

PORTABLE WELDING CARRIAGE

WELDYSTIFFENER

SAFETY INSTRUCTION FOR USE AND MAINTENANCE

60 to 160 mm – 120 to 320 mm



EDITION : EN
REVISION : E
DATE : 10-2018

Instructions for use

REF : **8695 5876**

Original instructions

LINCOLN[®]
ELECTRIC

Thank for the trust you have expressed by purchasing this equipment, which will give you full satisfaction if you follow its instructions for use and maintenance.

Its design, component specifications and workmanship comply with applicable European directives.

Please refer to the enclosed CE declaration to identify the directives applicable to it.

The manufacturer will not be held responsible where items not recommended by themselves are associated with this product.

For your safety, there follows a non-restrictive list of recommendations or requirements, many of which appear in the employment code.

Finally we would ask you kindly to inform your supplier of any error which you may find in this instruction manual.

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DISPLAYS AND PRESSURE GAUGE

The measuring tools or displays for voltage, intensity and speed either analog or digital, must be considered as indicators

REVISIONS

REVISION B

08/08

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Update photos	

REVISION C

08/09

DESIGNATION	PAGE
Update	

REVISION D

08/14

DESIGNATION	PAGE
Spare parts	

REVISION E

10/18

DESIGNATION	PAGE
To change logo	

A - IDENTIFICATION

Please enter the number of your machine in the following box.

Quote this information in all correspondence.



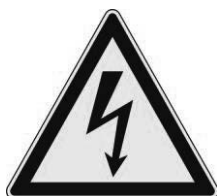
CE	Type	<input type="text"/>
Matricule		<input type="text"/>

B - SAFETY INSTRUCTIONS

ELECTROMECHANICAL EQUIPMENT USED AS THE SUBASSEMBLY OF AN INSTALLATION.

- This equipment can be associated with a welding installation, in which case it is covered by safety instructions described in the instructions for the welding installation
- If this equipment is used in other cases, a minimum of instructions must be respected, in particular :

1 - SERVICING



- Check often that the insulation and connections of the electrical equipment and accessories are in good condition: plugs, cables, flexible cables, sheaths, connectors, extension cables, workpiece clamps, electrode holders or torches...
- Maintenance and repair work on insulating sheaths and covers should never be carried out in a makeshift manner.
- Have defective accessories repaired by a specialist or, better still, replace them.
- Periodically check that electrical connections are properly tightened and do not overheat.

2 - PERSONAL PROTECTION

RISK OF EXTERNAL INJURY.



- The operator must be properly dressed and protected for the work he is carrying out.
- Ensure that no part of the operator's body or of his assistant's body can come in contact with metal parts and workpieces which are energized or which could accidentally become energized and/or which are moving.
- Do not wrap electrical cables around your body.



WARNING !
Be careful not to crush your fingers

Make sure that no spray or water enters into the electrical box of the carriage.

→ IP23 PROTECTION

C - DESCRIPTION

1 - DEFINITION

WELDYSTIFFENER carriages are portable, with two driving wheels, it supports 2 independent torches.

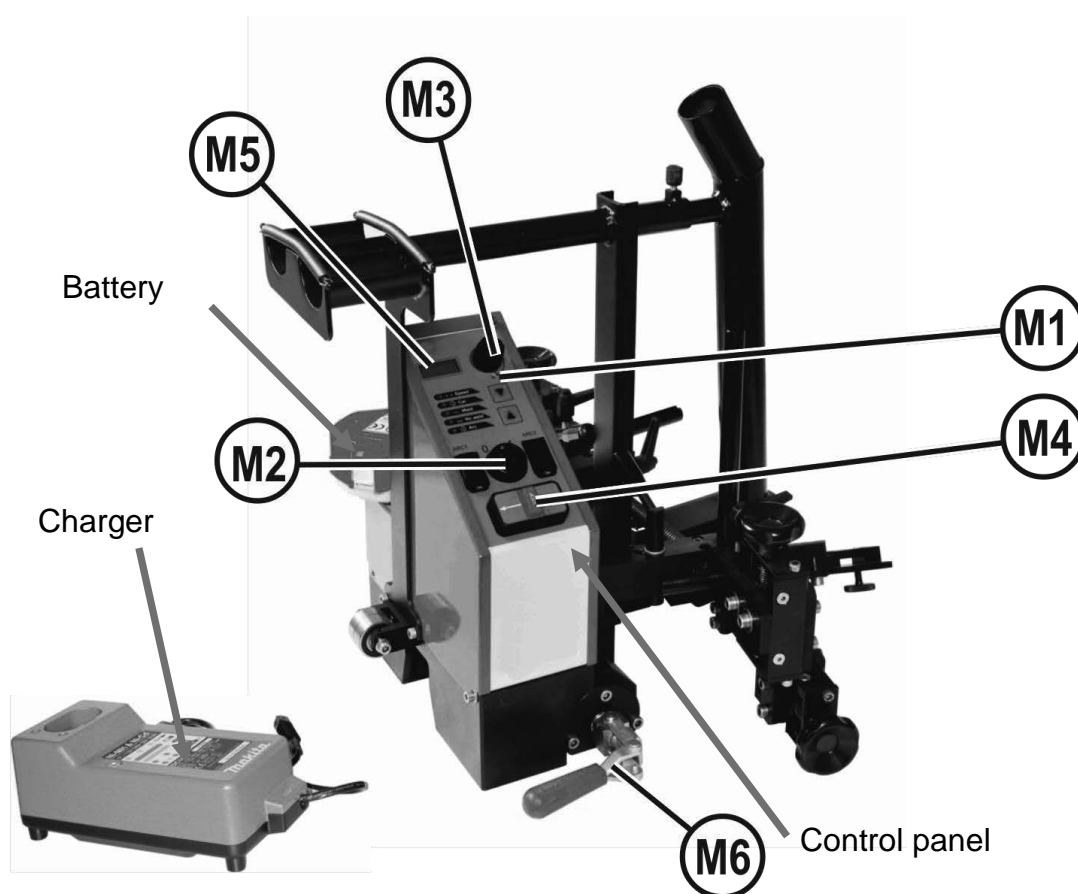
They are specially designed for semiautomatic welding of stiffener named " holland – profile " of size :

- 60 to 160 mm

or

- 120 to 320 mm.

Light and robust, they offer the quality of automatic welding as well as easy operation and fast commissioning.



A) MOTORIZATION

WELDYSTIFFENER is driven by a 14 VDC motor.

The carriage is autonomous. The battery ensures a continuous work during 6 hours.

B) ELECTRIFICATION

Indication of battery low status by the red led **M1**.

