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Rev. 4

LINC FEED 34 & 35

OPERATOR'S MANUAL

MANUALE OPERATIVO

BEDIENUNGSANLEITUNG

MANUAL DE INSTRUCCIONES

MANUEL D'UTILISATION

BRUKSANVISNING OG DELELISTE

GEBRUIKSAANWIJZING

BRUKSANVISNING

INSTRUKCJA OBSŁUGI

KÄYTTÖOHJE

MANUAL DE INSTRUÇÕES

LINCOLN ELECTRIC BESTER S.A.
ul. Jana III Sobieskiego 19A, 58-260 Bielawa, Poland
www.lincolnelectric.eu

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

Försäkran om överensstämmelse
Deklaracja zgodności
Vakuutus yhteensopivuudesta
Declaração de conformidade

LINCOLN ELECTRIC BESTER S.A.

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 le poste de soudage:
Bekrefter at denne sveisemaskin:
Verklaart dat de volgende lasmachine:

Försäkrar att svetsomriktaren:
Deklaruje, że spawalnicze źródło energii:
Vakuuttaa, että hitsauskone:
Declara que a maquina de soldar:

LINC FEED 34

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:
overeenkomt conform de volgende richtlijnen:

överensstämmer med följande direktiv:
spełnia następujące wytyczne:
täyttää seuraavat direktiivit:
está em conformidade com as seguintes directivas:

2006/95/CEE, 2004/108/CEE

and has been designed in compliance with the following standards:
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:
i że zostało zaprojektowane zgodnie z wymaganiami następujących norm:
ja on suunniteltu seuraavien standardien mukaan:
e foi concebida de acordo com as seguintes normas:

EN 60974-1, EN 60974-5, EN 60974-10

(2006)

Paweł Lipiński
Operations Director
LINCOLN ELECTRIC BESTER S.A., ul. Jana III Sobieskiego 19A, 58-260 Bielawa, Poland

12/05

Declaration of conformity
Dichiarazione di conformità
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LINC FEED 35

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(2006)

Paweł Lipiński
Operations Director
LINCOLN ELECTRIC BESTER S.A., ul. Jana III Sobieskiego 19A, 58-260 Bielawa, Poland

