WeldTec®

OWNER'S MANUAL

WATER COOLING SYSTEMS

MODEL C20

C20
STANDARD (2 Gallon)

TEC WELDING PRODUCTS, INC.
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1) INTRODUCTION

1.1 DESCRIPTION

The WeldTec® water cooling systems are designed for cooling TIG, MIG and plasma welding and cutting torches. The systems may also be used for other cooling applications such as spot welding equipment, casting equipment, induction heating equipment, etc. Check BTU rating needs for other applications.

The cooling systems are built using proven industrial quality components designed to give long trouble free performance.

1.2 FEATURES

The units consists of a stainless steel tank, pump, motor, high volume cooling fan and aluminum finned radiator. The pump draws water from the tank sending it to the equipment to be cooled. The returning water is discharged bank into the tank for recirculation.

All units are available with an optional gear pump with a built-in bypass which returns the excess pump output back to the tank. This keeps the pump cool and provides longer pump life.

The clear fill port allows the operator to see the coolant flow while the unit is operating. A filter is located in the pick up hose to help prevent debris from damaging the pump.

1.3 SAFETY

CAUTION - Read and understand the operation manuals for all equipment being used with the cooler unit.

The installation and maintenance of this equipment must by done by qualified - knowledgeable persons only.

IMPORTANT - The operating voltage, phase and frequency is marked at the front of the unit. 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. The 230 volt unit is not shipped with a plug. Install an appropriate grounded plug. This connection should be made by a qualified electrician.

2) INSTALLATION

Inspect the shipping carton and cooler unit for any shipping damage. Shipping damage claims must be made with the delivering carrier.

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 power supply if there is one provided. The water / coolant must flow through the equipment continuously while it is being used and during idle periods. Be sure all connections are snug but avoid over tightening. Welding connections are self sealing and do not require Teflon tape to seal.

2.2 FILLING THE TANK

Remove the cover of the fill port and fill the tank with the EXACT number gallons for the specific model. **DO NOT OVER FILL**. Water or coolant warms up as it is used to cool the equipment and will expand, if over filled, the expanding fluid will leak out the top of the tank.

Only use distilled, deionize water or special coolant. **DO NOT** - use tap water or well water. Replace filler cap, check all connections and test run the unit for several minutes.

If the cooler will be used in freezing conditions a **non-automotive anti-freeze** should be added. Follow the anti-freeze directions for proper mixture based on the lowest expected temperatures. Automotive anti-freeze contains additives which will harm the pump, lines and equipment causing permanent damage. **Use of automotive anti-freeze voids the cooler warranty.** Propylene glycol type anti-freeze is recommended for safety reasons.

3) OPERATION

ADJUSTABLE PUMP PRESSURE
The pump is equipped with an adjustable pressure screw. The factory setting is 50 psi which will yield 1.7 gpm of flow. Some equipment may require higher pressure settings. Consult the manufacturers guidelines for maximum pressure ratings. To adjust the pressure setting unplug the cooler, locate the adjusting screw 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. CAUTION - most welding equipment requires flow volume, not high pressure for proper cooling. Check the flow requirements of the equipment being cooled for the proper fluid flow needs.

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 equipment manuals for maintenance instructions for that specific equipment.

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

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, dry and replace.

To replace the coolant, pump all coolant from tank and flush with clean water. Flush out the torch lines at the same time. Replace the coolant, distilled, or deionize water and fill with the exact gallons required for the tank size. Replace coolant yearly. Check all lines and hose clamps and adjust or replace as needed.

