

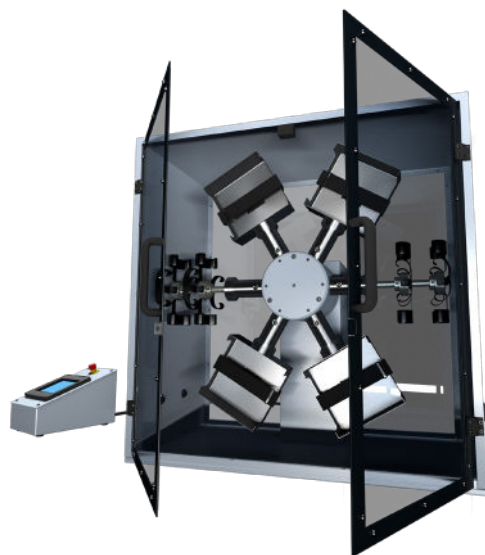


ASTUTO Sàrl

MACHINES À REMONTER LES MONTRES AUTOMATIQUES



DUOTEST 4



DUOTEST 48



serial number _____

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Table of Contents

Start up of DUOTEST 4	3
Start up of DUOTEST 48	4
Control console	5
Configuration of the control console	6
Work in manual mode	7
Work in time mode	8
Work in revolutions mode	9
Work in Programming mode	10
Work in programming mode (timer)	11
Work in programming mode (revolutions)	12
Set up	13
Emergency stop	14
Safety instructions and important notices	15

