

COOLING UNIT

**CS 601 W ALFIN**  
**CS 601 W PEGAS**  
**CS 601 W**  
**CS 601 WA**

INSTRUCTION MANUAL

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## 1. INTRODUCTION

Congratulations on your new ALFA IN product. We are proud to have you as our customer and will strive to provide you with the best service and reliability in the industry.

This Operating Manual has been designed to instruct you on the correct use and operation of your ALFA IN product. Your satisfaction with this product and its safe operation is our ultimate concern. Therefore please take the time to read the entire manual, especially the Safety Precautions. They will help you to avoid potential hazards that may exist when working with this product.

Read and understand this entire Manual and your employer's safety practices before installing, operating, or servicing the equipment. While the information contained in this Manual represents the Manufacturer's best judgement, the Manufacturer assumes no liability for its use.

CS 601 W / CS 601 WA are cooling units for cooling MIG/MAG, TIG or plasma cut torches. The appliances can be used for cooling resistance welding appliances too.

CS 601 WA is equipped with electronic that automatically switches the pump off if there is no electromagnetic field detected (no welding had been performed). CS 601 W is not equipped with this function.

CS 601 W ALFIN is equipped with an adapter for ALFIN 200 AC/DC, ALFIN 220 AC/DC PCF, ALFIN 202 TIG HF and Alfin 250 W TIG HF SYNERGIC. CS 601 W ALFIN is quipped by a pressure switch.

CS 601 W PEGAS is equipped with an adapter for PEGAS 200 AC/DC and PEGAS 200 AC/DC PULSE.

## 2. SAFETY INSTRUCTIONS AND WARNINGS

- OPERATION AND MAINTENANCE OF WELDING EQUIPMENT CAN BE DANGEROUS AND HAZARDOUS TO YOUR HEALTH.
- Once the packing has been opened, make sure that the machine is not damaged. If in any doubt, call the service centre.
- When unpacking the appliance, check that is not damaged. If in doubt, do not use it and contact the service centre.
- This appliance is designed to be used by qualified persons. Other people must not be allowed operate with that.
- Any electrical work required to install this appliance must be carried out by a qualified electrician.
- After having installed the machine, check that it is not standing on its electrical supply cable.
- This equipment must only be used by qualified personnel.
- During installation, any electric work must only be carried out by trained personnel.

- The machine must be used in a dry place with good ventilation.
- Make sure that no metal dust can be drawn in by the fan inside the machine, as this could cause damage to the electronic circuits.
- When installing the machine, follow the local regulations on safety.
- The position of the machine must allow easy access by the operator to the controls and connectors.
- Do not expose the machine to direct sunlight or to heavy rain. This equipment conforms to protection rating IP23S.
- The operator must be aware of all the special regulations which he needs to conform to when cutting in enclosed spaces with a high risk of explosion.
- To prevent electric shock, we strongly suggest the following rules:
  - Do not work in a damp or humid environment.
  - Do not use the machine if its cables are damaged in any way.
  - Make sure that the earthing system of the electric equipment is correctly connected and operational.
  - The operator must be insulated from the metal components connected to the return wire.
  - The earthing of the piece being worked could increase the risk of injury to the operator.
- Before opening the machine switch off the machine and disconnect it from the power socket.
- Only personnel authorised by this company can carry out maintenance on the machine.

## **2.2 ELECTROMAGNETIC COMPATIBILITY (EMC)**

This machine conforms to EN 60974-10 standard. However, the electromagnetic emissions generated could prove not be compatible with the maximum permitted levels for some classes of electrical equipment, such as the following:

- Domestic electronic appliances (radios, TVs, videos, telephones, burglar alarms, etc.).
- Computers, robots, electro-medical instruments and life-support systems.
- Radio-television transmitters and receivers.
- Pacemakers and hearing aids.
- All very sensitive electrical equipment.

The operator is responsible for the installation and use of the cutting machine. If there should be any fault in operations of other systems

## **3. CONDITIONS OF USE**

- This equipment must only be used by qualified personnel.
- During installation, any electric work must only be carried out by

trained personnel.

