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WELD THE WORLD

Power Pulse 400-500
Power Pulse 402-502
Power Pulse 322T-402T-502T
Power Pulse 322AC/DC-402AC/DC-502AC/DC
WF-104, WF-108
RC-104, RC-204, IR-01
Pioneer Pulse 321MSR, Pioneer 321 Pulse
Micro Pulse 302MFK

GB

Software update manual

WELD THE WORLD

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KEY

DANGER!

This pictogram warns of danger of death or serious injury.

WARNING!

This pictogram warns of a risk of injury or damage to property.

INFORMATION

This pictogram gives important information concerning the execution of the relevant operations.

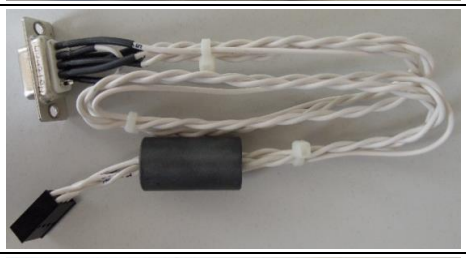
This symbol identifies an action that occurs automatically as a result of a previous action.

NOTE

The figures in this manual are purely guideline and the images may contain differences with respect to the actual equipment to which they refer.

1 INSTALLATION OF THE SOFTWARE ON THE PC

1.1 SOFTWARE UPDATE KIT CONTENTS

	Code 010.0000.0037	Complete software update kit
	Code 022.00002.0178	RS232-RS232 communication cable
	Code 022.0002.0152	RS232-microfit 8 pin communication cable
	Code 022.0002.0153	RS232-minifit 8 pin communication cable
	Code 006.0002.0041	USB/RS232 adapter
	Codice 010.0000.0065	USB software

1.2 PREPARATION

1. Power on the PC.
2. Connect the USB/RS232 adapter to the PC.
3. Load the CD and install the USB/RS232 adapter driver.
   The installation procedure varies in accordance with the adapter model supplied.
   Follow the drivers installation procedure shown on the CD.
4. Load the CD with the software of the unit to be updated.
   (The files can be sent on request by e-mail in .rar or .zip compression format)
5. Install the FME-FLASHPROG-V4.5 program by double left-clicking on the following icon:

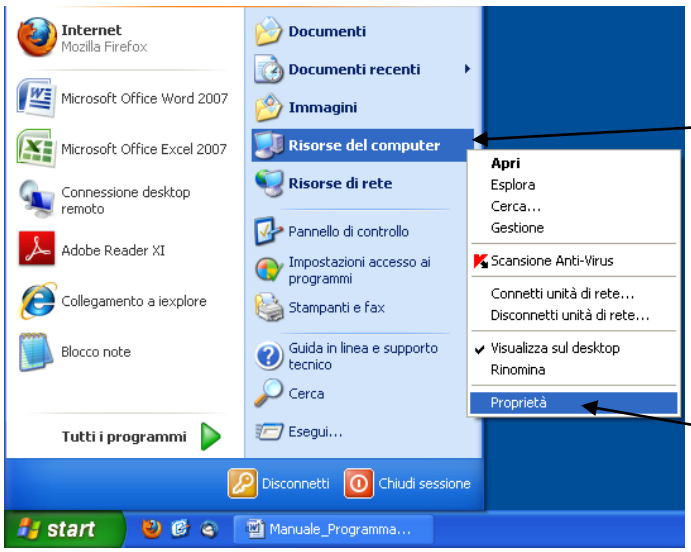
   Follow the installation wizard.
6. Once the installation procedure is complete, the program installation folder (C:\FME_FR_Programmer by default) will contain the following icon:

   (For the sake of convenience copy a link to the file on the desktop).

1.3 SETTING THE PC COMMUNICATION PORT

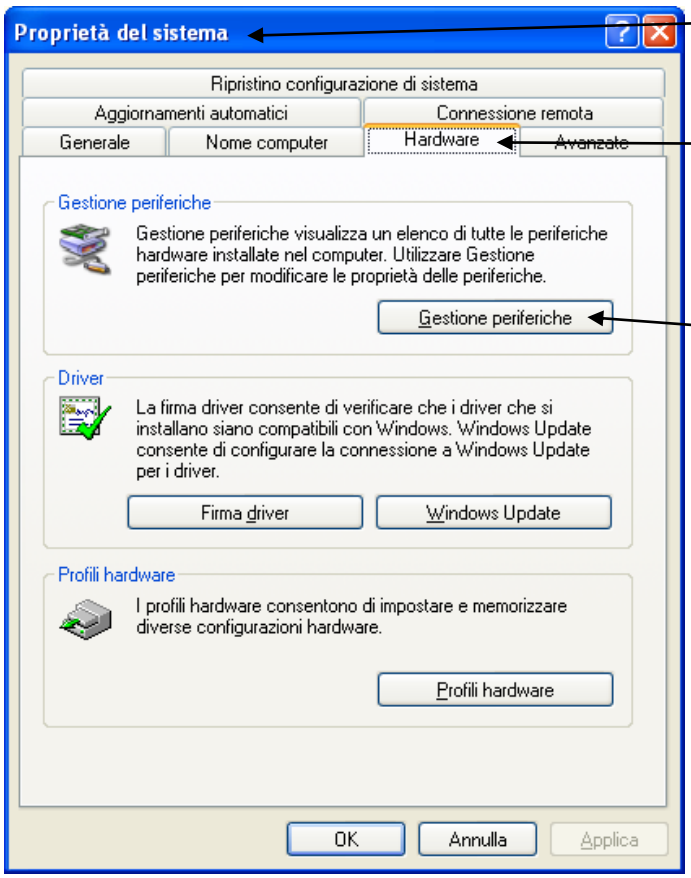
1. Connect the USB-RS232 adapter to the PC.
2. Identify the number of the communication port in which the adapter is inserted as described below:

1.3.1 PROCEDURE WITH WINDOWS XP OPERATING SYSTEM



a- Right-click on MY COMPUTER.

