

LF-40

OPERATOR'S MANUAL

MANUEL D'UTILISATION



LINCOLN ELECTRIC FRANCE
Avenue Franklin Roosevelt
76121 Le Grand Quevilly cedex
Tél : 02 32 11 40 40
Fax : 02 32 11 40 11
www.lincolnelectric.fr



Declaration of conformity
Dichiarazione di conformità
Konformitätserklärung
Declaración de conformidad
Déclaration de conformité
Samsvars erklæring
Verklaring van overeenstemming
Försäkran om överensstämmelse



LINCOLN ELECTRIC FRANCE

Declares that the welding machine:
Dichiara che il generatore per saldatura tipo:
Erklärt, daß die Bauart der Maschine:
Declara que el equipo de soldadura:
Déclare que l'équipement de soudage:
Bekrefter at denne sveisemaskin:
Verklaart dat de volgende lasmachine:
Försäkrar att svetsmaskinen :

LF-40 s/n



conforms to the following directives:
è conforme alle seguenti direttive:
den folgenden Bestimmungen entspricht:
es conforme con las siguientes directivas:
Est conforme aux directives suivantes:
er i samsvar med følgende direktiver:
Overeenkomst conform de volgende richtlijnen:
överensstämmer med följande direktiv:

73/23/CEE, 89/336/CEE

and has been designed in conformance with the following norms:
ed è stato progettato in conformità alle seguenti norme:
und in Übereinstimmung mit den nachstehenden Normen hergestellt wurde:
y ha sido diseñado de acuerdo con las siguientes normas:
et qu'il a été conçu en conformité avec les normes:
og er produsert og testet iht. følgende standarder:
En is ontworpen conform de volgende normen:
och att den konstruerats i överensstämmelse med följande standarder:

EN 50199, EN 60974-5

LINCOLN ELECTRIC FRANCE, Avenue Franklin Roosevelt, 76121 Le Grand Quevilly cedex, France

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Safety



WARNING

This equipment must be used by qualified personnel. Be sure that all installation, operation, maintenance and repair procedures are performed only by qualified individuals. Read and understand this manual before operating this equipment. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or damage to this equipment. Read and understand the following explanations of the warning symbols. Lincoln Electric is not responsible for damages caused by improper installation, improper care or abnormal operation.

	<p>WARNING: This symbol indicates that instructions must be followed to avoid serious personal injury, loss of life, or damage to this equipment. Protect yourself and others from possible serious injury or death.</p>
	<p>READ AND UNDERSTAND INSTRUCTIONS: Read and understand this manual before operating this equipment. Arc welding can be hazardous. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or damage to this equipment.</p>
	<p>ELECTRIC SHOCK CAN KILL: Welding equipment generates high voltages. Do not touch the electrode, work clamp, or connected work pieces when this equipment is on. Insulate yourself from the electrode, work clamp, and connected work pieces.</p>
	<p>FUMES AND GASES CAN BE DANGEROUS: Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. To avoid these dangers the operator must use enough ventilation or exhaust to keep fumes and gases away from the breathing zone.</p>
	<p>ARC RAYS CAN BURN: Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing. Use suitable clothing made from durable flame-resistant material to protect you skin and that of your helpers. Protect other nearby personnel with suitable, non-flammable screening and warn them not to watch the arc nor expose themselves to the arc.</p>
	<p>WELDING SPARKS CAN CAUSE FIRE OR EXPLOSION: Remove fire hazards from the welding area and have a fire extinguisher readily available. Welding sparks and hot materials from the welding process can easily go through small cracks and openings to adjacent areas. Do not weld on any tanks, drums, containers, or material until the proper steps have been taken to insure that no flammable or toxic vapors will be present. Never operate this equipment when flammable gases, vapors or liquid combustibles are present.</p>
	<p>ELECTRICALLY POWERED EQUIPMENT: Turn off input power using the disconnect switch at the fuse box before working on this equipment. Ground this equipment in accordance with local electrical regulations.</p>
	<p>ELECTRICALLY POWERED EQUIPMENT: Regularly inspect the input, electrode, and work clamp cables. If any insulation damage exists replace the cable immediately. Do not place the electrode holder directly on the welding table or any other surface in contact with the work clamp to avoid the risk of accidental arc ignition.</p>
	<p>ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS: Electric current flowing through any conductor creates electric and magnetic fields (EMF). EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before operating this equipment.</p>
	<p>CYLINDER MAY EXPLODE IF DAMAGED: Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. Always keep cylinders in an upright position securely chained to a fixed support. Do not move or transport gas cylinders with the protection cap removed. Do not allow the electrode, electrode holder, work clamp or any other electrically live part to touch a gas cylinder. Gas cylinders must be located away from areas where they may be subjected to physical damage or the welding process including sparks and heat sources.</p>
	<p>WELDED MATERIALS CAN BURN: Welding generates a large amount of heat. Hot surfaces and materials in work area can cause serious burns. Use gloves and pliers when touching or moving materials in the work area.</p>



CE COMPLIANCE: This equipment complies to the European Communities directives.



