IM3204
01/2025
REV02

# YARDTEC® 300C STANDARD

## OPERATOR'S MANUAL


ENGLISH

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12/05

**THANK YOU!** For choosing the QUALITY of the Lincoln Electric products.

- Please check packaging and equipment for damage. Claims for material damaged in shipment must be notified immediately to the dealer.
- For ease of use, please enter your product identification data in the table below. Model Name, Code & Serial Number can be found on the machine rating plate.

| Model Name: | |
|---|---|
| ..... | |
| Code & Serial number: | |
| ..... | ..... |
| Date & Where Purchased: | |
| ..... | ..... |

# ENGLISH INDEX

# Technical Specifications

01/25

| NAME | INDEX |
|---|---|
| **YARDTEC® 300C STANDARD** | **K14421-1** |

| **INPUT** | | | |
|---|---|---|---|
| | Input Voltage $U_1$ | EMC Class | Frequency |
| **300C STANDARD** | 400V ± 15%, 3-phase<br>230V ± 10%, 3-phase | A | 50/60Hz |

| | Input Power at Rated Cycle | Input Amperes I1max | PF |
|---|---|---|---|
| **300C STANDARD** | 11 kVA @ 3x400V, 30% Duty Cycle | 16A | 0,90 |
| | 9 kVA @ 3x230V, 30% Duty Cycle | 22A | 0,90 |

| **RATED OUTPUT** | | | | | | |
|---|---|---|---|---|---|---|
| | Process | Input Voltage | Open Circuit Voltage | Duty Cycle 40°C (based on a 10 min. period) | Output Current | Output Voltage |
| **300C STANDARD** | GMAW FCAW | 3x400V | 51Vdc | 30% | 300A | 29,0Vdc |
| | | | | 60% | 240A | 26,0Vdc |
| | | | | 100% | 200A | 24,0Vdc |
| | SMAW | | | 30% | 250A | 30,0Vdc |
| | | | | 60% | 230A | 29,2Vdc |
| | | | | 100% | 200A | 28,0Vdc |
| | GTAW | | | 30% | 300 | 22,0Vdc |
| | | | | 60% | 240 | 19,6Vdc |
| | | | | 100% | 200 | 18,0Vdc |
| | GMAW FCAW | 3x230V | 52Vdc | 30% | 250A | 26,5Vdc |
| | | | | 60% | 200A | 24,0Vdc |
| | | | | 100% | 180A | 23,0Vdc |
| | SMAW | | | 30% | 250A | 30,0Vdc |
| | | | | 60% | 200A | 28,0Vdc |
| | | | | 100% | 180A | 27,2Vdc |
| | GTAW | | | 30% | 250A | 20,0Vdc |
| | | | | 60% | 200A | 18,0Vdc |
| | | | | 100% | 180A | 17,2Vdc |

| **WELDING CURRENT RANGE** | | | | | |
|---|---|---|---|---|---|
| | Input Voltage | GMAW | FCAW | SMAW | GTAW |
| **300C STANDARD** | 3x400V | 10A÷300A | 10A÷300A | 20A÷250A | 15A÷300A |
| | 3x230V | 10A÷250A | 10A÷250A | 20A÷250A | 15A÷250A |

| **RECOMMENDED INPUT CABLE AND FUSE SIZES** | | |
|---|---|---|
| | Fuse Type gR or Circuit Breaker Type Z | Power Lead with plug |
| **300C STANDARD** | 16A, 400V AC | 4 Conductor, 1,5mm$^2$<br>5 - pin, 16A |

| **WELDING VOLTAGE REGULATION RANGE** | | |
|---|---|---|
| | GMAW | FCAW |
| **300C STANDARD** | 10V÷ 32V | 10V÷ 32V |

| WIRE FEED SPEED RANGE / WIRE DIAMETER | | | |
|---|---|---|---|
| | WFS Range | Drive Rolls | Drive roll diameter |
| **300C STANDARD** | 1,5 ÷ 22 mm/min | 2 | Ø37 |
| | | | |
| | Solid Wires | Aluminum Wires | Cored Wires |
| **300C STANDARD** | 0,6 ÷ 1,2 mm | 1,0 ÷ 1,2 mm | 0,9 ÷ 1,2 mm |

| DIMENSION | | | | |
|---|---|---|---|---|
| | Weight | Height | Width | Length |
| **300C STANDARD** | 18 kg | 381 mm | 230 mm | 498 mm |

| OTHERS | | | |
|---|---|---|---|
| | Protection Rating | Maximum Gas Pressure | Operating Humidity (t=20°C) |
| **300C STANDARD** | IP23 | 0,5MPa (5 bar) | ≤ 90 % |
| | | | |
| | Operating Temperature | Storage Temperature | |
| **300C STANDARD** | from -10°C to +40°C | from -25°C to 55°C | |