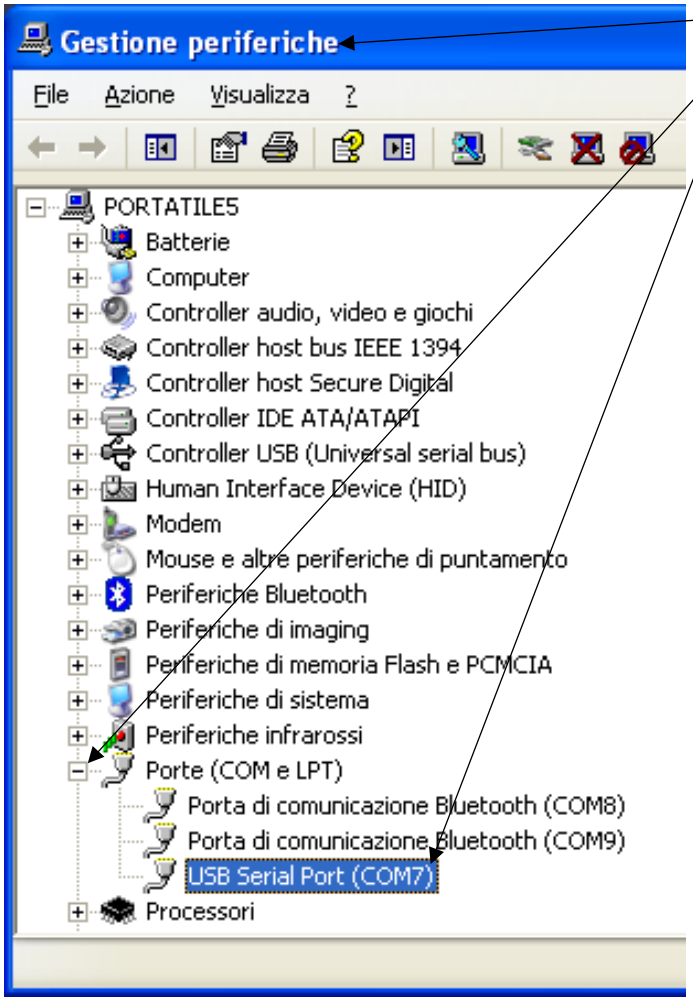
b- Left-click on PROPERTIES.



a- Open the SYSTEM PROPERTIES window.

c- Select the HARDWARE tab.

d- Left-click on DEVICE MANAGER.



The DEVICE MANAGER window will appear.

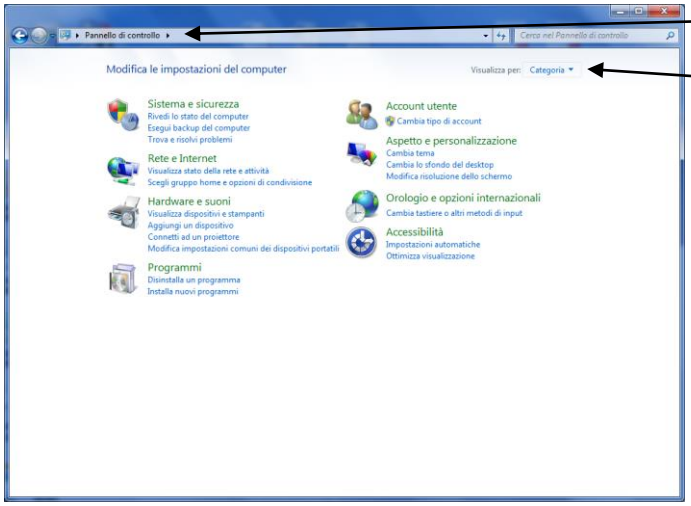
e- Left-click the ⊞ PORTS (COM and LPT) button.

f- Check the number of the USB SERIAL PORT.
Make a note of the number.

g- Close the window by pressing this button: ☒

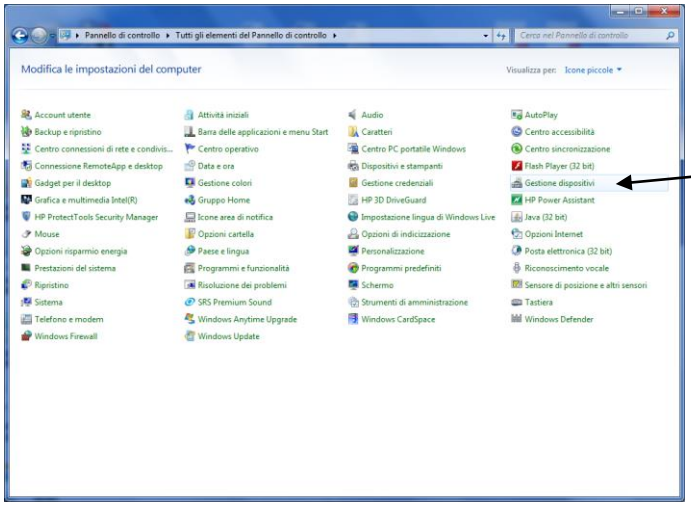
1.3.2 PROCEDURE WITH WINDOWS 7 OPERATING SYSTEM

a- Left-click on CONTROL PANEL.

