

WeldTec[®]

OWNER'S MANUAL

WATER COOLING SYSTEM

MODEL C 2.5-1G (115 VOLT)
C 2.5-2G (230 VOLT)
CSK 2.5-1 (115 VOLT)



C 2.5-1G
DELUXE COOLER SHOWN

TEC Torch Company, Inc.

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www.tectorch.com

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1) INTRODUCTION

1.1 DESCRIPTION

The WeldTec water cooling system is designed for cooling TIG, MIG and plasma welding and cutting torches. The system may also be used for other cooling applications like spot welding equipment, casting equipment, induction heating equipment and a wide variety of other water cooling applications. The cooling system is built using proven industrial quality components designed to give long trouble free performance.

The unit consists of a stainless steel tank, a pump, a high volume fan and a large capacity radiator. The pump draws water from the tank through the radiator sending it to the torch or equipment to be cooled and returning the heated water to the tank.

1.2 FEATURES

The deluxe unit incorporates a gear pump with a bypass which returns the excess pump output to the tank. This keeps the pump cool and provides longer pump life. The standard unit uses a vane pump that does not have a bypass. The clear filler port allows the operator to see the coolant flow while the unit is operating. A filter is located in the pick up hose to keep debris from entering the pump.

1.3 SAFETY

CAUTION - Read and understand the operation manuals for all welding, cutting or other equipment which is being used with this cooler. Do not operate the cooler with the cover removed. Keep hands and fingers away from the fan area.

IMPORTANT - The operating voltage phase and frequency is marked at the front of the cooler. Only connect the unit to the voltage indicated. For 115 volt service use the grounded 115 volt 3 prong plug provided. **DO NOT** remove the ground prong from the plug. The 230 volt unit is shipped without a plug. Install the appropriate grounded plug. This connection should be made by a qualified electrician.

2) INSTALLATION

After unpacking the cooler, inspect the unit for any shipping damage. Shipping damage claims must be made with the carrier that delivered the cooler.

2.1 HOSE CONNECTIONS

Connect the welding equipment hoses to the "water to torch" and "water return" connections. The "water to torch" connection is the output line from the pump. The "water return" connection is the return line from the welding / cutting equipment back to the tank. **DO NOT** use a water on-off solenoid valve on the welding or cutting power supply. The water must flow through the equipment continuously while it is being used even during idle periods. Be sure all connections are snug but avoid over tightening.

2.2 FILLING THE TANK - 2 GALLONS

Remove the cover of the filler port and fill the tank with exactly 2 gallons (7.5L) of distilled water, deionized water or cooler coolant. **DO NOT** use tap water or automotive anti-freeze solutions. Deionized water may be required with plasma welding - cutting equipment. Consult the plasma equipment instructions for details. Replace the filler cap and run the unit for several minutes to remove any air in the torch lines.

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If the unit will be used in freezing conditions a nonautomotive anti-freeze or cooler coolant must be used. Follow the anti-freeze directions for proper mixture based on the lowest expected temperatures. Automotive anti-freeze contain additives which will harm the pump, torch lines and welding equipment causing permanent damage. Use of automotive anti-freeze voids the cooler warranty. Propylene glycol is recommended for safety reasons. **Keep antifreeze away from pets and children.**

**DO NOT OPERATE THE COOLER UNIT
WITH THE COVER REMOVED.
ELECTRICAL SHOCK CAN KILL,
MOVING PARTS CAN CAUSE
SERIOUS INJURY.**

3) OPERATION

ADJUSTABLE PRESSURE

The pump is equipped with an adjustable pressure bypass. The factory setting is 50 psi which will yield 1.7 gpm of flow. Some plasma torches or long extended cable assemblies may require higher pressure settings. Consult the equipment guidelines for maximum pressure ratings. To adjust the pressure setting unplug the unit and remove the hex cap if equipped on the side of the pump. Turning the adjusting screw clockwise will increase the output pressure and counter clockwise will decrease the output pressure. A pressure test gauge should be used to accurately set the output pressure. Do not exceed the maximum pressure rating for the equipment being cooled. When the desired pressure is reached secure the lock nut.

4) MAINTENANCE

CAUTION - Do not attempt any repairs or maintenance while the unit is connected to the input power supply. Unplug the unit before making any adjustments or repairs.

Consult the welding - cutting equipment manuals for maintenance requirements for that equipment.

Keep the unit clean and free from accumulated dust and debris. Blow off the unit and radiator fins with compressed air every six months or more frequently if needed. If the unit is fitted with a dust filter, blow off and wash the filter in soapy water, rinse and dry thoroughly.

Pump and drain the coolant from tank and flush with clean water annually. Flush out all lines at the same time. Replace the coolant with distilled water, deionized water or cooler coolant. Fill with exactly 2 gallons of fluid. Check all lines and hose clamps. Adjust or replace as needed.

The gear type pump will give long trouble free service. Pump wear is noticeable by a decrease in output pressure or flow rate. Pump wear will usually take place over a lengthy period allowing time to make repairs or replace the pump before complete failure occurs. A repair kit is available for field repair that contains internal pump gears, seals, etc. The entire pump can be quickly changed by means of the clamp connection.