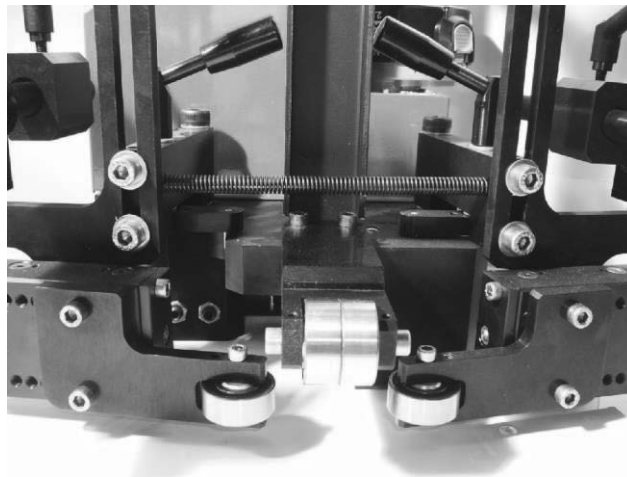
Pre-display and real display of the speed by high-brightness LEDs and adjustment via numerical encoder **M3** (max. error at mid scale < +/-5%).

Manual starting up with pushbutton **M2** or automatic starting up with arc sensor with power source function in 2 stages.

C) GUIDANCE PRINCIPAL

The carriage takes place quickly and easily on the welded seam.

The tilted position of the carriage is done by setting the height of the rollers.



The toggle clamp allows to maintain the carriage against the profil to be welded.

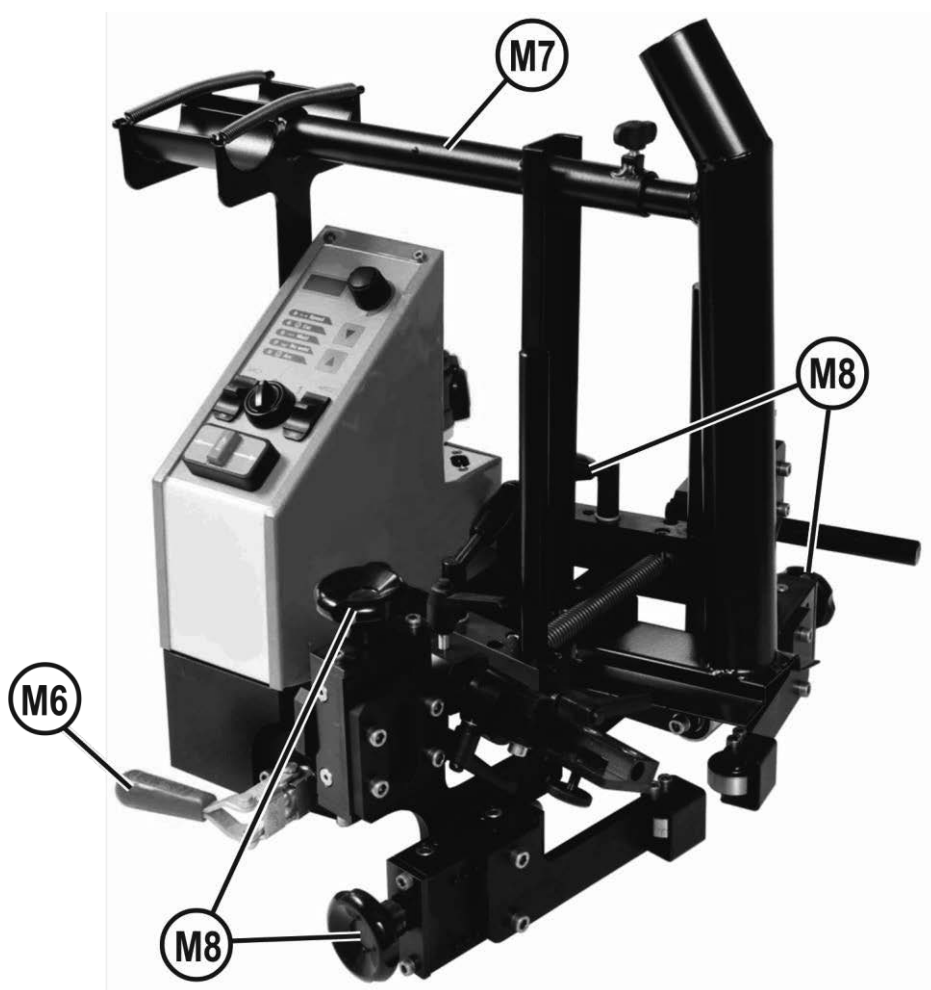
D) TORCH SETTING

The adjustment of the torch position is very easy and precise with 2 crossed slides (**M8**) which have different fixation steps.

A ball joint, coupled to an indexed handle, allows to set the torch holder very precisely. The torch holder enables an easy and quick setting, and can be changed by a specific tool

E) CARRYING

Lightweight 16 kg and handy (**M7**) **WELDYSTIFFENER** can be held easily by an operator for a fast commissioning..



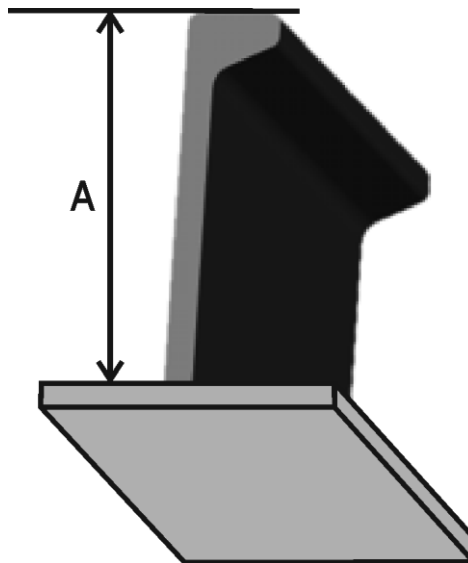
2 - TECHNICAL SPECIFICATIONS

FUNCTIONS

- Ultra bright preview of the advance speed in cm/min.
- Setting of the advance speed by digital encoder (Precision +/- 5%)
- moving manually controlled by pushbutton or automatically by the welding arc sensor.
=> the generator must be set to the "2 cycle" mode

CHARACTERISTICS

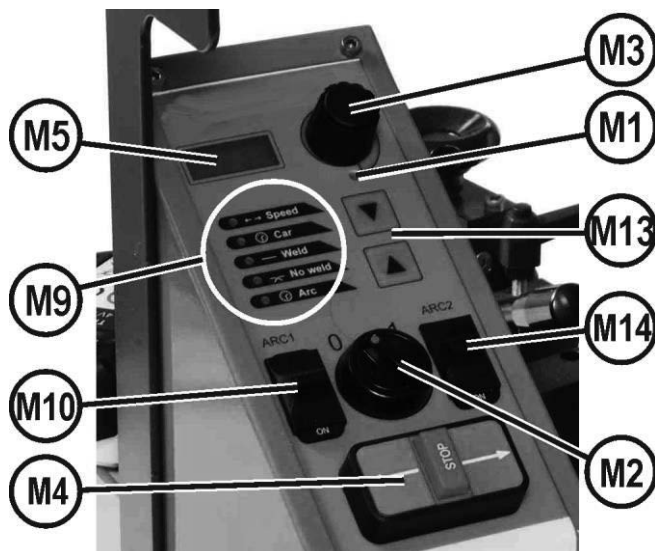
Size "A"	60 to 160 mm	120 to 320 mm
Weight	16 kg	16 kg
Supply	Battery 14 VDC	Battery 14 VDC
Work autonomy	6 hours	6 hours
Movement speed	15 to 180 cm/mn	15 to 180 cm/mn
Protection index	IP 23	IP 23
Trigger control	1 contact 1T/2A	1 contact 1T/2A
Operating temperature	-5°C to +45°C	-5°C to +45°C
Storage temperature	-10°C to +60°C	-10°C to +60°C
Relative humidity	<90%	<90%
Dimensions in mm L x l x h	500 x 500 x 500	500 x 500 x 600