- Do not expose the appliance to direct sunlight or to rain or snow. This equipment conforms to protection rating IP23S.
- Place the appliance the way that the cooling air can enter the vents without restriction to. It is necessary to ensure that no impurities, especially metal particles, are not drawn into the machine.
- This appliance in terms of interference suppression is intended primarily for industrial premises. In the case of use of other areas may be need for special measures (see EN 60974-10).
- The appliance must be protected against
  - a) moisture and rain and snow
  - b) mechanical damage
  - c) draft and any ventilation of neighbouring machine
  - d) excessive overloading - crossing technical parameters
  - e) rough handling
  - f) running without the cooling liquid

#### 4. TECHNICAL DATA

The nominal data were measured at the ambient temperature 25 °C.

<b>CS 601 W ALFIN</b>		
	Units	
Cooling power (Q=1l/min)	kW	0,55
Total liquid content	l	3,0
Max. pressure	Bar	3,5
Max. flow	l/min	8
Input voltage $U_1$ [V/Hz]	V/Hz	230/1~50
Input current $I_1$ [A]	A	1,3
Protection		IP 23 S
Weight	kg	16,7
Dimensions (w x l x h)	mm	244 x 525 x 290
Standards		EN 60974-2

<b>CS 601 W PEGAS</b>		
	Units	
Cooling power (Q=1l/min)	kW	0,55
Total liquid content	l	3,0
Max. pressure	Bar	3,5
Max. flow	l/min	8
Input voltage $U_1$ [V/Hz]	V/Hz	230/1~50
Input current $I_1$ [A]	A	1,3

Protection		IP 23 S
Weight	kg	16,7
Dimensions (w x l x h)	mm	246 x 525 x 240
Standards		EN 60974-2

<b>CS 601 W, CS 601 WA</b>		
	Units	
Cooling power (Q=1l/min)	kW	0,55
Total liquid content	l	3,0
Max. pressure	Bar	3,5
Max. flow	l/min	8
Input voltage $U_1$ [V/Hz]	V/Hz	230/1~50
Input current $I_1$ [A]	A	1,3
Protection		IP 23 S
Weight	kg	16,6
Dimensions (w x l x h)	kg	244 x 525 x 290
Standards	A	EN 60974-2
Detected current	A	60 (switch to the manual mode for current bellow 60 A)

