
Cotton Candy Factory

Operation and
Service Guide

VendEver LLC

Revision 1b

Chapter 1: Set-Up & Installation

This chapter explains the following necessary set-up and required installation requirements and procedures:

- ✓ Unpacking, inspection, and set-up.
- ✓ Location requirements, programming and machine testing.

Removing Packing Material and Machine Preparation

The Cotton Candy Factory machine from VendEver is tested and adjusted for proper operation prior to shipping. The following procedure is required to ensure proper operation of the machine.

1. Keys to the machine are located inside the vending chamber. Three machine cabinet keys and two cash box keys. Unlatching of the vend door is accomplished by inserting a small strait device such as a large straightened paper clip into the door lock release hole located on the front door. This hole is located in the second "T" of "COTTON" on the machine logo. Open the front door and rear doors to access included accessories and supplies. Remove (2) packages of floss sticks and topper sign. Remove shipping tape from sugar container and stick dispenser covers.
2. Locate the vending arm shipping pins identified by the red flagged labels. Pull these pins and remove completely to release the vending arm for proper operation. Failure to do this prior to applying machine power could result in mechanism damage. Save these pins to secure the vending arm when transporting the machine.
3. Raise the cleaning arm assembly by loosening the shipping and locking knob and lifting the assembly, sliding in upwards in the mounting track. Placing one of the lock screws in the upper position will assist in holding the cleaning assembly in this raised position. Ensure that the assembly is secure in the upper position before proceeding.
4. Raise the sugar tube by loosening the knob and lifting the tube to the upper limit. Tighten the knob gently to prevent the tube from falling.
5. Remove three bowl cover screws and remove the bowl cover and set aside.
6. Remove the Spinner Head Support collar that is fastened around the spin head. Save this collar to support the spin head during transportation. Failure to utilize this collar when transporting the machine could cause damage to the suspension springs of the Spinner Head and Motor assembly.

7. Remove floss bowl by lifting the bowl above the spinner head and tipping forward up to clear the spinner head then lowering the bowl to remove from around the sugar tube. Remove all packing that may exist between the Spin Motor housing and the mounting spring brackets.
8. The floss bowl is a food contact surface and needs to be cleaned prior to first use. Clean the bowl as described in the cleaning section. Replace the floss bowl, floss bowl cover, cover screws and lower the sugar tube to just inside the top lip of the spinner head. Ensure that the tube is centered in the spinner head opening.
9. Lower the cleaning arm assembly to the lower position.
10. Remove the power cord from the coin box and insert in the power receptacle on the lower back panel. Turn power breaker switch on to apply power to the machine. Close and lock the lower and upper rear cabinet doors.
11. Locate the front door interlock switch on the right edge of the vending shelf. Pull the white plunger to the out position applying power to the machine.

Preparing and Loading Sugar Mixture and Floss Sticks

Floss Sugar Mixture

Optimum Cotton Candy production requires the use of optimum grade sugar. VendEver recommends the use of Wal-Mart Great Value sugar or an equivalent pure cane sugar of identical granularity. Use of a fine granulation of sugar will not create optimum floss production and cause premature fouling of the spinner head.

Flavoring of the sugar mixture should be done by the use of commercially available floss flavors such as Gold Medal Flossine. VendEver LLC recommends the use of this brand of flavoring to create maximum sales and customer satisfaction. Flossine should be mixed at the rate of one tablespoon Flossine to ten pounds of sugar. This mixture should then be filled into the sugar container of the Cotton Candy Factory.

Priming of the Sugar Container Hopper

1. Place sugar mixture in the sugar container of the CCF machine.
2. Enter the Test Mode by pressing and holding the test button while turning on machine power.
3. Release the button when the display reads “33”.
4. Press and release the test button until test “11” is shown on the display to select the sugar motor test.
5. Press the Free Play button to start the sugar motor test. Allow the sugar motor to run approximately 5 seconds to prime the sugar auger.
6. Press the Free Play button again to stop the test. Observing that there is a small amount of sugar present in the spinner head.
7. Turn machine power off, then back on to exit the test mode.

