MODEL 2M SPECIFICATIONS AND PERFORMANCE

SPECIFICATIONS: MODEL 2M

Height	78 Inches
Width	74 Inches
Length	144 Inches
Weight (Including Fuel)	3,006 Lbs.
Fuel Capacity	100 U.S. Gal.
Heat Transfer Fluid Capacity	56 U.S. Gal.
Hose	1,200 Feet Supplied
Circulation Zones	2
Circulation Pump	1 High Output Pump
Fill Pump	1
Tires	225x75R16
Axle	3,500 Lb. Torflex
Brakes	Electric
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PERFORMANCE: MODEL 2M

Heat Input	140,000 BTU
Max Fuel Consumption	1.0 U.S. Gal./Hour
Fuel Requirements	#1 Fuel Oil or #1 Diesel Fuel
Electrical Requirements	1 - 120 VAC 20 AMP
Normal Operating Temperature	Supply 180 ° F
Maximum Thawing Capacity	2,400 Sq. Ft.
Concrete Curing Capacity	6,000 Sq. Ft.
Generator (Optional)	Call for Options

2M START UP PROCEDURE

*BOILER HAS A 30 SECOND FIRING DELAY

- 1. Visually inspect machine for any damage or leakage.
- 2. Check all electrical circuit breakers -should be in the OFF position (in electrical panel #1).
- 3. Turn on the circuit breaker for the light (#6).
- 4. Plug in the machine to 120 VAC ground fault circuit or start the generator. Make sure the main power panel is connected to correct power source.
- 5. Check hose reel drum switch it should be in the NEUTRAL position.
- 6. Remove hose reel foot switch from holder and place on the ground, loosen hose reel brake.
- 7. Place hose reel switch to FORWARD position and lay out hose.
- 8. Plug hose into supply and return disconnects.
- 9. Return hose reel switch to NEUTRAL and place foot switch back in holder.
- 10. Pump suction valve 4S, supply valve 3S, and return valve 3R should be in the OPEN position.
- 11. Check boiler pressure gauge on boiler (should be approximately 5 PSI when machine is cold).
- 12. To add fluid to system:
 - A. Energize circuit breaker #8 (located at electrical panel).
 - B. OPEN ball valve (labeled #2, on line connected to small black fill pump on boiler side of machine).
 - C. Turn switch to ON position (directly above valve #2 must be held to ON position).
 - D. Watch gauge on boiler closely (located on burner side). DO NOT exceed 10 PSI.
 - E. Close ball valve #2 on line connected to small black pump when done filling.
- 13. Turn ON circuit breaker #2 on electrical panel #1(circulation pump).
- 14. Place fuel valve (#1) to OPEN position.
- 15. Turn ON circuit breaker #1 to start boiler. NOTE: 30 second delay.
- 16. When hose reel is not in operation, make sure hose reel breaker is in the OFF position and drum switch is in the NEUTRAL position.

SHUT DOWN PROCEDURE

- 1. Shut burner breaker OFF (Circuit breaker #1).
- 2. Close fuel valve #1.
- 3. Shut circulation pump OFF (Circuit breaker #2).
- 4. Disconnect hose from machine.
- 5. Place hose reel foot switch on the ground.
- 6. Turn circuit breaker #3 to ON position.
- 7. Rewind hose. NOTE: Hose needs to be NEATLY rewound to properly fit on the reel.
- 8. Return hose reel switch to NEUTRAL position and replace foot switch to holder.
- 9. Tighten hose reel brake.
- 10. Turn circuit breakers #3 and # 6 to OFF position.
- 11. Close and lock door. **THAWZALL** is ready to move.

MODEL 6A SPECIFICATIONS AND PERFORMANCE

SPECIFICATIONS: MODEL 6A

Height	91 Inches
Width	84 Inches
Length	170 Inches
Weight (Including Fuel)	5,605 Lbs.
Fuel Capacity	160 U.S. Gal.
Heat Transfer Fluid Capacity	122 U.S. Gal.
Hose	3,000 Feet Supplied
Circulation Zones	5
Remote Manifold Outlet	1
Circulation Pump	2 High Output Pumps
Fill Pump	1
Tires	225x75R16
Axle	6,000 Lb. Torflex
Brakes	Electric