## 5. DESCRIPTION

### 5.2 MAIN PARTS

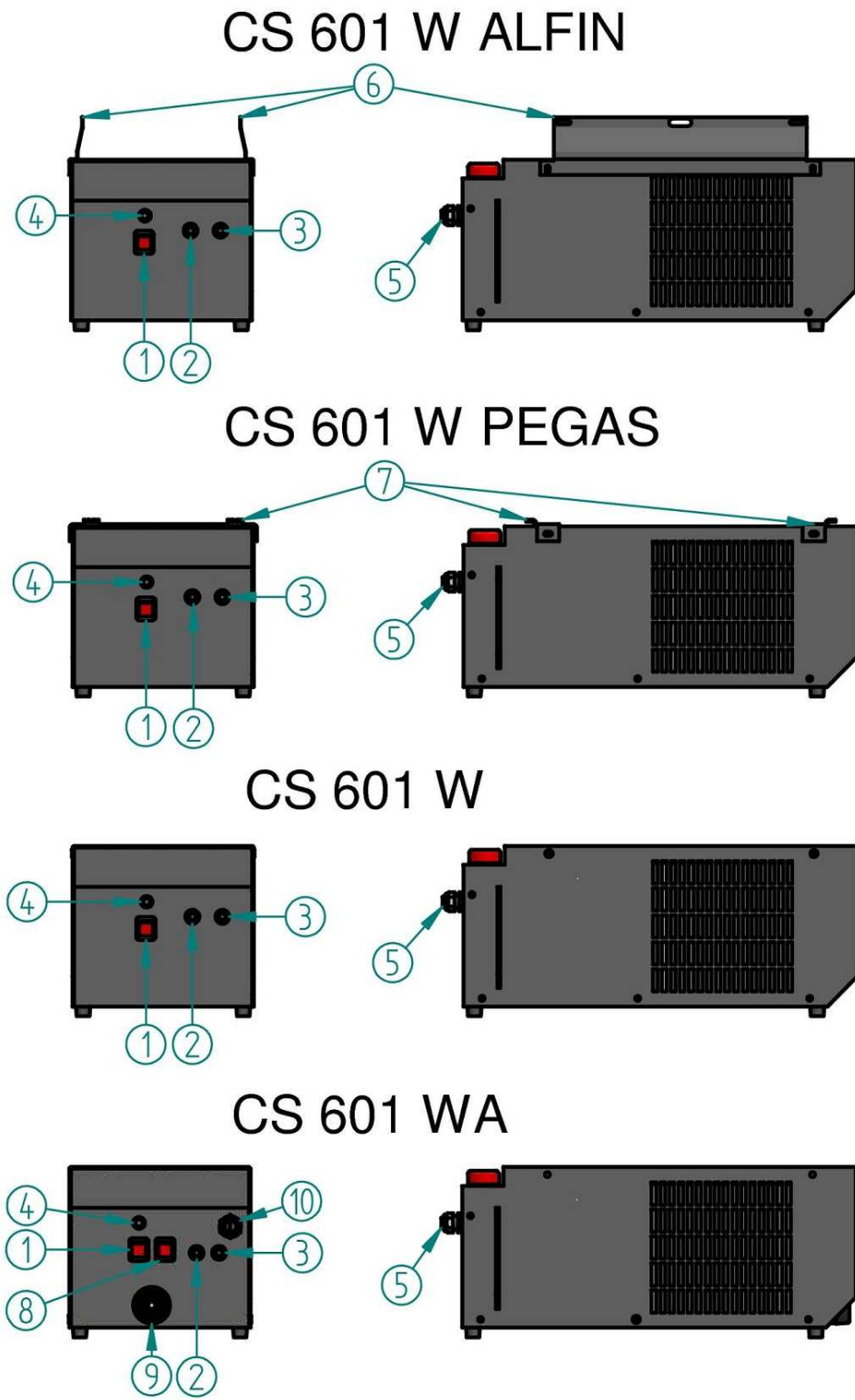


Fig 1: Main parts

pos.	Description
1	ON/OFF switch
2	Water quick connector - red
3	Water quick connector - blue
4	Fuse
5	Supply cable
6	ALFIN adaptor
7	Pegas adapter
8	Switch for manual or automat mode
9	Quick connector for the ground welding cable
10	Connecting cable with a plug

### 5.3 TECHNICAL DATA

Cooling power (Q=1l/min)	kW	0,50
Total liquid content	l	3,0
Max. pressure	Bar	3,5
Max. flow	l/min	8
Input voltage $U_1$ [V/Hz]	V/Hz	230/1~50
Input current $I_1$ [A]	A	1,3
Protection		IP 23 S
Weight	kg	16,6 – 17,4 (according a model)
Dimensions (w x l x h)	mm	242 x 525 x 225
Standards		EN 60974-2

## 6. SETTING UP

### 6.2 CONNECTING THE COOLING UNIT TO AN ALFIN WELDER

- Unscrew one of the adaptors ALFIN 6.
- There are three screws on the bottom side edge of the ALFIN welder (on both sides). Leave the middle screw as it is and unscrew the outer screws.
- Place the ALFIN welder on top of the cooling unit that way that the plastic front panel is flush with the front panel of the cooling unit. Gently press the ALFIN welder towards the adapter 6.
- Screw up the adapter 6 to the ALFIN welder. Use the original screws.



- Screw up the second part of the adapter **6**.
- Connect the cooling unit with the ALFIN welder by means of supply cable **5**

### **6.3 CONNECTING THE COOLING UNIT TO AN PEGAS WELDER**

- Unscrew the front part of the PEGAS adapter **7** and shift it towards the middle part of the cooling unit.
- Place the PEGAS welder on top of the cooling unit and push it onto the rear part of the adapter **7**.
- Shift the other part of the adapter **7** back to its original position and slid it into the empty space of the plastic front panel.
- Screw up the front part of the adapter **7** by the original screws.
- Connect the cooling unit with the ALFIN welder by means of supply cable **5**

### **6.4 GETTING STARTED**

- **👉IMPORTANT👈** Remove the sealing tape from top of the cup of the liquid tank.
- Check the level of the cooling liquid. The level should be between the red and blue signs (see the front panel of the cooling unit). In case there is not enough cooling liquid, fill it in. For MIG torches it is possible to use a mixture of pure water and anti-freezing liquid for aluminium motors (2:1), for TIG torches use original cooling liquids recommended by torch manufacturer.
- Connect the blue signed water quick connector of the welding torch into the blue signed water connector on the cooling unit **3**.
- Connect the red signed water quick connector of the welding torch into the red signed water connector on the cooling unit **2**.
- Switch the cooling unit ON (I) using the ON/OFF switch **1**.
- In case of CS 601 WA set the desired mode by means of the Switch for manual or automat mode **8**.
- M - manual, pump runs permanently.
- A - automatic, the pump is running while welding is performed and for a certain time after finishing welding (ca 4-6 min).

