



Cougartron[®]
Powered by innovation



ProPlus

User Manual

Dear Customer,

Thank you for purchasing a Cougartron ProPlus Weld Cleaning Machine.

We would like to reward you with an exclusive extended **2-year** warranty!
To qualify for this, please fill in the all the information below and send it to us by the below details.

Email: warranty@cougartron.com

or **Register Online** at: www.cougartron.com/machine-support/

Machine Model: ProPlus	Serial Number:	Date of Purchase:
Customer Name:		
Customer Phone Number:	Customer Email:	
Customer Address:		
Distributor Name and Address:		



Scan to register online

We love hearing from our customers and are very happy to help if you have any questions.

Best Regards

The Cougartron Team



Foreword

This User Manual is a very important tool!

Keep it with the machine at all times. The purpose of this manual is to provide users with the necessary operating procedures and precautions, essential for the safe and proper operation of the Cougartron Machine.

This User manual is for the following machines:

Table 1

Partcode	Model	Input	Output
WELC1016	ProPlus 50/60Hz	220-240vac 8amps	14v ac/dc 50amps
WELC1019	ProPlus 50/60Hz	110-130vac 10amps	14v ac/dc 50amps

Due to continuous improvements, BM Group International ApS reserves the right to make specification changes.

FOR:

- Accident reporting
- Product safety publications
- Current owner updates
- Questions regarding product safety
- Standards and regulations compliance information
- Questions regarding special product applications
- Questions regarding product modifications

CONTACT

Your local Cougartron distributor. You can find your local distributor by contacting;

International contact:

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Brydehusvej 23,
2750 Ballerup, Denmark
+45 43 46 20 10
sales@cougartron.com

Within North America contact:

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PA 19342 – 0250
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1. Introduction

The Cougartron ProPlus is a metal cleaner which uses the interaction between an alternating electric current (ac) and a conductive fluid to remove weld marks from stainless steel.

The Cougartron ProPlus will also polish metal, by passing a negative dc current through the same conductive fluid. This is called electro-polishing.

By using the Marking mode, and replacing the standard fluid with a marking solution, the Cougartron ProPlus, can Mark the pattern in an overlay stencil onto the surface of the metal.

The Cougartron ProPlus comprises a machine unit and wand with a soft bristle tip which, after wetting with a conductive fluid, is applied to the weld mark in a painting action. This unique cleaning system is quick, eliminates the need for pickling paste, or abrasives, and provides a superior finish.

The Cougartron ProPlus Cleaning fluid is based on phosphoric acid and supplies may be purchased from your supplier in quantities of one litre (1Qt) or five liter (1.3Gal) bottles. Refer to www.cougartron.com for your nearest authorized supplier.

The Cougartron ProPlus is light and portable, and is powered by 120 or 240vac mains power source (refer to Table 1 in the Foreword). The Cougartron ProPlus is provided with a one-year warranty on the control box, provided the unit is used only for the purpose for which it was designed. Cougartron accessories (brushes, insulating shrouds and leads) are not covered by the warranty

2. Safety Information

Protect yourself and others by observing all safety information, warnings and cautions. Failure to comply with instructions could result in personal injury and/or damage to the product or property.

Read this documentation carefully before operating the equipment. Please retain these instructions for future reference.

Before using the Cougartron ProPlus, make sure the work environment is well ventilated and away from any combustible substances. Ensure that all required equipment is available.

Do not use the Cougartron ProPlus for any purpose other than that described in this manual. Failure to observe this warning may result in permanent damage to the Cougartron ProPlus, cause damage to the workpiece, cause injury to the operator and void the warranty.

The Cougartron ProPlus is amongst the safest appliances in its class. However, some precautions must be taken with the use of the Cougartron ProPlus, as with any electro-cleaner.

- The Cougartron ProPlus uses mild acids; gloves should be used to avoid prolonged contact with any of the fluids.
- Goggles should be worn to prevent fluid being splashed in the eyes.
- Fluid spilled on the skin should be washed off as soon as practical.
- Material Safety Data Sheet is available for all fluids and should be read before use.
- The brush gets extremely hot, around 200°C / 392 F. Be very careful touching the brush. Do not place the brush near any flammable materials.
- The Cougartron ProPlus produces an electric current which may generate small sparks between the brush and the metal being cleaned.

