# Cryomodule Warm-up sequence

1. Stop regulation of LT01 (CV02) – done automatically when exiting 4K operation state
2. Close CV01, CV02, CV07
3. Open CV61
4. Close CV5202 (LINDE system), FV501 will be kept open (HNOSS), LT03 regulation still on (CV03))
5. Close FV401 (HNOSS) – stop thermal shield cooling
6. Wait for CV5202 to close
   1. When FV401 closed stop regulation and open CV60
   2. CV550 stop regulation and open (HNOSS: MKS2) m141.0 on CM PLC is used for turning on/off the PID regulator on MKS2.
   3. open CV552 (HNOSS: MKS1)
   4. Wait for LT03 < 0.5
      1. Stop the regulation of LT03 (CV03)
      2. Start the Valve box heaters (EH90, EH93-96, EH63\_64\_70, EH61-62, EH 60\_67-69, EH97-98
   5. Wait for LT01 < 0.5
      1. Start the CM heaters (EH903, EH920, EH918, EH904)
   6. Wait for LT01 < 0.5 AND LT03 < 0.5
      1. Open CV01 – CV04
7. Wait for operator’s command to stop the warm-up

Green text – already implemented