12/05

07/06

English		Do not dispose of electrical equipment together with normal waste! In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative. By applying this European Directive you will protect the environment and human health!
Italiano		Non gettare le apparecchiature elettriche tra i rifiuti domestici! In ottemperanza alla Direttiva Europea 2002/96/CE sui Rifiuti di Apparechiature Elettriche ed Elettroniche (RAEE) e la sua attuazione in conformità alle norme nazionali, le apparecchiature elettriche esauste devono essere raccolte separatamente e restituite ad una organizzazione di riciclaggio ecocompatibile. Come proprietario dell'apparecchiatura, Lei potrà ricevere informazioni circa il sistema approvato di raccolta, dal nostro rappresentante locale. Applicando questa Direttiva Europea Lei contribuirà a migliorare l'ambiente e la salute!
Deutsch		Werfen Sie Elektrowerkzeuge nicht in den Hausmüll! Gemäss Europäischer Richtlinie 2002/96/EG über Elektro- und Elektronik- Altgeräte (Waste Electrical and Electronic Equipment, WEEE) und Umsetzung in nationales Recht müssen verbrauchte Elektrowerkzeuge getrennt gesammelt und einer umweltgerechten Wiederverwertung zugeführt werden. Als Eigentümer diese Werkzeuges sollten sie sich Informationen über ein lokales autorisiertes Sammel- bzw. Entsorgungssystem einholen. Mit der Anwendung dieser EU Direktive tragen sie wesentlich zur Schonung der Umwelt und ihrer Gesundheit bei!
Español		No tirar nunca los aparatos eléctricos junto con los residuos en general!. De conformidad a la Directiva Europea 2002/96/EC relativa a los Residuos de Equipos Eléctricos o Electrónicos (RAEE) y al acuerdo de la legislación nacional, los equipos eléctricos deberán ser recogidos y reciclados respetando el medioambiente. Como propietario del equipo, deberá informar de los sistemas y lugares apropiados para la recogida de los mismos. Aplicar esta Directiva Europea protegerá el medioambiente y su salud!
Français		Ne pas jeter les appareils électriques avec les déchets ordinaires! Conformément à la Directive Européenne 2002/96/EC relative aux Déchets d' Équipements Électriques ou Électroniques (DEEE), et à sa transposition dans la législation nationale, les appareils électriques doivent être collectés à part et être soumis à un recyclage respectueux de l'environnement. En tant que propriétaire de l'équipement, vous devriez vous informer sur les systèmes de collecte approuvés auprès nos représentants locaux. Appliquer cette Directive Européenne améliorera l'environnement et la santé!
Norsk		Kast ikke elektriske artikler sammen med vanlig søppel. I følge det europeiske direktivet for Elektronisk Søppel og Elektriske Artikler 2002/96/EC (Waste Electrical and Electronic Equipment, WEEE) skal alt avfall kildesorteres og leveres på godkjente plasser i følge loven. Godkjente retur plasser gis av lokale myndigheter. Ved å følge det europeiske direktivet bidrar du til å bevare naturen og den menskelige helse.
Nederlandse		Gooi elektrische apparatuur nooit bij gewoon afval! Met inachtneming van de Europese Richtlijn 2002/96/EC met betrekking tot Afval van Elektrische en Elektronische Apparatuur (Waste Electrical and Electronic Equipment, WEEE) en de uitvoering daarvan in overeenstemming met nationaal recht, moet elektrische apparatuur, waarvan de levensduur ten einde loopt, apart worden verzameld en worden ingeleverd bij een recycling bedrijf, dat overeenkomstig de milieuwetgeving opereert. Als eigenaar van de apparatuur moet u informatie inwinnen over goedgekeurde verzamelsystemen van onze vertegenwoordiger ter plaatse. Door het toepassen van deze Europese Richtlijn beschermt u het milieu en ieders gezondheid!
Svenska		Släng inte uttjänt elektrisk utrustning tillsammans med annat avfall! Enligt Europadirektiv 2002/96/EC ang. Uttjänt Elektrisk och Elektronisk Utrustning (Waste Electrical and Electronic Equipment, WEEE) och dess implementering enligt nationella lagar, ska elektrisk utrustning som tjänat ut sorteras separat och lämnas till en miljögodkänd återvinningsstation. Som ägare till utrustningen, bör du skaffa information om godkända återvinningssystem från dina lokala myndigheter. Genom att följa detta Europadirektiv bidrar du till att skydda miljö och hälsa!
Polski		Nie wyrzucać osprzętu elektrycznego razem z normalnymi odpadami! Zgodnie z Dyrektywą Europejską 2002/96/EC dotyczącą Pozbywania się zużytego Sprzętu Elektrycznego i Elektronicznego (Waste Electrical and Electronic Equipment, WEEE) i jej wprowadzeniem w życie zgodnie z międzynarodowym prawem, zużyty sprzęt elektryczny musi być składowany oddzielnie i specjalnie utylizowany. Jako właściciel urządzeń powinieneś otrzymać informacje o zatwierdzonym systemie składowania od naszego lokalnego przedstawiciela. Stosując te wytyczne bedziesz chronił środowisko i zdrowie człowieka!
Suomi		Älä hävitä sähkölaitteita sekajätteiden mukana! Noudatettaessa Euroopan Unionin Direktiiviä 2002/96/EY Sähkölaite- ja Elektroniikkajätteestä (WEEE) ja toteutettaessa sitä sopusoinnussa kansallisen lain kanssa, sähkölaite, joka on tullut elinkaarensa päähän pitää kerätä erilleen ja toimittaa sähkö- ja elektroniikkaromujen keräyspisteeseen. Lisätietoja tämän tuotteen käsittelystä, keräämisestä ja kierrätyksestä saa kunnan ympäristöviranomaisilta. Noudattamalla tätä Euroopan Unionin direktiiviä, autat torjumaan kielteiset ynpäristö- ja terveysvaikutukset!
Português		Não deitar fora o equipamento eléctrico juntamente com o lixo normal! Em conformidade com a directiva Europeia 2002/96/EC relativa a Resíduos Eléctricos e Equipamento Eléctricos (REEE) e de acordo com a legislação nacional, os equipamentos deverão ser recolhidos separadamente e reciclados respeitando o meio ambiente. Como proprietário do equipamento, deverá informar-se dos sistemas e lugares apropriados para a recolha dos mesmos. Ao aplicar esta Directiva Europeia protegerá o meio ambiente e a saúde humana!

12/05

THANKS! For having choosen the QUALITY of the Lincoln Electric products.
- Please Examine Package and Equipment for Damage. Claims for material damaged in shipment must be notified immediately to the dealer.
- For future reference record in the table below your equipment identification information. Model Name, Code & Serial Number can be found on the machine rating plate.

GRAZIE! Per aver scelto la QUALITÀ dei prodotti Lincoln Electric.
- Esamini Imballo ed Equipaggiamento per rilevare eventuali danneggiamenti. Le richieste per materiali danneggiati dal trasporto devono essere immediatamente notificate al rivenditore.
- Per ogni futuro riferimento, compilare la tabella sottostante con le informazioni di identificazione equipaggiamento. Modello, Codice (Code) e Matricola (Serial Number) sono reperibili sulla targa dati della macchina.

VIELEN DANK! Dass Sie sich für ein QUALITÄTSPRODUKT von Lincoln Electric entschieden haben.
- Bitte überprüfen Sie die Verpackung und den Inhalt auf Beschädigungen. Transportschäden müssen sofort dem Händler gemeldet werden.
- Damit Sie Ihre Gerätedaten im Bedarfsfall schnell zur Hand haben, tragen Sie diese in die untenstehende Tabelle ein. Typenbezeichnung, Code- und Seriennummer finden Sie auf dem Typenschild Ihres Gerätes.

GRACIAS! Por haber escogido los productos de CALIDAD Lincoln Electric.
- Por favor, examine que el embalaje y el equipo no tengan daños. La reclamación del material dañado en el transporte debe ser notificada inmediatamente al proveedor.
- Para un futuro, a continuación encontrará la información que identifica a su equipo. Modelo, Code y Número de Serie los cuales pueden ser localizados en la placa de características de su equipo.

MERCI! Pour avoir choisi la QUALITÉ Lincoln Electric.
- Vérifiez que ni l'équipement ni son emballage ne sont endommagés. Toute réclamation pour matériel endommagé doit être immédiatement notifiée à votre revendeur.
- Notez ci-dessous toutes les informations nécessaires à l'identification de votre équipement. Le nom du Modèle ainsi que les numéros de Code et Série figurent sur la plaque signalétique de la machine.