SAFETY MARK: This equipment is suitable for supplying power for welding operations carried out in an environment with increased hazard of electric shock.

Installation and Operator Instructions

Read this entire section before installation or operation of the machine.

Product Description

The LF 40 is a high performance, digitally controlled, wire feeder. Properly equipped, it can support the GMAW, GMAWP, FCAW and SMAW processes. The Power Feed wire feeders are designed to be a part of a modular, multi process welding system.

The LF40 is a 4 drive roll wire feeder that operates on 42V input power.

The LF 40 wire feeders is designed to be used with compatible power sources, operating as a system. Each component in the system has special circuitry to « talk with » the other system components, so each component (power source, wire feeder, electrical accessories) knows what the other is doing at all times.

This shared information lays the groundwork for a system with superior welding performance.

Recommended Equipment

The LF40 must be used with power sources having digital communication capabilities and 40 VDC auxiliary power. The presently available power source is the PowerWave 455. Other power source will be available in the future.

Duty Cycle

The LF40 wire feeder is capable of welding at a 100% duty cycle (continuous welding). The power source will be the limiting factor in determining system duty cycle capability.

Location and Environment

This machine will operate in harsh environments. However, it is important that simple preventative measures are followed to assure long life and reliable operation

- Do not place or operate this machine on a surface with an incline greater than 15° from horizontal.
- This machine must be located where there is free circulation of clean air without restrictions for air movement to and from the air vents. Do not cover the machine with paper, cloth or rags when switched on.

- Dirt and dust that can be drawn into the machine should be kept to a minimum.
- This machine has a protection rating of IP21. Keep it dry when possible and do not place it on wet ground or in puddles.
- Locate the machine away from radio controlled machinery. Normal operation may adversely affect the operation of nearby radio controlled machinery, which may result in injury or equipment damage. Read the section on electromagnetic compatibility in this manual. Do not operate in areas with an ambient temperature greater than 40°C.

Input Supply Connection

Check the input voltage, phase, and frequency supplied to this machine before turning it on. Verify the connection of grounding wires from the power source to the input source.

Gas Connection

Once a gas cylinder has been securely installed on the machine, connect the gas hose of the input cable to the gas cylinder using a flow regulator.

Drive Rolls and Guide Tubes Installation

- Mount the wire spool on the output shaft so that, by dragging the extremity of the wire, the spool turns anticlockwise.
- The wire diameter must fit the diameter stenciled on the visible side of drive rolls (A). If it is not the case, unscrew the screws holding the rolls (B), turn them or replace them with rolls that fit the wire diameter used.
- Every drive roll is provided with 2 grooves to allow the feeding of wires with different diameters.
- Specific drive rolls are available for cored or aluminium wires. It is also possible to configure the wire feeder with 4 driven rolls (see "Accessories").
- Lift the levers (C) of ball bearings (D) which press on drive rolls (B).
- Insert the wire inside the fitting inlet guide and let it out from the torch adapter (E). Lower the

levers regulating the bearings. Use the adjustment nut to modify the pressure of the bearings.

Idle Roll Pressure Setting

For small wire sizes and aluminum wires, the idle roll pressure varies with type of wire, surface condition, lubrication and hardness.

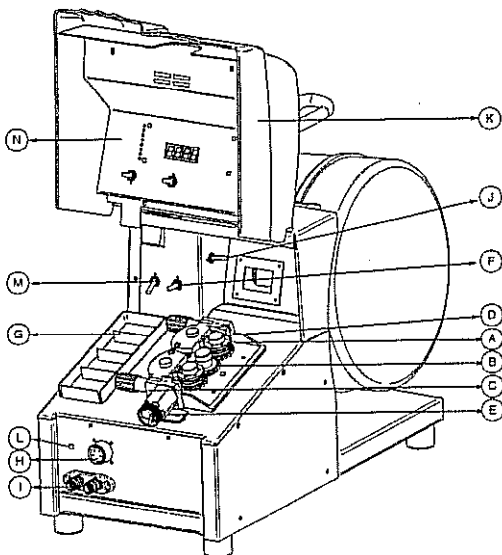
An excessive pressure may cause wire distortion. It may be jammed or break which may cause an early wear and tear of the feeding motor. Turn back the adjusting knob and repeat the operation.

A too low pressure may cause wire feeding irregularities.

- Connect the gun to the gun adapter.
- Take off the gas guide from the gun extremity and unscrew the contact tip. The wire must feed regularly without any variation in wire feed speed. If it is not the case, or if the wire slips, increase the pressure setting using the with the adjustment nut until the wire feed speed becomes regular.
- Mount again the contact tip and the gas nozzle. Be sure the that both the wire feed speed and the size of contact tip are correct.
- Connect the work clamp to the work piece or to the welding table making sure that the clamp is provided with a good quality contact (the surface of work piece must be clean and must not show any rust, paint or oily stains).

