Popup Drink Thru

SPACEMAN Frozen Drink Machine Manual & Cleaning

June 2021

Confidential & Proprietary

SPACEMAN

6695-C

FROZEN BEVERAGE FREEZER

Two flavor, Countertop, Gravity feed

Intertek Intertek CE

Powerful & Versatile

High capacity two flavor counter model for frozen beverage and milkshakes

Fast Freeze Down
Patented high efficiency heat exchanger allows fast freeze down with low energy consumption

Simple Control, Easy Operation
Simple and intuitive control system makes operation and viscosity adjustment easy, swift and more precise

Low Mix Indicator
Light turns "ON" at low mix to alert operator to add mix

See-through Dispensing Door
Clear dispensing door design makes product more attractive and serves as great marketing tool

Standby & Indicator
Maintains product temperature in both mix hopper and freezing cylinder below 4.4°C (40°F) overnight; Indicator lights up during Standby

Higher capacity solution with greater flexibility to serve larger crowds alcoholic & non-alcoholic frozen drinks including milkshakes

Hopper Agitators
Maintain product consistency and prevent product separation

Self-closing Dispensing Valve
Automatically prevents product overflow after dispense

Safety Protections
- High pressure switch to prevent compressor overheating
- Thermal overload to protect from motor overheating

Light Box (Optional)
- Illuminates flavor cards to attract more business
- Changes color to indicate Low Mix and Standby

One-hand Operated Spinner (Optional)
- Adds ability to blend and offer more variaties of treats
- Allows for multi-tasking one-hand operation that helps increase productivity and reduce serving time

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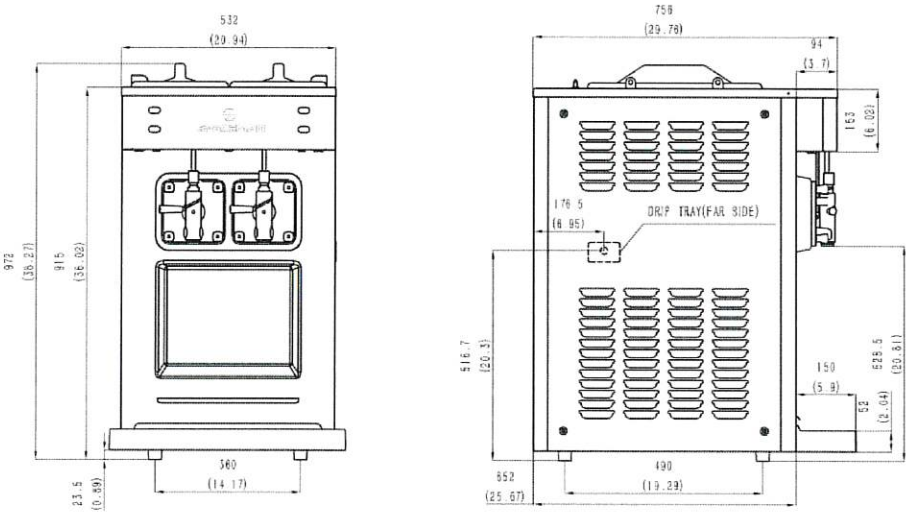
SPACEMAN

6695-C FROZEN BEVERAGE FREEZER



SPECIFICATIONS

Flavors	2
Freezing Cylinders	2 x 6.9L / 7.3qt
Mix Hoppers	2 x 12L / 12.7qt
Output Capacity (250ml)	320 serves/hr
Clearance Requirements	152mm/6" on right

Weight	Kg/lb
Net	220 / 489
Shipping	235 / 522
Volume	0.51 CBM / 17.84 CBF

Dimensions	Net (mm/in)	Shipping (mm/in)
Width	532 / 20.9	570 / 22.4
Depth	652 / 25.7	800 / 31.5
Height	972 / 38.3	1110 / 43.7