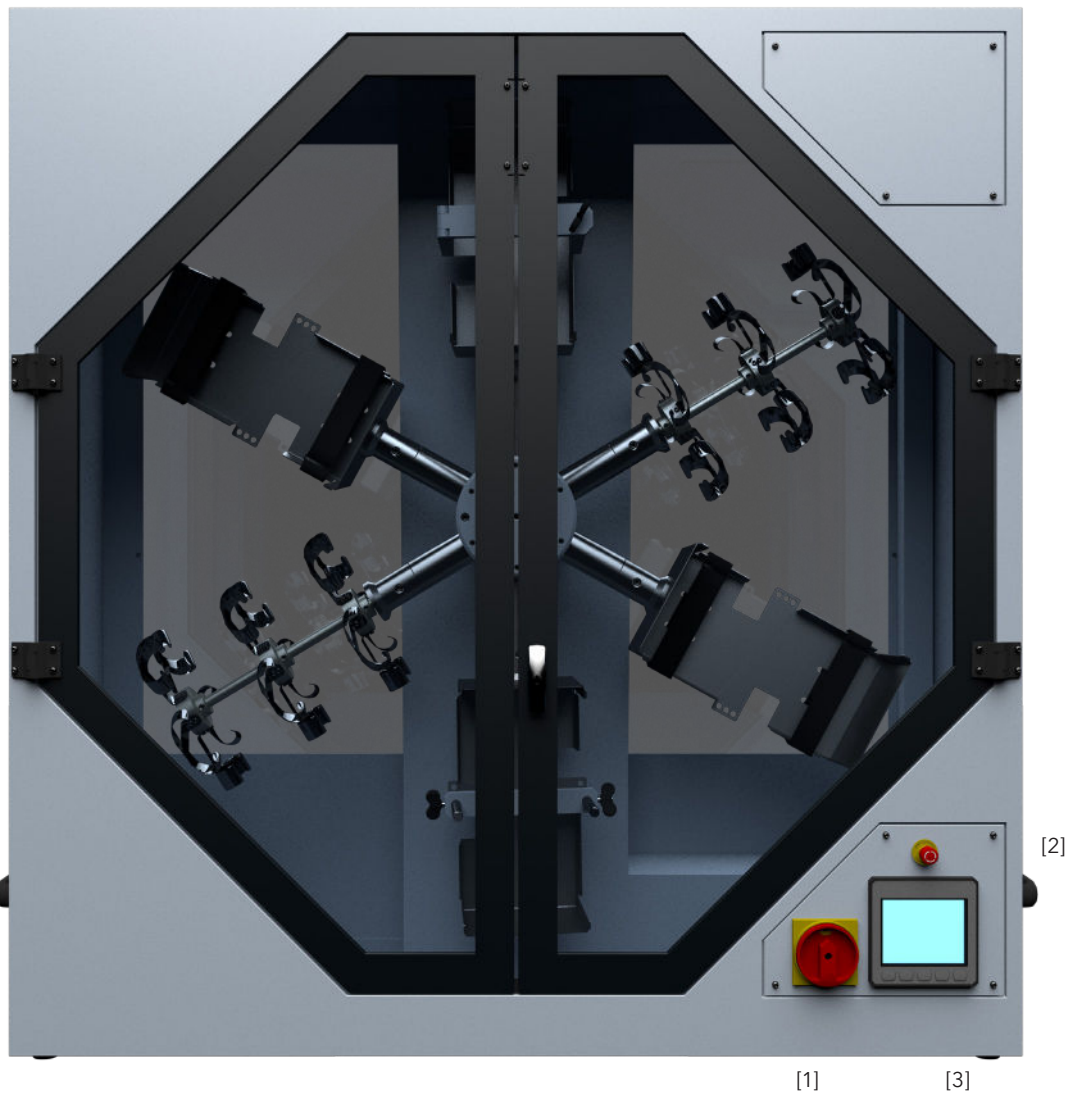
Start up of DUOTEST 4

Plug in power to mains with help of cable supplied with the machine. The power source must correspond to the requirements of the machine.

Start the machine with the main interrupter [1].

In case of a problem, the emergency button is on the control console[2].

You may start using the machine from the command console[3].



