

EN

USER MANUAL

AutoGrind

Digital



inelco
grinders
The way to grind



for Ultima-Tig

and



for Ultima-Tig-Cut

EU statement of compliance

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Hereby declare that

the machine: **AutoGrind Digital**

is produced in accordance with the provisions of the Commission's Directive on harmonization of national legislation's on machinery 2006/42/EU, low-voltage directive 2006/95/EU and EMC-directive 2004/108/EU.

AutoGrind is developed and produced according to following international norms:

EN 61029
EN 61000-6-4
EN 61000-6-2

Responsible: Name: Anders Thy
 Date : 27.06.2018
 Signature: 

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- **Important safety instructions**

- o AutoGrind can ONLY be used with Ultima-Tig and Ultima-Tig-Cut grinders. It CANNOT be used with other grinders.
- o Only Ultima-Tig and Ultima-Tig-Cut shall be connected to the power outlet (female socket) on the control box. Any other equipment shall not under any circumstance be connected to the control box.
- o Only Ultima-Tig and Ultima-Tig-Cut with the same voltage and frequency as the power supply should be connected to the power outlet (female socket) on the control box. The control box is NOT a transformer!

- **Video**

- o Here you can see a video showing unboxing, installing and grinding with the AutoGrind. The video cannot replace this Manual.



- **Disposal**



- Do not dispose electrical equipment in your ordinary waste disposal, but use the following guidelines:
- o The control box shall be disposed as electronic equipment.
 - o The grinding module has to be dismantled, and the motor and cable shall be disposed as electronic equipment, and the rest as metal waste.

1. General description

AutoGrind is engineered to be used with the Ultima-Tig and Ultima-Tig-Cut for automatic grinding of Tungsten electrodes. The AutoGrind ensures a unified and fast grinding of the Tungsten electrodes.

2. What is included

AutoGrind consists of the following parts:

Pos.: Description:

1. Grinding module incl. connection cable and plug for the control box (Item No. 75550005)
2. Control box (Item No. 75550006)
3. Mains cable (female IEC plug, male plug depending on country)(Part no. see next page*)
4. Cable to connect the control box and the Ultima-Tig/-Cut grinder (Part No. see next page**)
5. Electrode holder for AutoGrind (Item No. 75550020)
6. O-ring $\varnothing 13 \times 1.5$ (Item No. 44470213)
7. Stretching screw (Item No. 44550022) for mounting on Ultima-Tig/-Cut
8. Drain ring (Item No. 44550018)
9. Pipe fitting (Item No. 44492510)
10. Tightening screw with drain (Item No. 75550019)
11. Drain bottle set (Item No. 75550030)
12. Bottle holder (Item no. 44491215)
13. M6x14 hexagon screw (Item.No. 40310620)
14. Hexagon key 3 mm (Item No. 44510435)



*List of cables pos. 3

| Male plug type | Part. No. |
|----------------------|-----------|
| EU 230V-50Hz | 74250014 |
| UK 110V-50Hz | 74250015 |
| UK 220V-50Hz | 74250016 |
| US 120V-60Hz /switch | 75550015 |

**List of cables pos. 4

| Female plug type | Part. No. |
|------------------|-----------|
| EU 230V-50Hz | 74300014 |
| UK 110V-50Hz | 74300015 |
| UK 220V-50Hz | 74300016 |
| US 120V-60Hz | 74300017 |

3. Mounting on the Ultima-Tig/Ultima-Tig-Cut

The original tightening screw and the stretching screw on the Ultima-Tig/-Cut must be removed, which can only be done when the angle adjustment is in 90° position. Otherwise it will fall down inside the grinding chamber.

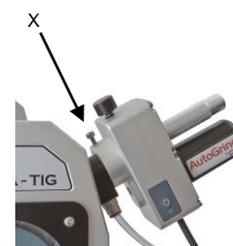


The included stretching screw (Item No. 44550022) must be mounted in the angle adjustment unit, using a little bit of white grease on the thread, and firmly tightened with a 14 mm wrench. The included tightening screw (Item No. 75550019) is mounted loosely on the stretching screw. Then the desired grinding angle is chosen and the tightening screw is tightened firmly by hand.



