

Hamatech Mask Mask processor User Manual

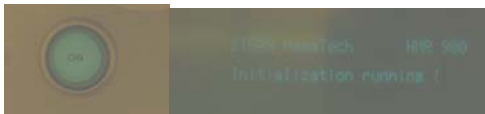
Version of 11.13.2017.

1. Introduction

This user manual explains how to operate the Hamatech HMR 900 mask-processor.

2. Login & System Initialization

- Login on “Hamatech mask Processor ...” with CAE on zone 6 accounting computer.
- In case of power off (no display) start with power on to activate display. A short initialize sequence runs automatically. Lines and chamber rinse with water. If not working see point No 7 FAQ.



3. Preparation: Chuck Loading

- Chuck for 4, 5 and 6 inch Cr-plate is installed by default (triple stage edge clamps). A special chuck for processing 7 inch Cr-plate is also available. (single stage edge clamps). Chuck switch requires any specific tool.

4. Preparation: Load Cr-plate

- Line purge with DI is recommended as soon as the tool was in idle mode for more than 2 hours. In case of doubt always run the purge sequence first with a dummy glass plate
- Put the mask to process correctly inside the 4 corners at the stage adapted to the Cr-plate size.
 - **! Take care !**
 - No vacuum is used to fix the plate during processing. Safe position need to be check at least for 2 corners



Check the position of the plate corners as pointed out

Rotate plate both direction briefly but firmly to check that plate movement results to consistent chuck rotation

5. Choose a recipe

Available recipe for standard application:

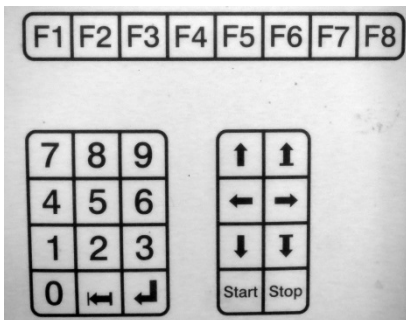
Prg: (min:sec)	Name	Purpose/
1 (08:30)	DEV/ETCH/STRIP (Prog 6 + 7 + 4 in one)	Full mask fabrication process (4 to 5 inch Cr-plate). Include standard development, Cr etching, resist stripping and final rinse dry
11 (08:30)	LOW D/E/S (Prog 16 + 17 + 14 in one)	Lower rotation speed for large size or thick mask (6 to 7 inch Cr-plate). Include standard development, Cr etching, resist stripping and final rinse dry.
5 (03:00)	RINSE/DRY 50s	As final rinse and drying sequence after a manual stop.
8 (04:15)	Lines Purge	For use after long standby period (> 6 hours) ! Use dummy glass plate!

Additional recipe are available to precede step by step. (See full listing of recipe in annexe I)

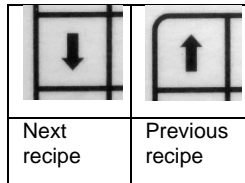
By default equipment is in automatic mode. Display at idle looks like.



Example idle mode. Program No 5 selected 1

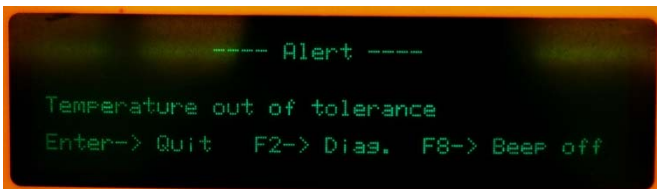


Use simple arrows up/down to navigate in available programs

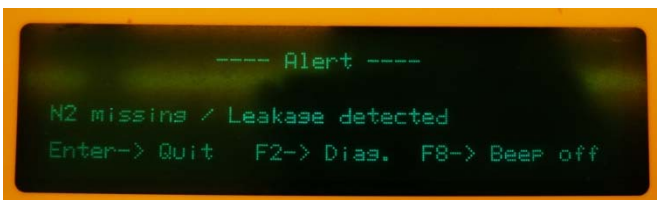


To start the recipe

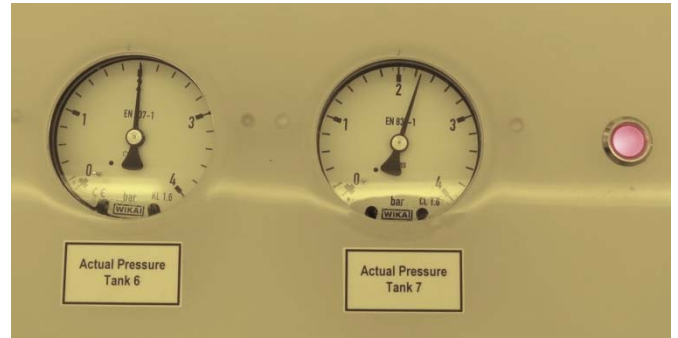
- Press start. In case warning for temperature occurs.



- Press F8 to stop the beep and
- Warning for N2 missing beep.



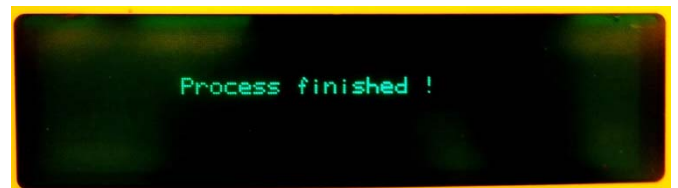
- Press F8 to stop the beep. Front safety door will close.
- Wait for rise up of canisters pressure to be stable (Tank 6 > 2 bars)



- Press Quit. () to continue Recipe starts and run till end of last step. Current step with parameters are displayed on line.



Safety door open at end of process. Message will disappear after a few seconds.



6. Unload and Close

Chamber is rinsed by remains wet. Remove plate from the chuck without touching the walls or the chuck. Some DI-water moisture still remains at the very center of the plate backside.

! Take care ! The gun at the left chamber side is not a dry nitrogen gun but a water washer for safety use after any unexpected stops.

We recommend to let the mask dry in air for 30 minute before use. (A specific storage/drying area is available in the Plade wetbench divers in zone 6)

Don't forget to sign out immediately after unloading.

7. FAQ

7.1 Initialization at power on:

A dummy plate was inserted and not accessible. Dummy is wet and need to be removed:

- **Power on and next Run program No 5 “RINSE/DRY” and removed it**

7.2 ON button did not light:

Release EMO

(Emergency Off button) or call for the staff



7.3 Initialization stops with “door not closed” error

You probably forgot to sign in to access the tool.



Login on “Hamatech mask Processor ...” with CAE on zone 6 accounting computer. and press

“Quit” 

7.4 Tank refill error:

Call staff for refill. No handling of chemicals by users allowed

7.5 Process was stopped by user or by unexpected alarm:

Take care of presence of active chemicals on the plate inside the chamber and of the walls of the chamber. A manual rinse is mandatory to avoid contamination with corrosive liquid dispensed during the process. A water gun feed with deionized water is available on the left side of the chamber. Wash chamber walls and plate for about

60 sec and next try to run program No 5 to finish with a standard rinse and drying sequence



Proceed with manual rinse before unloading any plate after any aborted runs (corrosive liquid may be inside chamber)



Use DI-water gun/washer to rinse inside chamber (including the plate inserted on the chuck)

Press “water gun” button simultaneously with the gun trigger