



DCPC250
DCPC500

AutoFinish DCPC250 & DCPC500 Centrifugal Barrel Finishing Systems
Operations Manual



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Specifications

DCPC250 Specifications

Max Capacity	0.25 Cubic Feet (7.07 Liters)
Barrel Capacity	0.0625 Cubic Feet (1.77 Liters)
Barrel Dimensions	W 4.5" (11.4cm) x H 6" (15.2cm)
Machine Dimensions	D: 30.1" x W: 28.5" x H: 51.5"
Machine Weight	~480lbs
Power Requirements	208/240 (\pm 10%) VAC, 50/60Hz, 1 \emptyset , 16A
Main Drive/Motor	1HP, Inverter-Controlled, Single-Phase
Operating Volume	Under 70 Decibels
Compressed Air	Not Required

DCPC500 Specifications

Max Capacity	0.50 Cubic Feet (14.16 Liters)
Barrel Capacity	0.125 Cubic Feet (3.54 Liters)
Barrel Dimensions	W 6" (15.25cm) x H 6.75" (17.15cm)
Machine Dimensions	D: 32" x W: 32" x H: 55"
Machine Weight	~600lbs
Power Requirements	208/240 (\pm 10%) VAC, 50/60Hz, 1 \emptyset , 20A
Main Drive/Motor	2HP, Inverter-Controlled, Single-Phase
Operating Volume	Under 70 Decibels
Compressed Air	Not Required

Shipping and Placement

Shipping Information and Customer Responsibility

Shipment to the customer will be arranged as specified in the price quote. The customer is responsible for providing detailed delivery information, including, whether or not there is loading dock at the delivery site. The customer is responsible for transporting the printer to a suitable installation site.

Shipping Crates

Machine Crate: 43”D x 43”W x 64”H

DCPC250 will ship with supplies and consumables in the crate.

The DCPC500 will ship with an additional pallet not exceeding 48”D x 48”W

Placement

1. Is there adequate room to set up the machine with a pallet jack?
 - a. The machine is placed on a pallet jack diagonally.
2. Is there a sink in the room?
 - a. Does the sink have a plaster trap attached to it?

The equipment should be conveniently located to the “flow of parts.” The DCPC System will require the appropriate electrical power. If a sump system and water recycling unit is to be used, separate power must be provided for those units as well. Sufficient work and storage space is also required.

Installation Area

The installation area must have a level surface. Allow 6” between each edge of the machine and the wall. The machine must be placed on included isolation pads. One under each foot. DO NOT fasten machine to the floor or wall.

Electrical Requirements

- Is there a NEMA style receptacle rated for a minimum of 240 VAC 20 amps within the vicinity of machine location?
- What is the NEMA style #?
- If no receptacle is available, is there a 208-240 VAC distribution panel with available space and ampacity for a 2-pole 20 amp breaker in the facility?

A certified electrician should be present on-site to check distribution panel and receptacle before installing the proper cord and plug.

Loading & Unloading

Rotating the Turret

When the shutter door is open, the turret may be manually rotated by pushing it either clockwise or counterclockwise. Bring the barrel you want to work on directly in front of you for easy loading & unloading. The motor will not be operational while the door is open.