Loading the Stick Dispenser

Load the floss sticks into the stick dispenser by small handfuls to ensure that all sticks are placed in a parallel order. Care must be taken to not allow any sticks to be loaded that do not conform in the parallel position as a single stick inserted at a diagonal angle will cause a stick jam and malfunction of the stick dispenser causing an out of order condition.

When sticks are loaded the machine will load a stick to the stick pusher tray to prior to the machine entering the ready to vend condition upon power up.

Location Requirement for Power and Current

Locations must provide for a dedicated 110 volt AC outlet rated at 15 amps. Failure to provide adequate voltage and current requirements may cause erratic operation and failure to generate proper heating requirements for adequate floss production and ability to clean spinner head correctly.

Programming the Dip Switch Options.

The following chart describes the Dip Switch settings for options available on the CCF vendor.

DIP SW1

FUNCTION	SWTICH POSITION	1	2	3	4	5	6	7	8
COIN MECH	1 COIN 1 CREDIT **	0							
	1 COIN 5 CREDITS	1							
BILL ACCEPTOR	1 PULSE 1 CREDIT **		0	0					
	1 PULSE 2 CREDITS		1	0					
	1 PULSE 4 CREDITS		0	1					
	1 PULSE 10 CREDITS		1	1					
1PLAY	1 CREDIT **				0	0	0		
	2 CREDITS				1	0	0		
	3 CREDITS				0	1	0		
	4 CREDITS				1	1	0		
	5 CREDITS				0	0	1		
	6 CREDITS				1	0	1		
	8 CREDITS				0	1	1		
10 CREDITS				1	1	1			
COIN RECORD	NO							0	
	YES **							1	
FREE PLAY PUSH START BUTTON	NO **								0
	YES								1

**Factory Setting

***Please reboot machine after setting is changed.

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DIP SW2

FUNCTION	SWTICH POSITION	1	2	3	4	5	6	7	8
AUTO-CLEAN OPERATING AFTER <u>XX</u> VENDS	3 VENDS	0	0	0					
	10 VENDS **	1	0	0					
	20 VENDS	0	1	0					
	30 VENDS	1	1	0					
	35 VENDS	0	0	1					
	40 VENDS	1	0	1					
	45 VENDS	0	1	1					
	50 VENDS	1	1	1					
TOTAL TIME OF SUGAR-IN (HOW MUCH SUGAR NEEDED)	3.75 SECONDS				0	0			
	4.00 SECONDS				1	0			
	4.25 SECONDS				0	1			
	4.5 SECONDS **				1	1			
STANNBY MUSIC	ON **						0		
	OFF						1		
AUTO-CLEAN MODE	ON **							0	
	OFF							1	
Vend cycle test	ON								1
	OFF **								0

**Factory Setting

***Please reboot machine after setting is changed.

DIP SW3

FUNCTION	SWTICH POSITION	1	2	3	4	5	6	7	8
TEMPERATURE AND HUMIDITY	ON **	0							
	OFF	1							
SAFETY VSENSE OF HEAT MOTOR	ON **		0						
	OFF		1						
MANUAL PRE-HEAT TIME	0 SECONDS **			0	0				
	4 SECONDS			1	0				
	8 SECONDS			0	1				
	12 SECONDS			1	1				
AI PRE-HEAT SETTING	ON **					0			
	OFF					1			
VEND ARM RAISE FOR ONE SECOND	OFF **						0		
	ON						1		
NO USE									
	-								
VEND ARM MOVE UP AND DOWN MODE	OFF **								0
	ON								1

***Please reboot machine after setting is changed.

Completing A Test Vend On the Cotton Candy Factory.

After completing the set-up procedures and connection to a proper power supply, conducting several test vends to properly “season” the spinner head is required to achieve the optimum product shape and size.

