weedingtech

Foamstream

M600

QUICK START-UP GUIDE

ENGLISH (EU) – 16/05/2018 – ISSUE 3

Safety Information

To ensure safety while operating the M600, please carefully read the following information.

Operator Attention

WARNING

- Read and understand this user manual before operating the M600.
- The M600 should only be used by trained operators.
- Proper PPE is to be worn at all times while operating the M600.
- Major repair work should only be carried out by professionally trained service engineers.

Carbon Monoxide Hazards

WARNING

- Boiler and generator exhaust contains poisonous carbon monoxide gas.
- Never run the M600 indoors, even if a door or window is open. **ONLY USE IN A WELL VENTILATED AREA.**
- Do not use the M600 in potentially expolosive atmospheres.

Electric Shock Hazards

WARNING

- Do not operate the M600's electrical components with wet hands.
- Do not expose the generator to rain, moisture, or snow.
- Always ensure electric cables are in good condition.

Fire and Burn Hazards

WARNING

- LPG and diesel are explosive and flammable. Always ensure spark or fire source point away while refueling.
- Do not refill diesel while machine is in use.
- Clean up any overflowing fuel prior to turning on the M600.
- Never smoke while operating the M600.
- Do not touch the working components in the M600 while in use or immediately following use. Allow sufficient time to cool before servicing.
- Shut off generator by closing LPG supply to prevent unburned gas from remaining in the system.

Generator Fuel Warning

WARNING

NEVER USE PETROL IN THE M600. ONLY USE LPT TO FUEL THE GENERATOR.

If the generator is used outside the M600 as a backup generator and petrol is used, follow the instructions below prior to using the M600.

- **Remove all remaining petrol from generator and clean all spills and allow to dry/evaporate before putting the generator back inside the M600.**
- Turn the fuel switch (item 7 in Figure 3) to the **OFF** position.
- Connect LPG cylinder and start as normal.

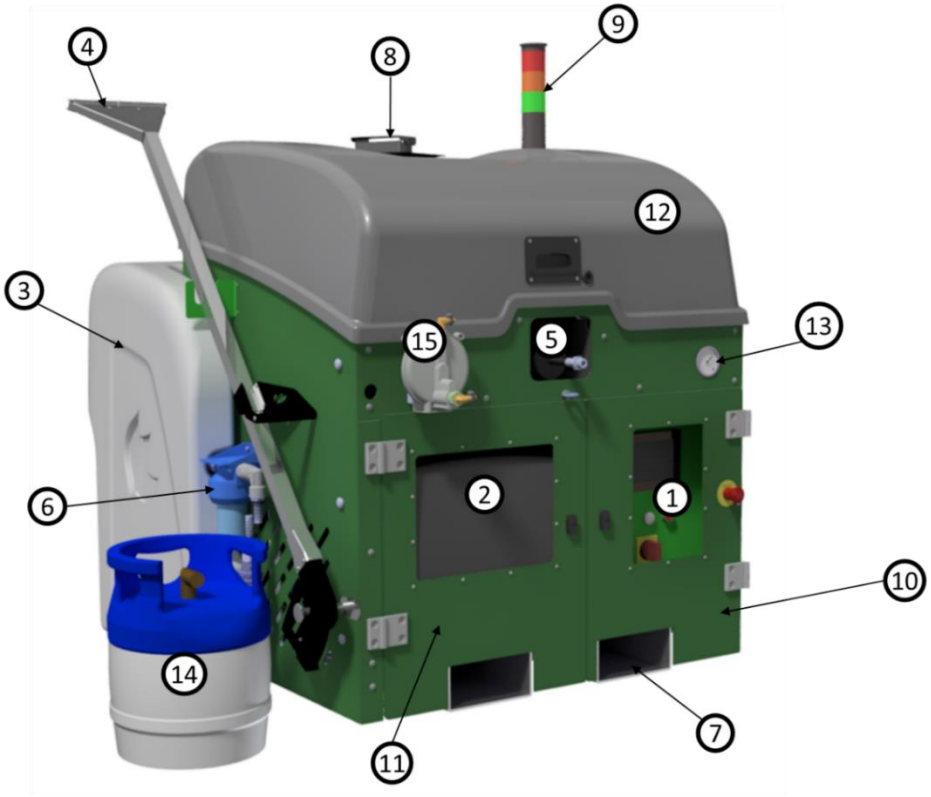


Figure 1 - Perspective view of the M600

Num.	Description
1	Control Panel
2	Generator
3	Water tank
4	Lance
5	Hose reel orifice
6	Water Filter
7	Forks entrance
8	Boiler exhaust flap
9	Warning light
10	Control panel access door
11	Generator access door
12	Top cover
13	Hydraulic pressure gauge
14	LPG cylinder
15	LPG regulator

Prestart checks

THE FOLLOWING CHECKS MUST BE COMPLETED BEFORE EVERY START UP OF THE M600. ANY FAULTS MUST BE RECTIFIED BEFORE THE M600 IS SWITCHED ON.