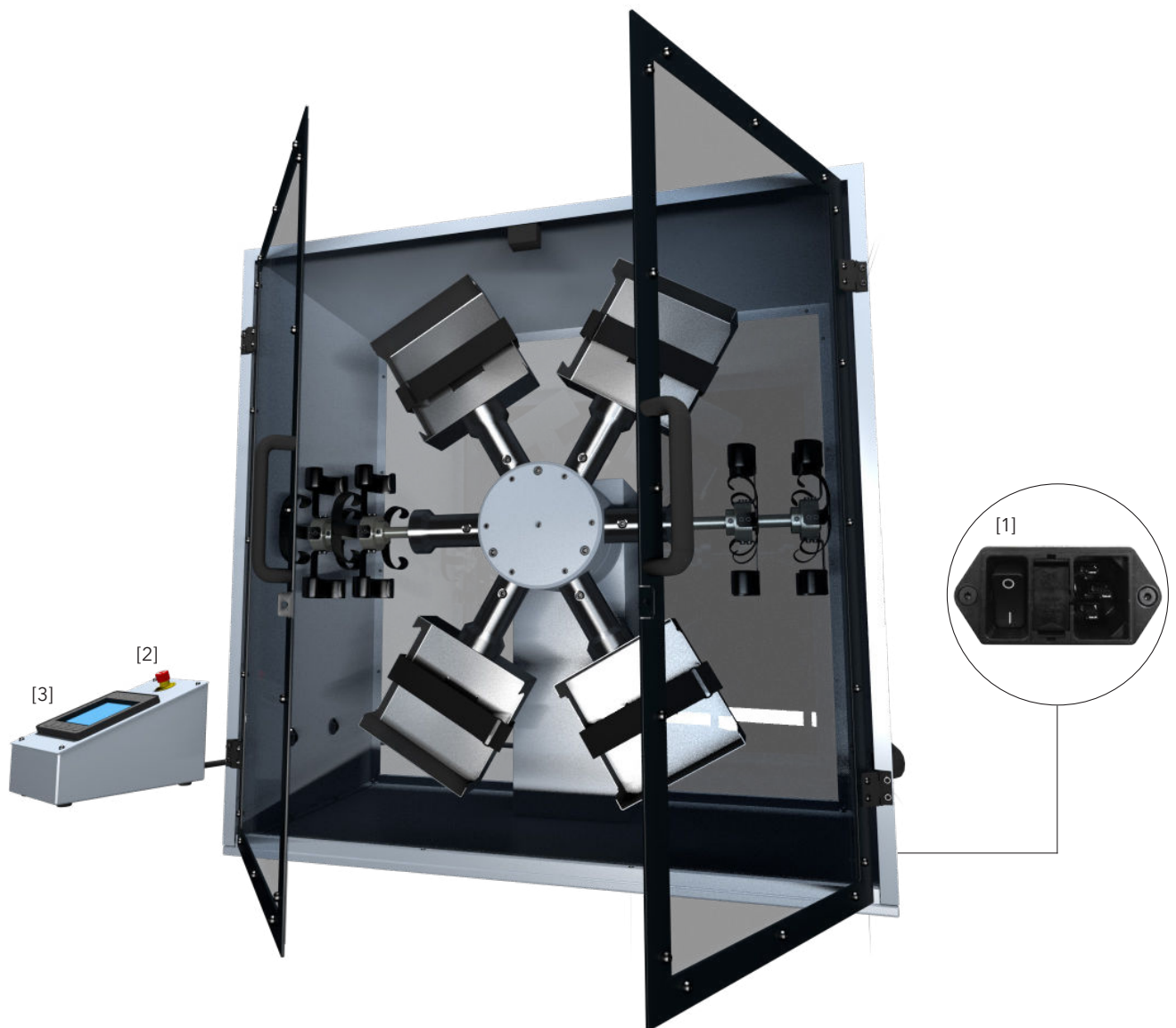
Start up of DUOTEST 48

Connect the power supply to the mains using the cable supplied with the machine. The power source must correspond to the requirements of the machine.

Start the machine at the back of the support carrier [1].

In case of a problem, the emergency button is on the control console [2].

You may start using the machine from the command console [3].



Control console

The command console [1] allows functioning and programming of several machine models of the range ASTUTO SARL (DUOTEST II DUOTEST48).

It is made up of a touch screen and 5 touch buttons. Most of the functions are operated from the touch screen. Only two buttons (F3 and F4) are of use to the user. (SYS: maintenance F1 and F2: reserve).

When the voltage is switched on, the control module is lit and proceeds to a test after starting the systems.

When using different modes of operation of the machine you verify that the parameter chosen appears in reverse contrast to the view, as in the example below[2].

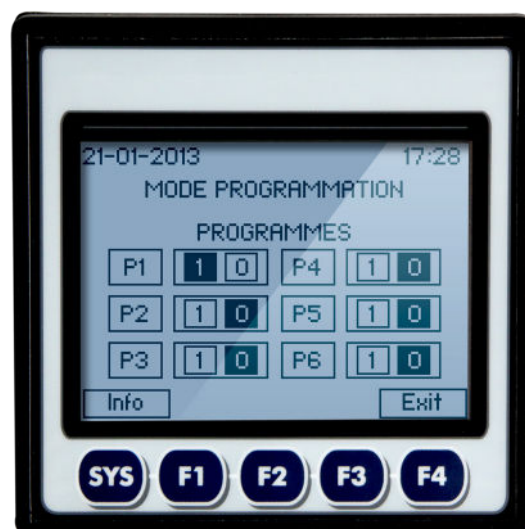
It is recommended not to use solvents for cleaning the control console.

Never use the control console whilst manipulating the machine. It is best to always use the control console with the doors of the machines closed.

In the case of a separate console to the machine, it is recommended not to power the machine if the console is not plugged in.



[1]



[2]

Configuration of the control console

At the beginning it is necessary to configure all parameters of the machine to be able to use all of the features in the greatest comfort.