# ECO design information

01/25

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:

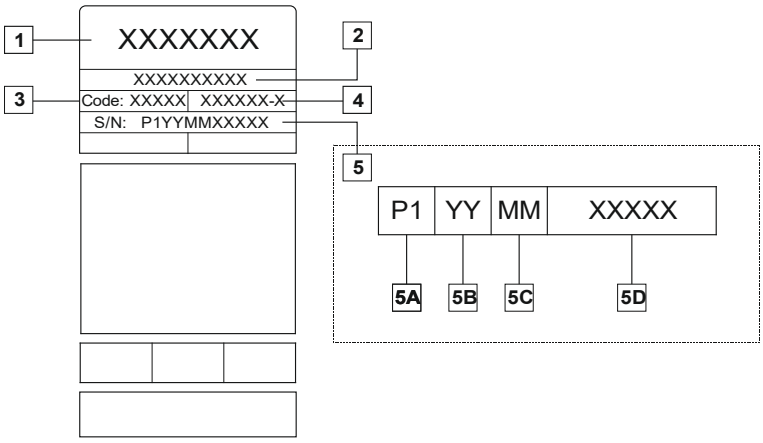
| Index | Name | Efficiency when max power consumption / Idle power consumption | Equivalent model |
|---|---|---|---|
| **K14421-1** | **YARDTEC® 300C STANDARD** | 88 % ( 400V )<br>86 % ( 230V )<br>Level 1 - Standby – 20W<br>Level 2 – Shut down mode – 7W | No equivalent model |

Idle state occurs under the condition specified in below table

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

The value of efficiency and consumption in idle state have been measured by method and conditions defined in the product standard EN 60974-1:2022.

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:

| Material type | Wire diameter [mm] | DC electrode positive | | Wire Feeding [m/min] | Shielding Gas | Gas flow [l/min] |
|---|---|---|---|---|---|---|
| | | Current [A] | Voltage [V] | | | |
| 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 commonly 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. 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, if necessary with assistance from Lincoln Electric.

**⚠ WARNING**

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

- 90 mΩ for the **YARDTEC® 300C STANDARD.**

This equipment is compliant with IEC 61000-3-11 and IEC 61000-3-12 and can be connected to public low voltage 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 as short as possible and positioned together as close as possible to each other. 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**

EMC classification of this product is class A in accordance with electromagnetic compatibility standard EN 60974-10 which means that the product is designed to be used in an industrial environment only.

**⚠ 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 may be potential difficulties in ensuring electromagnetic compatibility in those locations, due to conducted as well as radiated disturbances.

# Safety

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## WARNING

This equipment have to 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 equipment damage. 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 equipment damage. Protect yourself and others from possible serious injury or death. |
|  | WEAR CORRECT EYE, EAR &BODY PROTECTION: Protect your eyes and face with welding helmet properly fitted and with proper grade of filter plate. Protect your body from welding spatter and arc flash with protective clothing including woolen clothing, flame-proof apron and gloves, leather leggings, and high boots. Protect others from splatter, flash, and glare with protective screens or barriers. In some areas, protection from noise may be appropriate. Be sure protective equipment is in good condition. Also, wear safety glasses in work area at all times. |
|  | 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 equipment damage. |
|  | ELECTRIC SHOCK CAN KILL: Welding equipment generates high voltages. Do not touch the electrode, work clamp, or connected work pieces when this equipment is turned on. Insulate yourself from the electrode, work clamp, and connected work pieces. |
|  | ELECTRICALLY POWERED EQUIPMENT: Turn off the 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. |
|  | ELECTROMAGNETIC FIELD MAY BE DANGEROUS: Electric current flowing through any conductor creates electromagnetic field (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. To protect the skin, use suitable clothing made of durable, fireproof material. 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 easily accessible. 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 use this equipment when flammable gases, vapors or flammable liquids 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 certificate, 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. |
|  | MOVING PARTS ARE DANGEROUS: There are moving mechanical parts in this machine, which can cause serious injury. Keep your hands, body and clothing away from those parts during machine starting, operating and servicing. |
|  | HOT COOLANT CAN BURN SKIN: Always be sure coolant is NOT HOT before servicing the cooler. |
|   | SAFETY MARK: This equipment is suitable for supplying power for welding operations carried out in an environment with increased risk 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.