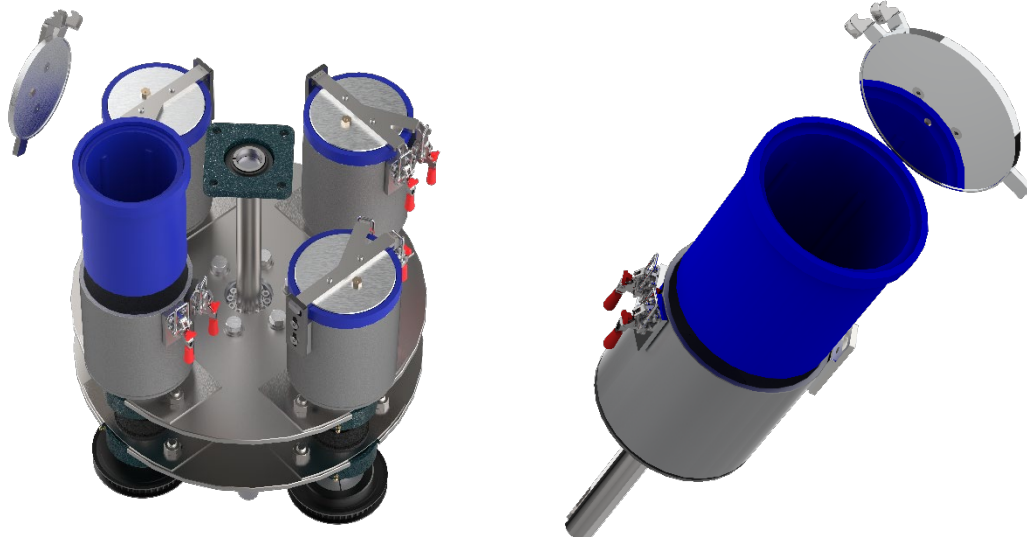
Loading Barrels

While holding the lock handle, push in the toggle lock. Pull the locks upwards and move the U-bolt out of the way. Pull out the lid and place it in the lid holder. Then, pull out the urethane barrel. Load the barrel with the contents (refer to the process report). Generally, you should first load the media, then the part, the water, then the compound. Always refer to your specific process recipe. Ensure that opposing barrels are always balanced by weight. 2 or 4 barrels should be filled at all times. If you are running an odd number of barrels, the opposing “empty” barrel should be filled with water to balance the weight.

Closing & Locking Barrels

It is important to ensure that the sealing surfaces of the barrel and the barrel lid are clean and free from media, compound, and parts that could disrupt the seal. Please follow the guidelines below for closing the barrels.

1. Clean the sealing surfaces of the barrel and lid of all media and compound. Rinse the lid.
2. Secure the locking clamps. Ensure they lock firmly into place and are not easy to unlock.
3. Pull up on locking clamps to ensure they are locked by the toggle lock. If the locks pull upwards and detach, they were not fully locked down.
4. If using only one or two barrels, use opposing barrels. This will balance the turret. Approximate barrel weights should be within ten percent of each other.
5. Operate the machine with all lids in place, even if the barrel is empty. Failure to do so may cause abnormal vibration or damage due to the machine being out of balance.
6. After locking all the barrels, a good safety practice is to rotate the turret by hand and double check all the locks one by one before closing the door.



Operating Tips

Here are a few tips for working with your CPC that should make production easier and more consistent:

- Always use a soap or detergent in every process. Otherwise the media will soon take on a glazed appearance and will no longer cut properly.
- Rinse parts after each step of the process. Do not let the compound dry on the parts.
- Do not let parts sit for an extended period after finishing. Some materials, especially aluminum and zinc alloys will develop corrosion spots if left in the machine for as little as 10 minutes after the end of the process. If the parts have sat in the barrel, operate the CPC for a few extra minutes before unloading the barrels. This may help eliminate spotting that may have developed.
- Never put compound directly on work pieces. Always load media and water on top of parts before adding compound or compound residue may be found on the parts.
- Thoroughly rinse the empty barrels between process steps.
- Never use the same scooper for more than one compound. Doing so will contaminate both products and may result in inferior finishing.
- Keep finishing media as clean and uncontaminated as possible.
- Avoid inadvertently mixing media together.

If the work pieces are subject to rust, a rustproof treatment must be used.



Touchscreen Operation

Startup Screen



Press “Select Recipe” button to begin process.

Recipe Viewing Screen

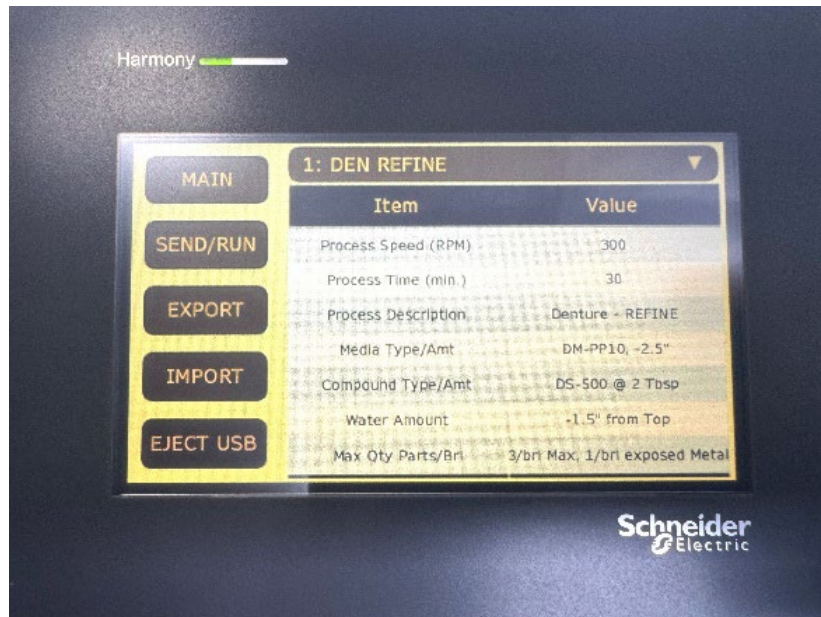


Tap the dropdown menu to view the list of saved processes.