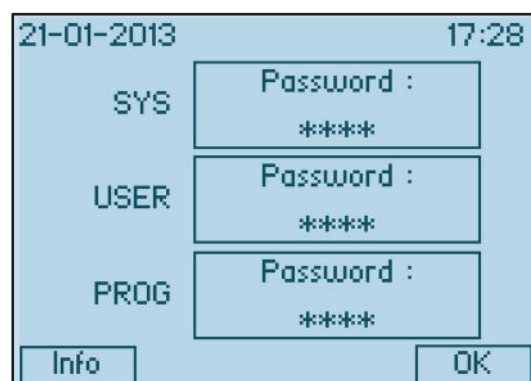
1. Turn on the machine. After a few seconds, the welcome screen [1] is displayed.
2. Press the key "F4" which is located below the touch screen. The access screen [2] is displayed.
3. Press the rectangle containing «Password: ****» of the line «USER».
4. Enter the code "1234" and press "Enter"
5. The user setting screen [3] is displayed.
6. Press the date (here "21-01-2013"), correct the date by using the cursor and then press "Enter".
7. Press the date (here "17:28"), correct the date by using the cursor and then press "Enter".
8. Choose the interface language to "FR" for French, "GB" for English and "D" for German.
9. Adjust the contrast of the display of the touch screen using the slider in order to have a good readability of information.
10. The function "beep" defines if the console sends a sound when you press a function on the touch screen. «0», The console is silent, "1" the console emits an audible signal at the introduction of a command. (It is recommended to activate the audible signal at the beginning).
11. Once you have defined all of the configuration parameters, press "OK" to return to the home screen [1].

Your machine is ready to operate.

By pressing on the "info" button, the coordinates of the company are displayed. Tap anywhere on the touch screen to return to the home screen [1].



[1]



[2]



[3]

Work in manual mode

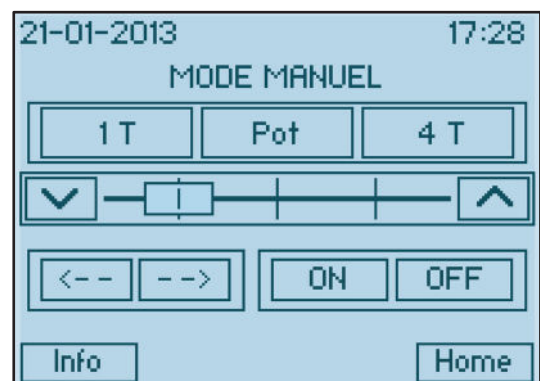
The manual mode allows you to turn on and turn off the machine without any programming. The machine operates from the manual start up to the manual stop.

1. On the home screen [1], press "MANUEL".
2. The screen «MANUAL MODE» [2] displays.
3. Set the rotation frequency of the main arm of the machine.
«1 T» corresponds to 1 turn a minute «4 T» corresponds to 4 turns per minute. It is possible to set an intermediate speed and pressing «Pot» and by dragging the cursor line or by increasing or reducing the frequency of rotation using the two arrows next to the tip of the cursor.
4. Set the direction of rotation of the main axis of the machine by pressing «< - >» or «> - <». (Function in option).
5. Start the machine by pressing «ON»
6. Return to the home screen [3] by pressing «Home».
7. To stop the machine, press «MANUEL» then on «OFF».

The last setting introduced remains in the memory. The parameter chosen appears contrasted.



[1]



[2]



[3]

Work in Timer Mode

The timer mode lets you turn on the machine that will stop automatically after a user-defined time.

1. On the home screen [1], press **"TIMER"**.
2. The screen **«TIMER MODE»** [2] displays.
3. Set the rotation frequency of the main arm of the machine. «1 T» corresponds to 1 turn a minute «4 T» corresponds to 4 turns a minute. It is possible to set an intermediate speed and pressing **«Pot»** and by dragging the cursor or by increasing or reducing the frequency of rotation using the two arrows next to the tip of the cursor.
4. Press on **«Time adjustment»**.
5. The screen **«TIME ADJUSTMENT»** [3] displays.
6. Press on **«time set»** to set the time for the machine to operate.
7. Insert the time set point, in minutes, using the numeric keypad that appears and confirm with the key **«Enter»**
8. Set the direction of rotation of the main axis of the machine by pressing **«- -»** or **«- >»**. (Function in option).
9. Start the machine by pressing **«ON»**. The machine will operate until the **«TIME COMPLETED»** reaches the set point introduced in point 7. (It is possible to interrupt the operation of the machine at any time by pressing **«OFF»**).
10. Return to the home screen [4] by pressing **«Home»**.
A flashing square **■** displays next to **«TIMER»** It indicates that the machine is running in timer mode.
11. To stop the machine before the time defined in point 7, press **«TIMER»** then on **«OFF»**.

