

Start Up

1. Do not use unless properly trained.

2. Sign into log book.

3. Turn the melt indexer on by flipping the toggle switch located at the top right rear of the machine. The LCD screen will illuminate.

4. Run Method A.

Method A involves collecting extrudate from the instrument over a fixed period of time, then converting the result to grams/10 minutes. Material with melt flow rates (MFR) below 50 g/10 min. generally are conducted using Method A.

Programming the Melt Indexer

1. Press the EDIT smart key. You will be prompted to enter a program number. If none exist, enter any number.
2. Press the ENTER smart key to edit an existing program or to create a new program.
3. Enter Run Parameters
 - a. "METHOD =" Press the smart key until the 3rd line of the display has the A over the SELECT smart key. Press the SELECT smart key to select the method A test. The second line should now read METHOD = A. Press SELECT/ENTER to accept and move to the SET POINT.
 - b. "SETPOINT =" Enter a temperature using the numeric keypad and press enter. Press SELECT/ENTER to accept the value and move to the MELT TIME.
 - c. "MELT TIME =" Enter a melt time on the numeric keypad and press enter. Press SELECT/ENTER to accept the value and move to the NO OF CUTS.
 - d. "NO OF CUTS =" Enter the number of cuts from the numeric keypad and press enter to accept the value and move to the LOAD screen.
 - e. "LOAD =" Enter the LOAD from the smart keys or from the numeric keypad. Press ENTER twice.
 - f. "PROGRAM ID =" Enter the program ID and press ENTER when finished. Numeric and alphanumeric values may be input.
 - g. To save the program: Press ESC twice, select SAVE to save the program.

Choosing the Program

1. Press the PROGRAM button.
2. Enter the number of the program that was just created.
3. Insert the die and then the piston.
4. The temperature must equilibrate with the die and piston in place.
You must allow the indexer to reach the designated temperature before proceeding.

Loading the Sample

1. Remove piston rod making sure that the die had remained in the bottom of the barrel.
2. The loading should be done in two increments
 - a. First load approximately 60% of the material.
 - b. Tamp down the material with the packing tool.
The packing tool can be inserted through the fill funnel.
 - i. If bridging occurs, slide the funnel off to one side and tamp down on the material in the barrel.
 - ii. Move the funnel back into place.
 - c. Repeat with the remainder of the material.

Executing a Run

1. Place the plunger into the barrel.
2. Seat the guide bushing down into the barrel if it has not already fallen into place.
The guide bushing should move freely on the plunger.
3. Place the weight on the plunger rod and immediately press RUN.
Pressing RUN also starts the internal computer program running.
4. Wait for the melt time clock to count down from 360 seconds.
5. After melt time is completed, and after the piston lowers into the “run area” as denoted by the scribe marks on the piston assembly, make a cut and press RUN simultaneously.
A measurement may start when the 1st scribe mark has lined up with the top of the guide bushing. The run MUST start before the 2nd scribe mark lines up with the top of the guide bushing.

Making a Cut

1. When the lower scribe mark on the plunger reaches the top of the guide bushing *simultaneously*:
 - a. Cut the extrudate using the cutting knife in a wiping like action up against the bottom of the die.
and
 - b. Press RUN.
2. After pressing RUN a count down timer appears on the left of the front display.
As it counts down it will give a warning beep when 10 seconds remain in the cut time.
3. When the timer reaches zero and the machine beeps, quickly cut the extrudate up against the bottom of the die.

Weighing the Sample

1. Weigh the sample
2. Enter the weight in grams using the touch panel
3. Hit YES if correct.
The flow rate will be calculated and displayed immediately.

Cleaning up

1. Clean-up must occur with the melt indexer at operating temperature.
Do not allow the device to cool before cleaning.
2. Push down on the weight to purge any material remaining in the barrel.
3. Remove the rod by twisting it clockwise to break the seal created by the molten plastic.
4. Pull straight up.
If you pull the rod out too quickly you may cause a suction that pulls the die out along with it.
5. Wipe the plunger rod with a cotton rag.
6. Make sure the bushing can move freely up and down the rod.
7. Remove the die with the die removal tool.
8. Wipe it with the cotton rag and clean it by running the drill bit through it several times.
Remove material that collects in the grooves of the drill bit and repeat until the drill passes easily through the die.
9. Scrape the die with the cutting knife if needed to clean the faces.
10. Clean the barrel.
 - a. Put 2 cotton cleaning patches directly over the barrel about 1/2 way overlapped.
 - b. Using the cleaning tool, push the patch down into the barrel.
 - c. Run the patch up and down a half dozen times or so.
 - d. Repeat steps a-c twice.
 - e. The second set of patches should come out clean.
If not repeat the process until they do come out clean.
11. When done, put the die and plunger back into the barrel.
12. Put away all instruments.
13. Turn off the device.
14. Place cover over melt indexer.