Charging Spruce Pine Batch in Wet Dog Glass Furnaces

The process:

* Ramp the furnace up to 2,400F and let it sit for an hour before the first charge.
* Charge 35-50 lbs batch per charge.  35lbs if not preheated, 50lbs if preheated.  (It can be preheated in an annealing oven to annealing temp.)
* Wait until there are no cold spots and the surface is flat before charging again.  This takes about 45 minutes if preheated, or 1:15 if not preheated.
* After last charge, soak for 7-8 hours at 2,400F, at which point you should have pinhead sized seeds 1/4" apart.  If they are larger or closer together, wait another 1/2 hr and take a sample to see if it's ready.
* Turn down to 1,950F-2,000F and let sit there until you come in the next day to sample it. Once you can see that the seeds are gone, ramp up to working temp and use the glass.

An ideal profile is:

Step 1: 2,100F in 1 second

Step 2: 2,400F in 15 minutes

Step 3: Soak 8 hours

Step 4: 1,950F 1 second

Step 5: End, Hold

To use this profile in a Watlow PM controller:

* Press the EZ1 key to send the furnace up and each time before you charge.
* The first time you press it, it will go to 2,100F in one second, then immediately go to 2,400F over 15 minutes and soak until you are ready to charge, up to 8 hours.
* The second time you charge, you will press EZ1 to turn the profile off, then press it again to run it again.  It will drop temp to 2,100F and slowly ramp back up to 2,400F.  This slow ramp allows the batch to skin over before the burner kicks in to high fire again, and this keeps dust down.
* Continue doing this, and after your last charge, simply walk away.  The profile will soak 8 hours at 2,400F, then go down to squeeze and hold there indefinitely.

To create the profile:

<https://www.dropbox.com/s/ivgjmyagi011ne8/Profile%20Setup.MOV?dl=0>

To start/stop the profile by using the EZ1 button, set up your EZ1 function by following the instructions in this video.

<https://www.dropbox.com/s/ckyidvdxhomzeqj/Function%20Menu.MOV?dl=0>

This link should take you to our manual that discusses glass melting on pages 37 and 38.

[https://www.dropbox.com/s/ckyidvdxhomzeqj/Function%20Menu.MOV?dl=0](https://www.dropbox.com/s/zzprjxat2iwhzm4/WDG%20Equipment%20Manual.pdf?dl=0#page=43)