The AutoGrind grinding module can now be mounted on the tightening screw, and secured by tightening the hexagon screw (x). Tool is included.

We recommend to position the grinding module, so that the cable from the grinding module is hanging down to the right as shown on the front page picture of this manual.



4. Setting the grinding angle

By turning the grinding module counter clockwise, the angle adjustment is loosened and the angle can be adjusted. By turning the grinding module clockwise, the angle adjustment is tightened again.

5. Connecting AutoGrind and the grinder

The cable from the grinding module is connected to the control box.

The included short cable is connecting the grinder with the control box, so that the mail IEC plug is plugged in the control box and the female plug is connected to the male plug from the mains cable on the grinder



The included long power cable is connecting the control box to the main power.

IMPORTANT: Only Ultima-Tig and Ultima-Tig-Cut, that is suitable for the voltage and frequency, as the control box is connected to, shall be connected to the control box.

If the on/off switch on the Ultima-Tig/-Cut grinder is set to "on", the grinder is not running, but will start and stop by activating the on/off button on the side of the AutoGrind module. The control box automatically supplies the power to the grinder, when the grinding module is turned on. Therefore the on/off switch on the grinder needs to be "on". Otherwise the control box cannot start and stop the grinder automatically.

6. Inserting the electrode holder in the AutoGrind

The Electrode is inserted into the electrode holder and securely fastened. Set the stick-out on the Ultima-Tig/-Cut, as described in step #6 in the operations manual.



When the electrode holder is inserted in to the AutoGrind module, the locking pin (black knob) needs to be pressed down to lock the drive unit and prevent it from rotating.



The electrode holder should be rotated with a light pressure until the electrode holder locks into the drive unit, you will feel a slight click as the electrode holder is in position. Next push the electrode holder in and rotate counter-clockwise until the bayonet lock is holding the electrode holder in place.



Important: The locking pin must not be held down, when the AutoGrind is started or pressed down during grinding. This will destroy the inner parts of the module!

7. The automatic grinding program

The control box is programmed to run through the following grinding process that starts when the on/off button is activated:

- i. Ultima-Tig/-Cut grinder is activated and starts to rotate the grinding disc.
- ii. 2 sec. later the AutoGrind module starts to rotate the electrode holder slowly in 3 sec. This moves the electrode holder towards the grinding disc, and the grinding of the electrode starts.
- iii. The AutoGrind module is then rotating faster for 15 sec. (the grinding time). The grinding time can be adjusted as necessary (see step #8)



- iv. Next, the AutoGrind module slows down for 3 sec. This finishes the grinding, and gives the electrode tip a fine and consistent surface.
- v. The AutoGrind module now shifts rotational direction for 2½ sec. to move the electrode holder back to the start position. At the same time the grinder is stopped, and the grinding is finished.

The electrode holder can now be turned clockwise and pulled out of the bayonet lock and the grinding module.

If the on/off button on the grinding module is activated during the grinding process, the program jumps to #v and the grinder stops.

8. Setting the grinding time

When the controlbox is plugged in to the power source, the display will show “Ed” (Edition) and the edition number of the software “1.0” or higher, followed by the preset grinding time (standard 15 sec.)



The grinding time (see section #7, iii) can be adjusted from 1 to 99 sec. The adjustment is done by pressing the “+” and “-” buttons on the front of the controlbox. Each push changes the grinding time with 1 sec.

Any change of the grinding time is only saved in the controlbox after the AutoGrind has completed a grinding cycle. The grinding time is not saved if the grinding cycle is interrupted.

Display the number of grindings

If the on/off button is pressed while the controlbox is connected to the power source, then the display will show “8.8” followed by “- -” and the number of grindings the controlbox has carried out. The number of grindings is shown two digits at a time. The highest number it can show is 999.999.



If the power is disconnected for 5 sec. the controlbox returns to the grinding program.



