Sherman

ENG V3.5 17/7/26

USER MANUAL

WRC 300B COOLING UNIT



CE



WARNING!
Before installing and starting the appliance, please refer to this manual

1. GENERAL COMMENTS

The device can only be commissioned and operated after carefully reading these Operating Instructions.

Due to the continuous technical development of the device, some of its functions may be modified and their operation may differ in detail from the descriptions in the manual. This is not a fault of the device, but the result of progress and continuous modification work of the device.

Damage to the device caused by improper operation will void your warranty rights.
Any modifications to the charger are prohibited and will void the warranty.

2. SAFETY

Before starting the device, you should:
- Check the condition of electrical and mechanical connections. It is forbidden to use on electrical wires with damaged insulation. Improper insulation of electrical wires may result in electric shock,
- Ensure proper working conditions, i.e. ensure proper temperature, humidity and ventilation in the workplace. Outside closed rooms, protect against precipitation,
- Place the cooler in a location that allows it to be easily operated.

Cooler operators should:
- Have the necessary qualifications to operate electrical equipment
- Know and comply with health and safety regulations when operating electrically powered equipment
- Use appropriate, specialized protective equipment: gloves, an apron, rubber boots, a welding shield or a welding visor with a properly selected filter.
- Be familiar with the contents of this instruction manual and operate the coolers as intended.

It is forbidden to remove the external covers when the device is plugged in.
Any modifications to the cooler on your own are prohibited and may impair safety conditions.
The workplace should be equipped with firefighting equipment.
When you have finished working, the power cord of the appliance must be unplugged.



WARNING!

Do not use conductive coolants and antifreeze

- The electrical installation of the appliance should be in good condition and in accordance with generally applicable regulations.
- If any coolant leaks are detected, it is imperative to disconnect the device from the mains.
- Maintenance and overhaul work is only allowed when the appliance is disconnected from the mains
- Maintenance and renovation works should be carried out by professional personnel authorized to operate electrical equipment up to 1kV.
- During the operation of the cooler, generally accepted fire protection rules must be followed.

WARNING

Welding may endanger the safety of the operator and other people in the vicinity. Therefore, special precautions must be taken when welding. Before starting welding, you should familiarize yourself with the health and safety regulations applicable at the workplace.
The following hazards exist during electric welding:

- **ELECTRIC SHOCK**
- **NEGATIVE EFFECTS OF THE ARC ON HUMAN EYES AND SKIN**
- **VAPOR AND GAS POISONING**
- **BURNS**
- **EXPLOSION AND FIRE HAZARDS**
- **NOISE**

Electric shock prevention:

- connect the device to a technically efficient electrical system with proper protection and proper grounding (additional protection against electric shock); other devices at the welder's workplace should also be checked and correctly connected to the network,
- install power cables when the device is switched off,
- Do not touch the non-insulated parts of the electrode holder, electrode and welded object at the same time, including the device housing,
- do not use torchs and power cords with damaged insulation,
- in conditions of particular risk of electric shock (work in environments with high humidity and closed tanks), work with an assistant supporting the welder's work and watching over safety, use clothing and gloves with good insulating properties,
- if you notice any irregularities, you should contact competent people to remove them,
- It is forbidden to operate the device with the covers removed.

Preventing the negative effects of the electric arc on the eyes and skin of a person:

- Wear protective clothing (gloves, apron, leather shoes),
- Use protective shields or visors with a properly selected filter,
- Use protective curtains made of non-flammable materials and properly choose the colors of the walls that absorb harmful radiation.

Prevention of poisoning by vapours and gases emitted during welding from the electrode coating and metal evaporation:

- Use ventilation devices and exhausts installed in positions with limited air exchange,
- Blow fresh air when working in confined spaces (tanks),
- Use masks and ventilators.

Burn prevention:

- Wear appropriate protective clothing and footwear to protect against burns caused by arc radiation and spatter,
- Avoid staining the garment with greases and oils that may lead to ignition

Explosion and fire prevention:

- It is forbidden to operate the device and weld in rooms with a risk of explosion or fire.
- The welding station should be equipped with fire-extinguishing equipment.
- The welding station should be located at a safe distance from flammable materials.