Press the Free Play button on the control panel to start the test vend process. The first several vends may be smaller and not have the optimum shape results. This should resolve within 4-5 test vends. At this time the machine can be put in to normal service.

Testing and Error Codes

Entering the Test Mode for Machine Testing

Press test button and turn on the power until the display shows “33” and then release test button. Choose test mode by pressing test button, and test by pressing free play button. For example, the display show “01” to represent the machine is in test mode 01, auto cleaning mode. And it will start for a cycle by pressing free play button. Meanwhile, a sound effect gives off in the beginning of the test, and the another sound effect gives off as long as all procedures in this test cycle has been finished correctly. If it couldn’t finish all procedures correctly, the alarm will be activated and show the corresponding error on the display.

NO.	MODE	OPERATION	IN OR OUT
1	AUTO-CLEAN	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
2	VEND ARM	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
3	GATE/FLAP	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
4	PUSHER	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
5	STICK DISPENSER	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
6	STICK PUSHER	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
7	ROTATOR	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
8	VEND DOOR LOCK	PUSH "FREE PLAY" BUTTON TO TEST	IN AND OUT
9	SPIN HEATER	PUSH "FREE PLAY" BUTTON TO START AND STOP	OUT
10	FLOSS BOWL MOTOR	PUSH "FREE PLAY" BUTTON TO START AND STOP	OUT
11	SUGAR-IN MOTOR	PUSH "FREE PLAY" BUTTON TO START AND STOP	OUT
12	ROTATOR MOTOR	PUSH "FREE PLAY" BUTTON TO START AND STOP	OUT
13	NO USE		
14	SPIN HEATER MOTOR	PUSH "FREE PLAY" BUTTON TO START AND STOP	OUT
15	STICK SENSOR	PUSH "FREE PLAY" BUTTON TO TEST	IN
16	SUGAR VSENSE	PUSH "FREE PLAY" BUTTON TO TEST	IN
17	VEND DOOR OPEN	PUSH "FREE PLAY" BUTTON TO TEST	IN

Please reboot machine after testing

Troubleshooting and Error Codes

The following is a chart of error codes for troubleshooting the Cotton Candy Factory.

NO.	CAUSE	SOLUTION	REF.
1	METER 1 ERROR	1. CHECK CONNECTING WIRE 2. CHANGE METER	
2	METER 2 ERROR	1. CHECK CONNECTING WIRE 2. CHANGE METER	
3	OUTPUT METER ERROR	1. CHECK CONNECTING WIRE 2. CHANGE METER	
4	COIN MECH ERROR	1. CHECK CONNECTING WIRE 2. CHANGE COIN MECH	
5	BILL ACCEPTOR	1. CHECK CONNECTING WIRE 2. CHANGE BILL ACCEPTOR	
6	MEMORY ERROR	CHANGE MOTHERBOARD	
7	NO SUGAR	1. ADD SUGAR 2. CHECK DETECTOR SENSOR OF SUGAR	
8	VEND DOOR OPEN OVER TIME	1. CHECK VEND DOOR IS CLOSED 2. CHECK VEND DOOR SENSOR 3. CHECK IF THERE IS BLOCK IN VEND DOOR	
9	SPIN HEATER MOTOR ERROR	1. CHECK CONNECTING WIRE AND DETECTOR PLATE WIRE 2. CHECK SPIN HEATER MOTOR 3. CHECK DETECTOR	
11	NO PAPER STICK ON ROTOR	1. CHECK THERE ARE ANY PAPER STICK ON 2. CHECK PAPER STICK DISPENSER MICRO SWITCH 3. PAPER STICK DISPENSER MOTOR 4. CHECK PAPER STICK PUSHER MOTOR 5. PAPER STICK PUSHER SENSOR	APPENDIX VI
12	PAPER STICK SENSOR ERROR	1. CHECK PAPER STICK PUSHER MOTOR 2. CLEAN DUST OR CHANGE SENSOR	APPENDIX VI
13	CLEAN MECHANISM ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK MICRO SWITCH 3. CHECK PCB	
14	VEND ARM ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK MICRO SWITCH 3. CHECK PCB	APPENDIX I
15	VEND DOOR ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK SENSORS 3. CHECK PCB 4. CHECK MICRO SWITCH OF VEND DOOR	APPENDIX II
16	PUSHER OF VEND ARM ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK MICRO SWITCH 3. CHECK PCB	APPENDIX III
17	PAPER STICK PUSHER MECHANISM ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK MICRO SWITCH 3. CHECK PCB	APPENDIX IV
18	NO PAPER STICK	1. ADD PAPER STICK 2. CHECK PAPER STICK DISPENSER MICRO SWITCH	
19	ROTOR OF MANIPULATOR MECHANISM ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK MICRO SWITCH 3. CHECK PCB	APPENDIX V
20	VEND DOOR LOCK/ OPEN MOTOR ERROR	1. CHECK MOTOR OR CONNECTING WIRE 2. CHECK MICRO SWITCH OF EXIT DOOR 3. CHECK PCB	
21	INITIAL POSITION ERROR OF PUSHER OF VEND ARM	ENTER TEST MODE AND ADJUST PUSHER OF MANIPULATOR TO THE TOP LIMIT	APPENDIX III