- ✓ The M600 is in good condition and securely attached to the transport vehicle
- ✓ The M600 water tank is securely attached to the transport vehicle
- ✓ The LPG cylinder is full, secured, and in good condition
- ✓ Water tank is full of clean water
- ✓ Water filter is clean and free from debris
- ✓ Air intakes are clear of debris
- ✓ The lance, hose reel and hose are securely connected and free from damage
- ✓ Lance wear pads are not excessively worn
- ✓ The water return pipe and water level sensor are connected
- ✓ Pipe/hose routes are clear of sharp edges and hot surfaces
- ✓ There are no signs of leaks from any pipe or connection
- ✓ Fuel tank is full of clean diesel fuel
- ✓ Boiler fuel filter is clean and free from debris
- ✓ The Foamstream® concentrate has not been subject to temperatures below 5°C and frozen or separated
- ✓ Foamstream® concentrate tank is full of clean Foamstream® concentrate
- ✓ Foamstream® filter is clean and free from debris
- ✓ Vent screw on Foamstream® tank filler cap is open
- ✓ Generator engine oil level is correct
- ✓ Pump oil level is correct
- ✓ Generator and boiler exhaust are secure and clear of debris and obstruction
- ✓ Fuel switch on generator is in the OFF position
- ✓ Generator is switched to normal mode
- ✓ Water feed valve is connected and in the ON (inline) position
- ✓ Air has been bled from water system
- ✓ The LPG cylinder valve is connected and open

NOTE:
CLOSE LPG CYLINDER VALVE WHEN MACHINE IS NOT IN OPERATION

NEVER RUN GENERATOR WITH LPG WHILE PETROL REMAINS IN THE PETROL TANK.

Filling with foam and Diesel

NEVER MIX FOAMSTREAM® CONCENTRATE WITH DIESEL.
ONLY FILL FOAM TANK WITH FOAMSTREAM® CONCENTRATE.

- ✓ Open top cover and prop up with rod.
- ✓ To fill diesel tank, open valve cap (RED - LEFT) (item 1 Figure 2) and carefully pour diesel until the tank is full.
- ✓ Replace cap and screw in until tight.
- ✓ To fill foam tank, open valve cap (GREEN - RIGHT) (item 2 Figure 2) and carefully pour Foamstream® concentrate until the tank is full.
- ✓ Replace cap and screw in until tight.

