CITOSTEEL 355S, 425S, 505S

OPERATOR'S MANUAL



ENGLISH





ANI/CI For having changes the OLIALITY of the Lincoln Floating products

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.

Model Name:					
Code & Ser	rial number:				
	1				
Date & Where Purchased:					

ENGLISH INDEX

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Technical Specifications

CITOSTEEL 35SS W000404457		NAME				INDEX			
Input Voltage U1		CITOSTEEL 3555	S		W000404457				
Input Voltage U1		CITOSTEEL 425	S		W000404458				
Input Voltage U1									
A		T		INF					
Input Power at Rated Cycle		Input Voltage	⊎ U1		EMC Class	i		Frequency	
Input Power at Rated Cycle		400) (450) (.						50/0011	
Input Power at Rated Cycle		400V ± 15% 3-	pnase		А			50/60HZ	
355S	5058								
355S		Input Power at Rat	ted Cycle	Inr	out Amperes	I _{1may}		PF	
19 kVA @ 100% Duty Cycle (40°C) 27A 0,92	2550			,		· iiiax			
Sobs 23 kVA @ 60% Duty Cycle (40°C) SAA 0,94	3555	(40°C)			21A			0,90	
Copen Circuit Voltage	425S	(40°C)			27A			0,92	
Company Comp	505S		uty Cycle		34A			0,94	
Comparison Control C		(.5 3)		RATED	OUTPUT				
STATE Company Compan				(based o	n a 10 min.	Output	Current	Output Voltage	
100% 300A 29,0Vdc				5	60%	35	0A	31,5Vdc	
Sobs			GMAW	6	60%	34	0A	31,0Vdc	
Solution				10	00%	30	0A	29,0Vdc	
U _{0rms} = 54Vdc		U _{0peak} = 54Vdc						·	
SMAW	355S	Ho = 54\/dc	FCAW					· · · · · · · · · · · · · · · · · · ·	
SMAW 60% 320A 32,8Vdc 100% 275A 31,0Vdc 100% 420A 35,0Vdc FCAW 100% 420A 36,8Vdc FCAW 100% 420A 36,8Vdc FCAW 100% 420A 36,8Vdc SMAW 100% 420A 36,8Vdc GMAW 100% 420A 35,0Vdc GMAW 100% 420A 35,0Vdc GMAW 100% 420A 35,0Vdc GMAW 100% 420A 35,0Vdc SMAW 100% 420A 35,0Vdc SMAW 100% 420A 35,0Vdc SMAW 100% 420A 35,0Vdc SMAW 100% 420A 36,8Vdc SMAW FCAW SMAW 355S 20A+350A 20A+350A 10A+350A 425S 20A+420A 20A+20A 10A+420A 505S 20A+500A 20A+500A 10A+420A SMAW FCAW SMAW FCAW SMAW FCAW SMAW SMAW SMAW S		Comis – 54 v do						· · · · · · · · · · · · · · · · · · ·	
100% 275A 31,0Vdc 100% 420A 35,0Vdc FCAW 100% 420A 35,0Vdc FCAW 100% 420A 35,0Vdc FCAW 100% 420A 36,8Vdc SMAW 100% 420A 36,8Vdc GMAW 100% 420A 35,0Vdc SMAW 100% 420A 35,0Vdc SMAW 100% 420A 35,0Vdc 100% 420A 35,0Vdc 100% 420A 36,8Vdc SMAW 100% 420A			SMAW					· · · · · · · · · · · · · · · · · · ·	
U_0peak = 60Vdc								· · · · · · · · · · · · · · · · · · ·	
The standard of the standard			CNANA					· '	
SMAW	4259	U _{0peak} = 60Vdc							
Soft Company Company	7230	U _{0rms} = 54Vdc							
Tools								,	
The state of th			GMAW					· · · · · · · · · · · · · · · · · · ·	
Uorms = 54Vdc 100% 420A 35,0Vdc SMAW 60% 480A 39,2Vdc WELDING CURRENT RANGE GMAW FCAW SMAW 355S 20A÷350A 10A÷350A 425S 20A÷420A 10A÷420A 505S 20A÷500A 10A÷480A WELDING VOLTAGE REGULATION RANGE GMAW FCAW 355S 15V÷ 33,5V 425S 15V÷ 37V 15V÷ 37V	5050	U _{0peak} = 60Vdc	50.004	6	60%	50	0A	39,0Vdc	
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100% 420A 36,8Vdc			SMAM	6	60%	48	0A	39,2Vdc	
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WELDING VOLTAGE REGULATION RANGE GMAW FCAW 355S 15V÷ 33,5V 15V÷ 33,5V 425S 15V ÷ 37V 15V ÷ 37V									
GMAW FCAW 355S 15V÷ 33,5V 15V÷ 33,5V 425S 15V ÷ 37V 15V ÷ 37V	3038								
355S 15V÷ 33,5V 15V÷ 33,5V 425S 15V ÷ 37V 15V ÷ 37V				JEIAGE	LOOLATIO	MANGE	FC.A	W	
425S 15V ÷ 37V 15V ÷ 37V	355S								
505S 15V ÷ 41V 15V ÷ 41V	5058		15V ÷ 41V						