TAKK! For at du har valgt et KVALITETSPRODUKT fra Lincoln Electric.
- Kontroller emballsjen og produktet for feil eller skader. Eventuelle feil eller transportskader må umiddelbart rapporteres dit du har kjøpt din maskin.
- For fremtidig referanse og for garantier og service, fyll ut den tekniske informasjonen nedenfor i dette avsnittet. Modell navn, Kode & Serie nummer finner du på den tekniske platen på maskinen.

BEDANKT! Dat u gekozen heeft voor de KWALITEITSPRODUCTEN van Lincoln Electric.
- Controleert u de verpakking en apparatuur op beschadiging. Claims over transportschade moeten direct aan de dealer of aan Lincoln electric gemeld worden.
- Voor referentie in de toekomst is het verstandig hieronder u machinegegevens over te nemen. Model Naam, Code & Serienummer staan op het typeplaatje van de machine.

TACK! För att ni har valt en KVALITETSPRODUKT från Lincoln Electric.
- Vänligen kontrollera förpackning och utrustning m.a.p. skador. Transportskador måste omedelbart anmälas till återförsäljaren eller transportören.
- Notera informationen om er utrustnings identitet i tabellen nedan. Modellbeteckning, code- och serienummer hittar ni på maskinens märkplåt.

DZIĘKUJEMY! Za docenienie JASKOŚCI produktów Lincoln Electric.
- Proszę sprawdzić czy opakownie i sprzęt nie są uszkodzone. Reklamacje uszkodzeń powstałych podczas transportu muszą być natychmiast zgłoszone do dostawcy (dystrybutora).
- Dla ułatwienia prosimy o zapisanie na tej stronie danych identyfikacyjnych wyrobów. Nazwa modelu, Kod i Numer Seryjny, które możecie Państwo znaleźć na tabliczce znamionowej wyrobu.

KIITOS! Kiitos, että olet valinnut Lincoln Electric LAATU tuotteita.
- Tarkista pakkaus ja tuotteet vaurioiden varalta. Vaateet mahdollisista kuljetusvaurioista on ilmoitettava välittömästi jälleenmyyjälle.
- Tulevaisuutta varten täytä alla oleva lomake laitteen tunnistusta varten. Mallin, Koodin ja Sarjanumeron voit löytää konekilvestä.

OBRIGADO! Por ter escolhido os produtos de QUALIDADE da Lincoln Electric.
- Por favor, examine a embalagem e o equipamento para que não tenham danos. A reclamação de danos do material no transporte deverá ser notificada imediatamente ao revendedor.
- Para futura referência, registe abaixo a informação de identificação do equipamento. Modelo, Código e Número de Série podem ser encontrados na chapa de características do equipamento.

Model Name, Modello, Typenbezeichnung, Modelo, Nom du modèle, Modell navn, Model Naam, Modellbeteckning, Nazwa modelu, Mallinimi, Modelo:

……

Code & Serial number, Code (codice) e Matricola, Code- und Seriennummer, Code y Número de Serie, Numéros de Code et Série, Kode & Serie nummer, Code en Serienummer, Code- och Serienummer, Kod i numer Seryjny, Koodi ja Sarjanumero, Código e Número de Série:

…… | ……

Date & Where Purchased, Data e Luogo d'acquisto, Kaufdatum und Händler, Fecha y Nombre del Proveedor, Lieu et Date d'acquisition, Kjøps dato og Sted, Datum en Plaats eerste aankoop, Inköpsdatum och Inköpsställe, Data i Miejsce zakupu, Päiväys ja Ostopaikka, Data e Local de Compra:

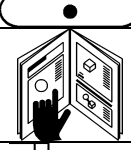
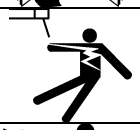
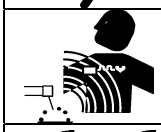
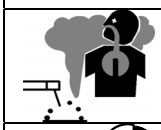
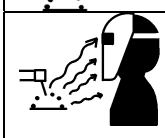
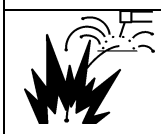
…… | ……

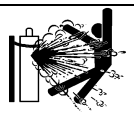
Safety

11/04

WARNING

This equipment must be used by qualified personnel. Be sure that all installation, operation, maintenance and repair procedures are performed only by qualified person. 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.

	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.
	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.
	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.
	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.
	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.
	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 shall consult their physician before operating this equipment.
	CE COMPLIANCE: This equipment complies with the European Community Directives.
	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.
	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.
	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.
	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.
	SAFETY MARK: This equipment is suitable for supplying power for welding operations carried out in an environment with increased hazard of electric shock.

	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.

Installation and Operator Instructions

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

Location and Environment

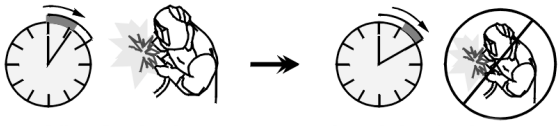
This machine will operate in harsh environments. However, it is important that simple preventative measures are followed to assure long life and reliable operation.

- Do not place or operate this machine on a surface with an incline greater than 15° from horizontal.
- Do not use this machine for pipe thawing.
- 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 IP23. 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.

Duty cycle

The duty cycle of a welding machine is the percentage of time in a 10 minute cycle at which the welder can operate the machine at rated welding current.

Example: 60% duty cycle:



Welding for 6 minutes. Break for 4 minutes.