Electrical	MFS	MCA	Power(kW)
220-240/50/1	20	15	2.4
208-230/60/1	20	17	2.7

FEATURES

Control Systems	Two, Mechanical
Refrigerated Hoppers	☑
Hopper Agitators	☑
Standby Mode	☑
Auto Closing Dispensing Valves	☑
Low Mix Indicator Light	☑
Low Mix Indicator Alarm	☑
Standby Mode	☑
Standby Indicator Light	☑
High Pressure Protection	☑
Thermal Overload Protection	☑

AVAILABLE OPTIONS

Top Air Discharge Chute	☑
Spinner	☑
Light Box	☑

• Above specifications are subject to change without notice

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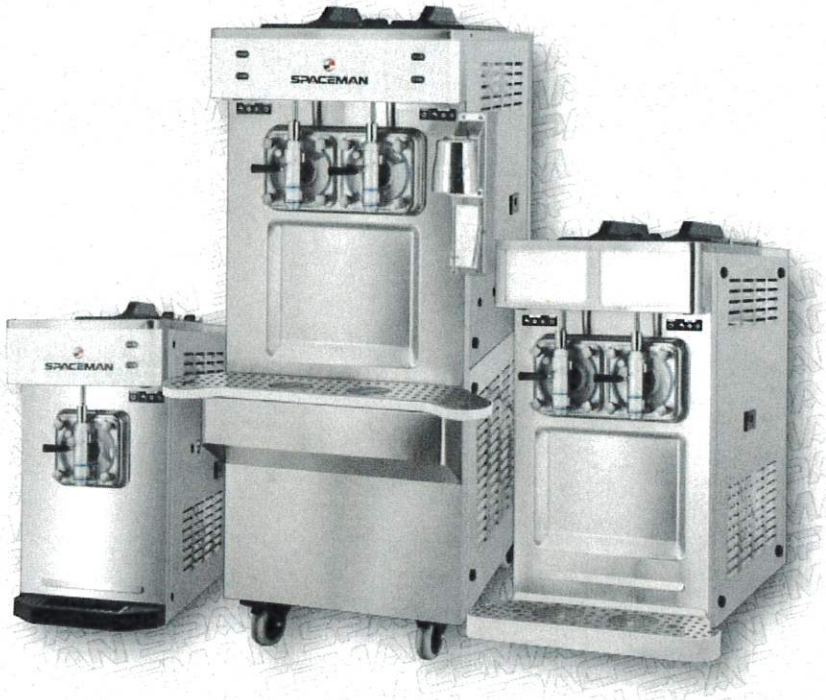
02/2020

SPACEMAN

COMMERCIAL ICE CREAM & FROZEN BEVERAGE EQUIPMENT

Machine Manual



Frozen Beverage Models

Counter or Floor Standing

About The Manual

Welcome to your machine

Welcome to your Spaceman frozen beverage machine, engineered and designed to provide dependable operation and a consistent quality product. Your machine is approved for dairy and nondairy products, with hopper refrigeration function to maintain product temperature below 4°C (40°F), and with more automated analog control system for operational ease and efficiency . All models, countertop or floor, single or two flavor, operate in the same fashion.

This manual is a universal version that provides instructions on installation, operation, cleaning and routine maintenance. Information contained in this manual may be subject to change. Please check online or contact your local Spaceman distributor for continued updates and detailed information about your Spaceman machine.

Look out for these icons

WARNING: Denotes an action that WILL cause harm to the operator or machine if performed incorrectly.

IMPORTANT: Represents a vital mechanical step or note that the user must be aware of.

CAUTION: Informs the operator of a task that may lead to harm if protocol is not properly performed.

NOTE: Non-hazard, but pay extra attention.

Follow instructions to be safe

CAUTION: This machine has many built-in safety features to protect the operator while the machine is running.

Be cautious and follow instructions carefully when operating, cleaning, and servicing the machine.