Connecting the Welding Gun

Position the gun connector located at the end of the torch in front of the gun connector of the wire feeder (E). Gently push and screw the black locking nut.



A, B, C, D, E : 4-roll gear box and motor assembly configurable with 2 or 4 driven rolls according to the

selected drive roll kit (see "Accessories")

- F. Cold inch control and gas purge control. The LF40 has a Cold Feed/Gas Purge Switch located near the drive roll assembly. This is an up/down center-off momentary toggle switch. When held in the down position, the Wire Drive will feed wire, but neither the power source nor the gas solenoid will be energized. When cold feeding, the feed speed can be adjusted by rotating the WFS encoder knob on the Control Box. Adjusting the cold feed will not affect the run in or welding wire feed speed. When the cold feed switch is released, the cold feed value is saved. When this switch is held in the up position, the gas solenoid valve is energized, but neither the power source nor the drive motor will be energized.
- G. Tool case (contact tips, drive rolls, guide-tubes...)
- H. Remote control receptacle.
- I. Water connector (as standard on water cooled models) for connecting water cooled torches.
- J. Water/air cooled torch selection switch (as standard on water cooled models). Set this switch according to the torch model being used.
- K. Cover.
- L. Led status Light (see description below)
- M. 2/4 strokes switch
The Wire Drive has a 2 Step/ 4 Step switch located near the drive roll assembly.

2 Step Logic :

- 1) Closing the gun trigger initiates the welding sequence (preflow, run in, etc.)
- 2) Opening the gun trigger ends the welding sequence (burnback, postflow, etc.)

4 Step Logic

With Crater Fill "OFF"

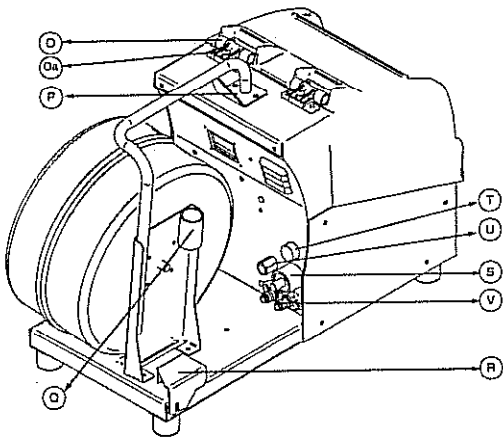
- 1) Closing the gun trigger initiates the welding sequence (preflow, run in, etc)
- 2) Opening the trigger allows the wire to continue feeding before or after the welding arc is established. If the arc goes out the wire continues feeding.
- 3) Closing the trigger again cancels the interlock and the wire to continues feeding.
- 4) Opening the trigger again ends the welding sequence (burnback, postflow, etc.).

With Crater Fill "ON":

- 1) Closing the gun trigger initiates the welding sequence (preflow, run in, etc.).

- 2) Opening the trigger allows the wire to continue feeding before or after the welding arc is established. If the arc goes out the wire continues feeding.
- 3) Closing the trigger again cancels the interlock changes the wire feed speed and the Volts/Trim to the Crater values, and the wire continues feeding.
- 4) Opening the trigger again ends the welding sequence (burnback, postflow, etc.).

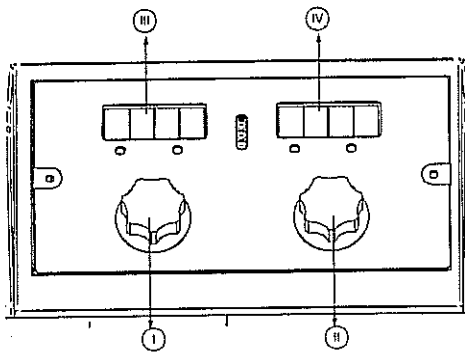
N. Control box MSP3 Panel (see description below)



- O. Adjustable hinge for cover latching.
 - Oa) : latch screw for cover : (To slow latching of the cover and then prevent it from closing too strongly , screw "Oa)". On the opposite, unscrew to make the closing easier.
- P. Lift bail location.
- Q. Torch holder.
- R. Cable clamp
- S. Fast-mate adaptor (male)
- T. 8-pin male Amphenol plug for wire feeder.
- U. Gas connector
- V. Quick water connectors (as standard on water cooled models)

Control Panels

Control/Display Front Panel



The LF40 have a Control/Display (CD) panel. This panel consists of adjustment knobs, digital displays and a series of indicator lights (LEDs). There are two knobs (I & II); each has a 4 digit LED display (III & IV) and a pair of LEDs associated with it. Knobs and displays have dual functions; the LEDs indicate which function at any given time. This panel also has a dual color Status LED, used to indicate the general health status of the Control Box and its connection to other components in the system (power source, wire drive, etc.)

