



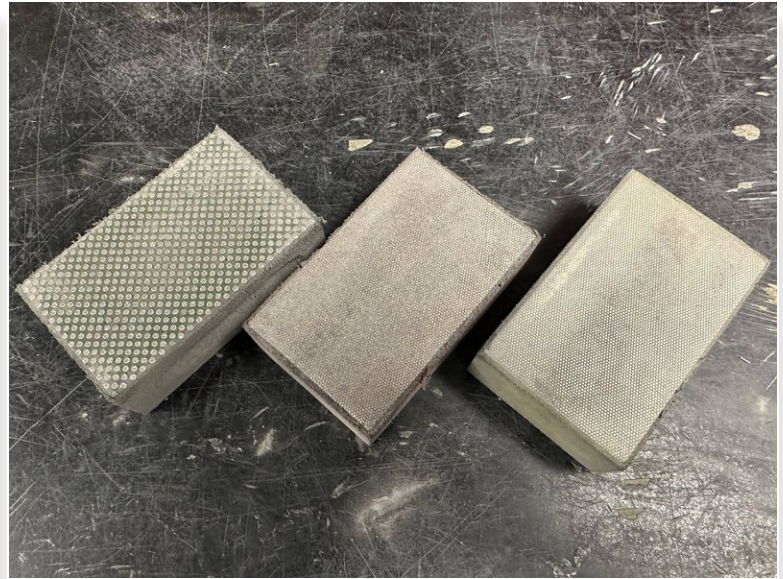
Roller Resurfacing

This guide will show you how to resurface the powder roller of the ProX. This should be done every 1-3 months, or if powder layers are uneven or streaky

Written By: Anderson Bussard

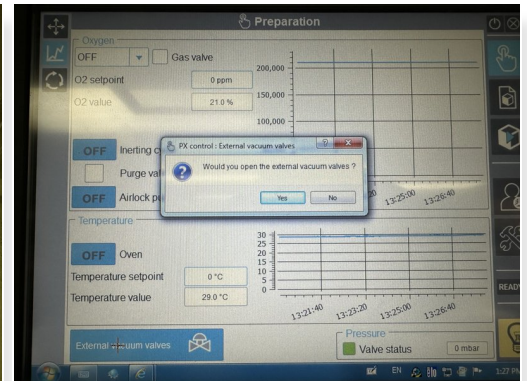
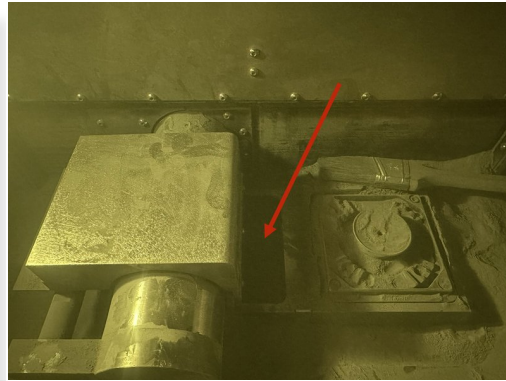
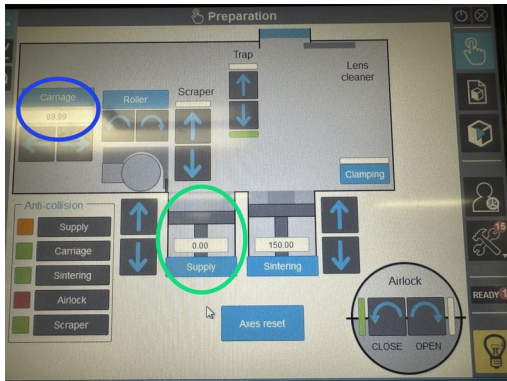