# Introduction

The welding machines **YARDTEC® 300C STANDARD** enables welding:
- GMAW (MIG/MAG),
- FCAW (Flux-Cored),
- SMAW (MMA),
- GTAW (TIG),
- GOUGING.

The complete package contains:
- Work lead – 3m,
- Gas quick connector G1/8”,
- Driving roll V1.0/V1.2 for solid wire (mounted in the wire feeder).

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

# Installation and Operator Instructions

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

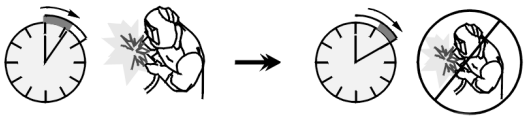
## Location and Environment

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.
- Do not use in rain or snow.
- 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 and Overheating

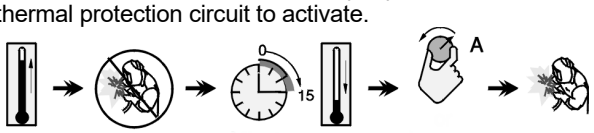
The duty cycle of a welding machine is the percentage of time in a 10 minute cycle at which the welder can operate the machine at rated welding current.

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.




Minutes or decrease Duty Cycle

## Input Supply Connection

**WARNING**

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

Check the input voltage, phase and frequency supplied to this machine before turning it on. Verify the connection of ground wires from the machine to the input source. The welding machine **YARDTEC® 300C STANDARD** must be connected to a correctly installed plug-in socket with an earth pin.
**YARDTEC® 300C STANDARD** has a special voltage auto-detection module and allows connection to a 3x400V or 3x230V power supply network.
For more information about input supply 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 necessary delayed fuse or circuit breaker and cable sizes are indicated in the technical specification section of this manual.

**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.

**WARNING**

When powering the machine from a generator be sure to turn off welder first, before generator is shut down, in order to prevent damage to welder!

## Output Connections

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

## Controls and Operational Features

**YARDTEC® 300C STANDARD**

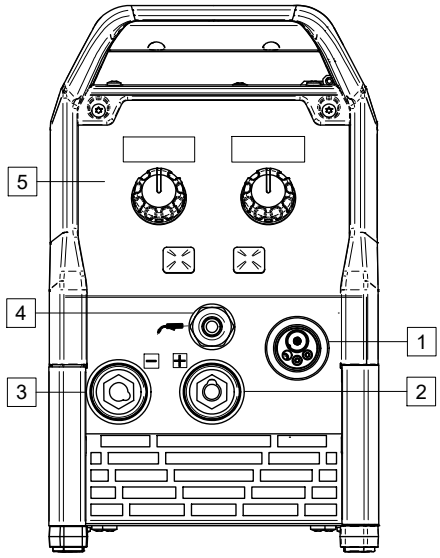



**Figure 1**

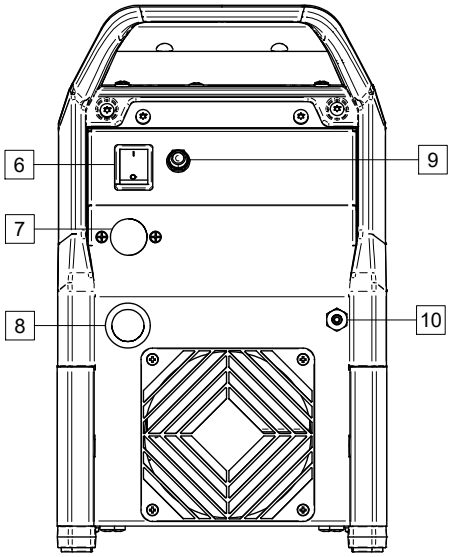



**Figure 2**

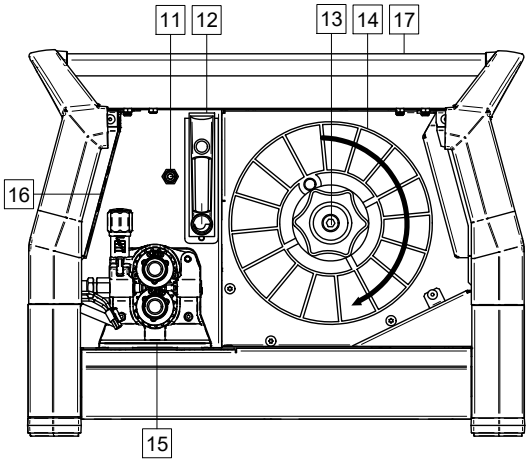



**Figure 3**

1. EURO Socket: For connecting a welding gun (for GMAW / FCAW process).
2. Positive Output Socket for the Welding Circuit: For connecting an electrode holder with lead / work lead depending on the require configuration. +
3. Negative Output Socket for the Welding Circuit: For connecting an electrode holder with lead / work lead depending on the require configuration. —
4. Lead of Changing Polarity of EURO socket.
5. U22 User Interface: See „User Interface" section.
6. Power Switch ON/OFF (I/O): Controls the input power to the machine. Be sure the power source is connected to the mains supply before turning power on ("I"). After input power is connected and the power switch is turned on, the indicator will light up.
7. Power Lead (5 m): 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.
8. Wire Liner Entry: Enables installing liner for welding wire delivered in drum package.
9. Fuse F1: Use the low blow fuse:

| YARDTEC® 300C STANDARD |
|---|
| 0,5A / 400V (5x20mm) |

10. Gas Quick Coupling Socket (21SF AW10 MXX G1/8"): For connecting a gas pipe.
11. Switch: Cold Inch / Gas Purge: This switch allows wire feeding (wire test) and gas flow (gas test) without switching on the output voltage.
12. Gas Flow Regulator: Regulate flow between 0-25 LPM (liter/min.).
13. Wire Spool Holder: Maximum 5kg (S200) spools. Holder allows mounting plastic, steel and fiber spools onto 51 mm spindle.
14. Spooled Wire (for GMAW / FCAW): Not supplied as standard.
15. Wire drive: 2-rolls wire drive.
16. LED: Illuminates the feed chamber.
17. Transport handle: used to carry the device.

## User Interface U22

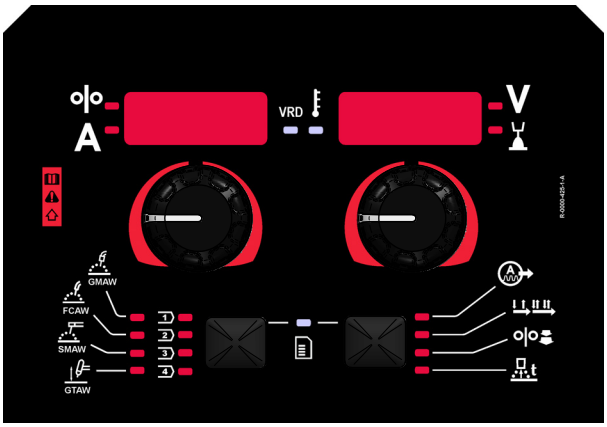



**Figure 4**

Detailed operation of Global User Interface can be found in the IM3197 user manual.

## VRD

The VRD (Voltage Reduction Device) feature provides additional safety in the CC-Stick mode. The VRD reduces the OCV (Open Circuit Voltage) at the welding output terminals while not welding to less than 35VDC peak.

The VRD requires that the welding cable connections be kept in good electrical condition because poor connections will contribute to poor starting. Having good electrical connections also limits the possibility of other safety issues such as heat-generated damage, burns and fires.

The machine is shipped with VRD “Disabled”. The VRD function can be disabled or enabled via X6 plug on the control P.C. board. The control board and plug can be accessed by removing the left side of case.

If it is necessary to enable/desable the VRD feature:

- Switch off the machine.
- Unscrew the left side of case.
- Connect/Disconnect X6 plug with X6 socket:
  - Connected – VRD is on.
  - Disconnected – VRD is off.

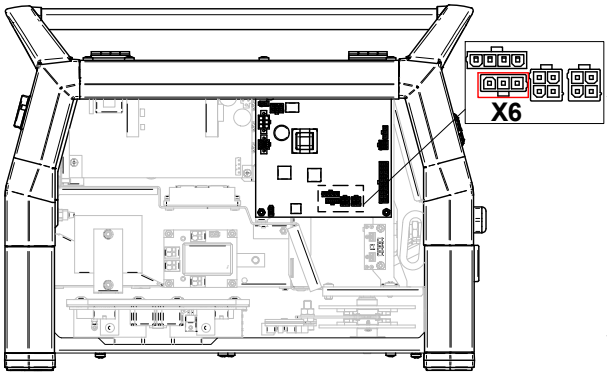



**Figure 5**

**WARNING**

Only a qualified electrician can enable/disable the VRD in the welding machine.

When VRD is active, a green light indicates the open circuit voltage is less than 35V peak. Light will illuminate for 5 seconds upon power up. The behavior of the VRD light is listed in the table 1.

The VRD applies to the constant current modes of operation. Only in these modes will the OCV be reduced.

**Table 1**

| VRD light indicator status | | |
|---|---|---|
| | CC modes | CV modes |
| OCV off | ON | OFF |
| OCV on | ON (**OCV reduced**) | OFF |
| While Welding | OFF | OFF |

## Loading the Electrode Wire

Depending on the type of wire spool it can be installed on the wire spool support without adapter or installed with use applicable adapter that must be purchased separately (see "Accessories" chapter).