Preventing the negative effects of noise:

- Use earplugs or other noise protection equipment
- Warn of danger to people in the vicinity

3. GENERAL DESCRIPTION

The WRC 300B cooler is used to liquid-cool the welding torches for MIG/MAG and TIG welding. The cooler and torch create a closed circuit, allowing welding equipment to operate regardless of water availability and reducing water consumption. The use of a cooler also extends the life of the welding torches.

4. TECHNICAL PARAMETERS

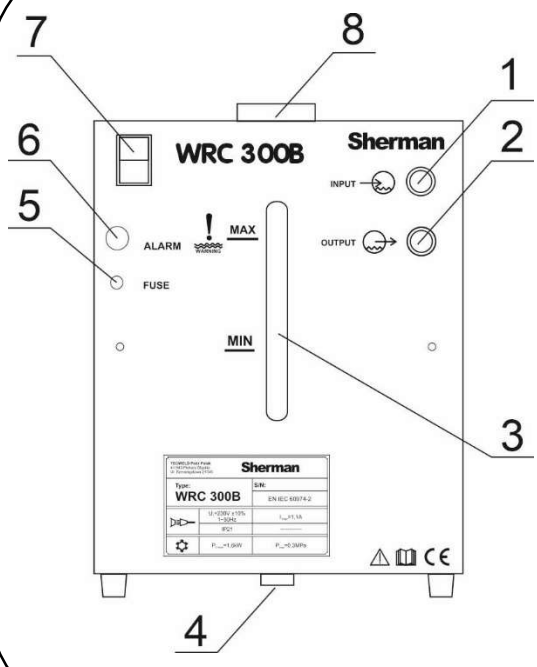
Supply Voltage	AC 230V 50Hz
Pump power	370 W
Coolant Flow	8.0 l/min
Coolant pressure	0.3 MPa
Rated cooling capacity	1.6 kW (1l/min)
Tank capacity	6.5 l
Mass	15 kg
Overall dimensions	510 x 255 x 365 mm
Degree of protection	IP21S

Attention! The ratings have been set at an ambient temperature of 20 ºCto 25 ºC. The operating range of the device is specified in the range from -10 ºCto +40 ºC.

Degree of protection
IP determines the extent to which the device is resistant to the ingress of solid and water contaminants. IP21S means that the device is suitable for indoor use and is not suitable for storage or use in rain and snow.

5. CONSTRUCTION AND OPERATION

The WRC 300B cooler consists of a pump, fan, cooler, liquid tank and housing.
The coolant is fed by a pump from the tank to the cooled device, then the heated liquid gets back into the cooler, where it is cooled, and then flows into the tank.
On the front plate of the device there is a power switch (7) and quick-release sockets for the liquid entering (2) and flowing out (1) from the cooler. At the top of the case there is a coolant filler cap (8).
The device is equipped with a coolant flow sensor. If there is no or too low liquid flow, an audible alarm will sound and the ALARM LED (6) on the front panel will flash. In this case, stop working immediately and remove the cause of the alarm.



1. Coolant inlet socket (hot)
2. Coolant outlet (cold) outlet
3. Coolant level indicator
4. Drain plug
5. Fuse 1A
6. No Liquid Flow Alarm
7. Power Switch
8. Filler stopper

6. LOCATION

The cooler should be positioned in such a way that air can flow freely and the cooling air inlets and outlets are not blocked.

7. CONNECTION TO THE POWER SUPPLY

The appliance should only be used in a single-phase, three-wire, grounded zero point power supply system.
The WRC 300B cooler is designed to work with a 230V 50Hz mains protected by a 16 A fuse.
Before connecting the power supply, make sure that the power switch (7) is in the OFF (off) position.

