

GREENCUT® PLASMA TABLE CIRCULATION SYSTEM INSTALLATION

HOW IT WORKS

Learn how a CNC Plasma Water Table GreenCut® Coolant should function with the proposed Coolant Circulation System; it's important to examine the Frequently Asked Questions (FAQ) for CNC Plasma Arc Cutting Tables, available [here](#).

Calculations for the CNC Plasma Cutting Table Coolant capacity are based on a volume of 100 US Gal. An initial requirement of 5 gal. (one pail) of GreenCut Plasma Cutting Fluid is determined for the table described, with additional amounts for topping up during operations. The pH of the coolant should ideally be maintained at 9. This proposed system is suitable for tables ranging from 50 US Gal. to 400 US Gal. For systems exceeding this capacity, a larger pump is recommended, and expert consultation is suggested.

For optimum results, circulating the mixed Water/GreenCut coolant is essential. The GreenCut Data Sheet and GreenCut Disposal Sheet provide comprehensive information on this process. Circulating and filtering the coolant not only removes waste particles but also extends the coolant's lifespan. Regular pH checks, ideally aiming for a value of 9 or higher, are recommended. Additional GreenCut Plasma may be required to maintain this pH level. For those using a previously-operated Plasma table, draining, cleaning, and starting anew is advisable.

Regarding the circulation equipment for the plasma table:

A detailed sketch of a typical plasma table Circulation System is provided. The design entails a pump suction positioned near the liquid's top to safeguard the pump from debris, while the discharge is directed lower into the tank.

The suggested pump detail has a capacity of 1/25 HP, which offers a circulation frequency of up to 4 times per day at 0.5 gpm for a 100-gallon Plasma table tank. Piping recommendations include 1/2" plug valves, 1/2" sch. 40 steel pipe and fittings, all screwed. This size is appropriate for table capacities ranging from 50 to 400 US Gallons. For infrequently used Plasma Tables, it is advisable to activate the circulation pump for approximately 2 hours every three days to prevent mold and bacterial growth in stagnant coolant.

It's believed that the CNC Plasma Arc table employs an air bladder to elevate the coolant directly against the plate being cut. Ensuring no air gaps between the cut plate and coolant is crucial for both safety and the quality of the cut. This precaution eliminates any smoke produced during plasma cutting. Given the extreme temperatures involved in plasma cutting, ranging from 7,000°F to 25,000°F, the metal undergoes both cutting and melting, releasing vaporized metal particles present in the smoke, **which are hazardous when inhaled.**

PROTECTING HANDS, FACES, LUNGS, AND ENVIRONMENT, WHILE PREVENTING MACHINE SHOP BACTERIA 'STINK.'

Have questions? Reach us at: www.lubecorp.com