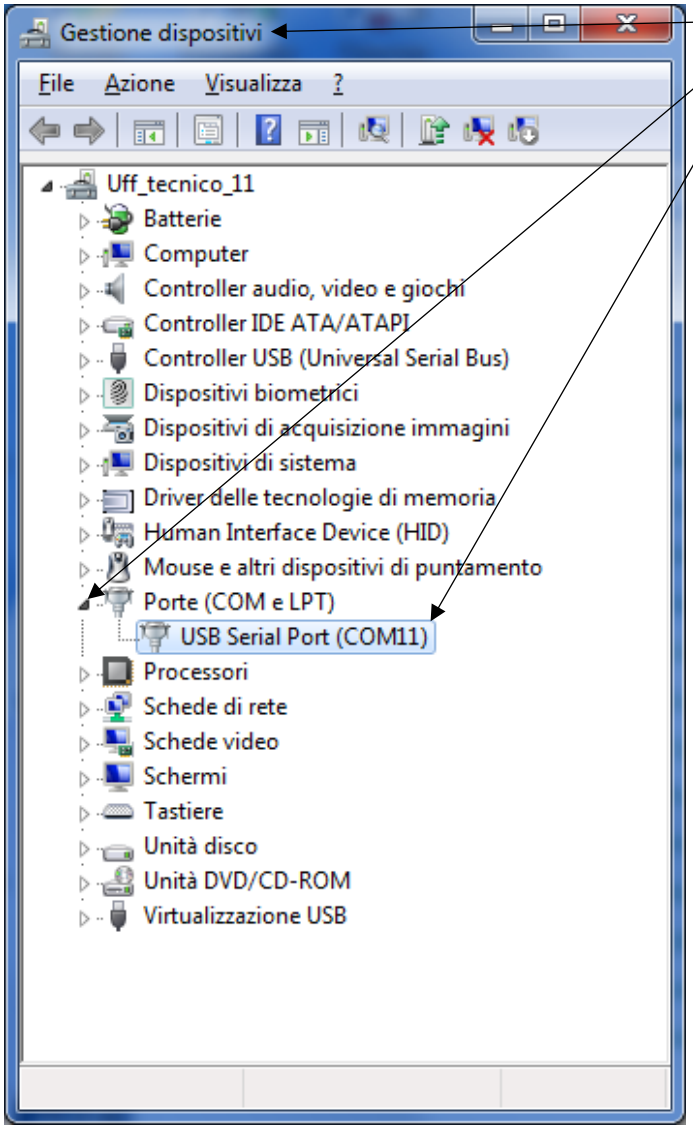


The CONTROL PANEL window will appear.

b- Select SMALL ICONS in the VIEW tab.



c- Left-click on DEVICE MANAGER.



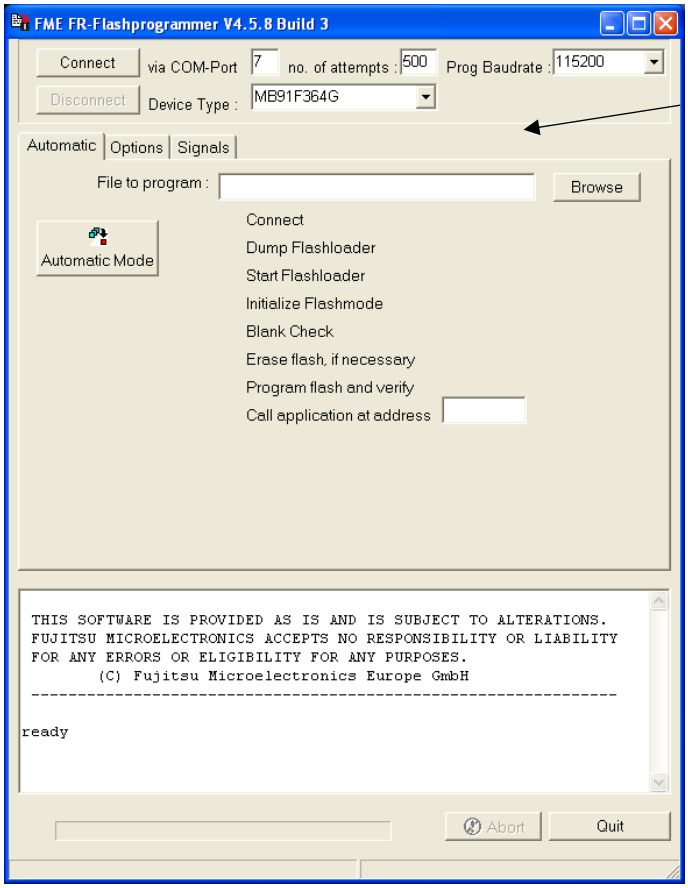
The DEVICE MANAGER window will appear.

d- Left-click the ▷ PORTS (COM and LPT) button.

e- Check the number of the USB SERIAL PORT.
Make a note of the number.

f- Close the window by pressing this button:

1.4 PROGRAMMING SETTING

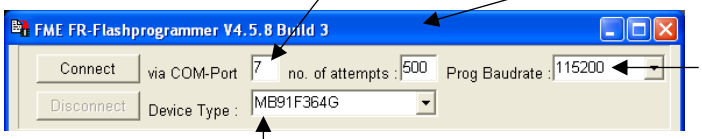


3. Start the previously installed FLASHPRG program by double left-clicking on the following icon:

➪ The FLASHPRG program window will appear.