8. PREPARING THE DEVICE FOR OPERATION

- Fill the cooler tank with liquid through the filler (8) located at the top of the housing.
- Connect the hot liquid hose from the welding torch  to the inlet socket (2)
- Connect  the cold liquid line to the welding torch to the outlet socket (1)
- Connect the appliance to the mains and set the power switch (7) to the ON position.

9. BEFORE YOU CALL FOR SERVICE

In the event of malfunction of the device, before sending the cooler for service, you should check the list of basic malfunctions and try to fix them yourself.
Any repairs to the appliance may only be carried out by unplugging the plug from the power socket.
Attention! The unit is not sealed and the user can remove the cooler housing to remove minor malfunctions.

Symptoms	Causes of improper work	How to proceed
Fan not working, pump not working	Blown fuse	Replace the fuse on the front of the appliance
When the cooler is switched on, the engine does not work	Seared motor shaft	Move the motor shaft vigorously clockwise, spray the motor stem with penetrating lubricating fluid.
	Blocked or bent fan	Move or bend the locking part or blade
The fan is working, the pump is not working.	Pump blocked.	Switch off the cooler immediately with the switch (7), switch it on again. Repeat the operation several times. If this does not help, turn off the cooler and blow the pump with compressed air through the outlet port (2), then switch on the pump. Make sure the fluid is pumped, connect the welding torch.
Too little liquid flow	Contamination in the water system	Check the coolant level, it must not be below MIN.
	Water system leaks	Replace coolant, it may be contaminated.
	Bent hoses	Check the internal cooler installation and the welding torch supply hoses
Too little thermal efficiency	Pump aeration Clogging of the water system Too little fluid in circulation Damaged pump Damaged fan	Check and proceed as above
Fluid leakage	Water system leakage Damaged tank	Check the installation and tank.

10. OPERATING INSTRUCTIONS

The cooler should be operated in an atmosphere free of corrosive components and high dust. Do not place the appliance in dusty areas, near running grinders, etc. Dust and metallic filing contamination of control boards, cables and connections inside the unit can lead to an electrical short circuit and consequently damage to the cooler.
Avoid use in environments with high humidity, especially in situations where dew occurs on metal components. In the event of dew on metal elements, e.g. after introducing a cool device into a warm room, wait until the dew disappears. It is recommended that the cooler be placed under the roof in order to protect it from adverse weather conditions if it is operated outdoors.
The WRC 300B cooler should be operated under the following conditions:

- changes in the rms value of the supply voltage not greater than 10%
- ambient temperature from –10°C to +40°C
- atmospheric pressure 860 to 1060 hPa
- relative humidity of atmospheric air not exceeding 80%
- altitude up to 1000m above sea level

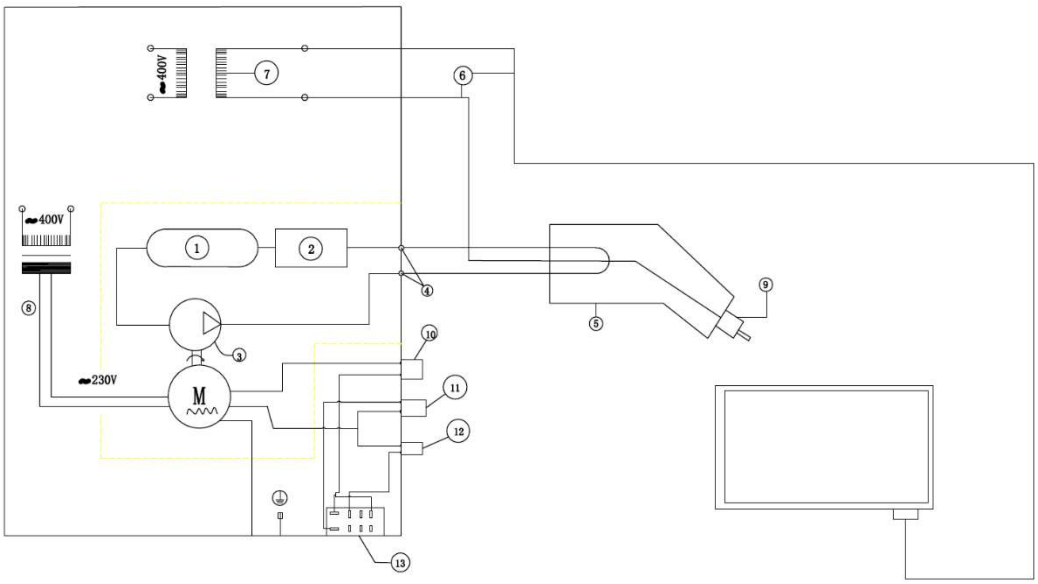
Non-aggressive ethylene glycol-based fluids from recognized welding equipment suppliers should be used as a coolant . The liquid should not be diluted.
Water must not be used as a coolant. as this may lead to damage to the fluid pump and failure of the entire cooler.