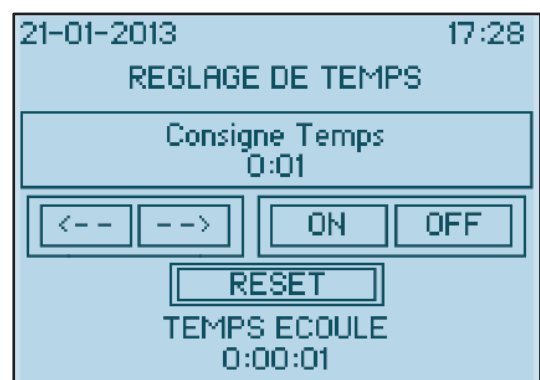
The last setting introduced remains in the memory. The parameter chosen appears contrasted.



[1]



[2]



[3]



[4]

Work in revolutions mode

This function is only on Duotest II

The mode "revolutions" allows you to turn on the machine which will automatically stop after a number of revolutions defined by the user.

1. On the home screen [1], press "Revolutions".
2. The screen «MODE REVOLUTIONS COUNT» [2] displays.
3. Set the rotation frequency of the main arm of the machine. «1 T» corresponds to 1 turn a minute «4 T» corresponds to 4 turns a minute. It is possible to set an intermediate speed and pressing «Pot» and by dragging the cursor or by increasing or reducing the frequency of rotation using the two arrows next to the tip of the cursor.
4. Press the number of revolutions, here «2».
5. Insert the set point, in number of revolutions, using the numeric keypad that appears and confirm with the key «Enter»
6. Set the direction of rotation of the main axis of the machine by pressing «← - →» or «→ - ←». (Function in option).
7. Replace the number of revolutions to zero by pressing «RESET».
8. Start the machine by pressing «ON». The machine will operate until the number of revolutions defined in the set point (point 5) is reached. (It is possible to interrupt the operation of the machine at any time by pressing «OFF»).
9. Return to the home screen [3] by pressing «Home». A flashing square «■» displays next to «REVOLUTIONS» indicating that the machine is running in revolutions mode.
10. To stop the machine before the number of revolutions defined in point 5 is reached, press «REVOLUTIONS» then on «OFF».

The last settings introduced remain in the memory. The parameter chosen appears contrasted.



[1]



[2]



[3]

Work in programming mode

The "program" mode allows you to program the machine to six different ways in a week in the modes "timer" and "revolutions" in order to start and stop automatically.

1. On the home screen [1], press **"PROGRAMMING"**.
2. The screen **"PROGRAM MODE"** [2] is displayed.
3. Press **"1"** in front of **"P1"** to activate the first program.
4. Press **"P1"** to configure the first program.
5. The screen **"SPEED P1"** [3] is displayed.
6. Set the rotation frequency of the main arm of the machine. **"1 T"** Corresponds to 1 revolution per minute **"4 T"** corresponds to 4 revolutions per minute. It is possible to set an intermediate speed and pressing **"Pot"** and by dragging the cursor or by increasing or reducing the frequency of rotation using the two arrows next to the tip of the cursor.
7. Press **"PAGE OF ADJUSTMENT"**.
8. The screen **PROGRAM P1** [4] is displayed.
9. Set the day or days of the weeks which the machine will work. On Monday **"L"** on Sunday **"D"** or **"H"** throughout the week.
10. Set the direction of rotation of the main axis of the machine by pressing **« - - »** or **« - > »**. (Function in option).
11. Choose the mode of operation by pressing **"Timer"** or **"Revolutions"**

Following the programming in timer mode to the section "Work in programming mode (timer)".

Following the programming mode account turns to the section "Work in programming mode (rev)".