3. Enter the number of the USB SERIAL CONTROLLER port displayed previously in the DEVICE MANAGER window in the VIA COM-PORT field.

4. Type the number 500 in the NO. OF ATTEMPTS field.



5. Type the number 115200 in the PROG BAUDRATE field.

6. Select MB91F364 in the DEVICE TYPE drop-down menu.

2 PROGRAMMING THE UNIT

WARNING!

Before starting the programming procedure disconnect the welding cables from all the unit's welding sockets.
Failure to comply with this instruction can result in serious damage to the programming controller.

1. Set the welding power source ON/OFF switch to “O” to switch the unit off.
2. Use the RS232-RS232 communication cable to connect the USB/RS232 adapter to the unit's RS232 serial port.

INFORMATION

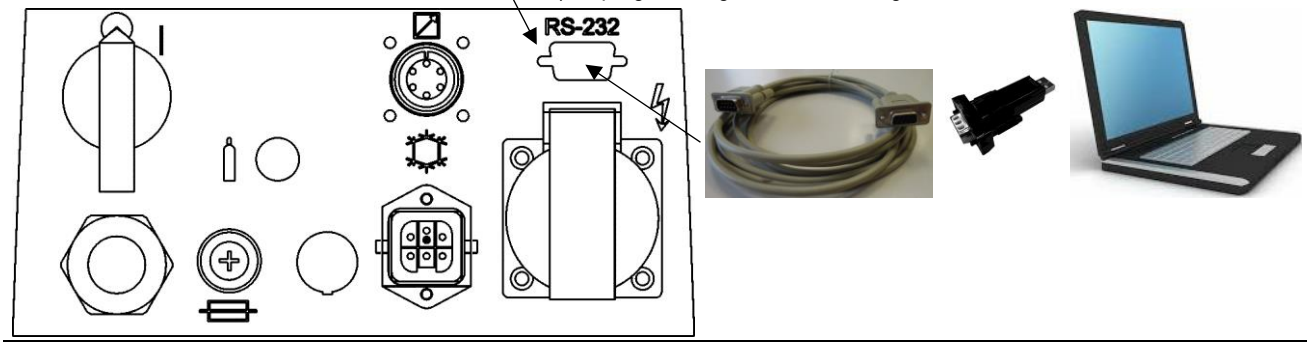
If the unit is not equipped with an external RS232 connector for software updates the connection can be made directly to the internal circuit boards to perform the programming procedure.
See § 2.2 PROGRAMMING VIA CONNECTOR DIRECTLY ON THE CIRCUIT BOARDS

2.1 PROGRAMMING VIA RS232 SERIAL PORT

Depending on the type of unit make a connection between the PC and programming connector as described below.

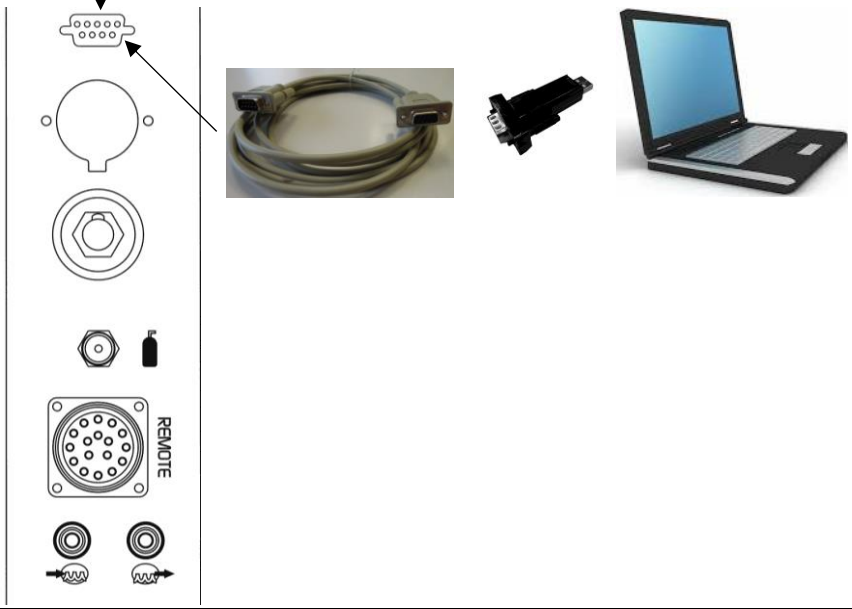
2.1.1 400 POWER PULSE – 500 POWER PULSE: RS232 CONNECTOR

COM1: Programming connector for the process circuit board.
(For programming with the following software: 500_PULSATO_COM1_..._.mhx)