PERFORMANCE: MODEL 6A

Heat Input	280,000 BTU
Max Fuel Consumption	1.75 U.S. Gal./Hour
Fuel Requirements	#1 Fuel Oil or #1 Diesel Fuel
Electrical Requirements	1 - 120 VAC 20 AMP
Normal Operating Temperature	Supply 180° F
Maximum Thawing Capacity	6,000 Sq. Ft.
Concrete Curing Capacity	18,000 Sq. Ft.
Generator (Optional)	Call for options

6A START UP PROCEDURE

*BOILER HAS A 30 SECOND FIRING DELAY

- 1. Visually inspect machine for any damage or leakage.
- 2. Check all electrical circuit breakers -should be in the OFF position (in electrical panels #1 and #2).
- 3. Turn on the circuit breaker for the light (#6).
- 4. Plug in the machine to 120 VAC ground fault circuit.
- 5. Check hose reel drum switch it should be in the OFF position.
- 6. Open valve #1 on fuel tank. (Handle should be in line with pipe)
- 7. Make sure both ball valves (4 S & D or 5 S & D) on circulation pump (#1 or #2) to be used are in the OPEN position.
- 8. Make sure all manifold valves (#3 S and #3 R per zone) are CLOSED (located at rear of machine).
- 9. Remove foot control for hose reel. Turn hose reel circuit breaker (#3) ON. Place drum switch control in reverse position. Plug in hose and lay out first 600 feet of hose, starting from electrical panel side. When the first complete disconnect rolls off hose reel, separate it and plug the end into the manifold (male and female disconnects).
- 10. Open ball valve (#3 S and #3 R) to the first zone being used.
- 11. Check the temperature and pressure gauge on boiler. Pressure reading should be approximately 5 PSI when machine is cold.
- 12. To add fluid to system:
 - A. Energize circuit breaker #8 (located at electrical panel, in rear of machine).
 - B. OPEN ball valve (labeled #2, on line connected to small black fill pump on boiler side of machine).
 - C. Turn switch to ON position (directly above valve #2 must be held to ON position).
 - D. Watch gauge on boiler closely (located on burner side). DO NOT exceed 10 PSI.
 - E. Close ball valve #2 on line connected to small black pump when done filling.
- 13. Turn on circuit breaker #2 on electrical panel #1(circulation pump).
- 14. Flow indicator for appropriate zone should be spinning at this time. If not, check ball valve #3 S and #3 R at appropriate zones in open position at rear manifold. If valves are in open position and flow indicators are still not spinning, check hose layout for possible kinks.
- 15. Start boiler by turning on circuit breaker #1 (in electrical panel #1). If boiler does not fire:
 - A. Check fuel valve #1 again.
 - B. Check red reset button on the Beckett Burner (under the cover).
- 16. Repeat step #8 to lay out additional zones.
- 17. When hose reel is not in operation, make sure hose reel breaker is in the OFF position and drum switch is in the OFF position.

SHUT DOWN PROCEDURE

- 1. Shut burner breaker OFF.
- 2. Shut circulation pump OFF.
- 3. Shut off all valves at the manifold.
- 4. To wind up hose, reverse procedure in start up direction #8.
 - **NOTE:** Hose needs to be NEATLY rewound to properly fit on the reel.
- 5. Make sure fuel valve in the closed position when transporting.
- 6. Shut OFF all breakers in the electrical panel and unplug cord.

^{**} If green light is blinking on boiler burner control: Check fuel line, burner may need to be bled. SEE OWNER'S MANUAL TROUBLE SHOOTING SECTION.

MODEL 12HU SPECIFICATIONS AND PERFORMANCE

SPECIFICATIONS: MODEL 12HU

Height	91 Inches
Width	84 Inches
Length	170 Inches
Weight (Including Fuel)	4,350 Lbs.
Fuel Capacity	300 U.S. Gal.
Heat Transfer Fluid Capacity	138 U.S. Gal.
Circulation Zones	5
Remote Manifold Outlet	1
Circulation Pump	1 High Output Pump
Fill Pump	1
Tires	225x75R16
Axle	6,000 Lb. Torflex
Brakes	Electric

PERFORMANCE: MODEL 12HU

Heat Input	560,000 BTU
Fuel Consumption	3.5 U.S. Gal.
Max Fuel Requirements	#1 Fuel Oil or #1 Diesel Fuel
Electrical Requirements	1 -120 VAC 20 AMP
Normal Operating Temperature	Supply 180° F
Maximum Thawing Capacity	12,000 Sq. Ft.
Concrete Curing Capacity	36,000 Sq. Ft.
Generator (Optional)	7kW Isuzu Liquid Cooled