Refer to the Technical Specification section for more information about the machine rated duty cycles.

Input Supply Connection

Check the input voltage, phase, and frequency of the power source that will be connected to this wire feeder. The allowable input voltage of the power source is indicated on the rating plate of the wire feeder. Verify the connection of grounding wires from the power source to the input source.

Gas Connection

A gas cylinder must to be installed with a proper flow regulator. Once a gas cylinder with a flow regulator has been securely installed, connect the gas hose from the regulator to the machine gas inlet connector. Refer to point 8 of the images below. The wire feeder supports all suitable shielding gases including carbon dioxide, argon and helium at a maximum pressure of 5,0 bar.

Output Connections

Refer to item 3 of the images below.

Controls and Operational Features

1. Water Connectors: Connections for water cooled torches.

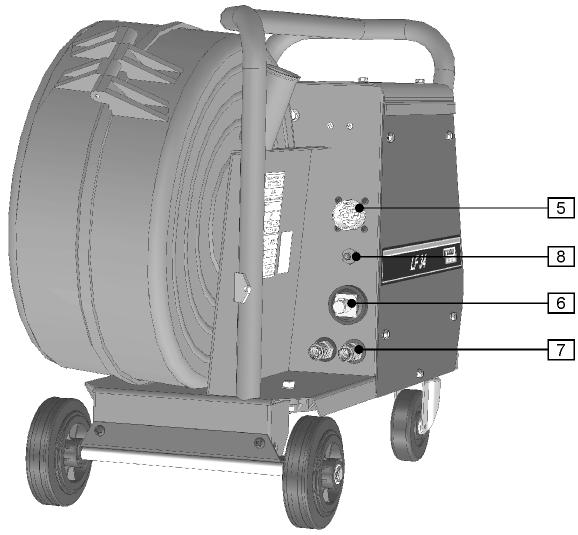
   Warm water from torch. 

   Cool water to torch. 

2. Remote Control Receptacle: If a remote control is used, it will be connected to the remote receptacle. 

3. Euroconnector: Connect welding torches.

4. Digital Display Interface: Control of welding parameters including Wire Feed Speed, Voltage, and Memory Recall. See sections A-G for further details.

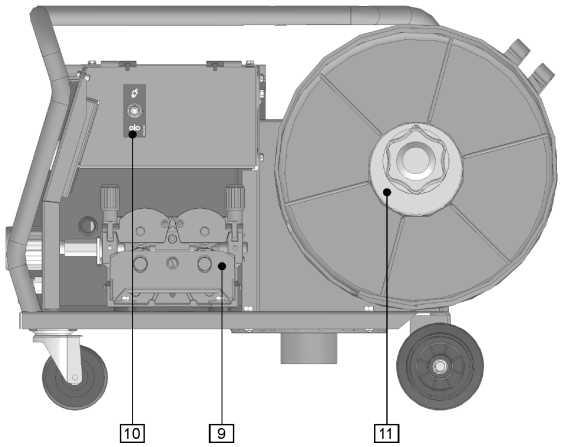


5. Amphenol Connection: 8-Pin connection to power source.

6. Fast-Mate Adapter: Input power connection.

7. Water Connectors: If water cooled torches are used, connect water lines from water cooler here. Refer to torch and water cooler guidelines for recommended cooling liquid and flow rates.

8. Gas Connector: Connection for gas line.



9. Wire Drive: 4-Roll wire drive compatible with 37mm drive rolls.

10. Cold Inch / Gas Purge Control: This switch allows gas flow or wire feeding without turning on output voltage.

11. Wire Spool Support: Maximum 15kg spools. Accepts plastic, steel and fiber spools onto 51mm spindle. Also accepts Readi-Reel® type spools onto included spindle adapter.

⚠ WARNING

The Linc Feed wire feeders must be used with the door completely closed during welding.

Maintenance

⚠ WARNING

For any maintenance or repair operations it is recommended to contact the nearest Technical Service Center or Lincoln Electric. Maintenance or repairs performed by unauthorized service centers or personnel will null and void the manufacturer's warranty.

The frequency of the maintenance operations may vary in accordance with the working environment where the machine is placed.

Any noticeable damage should be reported immediately.

Routine maintenance

- Check condition of insulation and connections of the work cables and input power supply cable.
- Remove the spatters from the welding gun nozzle. Spatters could interfere with the shielding gas flow to the arc.
- Check the welding gun condition: replace it, if necessary.
- Check condition and operation of the cooling fan. Keep clean its airflow slots.

Periodic maintenance

Perform the routine maintenance and, in addition:

- Keep the machine clean. Using a dry (and low pressure) airflow, remove the dust from the external case and from the cabinet inside.
- Check condition of all connections and change if necessary.
- Check and tighten all screws.

⚠ WARNING

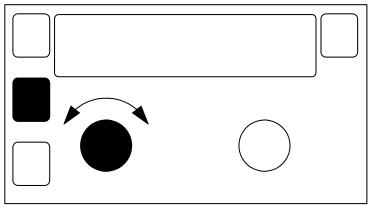
Mains supply network must be disconnected from the machine before each maintenance and service. After each repair, perform proper tests to ensure safety.

A. Non Synergic Welding Mode (CV Mode)

Description:
During Non Synergic (CV Mode) welding, the pre-setting of the welding parameters (Wire Feed Speed and Voltage) are independent from one another.