D - INSTRUCTIONS FOR USE

REMARK : the battery is delivered flat. The battery must be charged before the first use

1 - CARRIAGE



A) CONTROL BOX

The basic control box is used for the following functions :

M2	Starting up
M4	Cycle start/stop..
	- ← selection of the displacement direction (left)
	- → selection of the displacement direction (right)
M9	Menu
M13	Scroll through menu , confirm and save a selection or setting
M1	Indication of battery
M5	Display.
M3	Numerical incrementing/decrementing potentiometer
M10	Switch "arc 1"
M14	Switch "arc 2"

B) BATTERY

The battery autonomy is 6 hours in continuous work.

The display flashes to indicate that the battery charge level is too low to power the carriage and its optional features.

Connect the charger to a main connector 220-240V / 50-60 Hz.

When the battery is well connected, according to the polarities, green warning light goes red and the charge begins. The light remains red during all the charging time.

When the charge is over, the light turns green.



2 - OPERATING OF WELDYSTIFFENER

When power is turned on with **M2**

- The direction is automatically set to the right →
- To connect the cable "TRIGGER" on the touch.

Movement of the carriage by push on the touch start / stop **M4**.



3 - CONTROL PANEL

To access to level 2 :

Push the touch  3 seconds.

To exit the level 2 :

Push the touch  3 seconds.

	PARAMETER	MINI VALUE	MAXI VALUE	UNIT
LEVEL 1	VITESSE / SPEED	0000	0180	CM/mn
	PRE SOUDAGE /  CAR	000,1	005,0	SECOND
	LONGUEUR /S / WELD	0001	9999	MILLIMETER
	LONGUEUR /NS / NO WELD	0000	9999	MILLIMETER
	POST SOUDAGE /  ARC	000,1	005,0	SECOND
LEVEL 2	NUMEROUS of masking program (PG)	00	01	INTEGER
	NUMBER of steps in mode intermittent (PA)	00	99	INTEGER
	SELECTION of DISPLAY (AF)	0 (speed)	1 (distance)	CM/mn or millimèter

Legende :