9. Important when using the AutoGrind on Ultima-Tig-Cut

If the AutoGrind is being used with the Ultima-Tig-Cut, it is necessary to adjust the electrode guide on the Ultima-Tig-Cut, app. 2mm outwards, because the electrode holder for the AutoGrind is different than the standard electrode holder. Otherwise there is a risk that the cutting disc will cut through the electrode clamp and damage it.



10. Maintenance

The AutoGrind module and control box are maintenance free, but needs to be kept dry and clean.

The rotating part in the AutoGrind module is running in two bearings. If dirt and moisture is getting in to the bearings, they will not last so long, and it will affect the grinding result.

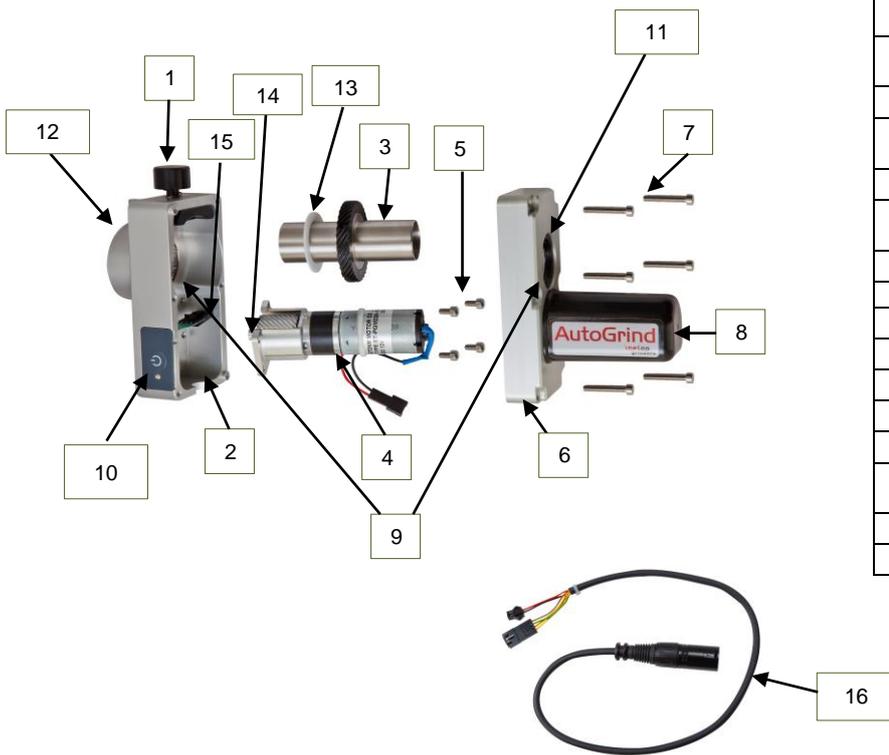
When the two bearings are worn out, they need to be changed, please contact the distributor where you purchased the AutoGrind or contact Inelco Grinders.

11. Technical data

The control box is universal and can be plugged in to all one phase power supplies from 100 V to 240 V for both 50 Hz and 60 Hz.

The grinding module has a 12V motor, that may only be connected to the control box.

12. Spare parts overview Item No. 75550005



| Pos. | Item No. | Description |
|------|----------|----------------------------------|
| 1 | 75550013 | Blocking module for AutoGrind |
| 2 | 44550000 | Bottom grinding module AutoGrind |
| 3 | 75550012 | Axle module AutoGrind |
| 4 | 75550011 | Motor module for AutoGrind |
| 5 | 40310306 | Allen screw M3x6 |
| 6 | 44550001 | Top grinding module AutoGrind |
| 7 | 40310320 | Allen screw M3x20 |
| 8 | 44550002 | Motorcap |
| 9 | 44550020 | Bearing AutoGrind |
| 10 | 17110035 | On/off button AutoGrind |
| 11 | 44551300 | Packing box AutoGrind |
| 12 | 40110511 | Screw M4x12 |
| 13 | 44550017 | Teflon disc |
| 14 | 44550021 | Motor Bearing AutoGrind |
| 15 | 74491429 | Plug Foil Key female |
| 16 | 75550010 | Control cable |