[1]



[2]



[3]



[4]

Work in programming mode (Timer)

Programming in Timer Mode

(Following from the section «Work in programming mode»)

1. Press «**Timer**».
2. Validate the timer function by pressing «**M**»
3. The screen «**PROGRAM P1 Timer**» [2] displays.
4. Set the start time in the box «**START TIME**» pressing on «**0:00**» Enter the start time to using the numeric keypad that appears and confirm with the key «**Enter**».
Set the time set point in the box «**CONS. TIME**» by pressing«**0:00**» Insert the set point of time in minutes using the numeric keypad that appears and confirm with the key «**Enter**».
Replace the elapsed time in the box «**TIME ELAPSED**» to zero pressing «**RESET**».
5. Press three times on "Exit" to return to the screen «**MODE PROGRAMMING**» [3]. Verify that the desired programs are active.
6. Return to the home screen [4] by pressing «**Home**». A circle accompanied by the name of the program «**● P1**» is displayed for each active program.



[1]



[2]



[3]



[4]

Work in programming mode (revolutions mode)

This function only on Duotest II

In programming revolutions mode

(Following on from the section «Work in programming mode»)

Press on «Revolutions».

1. Validate the rev counter function by pressing «T»
2. The screen «Program P1 revolutions count» [2] displays.
3. Set the start time in the box «**START TIME**» by pressing «0:00» enter the start time to using the numeric keypad that appears and confirm with the key«Enter».
Set the number of revolutions «**CONS. REVOLUTIONS**» by pressing «2» insert the set point of number of revolutions to perform using the numeric keypad that appears and confirm with the key «Enter».
4. Press three times on "Exit" to return to the screen«**MODE PROGRAMMING**» [3]. Verify that the desired programs are active.
5. Return to the home screen [4] by pressing «Home». A circle accompanied by the name of the program «**● P1**» is displayed for each active program.



[1]



[2]



[3]



[4]

Set up

The set up is a mode that is used to position the arm of the machine in a way that it can load easily.

1. On the main screen [1], it is sufficient to press «**SET UP**» [2].
It is also possible to press the button "F3" which is located below the touch screen.
2. Hold your finger on "**SET UP**". The machine rotates very slowly until you release the button. It is thus possible to easily load the machine.

Note: By pressing "**Home**", the console always returns to the home screen.

The "F3" key on the bottom of the touch screen allows you to access the set up at any time.



[1]



[2]

Emergency stop

In the event of a problem, it is sufficient to press the emergency stop button [1] and the machine stops. The machine will then go into alarm mode.

1. Release the emergency stop button by pivoting the red part a quarter of a turn.
2. Open the doors.
3. Work the machine if necessary.
4. If necessary, press the "F3" key on the bottom of the touch screen to perform a set up. Press "**set up**" [2] to slowly rotate the main axis of the machine.
5. Close the doors of the machine
6. Press «**Home**»
7. Restart the machine according to the desired mode.

Note: The doors must be opened and closed in all cases to be able to reset the alarm in the process.



[1]



[2]

Safety instructions and important notices

It is recommended not to use solvents for cleaning of the control console.

Never use the control console whilst manipulating the machine. It is best to always use the control console with the doors of the machines closed.

In the case of a separate console to the machine, it is recommended not to plug the machine if the console is not plugged in.

Astuto disclaims all liability in the event of damages when the use of the machine deviates from its original purpose, if it is used or handled improperly or repaired by persons who are not authorised.

Before you connect the machine to the power outlet, check to see if the nominal voltage indicated corresponds to that of the mains.

At the time you connect or disconnect the machine, always hold the mains and do not pull on the cable.

Deploy the power cord so that it does not remain stuck and will not be damaged by sharp objects.

Use only the cable supplied. The use of a different cable can cause damage to the machine.

Do not route the power cord in the vicinity of radiators and other heat sources.

Always place the machine in a way that does not block the movement of air through the slot of ventilation.

Place the machine on a flat surface, level and stable.

Never try to disassemble the machine and repair it yourself. For any problem of operation contact only qualified staff or authorized personnel.

RESIDUAL RISK

To prevent any risk of injury, never introduce any body part in the machine, while operating the set up function with open doors.