RECOMMENDED INPUT CABLE AND FUSE SIZES								
	Fuse Type:	Time-Delay o	or Circuit Breaker	Type D	Р	Power Lead		
		40	0V					
355S		25	5A		4 Con	4 Conductor, 2,5mm ²		
425S		32	2A		4 Con	4 Conductor, 4,0 mm ²		
505S		32	2A		4 Conductor, 4,0 mm ²			
			DIMEN	NSION				
	We	eight	Height		Width	Length		
355S	68	68kg						
425S	78	78kg 932 mm			560 mm	925 mm		
505S	79	9kg						
OTHERS								
Protection	Protection Rating Operating Humidity (t=20°C) O			Opera	ating Temperature	Storage Temperature		
IP23	\leq 90 % from -10 °C to				-10 °C to +40 °C	from -25 °C to +55 °C		

ECO design information

The equipment has been designed in order to be compliant with the Directive 2009/125/EC and the Regulation 2019/1784/EU.

Efficiency and idle power consumption:

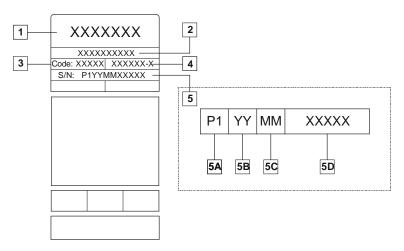
Index	Name	Efficiency when max power consumption / Idle power consumption	Equivalent model	
W000404457	CITOSTEEL 355S	86,7% / 29W	No equivalent model	
W000404458	CITOSTEEL 425S	88,7% / 29W	No equivalent model	
W000404459	CITOSTEEL 505S	87,9% / 29W	No equivalent model	

Idle state occurs under the condition specified in below table

IDLE STATE					
Condition	Presence				
MIG mode	X				
TIG mode					
STICK mode					
After 30 minutes of non-working					
Fan off	Х				

The value of efficiency and consumption in idle state have been measured by method and conditions defined in the product standard EN 60974-1:20XX.

Manufacturer's name, product name, code number, product number, serial number and date of production can be read from rating plate.



Where:

- 1- Manufacturer name and address
- 2- Product name
- 3- Code number
- 4- Product number
- 5- Serial number
 - **5A-** country of production
 - 5B- year of production
 - **5C-** month of production
 - 5D- progressive number different for each machine

Typical gas usage for MIG/MAG equipment:

Wire		DC electrode positive		Wire Feeding		Gas flow	
Material type	diameter [mm]	Current [A]	Voltage [V]	[m/min]	Shielding Gas	[l/min]	
Carbon, low alloy steel	0,9 ÷ 1,1	95 ÷ 200	18 ÷ 22	3,5 – 6,5	Ar 75%, CO ₂ 25%	12	
Aluminium	0,8 ÷ 1,6	90 ÷ 240	18 ÷ 26	5,5 – 9,5	Argon	14 ÷ 19	
Austenic stainless steel	0,8 ÷ 1,6	85 ÷ 300	21 ÷ 28	3 - 7	Ar 98%, O ₂ 2% / He 90%, Ar 7,5% CO ₂ 2,5%	14 ÷ 16	
Copper alloy	0,9 ÷ 1,6	175 ÷ 385	23 ÷ 26	6 - 11	Argon	12 ÷ 16	
Magnesium	1,6 ÷ 2,4	70 ÷ 335	16 ÷ 26	4 - 15	Argon	24 ÷ 28	

Tig Process:

In TIG welding process, gas usage depends on cross-sectional area of the nozzle. For comonnly used torches:

Helium: 14-24 l/min. Argon: 7-16 l/min.