The vane type pump tends to fail without any warning and is not field repairable. A spare pump will save time and can be quickly changed by means of the clamp connection if unexpected failure occurs.

Anytime a pump is replaced take the time to empty and clean the tank and refill with fresh coolant.

When ordering spare or replacement parts be sure to give the cooler model, part number and a complete description of the parts required.

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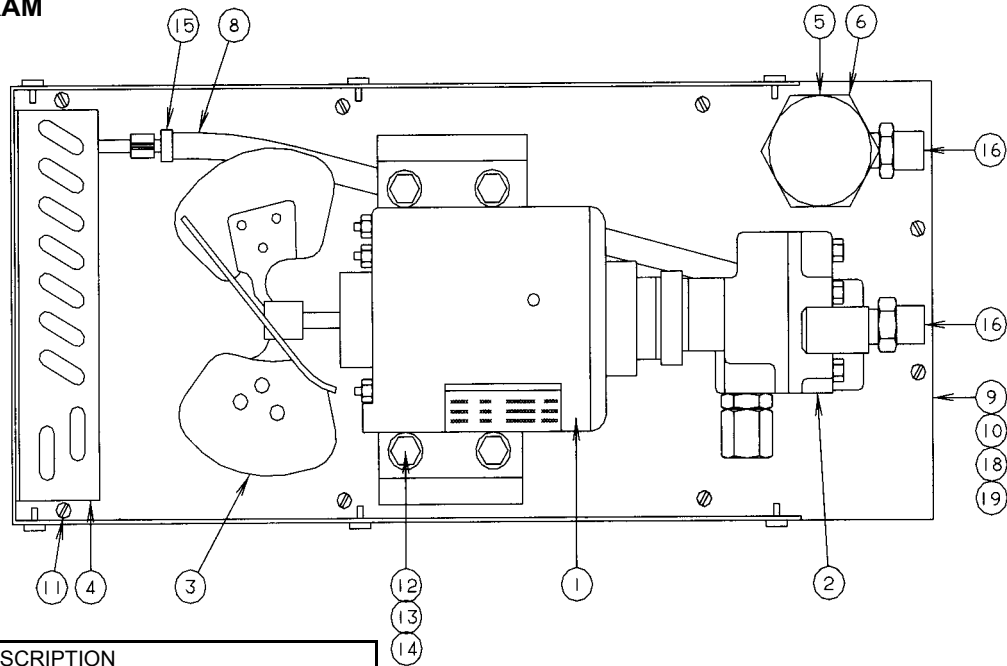
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Cooling System

PARTS DIAGRAM



ITEM	PART NO.	DESCRIPTION
	C 2.5-1G	Cooler w/Gear Pump 115V-50/60 Hz
	C 2.5-2G	Cooler w/Gear Pump 230V-50/60 Hz
	CSK 2.5-1	Cooler w/Vane Pump 115V-50/60 Hz
1	C 3000	Electric Motor 1/3 HP 115/230V-50/60 Hz
2	C 1110	Gear Pump - Oberdorfer
2	C 102RP-V	Vane Pump - WeldTec® (import)
N/S	C 11969	Gear Pump Repair Kit
3	C 3075	Fan
4	C 0900	Radiator Coil Unit
5	C 1500	Filler Port Assembly
6	C 1501	Filler Port Cap
8	C 0904	Pick Up Hose
9	C 0901	Sub-Plate
10	C 0905	Stainless Steel Tank
11	C 1000	Sheet Metal Screw
12	C 1001	Hex Bolt
13	C 1003	Flat Washer
14	C 1004	Nut
15	C 0903	Stainless Steel Hose Clamp
16	C 1005	Water Adapter
18	C 1006	Tank Gasket
19	C 1007	Tank Feet Pads (4 Pack)
N/S	C 1012	Plastic Parts Storage Box
N/S	C 1008	Strainer - Pick Up Hose
N/S	C 1009	Cord Relief
N/S	C 1010	Power Cord and Plug 115V-60Hz
N/S	C 0902	Stainless Steel Cover
N/S	C 1011	Hose Barb
N/S	C 0904	Bypass Hose (Gear Pump Only)
N/S	C 3003	Clamp (Gear Or Vane Pump)
N/S	C 3007	Coupling Key (Gear Pump)
N/S	C 3008	Coupling Key (Vane Pump)

SPECIFICATIONS

Pump Specifications and Capacity:

Factory pressure setting 50 PSI, adjustable 2-100 PSI.
Built-in bypass to tank (gear pump only).

Output: 1.7 gallons per minute @ 50 PSI.

Dimensions: 18" L x 9 1/4" W x 14 1/2" H.

Weight: Net 34 lbs. Shipping: 36 lbs.

Torch/gun connections:

Standard: 5/8-18 LH water adapter.

Model Data:

MODEL	MOTOR INPUT VOLTAGE	AMPERES INPUT FULL LOAD	PHASE	FREQUENCY (HZ)	COOLANT TANK CAPACITY
C 2.5-1G	115V	5.6	Single	50/60	2.0 gals.
CSK 2.5-1	115V	5.6	Single	50/60	
C 2.5-2G	230V	2.8	Single	50/60	

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