Introduction to Morbidelli N100

If you are unsure of anything, please don’t hesitate to ask UQ Innovate Staff
If something is untidy, wrong or broken Report IT!

Start Up Procedure

Starting at back of machine. Identify Wall Isolation for Air and Power and how they function.
Also note extraction control panel this needs to be on for all material milling and drilling operations.
Identify Air shutoff valve on the machine it needs to be shut off at end of use so that compressed air doesn’t bleed through an un-energised solenoid when machine is off. Push down on the aluminium plunger to open the valve.

Identify machine isolator and switch on by rotating clockwise
Once machine has switched on “Maestro Active” and log in, details are.

Username: Admin       Password: “nil”
Once Maestro opens the “alarms” will need to be cleared using the control panel reset button and the various “emergency stops”.
Homing / Axis Calibration, Click the calibration Icon

Press Manual “Cycle Start” Button. At this stage it is good to understand how the “bumpers” work and how the machine needs a clear and uninterrupted path from collisions.
CREATE CHANGE
Depending on the machines location when it was shut down this time can vary between 2-5 minutes. Once the machine is calibrated it should have the Thumbs up.
Spindle Warm Up

It is important that the Spindle warm up is run every time the machine is started. On the toolbar locate the button for loading programs.

Now click on “load a program” and select “Spindle Warm Up.pgmx” from the favourites list.
Now Click the “Load” button on the next 2 pages.

The automatic cycle buttons should now be flashing green press either one to commence the warm up process.
Make sure the motion control potentiometers are set to 100% or nothing will happen. The left knob controls rapid movements and the right knob one is for feed.

This program takes approximately 10 minutes to complete, now is a good time to check your program and get materials in order.

Once the program is finished running you will have a dialog box asking you to give feedback just click “no”.

Manual Data Input Procedures

There are several useful functions available from MDI to access click the “MDI” button on the toolbar.
Spindle Retract (M80)

It is important to retract the spindle before restarting a program especially if the tool is in contact with material failure to retract the tool before restart will result in damage.

Click on Restore (M80) then press the cycle start button on the hand control.
Park (M100)

Sometimes we need to move the machine gantry to either the left or right for loading of materials, cleaning the machine or access to the tool store.

Click Park button & use the drop box to select (Parking Right X+) or (Parking Left X-) then press the cycle start button on the hand control.
Tool Change Cycle

At times we need to load and unload tools from the machine's spindle. This is especially important before machine shutdown. If the machine is left for long periods of time with a loaded tool, it can become stuck due to corrosion.

Use the top dialogue box to select the tool you want to load (select 0 if you wish to unload); the bottom box shows which tool is loaded.
Shutdown Procedure

Before shutting down the machine it is important that we have an empty spindle and all SCM software is closed on the desktop. Make sure Maestro active and Maestro are closed or there is a risk of file corruption.

Shut down the computer from the windows button as you would with any other PC.
Once the screen has gone blank you can switch off the power at the machine isolator. Rotate it counterclockwise.

Finally shut the air valve by pulling the plunger up. If you have been using the extraction switch it off at the control panel but leave the wall isolation for air and power in the on position.

Please ensure that the machine is clean and tidy for the next user and that the coversheet is put back on the machine.