Set-Up:
LF 34: This machine is always in Non-Synergic Welding Mode.

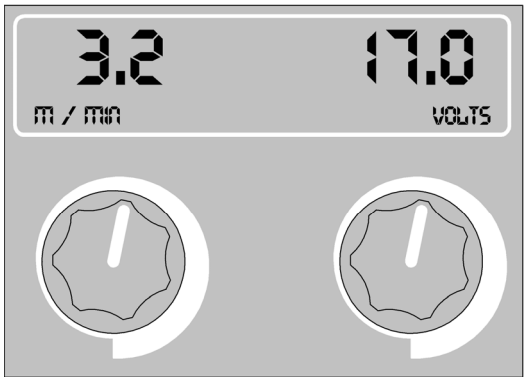
LF 35: While pressing the **Prog** button, rotate the left knob until **"NON SYNERGIC"** appears on the display.



Before Welding (Pre-Set):

Pre-Set Wire Feed Speed
(Meters/Minute)

Adjust with left knob.

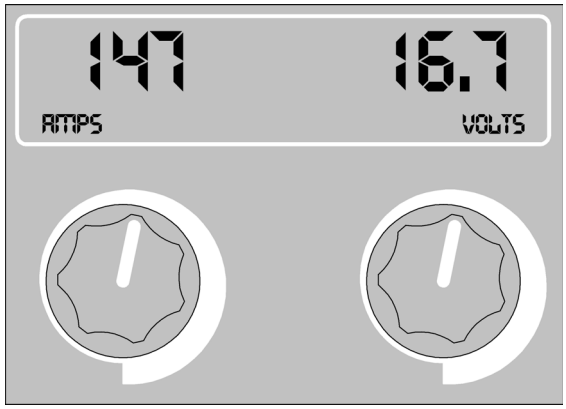


Pre-Set Welding Voltage
(V)

Adjust with right knob.

During Welding (Actual):
These actual values are displayed for **5 seconds** after the weld has stopped. Press **ENTER (LF 35 Only)** to recall these values.

Actual Welding Current
(A)



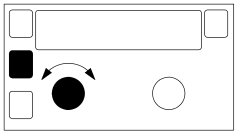
Actual Welding Voltage
(V)

B. Synergic Welding Mode (LF 35 only)

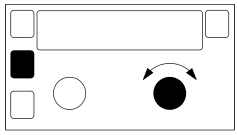
Description:
During Synergic welding, the wire feeder determines the optimal voltage characteristics based upon the selected wire type and diameter. Only the wire feed speed needs to be regulated by the user. The user can then adjust the height of the arc using the right knob. Once the arc height has been established, it will remain at the same level regardless of any variation in the wire feed speed.

Set-Up:

While pressing the **Prog** button, rotate the **Left** knob and select from the following:



While pressing the **Prog** button, rotate the **Right** knob and select the appropriate wire diameter:

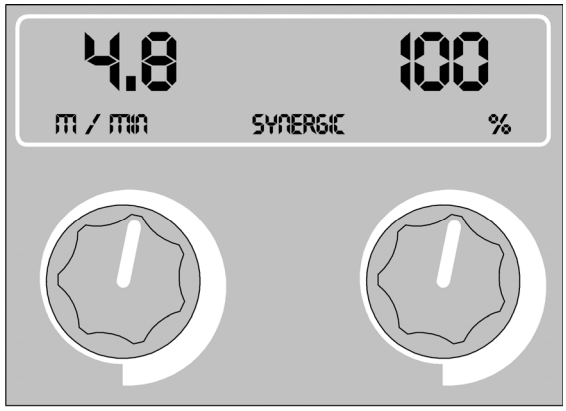


Steel 80/20	→	0.8, 1.0, 1.2 mm
Stainless 98/2	→	0.8, 1.0, 1.2 mm
Metal Cored 98/2	→	1.2, 1.6 mm
Flux Cored 80/20	→	1.2, 1.6 mm
Flux Cored CO2	→	1.2, 1.6 mm
AlMg 100% Arg	→	1.2, 1.6 mm
AlSi 100% Arg	→	1.2, 1.6 mm
Innershield NR-211MP	→	1.7, 2.0 mm
Innershield NR-232	→	1.8, 2.0 mm
Innershield NR-400	→	2.0 mm
Innershield NS-3M	→	2.0 mm

Before welding (Pre-Set):

Pre-Set Wire Feed Speed
(Meters/Minute)

Adjust with left knob.

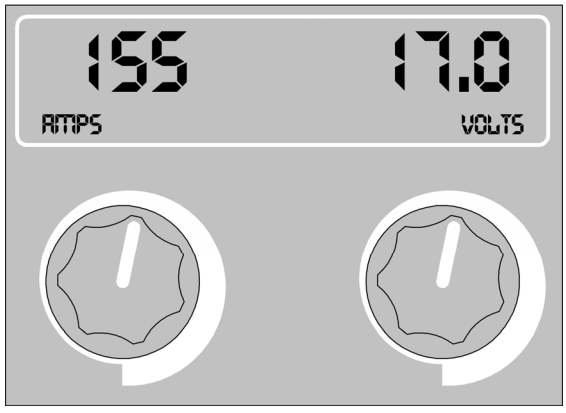


Pre-Set Relative Arc Height

100% is the baseline. This value is often referred to as **Trim**. Adjust with the **Right** knob to increase/decrease arc height.