All personnel operating this machine **MUST** read and understand this manual in its entirety. Failure to comply with this manual may damage the machine and cause severe injury to the operator.

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QUICK OPERATION GUIDE

UNPALLETIZE MACHINE

Warning: Unpalletizing requires lifting. **Two or more personnel should remove the machine from its packaging and place it in its final operating location.** Failure to do so may result in severe injury or damage. Inspect equipment for hidden damage before signing for delivery.

1. Cut packing straps, and remove cardboard lid and outer sides from the pallet. DO NOT cut cardboard.
2. Remove plastic wrapping around machine.
3. Cut stabilizing straps, being careful not to scratch or dent the machine panels.
4. Prepare the area where the machine will be placed, remove packing cardboard from underneath machine, and place ramp wedges near front casters.
5. Unlock front casters, and roll machine down the wedges off the pallet.
6. Place the machine in its final location according to the Installation Requirements.

CHECK FOR SHIPPING DAMAGE

Inspect the machine for any shipping damage. If you find any, contact Spaceman Technical Service immediately after unpalletizing. Our technicians will help you assess the damage and determine the appropriate action prior to accepting the delivery.

UNPACK AND INSPECT PARTS

Refer to the detailed parts diagrams on the back pages if necessary.

1. Remove all packaged parts and accessories from your machine.
2. Organize items on a clean table or operating area using the checklist.
3. Inspect for damage immediately upon unpacking and call Spaceman Technical Service if you discover any damaged or missing parts.
4. Clean and properly lubricate machine parts prior to machine operation.

Included Parts:

- Hopper Cover (1 or 2)
- Front Drip Tray + Splash Shield
- Dispensing Handles
- Start-Up Kit
- Operator's Manual

INSTALLATION AND SETUP

1 

Unpack and inspect machine, parts, and accessories.

2 

Place machine in appropriate food preparation area. Comply with all installation requirements.

3 

Read and understand ALL safety and standard operating procedures.

CLEANING AND PREPARATION

4 

Fully disassemble machine, and prepare parts for cleaning.

5 

Thoroughly clean and scrub machine hoppers, cylinders, and all parts.

6 

Lubricate and re-assemble all machine parts.

7 

Fully sanitize machine.

OPERATION

8 

Prepare product in a separate container, and ensure product is thoroughly mixed.

9 

Add product to hoppers and prime the cylinder using the prime plug.

10 

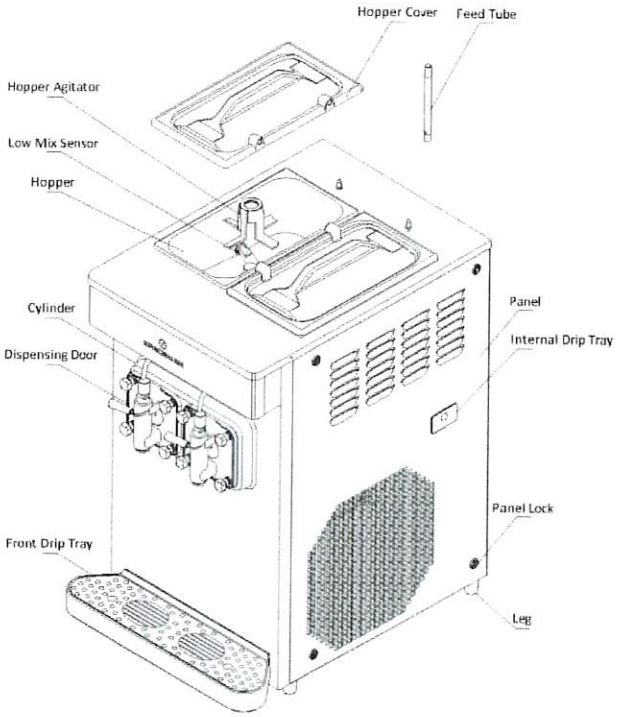
Turn machine to FREEZE mode, and wait for product to reach frozen consistency.