- Hydrogen gas may also be generated (which is an invisible but explosive gas). Always use the apparatus in a well-ventilated area. Do not use near flammable substances, or in areas where dense flammable gases (such as petrol vapor) may accumulate.
- The Cougartron ProPlus uses 120 or 240vac only (refer to Table 1 in the Foreword). Do not use with any other voltage. If the power cord is damaged or if the Cougartron ProPlus has been dropped from a height and damaged, do not use the unit. Contact your Cougartron supplier to have the Cougartron ProPlus inspected and repaired.
- Do not short out the terminals, or use the Cougartron ProPlus with a damaged wand or cables. Doing so may permanently damage the Cougartron ProPlus and cause damage to the workpiece being cleaned. The high currents involved may also cause intense heating of the shorted or damaged part, which could result in burns to the operator.
- Ensure that the Cougartron ProPlus is located where it cannot easily fall and cause injury. Ensure that the cables do not present a trip hazard.

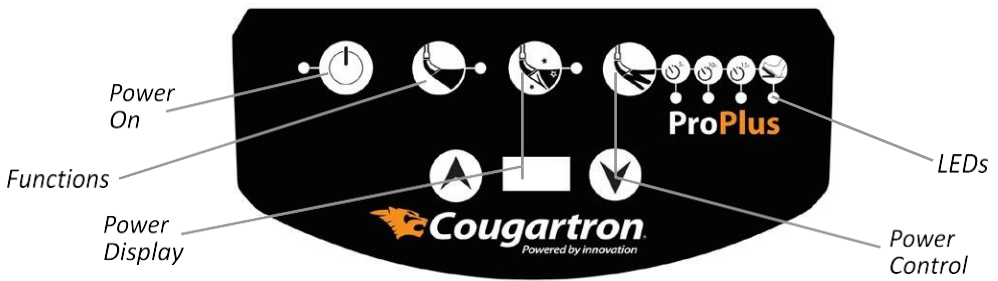
3. Description of Apparatus

3.1 ProPlus Control Panel

The mains power ON/OFF switch is on the rear of the unit.

The Control Panel is the sloping panel on the top of the Cougartron ProPlus containing the Power setting switches and the Function selection switches. Each Function has a LED that lights up when that function is active.

The Functions are selected using the buttons along the top of the Control Panel. The different functions alter the way the Cougartron ProPlus works to achieve different effects (i.e., cleaning, polishing, etching)



The Power is adjusted by the 2 buttons either side of the small screen. The power is adjustable in increments of 5 amps from 05 to 50. The screen displays how many amps the machine is running on. The Power setting switch is used to adjust the amount of voltage applied to the brush, and therefore how fast the Cougartron ProPlus cleans.

The two sockets on the front of the machine are the sockets into which the leads are connected. The orange power lead connects into the socket with the “brush” icon and the earth lead connects into the socket with the “clamp” icon.

3.2 ProPlus Leads

The leads are 4 metres long (13ft), and connect the Cougartron ProPlus to the earth clamp and the handle. The orange lead is the power lead, used for cleaning and the black lead is the earth lead.

3.3 ProPlus Handle and Wand

The power cable extends in one piece from the cable end connector at the Control Box, through to the end of the wand. The handle is insulated from electricity and heat, and can be held safely. The wand screws into handle. The brush tip screws into the wand.

The brush tip bristles are conductive and can withstand high temperatures. The brush tip has a Teflon twist-shroud covering the tip base to prevent direct shorting of the current to the work. The shroud can be moved along the wand to change the profile of the brush bristles.

The shroud must be fitted to the wand at all times when the Cougartron ProPlus is in use. Extra shrouds can be purchased from your supplier or from Cougartron at www.cougartron.com

The Cougartron ProPlus cleaner will survive the occasional, brief, accidental short of the brush crimp. A prolonged short of the crimp may cause damage to the Cougartron ProPlus cleaner, and will void the warranty. Please ensure that the shroud always covers the crimp.

The brush tip should be removed and rinsed with water after use and before storage.

3.4 ProPlus Earth Clamp

The Cougartron earth clamp is a spring-loaded clamp for connecting one terminal of the Cougartron ProPlus to the work piece.

The Cougartron earth clamp can become dirty or coated in residue and should be cleaned regularly.

4. Power and Function Settings

4.1 ProPlus Power Settings

Choose the cleaning intensity required by selecting the appropriate setting using the Power Control.

