All the functions activated directly from the keyboard and those executed from the menus are only accessible after the instrument has been switched on.
The switching on is also gotten with the special external push-button (optional) connected to the data output, or automatically, or when press the keys on the printer, or when the software Measurement Studio communicate with the roughness tester.
Note: when the ISR-S400 switches off at the precise moment you try to press a key, you are advised to wait for ½ second before switching the instrument on again.

Menus and Settings

❶ **the ISR-S400 menus. Use, notes and structure:**
The operator programs and controls the instrument's functions through selection menus and submenus.
To activate the main menu press the key 🔲 (ENTER) when the display shows:
1. The results of a measurement.
2. The cut-off.
3. The cut-off number.
4. An error message.
To exit from the main menu and the submenus press the 🔲 and 🔲; the first one immediately starts the measure, the second in the submenus makes to climb a level, in the main menu it makes to visualize the parameters.
The structure of the menu can be seen in the figure that follows:
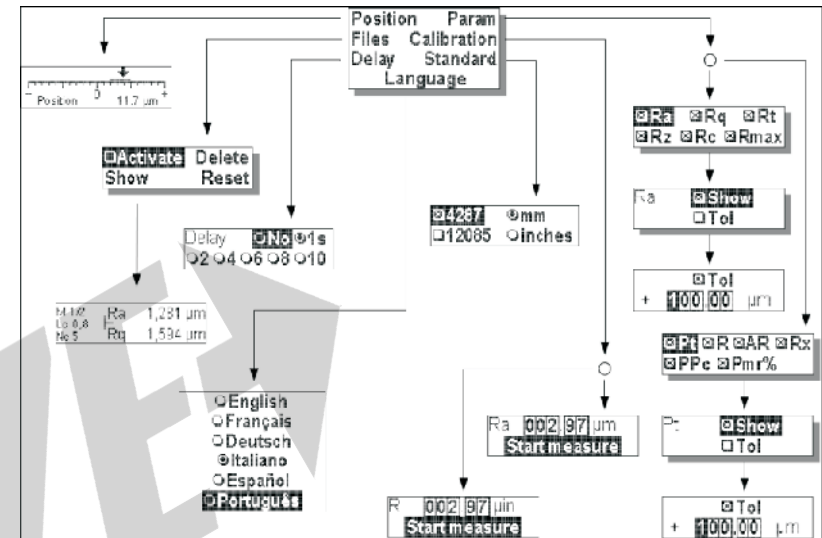
The selections made on the submenus become operative immediately and the active item or the last one we was positioned on is indicated by a black background applied to the item. To shift the the selection and, as a result, alter your selection, use the key 🔲. Access may be had to the submenus by pressing the key 🔲. When the menu or submenu contains numerous items that cannot all be displayed simultaneously, you will see on display only the items that can be written in full; the others will appear gradually as you move with the cursor. For example, the main menu comprises 8 items but only four are displayed at a time.
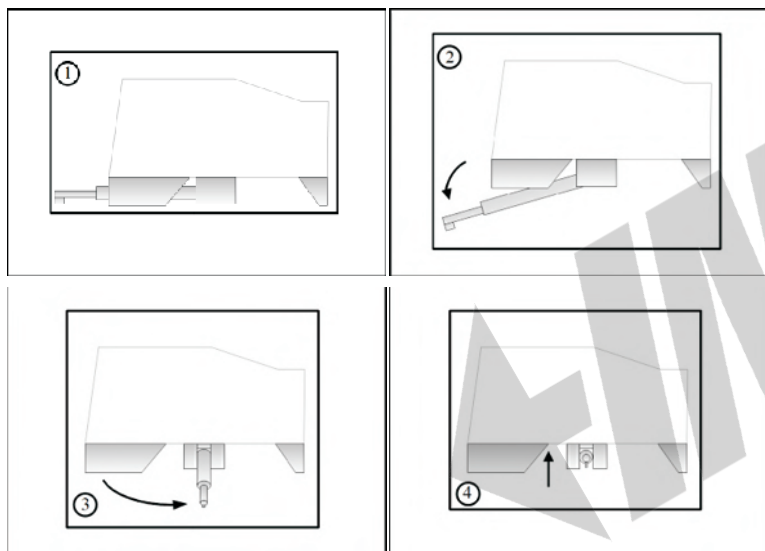
❷ **The pick-up:**
The ISR-S400 incorporates the traverse unit mechanism and the pick-up is fastened to the latter by means of the pick-up support articulation. The measurements may be made either by holding the ISR-S400 in your hand or fastened to a support or simply set down (with additional supports for measurements on cylinders and pick-up cover for use when measuring edges).
The pick-up support block permits rotation of the pick-up so that measurements may be made inside throats (pick-up at 90°), as shown in the figure below.