The left knob/display (I & III) is labeled WFS / AMPS (wire feed speed/amps).

- In non-synergic modes, the WFS control changes the wire feed speed according to the desired procedure.

- In synergic welding modes (synergic CV, pulse GMAW) WFS is the dominant control parameter, controlling all other variables.

The power source then uses the WFS setting to adjust its output characteristics (output voltage, output current) according to preprogrammed settings contained in the power source.

An LED lights to inform the user which function (WFS or amps) is active.

This display can be either English or metric units.

The right knob/display (II & IV) is labeled VOLTS / TRIM. In constant voltage modes (synergic CV, standard CV) the control adjusts the welding voltage.

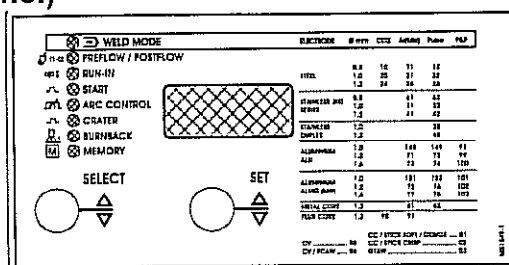
In pulse synergic welding modes (pulse GMAW only) the user can change the Trim setting to adjust the arc length. It is adjustable from 0.50 to 1.50. A Trim setting of 1.00 means than no adjustments will be made to the preset arc lengths, and is optimum for most conditions. An LED lights to inform the user which function (volts or trim) is active.

Both displays indicate preset values, according to the weld mode selected, when not welding. Once welding begins, they switch to displaying actual values. At that time, the indicator LEDs will flash to

signify actual values are being displayed. The displays hold the actual values for 5 seconds after a weld is stopped. Turning a knob during the hold time

shuts off the hold, and returns the meters to their preset values.

Inside Panel (MSP3 Panel)



This panel provides a selection of over 30 weld modes, including CV, pulse FCAW and CC, through a toggle switch and indicator lights (LEDs). It allows for adjustment of all set up parameters, Preflow, Run In, Arc Control, Burnback, Postflow, and Crater, through an up/down toggle switch, indicator lights and a 3 digit display.

To adjust a set up parameter (Weld Mode being one of those parameters), first select one of the set up parameters for adjustment, and then adjust the displayed value up or down.

Set up parameters are selected with the SELECT switch, an up/down center-off momentary toggle switch.

Moving the switch bat up or down moves an LED in the corresponding direction. Holding the switch in either direction will cause the indicator to move quickly in the corresponding direction until the switch is released, or the upper or lower limit is reached.

The value of the active set up parameter is shown on the panel digital display. The value can be modified with the SET switch. The SET switch is an up/down center-off momentary toggle switch. Moving the switch bat up or down adjusts the displayed value in the corresponding direction. Holding the switch in either direction will cause the display to move quickly in the corresponding direction until the switch is released, or the upper or lower parameter limit is reached.

Weld mode - Select a weld mode corresponding to the process being used

Preflow – Time delay after the trigger is pulled, but before weld starts, during which shielding gas flows. Weld start is defined as the time when both the power source is energized and the Wire Drive begins feeding wire. Adjustable from 0.0 (Off) to 2.5 seconds in 0.1s increments.

Run In – Wire feed speed during arc starting. Wire Drive will feed wire at the Run In speed for one second, or until weld current flows. Low speed gear range: Off (Run In speed equals weld wire feed speed) or adjustable from 50 to 150 IPM (1.25 to 3.80 MPM). High speed gear range: Off (Run In speed equals weld wire feed speed) or adjustable from 75 to 150 IPM (2.00 to 3.80 MPM).

Start – Used only when welding with 4-step trigger mode. Can be set to OFF or ON with the SET switch.

When ON is set, adjustments can be made to WFS/ and VOLTS/TRIM on the control/display panel.

These settings are then used for "Starting" when in the 4-step trigger mode (see explanation of 2 and 4 step operation below).

When OFF, "starting" is not possible.

Arc Control – Unitless characteristic, also known as Inductance of Wave Control. Allows operator to vary the arc characteristics from "soft" to "harsh" in all weld modes. Adjustable from -10.0 to 10.0 in increments of 0.1. (0.0) is nominal.

Crater – Can be set to Off or On. When On, adjustments can be made to WFS and VOLTS/TRIM on the Control/Display panel. These settings are then used for 'cratering'. When Off, "cratering" is not possible.

Burnback – Time delay after the trigger is released during which the power source remains energized but the Wire Drive stops feeding wire. Adjustable from 0.00 (Off) to 0.25 seconds in 0.01 second increments.