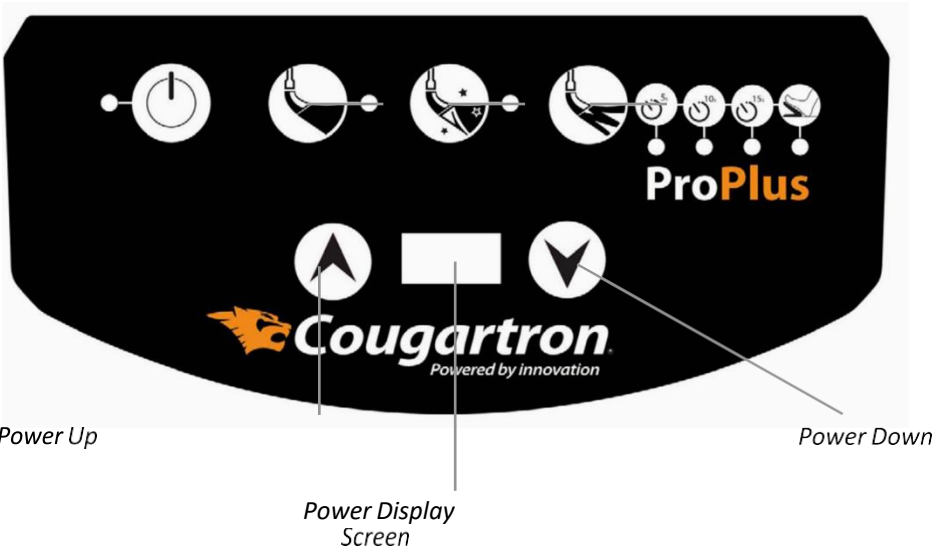
The below settings are what we recommend;

- 05-30 amps for thin material and light discoloration
- 30-40 amps for normal tig welds and mild discoloration
- 40-50 amps for thick material and heavy discoloration

CLEAN

POLISH

MARK



4.2 ProPlus Function Settings

Choose the type of function required by selecting the appropriate setting using the function selection buttons at the top of the control panel.



CLEAN - This mode provides the fastest cleaning at each power setting. However, prolonged use may cause a milky appearance on the surface of the metal. If this happens, use POLISH to rectify.



POLISH - This mode provides metal polishing. Use this grade to repair a dull white surface, including one caused by over-use of CLEAN.



MARK - This mode provides surface marking, when used with the appropriate power setting and marking fluid.

This model that you own also has advanced marking capabilities incorporated into its electronics.



The first 3 icons left to right represent the time that the power is flowing for. 5 sec, 10 sec and 15 sec. The fourth icon is the last icon on the right and represents continuous marking mode. The power is always on and is similar to the Clean and Polish mode.

This is part of the Cougartron Basic Etching Set (WELC4045)

5. Cleaning Method

5.1 Preparation

1. Inspect unit and all cables for damage before use.
2. Ensure the unit is dry.
3. Ensure the work environment is well ventilated and away from any combustible substances.
4. Ensure that cables do not present a trip hazard.
5. If the items to be cleaned are small, place the parts in a plastic container that can hold acidic fluids safely.
6. Parts will need to be sprayed with the recommended
7. Cougartron neutraliser or washed down with water after cleaning. Ensure there is ready access to water and a suitable place for washing.
8. Wear suitable personal protective equipment as recommended in the MSDS. The minimum requirement is for gloves to protect hands from the fluid, and goggles to prevent fluid splashing into the eyes.

5.2 Assembly of the ProPlus

1. Attach connector of orange cable to the right-hand connector of Cougartron ProPlus Unit.
2. Screw wand into handle.
3. Place shroud on brush and screw into wand.

4. Attach connector of black cable to the left-hand connector of the Cougartron ProPlus Unit.
5. Set POWER switch to “OFF”.
6. Attach power cord to mains outlet and Cougartron ProPlus Unit.
7. Attach clamp to workpiece.



5.3 Cleaning Fluid

Pour a reasonable quantity of the cleaning fluid into a shallow container. Place the container close to the work because the tip will be dipped into the fluid regularly during operation.