To perform rotation of the pick-up, proceed as illustrated in the figure:

Rotation of the pick-up through 90 degrees

With the extra V-shape supports, the ISR-S400 allows measurements to be made on cylinders starting from a minimum diameter of 80 mm.

3 How to preset the cut-off:
The key that lets you access presetting of the cut-off is ▯. If you are in the main menu, to access presetting of the cut-off, press the key twice; in any other context, simply press the key once.

The display lists the options possible, while the current selection is indicated by the black background, for example, ▯. To modify it, set the selection on the value desired.

The traverse length made by the traverse unit corresponds to the length λt which depends on the cut-off selected, according to the relation: (cut-off no. +1) λc. If for reasons of space the length is excessive, you can lower the cut-off number. Normally the 5 cut-off is used but you can select between 1 and 5. To select this number press again ▯; the display will show ▯, move the selection to the value desired. You can either return to modify cut-off by pressing ▯ twice or terminate the operation by pressing ▯ once only. In this case, the report ▯ will be displayed because the assessment of the parameters is strictly related to λc and to the number of λc used.

When the cut-off or cut-off number is changed on an instrument already preset for measurement, setting of the cut-off may be terminated with the key ▯ which immediately starts the measuring cycle.

4 How to preset the traverse length with ISO 12085:
When the ISO 12085 standard is used, the measurement range no longer depends on the cutoff but is selected directly. The key by means of which you access presetting of the measurement range is ▯. If you are in the main menu, to access presetting of the measurement range press twice the key however, in all other contexts, all you have to do is press the key once. The display shows a list of the options possible with the current selection indicated by the black background, for example ▯. To change it, set the selection on the desired value.

You can terminate the operation by pressing the key ▯. In this case, the report will be displayed ▯, because the assessment of the parameters is strictly related to the traverse length selected.

When the measurement range is changed on an instrument already preset for measurement, the setting work may be terminated with the key ▯ which immediately starts the measuring cycle.

5 use of the main menu and main menu items:
As already said, setting of the instrument is made through a selection menu and relativesubmenus.

The main menu is activated by pressing the key ⟦⟧, when the display shows the cut-off, a parameter, or an error signal. The menu is presented in the following way with the last item selected with black background.

For example, if the menu is activated for the first time, the item "Position" will blink. When the display cannot contain the whole of the menu, the cursor movement key lets you display the other items. The significance of the items is as follows:

```
Position    Param
Files    Calibration
Delay    Standard
        Language
```
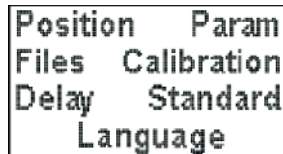
◆ **Position:** Lets you control, in the section to be explored, the position of the stylus with respect to the surface. This is very useful in two cases:

  1) to prevent the body of the pick-up from touching inside holes or throats and bringing the sensor to the extremity of the measuring zone or the stylus from losing contact with the surface causing an interruption of exploration.

  2) for positioning the pick-up correctly on critical surfaces, such as concave, convex, etc. surfaces.

◆ **Param:** Enables/disables the roughness parameters to be printed and also lets the user access a further submenu where he can enable/disable tolerance limits to be associated with a parameter and the presetting of these limits.