Postflow – Time delay after burnback is complete, during which shielding gas flows. Adjustable from 0.0 (Off) to 10.0 seconds in 0.1 second increments

Memory - Functional Specification

The memory mode is entered when the MEMORY LED is illuminated and exited when the MEMORY LED is extinguished using the SELECT switch.

Each time the MEMORY LED is selected using the SELECT switch, the display on the MSP3 will show four dashes "----" to indicate that no action will occur if the user exits the MEMORY mode by using the SELECT switch.

If the SET switch is pushed up, the four dashes will change to "S-1" to indicate that the present weld mode and associated parameters will be saved to user memory #1 when the SELECT switch is used to exit the memory mode.

Pressing the SET switch down past the four dashes will cause the display to change to "r-1" to indicate

that the weld mode and associated parameters currently stored in user memory #1 will be recalled when the SELECT switch is used to exit the memory mode.

The following table summarizes the action taken when the user exits the memory mode:

MSP3 display	Action taken when the user uses the SELECT switch to exit the MEMORY mode
"S-8"	Save to user memory #8
...	...
"S-2"	Save to user memory #2
"S-1"	Save to user memory #1
" _ "	No action (default display each time memory mode is entered)
"r-1"	Recall from user memory #1
"r-2"	Recall from user memory #2
...	...
"r-8"	Recall from user memory #8

When a memory save or memory recall is performed, the MSP3 panel will briefly scroll a text message to indicate that an action occurred. When a memory saved is performed, "SavEd" will be displayed. When a memory recall is performed, "rEcALLEd" will be displayed. When the memory

mode is exited when the four dashes are displayed, there is no additional text displayed on the MSP3.

If the user attempts to restore from memory location that was not previously saved, the memory mode will exit without scrolling the "rEcALLEd" message as an indication that no action occurred.

There will be no timeout time associated with memory saving and recalling. The user must exit the memory mode using the SELECT switch.

CC Stick welding

To energize the output studs in either CC/Stick mode, the right Control/Display panel knob, labeled Volts/Trim, must be used. The volts/Trim knob must be turned clockwise roughly a quarter revolution to energize the output studs. (The Volts/trim display will indicate 'On' when the studs are energized.) Similarly, turning the knob a quarter turn counter clockwise de-energizes the output studs. If a CC/Stick weld mode is entered through use of the Dual Procedure, the studs will be in the same state as when they were last used. If a CC/Stick weld mode is entered through a Memory recall, the studs will be deenergized.

Status Lights

The light is a bicolor, Green/Red, LED. The purpose of the status light is to allow the operator to quickly identify that the system is working properly, or, if not, which component is causing the problem. By using the status lights the operator can quickly pinpoint the system problem to a particular component. See the following table for a complete listing and description of all status light conditions.

NOTE: The green light ON and steady indicates a normal functioning system.

LED State	Power Source LED	LED on any other nodes (components); Wire Feeder, Control Box Etc.
Off	Power Source is not turned ON or is not functioning correctly.	The system component is not receiving input power or is faulty.
Green LED blinking at a "normal" rate	It should only blink for a few seconds while the system is mapping (identifying components). If blinking continues every group may have a mapping error. (DIP switches may be set incorrectly).	It should only blink for a few seconds until the system component (node) has been recognized. If the blinking continues at least one node in the group has a mapping error (DIP switches may be set incorrectly). The node or nodes with mapping errors will be blinking red. <ul style="list-style-type: none"> ● There may be too many components in the group. All components in the group will be blinking green. ● The power source bus may not be available. The bus may be being used to program another component. ● The LED's of the power source and the component being programmed will be solid green.
Red LED blinking at a "normal" rate	Indicates a recoverable communication fault. The power source should automatically recover. If it cannot recover the LED will be solid red.	Indicates a recoverable communication fault most likely caused by one of the following. <ul style="list-style-type: none"> ● More than one control box (UI) in the group. All control boxes in the group will be blinking red. ● No control box (UI) in the group. All nodes in the group will be blinking red. ● More than one node, of the same equipment type, has the same group and feed head (FH) numbers. All these nodes will be blinking red. ● The feed head DIP switches may be set to zero. The nodes with DIP switches set to zero will be

		blinking red. ● The node bus may be off.
Red/Green LED Blinking at a "normal" rate"	Indicates a recoverable hardware fault such as over temperature, overload shutdown etc.	Indicate a recoverable hardware fault such as over temperature, overload shutdown etc. Could also be an open shutdown circuit at the feed head (leads 570, 572 with tab terminals) typically used for water flow shutdown switches.
Red LED blinking at a fast rate	Power source needs to be reprogrammed. Contact your Local Authorized Lincoln Field Service Facility	System component (node) needs to be reprogrammed. Contact your Local Authorized Lincoln Field Service Facility.
Red LED ON and steady	Power source has a non-recoverable hardware fault. Contact your Local Authorized Lincoln Field Service Facility.	System component (node) has a non-recoverable hardware fault. Contact your local Authorized Lincoln Field Service Facility.
Green LED ON and steady	System normal and functional	System normal and functional

Normal Blinking LED – Each illumination should exist for 05 seconds

Fast Blinking LED – Each illumination should exist for 0.1 second

Electromagnetic Compatibility (EMC)

This machine has been designed in accordance with all relative directives and norms. However, it may still generate electromagnetic disturbances that can affect other systems like telecommunications (telephone, radio, and television) or other safety systems. These disturbances can cause safety problems in the affected systems. Read and understand this section to eliminate or reduce the amount of electromagnetic disturbance generated by this machine.