Use the arrows to move up and down.

Tapping a process will reveal its details.

Selecting a Process Recipe



Confirm that the process details are correct.
To load the process, tap **SEND/RUN**

Ready Screen

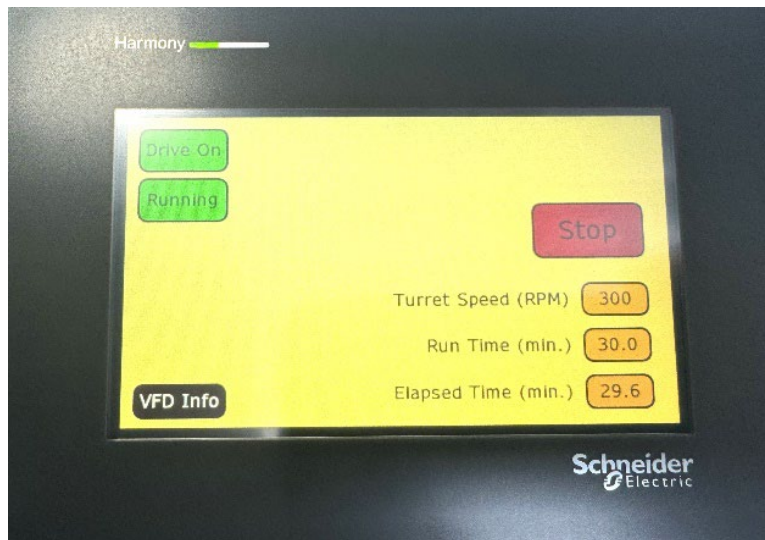


The machine is ready to start.

Before starting the machine ensure all the lids are secured to the barrels and the latches are in the locked position. Close the door then select the "lock" button on the screen. This will activate the safety lock on the door, and the **Drive On** button will turn green when the inverter completes its safety check. The machine will not start if the door is not locked.

Select **Start** to start the process.

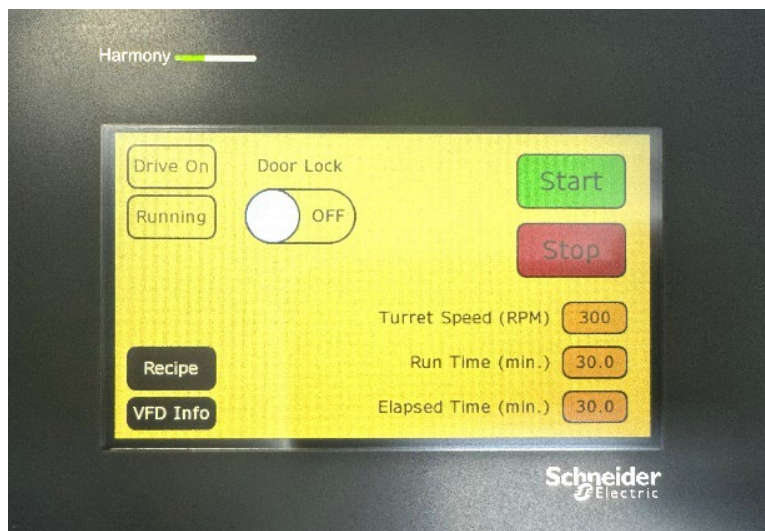
Process in Progress



To view real time details on the speed, and power consumption select **VFD Info**



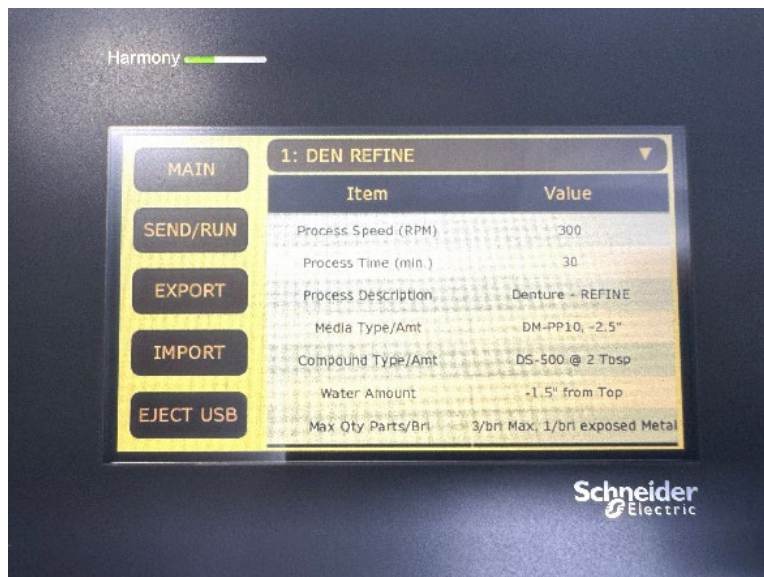
Real time details.