**WARNING**

Turn the input power OFF at the welding power source before installation or changing a wire spool.

- Turn the input power OFF.
- Open the side panel of the machine.
- Unscrew the Locking Nut [18] and remove it from the Spindle.
- Place the spool [14] on the Spindle [13] making certain the Spindle Brake Pin is put in the hole in back side of spool.
  If using adapter (see "Accessories" chapter), place it on the spindle [13] making certain the spindle brake pin is put in the hole in back side of the adapter.

**WARNING**

Position the spool so that it will rotate in the same direction as wire feed and electrode wire should feed from the bottom side of the spool.

- Install the Locking Nut [18]. Make sure that the Locking Nut is tightened.

## Adjustments of Brake Torque of Sleeve

To avoid spontaneous unrolling of the welding wire the sleeve is fitted with a brake.
Adjustment is carried by rotation of its screw M10, which is placed inside of the sleeve frame after unscrewing the brake locking nut.

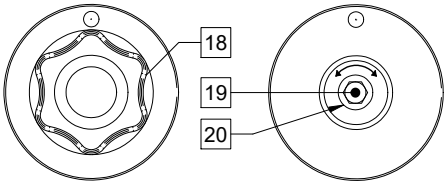



**Figure 6**

18. Locking Nut.
19. Adjusting Screw M10.
20. Pressing Spring.

Turning the M10 screw clockwise increases the spring tension and increase the brake torque

Turning the M10 screw anticlockwise decreases the spring tension and decrease the brake torque.

After finishing of adjustment, you should screw brake locking nut again.

## Adjusting of Pressure Roll Force

The pressure arm controls the amount of force the drive rolls exert on the wire. Pressure force is adjusted by turning the adjustment nut clockwise to increase force, counterclockwise to decrease force. Proper adjustment of pressure arm gives the best welding performance.

**Table 2**

| | |
|---|---|
| Steel | **3 ÷ 5** |
| Stainless steel | |
| Braze | |
| Flux cored | **2,5 ÷ 3,5** |
| Aluminium | **1,5 ÷ 2,5** |

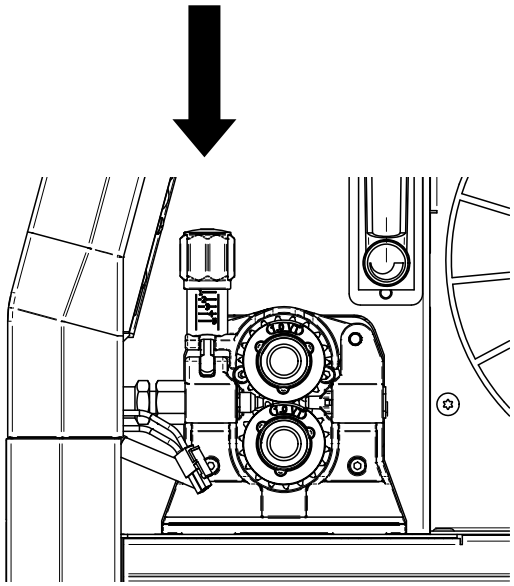


**Figure 7**

**WARNING**

If the roll pressure is too weak the roll will slide on the wire. If the roll pressure is set too heavy the wire may be deformed, which cause feeding problems in the welding. The pressure force should be set properly. For this purpose decrease the pressure force slowly until the wire just begins to slide on the drive roll and then increase the force slightly by turning of the adjustment nut by one turn.

## Inserting Electrode Wire into Welding Torch

- Turn the welding machine off.
- Depending of welding process connect proper welding torch to the euro socket [1]. Rated parameters of the torch and welding machine should be matched.
- Depends on type of gun must be remove the nozzle from the gun and contact tip or protection cap and contact tip.
- Turn the welding machine on.
- Hold the Cold Inch / Gas Purge Switch [11] or use torch trigger until wire appear over threaded end of the gun.
- When the Cold Feed switch or torch trigger is released spool of wire should not unwind.
- Adjust wire spool brake accordingly.
- Turn the welding machine off.
- Install a proper contact tip.
- Depending on the welding process and the type of the gun, install the nozzle (GMAW process) or protection cap (FCAW process).

**⚠ WARNING**

Take precaution to keep eyes and hands away from the end of the gun while the wire is being come out of the threaded end.

## Changing Driving Rolls

**⚠ WARNING**

Turn the input power off before installation or changing drive rolls.