WARNING: This machine has been designed to operate in an industrial area. To operate in a domestic area it is necessary to observe particular precautions to eliminate possible electromagnetic disturbances. The operator must install and operate this equipment as described in this manual. If any electromagnetic disturbances are detected the operator must put in place corrective actions to eliminate these disturbances with, if necessary, assistance from Lincoln Electric Italia. Do not modify this machine without the written approval of Lincoln Electric Italia.

Before installing the machine, the operator must check the work area for any devices that may malfunction because of electromagnetic disturbances. Consider the following.

- Input and output cables, control cables, and telephone cables that are in or adjacent to the work area and the machine.
- Radio and/or television transmitters and receivers.
- Computers or computer controlled equipment.
- Safety and control equipment for industrial processes.
- Personal medical devices like pacemakers and hearing aids.
- Equipment for calibration and measurement.
- Check the electromagnetic immunity for equipment operating in or near the work area. The operator must be sure that all equipment in the area is compatible. This may require additional protection measures.
- The dimensions of the work area to consider will depend on the construction of the area and other activities that are taking place.

Consider the following guidelines to reduce electromagnetic emissions from the machine.

- Connect the machine to the input supply according to this manual. If disturbances occur it may be necessary to take additional precautions such as filtering the input supply.
- The output cables should be kept as short as possible and should be positioned together.
- If possible connect the work piece to ground in order to reduce the electromagnetic emissions. The operator must check that connecting the work piece to ground does not cause problems or unsafe operating conditions for personnel and equipment.
- Shielding of cables in the work area can reduce electromagnetic emissions. This may be necessary for special applications.