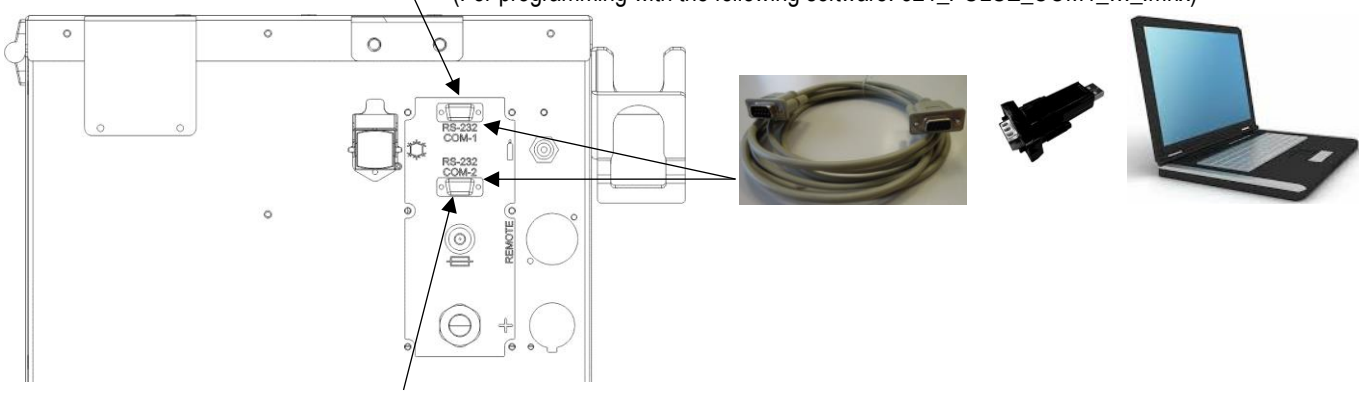
2.1.2 WF-104: RS232 CONNECTOR

COM2: Programming connector for the motor circuit board.
(For programming with the following software: WF104_COM2_…_.mhx)



2.1.3 321 POWER PULSE: RS232 CONNECTOR

COM1: Programming connector for the process circuit board.
(For programming with the following software: 321_PULSE_COM1_…_.mhx)



COM2: Programming connector for the motor circuit board.
(For programming with the following software: 321_PULSE_COM2_…_.mhx)

2.2 PROGRAMMING VIA CONNECTOR DIRECTLY ON THE CIRCUIT BOARDS

DANGER!

Maintenance procedures must be carried out by qualified technical personnel.

Disconnect the unit from the mains power supply before opening it and before performing any maintenance procedures.

Wait at least 5 minutes after switching off the unit before opening it to gain access to internal electrical parts.
Even when the unit is disconnected from the electrical mains the interior parts may carry dangerous electrical voltages due to the energy retained by the capacitors.
Use a multi-tester to check on the electrolytic capacitor terminals that the residual voltage is below 60 Vd.c. before touching any electrical parts.

When the unit is switched off after a long period of duty, some internal parts may be hot.

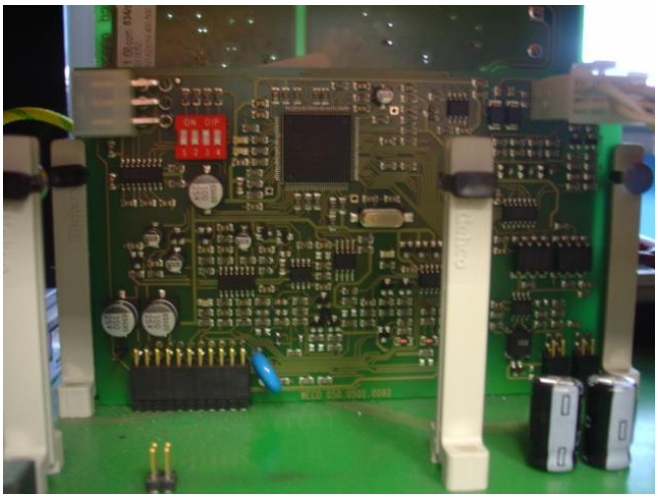
Electronic components of the unit are susceptible to damage due to static electricity. Wear an antistatic wrist strap before handling electronic circuit boards.

Depending on the type of unit make a connection between the PC and programming connector as described below.

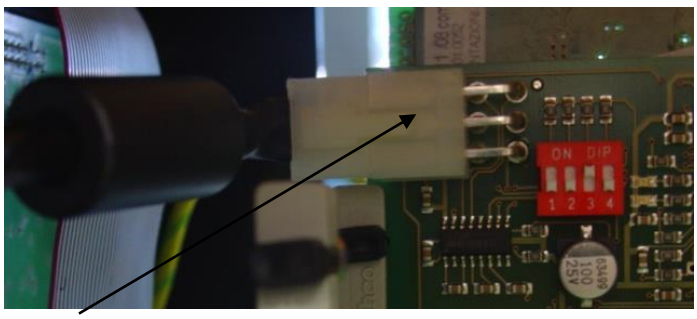
2.2.1 400 POWER PULSE – 500 POWER PULSE: CIRCUIT BOARD 050.0001.0080

1. Disconnect the unit from the mains power supply.
2. Connect communications cable P/N 022.0002.0153 to connector CN2 on circuit board P/N 050.0001.0080.

Communication cable P/N 022.0002.0153



Circuit board P/N 050.0001.0080



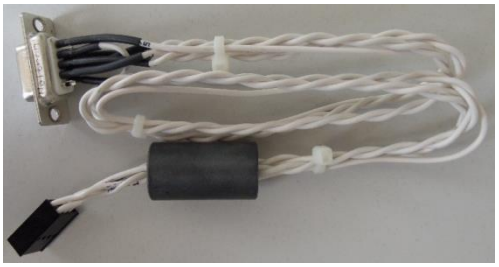
CN2: Programming connector for the process circuit board.
(For programming with the following software:
500_PULSATO_COM1_..._.mhx)

2.2.2 WF-104: CIRCUIT BOARD 050.0001.0078

1. Disconnect the unit from the mains power supply.
2. Connect communications cable P/N 022.0002.0152 to connector CN2 on circuit board P/N 050.000x.0078.

