



Best Practices for Safe Machine Shutdown & Restart



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Before Shutting Down the machine

1. Remove tools from spindle, clean spindle taper, and apply grease to prevent rust.
2. Ensure the machine table, LM guideways, Ball screws are free from coolant. Apply grease at any exposed areas.
3. Check the battery voltage. Ensure all drive and system batteries are healthy. Replace any battery if voltage is below 5V.
4. Back up machine data and keep it secured.
5. Move all axes to the centre before shutting down.
6. Secure all electrical cabinet doors. Do not leave any food near the machine to avoid attracting rats, which can damage cables and other parts.
7. Clear chips from machining chamber and cover.

Additional Points for WIRE EDM during long shutdown

1. Remove the wire from the wire path.
2. Do not leave the workpiece on the table.
3. Clean and dry the upper and lower heads.
4. Clean and dry the work tank.
5. Clean and dry the jet nozzles and the wire guide unit.
6. Clean and dry the D-roller, H-roller, I-roller, LM rollers.
7. Check the machine for any moisture and clean it.

Additional Points for SINKER EDM during long shutdown

1. Clean the worktable and remove all dirt.
2. Clean the work tank.
3. Check for any moisture and clean the machine.

Before Power ON machine after long period

1. Remove grease from the table and ATC arm, and clean these areas thoroughly.
2. Check around the machines for any signs of rats or other animals.
3. Open Electrical Cabinet and check for any cable damage caused by rats.
4. If there is cable damage, identify and replace them before powering on.
5. Check the incoming power supply and make sure the voltage is within the acceptable range.
6. Turn off all contactors, then turn ON the main MCB.

After Power ON Milling machine

1. Top up grease and oil if required.
2. Release the Emergency stop button after controller is ON. Check if any alarms appear on the monitor.
3. Clear any alarms and reference all axes.
4. Run the spindle from lower RPM to maximum speed in steps of 500, with tool loaded in the spindle.
5. Check all functions and warm up the machine for one hour.

Wire EDM Power ON Tips

1. Do not power ON the machine at the same time as the other machines in the factory.
2. Wait for 10-15 minutes before powering ON the machine.
3. Check for any battery alarm (e.g. Alarm 20: battery dropped).
4. Release air lock on the ION bottle and pump.
5. Top up water if bed tank is low.
6. Check if the filter is delivering water to the clean tank.
7. Turn on flushing with tank fill for 15 minutes to stabilise flushing before starting machining.
8. Calibrate wire tension.
9. Clean the upper and lower heads.
10. Confirm the air pressure needed for operation (0.6MPA).

Sinker EDM Power ON Tips

1. Do not power ON the machine at the same time as the other machines in the factory.
2. Wait for 10-15 minutes before powering ON the machine.
3. Top up dielectric oil if the bed tank is low.
4. Turn on flushing with tank fill for 15 minutes to stabilise the dielectric before starting machining.

uCell B80 Shutdown Tips

1. Detach gripper from the robot hand.
2. Bring the B80 to home return position using the portable panel.
3. Shut down the B80 IPC using the operator panel monitor for A-type interface.
4. Turn off the connecting machine(s).
5. Turn off the B80 isolator switch.

uCell B80 power ON Tips

1. Turn on the connecting machine(s).
2. Turn On the B80 isolator switch.
3. Reset and clear the B80 alarms and reference all axes.
4. Run the Job Manager application and engine in B80 operator panel (A-type interface).