11 

Slightly adjust viscosity setting as necessary to adjust product firmness.

GETTING TO KNOW YOUR MACHINE

COMMON MACHINE PARTS



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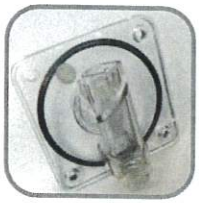
Hopper Cover


Feed Tube


Door Hand Screws


Dispensing Door with Prime Plug, and Gasket


Draw Valve with O-Rings


Draw Valve Pin


Ice Buster


Draw Handle


Beater Guide


Torque Arm


Beater


Scraper Blade


Torque Assembly with O-Ring


Torque Guide


Drive Shaft


Drive Shaft Gasket


Internal Drip Tray


Front Drip Tray with Splash Shield


O-Ring Removal Tool

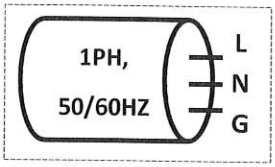

Brush Kit (Optional)


Hopper Agitator (if present)

INSTALLATION REQUIREMENTS

POWER CONNECTION

1. Connect all wires to Circuit Breaker (including neutral & ground bus terminals) or Local Plug according to supply voltage and wire codes on machine power cable.
2. Verify Incoming Supply Cable is wired the same way on Circuit Breaker or Wall Receptacle before switching on or plugging in the machine.

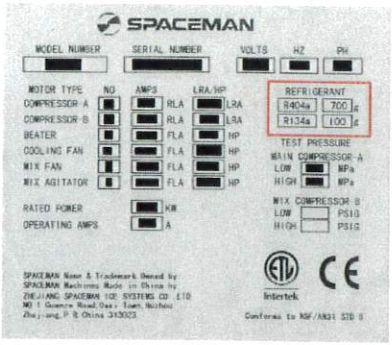


REFRIGERANT REQUIREMENTS

Spaceman requires that only the specified refrigerant be used in your machine.

Alternative refrigerants may cause damage to the cooling system and/or prevent the machine from operating at optimal performance.

If you require an alternative refrigerant, please call Spaceman Technical Support for a list of compatible alternatives for your compressor.

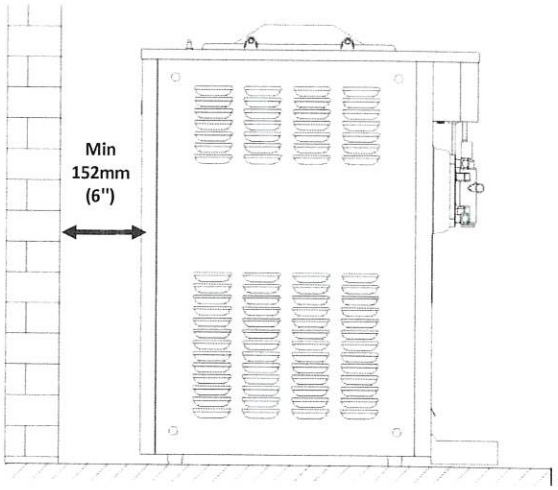


MACHINE PLACEMENT REQUIREMENTS

CAUTION: The machine must be placed on a level surface away from walls and other objects. Failure to comply will damage the machine and refrigeration components and will void all warranties.

CAUTION: The machine is designed to operate in normal ambient temperatures of 16°C to 24°C (60°F to 75°F). Operating in higher ambient temperatures will result in degraded performance.

- Place on a flat, level, and solid surface fitted to the machine dimensions
- Ensure a minimum 152mm (6") clearance on the exhaust side (Side or Back)
- Completely clear area of dust, grease, and airborne particles
- Place away from hot equipment such as stoves, frying baskets, ovens, etc.