◆ **Files:** Enables/disables the storing of measurements and permits elimination of the last measurement stored or all the measurements simultaneously. Besides it allows to see on the display all the memorized measures.

◆ **Calibration**: Performs calibration of the instrument.

◆ **Delay:** Allows the measurement starting with a certain period of time delay after sending the command.

◆ **Standard**: Selects the type of standard, ISO 4287 or ISO 12085 (CNOMO), with which the parameters are calculated.

◆ **Language:** Allows you to select the language in which the messages are displayed.

Assuming that the starting condition is always with the main menu displayed, let us examine in detail how to use the different items.
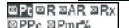
❻ **Controlling the stylus position:**

1) Make your selection on the item Position and press ⟦⟧. The following indication will be obtained ⟦position 0 (1.7 μm)⟧, where the vertical arrow indicates current position of the stylus while the horizontal line below it represents the total excursion of the stylus during the positioning session. In order to obtain correct measurements, the arrow must be in the centre of the field defined on the display coinciding with the zero point or as close to it as possible. The useful positioning range about the zero point is ±75 μm.

2) Press ⟦⟧ to obtain a "test exploration" in which to check if the arrow is outside the "+" and "–" limits. If it is outside, position the pick-up again and repeat the exploration.

3) On completing these tests, press ⟦⟧ to return to the main menu, or ⟦⟧ to exit from the menu.

❼ **Enabling or disabling the parameters to be printed and displayed:**

The operator can select to print and display on screen only the roughness parameters required. The procedure is as follows:

1) Move the selection on to the item Param and press ⟦⟧. The display shows ⟦Ra Rq Rt Rz Rc Rmax⟧, if the currently enabled standard is ISO 4287, ⟦Pt R AR Rx PPc Pmr%⟧ if the standard is ISO 12085.

2) Move the selection on one of the listen parameters then press ⟦⟧, the following submenu is displayed: ⟦Ra Show Tol⟧, this submenu allows to enable or disable the current parameter for printing and displaying.

Move the selection on the item Show then Press ⟦⟧ to enable the parameter if it is disabled, or vice versa, to disable the parameter if it is enabled.

Printing and displaying of the parameter is enabled when the symbol ⟦⟧ is displayed to the left of it, whereas it is disabled if the symbol ⟦⟧ is displayed to the left of it. If the RPc parameter is selected the following submenu will be displayed: ⟦RPc Show Ba-d 0.00 0.01 μm⟧, where and additional option is displayed, that is the value of the range amplitude used for the calculation of the parameter. Move the selection with ⟦⟧, on the digit to be changed then press ⟦⟧ until the desired value is reached.

3) Press ⟦⟧ to move between the parameters. Make your choice and proceed in this way for all the parameters for which you wish to alter the selection. At this point, by pressing ⟦⟧ you go back to the main menu.

Note: **if you need to check the value of a disabled parameter and you have just finished measuring, simply enable the parameter concerned. It is not necessary to complete the measurement. The parameter Rmr% represents the bearing ratio and it is also graphically printed as curve of Abbott.**

8 **Presetting the tolerance thresholds:**

1) Move the selection on to the item Param and press [icon]. The display shows [icon], if the currently enabled standard is ISO 4287, [icon] , if the standard is ISO 12085.

2) Move the selection on one of the listen parameters then press [icon], the following submenu is displayed: [icon] . This submenu lets you enable or disable tolerances for that parameter. Move the selection on the item Tol then press [icon] to enable tolerances if those are disabled or vice versa, to disable tolerances if those are enabled. The tolerances of the parameter are enabled when to the left of the Tol item the symbol [icon], is displayed, whereas they are disabled when to the left of the Tol item the symbol [icon] is displayed.

3) After you have made your choice, press [icon] to return to the tolerances submenu. If you wish to go back to the main menu, press [icon] ; to move on to displaying the data, press [icon] again.