Step 1 — Gather Materials



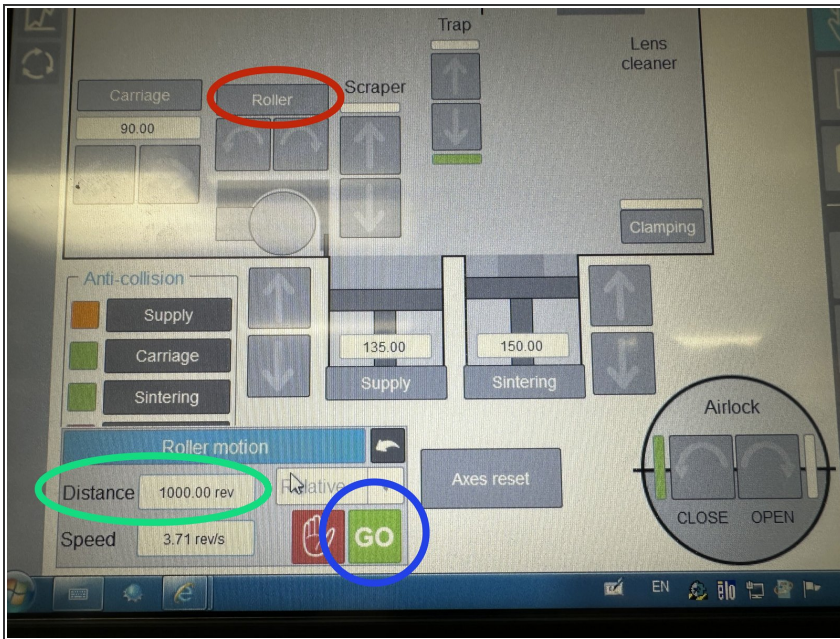
- ⚠ Always wear gloves and a mask when handling the blocks, placing them in the ProX airlock, or when operating the ProX itself.
- Resurfacing the roller requires 60, 200, and 400 grit diamond sanding blocks.
 - Other grits are fine, so long as there is a low, medium and high grit option. They must be diamond, because the roller is steel and common sanding blocks will not smooth the roller.

Step 2 — Positioning the Carriage and Powder Supply



- ⚠ Place the sanding blocks inside the machine before moving the Carriage. The airlock will not be able to open once the Carriage is in place.
- Set the Powder Supply to 0 mm.
- Set the Carriage to approximately 90 mm.
- There should be a gap just large enough to fit your hand underneath the Carriage, as seen in the second image.
- ① You may wish to "open the external vacuum valves.". While not strictly necessary, it will make moving your hands in the ProX easier. This option will be under the gas control submenu.

Step 3 — Starting the Roller



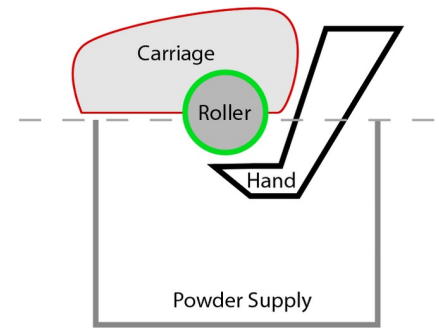
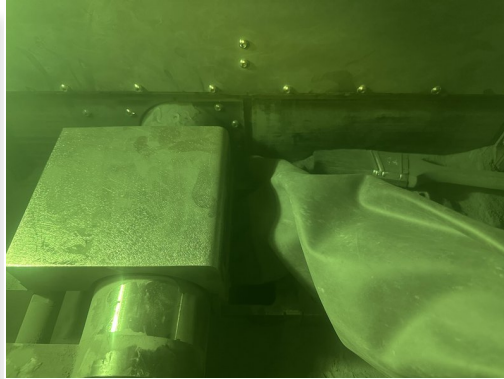
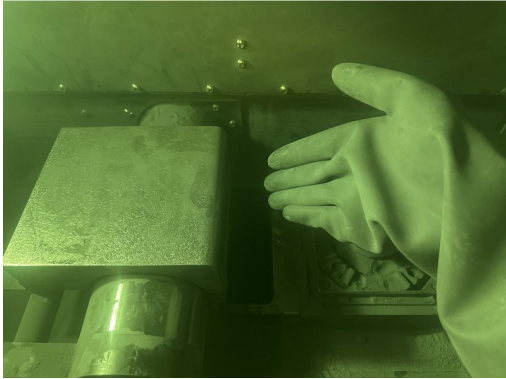
- Open the Roller menu, **set Distance to 1000**, then **press Go**.
- 1000 is the maximum value the machine will accept.
- ❗ The Roller will now be spinning, and stay spinning until it has completed 1000 revolutions or it's explicitly cancelled.
- ❗ When hands are in the machine, a separate menu will automatically open. The roller cannot be stopped from this menu.