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ROUTINE MAINTENANCE

ROUTINE MAINTENANCE OPERATION:

- **Disassemble, Clean, and Lubricate:** Daily
- **Replace Wearable Parts:** Every 1 to 3 months*
- **Preventative Maintenance:** Quarterly**

* Based on machine usage and cleaning intervals; a Tune-Up Kit is available with all wearable parts (O-rings, gaskets, etc.) except scraper blades

** Based on cleanliness of location and proximity to powder-based machines. Preventative maintenance includes cleaning condensers, checking belt tensions, and cleaning the interior of the machine frame as required.

Tune-Up Kit

The image displayed is for illustration purpose only and may differ from the actual product.

For optimal machine performance and many years of efficiency and reliability from your machine, Spaceman recommends cleaning and sanitizing the machine and its parts **daily**. The machine comes equipped with a brush kit specifically designed to efficiently and properly clean the machine.

WARNING: If this is the first time operating the machine, you MUST clean and sanitize ALL parts prior to running the machine.

IMPORTANT: Cleaning and sanitizing schedules are governed by state or local regulatory agencies and MUST be followed accordingly. Routine maintenance MUST be performed a minimum of once every 3 days.

CAUTION:

- Do NOT run the machine without properly lubricating required parts
- Do NOT clean the machine with abrasive or toxic chemicals and cleaners. Doing so may cause damage to the stainless steel material
- ONLY use Spaceman-included cleaning brushes and lubrication
- NEVER use metal objects to clean or operate the machine
- ALWAYS replace wearable parts a minimum of every 3 months
- ALWAYS prime machine prior to operating
- ALWAYS inspect parts for excess wear and damage

NOTE: Additional brushes, lubrication, wearable parts, and tools can be purchased from Spaceman to ensure proper maintenance. Extra wearable parts (except scraper blades) are found in the Start-Up Kit.

PREPARATION : DISASSEMBLE PARTS

DISASSEMBLE PARTS

NOTE: Prepare dishwashing area prior to disassembly, and use a bucket to temporarily store removed parts.

CAUTION: Always separate O-rings and gaskets from metal parts to prevent damage while washing.

1. Verify the power switch is turned to OFF.
2. Remove the torque arm, first pulling up out of the torque assembly and then down out of the flat sensor arm.
3. Remove dispensing door hand-screws (4).
4. Remove dispensing door assembly, torque assembly, and beater assembly.
5. Remove torque assembly O-ring using O-ring tool; remove torque guide.
6. Remove scraper blades from beater assembly
7. Remove dispensing door gasket using O-ring tool.
8. Rotate draw valve until the flat part at the top is perpendicular to the clear face of the dispensing door (use towel if necessary).
9. Remove ice buster.
10. Remove draw valve, twisting it while removing.
11. Remove draw valve O-rings (2) using O-ring tool.
12. Unscrew and remove prime plug from dispensing door.
13. Use a towel to remove drive shaft at the back of the cylinder.
14. Separate drive shaft gasket from drive shaft.
15. Remove front drip tray and internal drip tray.

PREPARATION : WASH PARTS

WASH PARTS

CAUTION: Never wash parts in a dishwasher. Always hand-wash components with nontoxic, food-safe cleaners.

1. Verify power switch is turned to OFF.
2. Use the large brush and cool water to thoroughly clean inside the cylinder; *be sure to scrub the back of the cylinder and verify the cylinder is free of ALL product.*
3. Thoroughly clean and dry the rear of the cylinder with the supplied black brushes and a clean, dry towel.
4. Gently clean and wipe down the outside of the machine.
5. Carefully and thoroughly wash all parts removed from the machine using supplied brushes, sponges, and clean towels; *when cleaning the dispensing door, clean the priming port with a small brush.*
6. Carefully and thoroughly clean all gaskets and O-rings removed from the machine; *be sure to wipe gaskets and O-rings to remove excess lubricant.*
7. Verify all parts are clean and free of all food product prior to re-assembling machine.