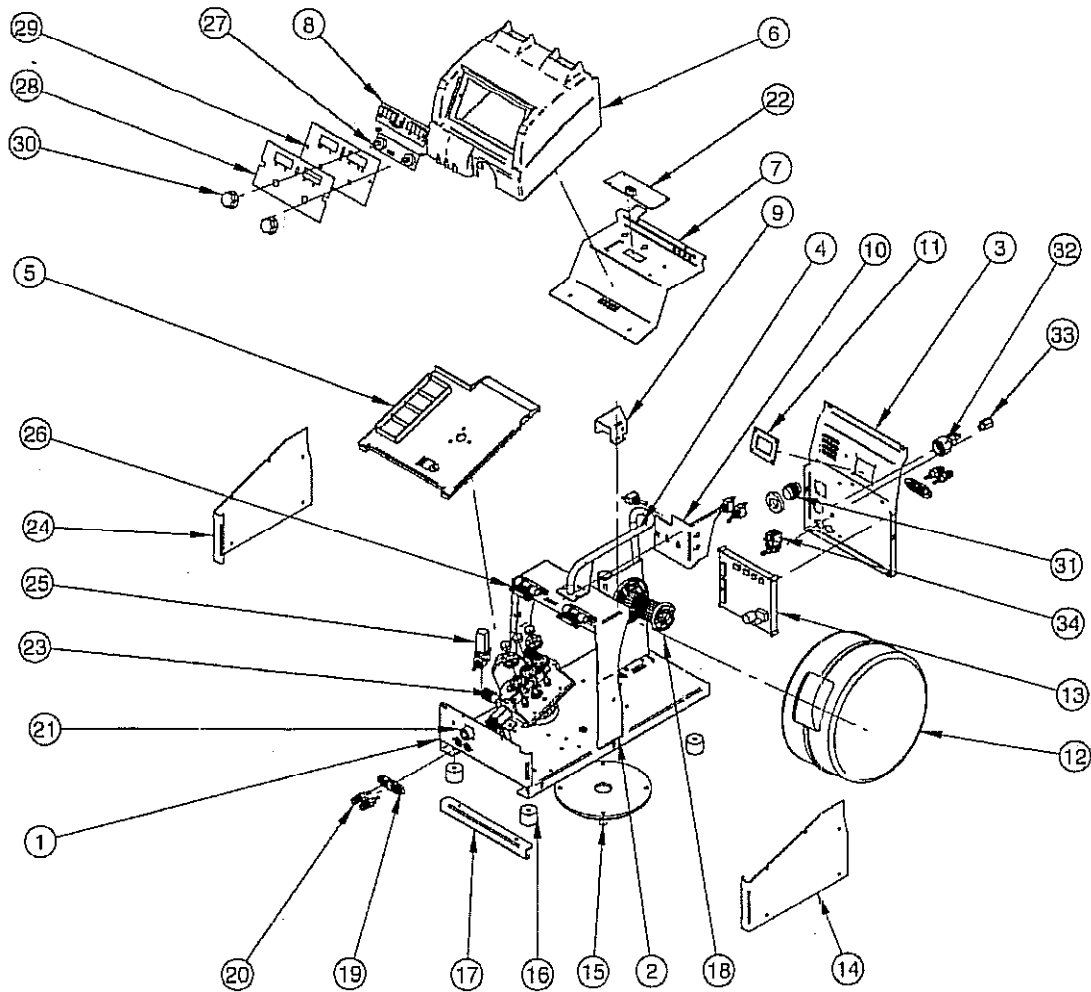
LF-40 Technical Specifications

WIRE SPEED RANGE (m/min)
2 m/min to 20 m/min
INPUT VOLTAGE (V)
42 V
WIRE SIZES (mm)

SOLID WIRES 0.6 to 1.6		CORED WIRES 1.0 to 1.6		ALU WIRES 1.0 to 1.6	
DIMENSIONS					
Height 470 mm		Width 295 mm		Length 735 mm	
Operating Temperature -20°C to +40°C			Storage Temperature -25°C to +55°C		

For any maintenance or repair operations it is recommended to contact the nearest Lincoln technical service center. Maintenance or repairs performed by unauthorized service centers or personnel will null and void the manufacturers warranty.

Spare Parts, Parti di Ricambio, Ersatzteile, Lista de Piezas de Recambio, Pièces de Rechange, Deleliste, Reserve Onderdelen, Reservdelar



Spare parts

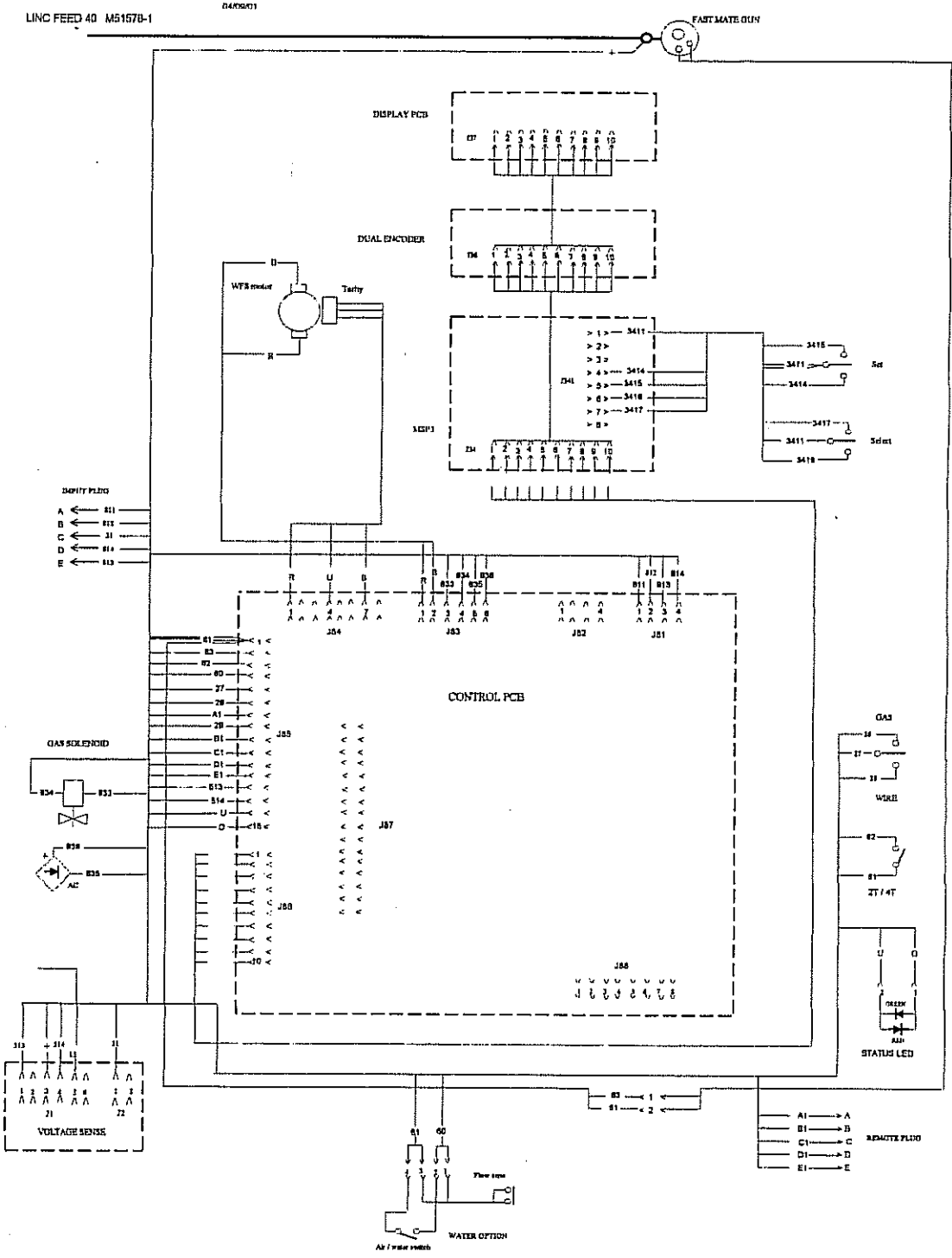
Item	Description	Qty
1	Base	
2	Frame	
3	Rear panel	
4	Wire feeder handle and spool spindle assembly	
5	Wire feeder bracket	
6	Cover	
7	Cover plate	
8	Display screen	
9	Cable clamp	
10	Switch panel	
11	guide tube	
12	Cake box	
13	Control PC board	
14	Right panel	
15	Plastic swivel platform (top)	
16	Foot	
17	Bottom front panel	
18	Wire reel support	
19	Water kit insulator	
20	Quick connect for water	
21	Amphenol plug	
22	MSP3	
23	Wire drive assembly	
24	Left panel	
25	Flow meter	
26	Hinge	
27	PC board	
28	Nameplate meter	
29	Meter bracket	
30	Knob	
31	Amphenol plug	
32	Fast-mate connector	
33	Gas connector	
34	Gaz solenoid	