PG : Hide program

LS : Low speed

HD : High speed

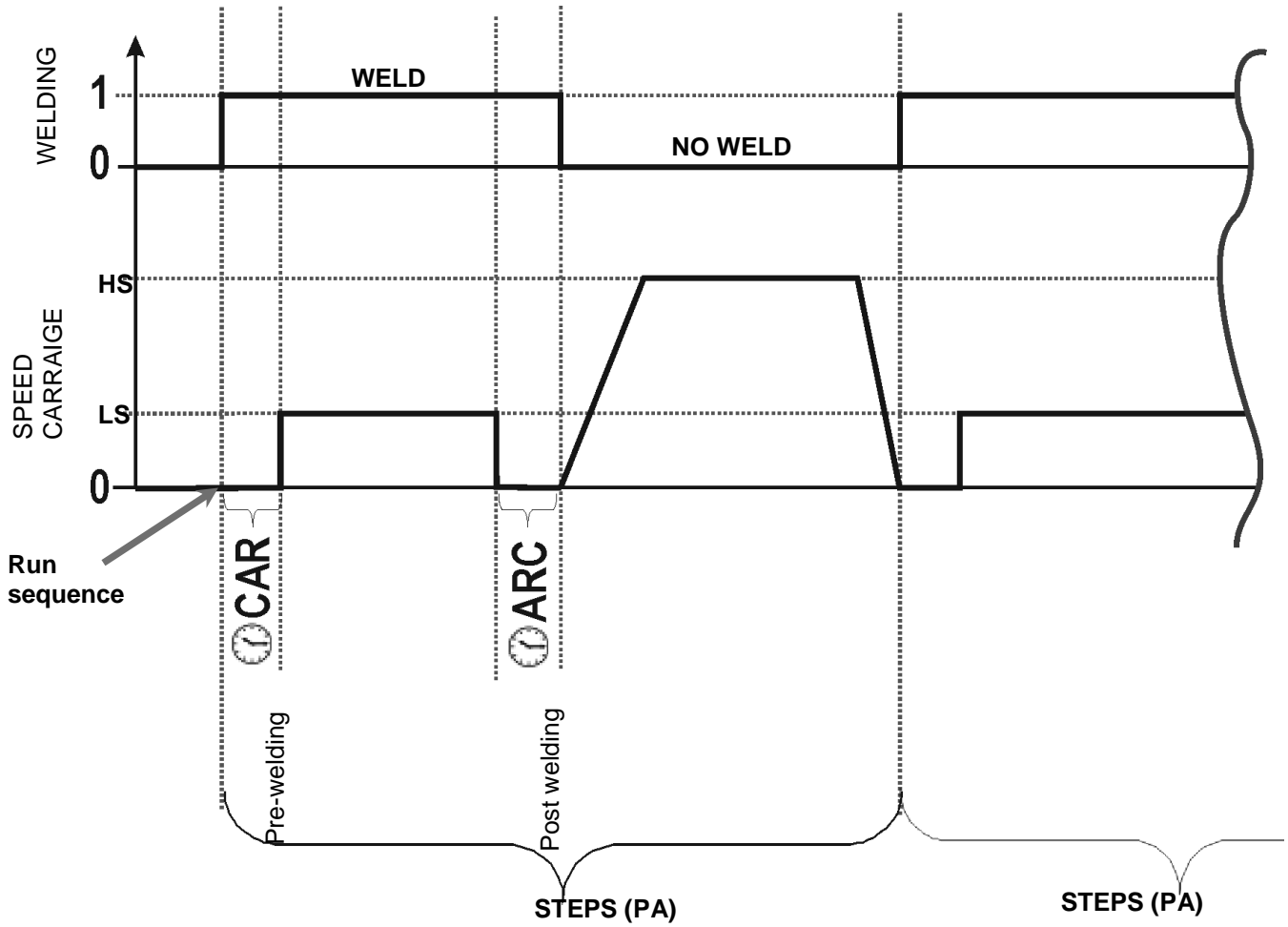
X... : Entered value

PA : Number of steps

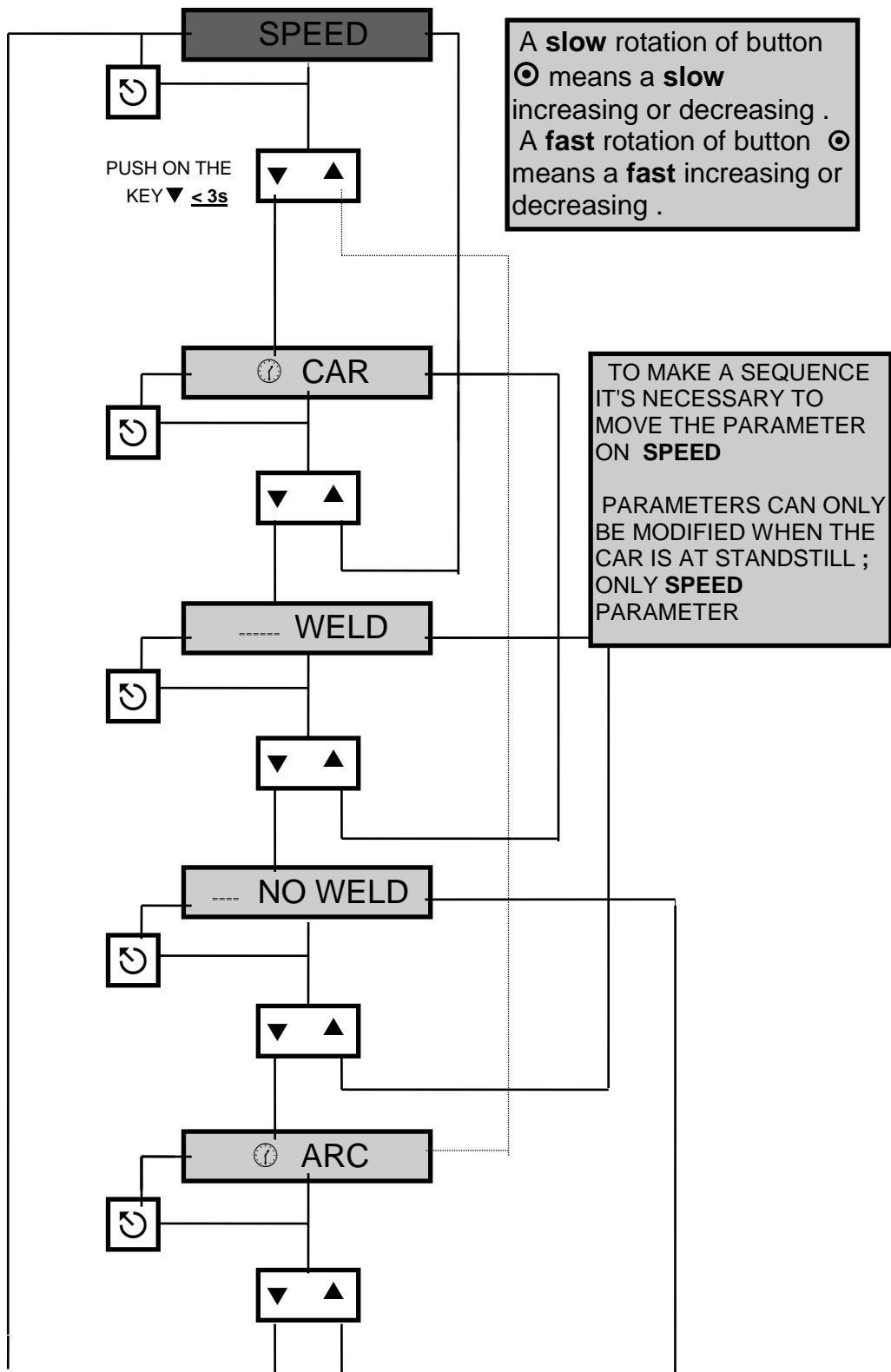
PG	WELD	NO WELD	CARRIAGE SPEED	AUTOMATIC STOP CARRIAGE
00	0	0	PV	Without
	0	X....	GV	With
	X....	0	PV	With
	X....	X....	PV / GV	Without

With PG = 01 :	
- WELD = X...	Carriage LS / HS and automatic stop after PA steps.
- NO WELD = X...	
- PA = X...	

4 - FUNCTIONAL SEQUENCE "INTERMITTENT "



5 - PARAMETER SETTING



A push on the key \blacktriangledown displays the next parameter and saves the preceding \blacktriangle returns to the preceding parameter and saves the actual parameter.

A push on the key \blacktriangle returns to the preceding parameter and saves the actual parameter.

A **slow** rotation of button \odot means a **slow** increasing or decreasing. A **fast** rotation of button \odot means a **fast** increasing or decreasing.

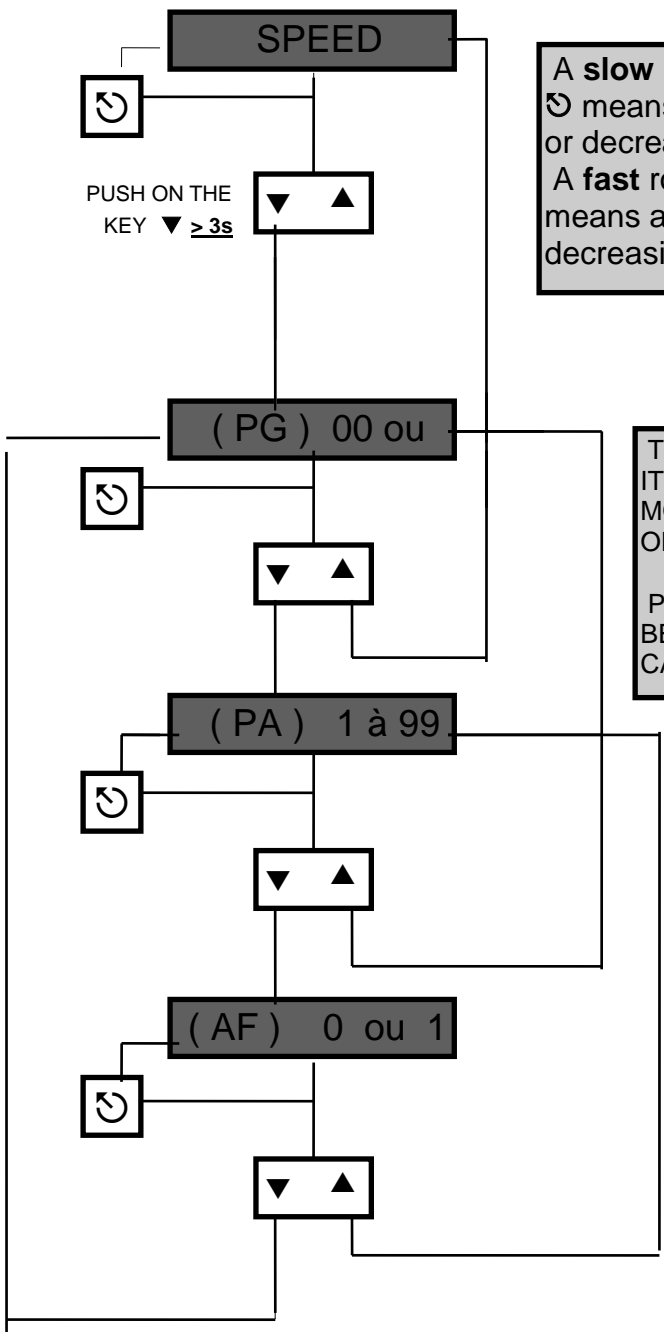
TO MAKE A SEQUENCE IT'S NECESSARY TO MOVE THE PARAMETER ON **SPEED**