PREPARATION : ASSEMBLE PARTS

ASSEMBLE PARTS

CAUTION: Never force the installation of any parts. All parts fit correctly without force. If parts don't seem to fit, remove all parts and repeat assembly.

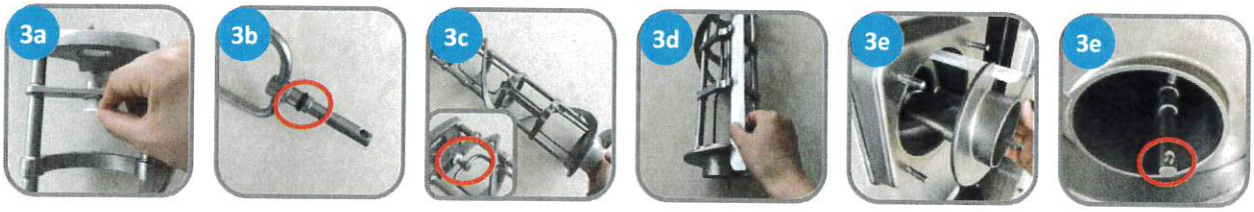
1. VERIFY MACHINE POWER SWITCH IS IN THE OFF POSITION

2. INSTALL DRIVE SHAFT

a. Place drive shaft gasket on drive shaft.
b. Seal gasket open space with Spaceman lubricant, extending onto drive shaft and *avoiding the top square part*.
c. Insert drive shaft into rear shell bearing at the back of the cylinder, and turn it until the key engages firmly into the socket (when inserted correctly, the drive shaft will no longer turn 360°).

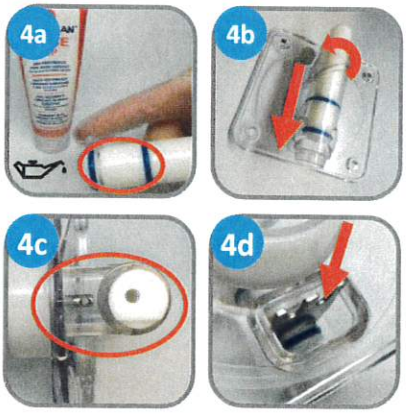
3. INSTALL BEAETR AND TORQUE ASSEMBLY

a. Place torque guide onto the end of the beater assembly; *DO NOT lubricate this component*.
b. Place O-ring on torque assembly, coating with Spaceman lubricant.
c. Insert torque assembly into torque guide at the end of beater assembly.
d. Fit scraper blades onto beater.
e. Insert the complete beater assembly into cylinder; turn assembly until it engages the drive shaft key and no longer turns 360°.



4. INSTALL DISPENSING DOOR

a. Place O-rings (2) on draw valve, coating with Spaceman lubricant.
b. Insert draw valve 7/8 way into the dispensing door from the top, *rotating as you install*.
c. Turn draw valve so the flat portion at the valve top is perpendicular to the clear face of the dispensing door .
d. Insert ice buster through the dispensing spout at the bottom of the door and into the slot on the draw valve.



PREPARATION : ASSEMBLE PARTS

e. Rotate draw valve to lock ice buster in place; turn valve until the hole for the draw handle is accessible on front.

f. Insert draw handle; secure in place with valve pin.