Step 4 — Opening the Machine (Optional)



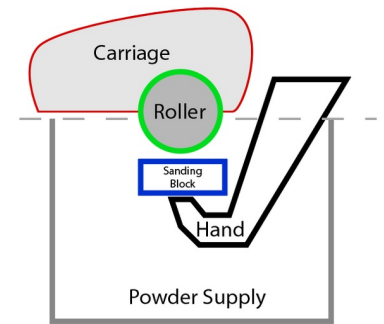
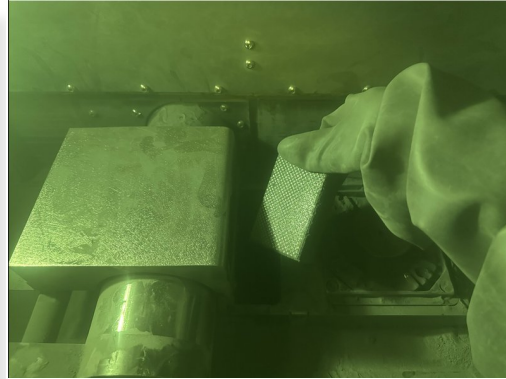
- ❗ Raising the front of the machine is the same process as opening the machine to clean the laser.
- Close the glass front panel so that it doesn't hit the ceiling.
- Raise the front cover by lifting on the grey handholds.
- ❗ Raising the front is optional, but allows you to reach further in the compartment, which can make positioning your arm and hand easier.

Step 5 — Finding the Roller



- Before sanding, find the Roller with your hand. Insert your hand underneath the Carriage, and gently feel the underside of the Carriage until you feel the spinning Roller.
- Keep your hand relatively parallel with the underside of the Carriage. This will minimize the already unlikely chance of the Roller grabbing the glove.
- See last image for expertly illustrated cutaway side view.

Step 6 — Sanding



- Insert your hand palm up, and the 60 grit sanding block underneath the Carriage.
 - There is no easy way to do this. You may need to press the sanding block against the Carriage or wall of the Powder Supply.
 - You may move the Carriage back, from 90 mm to some other distance, but the further back it is, the harder it will be to have proper contact between the Roller and the sanding block.
- Once positioned, firmly press the sanding block against the Roller using your fingers or the palm of your hand, and move the block side to side in a smooth motion to ensure that the entire Roller is sanded evenly.
 - ⚠ Avoid stabilizing the side of the block with your thumb. The Roller extends across the entire span of the supply, so each side of the sanding block should hit the wall of the supply. Your thumb will prevent this from happening.
 - ⚠ If you drop the sanding block, you will need to remove your hands from the machine, lower the front of the machine, stop the roller, move the carriage, and raise the supply to retrieve the block. Avoid dropping the block.

Step 7 — Repeating the Process



- Continue sanding with the 60 grit sanding block until the Roller stops.
- Remove your hands from the chamber, lower the front of the machine, and repeat steps 3-6, with the next higher grit of sanding block. (60 -> 200, then 200 -> 400 grit)
- ① If you still feel major imperfections after the Roller stops, you may need to repeat sanding with the current grit before moving to the next grit.

Step 8 — Cleanup



- Remove your hands from the ProX, and lower the front of the machine.
- Return the Carriage and Supply Piston to their original positions.
- Remove the sanding blocks from the machine and store them in their designated space.
- Power off the ProX.