During welding (Actual):
These actual values are displayed for **5 seconds** after the weld has stopped. Press **ENTER (LF 35 Only)** to recall these values.

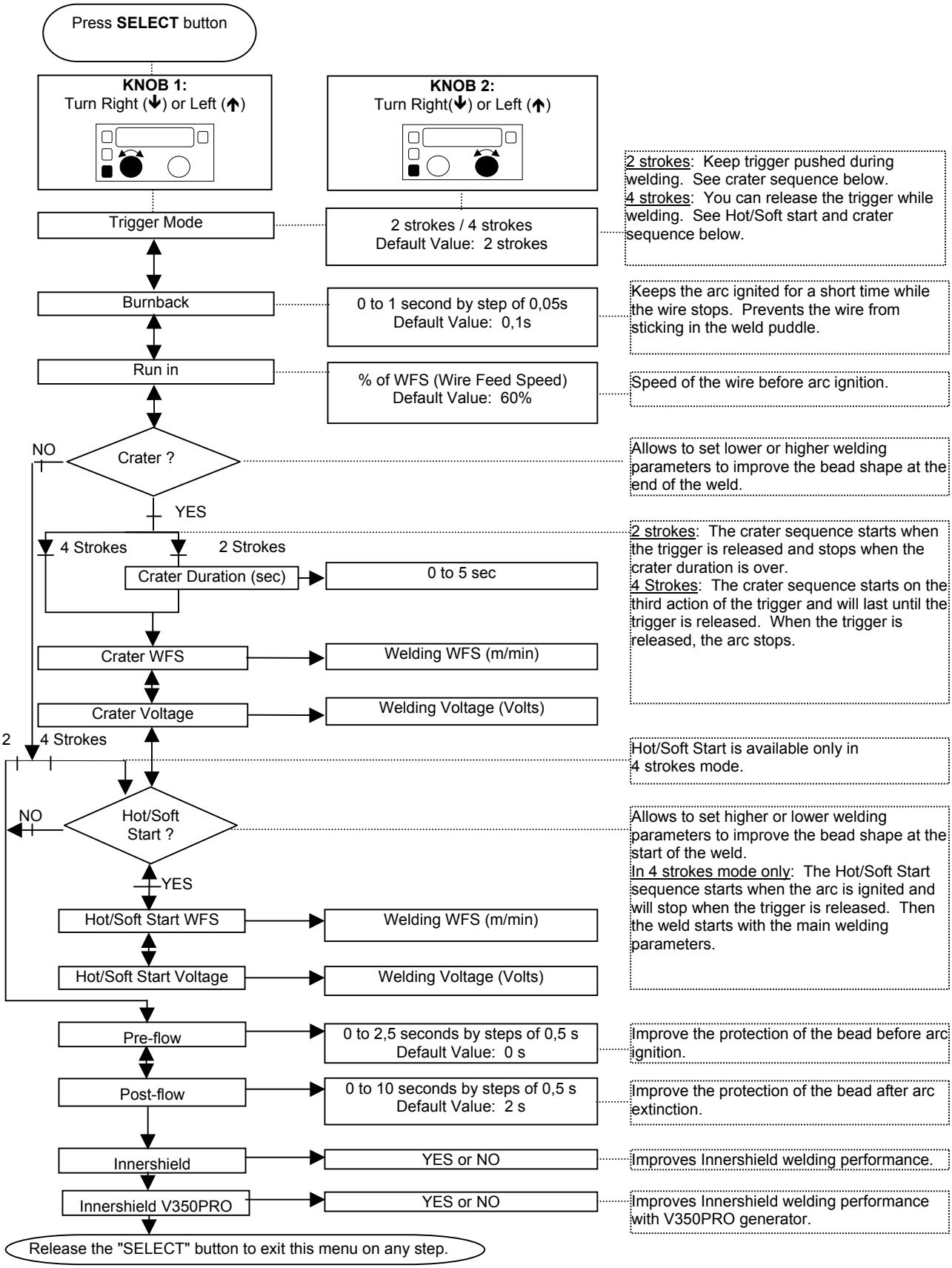
Actual Welding Current
(A)



Actual Welding Voltage
(V)

