

8000 BF-HPA Barrel Fill Station

User's Guide

Features

Emergency Stop

The EMERGENCY STOP button, located on the front panel will interrupt a cycle at any point during the operation. Initiating the E-STOP will cause an error state indicated by a flashing led. To reset, turn the E-STOP clockwise and switch power switch off then on.

Purge Feature

The barrel fill station is equipped with a purge switch. Pressing this button will open the fill valve. Always place a barrel reservoir on the fluid outlet to capture purge material.

Piston Sensor

A sensor located at the bottom of the vertical support will identify when a piston has not been placed in the barrel reservoir. In the event the sensor has tripped into an error mode and stopped the fill process, reset by turning the power switch off then on.

Cylinder Pressure

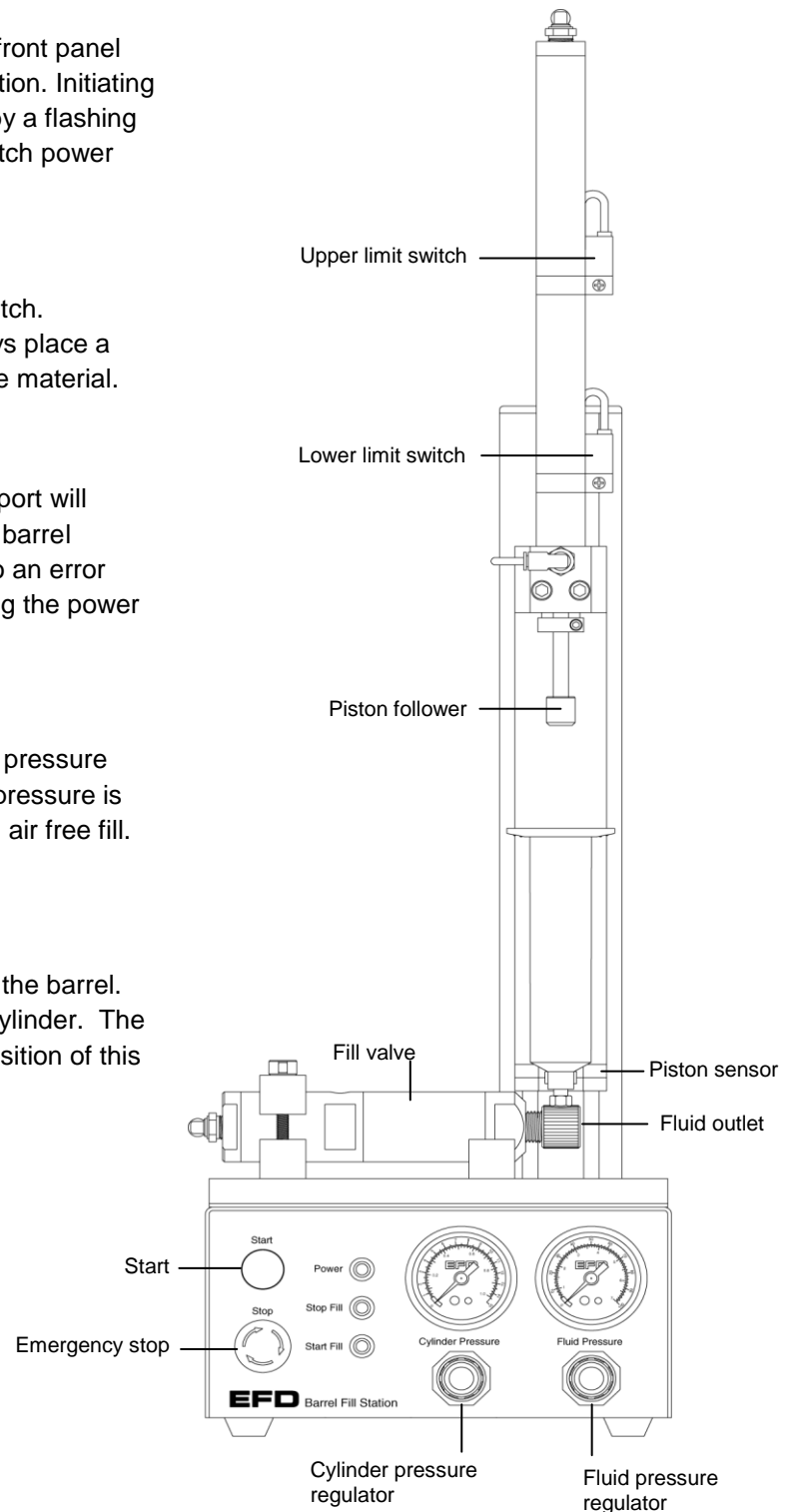
The cylinder pressure regulator controls the back pressure that the cylinder exerts against the piston. Back pressure is used to hold the piston down to provide a uniform air free fill. The regulator has a "push to lock" knob.

Limit Switches

The upper Limit switch determines fill level within the barrel. This switch is adjustable along the length of the cylinder. The lower limit switch initiates a fill command. The position of this switch is factory set and need not to be adjusted.

Fluid Pressure Regulator

Controls the pressure on the fluid reservoir.