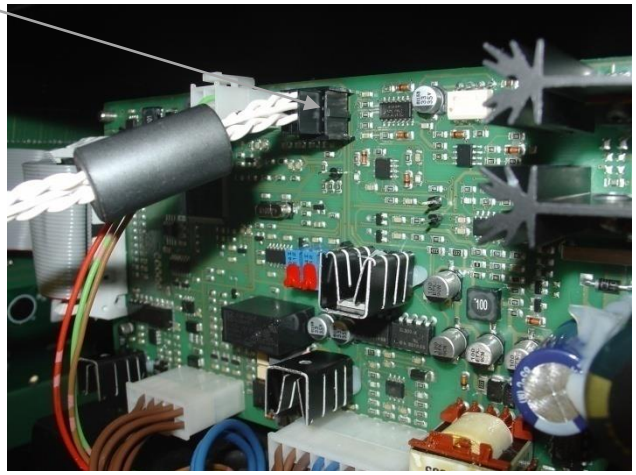
INFORMATION

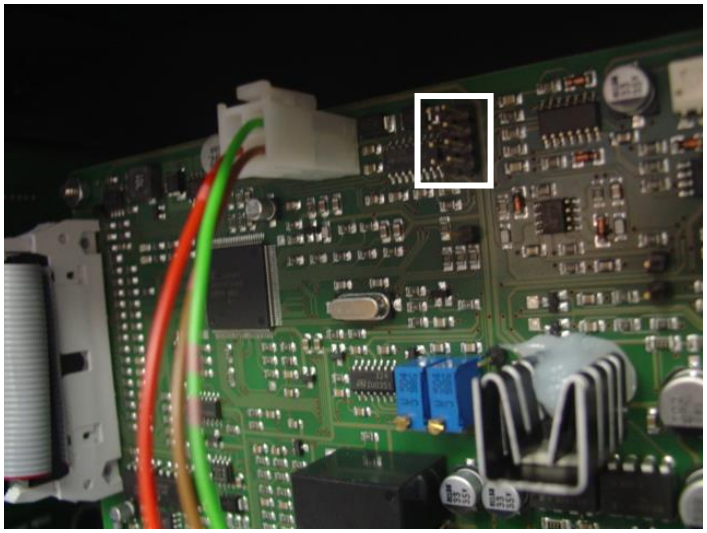
With circuit board P/N 050.0001.0078 insert cable P/N 022.0002.0152 using caution to ensure the tab of the connector is facing the flat cable and that all the pins are inserted.



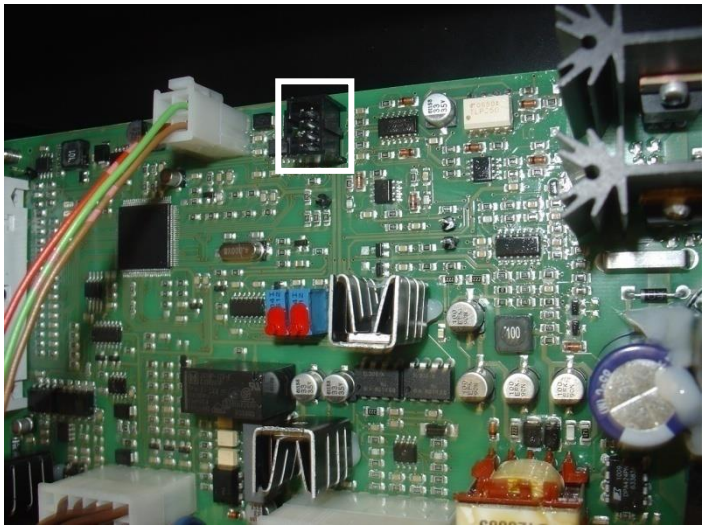
Communication cable P/N 022.0002.0152

CN2: Programming connector for the motor circuit board.
(For programming with the following software:
WF104_COM2_…_.mhx)





Circuit board P/N 050.0001.0078



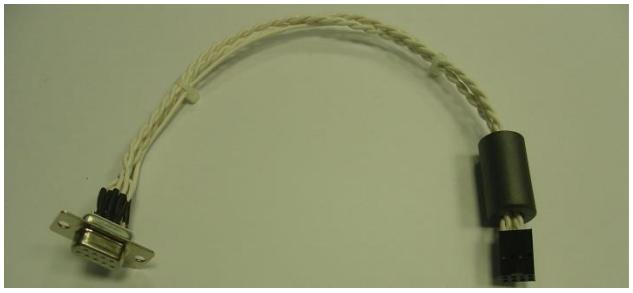
Circuit board P/N 050.0002.0078

2.2.3 RC-104: CIRCUIT BOARD 050.0001.0078

1. Disconnect the unit from the mains power supply.
2. Connect communications cable P/N 022.0002.0152 to connector CN2 on circuit board P/N 050.000x.0078.