**YARDTEC® 300C STANDARD** is equipped with drive roll V1.0/V1.2 for steel wire. For others wires and sizes it is required to install proper drive rolls kit (see "Accessories" chapter) and follow instruction:

- Turn the input power OFF.
- Unlock 2 rolls by turning 2 Quick-Change Carrier Gear [24].
- Release the pressure roll lever [25].
- Change the drive rolls [23] corresponding to the used wire.

**⚠ WARNING**

Be sure that the gun liner and contact tip are also size to match the selected wire size.

**⚠ WARNING**

For wires with the diameter larger than 1.6mm, the following parts have to be changed:

- The guide tube of the feeding console [22].
- The guide tube of the Euro Socket [21].

- Lock 2 new rolls by turning 2 Quick-Change Carrier Gear [24].
- Insert the wire through the guide tube, over the roller and through the guide tube of Euro Socket into liner of gun. The wire can be pushed into the liner manually for a few centimeters, and should feed easily and without any force.
- Lock the pressure roll lever [25].

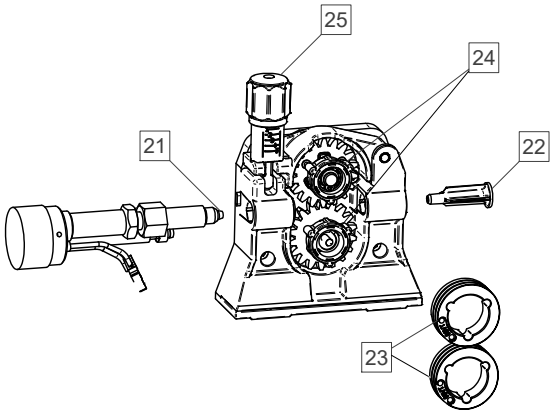



**Figure 8**

## Gas Connection

**⚠ WARNING**

- CYLINDER may explode if damaged.
- Always fix the gas cylinder securely in an upright position, against a cylinder wall rack or purpose-made cylinder cart.
- Keep cylinder away from areas where it may be damaged, heated or electrical circuits to prevent possible explosion or fire.
- Keep cylinder away from welding or other live electrical circuits.
- Never lift welder with cylinder attached.
- Never allow welding electrode to touch cylinder.
- Build up of shielding gas may harm health or kill. Use in a well-ventilated area to avoid gas accumulation.
- Close the gas cylinder valves thoroughly when not in use to avoid leaks.

**⚠ WARNING**

Welding machine supports all suitable shielding gases at a maximum pressure of 5,0 bar.

**⚠ WARNING**

Before use, make sure that the gas cylinder contains gas suitable for the intended purpose.

- Turn off input power at the welding power source.
- Install a proper gas flow regulator to the gas cylinder.
- Connect the gas hose to the regulator using the hose clamp.
- The other end of gas hose connect to the gas connector on the power source rear panel.
- Turn on input power at the welding power source.
- Open the gas cylinder valve.
- Adjust the shielding gas flow of the gas regulator.
- Check gas flow with Gas Purge Switch [11].

## Transport and Lifting

**⚠ WARNING**

Falling equipment can cause injury and damage to unit.

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

- Power source does not include the eye bolt which can be used to transport or lifting the machine.
- To lift use of suitable lifting equipment capacity.
- To lifting and transport use a travers and minimum two belts.
- Lift only power source without gas cylinder or/and any other accessories.