Chapter 2: Maintenance and Cleaning

This chapter explains necessary maintenance and cleaning procedures:

- ✓ Maintenance intervals necessary to ensure proper machine operation.
- ✓ Routine cleaning process to ensure consistent floss production.

Cleaning Schedules

The Cotton Candy Factory from VendEver requires routing servicing to maintain optimum operation of the machine. Several variables determine the frequency of the necessary cleaning required of the spinner head, floss bowl chamber and delivery areas.

- Low humidity locations require cleaning of the Floss Bowl and Delivery Area every 200-250 vends.
- Higher humidity locations may require cleaning of Floss Bowl and Delivery Area every 150-200 vends.
- Floss head cleaning (burn-off) should be performed when sugar crystal build-up begins to occur to maintain optimum performance and prolong floss ribbon life.
- Non-Food Contact areas will require routing cleaning with a dry brush process to prevent excessive accumulation of sugar vapor and floss build up.

The location environment is the primary variable to determine the cleaning frequency of the Floss Bowl. High humidity locations will require a more frequent service of the floss bowl area and may involve rinsing the sugar from the floss bowl each service, whereas lower humidity locations may only require a simple scraping of the floss bowl at the service interval and rinsing every 2 or 3 service intervals.

Cleaning of the interior surfaces of the machine is required as necessary to remove vaporized sugar residue. This residue should be brushed loose or cleaned with appropriate cleaner to prevent excessive buildup. Sugar residue that has been loosened by brushing should be swept up or vacuumed from the interior of the cabinet to maintain a clean and sanitary condition.

Cleaning Procedures

Food Contact areas

Routine cleaning of the machine at the suggested intervals should be performed as follows:

Spinner Head Cleaning

The spinner head requires routine maintenance to prevent premature failure of the floss ribbon heating element. Sugar build-up on the floss band if not treated will cause carbonized sugar to accumulate on the floss ribbon heater band causing excessive smoking and poor floss production eventually causing the failure of the ribbon. It is important to not attempt removal of the sugar crystals by brushing or scraping the surface of the floss band as this can cause permanent damage requiring the replacement of the Spinner Head Assembly. To remove sugar crystal build up, the following process should be followed to maintain peak floss production and quality of product:

1. Enter the Test Mode by pressing and holding the test button while turning on machine power.
2. Release the button when the display reads “33”.
3. Press and release the test button until test “09” is shown on the display.
4. Press the Free Play button to start the Spin Heater test. This test will start the spin motor and spinner head heater to “burn off” the sugar crystal build up. This test may need to run for several minutes until the crystals will begin to spin off the Floss Band. This is indicated by a sound similar to popcorn popping as small crystals fly off the band and impact the wall of the floss bowl.
5. After it is noticed that there are no more crystals “popping” off the spinner head, press the Free Play button again to stop the test.