5.4 Operation

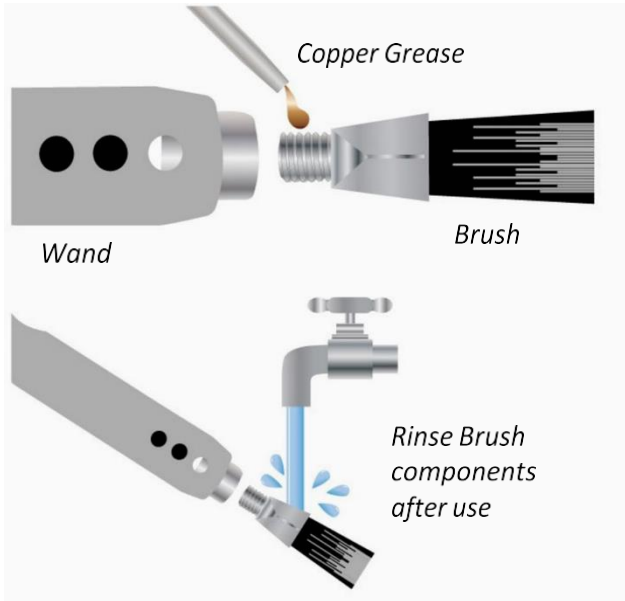
1. Set POWER control to STANDBY. Always use this setting when connecting the clamp or changing the tip.
2. Ensure the power cord is connected to a suitable AC power outlet (refer to Table 1 in the Foreword) and connected to the Cougartron ProPlus power socket.
3. Turn the On/Off switch to ON. The amp reader on the screen will begin at 20
4. Make sure the brush tip has its insulating shroud and the insulation on the wand is undamaged.
5. Ensure the Cougartron ProPlus is switched on and all equipment is correctly connected as described in section 4.2.

6. Select power level and operating mode using the push switches. See section 5 below for details.
7. Dip brush in cleaning fluid and apply brush tip to weld area to be cleaned. Use only recommended cleaning fluids, see S7.2.
8. Ensure brush and work area remain wet with the fluid during cleaning.
9. Apply brush only for as long as necessary to remove discolouration. Prolonged application may affect surface quality.
10. Some light sparking may occur where brush tip contacts workpiece, particularly on higher power settings, and this is normal. Excessive sparking for a prolonged time in one area may cause surface pitting.
11. When desired surface finish is achieved, turn the Cougartron ProPlus Power Control to OFF.
12. After use put the brush down on a non-flammable surface as it may be very hot.
13. Be careful touching the work as it may be hot.
14. Rinse thoroughly with clean water to remove all traces of cleaning fluid. To ensure acidic residue is removed, use the recommended Cougartron neutralising fluid, see S7.3.

6. Maintenance

- When not in use, ensure the On/Off switch is OFF. The power light on the front panel should not be illuminated and the red band on the On/Off switch should not be visible.
- Rinse brush with water to remove excess cleaning fluid.
- At completion of a work shift, unscrew the brush from wand. Remove the brush from the insulating shroud and rinse brush, shroud and end of wand with water to remove cleaning solution. Allow to dry before re-assembling.
- Before assembling the brush to the wand, coat threads with copper filled anti-seize compound. This will exclude the acidic solution from the joints and prevent corrosion.
- Rinse clamp with water to remove solution and prevent corrosion.

- Use a wet cloth to wipe fluid splashes off the Cougartron ProPlus unit. After some time splashes and marks may accumulate and become difficult to remove.



7. Consumables

Consumable supplies are available from authorised Cougartron distributors.

7.1 Cougartron Brushes

The brush will wear down with use and should be replaced when the bristles reach approximately 12mm (1/2 inch) in length.

7.2 Cougartron Shrouds

The insulating twist shroud may become damaged or heat affected. If this happens, replacement shrouds may be purchased.

7.3 Cougartron Fluids

A range of genuine Cougartron fluids is available. Please check with your local Cougartron distributor for details of fluids available in your region.

Types of fluids include:

- Pre-Weld Cleaning Fluids: to remove dirt and oil prior to welding to minimise contamination during welding.
- Weld Cleaning Fluids: for cleaning and, optionally, polishing.
- Neutralising Fluids: to ensure removal of all cleaning fluid residue.
- Finishing Fluid: to provide a clean, mark-free finish.
- Marking Fluids: can be used with custom stencils to indelibly mark various types of metal.

8. Troubleshooting

If the Cougartron is not operating correctly, please refer to the following trouble shooting guide before contacting your Cougartron distributor.

8.1 Red Power Light on the Control Panel Not Illuminated

- Ensure the On/Off switch on the back is ON.
- Ensure the power cable is pushed completely into the socket on the back of the Cougartron.
- Ensure power is present at the power point (possibly by plugging in another appliance, such as an inspection light).
- If the Cougartron was being used prior to it turning off, the unit may have over-heated. Wait 10 minutes for the unit to cool down before trying to use it again.