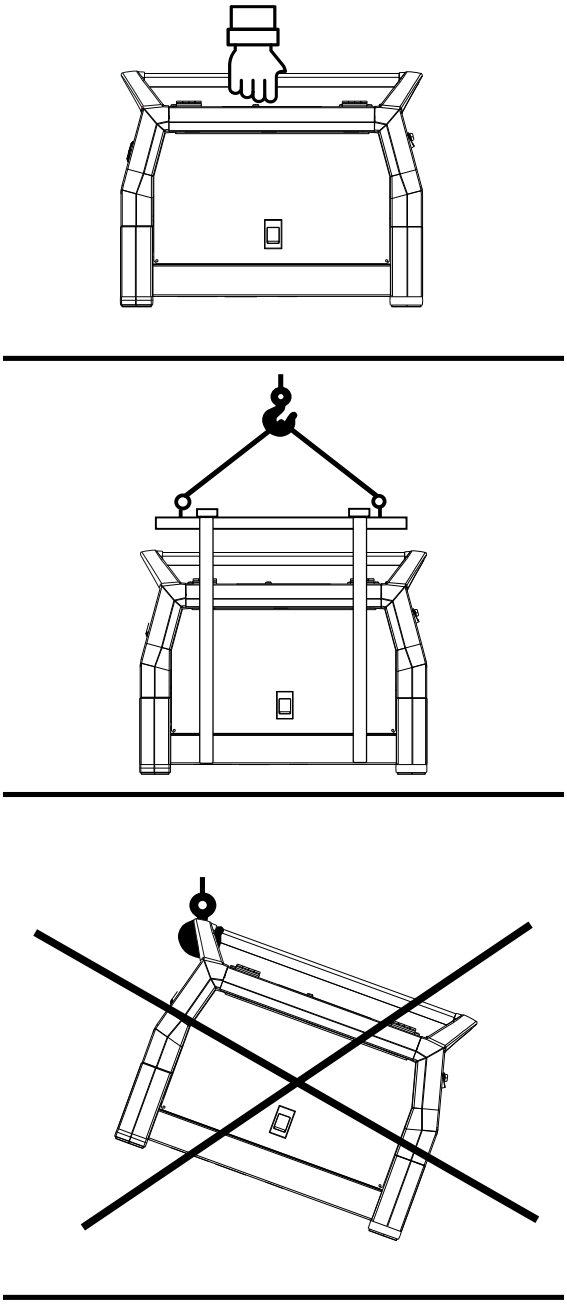


**Figure 9**

## Changing Polarity

1. For Positive Polarity (**DC +**):
- connect Welding Torch Cable to the Positive (+) output terminal.
- connect Return Welding Cable to the Negative (-) output terminal.

This is the typical configuration for the Metal Inert Gas (GMAW).

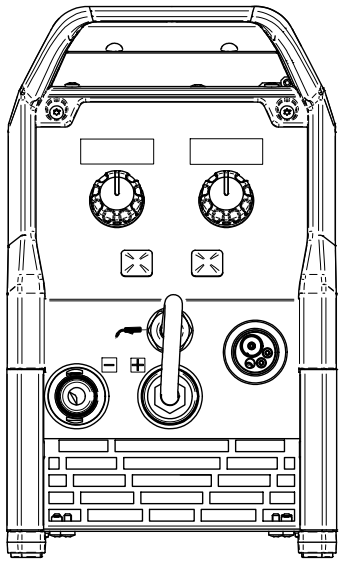


**Figure 10**

2. For Negative Polarity (**DC -**):
- connect Welding Torch Cable to the Negative (-) output terminal.
- connect Return Welding Cable to the Positive (+) output terminal.

This is the typical configuration for most of the Innershield wires (Flux Cored Arc Welding Self-Shielded / FCAW-S).

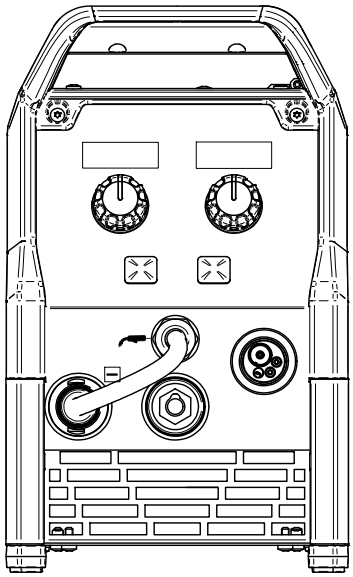


**Figure 11**

**WARNING**

Make sure that both thumbscrews are tight.

## Maintenance

**WARNING**

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 least 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 in accordance with the working environment where the machine is placed.

**WARNING**

Do not touch electrically live parts.

**WARNING**

Before removed case, machine has to be turned off and the power lead has 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

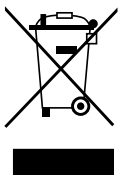
The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information 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.lincolnelectric.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

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**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

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- The purchaser must contact a Lincoln Authorized Service Facility (LASF) about any defect claimed under Lincoln's warranty period.
- Contact your local Lincoln Sales Representative for assistance in locating a LASF or go to www.lincolnelectric.com/en-gb/Support/Locator.