Caution. Do not touch the spinner head following the burn off test. The surface of the floss band will remain very hot for many minutes following the Burn Off cycle.

Floss Bowl Servicing

Cleaning of the Floss Bowl is performed based on location conditions and sales volume. When hard sugar build up occurs on the wall of the Floss Bowl, removal and cleaning is required. In some cases the sugar can be scraped from the side of the bowl and emptied allowing the floss bowl to be replaced in the machine without washing the bowl. When excessive build up occurs, the bowl must be removed, washed, thoroughly dried and replaced in the machine. The following is the process for cleaning of the floss bowl:

1. Perform the Spin Head Cleaning procedure if necessary prior to removal and cleaning of Floss Bowl
2. Remove Floss bowl according to the process described in the Set-Up section.
3. Scrape loose sugar from the inside wall of Floss Bowl .
4. Loosen and empty sugar byproduct into waste receptacle.
5. Inspect bowl and cover to determine if additional rinsing of sugar waste is necessary.

6. Rinse cover and bowl in HOT water to completely dissolve and remove sugar residue.
7. Dry thoroughly and completely with clean towels prior to replacing in machine.
8. Replace Floss Bowl and Cover according to the procedure in the Set-Up section of this manual.

Sugar Canister Removal and Cleaning

The sugar canister can be removed easily to remove sugar contents for cleaning and transportation. Once removed, the canister can be dis-assembled easily for cleaning and service. The following procedure is used to remove and service the canister.

1. Loosen the motor bracket fasteners securing the motor bracket assembly to the shelf.
2. Slide the motor assembly to the rear disengaging the motor drive shaft from the canister auger drive.
3. Release the canister by gently prying the mounting base tabs outward while lifting the container from the mounting base.
4. The container can now be emptied and dis-assembled for easy cleaning and servicing.
5. Cleaning of the container is accomplished by washing in hot water with a mild detergent.
6. Dry thoroughly and completely by air drying or wiping with clean towels.
7. Replace the container by reversing the previous steps.
8. Assure components are completely dry prior to adding sugar to the container to prevent build-up of sugar on drive components.

Vend Door / Delivery Area Cleaning

Cleaning of the food contact surfaces of the Delivery Area, Stick Tray and Vending Door need to be performed when servicing the machine. These areas are cleaned using the following procedure:

1. Using a stiff brush, loosen and remove sugar build-up from the vending chamber area.
2. Remove remaining sugar build-up using clean towels moistened with HOT water. Rinse or use clean towel frequently.
3. If an anti-bacterial multi-surface cleaner is used, Rinse, wipe and dry with clean, hot water and towels to remove cleaning residue on all food contact surfaces.

Caution: Use care around edges of stainless sheet metal surfaces. These edges, although checked for sharp edges, may cause minor abrasions or scrapes if not cleaned carefully. Nitrile rubber gloves are recommended to be worn for cleaning of these areas.

Non-Food contact areas

Stainless interior

Cleaning of all non-food contact stainless steel surfaces should be performed as necessary to prevent the build-up of vaporized sugar. Sugar build-up should be removed by brushing to remove build-up. Surfaces will generally come clean with this process. If additional cleaning is required, it is easily performed with a FDA approved cleaner such as Sheila Shine. Assure that all cleaner is

rinsed from all food contact surfaces after cleaning. All surfaces must be dried thoroughly and completely prior to operation.

Cabinet interior

Loose sugar residues should be brushed up or vacuumed regularly from the floor of the machine to prevent excessive build-up.

All remaining non-food contact surfaces on the interior of the machine can safely be cleaned as necessary by using multi-surface cleaners and clean towels. Ensure that cleaners are not allowed to contact food-contact surfaces. Rinse clean all food-contact surfaces that are contaminated with cleaners to remove all cleaner residues.