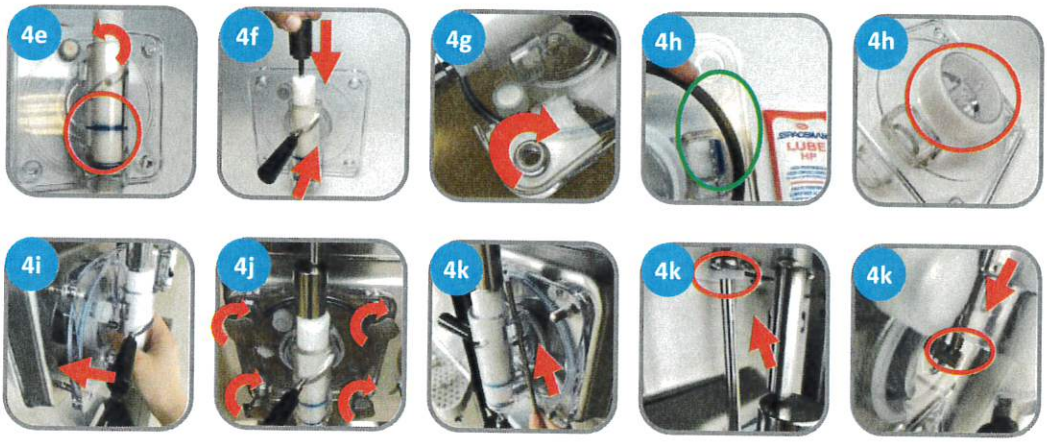
g. Screw prime plug onto dispensing door.

h. Place dispensing door gasket on door, coating with Spaceman lubricant; Place beater guide onto dispensing door, with flange flush with the back of the door.

i. Align door assembly with torque assembly and mounting bolts; install dispensing door until flush with machine; *if needed, gently wiggle dispensing door to get the beater guide to line-up correctly inside the beater; DO NOT force the dispensing door onto the machine*.

j. Tighten dispensing door hand-screws (4) in a cross-pattern.

k. With tapered end down, install torque arm up through the sensor pin hole under the overhead and then down into the torque assembly; torque am should move freely back and forth.



5. INSTALL HOPPER ASSEMBLY AND DRIP TRAYS

a. If machine has hopper agitator, lubricate inside it and install with arrow pointing up.

b. Install hopper lid and drip trays (internal and front).

PREPARATION : SANITIZE

SANITIZE

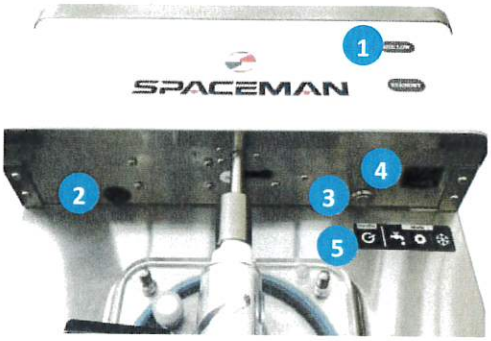
IMPORTANT: After sanitizing the machine, DO NOT rinse or touch areas that have been sanitized. Product must be added immediately. If new product will not be added immediately, rinse machine with clean water and loosen door hand-screws to allow cylinder to air-dry. Sanitize machine before using again.

CAUTION: Always use food-grade, no-rinse sanitizer to sanitize. If warm water is required to dissolve sanitizer, allow the solution time to cool before adding to machine.

1. Verify assembly is complete and machine power is OFF.
2. Verify the draw valve is in the CLOSED position (LEFT).
3. Mix a minimum of 7.57 liters (2 gallons) of food-grade sanitizer in a bucket or container.
4. Pour a minimum of 7.57 liters (2 gallons) of food-grade sanitizer solution into the hopper.
5. Turn power switch to WASH.
6. Allow solution to agitate for 5 to 10 minutes; *NEVER leave machine on WASH for more than 10 minutes.*
7. While agitating, gently use a clean brush to scrub and distribute sanitizer solution along hopper walls and hopper agitator (if present).
8. Place a bucket or container below the draw valve.
9. OPEN the draw valve (RIGHT) and drain solution from the machine.
10. Turn power switch to OFF.