# Electrical Schematic

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

# Accessories

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| OPTIONS & ACCESSORIES | |
|---|---|
| K14429-1 | CONTROL PANEL COVER (SIZE A) |
| K14204-1 | WIRE FEEDER DRUM QUICK CONNECTOR |
| K14435-1 | SHOULDER STRAP KIT |
| K14431-1 | PROTECTIVE CAGE WHEELS KIT |
| K14444-1 | PROTECTIVE CAGE |
| KP10519-8 | ADAPTER TIG EURO |
| E/H-300A-50-5M | ELECTRODE WELDING CABLE 50MM2 |
| K14191-1 | 2W CART (required K14384-1) |
| K14384-1 | CART'S INTERFACE |
| K14447-1 | CART WITH SUPPORT FOR 300mm SPOOL |
| K14448-1 | AIR FILTER (YARDTEC® 300C STANDARD) |
| W000010136 | FLAIR® 600 (Gouging torch) |
| **LINCGUN® (PROMIG & LGS3) & Push-Pull** | |
| W000345066-2 | LG PROMIG 300 3M MIG GUN AIR COOLED |
| W000345067-2 | LG PROMIG 300 4M MIG GUN AIR COOLED |
| W000345068-2 | LG PROMIG 300 5M MIG GUN AIR COOLED |
| W000345072-2 | LG PROMIG 400 3M AIR COOLED |
| W000345073-2 | LG PROMIG 400 4M AIR COOLED |
| W000345074-2 | LG PROMIG 400 5M AIR COOLED |
| W10430-36-3M | LGS3 360 G 3M MIG GUN AIR COOLED |
| W10430-36-4M | LGS3 360 G 4M MIG GUN AIR COOLED |
| W10430-36-5M | LGS3 360 G 5M MIG GUN AIR COOLED |
| **WTT2 TIG TORCHES** | |
| W10529-17-4V | WTT2 17 TIG TORCH WITH GAS VALVE 4M AIR COOLED |
| W000278885 | WTT2 26 TIG TORCH WITH GAS VALVE 4M AIR COOLED |
| W000278884 | WTT2 17 TIG TORCH, RL HANDLE 4M AIR COOLED (required KP10519-8 adaptor) |
| W000278917 | WTT2 17 TIG TORCH, RL HANDLE 8M AIR COOLED (required KP10519-8 adaptor) |
| W000278882 | WTT2 17 TIG Torch, EB HANDLE 4M AIR COOLED (required KP10519-8 adaptor) |
| W000278919 | WTT2 17 TIG Torch, EB HANDLE 8M AIR COOLED (required KP10519-8 adaptor) |
| W000382782 | WTT2 17 TIG Torch, EB-FLEX HANDLE 4M AIR COOLED (required KP10519-8 adaptor) |
| W000278890 | WTT2 26 TIG Torch, RL HANDLE 4M AIR COOLED (required KP10519-8 adaptor) |
| W000278913 | WTT2 26 TIG Torch, RL HANDLE 8M AIR COOLED (required KP10519-8 adaptor) |
| W000278887 | WTT2 26 TIG Torch, EB HANDLE 4M AIR COOLED (required KP10519-8 adaptor) |
| W000278915 | WTT2 26 TIG Torch, EB HANDLE 8M AIR COOLED (required KP10519-8 adaptor) |
| W000382784 | WTT2 26 TIG Torch, EB-FLEX HANDLE 4M AIR COOLED (required KP10519-8 adaptor) |
| W000382785 | WTT2 26 TIG Torch, EB-FLEX HANDLE 8M AIR COOLED (required KP10519-8 adaptor) |
| **ROLL KIT FOR SOLID WIRES** | |
| KP14420-V06/08 | ROLL KIT SW V0.6-0.8 FI37 TWIN |
| KP14420-V08/10 | ROLL KIT SW V0.8-1.0 FI37 TWIN |
| KP14420-V10/12 | ROLL KIT SW V1.0-1.2 FI37 TWIN |
| KP14420-V12/16 | ROLL KIT SW V1.2-1.6 FI37 TWIN |
| KP14420-V09/11 | ROLL KIT SW V0.9-1.1 FI37 TWIN |
| **ROLL KIT FOR ALUMINIUM WIRES** | |
| KP14420-U06/08A | ROLL KIT AW U0.6-0.8 FI37 TWIN |
| KP14420-U08/10A | ROLL KIT AW U0.8-1.0 FI37 TWIN |
| KP14420-U10/12A | ROLL KIT AW U1.0-1.2 FI37 TWIN |
| KP14420-U12/16A | ROLL KIT AW U1.2-1.6 FI37 TWIN |

| ROLL KIT FOR CORED WIRES | |
|---|---|
| KP14420-V10/12R | ROLL KIT CW 1.0-1.2 FI37 TWIN |
| KP14420-V12/16R | ROLL KIT CW 1.2-1.6 FI37 TWIN |
| KP14420-V09/11R | ROLL KIT CW 0.9-1.1 FI37 TWIN |
| **WIRE GUIDES** | |
| KP14420-INLET/BLUE | INLET WIRE GUIDE 0.6-1.6 BLUE ST-2 |
| KP14420-EURO | OUTLET SOLID WIRE GUIDE 97MM |

# Dimension Diagram

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