MODEL 12HU START UP PROCEDURE

*BOILERS HAVE A 45 SECOND FIRING DELAY

- 1. Visually inspect machine for any damage or leakage.
- 2. Check all electrical circuit breakers should be in the OFF position (in electrical Panels #1 and #2).
- 3. Turn on circuit breaker #1 in electrical panel #2 (Main) for boiler to be used.
- 4. Check oil on generator (Generator is optional equipment).
- 5. Open ball valve for generator fuel supply tagged #1 (located on side with electrical panel #1 and closest to the access door). *If generator is not being used, plug machine into 120 VAC, 20 Amp GFI circuit for each manifold being used.*
- 6. Turn on the circuit breaker for the light.
- 7. If using an Auxiliary Hose Reel, plug into Auxiliary power outlet (rear of machine, left side).
- 8. Check hose reel drum switch it should be in the OFF position.
- 9. Make sure both ball valves (4 S & D or 5 S & D) on circulation pump (#1 or #2) to be used are in OPEN position.
- 10. Make sure all manifold valves (#3 S and #3 R per zone) are CLOSED (located in rear of machine).
- 11. If using Auxiliary Hose Reel, remove foot control for hose reel. Turn hose reel circuit breaker #3 in electrical panel #2 ON. Place drum switch control in reverse position. Plug in hose and lay out first 600 feet of hose. When the first complete disconnect rolls off hose reel, separate it and plug the end into the manifold (M and F disconnects).
- 12. For use of upper manifold system: Start pump #1 (circuit breaker #3 in electrical panel #1).
- 13. For use of lower manifold system: Start pump #2 (circuit breaker #2 in electrical panel #2).
- 14. Open ball valve (#3 S and #3 R) to the first zone being used.
- 15. Check the temperature and pressure gauge on boiler. Pressure reading should be approx. 5 PSI when machine is cold.
- 16. To add fluid to system:
 - A. Energize circuit breaker #8 in electrical panel #1.
 - B. OPEN ball valve labeled #2 (up and right of electrical panel #1).
 - C. Turn switch to ON position (directly above valve #2 must be held to ON position).
 - D. Watch gauge on boiler closely (located above Operator and High Limit on burner face plate). DO NOT exceed 10 PSI.
 - E. Close ball valve #2 on line connected to small black pump when done filling.
- 17. Turn on circuit breaker #3 on electrical panel #1 (circulation pump).
- 18. Flow indicator for appropriate zone should be spinning a this time. If not, check that ball valve #3 S and #3 R at appropriate zones are in open position at rear manifold. If valves are in open position and flow indicators are still not spinning, check hose layout for possible kinks.
- 19. Make sure power switches (mounted on boiler) are in OFF position.
- 20. OPEN ball valve to appropriate boiler (tagged #1).
- 21. Check pressure on boilers (add pressure to show positive pressure approx. 5 PSI when cold).
- 22. Turn on circuit breaker switch #2 in electrical panel #1 to energize both boilers.
- 23. Flip on red switch (on face of boiler) wait for the boiler to ignite (*45 second delay). Repeat for second boiler, if second boiler will be used.
- 24. Repeat steps #11 and #12 to lay out additional zones.
- 25. When hose reel is not operation, make sure Auxiliary Hose Reel breaker is in the OFF position and drum switch is in the OFF position.

**If green light is blinking on boiler burner control: Check fuel line, burner may need to be bled.

SEE OWNER'S MANUAL TROUBLE SHOOTING SECTION.

SHUT DOWN PROCEDURE

- 1. Shut burner breaker OFF.
- 2. Shut circulation pump OFF.
- 3. Shut OFF all valves at the manifold.
- 4. If Auxiliary Hose Reel is being used: To wind up hose, reverse procedure in Start Up direction #11. NOTE: Hose needs to be NEATLY rewound to properly fit on the reel.
- 5. Make sure fuel valve is in the CLOSED position when transporting.
- 6. Shut OFF all breakers in the electrical panel and unplug cord.