Notice: Excessive flow rates causes turbulence in the gas stream which may aspirate atmospheric contamination into the welding pool.

Notice: A cross wind or draft moving can disrupt the shielding gas coverage, in the interest of saving of protective gas use screen to block air flow.



End of life

At end of life of product, it has to be disposal for recycling in accordance with Directive 2012/19/EU (WEEE), information about the dismantling of product and Critical Raw Material (CRM) present in the product, can be found at https://www.lincolnelectric.com/en-gb/support/Pages/operator-manuals-eu.aspx.

Electromagnetic Compatibility (EMC)

01/11

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. 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.

N WARNING

Provided that the public low voltage system impedance at the point of common coupling is lower than:

- 105 mΩ for the CITOSTEEL 355S
- 25 mΩ for the CITOSTEEL 425S
- 35 mΩ for the CITOSTEEL 505S.

This equipment is compliant with IEC 61000-3-11 and IEC 61000-3-12 and can be connected to public lowvoltage systems. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the system impedance complies with the impedance restrictions.

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.

∮ WARNING

The Class A equipment is not intended for use in residential locations where the electrical power is provided by the public low-voltage supply system. There can be potential difficulties in ensuring electromagnetic compatibility in those locations, due to conducted as well as radio-frequency disturbances.





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.



ARTIFICIAL OPTICAL RADIATION: According with the requirements in 2006/25/EC Directive and EN 12198 Standard, the equipment is a category 2. It makes mandatory the adoption of Personal Protective Equipment (PPE) having filter with a protection degree up to a maximum of 15, as required by EN169 Standard.



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.



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.



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

The manufacturer reserves the right to make changes and/or improvements in design without upgrade at the same time the operator's manual.

Intoduction

CITOSTEEL 355S, 425S, 505S inverter sources have to be connected with wire feeders WF 52D and WF 56D. Signal from the power source will be displayed on wire feeders user interface. For communication, inverter source-wire feeder is used CAN protocol.

Inverter source-wire feed configuration allows the welding:

- GMAW (MIG/MAG);
- FCAW;
- SMAW (MMA).

CITOSTEEL 355S, 425S, 505S work with the water cooler COOL ARC® 26.

The complete packaging includes the following items:

- Inverter source;
- USB with Operator's Manual;
- Work lead 3m;
- Slow-blow fuse 2A (2 units);
- Gas hose -2m;
- Chain.

Recommended equipment, which can be bought by the user, was mentioned in the chapter "Accessories Suggested".

Installation and Operator Instructions

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

Location and Environment

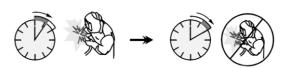
This machine can be operate in harsh environment. However, it is important to use simple preventative measures, which provide long life and reliable operation.

- Do not place or operate this machine on a surface with an incline higher than 15° from horizontal.
- Do not use this machine for pipe thawing.
- This machine must be located in a place 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.
- Keep awaz from 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 a 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 higher than 40°C.

Duty cycle and Overheating

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.

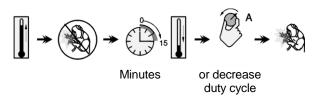
Example: 60% duty cycle



Welding for 6 minutes.

Break for 4 minutes.

Excessive extension of the duty cycle will cause the thermal protection circuit to activate.



Input Supply Connection



Only a qualified electrician can connect the welding machine to the supply network. Installation the outlet plug to power lead and connecting the welding machine had to be made in accordance with the appropriate National Electrical Code and local regulations.

Check the input voltage, phases, and frequency supplied to this machine before turning it on. Verify the connection of grounding wires from the machine to the input power source. **CITOSTEEL 355S, 425S, 505S** can only be connected to a mating grounded receptacle.

Input voltages is 3x400V 50/60Hz. For more information about input supply please refer to the technical specification section of this manual and to the rating plate of the machine.

Make sure that the amount of mains power available from the input supply is adequate for normal operation of the machine. The type of protection and cable sizes are indicated in the technical specification section of this manual.

N WARNING

The welding machine can be supplied from a power generator of output power at least 30% larger than input power of the welding machine.

See "Technical Specifications" chapter.



In case of powering welder from a generator make sure to turn off welding machine first, before generator is shut down, in order to prevent damage to welding machine!

Output Connections

Refer to points [2], [3] and [4] of the figures below.