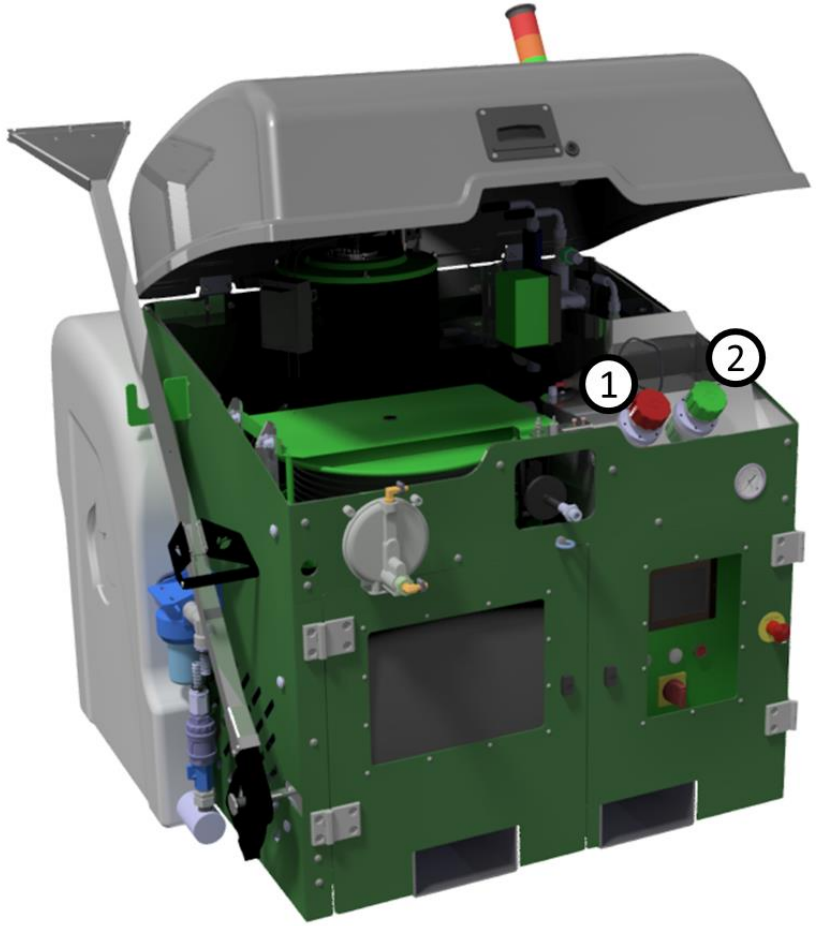


Figure 2 - View of foam and diesel filling points

Start procedure

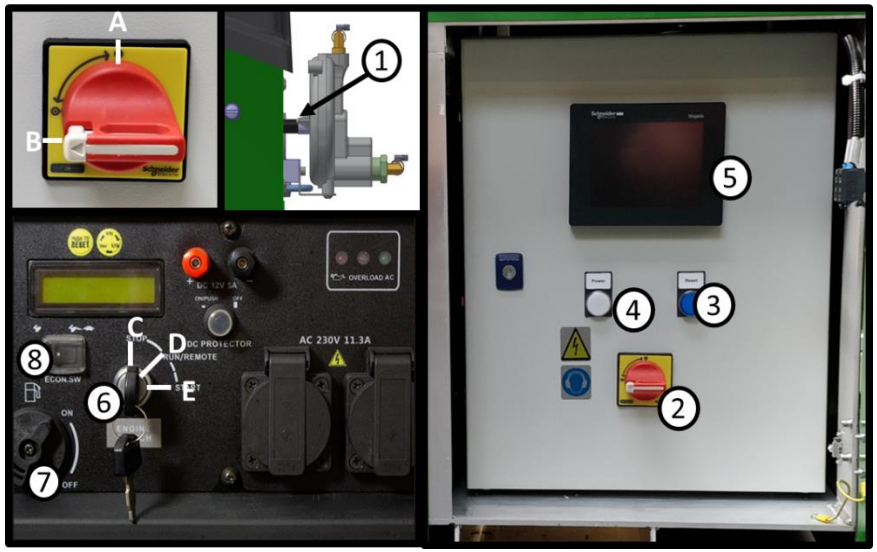


Figure 3 - M600 User Interface

- ✓ Complete pre-start checks (previous section)
- ✓ Press and hold priming button on regulator (item 1 in Figure 3)
- ✓ Turn fuel switch to **OFF** position on generator (item 7 in Figure 3)
- ✓ Start the generator by turning key (item 6 in Figure 3) in a clockwise direction by either:
    1. Turn key to position **E**, release to position **D** when engine starts
    2. Turn key to position **D** and double press and hold **ON** on the remote (Not shown)
- ✓ Turn the isolator switch (item 2 in Figure 3) to position **A**, the PLC screen (item 5 in Figure 3) should illuminate
- ✓ Press the **RESET** button (blue button, item 3 in Figure 3), the **FAULT** indicator goes out and you should see the screen represented in Figure 4.

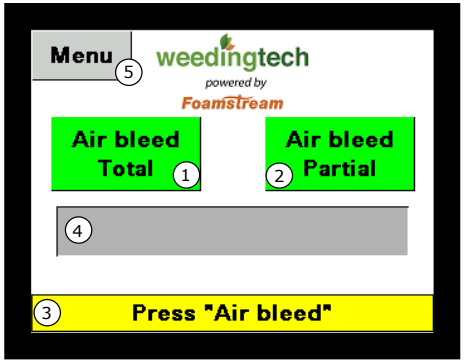


Figure 4 - Start-up screen of the PLC

- ✓ Wait a few seconds before requesting air bleed: buttons **1** or **2** in Figure 4.

If you have disconnected the water tank or are starting for the first time of the day, please use **Air bleed Total**

If you just took a break or want to perform an additional air bleed, please select **Air bleed Partial**

When bleeding the machine, the **trigger must be pushed** to allow water to flow out of the lance. Failure to do so will cause the machine to display a fault message.