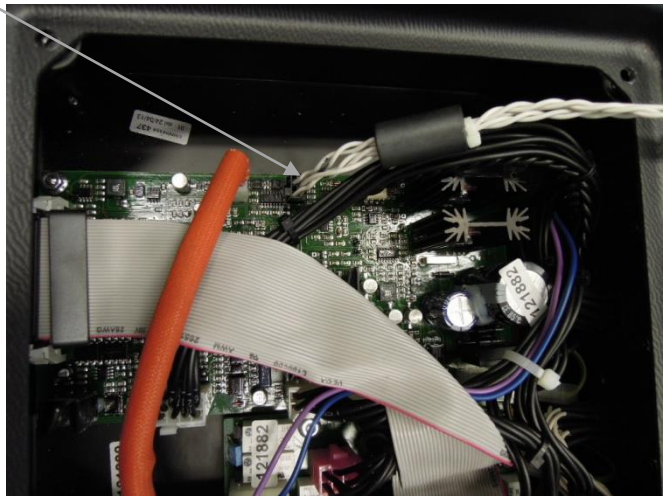
INFORMATION

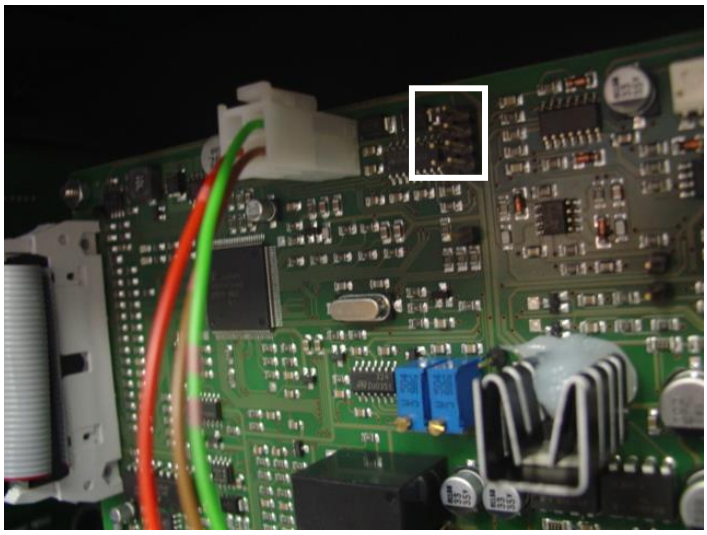
With circuit board P/N 050.0001.0078 insert cable P/N 022.0002.0152 using caution to ensure the tab of the connector is facing the flat cable and that all the pins are inserted.



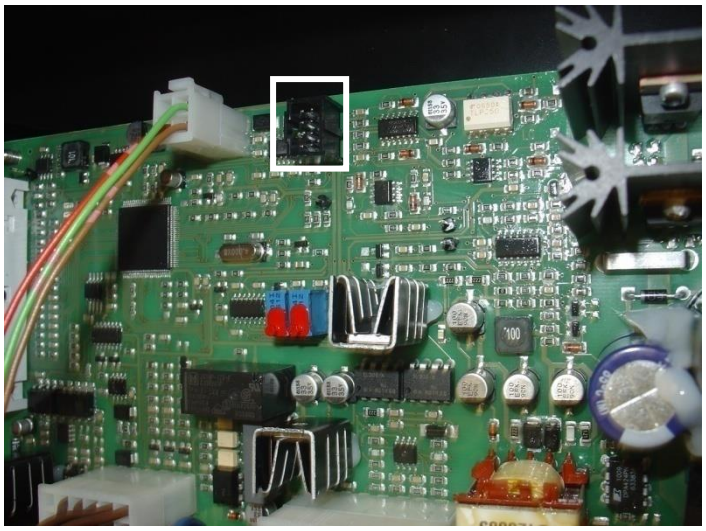
Communication cable P/N 022.0002.0152

CN2: Programming connector for the motor circuit board.
(For programming with the following software: RC104_COM2_…_.mhx)



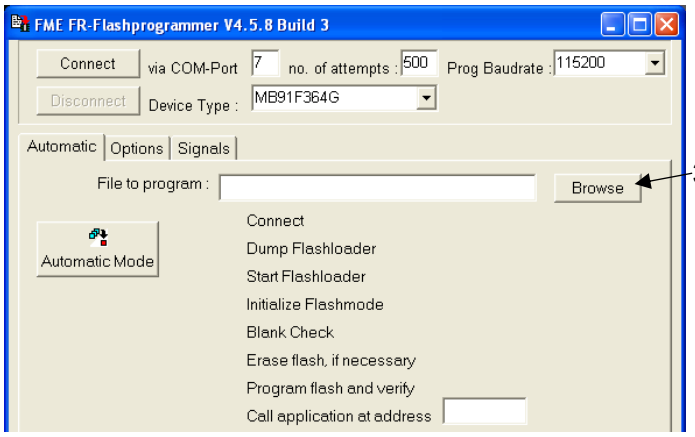


Circuit board P/N 050.0001.0078

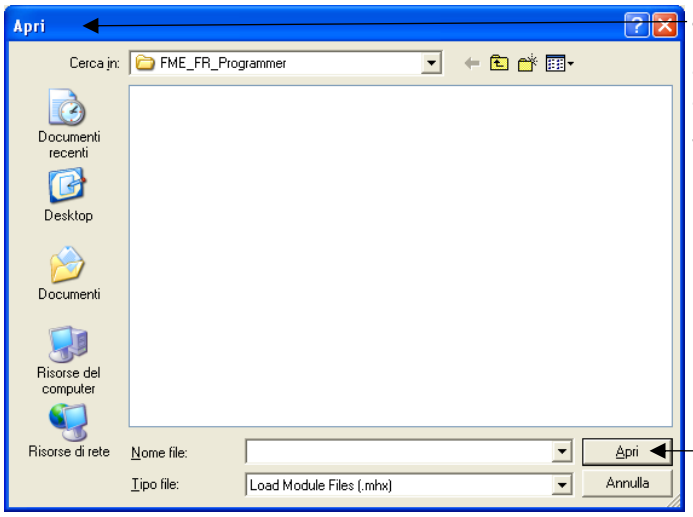


Circuit board P/N 050.0002.0078

… (continue from page 9)