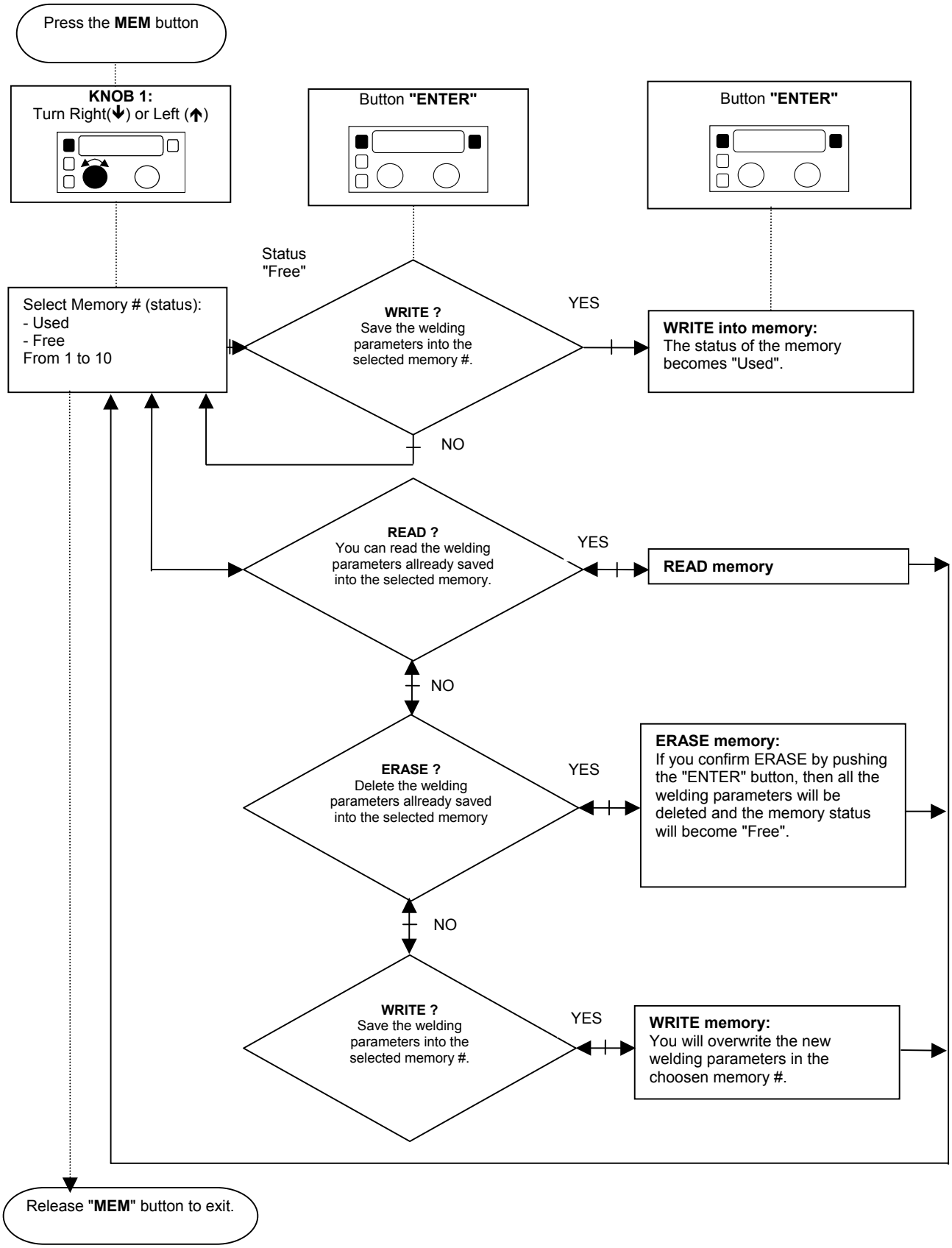
C. Selecting Welding Parameter

Description:
The following options can be regulated using the **Select** button and the procedure below: 2/4 Step Trigger, Burnback, Run-In, Crater, Hot/Soft Start, Pre-Flow and Post-Flow.



D. Memory Function - Saving, Reading and Erasing (LF 35 Only)

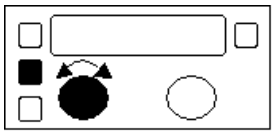
Description:
The Memory function can be used to recall up to 10 specific sets of welding parameters defined by the user. Once the welding parameters have been defined, the following steps can be taken to write these parameters to memory.



E. Memory Function - Recalling Memory (LF 35 Only)

Description:
The saved Memory configurations can be recalled.

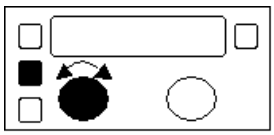
Set-Up:
While pressing the **Prog** button, rotate the left knob until **"RECALL MEMORY"** appears on the display.



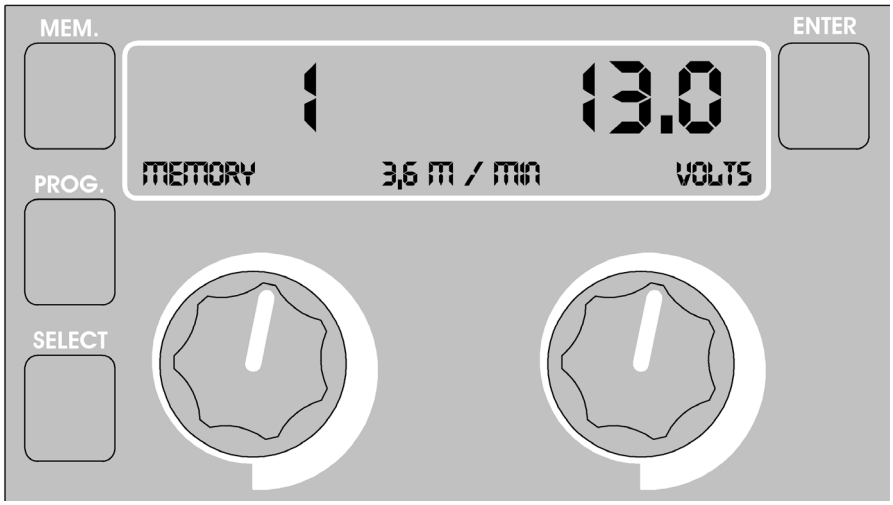
Selection:
Release the **Prog** button, then rotate the left knob to scroll through the saved memory configurations. Only the memory locations that have been used will be available. Once selected, begin welding.

Welding:
While welding in Memory Mode, the **Non-Synergic Voltage** or the **Synergic Trim** values can be varied approximately 5% using the right knob. This allows for fine adjustment of the welding characteristics.