Controls and Operational Features

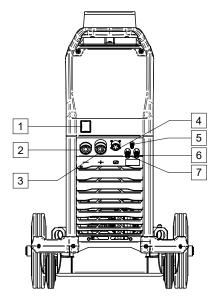


Figure 1.

- 1. Power Switch ON/OFF (I/O): Controls the input power. Make sure the power source is properly connected to the mains supply before turning power on ("I").
- 2. Negative Output Socket for the Welding Circuit: Depending on the configuration of power source, for connecting a work lead, the electrode holder with lead or the source/wire feeder welding cable.
- 3. Positive Output Socket for the Welding Circuit: Depending on the configuration of power source, for connecting a work lead, the electrode holder with lead or the source/wire feeder welding cable.



- Control Receptacle: 5 pins receptacle for wire feeder or remote controller connection. To communication wire feeder or remote controller with power source is used CAN protocol.
- 5. <u>Gas Connector:</u> For connection a gas hose from interconnecting cable.
- Quick Connect Coupling: Coolant inlet (takes warm coolant from torch/gun).



7. <u>Quick Connect Coupling:</u> Coolant outlet (supplies cool coolant to the torch/gun).



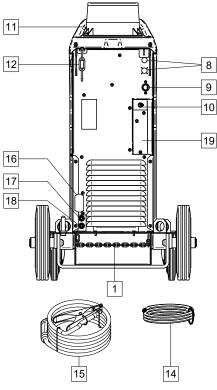


Figure 2.

- 8. <u>Supply Plug:</u> for gas heater kit (see "Accessories Suggested" chapter).
- Power Lead (5m): Connect the supply plug to the existing input cable that is rated for the machine as indicated in this manual, and conforms to all applicable standards. This connection shall be performed by a qualified person only.
- 10. <u>Gas Connector:</u> For connection a gas hose from cylinder.
- 11. Swivel bracket: For mounting the wire feeder.
- 12. Top Chain: To protect gas bottle.
- 13. Bottom chain: For properly securing the gas cylinder.

! WARNING

Not using both chains at the same time to secure the gas cylinder may result in damage to the cylinder, the device and personal injury.

- 14. <u>Gas hose:</u> For connection between the cylinder and machine.
- 15. Mass welding cable.
- Cover bracket: To intall COOL ARC® 26 power supply and control cable (see "Accessories Suggested" chapter).

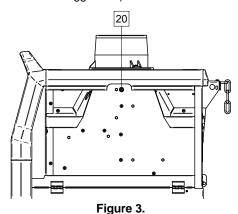
17. Quick Connect Coupling: Coolant inlet (supplies cool coolant to the torch/gun).



18. Quick Connect Coupling: Coolant outlet (takes warm coolant from torch/gun).



19. <u>Cover bracket:</u> To install the welding and control sockets on the rear panel of the device (see chapter "Accessories Suggested") to connect the wire feeder.



20. Fuse F1: Use the 2A/400V (6,3x32mm) low blow fuse.

Welding Cables Connection

Insert the plug of the work lead into the socket [2]. The other end of this lead connect to the work piece with the work clamp.

Connect the wire feeder to the power source:

- Insert the positive welding cable into the output socket [3].
- Insert the wire feeder control cable into the socket [4] (see "Accessories Suggested" chapter).

Use the possible shortest cable lengths.

Water Cooler Connection

CITOSTEEL 355S, 425S, 505S work with the water cooler COOL ARC® 26 (see "Accessories Suggested" chapter).



! WARNING

Read the cooler manual before connecting it to the power source.

The **COOL ARC® 26** is supplied by welding power source using 10-PIN socket.

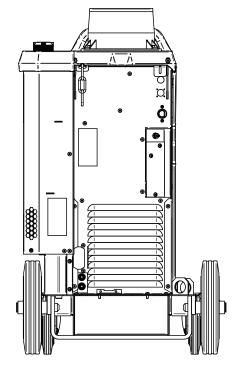


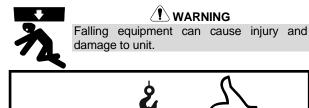
Figure 4.

Machine and Circuit Protection

Power Source is protected against overheating, overload and accidental short-circuits.

If the machine is overheated, the thermal protection circuit will decrease the output current to 0. This information will be shown by wire feeder user interface. Please refer to wire feeder user manual.