8.2 Red Power Light on the Control Panel Illuminated but the Machine is not working

- Ensure the Power Control is not set to STANDBY.
- Ensure the cables are securely plugged into the front of the Cougartron.
- Ensure the clamp is gripping the work securely. Sometimes the clamp position may need adjusting to make a good contact. If dirt or debris has built up on the clamp, clean it as this may prevent a good contact being made.

- Ensure the brush is wet with fluid.
- Ensure that the work is conductive. If the metal has a plastic film or a thick layer of oxide, the current cannot flow through the work. A mechanical or chemical method may need to be used to remove any insulating film before the Cougartron can be used.
- Examine all cables for damage and ensure they are properly connected.
- Ensure the brush is securely screwed into the wand. NOTE: Be careful when checking, as a loose connection may be extremely hot.
- Check screw threads on the handle, wand and brush for dirt and contamination and clean if required.

8.3 ProPlus Error Codes

Error No	Name	Description	Solution
1	Input Voltage Low	If input voltage is too low, then the machine cannot function properly. Activates at 95v	Ensure the machine is connected to a stable power supply. Also, long extension leads can cause a voltage drop.
2	Input Frequency Low	If input frequency is too low, then the Power Transformer cannot work. Activates at 40Hz	Ensure the machine is connected to a stable power supply. Ensure earth is connected.
4	Secondary Voltage missing	No voltage on the secondary side of the Transformer.	This could be due to low voltage supply, or a faulty Transformer. If problem persists then machine will need to be send for service.
8	Over Current Protection	If the output of the machine is shorted then the machine still cut output power to prevent anything from overheating or burning out. Activates at 450amp peak current	Ensure the output cables are in good working condition. Make sure that Genuine Cougartron Brushes and Cleaning Fluids are being used. Ensure that the brush crimps are not touching the work piece. Ensure that protective insulation on cables/handle/wand are not broken or damaged.
16	Over Temperature Protection	If the temperature in the machine exceeds 90 degrees, the machine will cut power to prevent overheating or burning.	Allow the machine to cool and then continue working again.
32	Input Voltage High	If the input voltage is too high then the machine will cut out to prevent damage to the electronics. Activates at 264v	Ensure the machine is connected to a stable and regulated power supply.
64	Input Frequency High	If input frequency is too high, then the Power Transformer cannot work. Activates at 70Hz	Ensure the machine is connected to a stable power supply. Ensure earth is connected.

Contact your Cougartron distributor or visit Cougartron website for more help at: <https://cougartron.com/machine-support/>

9. Warranty Terms

This warranty is given by BM Group International ApS of Brydehusvej 23, 2750 Ballerup, Denmark, Tel: +45 4346 2010, Email: warranty@cougartron.com The benefits given by each warranty set out in this document are in addition to any other rights and remedies you may have under a law in relation to the services or goods to which the warranty relates.

What this warranty covers

This warranty applies to any defects in the goods that appears within 12 months from the date of delivery of the goods to you. To claim under this warranty, the defects must be notified to Cougartron and the goods returned to Cougartron within two weeks of their appearance. Cougartron will, at its option, replace or repair the goods within a reasonable time of receiving a valid warranty claim. Cougartron will pay for the repair or replacement but you must pay all other costs including all transport costs of returning the defective goods to Cougartron and Cougartron delivering the repaired or replacement part back to you.

How to make a claim

If you want to make a claim under your warranty, please contact Cougartron in writing to warranty@cougartron.com. You must include your full name, address and contact telephone number and the details of the defect in relation to which you make your claim. Cougartron will tell you whether you need to return the goods to BM Group International ApS or the approved local distributor. You will need to return the goods together with all accessories and parts for a full assessment and report.

Additional limitations, exclusions and requirements

This warranty does not extend to:

- consumables such as the brush, insulating shroud and wand;
- any defect caused by normal wear and tear or incidental or inconsequential damage;
- any defect caused by misuse, negligence or other abuse of the goods;
- any defect caused by accidents or alterations;
- goods that have not been cleaned and maintained in accordance with the user's manual supplied with the goods;
- loss or damage, including consequential loss or damage, to your work or facilities arising out of or in connection with the use of the Cougartron Machine; or
- unless otherwise expressly stated, any right to be reimbursed or compensated for physical or financial injury, loss, damage, expense, time or inconvenience (whether direct or indirect) arising out of the occurrence of the defect in the product or your inability to use the product.

To Qualify for an exclusive 24-month warranty please go to www.cougartron.com/machine-support/ and fill in your details



Proudly Distributed By:

Machine Serial Number: _____