4) Press [icon] to move the selection on the item of adjustment of the lower tolerance value. The screen will be the following: [icon] . Whenever there has been a previous presetting, the values are displayed. To change the upper tolerance value, move with the cursor through the first line with the key [icon] up to the digit that has to be changed. Press the key [icon] until you come to the desired value. To change the lower tolerance value, move the selection with the key [icon] to the second line, the display will show [icon] . Move the cursor, still using the key [icon] , over the digit to be changed. Press the key [icon] until you come to the desired value.

5) Press [icon] to terminate the presettings.

The tolerances, on the display of the parameter that they are associated with, produce the display of [icon] if the measurement is inside the limits, [icon] blinking if the measurement is over the limit T+, [icon] blinking if the measurement is below the limit T-. The three cases are illustrated in the examples that follow:

Ra 2.01 μm OK	Ra 3.01 μm ▲	Ra 1.25 μm ▼
Rmax 2.51 μm	Rmax 4.15 μm	Rmax 1.60 μm

9 **Setting the calculating standard:**

1) In the main menu make your selection on the item Standard and press [icon]. The display will show [icon] .

2) Move the selection on the desired item then press [icon] to enable the item if it was previously disabled or vice versa to disable the item if it was previously enabled. The item is enabled when to its left the symbol [icon] is displayed, whereas it is disabled when to its left the symbol [icon] is displayed.

Press [icon] to go back to the main menu.

10 **Setting the measurement unit:**

1) In the main menu make your selection on the item Standard and press [icon]. The display will show [icon] .

2) Move the selection on the desired item then press [icon] to enable the item if it was previously disabled or vice versa to disable the item if it was previously enabled. The item is enabled when to its left the symbol [icon], is displayed, whereas it is disabled when to its left the symbol [icon] is displayed.

Press [icon] to go back to the main menu.

Note: The choice for the measurement unit is active only when the calculation standard 4287 is selected, vice versa the option mm(millimeters) is always used.

11 **Setting the start measurement delay:**

1) In the main menu make your selection on the item Delay and press [icon]. The display will show [icon] .

2) Move the selection on the desired item then press [icon] to enable the item if it was previously disabled or vice versa to disable the item if it was previously enabled. The item is enabled when to its left the symbol [icon], is displayed, whereas it is disabled when to its left the symbol [icon] is displayed.

Press [icon] to go back to the main menu.

12 **Setting the language:**

1) In the main menu make your selection on the item Language and press [icon] . The display will show:

○English
○Français
○Deutsch
◉Italiano
○Español
○Português

2) Move the selection on the desired item then press ⬚ to enable it. The item is enabled when to its left the symbol ⬚, is displayed, whereas it is disabled when to its left the symbol ⬚ is displayed.

Press the key ⬚ or the key ⬚ to go back to the main menu.

13 Storing the measurements:

With the ISR-S400 it is possible to store up to a maximum of 100 measurements. If the measurements memory is full, each time the operator makes a new measurement, the ISR-S400 produces an error message advising that it is not possible to store the measurement until one or more stored measurements are erased. Printing of the measurements is obtained by pressing the appropriate key on the printer.

Note: Measurements cannot be selected and recalled one at a time, they are all printed together in a list. Only the Measurement Studio software will permit complete management.

Printing can be repeated until you eliminate all the measurements. You can also examine the measurements one to one on the display using the special voice of the menu.

14 Enabling/disabling storage of measurements:

1) In the main menu make your selection on the item Files and press ⬚ to bring up the submenu: ⬚ .

2) Storage of measurements is enabled when the symbol ⬚ is displayed on the left of the item Activate, whereas it is disabled when the symbol ⬚ . is displayed on the left. Make your selection on the item Activate and press ⬚ to activate/de-activate this function. Press ⬚ to go back to the main menu. Performing the measures with the storage activated, you will have the indication of the number of the same present in memory; for example:

⬚ Measuring

15 Showing all the measurements stored:

1) In the main menu make your selection on the item Files and press ⬚ to bring up the submenu: ⬚ .