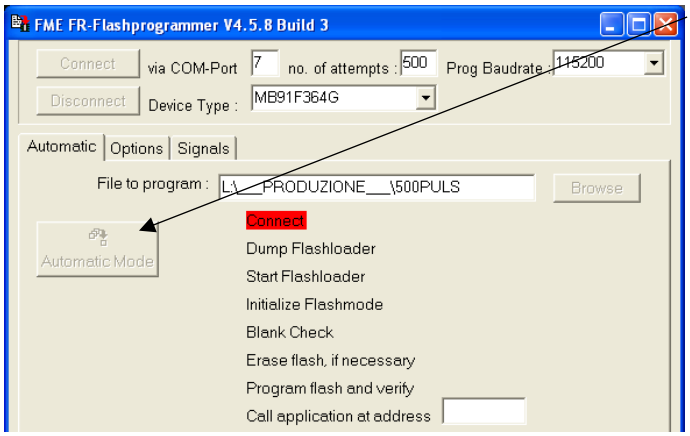


3. Press the BROWSE button.

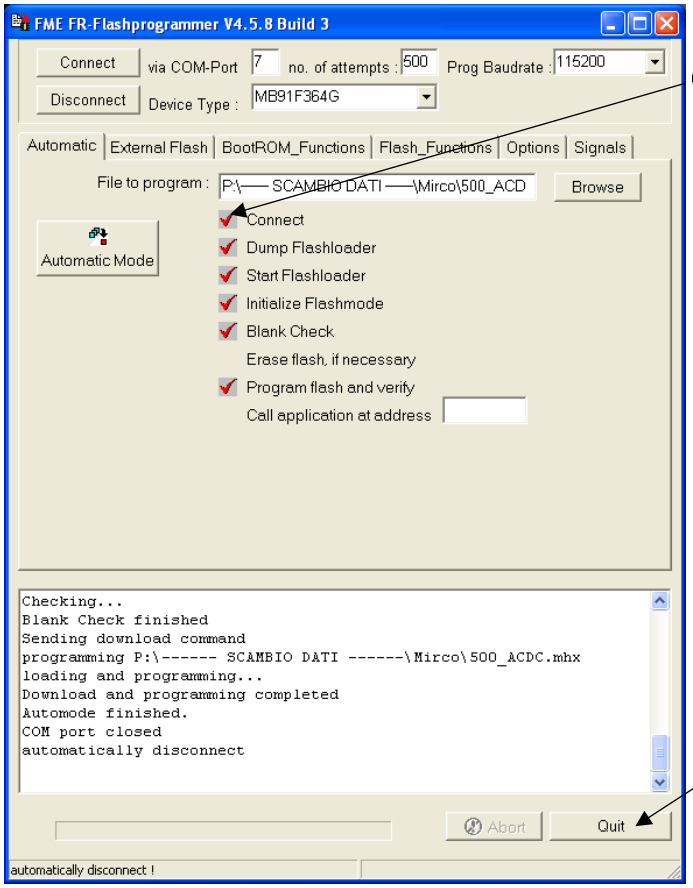


4. The OPEN window appears.
5. Find the .mhx extension file to be loaded.
The update files are on the software update CD.
The files can be sent on request by e-mail in .rar or .zip compression format.

5. Select the file to be loaded and click the OPEN button.



6. Click the AUTOMATIC MODE button; the word Connect will be highlighted red.



7. Set the welding power source ON/OFF switch to “I” to switch on the unit.
➔ The programming stage now starts…

8. When programming is completed press the QUIT button.
9. Close the window by pressing this button: ☒

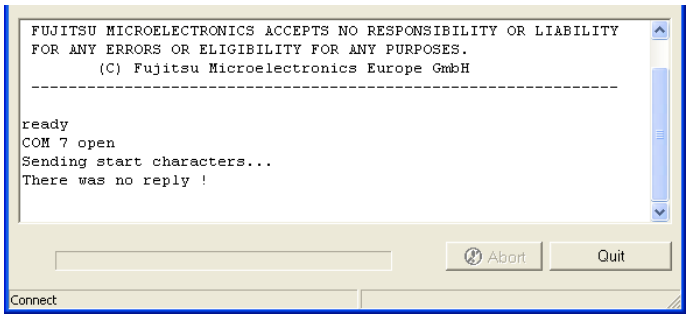
10. Set the welding power source ON/OFF switch to “O” to switch the unit off.
11. Disconnect the communication cable from the unit's RS232 connector.
12. Reset the unit (refer to procedure set down in the unit's manual).
The reset procedure involves complete restoration of the default values, parameters and memory settings set in the factory.
All memory locations will be reset and hence all your personal welding settings will be lost!

2.3 ERRORS DURING THE PROGRAMMING PROCEDURE

Communication port not recognized.
- Disconnect the USB/RS232 adapter from the PC port, wait 30 seconds and then reconnect it.
- Make sure you have entered the correct number of the USB SERIAL PORT in the VIA COM-PORT field.

The value entered in the PROG BAUDRATE field is too high.
- Set the value to 9600.

Data communication disturbance.
- Electromagnetic fields due to HF discharges or on-going welding operations can cause interference on data communications. Program the unit in an area well away from such sources of interference.



Communication cannot be established with the unit to be programmed.
- Make sure the unit is powered on.
- Check to ensure the cables between the PC and the unit are connected correctly.