



Model # FBNG/FB

Start Up Instructions

1. Check fluid level in reservoir. The fluid level should appear above the red and white label shown. Add a mixture of 30% propylene glycol and 70% water ONLY until fluid level rises to the indicator.



2. Seasonally check the level of lubricant in the reel drive motor by removing the access plug and filling with 80/90W Gear Oil



3. Check for adequate fuel in the burner reservoir Fill with Winter Blend Diesel Only.



4. Unroll hose spreading over the area to be heated.



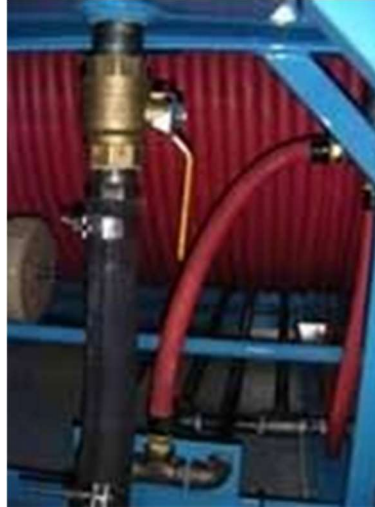
5. The hose is 3000 feet long and is made of three 1000-foot sections connected to one another. To facilitate more effective warming, each section of hose may be disconnected from the loop and connected to the auxiliary circuit located just under the reel. The connectors are quick couplers and snap together when the outer ring of the coupler is retracted. The second and third hoses may then be used to make three continuous loops.



DO NOT CONNECT OR DISCONNECT HOSES UNTIL FLUID HAS COOLED TO ROOM TEMPERATURE AND THE MACHINE HAS BEEN SHUT OFF!

Note: The hose should be laid out in a symmetrical pattern over the area to be heated. Spacing's of 12-24" are common for thawing. Spacing of up to 48" may be adequate for concrete curing.

6. All six (6) valves on the system must be open to allow fluid flow. Valves are open when handles are in alignment with tubing. Valve one and six are at the bottom of the reservoir.



Valve two is on the side of the reservoir. Valves one and two should be open at all times except for service of the boiler.



Valve three is above the fluid pump



Valve four is at the back of the reservoir.



Valve five is on the overflow line above the line pressure gauge.



THESE VALVES MUST ALL BE OPEN FOR PROPER OPERATION

7. Adjust desired temperature of fluid to be circulated by adjusting thermostat. Use a flat tip screwdriver to turn dial to desired setting. 180 Degrees Fahrenheit is the maximum setting for heating. Lesser temperatures may be desirable for concrete curing or other uses.



8. The system is designed to operate on a 30 Amp 110/120Volt Circuit. Connect the supplied cord to correct power source.
 - a. If equipped with a generator, ground the generator if applicable.
 - b. Start the generator according to instructions on the generator.
 - c. Ensure the voltage meter is reading the correct voltage required.
 - d. Allow generator to reach operating temperature before plugging in the power cord from generator to ground thaw.
 - e. Plug power cord from generator into receptacle of ground thaw.
9. Turn on Boiler with switch.



Allow the Boiler to reach operating temperature. The fluid from the reservoir will be circulated continuously through the reservoir and boiler.

10. After the hose is positioned and you are ready to start heating, turn on the fluid circulation pump with Pump Switch



WARNING– DO NOT HANDLE HOSE WITH PUMP TURNED ON!

11. Adjust line pressure. Pressure should NOT exceed 100 PSI. Read the pressure gauge found near the rear of the pump and adjust using the bypass regulator. Turning the regulator handle clockwise will increase the pressure in the hose and counterclockwise will decrease the pressure.



12. Visually check hose, fittings, and system for leaks
13. Check fluid flow by reading flow meter. The indicator inside the glass will indicate the GPM flowing through the hose. Normal flow is about 3 GPM for 3000 feet of hose in one circuit or 12-16 GPM for 3000 feet of hose in 3-1000 foot circuits. If the flow is inadequate check the hose for kinks.



14. Cover hose with insulating blankets to contain heat being careful to protect hose from damage.
15. Monitor fuel and fluid levels periodically as the unit is operating

Shut Down Procedure

1. Turn off Boiler with switch
2. Turn off the fluid circulation pump with Pump Switch
3. Shut the three (3) valves on the system to stop fluid flow. Valves are closed when handles are perpendicular to tubing. Valve three is about the fluid pump, valve 4 is at the back of the reservoir, and valve five is on the overflow line about the line pressure gauge.
4. After hose and fluid has cooled sufficiently, roll up hose by first turning on the reel drive motor (Fig 16.)



5. Apply rearward pressure on the reel control lever to begin winding the hose. Hose should be positioned and fed onto the reel as it is wrapped.



Do not attempt to drag long lengths of hose as damage to the hose may occur. Control the speed and power of the reel by adding or removing pressure to the reel handle.

6. If using three lengths of hose, disconnect connections on the first loop of hose when it is fully wrapped, then disconnect the second hose from the auxiliary circuit and connect the hoses together. Continue wrapping the second loop until fully wrapped, then disconnect the third hose from the auxiliary circuit and connect second and third hoses together. Continue wrapping.
7. Inspect hose for damage as it is returned to the reel.

Caution– As the reel becomes fuller, it becomes heavier and has more momentum. Slow the wind speed as the drum fills with hose.

8. For non-generator units, Unplug cable from power source to receptacle of ground thaw.
9. For generator units, turn off the generator according to instructions on generator. Remove and stow power cord from generator to receptacle on the ground thaw.