2) Make your selection on the item Show and press ⬚ . The first measure will be appear (Ms 1), with the number of used cut-off (the length of measure in ISO 12085) and the first two parameters. Press ⬚ to visualize various parameters in turn. In the second group the number of cut-off is visualized also. Press ⬚ to go to the next measure.

3) Press ⬚ for interrupting the visualization and to go back to the menu Files.

16 Eliminating all the measurements stored:

1) In the main menu make your selection on the item Files and press ⬚ to bring up the submenu: ⬚ .

2) Make your selection on the item Reset and press ⬚ . Press ⬚ to go back to the main menu.

Operations

When performing measurements, to get a correct result, there are a number of hints that should be observed:

1) Where possible, place the instrument and the part being measured on a rigid bench free of vibrations and clean thoroughly the surface to be explored. If you have to hold the ISR-S400 in one hand, make sure you do not move it during the measure; make several measurements and compare them because if one differs significantly from the others, then you must have moved the ISR-S400 during the exploration. The accessories supplied (cover for pick-up and riser feet) make positioning easier.

2) Switch the instrument on and, if necessary, preset the desired functions through the menus.

3) Insert a suitable cut-off and cut-off number (where necessary, refer to table 1).

4) The pick-up must be positioned in such a way that it is as parallel as possible to the surface to be explored. This may be checked by using the Position function, especially when the part to be measured is difficult to get to.

5) Start the measuring cycle with the key ⬚ (on-off/start) or the external push-button or the Measurement Studio command. The traverse unit will move the pick-up, pulling it towards itself, until the predetermined position is reached; the display will show respectively the ⬚ Measuring message on the first line and an incrementing exploration progress indicator on the second line. At the end of the exploration, while the display shows the result of the assessment, the traverse unit brings the pick-up back to the idle position. The measuring cycle can be interrupted at any time by pressing the key ⬚ .

Note: Measurements should always be made with the temperature of the room, of the part and of the instrument constant and, where possible, at 20°C.

Ra (µm)		cut-off (mm)	lₜ (mm)
from	to (included)		
0,02	0,1	0,25	0,75...1,75
0,1	2	0,8	1,3...4,5
2	10	2,5	3...13

Table 1. Relationship between roughness and cut-off.

Calibration

At periodic intervals, a check should be made that the instrument is calibrated, i.e. that the value of Ra (of R if in possession of a specimen for the ISO 12085 standard) measured on the specimen plate is as close as possible to that indicated on the plate.

Calibration is performed on the parameter Ra (or the value of R for the ISO 12085 standard); it takes place in two steps, first by setting the reference value (specimen) and then by making the measurement.

The reference value is set and the measurement made in the following way:

1) In the main menu make your selection on the item Calibration and press [⋮]. The display will indicate [Ra 002 97 µm / Start measure] if the enabled standard is ISO 4287, or [R 002 97 µm / Start measure] if the enabled standard is ISO 12085.

2) Now enter the value of the specimen plate supplied with the roughness tester: use the key [→] to move to the desired digit and the key [⋮] to change its value.

To go back to the higher level menu, press [⌫].

3) Set the pick-up on the specimen plate as for a normal measuring cycle and with the cut-off corresponding to that indicated on the specimen.

4) From the menu [Ra 002 97 µm / Start measure] (or [R 002 97 µm / Start measure] if the enabled standard is ISO 12085) make your selection on the item Start Measure and press [⋮]. The display will show the message on the first line and an incrementing exploration status indicator on the second line for the entire duration of the measurement, then [Calculations in progress] during the calculation step and finally [Calibration done] to indicate that the calibration stage has been completed. Press [⌫] to terminate the calibration and go back to the main menu.

You are recommended not to use the specimen plate more than is strictly necessary, to avoid deterioration caused by possible scoring of the stylus which could falsify the roughness values.