Spare parts list:

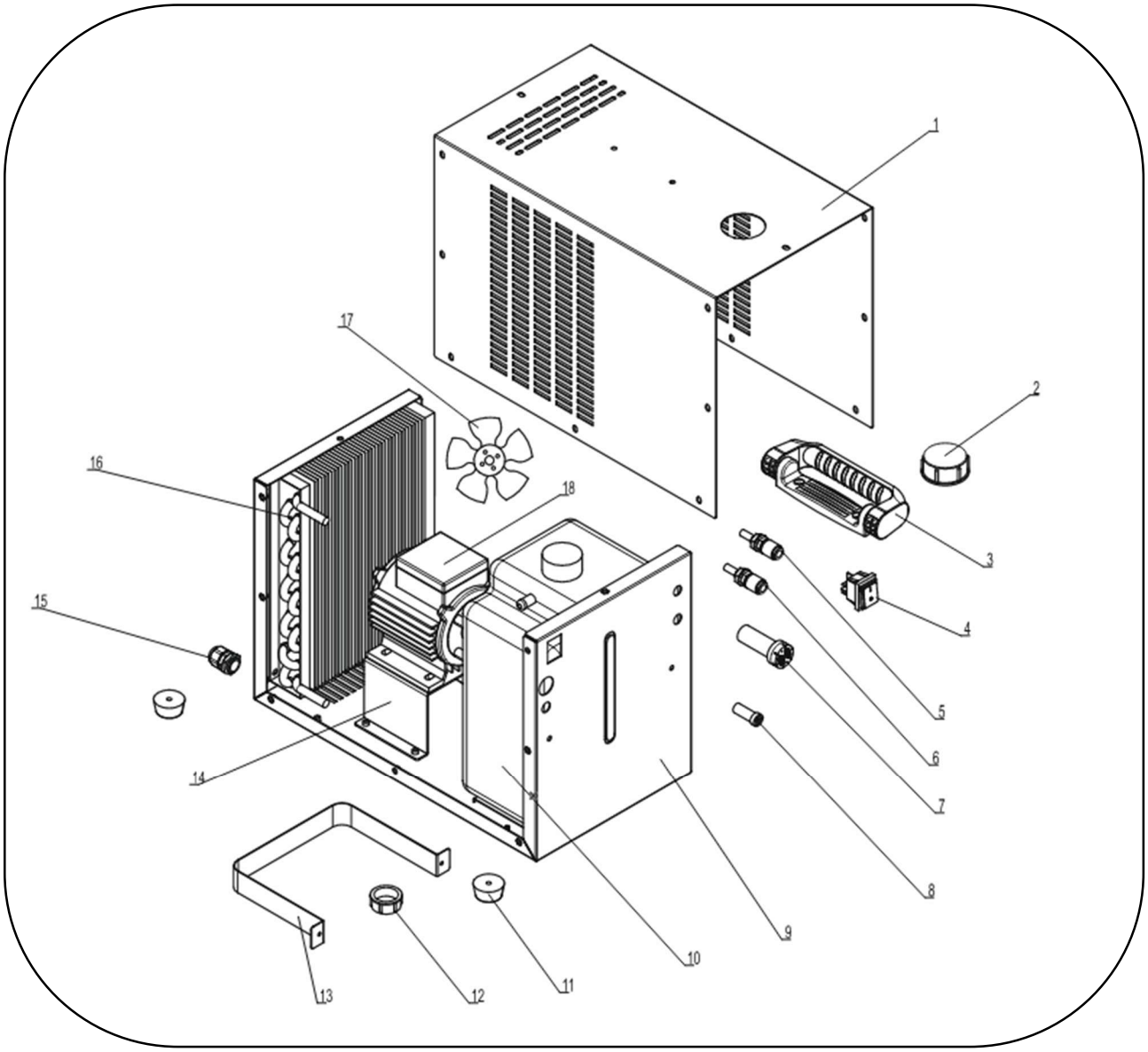
Name	Part number
Pump shaft seal kit	MB055004

