

# U-Phos®

PHOSPHINE FUMIGANT

## U-Phos® HiFlo System

### Quick Start Guide

(Always have PH3 detection equipment in use while operating the HiFlo unit. Respiratory protection should always be on hand.)

1. Connect U-Phos/air delivery hose using camlock fitting to HiFlo machine and place delivery end of hose in fumigated space (Ensure no blockages in hose and seal fumigated space accordingly around the hose).
2. Connect **Food Grade** CO2 cylinder and hand tighten connection, then further tighten with wrench (do not use excessive force). Open valve slowly to ensure no leaks present by listening for escaping CO2.
3. Connect HiFlo unit to appropriate 3 phase + 20 amp power source.
4. Verify PH3 lines "A" and "B" hose plugs are in place and wrench tight.
5. Turn HiFlo unit Power switch to ON, Home screen will then appear on unit display.
6. Touch blue "Post Purge" button on Home screen. (This will remove any potential residual phosphine from the lines).
7. When "Post Purge" is complete, return to Home screen and place phosphine cylinders on scales\* then connect hose hand tight before then tightening with torque wrench. (Ensure cyl valve is closed prior to removing cyl valve outlet cap. If only using one cyl ensure line not being used has hose plug in place.)
8. **DO NOT** open any PH3 cylinder until prompted by the screen to do so (Screen 16).
9. Verify Fan, SW1 and SW2 lights are green. (Verifies there is adequate air flow through the unit. If SW1 and SW2 lights are red check application hose for blockage).
10. Press **START LEAK TEST** button. This will then move the screen to **LEAK TESTING**. (Checks for leaks to the PH3 cylinders).
11. Once Leak Testing is completed, unit automatically moves to **PRE PURGING** screen. The unit is now testing for 10 cycles to evacuate all air from the system. (Bottom right box "Remaining Purge Cycles" counts down from 10 to show status of cycles).
12. Once **PRE PURGING** is complete, unit will automatically move to **READY TO DISPENSE** (Screen 16).
13. At the bottom of the screen, it will prompt you to open PH3 cyls. [Always wear leather gloves and safety glasses when opening/closing PH3 cyls] To open the valves, turn the handwheel to fully open on both cyls, which is approximately  $\frac{3}{4}$  of a turn and then close  $\frac{1}{4}$  turn. This allows handwheel to freely turn in either direction, allows operator to know the valve is open. (**NEVER** leave valve in fully open position)].
14. Next, set the amount of PH3 you want to dispense into the fumigated space by entering the amount (kg) into the display box at top right marked "Target KG's". (Touch screen and it will allow you to add the number needed).

15. Once amount needed is set, press the green **DISPENSE** button to start the fumigation process. (Note starting cylinder weights displayed in case of power loss).
16. The **DISPENSING** PH3 screen will then appear to show status of what has been dispensed. It will show you the amount of PH3 in each cylinder as well as amount of dispensed gas (kg) in middle of the screen. Top right of screen shows your target kg's you had set for the fumigation in step 13 above.
17. Once the set amount of PH3 has been dispensed, the unit will move to the **FUMIGATION COMPLETE** screen.
18. The screen will prompt you to "Turn off all PH3 Cylinders". (Always turn the cylinders off whenever you are prompted to do so and use torque wrench to tighten cyl valves).
19. The middle bottom box "Dispensed Gas" will show you how much PH3 was dispensed and bottom right box will show you the machine hours ran. The remaining amount of PH3 will also be displayed under the middle boxes titled "CYL B" and "CYL A".
20. Next, press the green "**POST PURGE**" button to start the purging process. The screen will change to tell you the unit is evacuating all PH3 from the unit. There is nothing for you to adjust or do until the process is complete.
21. Once the process is complete, the screen will say "**POST PURGING COMPLETE**". \*\*You can now disconnect PH3 hoses, place and tighten hose plugs and turn off the CO2 cylinder. Dispensed gas displayed in kg at bottom right of screen.
22. You can now press the red "**CANCEL**" button to take you back to the "**HOME**" screen.
23. The HiFlo unit can now be turned off by flipping the switch to the off position. You can now turn off the power source and remove the power cord.
24. **DO NOT FORGET** to remove the application hose from the fumigated space (using respiratory protection if needed) and seal accordingly. Place camlock cap back on discharge outlet.
25. Put phosphine cylinder valve outlet cap on (tighten with wrench) and secure cylinder cap.
26. Place hose plugs back on phosphine "A" and "B" lines and wrench tighten (plugs should always be in place when not in use to reduce polymerization). Place hose plug on CO2 line

\*Never move the HiFlo unit with cylinders attached or sitting on the scales. Never move any cylinders without cylinder cap in place. Use torque wrench to tighten cylinder nut.

\*\*Always complete Purge cycle before disconnecting any PH3 cylinders.

\*\*When disconnecting the PH3 cylinders, slowly and carefully loosen the nut wearing safety gloves and face mask as there is always a potential for residual PH3 to be in the cylinder line.

**Should power failure ever occur, always turn off PH3 cylinders prior to restart.**

**Always read the label before use**

**This is a quick start guide and is not intended to act as an operating manual. For full operational instructions refer to the operating manual.**

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