### **6.5 CONNECTING THE COOLING UNIT AND THE POWER SOURCE IN AUTOMATIC MODE (ONLY CS 601 WA)**

- Place the cooling unit into suitable place near the welding machine (in case of ALFI or PEGAS welders follow the manual as above).
- Connecting cable with a plug **10** into the earthing socket on the power source (welding machine, plasma cut ...)
- Connect the original earthing cable of the power source into the Quick connector for the ground welding cable

- Set the desired mode by means of the Switch for manual or automatic mode **8**.
- M - manual, pump runs permanently.
- A - automatic, the pump is running while welding is performed and for a certain time after finishing welding (ca 4-6 min).

## **7. MAINTENANCE**

We have designed this machine so as to reduce the amount of maintenance required to a minimum. Despite this, to keep the machine in perfect working order, you will need to arrange for a small amount of basic maintenance.

NOTE Only trained personnel are permitted to work inside the machine.

**BEFORE OPENING THE MACHINE, CUT OFF ITS ELECTRICAL POWER BY REMOVING THE PLUG FROM THE MAINS SUPPLY SOCKET.**

- Every six months, open the machine and clean it inside, using compressed dehumidified air.
- **CAUTION: DO NOT USE COMPRESSED AIR AT TOO HIGH PRESSURE. YOU COULD DAMAGE THE ELECTRONIC COMPONENTS.**
- Check the water quick connectors with the same frequency.

## **8. TROUBLE SHOOTING**

After transportation or if all the cooling liquid is lost, air may get into the cooling circuit. In this case:

- Switch the cooling unit off using ON/OFF switch **1**.
- Fill the tank with a proper cooling liquid. (For MIG torches it is possible to use mixture of pure water and anti-freezing liquid for aluminium motors (2:1), for TIG torches use original cooling liquids recommended by torch manufacturer.
- Disconnect the red signed water quick connector of the torch from the water quick connector of the cooling unit **2**.
- Switch the cooling unit ON for a short time.
- When the pump starts pumping the cooling liquid, switch the cooling unit off and put back the torch connector.

## **9. STATEMENT OF WARRANTY**

- In accordance with the warranty periods stated below, ALFA IN guarantees the proposed product to be free from defects in material or workmanship when operated in accordance with the written instructions as defined in this operating manual.
- ALFA IN products are manufactured for use by commercial and industrial users and trained personnel with experience in the use and

- maintenance of electrical welding and cutting equipment.
- ALFA IN will repair or replace, at its discretion, any warranted parts or components that fail due to defects in material or workmanship within the warranty period. The warranty period begins on the date of sale to the end user.
  - If warranty is being sought, please contact your ALFA IN product supplier for the warranty repair procedure.
  - ALFA IN warranty will not apply to:
    - Equipment that has been modified by any other party other than ALFA IN's own service personnel or with prior written consent obtained from ALFA IN Service Department.
    - Equipment that has been used beyond the specifications established in the operating manual.
    - Installation not in accordance with the installation/operating manual.
    - Any product that has been subjected to abuse, misuse, negligence or accident.
    - Failure to clean and maintain (including lack of lubrication, maintenance and protection), the machine as set forth in the operating, installation or service manual.
  - Within this operating manual are details regarding the maintenance necessary to ensure trouble free operation.



- Warranty repairs must be performed by either an ALFA IN Service Centre, an ALFA IN distributor or an Authorised Service Agent approved by the company ALFA IN.

## 10. DISPOSAL



Only for EU countries. Do not dispose of electric tools together with household waste material.

■ In accordance with European Council Directive 2002/96/EC on electrical and electronic equipment waste and its implementation in accordance with national law, electric tools that have reached the end of their service life must be collected separately and returned to an environmentally compatible recycling facility.