

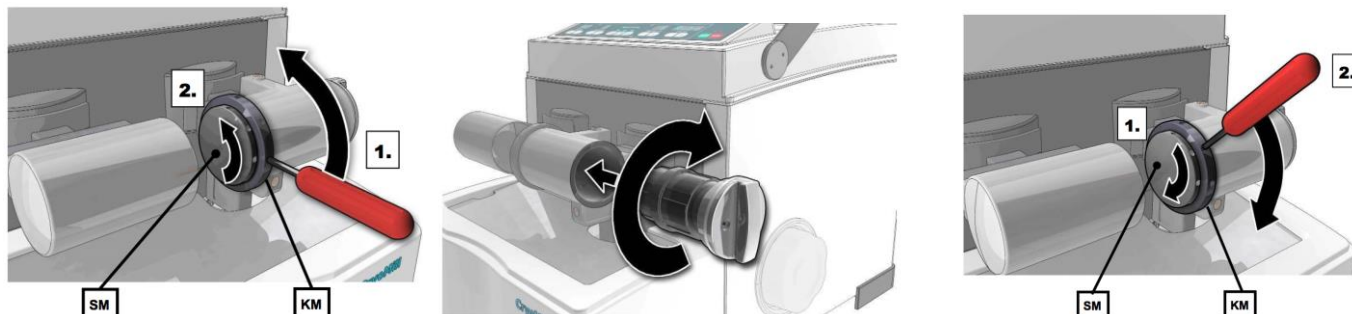
Simplified Procedures for CryoMill

1. Put sample and grinding balls into the grinding jar.

We have two types of grinding jars, one is 25 ml (for usually use) and the other is 6/4/2 x 2-ml Eppendorf reaction vial (where the grinding should be performed with a **maximum 25 Hz**).

For 25 ml grinding jars, **the sample quantity should be 4.0-10.0 ml**. 5-6 grinding ball of Ø10 mm or 1-2 grinding ball of Ø15 mm are recommended to use.

2. Insert grinding jars.

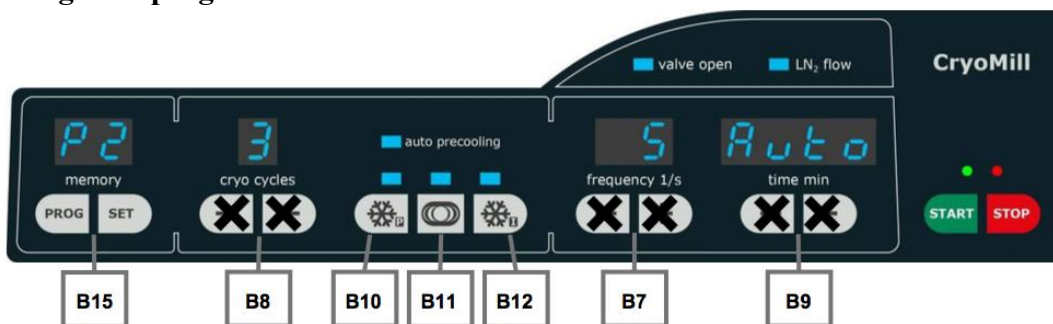


Release the grinding jar safety device first: unscrew the lock nut (KM) and then unscrew screw (SM) (Left figure). Then take off the jacket seal and completely screw the grinding jar in (Middle figure). In the end, tighten the screw by hand and then tighten the lock nut using the locking pin (Right figure). **Must follow the steps!!!**

3. Connect to the LN₂ supply.

The pressure in the external LN₂ supply line should be **0.5-1.0 bar**.

4. Grinding with program.



- (1) Turn on the CryoMill machine and use saved program to start grinding. Or select any program and press “set” to edit it (B15).
- (2) For editing a program: Press the button (B10) for at least 2 seconds until the “auto precooling” LED is lit up. Press the grinding time button (B11) and set the time (B9). Press the intermediate cooling button (B12) and set the time (B9). Set grinding cycles (B8). For rubber samples, auto precooling (5 Hz), grinding time for 2-3 mins (30 Hz), intermediate cooling time (5 Hz) for 1 min and 3-4 grinding cycles are recommended.
- (3) Press “start” to start the grinding and then the “valve open” LED will be lit up and “LN₂ flow” LED will be lit up when the LN₂ is detected.
- (4) During the process, if see any error, check the error message meaning from manual book (P53).

5. Get the ground sample and clean the machine.

When the grinding is completed, turn off the machine and turn off the LN₂ supply. **Wait until the grinding jar temperature return to room temperature** (~3 h). Release the grinding jar safety device (KM and SM), take out the grinding jar with the opening aid and replaced with jacket seal. Get the samples from grinding jar and **clean the grinding jar**. Put out the condensation collecting filter to let it dry and clean it regularly.