PARAMETERS CAN ONLY BE MODIFIED WHEN THE CAR IS AT STANDSTILL; ONLY **SPEED** PARAMETER

A push on the key ▼ displays the next parameter and saves the preceding parameter.

A push on the key ▲ returns to the preceding parameter and saves the actual parameter.

The value of parameter can be modified by a rotation of button ⌚



A **slow** rotation of button ⌚ means a **low** increasing or decreasing .

A **fast** rotation of button ⌚ means a **fast** increasing or decreasing .

TO MAKE A SEQUENCE IT'S NECESSARY TO MOVE THE PARAMETER ON **SPEED**

PARAMETERS CAN ONLY BE MODIFIED WHEN THE CAR IS AT STANDSTILL .


E - MAINTENANCE

1 - SERVICING



- So that the machine continues to provide good service for as long as possible, a certain minimum of care and maintenance is necessary
- The frequency of this maintenance work is given on the basis of the production of one work station per day. Maintenance should be more frequent if production is greater.

Your maintenance department may photocopy these pages so that it can follow up maintenance dates and operations (tick as appropriate)

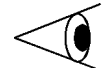


Daily

	<p>Remove regularly welding projection on protection lenses of the photo cell, protection casing and support roller.</p> <p>Regularly clean the outside of the carriage and the welding torch support adjusting elements.</p>
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Every 100 hours

Date of maintenance : / /	
	- Grease manoeuvre screw
	- Dismount and clean the support rollers.

Annually or after every 500 hours

Date of maintenance : / /	
	<ul style="list-style-type: none"> - check up the transmission system - adjust the clearance of guiding shims on the slides - adjust the clearance of the geared motor on the large sprocket wheel.
	- wash and grease the wheels.
	- blow very carefully the electronic card, speed regulator, electric rack.

2 - SPARE PARTS

How to order

The photos or sketches identify nearly every part in a machine or an installation

The descriptive tables include 3 kinds of items:

- those normally held in stock: ✓
- articles not held in stock: ✗
- those available on request: no marks

(For these, we recommend that you send us a copy of the page with the list of parts duly completed. Please specify in the Order column the number of parts desired and indicate the type and the serial number of your equipment.)

For items noted on the photos or sketches but not in the tables, send a copy of the page concerned, highlighting the particular mark.

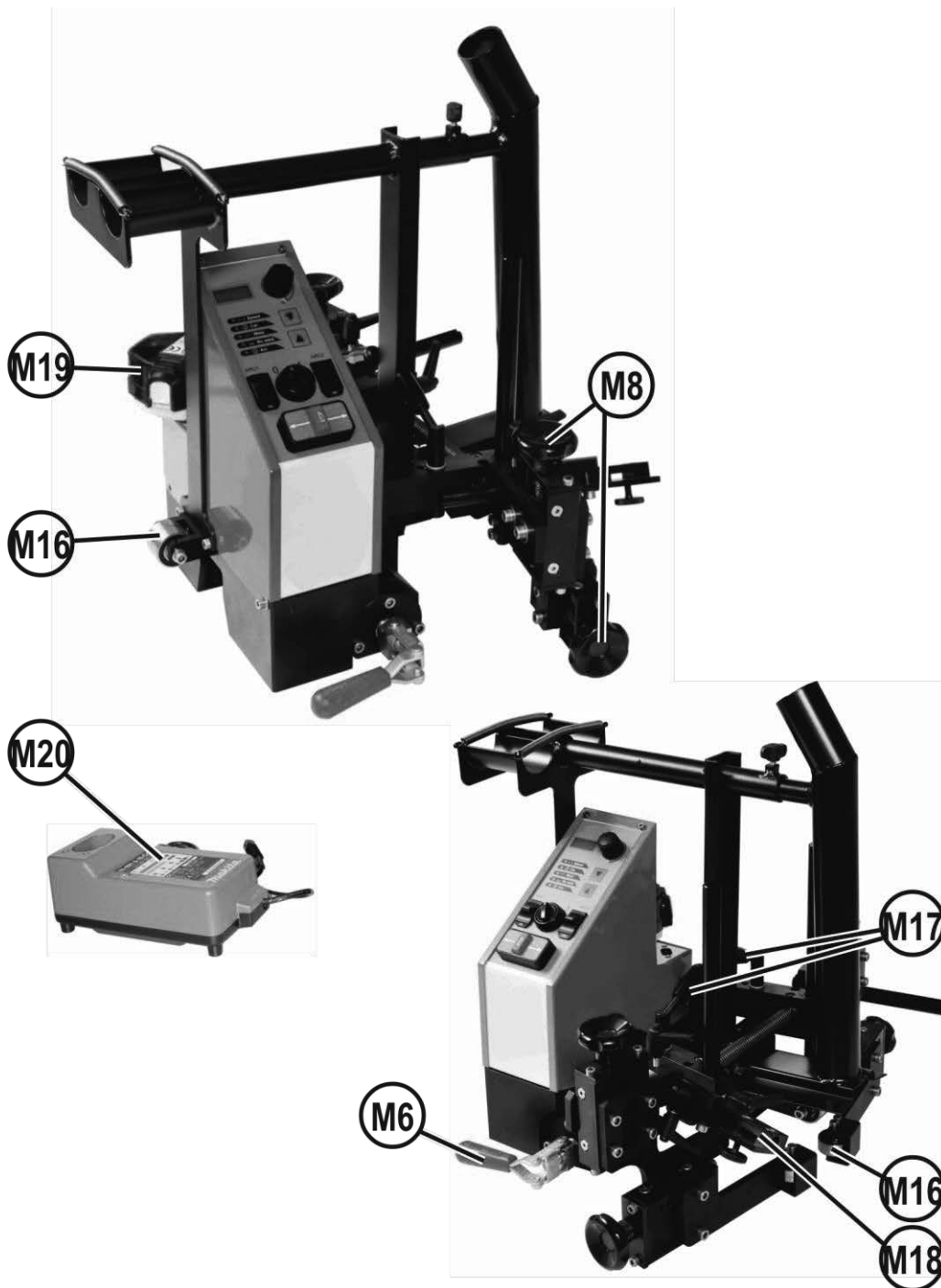
For example:

Item	Ref.	Stock	Order	Designation
1	W000XXXXXX	✓		Machine interface board
2	W000XXXXXX	✗		Flowmeter
3	9357 XXXX			Silk-screen printed front panel

✓	normally in stock
✗	not in stock
	on request

- For parts order, give the quantity required and put the number of your machine in the box below.