- ✓ Once button **1** or **2** of Figure 4 are pressed the bleed screen represented in Figure 5 will appear.

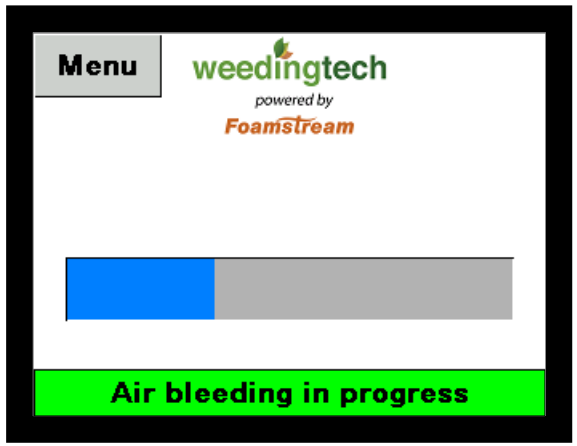


Figure 5 - Bleed screen of the PLC

If starting when water tank level is below water filter level perform either of the following:

1. Fill water tank to higher level than water filter
2. If unable to fill water tank select scenario below and follow the instructions
   - ✓ Water filter full, no air in system - Machine will start like normal.
   - ✓ Water filter full, air in system - Perform an additional air bleed.
   - ✓ Water filter empty - Manually fill water filter and then replace, then perform additional air bleeds until no faults/errors appear on the screen ("No flow at outlet" "Release Trigger") then perform one additional air bleed to ensure system is free of air.

✓ Wait until the purge is completed. A new screen will appear, represented in Figure 6.

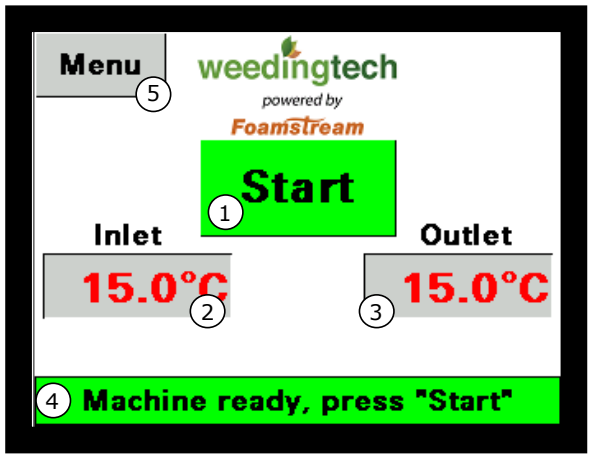


Figure 6 - Start screen of the PLC

✓ Press **START**, the button turns green and the screen represented on Figure 7 will appear.