Other spare parts available on request:

11. ELECTRICAL CIRCUIT DIAGRAM AND PARTS LIST



1. Tank
2. Heat exchanger
3. Pump
4. Grounded liquid wires cooling
5. Welding torch
6. Welding circuit
7. Welding Source
8. Power Source
9. Current Termination
10. Fuse
11. Flow sensor
12. Alarm
13. Relay



1. Case cover
2. Coolant filler cap
3. Transport handle
4. Power Switch
5. Coolant inlet socket
6. Coolant outlet socket
7. Alarm LED and buzzer
8. Fuse
9. Housing
10. Coolant tank
11. Footer
12. Coolant drain plug
13. Tank Clamp
14. Motor Bracket
15. Power cord gland
16. Cooler heatsink
17. Fan blades
18. Pump motor

12. MAINTENANCE INSTRUCTIONS

As part of daily operation, keep the cooler clean and check the condition of the external connections.
Replace consumable parts regularly.
Periodically remove the enclosure and clean the unit inside by blowing with compressed air to remove dust and metal filings from the control boards and wiring and electrical connections.
At least once every six months, the general equipment and the condition of electrical connections should be inspected, in particular:

- state of protection against electric shock
- isolation status
- security system status

13. STORAGE AND TRANSPORT INSTRUCTIONS

Store the appliance at a temperature of –10°C to +40°C and a relative humidity of up to 80% free of corrosive fumes and dust. Transport of packaged equipment should be carried out by covered means of transport. During transport, the packaged device should be protected against movement and provided with the correct position.

14. WARRANTY

The warranty is granted for a period of 12 months for business entities, but excluding warranty claims, or 24 months for consumers from the date of sale.
The warranty will be respected upon presentation by the complainant of proof of purchase (invoice or receipt) and a warranty card with the product name, serial number, date of sale and stamped point of sale.
To order a warranty repair, you need to fill in the form on the www.tecweld.pl website **in the SERVICE tab. On the basis of the notification, the device will be transported to the service by a courier company. Devices sent in any other way at TECWELD's expense will not be accepted!**
The device sent for complaint must be packed in the original cardboard box, secured with original polystyrene fittings. TECWELD is not responsible for damage to the cooler resulting during transport.



If you are going to dispose of this product, do not throw it away with ordinary household waste. According to the WEEE Directive (Directive 2012/19/EU) in force in the European Union, separate disposal methods must be used for used electrical and electronic equipment.
In Poland, in accordance with the provisions of the Act of 11 September 2015 on Waste Electrical and Electronic Equipment, it is prohibited to place waste equipment marked with the crossed-out bin symbol together with other waste.

The user who intends to dispose of this product is obliged to take the waste electrical and electronic equipment to a waste equipment collection point. Collection points are run, m.in, by wholesalers and retailers of this equipment and by municipal organizational units conducting waste collection activities.
The above statutory obligations have been introduced in order to reduce the amount of waste generated from waste electrical and electronic equipment and to ensure an appropriate level of collection, recovery and recycling of waste equipment. The correct implementation of these obligations is especially important when there are hazardous components in used equipment that have a particularly negative impact on the environment and human health.

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