SILVERBRITE EQUIPMENT INSTALLATION

Step 1.

After unpacking your machine please check you have the following parts:

1. Machine with fitted connection cable to 220/240 volt supply
2. Two process tanks
3. Four stainless steel anodes
4. Spare 10 amp fuse
5. Instruction leaflet

Step 2.

Connect suitable plug to the 220/240 volt connection lead.

1. Turn VOLTAGE CONTROL fully anti-clockwise.
2. Connect machine to 220/240 volt supply.
3. Turn VOLTAGE CONTROL clockwise and check that red light illuminates and VOLT METER needle moves.
4. Place process tanks under the 3 stainless steel bars.
5. Fill both tanks 1/2 full with tap water.
6. Add **DETARN SALTS** to left tank.
7. Add **SILVERBRITE 100 SALTS** to right tank.
8. Using 2 of the anodes, stir the solutions until all the salts are dissolved. Do not mix solutions by using only 1 stirrer.
9. Fill up the process tanks to 30mm below the top and stir again.
10. Fit 2 anodes to each process tank, one on the front and one on the rear bar. Leave the centre bar empty.

Plant is now fully installed ready for use.

Operating Instructions

1. Suspend the pieces to be processed on hooks or wires made from copper, silver or paper clips that have been straightened. Try not to allow pieces to cover each other
2. Dip the items on the hook into the left tank (DETARN) making a connection onto the centre bar. Turn the VOLTAGE CONTROL to 3.5 volts.

Please note that the voltages used on the **SILVERBRITE** machine are very low and safe and cannot harm you.

You should now see gas bubbles being formed in the process tank. This action is "scrubbing" the surface of the pieces to remove tarnish, grease and oil.

3. After 20 seconds remove the pieces and wash under a tap or dip into 2 containers containing clean tap water. Rinsing is important as the cleaner will effect the life of the **SILVERBRITE** chemical.
4. Place the items into the **SILVERBRITE 100** bath and connect to the centre bar. Adjust the voltage to 3.5 volts if necessary. Bubbles will appear in the tank to show that the process is working.
5. After 1.5 to 3 minutes,(see **TESTING THE EFFECTIVENESS of the PROTECTION**) the longer the time of process the longer the resistance to tarnish, for the maximum effectiveness process for 3 minutes, remove the items, rinse well in tap water and dry the items using Kleenex, maize dryers, hot air(Hair dryer) or solvent based systems.

Items are now fully protected from tarnish.

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Tips

1. If you are not seeing bubbles form in either of the tanks, check that the anode connections are clean. Wipe the bars with a damp cloth.

2. Failure of the voltmeter to read, often means that the protection fuse has blown. This is normally caused by trying to do many pieces at one time or accidentally touching the anodes with the articles when placing them into the tank. Change the fuse and restrict the size of each work load to an area equivalent to not more than 10 ladies rings. Take care when placing large pieces into the tanks, not to contact the anode plates.

3. Maintenance of Bath
Keep clean, cover when not in use. Store liquids in closed bottles if they are not to be used for several weeks. Add 25 grams per litre of SILVERBRITE salts if a test item fails the test for effectiveness (see TESTING .....) below.

4. Safety
Do not allow the chemicals to come into contact with the skin or eyes. Although they are not strong in the dilute form you use them they will cause "stinging" in eyes and skin abrasions. If accidental contact is made, rinse well in water and seek medical advise if any irritation persists. The DETARN is Sodium Hydroxide based and the **SILVERBRITE 100** is Chromate based. Do not drink fluids.

5. Disposal
Do not discharge the mixture directly into a river or stream containing aquatic life. Chemicals should always be disposed off by specialist companies

6. Avoid the use of abrasive or impregnated cloths when cleaning or wiping **SILVERBRITE 100** treated surfaces.

7. 1 litre of **SILVERBRITE 100** is capable of processing approximately 2000 ring sized items before replacement becomes necessary.

8. The removal of the **SILVERBRITE** layer may be necessary if electroplating is needed or the finish is not satisfactory. To remove the film, place the item in the DETARN solution and electrolytically clean for 20 seconds, alternatively, mix 50 ml of concentrated Hydrochloric Acid in 50 mls of tap water, stir and immerse the items to be stripped for 20 seconds at room temperature.

TESTING THE EFFECTIVENESS of the PROTECTION

This method is based on the system used by leading retail buyers to test that an effective anti tarnish film has been applied.

a. Make up a solution of 20 mls of Ammonium Hydrosulphide in 1000 mls water at room temperature, or alternatively 20 grams of Potassium Polysulphide in 1000 mls water at room temperature.

b. Place an item that has been treated in the **SILVERBRITE** system into the solution for 30 seconds. If the item stays white, the film is effective against tarnishing for a 6 month period. To comply with the test standard of major retailler Marks and Spencer Ltd, increase the process time to 2.5 to 3 minutes (depending on the condition of the solution) and the test time in the Sulphide solution to 30 minutes.

CHECK A SAMPLE OF YOUR PRODUCTION EACH WEEK TO ENSURE PROTECTION

SILVERBRITE has been proved to be effective at preventing tarnishing on 8,9,10 and 14 K Gold, Copper and copper plate, brass and bronze as well as Sterling, 500, 600, 800 and fine Silver and Silver plate.

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