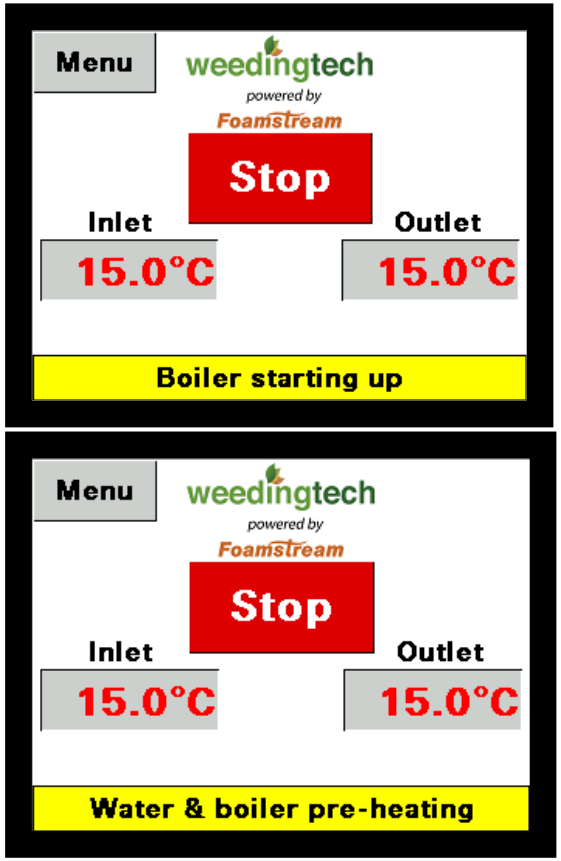


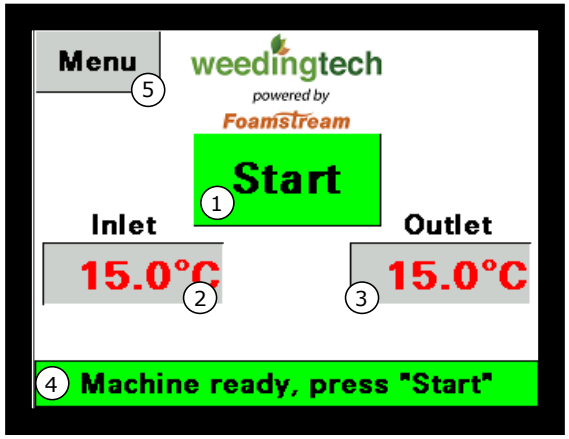
Figure 7 - Running screen of the PLC

- ✓ The amber **HEATER** light will illuminate and the red **FAULT** button should go out. This indicates that the boiler has switched on and is heating the water
- ✓ The green **READY** light will illuminate when the M600 has reached operating temperature and the system is ready for use (2 – 4 minutes).

AFTER A COLD NIGHT (BELOW 0 DEGREES CELSIUS), LET THE GENERATOR RUN ALONE FOR 15 MINUTES TO WARM UP THE MACHINE BEFORE TURNING THE ISOLATOR TO POSITION **A**.

Screen and PLC navigation

When the M600 is ready to start, the screen below will appear (same as Figure 6)



To access the menu, click on the **Menu** (item 5 in Figure 6) button on the top left-hand side of the screen. The screen below will appear.

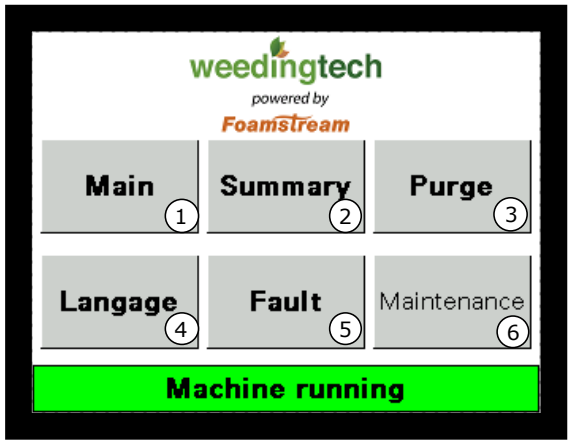
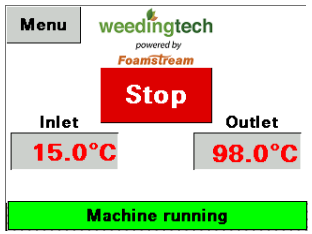
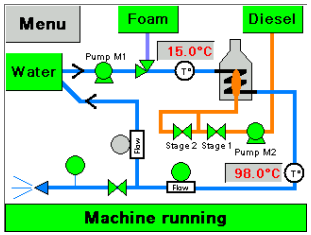


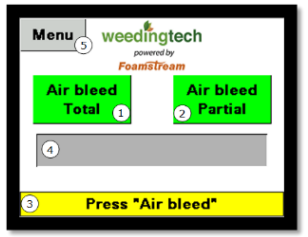
Figure 8 - Menu Screen

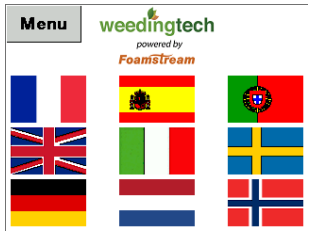
Num.	Description
1	Return to main page
2	Go to summary screen
3	Purge (Air bleed)
4	Language and units selection
5	Fault summary panel
6	Maintenance mode

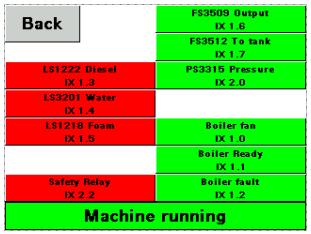
Users have no need to access pages **5** and **6**. Page **6** is restricted by a password. The screens are summarized in the table below.

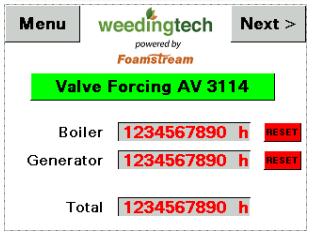












During the start-up phase, you will be able to check the operation of the various sensors by going on the **Summary** page.