Setup

1. Set power switch to the OFF position before beginning setup. Connect the power cord provided into the power cord receptacle located on the lower right corner of rear panel. Check fuse voltage setting in receptacle window.
2. Plug foot pedal into the connector, located on the rear panel.
3. Connect the air input hose to plant air source. Connect air input coupling to the air inlet on the rear panel. Pull back metal ring to attach. Set plant air supply to 80 psi min.
4. Connect ¼ NPT fitting (not supplied) to the fluid inlet hole on the 736HPA and connect the fluid feed hose to the fitting.
5. Connect reservoir supply hose to “fluid pressure” on rear panel and to the reservoir air inlet.

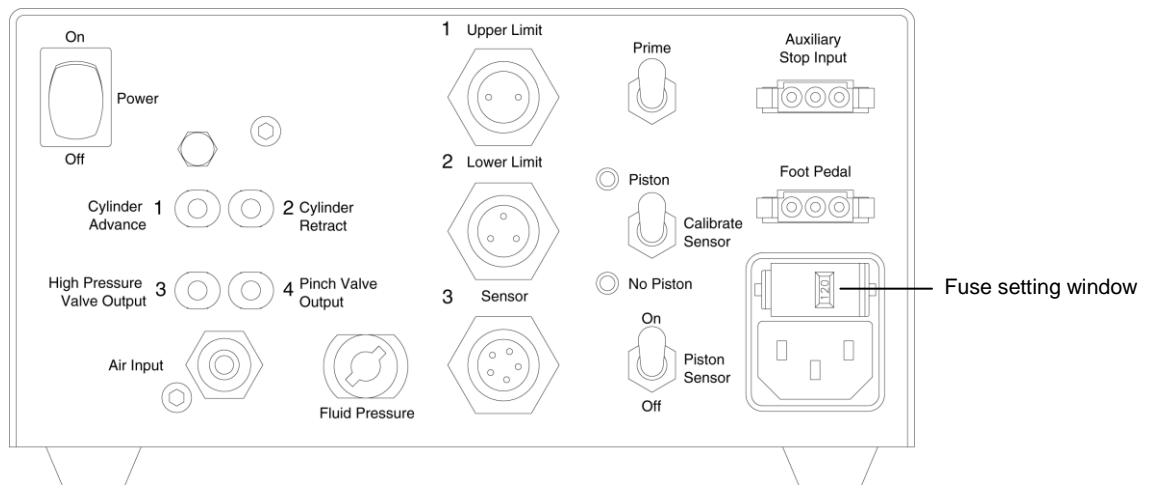
Note: The fluid inlet fitting and hose must be obtained from the high pressure pump supplier. Ensure that the hose and fitting are rated for maximum operating pressure of the pump.

Operation

1. Install a barrel on the fluid outlet fitting.
2. Set fluid reservoir pressure to 30 psi. Adjust pressure during operation to desired flow rate. Pressure should not exceed 80 psi.
3. Set power switch to the on position.
4. Press the purge button to open valve, allowing material to flow into the barrel. Clear lines of all air.
5. Place a piston flush into the top of an empty barrel. Install the barrel and piston onto the output fitting securely.
6. Set the cylinder pressure to 3.0 psi as a starting point.
7. Press green start button or foot pedal to begin a fill cycle.
8. Evaluate fill volume and adjust as required.
 - 8.1 To adjust fill volume, move the upper limit switch up to increase or down to decrease fill level.
 - 8.2 Increase fluid reservoir pressure to increase fill rate, decrease pressure to slow down fill rate.
 - 8.3 If air develops under the piston, increase piston pressure. If fluid flows past the piston, decrease piston pressure.

Sensor Calibration

1. Disconnect main air inlet supply at the machine.
2. Set power switch to the ON position.
3. Install a barrel with piston onto the fluid outlet fitting.
4. Extend cylinder into barrel by hand, pushing the piston to the bottom. Ensure that piston is located directly in front of the sensor.
5. Set the “piston sensor” switch to the on position.
6. Pull and lift up the “calibrate sensor” switch. Once set, the “no piston” lamp should be blinking.
7. Retract cylinder follower and remove barrel and piston.
8. Install empty barrel without piston onto fluid outlet.
9. Fully extend cylinder into barrel.
10. Pull and push down the “calibrate sensor” switch. Once set both lamps will light for a second and turn off.
11. The sensor is now calibrated.



Error Codes

The power lamp will flash red if there is an error in the system operation. The number of flashes between a “pause” will indicate where the failure occurred

1. One flash
Control solenoid error. Reset emergency stop button then turn power switch off and on again.
2. Two flashes
Lower limit switch on the cylinder has failed or is disconnected. Correct problem with the switch and reset by turning power off then on again.
3. Three flashes
Upper limit switch on the cylinder has failed or is disconnected. Correct the problem with the switch and reset by turning power off then on again
4. Four flashes
Either piston or barrel was not present on the fill fitting prior to pressing the start switch. Place a barrel with piston on the fill fitting then reset by turning power off then on again.

Note: This error condition will not occur if the “piston sensor” safety feature is disabled.

5. Five flashes
Indicates that the barrel/piston sensor is overexposed to ambient light. Remove the ambient light source (e.g. sun light or lamp near by the loading station). Reset by turning the power switch off then on again.
6. Six flashes
Indicates that the piston sensor is not functioning. Clean sensor lens and then recalibrate the sensor in the “correct order”.
7. Seven flashes
Indicates software error. Attempt a reset by turning power off then on. If this does not clear the problem contact EFD for service recommendation.



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