MODEL 12F SPECIFICATIONS AND PERFORMANCE

SPECIFICATIONS: MODEL 12F

Height	91 Inches
Width	100 Inches
Length	233 Inches
Weight (Including Fuel)	10,378 Lbs.
Fuel Capacity	300 U.S. Gal.
Heat Transfer Fluid Capacity	244 U.S. Gal.
Hose	6,000 Feet Supplied
Circulation Zones	10
Remote Manifold Outlet	2
Circulation Pump	2 High Output Pumps
Fill Pump	1 Standard
Tires	225x75R16
Axle	Dual 6,000 Lb. Torflex
Brakes	Electric

PERFORMANCE: MODEL 12F

Heat Input	560,000 BTU
Max Fuel Consumption	3.5 U.S. Gal./Hour
Fuel Requirements	#1 Fuel Oil or #1 Diesel Fuel
Electrical Requirements	2 - 120 VAC 20 AMP
Normal Operating Temperature	Supply 180° F
Maximum Thawing Capacity	12,000 Sq. Ft.
Concrete Curing Capacity	36,000 Sq. Ft.
Generator (Optional)	10 kW Isuzu Liquid

12F SINGLE SYSTEM START UP PROCEDURE

When using single system, use system 2 ONLY located in rear of trailer.

*BOILER HAS A 30 SECOND FIRING DELAY

- 1. Visually inspect machine for any damage or leakage.
- 2. Check all electrical circuit breakers -should be in the OFF position (in electrical panels #1 and #2).
- 3. Plug in the machine to 120 VAC ground fault circuit.
- 4. Turn on MAIN power supply (in electrical panel #2)
- 5. Turn on the circuit breaker for the light (#6 in electrical panel #2).
- 6. Check hose reel drum switch for system 2 it should be in the OFF position.
- 7. Open valve #1 on fuel line for system 2. (Handle should be in line with pipe)
- 8. Make sure both ball valves (4 S & D) on circulation pump (#1 yellow tag) to be used are in the OPEN position.
- 9. Make sure all manifold valves (#3 S and #3 R per zone) are CLOSED.
- 10. Remove foot control for hose reel. Turn hose reel circuit breaker (#7 in electrical panel #2) ON. Place drum switch control in reverse position. Plug in hose and lay out first 600 feet of hose, working from right to left. When the first complete disconnect rolls off hose reel, separate it and plug the end into the manifold (male and female disconnects).
- 11. Open ball valves (#3 S and #3 R) to the zone being used. Open ball valve #3 S located on hose reel supply line ONLY if ALL zones are being used.
- 12. Check the temperature and pressure gauge on boiler. Pressure reading should be approximately 5 PSI when machine is cold.
- 13. To add pressure to system:
 - A. Energize circuit breaker #8 (located at electrical panel #1).
 - B. OPEN ball valve labeled #2 on line connected to small black fill pump (mounted on yellow reserve tank above fuel tank).
 - C. Turn switch to ON position (mounted on boiler must be held to ON position).
 - D. Watch gauge on boiler closely (located on burner side). DO NOT exceed 10 PSI.
 - E. Close ball valve #2 on line connected to small black pump when done filling.
- 14. Turn on circuit breaker #2 on electrical panel #2 (circulation pump).
- 15. Start boiler by turning on circuit breaker #5 (in electrical panel #2). If boiler does not fire:
 - A. Check fuel valve #1 again.
 - B. Check red reset button on the Beckett Burner (under green indicator light on ignition oil primary control).
- 16. Flow indicator for appropriate zone should be spinning at this time. If not, check ball valves #3 S and #3 R at appropriate zones to make sure they are in open position at system 2 manifold. If valves are in open position and flow indicators are still not spinning, check hose layout for possible kinks.
- 17. Repeat step #11 to lay out additional zones.
- 18. When hose reel is not in operation, make sure hose reel breaker is in the OFF position and drum switch is in the OFF position.

** If green light is blinking on boiler burner control: Check fuel line, burner may need to be bled. SEE OWNER'S MANUAL TROUBLE SHOOTING SECTION.

SHUT DOWN PROCEDURE

- 1. Shut burner breaker OFF.
- 2. Shut circulation pump OFF.
- 3. Shut off all valves at the manifold.
- 4. To wind up hose, reverse procedure in start up direction #8.

NOTE: Hose needs to be NEATLY rewound to properly fit on the reel.

5. Make sure fuel valve in the closed position when transporting.