CE Type Matricule	TYPE:
	Number:

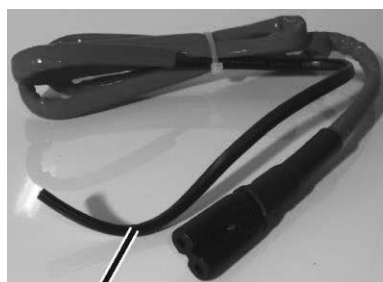


✓	normally in stock
✗	not in stock
	on request

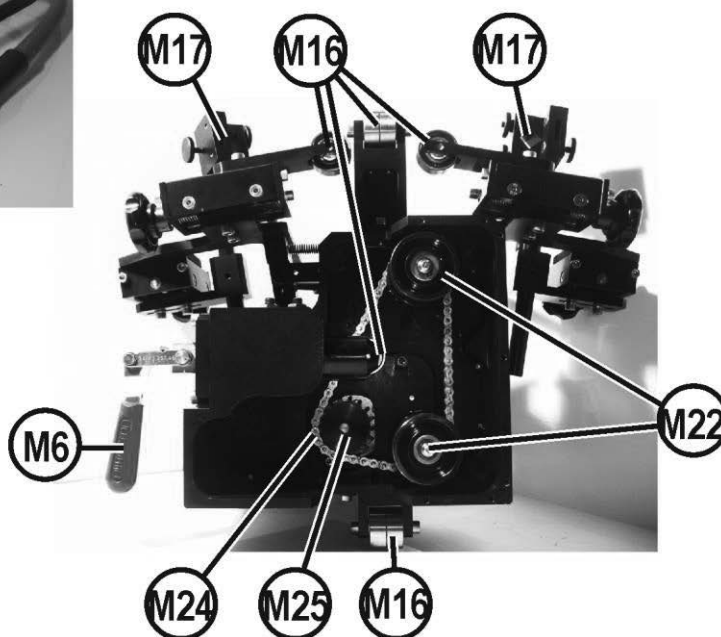
Item	Ref.	Stock	Order	Designation
M16	-			Support roller
M17	-			Indexable grip
M18	Z91300124	✓		Torch support mounted on TEE
M8	W000051010	✓		Hand wheel
M19	Z91300106	✓		Battery
M20	Z91300107	✓		Charger
M21	-			Cable "trigger"
M22	-			Drive wheel
M6	-			Troggle clamp
M24	-			Inox chain + quick link
M25	-			Idler sprocket

➤ For parts order, give the quantity required and put the number of your machine in the box below.

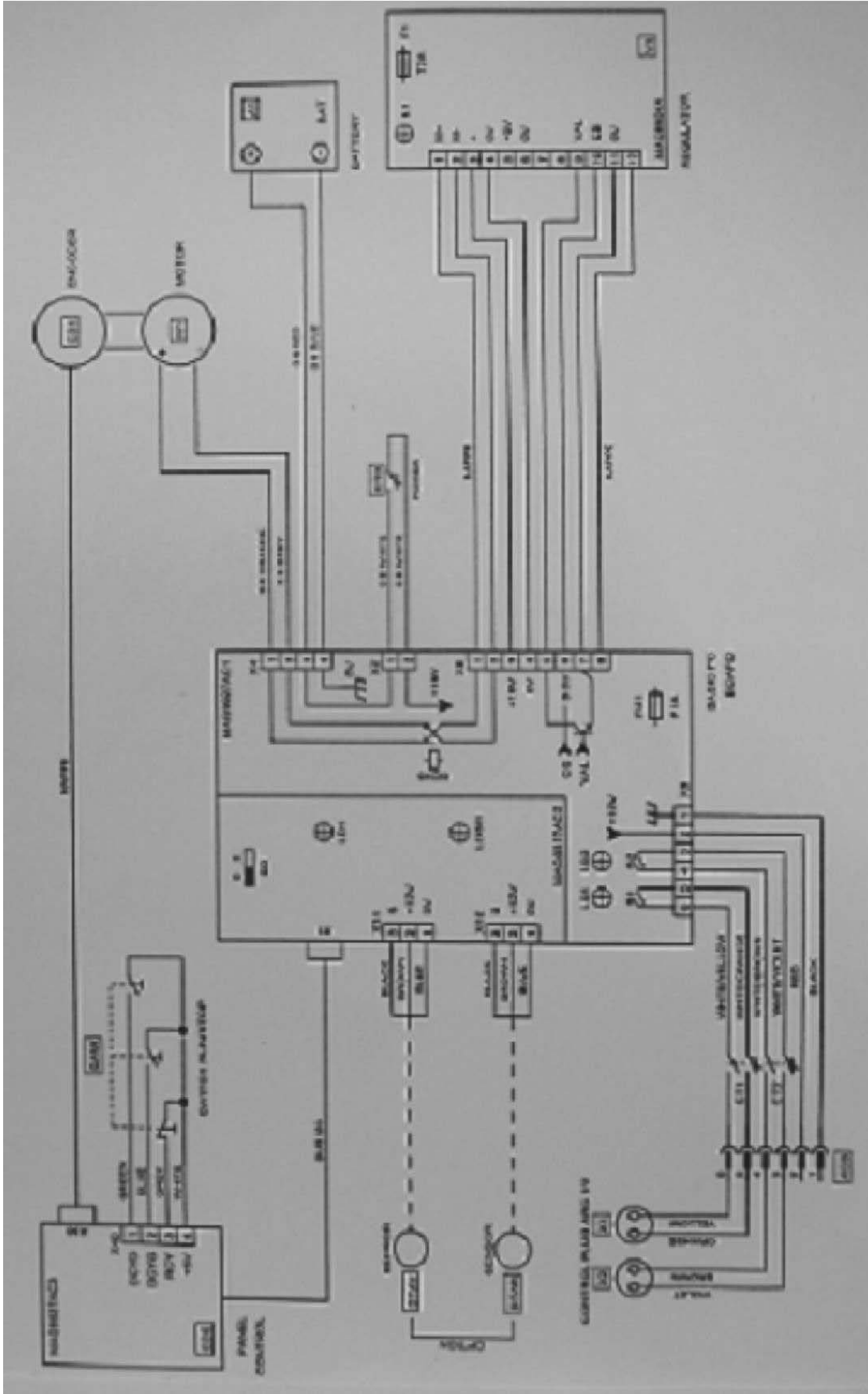
CE Type <input type="text"/> Matricule <input type="text"/>	TYPE:
	Number:



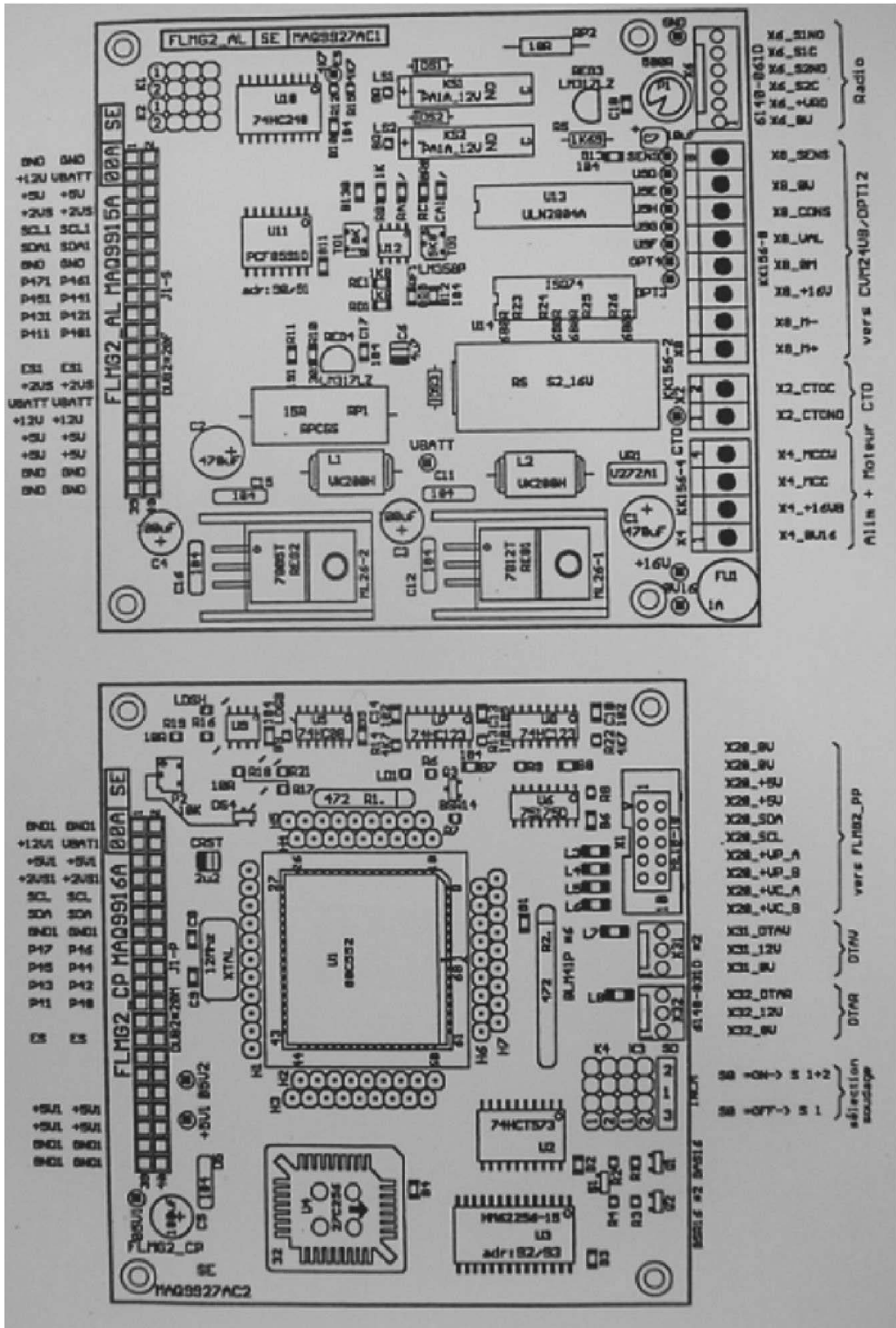
M21

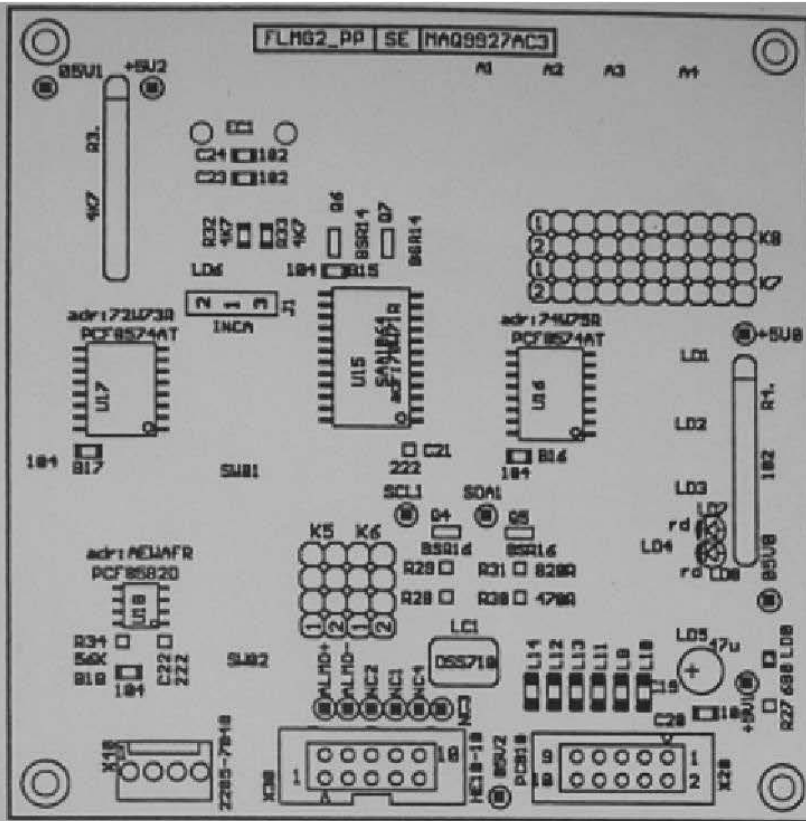


3 - WIRING DIAGRAM



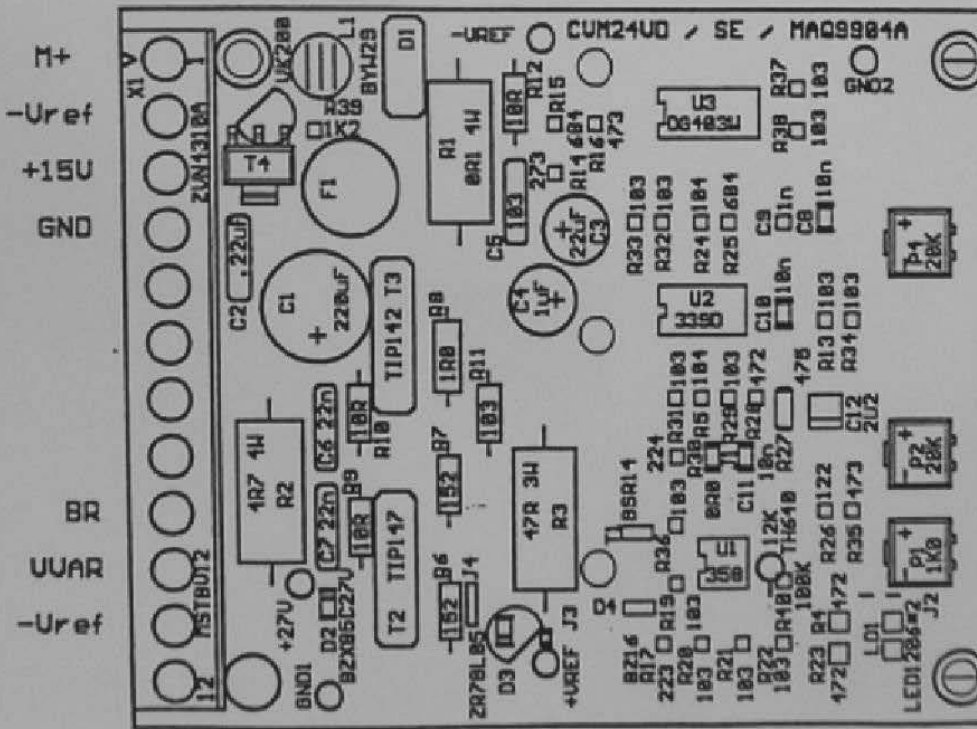
4 - PC BOARD



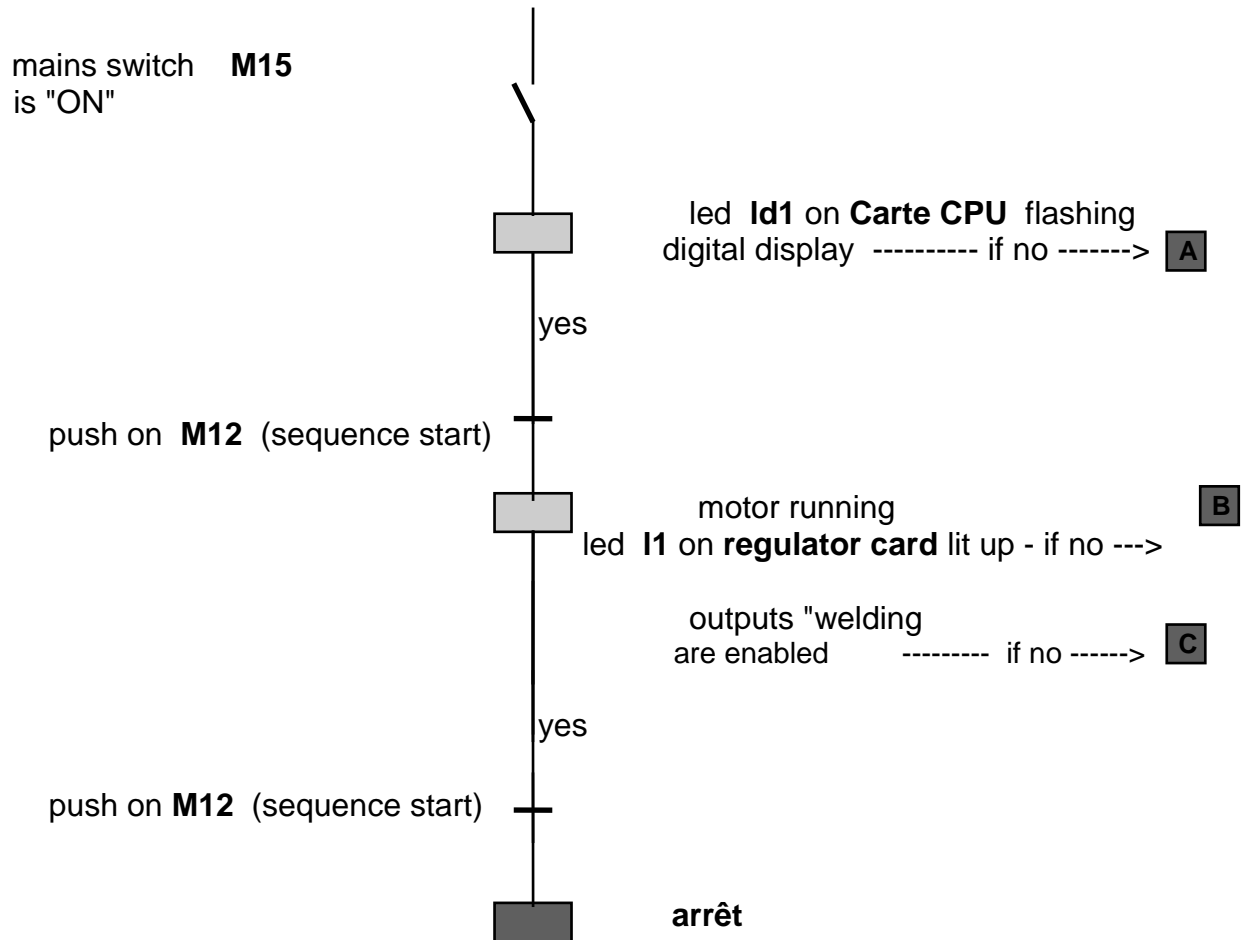


- X18_DCYD
 - X18_DCY6
 - X18_ACYC
 - X18_85U8
- Départ
Arrêt
cycle
- X38_ALPHO+
 - X38_+UCC
 - X38_+UC_A
 - X38_+UC_B
 - X38_85UB
 - X38_ALPHO-
 - X38_NC1
 - X38_NC2
 - X38_NC3
 - X38_NC4
- vers codeur NOP
- X28_+UC_B
 - X28_+UC_A
 - X28_+UP_B
 - X28_+UP_A
 - X28_SCL
 - X28_SDA
 - X28_85UB
 - X28_+5UB
 - X28_85UB
- vers FLH62_CB

Alimentations et Signaux
connecteur d'entrées



5 - ELECTRICAL MAINTENANCE



A FAULT SUPPLY

- the capacitor of battery is too low (power > 14,5V=)
- the plug connexion is faulty (follow circuit diagram)
- check the fuse **FU1** of pc board **CPU** or change pc board **CPU**

B FAULT REGULATOR OR FAULT CPU

- check the fuse **F1** of pc board **V1** or change pc board if necessary
- fault of control , change pc board **CPU**

nota: the car goes on and is stopped! (encodeur 's faulty, change motoreductor **M1/CD1** or pc board **CPU**; idem if distances have been exceeded

C FAULT WELDING CONTROL

- check **CPU** 's **Is1** and **Is2** of pc board lits up, if no change pc board **CPU**
- the plug connexion is faulty (follow wiring diagram with **CT1/CT2** , plugs **X1/X2**)