Pièces de rechange

Repère	Description	QTE
1	Base	
2	Structure	
3	Panneau arrière	
4	Poignée et support bobine assemblés	
5	Plaque support ensemble de dévidage	
6	Capot	
7	Tôle capot	
8	Afficheur	
9	Serre-câble	
10	Panneau switch	
11	Guide-fil	
12	Carter protection bobine	
13	Circuit de commande	
14	Panneau de côté droit	
15	Pivot intérieur	
16	Pied caoutchouc	
17	Cache avant	
18	Support bobine	
19	Support raccords eau	
20	Raccord laiton kit eau	
21	Prise Amphenol	
22	Circuit MSP3	
23	Ensemble de dévidage	
24	Panneau de côté gauche	
25	Electrovanne eau	
26	Charnière	
27	Circuit imprimé	
28	Nameplate meter	
29	Plaque support meter	

30	Bouton de potentiomètre	
31	Prise Amphenol	
32	Borne ¼ tour	
33	Raccord gaz	
34	Electrovanne gaz	

Electrical Schematic, Schema Elettrico, Elektrische Schaltpläne, Esquema Eléctrico, Schéma Electrique, Elektrisk Skjema, Elektrisch Schema, Elektriskt Kopplingschema



Accessories, Accessories

K10348-PG-xM	Source wire/feeder cable (gas). Available in 5, 10,15, 20, 25 or 30m Faisceau d'alimentation avec tuyau gaz. Existent en 5, 10,15, 20, 25 ou 30m
K10348-PGW-xM	Source wire/feeder cable (gas and water). Available in 5, 10,15, 20, 25 or 30m Faisceau d'alimentation avec tuyaux eau et gaz. Existent en 5, 10,15, 20, 25 ou 30m
K10339	Heavy duty undercarriage Chariot
K10371	Caster kit (light duty) Kit roulettes
K10158	Plastic adaptor for 15-kg coils (delivered as standard). Adaptateur plastique pour bobine de 15kg (livré en standard).
K10343	Innershield torch adaptor. Adaptateur euroconnecteur torche Innershield
K10352-1	Plastic swivel platform Plateforme plastique adaptable sur tout générateur
K10349-1	Water connection kit for LF with flow sensor Kit de raccordement d'eau avec détecteur de débit

Drive rolls and guide tubes/Galets d'entrainement de fil & guide-fils :

	2 driven rolls/2 galets moteur
0,6-0,8MM	KP10344-0.8
0,8-1,0MM	KP10344-1.0
1,0-1,2MM	KP10344-1.2
1,2-1,6MM	KP10344-1.6
1.0-1.6mm	KP10344-1.6C
1,0-1,2MM	KP10344-1.2A
1,2-1,6MM	KP10344-1.6A

K10362-1 : 2-idle roll kit for KP10344, 2-roll drive configuration
Kit 2 contre-galets lisses pour KP10344, configuration 2 galets moteurs

K10363-1 Necessary additional kit : 2-pinion kit for KP10345, configuration 4-roll drive
A commander obligatoirement : Kit 2 pignons pour KP10345 configuration 4 galets moteur