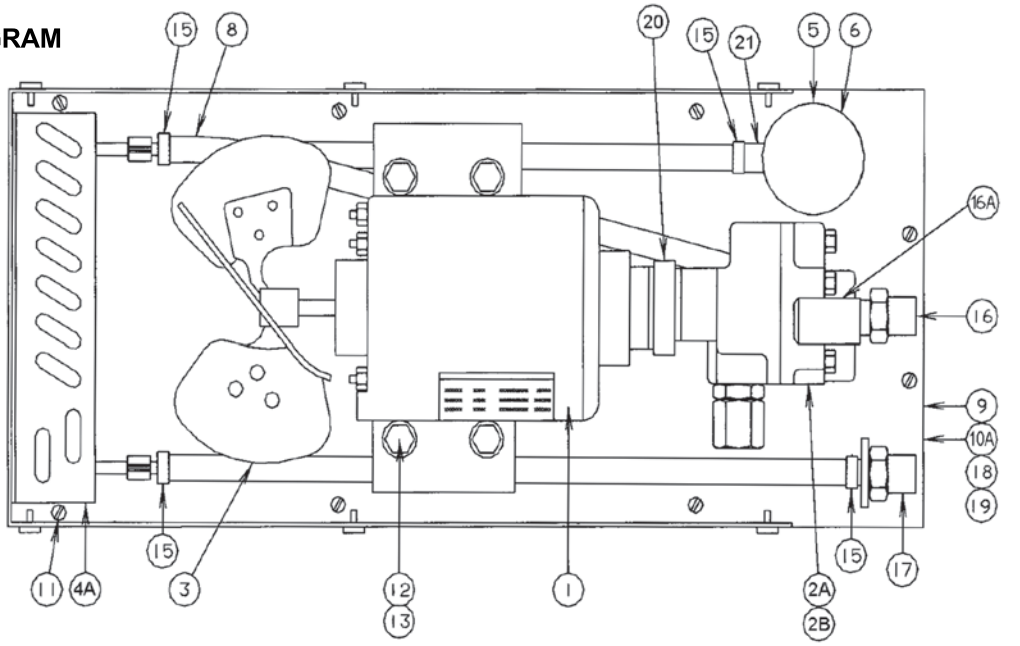
The gear type pump will give long trouble free service. Pump wear is noticeable by a decrease in output pressure or flow rate. The wear will usually take place over a lengthy period allowing time to make repairs or replace the pump before complete failure occurs. A repair kit is available for field repair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

The vane type pump will fail if the internal vanes are chipped or broken by debris in the lines, usually without warning. It is not field repairable, so a spare pump will save down time and can be quickly changed if unexpected failure occurs.

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

Water Cooler - C20

PARTS DIAGRAM



ITEM	PART NO.	DESCRIPTION
1	C 3000	Electric Motor 1/3 HP 115/230V-50/60 Hz
2B	C 102RP-V	Vane Pump - WeldTec® (Standard)
3	C 3075	Fan
4A	C 0900-2	Radiator Coil Unit C20, C25, C35
5	C 1502-1	Fill Port Cap
6	C 1502-2	Fill Port Tube
8	C 0904	Hose, 3/8 I.D. typ.
9	C 0901-1	Top Plate
10A	C 0905-1	Stainless Steel Tank 2 Gal.
11	C 1000	Sheet Metal Screw
12	C 1001	Hex Bolt
13	C 1003	Flat Washer
15	C 0903	Stainless Steel Hose Clamp
16	C 1005	Water Adapter
16A	C 1005A	3/8 Street Elbow 90°
17	C 1002	Hose Nipple
18	C 1006	Tank Gasket
19	C 1007	Tank Feet Pads (4 Pack)
20	C 3003	Clamp (Vane Pump)
21	C 1502-3	Nylon Hose Nipple
N/S	C 1008	Strainer - Pick Up Hose
N/S	C 1010	Power Cord and Plug 115V-60Hz
N/S	C 0902	Cover
N/S	C 1011	Hose Barb - 3/8
N/S	C 3008	Coupling Key (Vane Pump)

N/S - Not Shown

SPECIFICATIONS

Pump Specifications and Capacity:

Factory pressure setting 50 PSI.

Output: 1.7 gallons per minute @ 50 PSI.

Dimensions: C20 18″ L x 9 1/4″ W x 12 1/2″ H.

Dry Weight: C20 Net 31 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
C20	115V	5.6	Single	50/60	2.0 gals

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