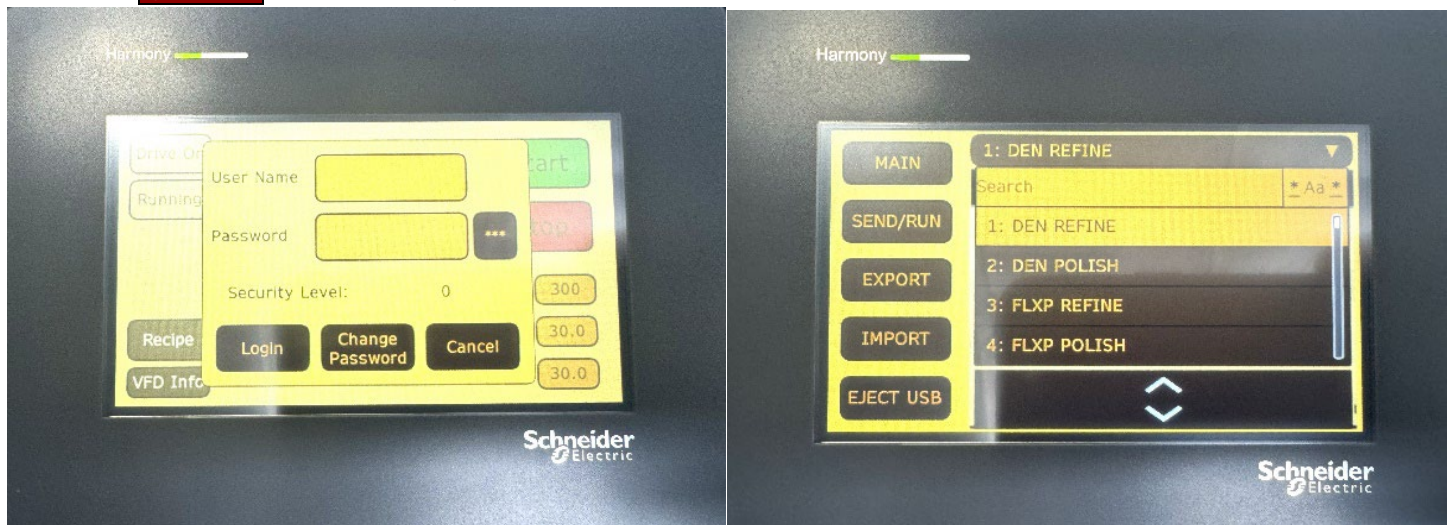
Once the machine comes to a full stop, select the **Door Lock** button to unlock the door.

Importing Recipes

Go to the Recipe screen by clicking **Recipe**, insert USB stick in the USB slot on the right side of the electrical panel.



Click **IMPORT**, input login and password (default login is **Tech**, password is **autofinish**), press enter, then login. (The system will log out after five minutes) Select the "Import" button to import the data from the USB stick. Note that all the data in the HMI will be overwritten with new data. We recommend backing up original data. When done, select the **Eject USB** button to safely remove the USB stick



To Update software, download update to the USB Stick, insert it into the slot then select "Update". *We recommend backing up original data before updating.* The unit will update itself and reboot with the updated software. Ensure all the original recipes are still installed. Then select **Eject USB** to remove the USB stick. Click **Send/Run**, then click **Reset** to reset the "Fault" button. System is now ready.

Preventative Maintenance Measures

Every Shift

- Inspect barrel lock bars.

First 50 Machine Hours

- Inspect barrel belts for proper tension.
- Inspect and tighten set screws on barrel shaft sprockets

First 250 Machine Hours

- Inspect barrel belts, and adjust as needed
- Inspect and tighten set screws on barrel shaft sprockets

Every 500 Machine Hours

- Grease turret bearings
- Grease barrel bearings
- Inspect barrel belts, and adjust as needed
- Inspect and tighten set screws on barrel shaft sprockets
- Inspect barrel linings

Every 1000 Machine Hours

- Inspect electrical connections and tighten as needed.