To Exit:
To return to Non-Synergic or Synergic welding, press the **Prog** button and rotate the left knob until the proper parameter appears. See sections A and B for further details.



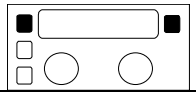
Memory Screen Example:



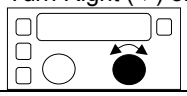
F. Memory Function - Locking / Unlocking Memory (LF 35 Only)

Description:
The Memory values can be locked / unlocked with a 4-digit code.

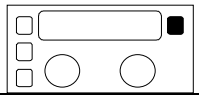
Press **Mem** & **Enter**



Knob 2: Turn Right (🡻) or Left (🡹)



Button **Enter**



Lock
Or
Unlock

NO ⇨

YES ⇨

Confirm **NO** to Exit this menu

Confirm **YES** to Enter the menu:
Lock
Or
Unlock

⇩

Select 1st Digit of your code

⇩

Confirm 1st Digit

⇩

Select 2nd Digit of your code

⇩

Confirm 2nd Digit

⇩

Select 3rd Digit of your code

⇩

Confirm 3rd Digit

⇩

Select 4th Digit of your code

⇩

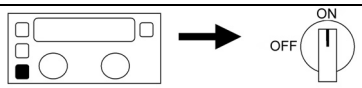
Confirm 4th Digit

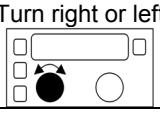
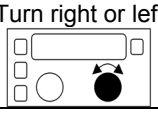
⇩

Exit to:
Locked Memory Mode
Or
Unlocked Memory Mode

G. Configuration Menu

Description:
This hidden menu allows you to change the Machine Configuration.

To enter the set-up menu, press the **Select** pushbutton and at the same time **Switch ON** the machine.	

Knob 1: Turn right or left 	**Knob 2:** Turn right or left 			
Choice of the configuration	**Choice**			**Function**
• LANGUAGE	English	Spanish	Dutch	Select the language you want to use.
	Italian	French	Swedish	
	German	Norwegian	Polish	
• ACCELERATION	From 1 to 3 Standard value: 2			Value used to determine the acceleration of the wire between the "Cold inch WFS" and the "Welding WFS".
• PRODUCT TYPE	Not used			Shows Product Type: • "LF 37" for LF 34 Product. • "LF 38" for LF 35 Product.
• SN	Not used			Shows Product Serial Number.
• MAINTENANCE	YES / NO			Answer NO or contact Lincoln representative.
• CALIBRATION	YES / NO			Answer NO.
• PROGRAM LEVEL	Not used			Shows Program level of the Wire Feeder.
• RESET	YES / NO			If YES, you will: • Erase all the memories and their status will become "empty". • Unlock the Recall memory mode if it was locked. • Restore all the parameters to their "DEFAULT" values.
• EXIT	YES / NO			If YES, Press Select to Exit and save the changes above.

Error messages:

Message	Description	Misadjustment(s)	Corrective Action
Unstable Welding Voltage	The generator is unable to deliver the pre-set value (voltage) requested by the wire feeder. It can appears: 1. During welding:	• Check that welding pre-set parameters (WFS and Voltage) matches the application (wire diameter, thickness, gas…).	• Adjust parameters.
		• Check the polarity switch position of the generator correspond to the polarity of the wire feeder connection.	• Correct polarity switch position and wire feeder polarity connection.
		• Check the remote control switch of the generator set on "Remote" position.	• Select "remote" position.
		• Check if pre-set parameters are not above the specified limit of the generator.	• Reduce the parameters or use an higher rating generator.
Wire Feed Jam	Motor is at maximum power and is not able to maintain the pre-set WFS value.	• Verify wire can move freely in cable.	• Clean or replace the liner.
		• Verify spool brake is not set too high.	• Adjust spool brake.

Electromagnetic Compatibility (EMC)

11/04

This machine has been designed in accordance with all relevant directives and standards. 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.

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.

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. Equipment for calibration and measurement.
- Personal medical devices like pacemakers and hearing aids.
- 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 if 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.

Technical Specifications

<table>
<tr><th colspan="2">INPUT VOLTAGE</th><th colspan="2">WIRE FEED SPEED</th></tr>
<tr><td colspan="2">42 Vac</td><td colspan="2">1.5-20 m/min</td></tr>
<tr><th colspan="4">RATED OUTPUT AT 40°C</th></tr>
<tr><td colspan="2">Duty Cycle
(based on a 10 min. period)

100%
60%</td><td colspan="2">Output Current

385 A
500 A</td></tr>
<tr><th colspan="4">OUTPUT RANGE</th></tr>
<tr><td colspan="2">Welding Current Range
5-500 A</td><td colspan="2">Maximum Open Circuit Voltage
113 Vdc or Vac peak</td></tr>
<tr><th colspan="4">WIRE SIZES (mm)</th></tr>
<tr><td>Solid wires
0.6 to 1.6</td><td>Cored wires
1.2 to 2.4</td><td colspan="2">Aluminium wires
1.0 to 1.6</td></tr>
<tr><th colspan="4">PHYSICAL DIMENSIONS</th></tr>
<tr><td>Height
460 mm</td><td>Width
300 mm</td><td>Length
636 mm</td><td>Weight
17 Kg</td></tr>
<tr><td colspan="2">Operating Temperature
–10°C to +40°C</td><td colspan="2">Storage Temperature
-25°C to +55°C</td></tr>
</table>