Transport & Lifting



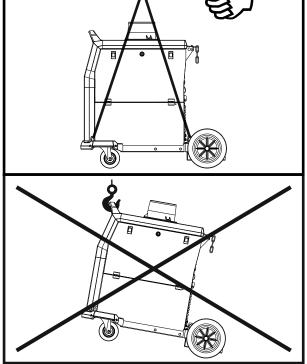


Figure 5.

During transportation and lifting with a crane, adhere to the following rules:

- · The device contains elements adapted for transport.
- · For lifting a suitable lifting equipment capacity.
- For lifting and transport use minimum four belts.
- Lift and transport only power source without gas cylinder, cooler and wire feeder, or/and any other accessories.

Maintenance



For any repair operations, modifications or maintenances, it is recommended to contact the nearest Technical Service Center or Lincoln Electric. Repairs and modifications performed by unauthorized service or personnel will cause, that the manufacturer's warranty will be lost.

Any noticeable damage should be reported immediately and repaired.

Routine maintenance (everyday)

- Check condition of insulation and connections of the work leads and insulation of power lead. If any insulation damage exists replace the lead immediately.
- 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 (every 200 working hours, but at list once a year)

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.
- If it is required, clean and tighten all weld terminals.

The frequency of the maintenance operations may vary according to the working environment where the machine is placed.

♠ WARNING

Do not touch electrically live parts.

⚠ WARNING

Before the case of welding machine will be removed, the welding machine has to be turned off and the power lead had to be disconnected from mains socket.

WARNING

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

Customer Assistance Policy

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.oerlikon-welding.com for any updated information.

WEEE

07/06



Do not dispose of electrical equipment together with normal waste!

In observance of European Directive 2012/19/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!

Spare Parts

2/05

Part List reading instructions

- Do not use this part list for a machine if its code number is not listed. Contact the Lincoln Electric Service Department for any code number not listed.
- Use the illustration of assembly page and the table below to determine where the part is located for your particular code machine.
- Use only the parts marked "X" in the column under the heading number called for in the assembly page (# indicate a change in this printing).

First, read the Part List reading instructions above, then refer to the "Spare Part" manual supplied with the machine, that contains a picture-descriptive part number cross-reference.

Authorized Service Shops Location

09/16

- The purchaser must contact a Lincoln Authorized Service Facility (LASF) about any defect claimed under Lincoln's warranty period.
- Contact your local Sales Representative for assistance in locating the nearest Authorized Service Facility.

Electrical Schematic

Refer to the "Spare Part" manual supplied with the machine.

Accessories Suggested

Accessories	o duggested	05/23
W100000176	WF 52D	05/23
W100000177	WF 56D	
K14182-1	COOLARC-26	
W000010167	FREEZCOOL 9,6L	
GRD-400A-70-XM*	GROUND CABLE 400A/70 MM ² ; X=5/10/15 M	
K14196-1	OUTPUT CONNECTION KIT (350A)	
K14202-1	OUTPUT CONNECTION KIT (500A)	
K14201-1	CABLE MANAGEMENT KIT	
K14208-1	WATER CONNECTION KIT	
K14176-1	GAS HEATER KIT	
	INTERCONNECTION CABLE	
K14198-PG	CABLE PACK 5PIN G 70MM2 1 M	
K14198-PG-3M	CABLE PACK 5PIN G 70MM2 3M	
K14198-PG-5M	CABLE PACK 5PIN G 70MM2 5M	
K14198-PG-10M	CABLE PACK 5PIN G 70MM2 10M	
K14198-PG-15M	CABLE PACK 5PIN G 95MM2 15M	
K14198-PG-20M	CABLE PACK 5PIN G 95MM2 20M	
K14198-PG-25M	CABLE PACK 5PIN G 95MM2 25M	
K14198-PG-30M	CABLE PACK 5PIN G 95MM2 30M	
K14199-PGW	CABLE PACK 5PIN W 95MM2 1M	
K14199-PGW-3M	CABLE PACK 5PIN W 95MM2 3M	
K14199-PGW-5M	CABLE PACK 5PIN W 95MM2 5M	
K14199-PGW-10M	CABLE PACK 5PIN W 95MM2 10M	
K14199-PGW-15M	CABLE PACK 5PIN W 95MM2 15M	
K14199-PGW-20M	CABLE PACK 5PIN W 95MM2 20M	
K14199-PGW-25M	CABLE PACK 5PIN W 95MM2 25M	
K14199-PGW-30M	CABLE PACK 5PIN W 95MM2 30M	