Recharging And Replacing The Accumulator

① When the accumulator charge is low, the instrument signals [▯] on the extreme right of the first line of the display. The instrument should then be connected, as quickly as possible, to the power supply provided; then plug the power supply into a mains outlet, after making sure that the voltage is that required (220V 50/60Hz). The power supply plug should be inserted in the socket shown in figure 2, on the rear of the ISR-S400, and making sure that it is plugged in fully; leave to charge for at least 3 hours. A full charge takes 4 hours. No problem will arise if the power supply is left connected for more than this time, because it is provided with an automatic charge control means.

It is possible to use the instrument even while the accumulator battery is recharging.

Note: do not store the instrument for long periods with the accumulator battery discharged, as it will become damaged. If left idle for long periods, check the charge level at least once every 30 days. If the accumulator discharges too deeply, it will not be possible to switch the roughness tester on. Do not replace the accumulator with zinc-carbon or alkaline batteries. These batteries can explode if you try to recharge them and, in any case, may cause the instrument damage when their charge is low.

② The accumulator can withstand a certain number of charge/discharge cycles, beyond which it can no longer be charged and must be replaced. Use an 8.4V-170mAh NiCd or NiMH type accumulator, PP3 format.

Remove the six base fixing screw of the instrument cover then pull the cover from the top, detach the accumulator from the button connection and insert the new one. Make sure that the accumulator does not touch the contacts with the polarities inverted!

Insert again the cover and fix it with the screws to the instrument base.
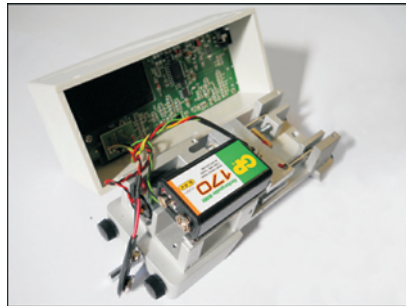
Error Messages

`* Overflow *`

Probable cause:

The instrument's measuring capacity has been exceeded (Rt>300 µm).

Remedies: clean the part thoroughly and check that there are no furrows at the measuring point. Try measuring a different point.

`No data available`

Data present in memory can no longer be used to gauge roughness.
Signalled in the following cases, after pressing [ ]:
a) After changing the cut-off.
b) After changing the cut-off number.
c) After calibration.
d) After a "measure test" in the Position function.
Remedies: make a measurement.

`Calibration not valid`

The value measured deviates too much from that of the specimen.
Remedies: repeat the calibration and check the value that you have preset.

`Redo calibration!`

The calibration data have accidentally been erased or damaged.
Signalled after pressing [ ].

`RS232C not ready`

Signalled when the data are required for printing or displaying or when the roughness tester has to receive external commands. The report is generated by the instrument timing-out for 2 seconds.
Probable causes:
a) The instrument that has to receive the data is not connected or is switched off.
b) The receiver is not programmed correctly.
c) The connection cable is damaged.

`RAM test error`

Signalled when the diagnostic checks reveal a memory defect.
Remedies: call the technical service department.

`Tables overflow`   `Number of peaks too big`

Signalled at the end of a measurement when, with the ISO 12085 standard selected, the instrument's calculating capacity is exceeded.
Probable cause: The profile examined cannot be gauged.

Resetting The Storage Memory

If there are problems with the functioning of the menus, which may occur due to excessive noise when the roughness tester is powered from the mains, the storage memory must be reset in order to restore proper working conditions.
However, note that the resetting involves the elimination of all the presettings and flags that enable the software to restore the condition prior to the switch-off.
The reset is performed by holding down the key [ ] while switching the instrument on, and releasing it only after the mention appears
`INSIZE ISR-S400 Vers 2.3` on the display.
It has been done correctly if, when you press the key [ ] again, the following signal `No data available` is displayed and if, when you check in the menus, all the functions (print parameters, tolerances, etc.) are disabled, and the cut-off is equal to 0.8.
If this is not the case, leave it to switch off and repeat the operation.