OPERATING CONTROL

INTRODUCTION



Mix Low Light
Standby Light

Light Box Button
(If present)

Standby Button

Power Switch

STANDBY WASH STOP FRREZE

ADD PRODUCT TO MACHINE

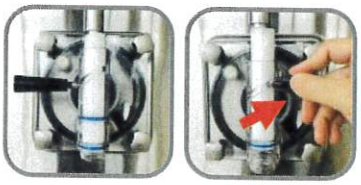
1. Verify machine has been recently sanitized (within 1 hour); if machine has <u>not</u> been recently sanitized, verify door hand-screws are tight, and perform sanitizing steps (Page 13).
2. Turn power switch to OFF.
3. Thoroughly mix and prepare at least 7.57 liters (2 gallons) of product according to manufacturer instructions; mix should be cool and smooth (free of large chunks).
4. Place a bucket or container below the draw valve.
5. OPEN draw handle (RIGHT).
6. Pour 0.95 liters (0.25 gallons) of product into the hopper; sanitizer will start to flow out of the draw spout.
7. Once sanitizer has been purged from the machine and a steady stream of product is flowing from the spout, CLOSE draw handle (LEFT).
8. Pour remaining product into the hopper.
9. Open the prime screw (counter-clockwise) on the front of the dispensing door and allow the cylinder to fill with product to the desired level; *cylinder must be at least 75% full to operate.*
10. Close the prime screw and tighten completely.
11. Replace hopper lid.

FREEZE PRODUCT

1. Verify cylinder is full of mixed product.
2. Turn power switch to FREEZE and verify STANDBY mode is off .
3. The motor will begin to agitate the product, and the cooling system will begin to freeze the product.
4. Freezing product takes approximately 10 minutes; product is at the adjusted viscosity when the flat sensor arm is switched to the RIGHT.
5. When the product reaches the desired viscosity, it is ready to dispense.

Operation Control

Dispense Product



1. OPEN draw handle (RIGHT) until the desired amount is dispensed.
2. CLOSE the draw handle (LEFT) when finished dispensing.

Wash

Turn power switch to WASH.

The motor will begin to agitate the product or water.

Standby

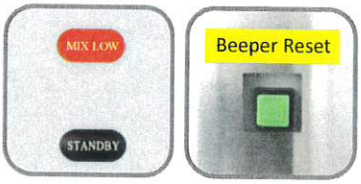
IMPORTANT: When the machine will NOT be utilized for several hours, place it in STANDBY mode to conserve electricity and reduce product loss.

In STANDBY, product remains below 5°C (41°F) in both the cylinder and hopper, but will NOT be frozen.

Press on STANDBY button underneath overhead.

Light on front panel illuminates blue when machine is in STANDBY mode.

Low Mix Alarm



Mix low light is located on front panel of machine. Light will illuminate RED and the alarm beeper will go off when mix level in hopper is low. Hopper should be refilled as soon as possible.

Alarm beeper can be turned off by pressing the Beeper Reset button on side panel of machine.

Always maintain at least 2cm of mix in the hopper. If you neglect to add mix, a freeze-up may occur. This will cause eventual damage to the beater assembly, the dispensing door, and gear box.

Light Box

On front panel of machine, Mix Low and Standby lights on standard machines will be replaced by a light panel.

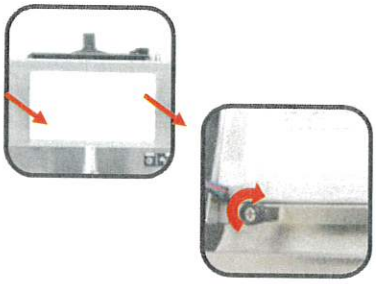
Press on Light Box button underneath overhead, light panel will illuminate.

Light panel will illuminate WHITE under Freeze and Wash modes.

Light panel will illuminate RED when mix is low.

Light panel will illuminate BLUE under Standby mode.

Placing Flavor Card



Pull bottom of light panel assembly towards you then down to take it off. Do not disconnect wires.

On back of light panel, loosen hand screws (a few turns only without taking it off) of tabs that hold light panel onto the frame.

Push light panel up from the frame and insert Flavor Card in between light panel and the frame. Put light panel back in place.

Turn tabs 90 degrees back to hold light panel. Tighten hand screws.

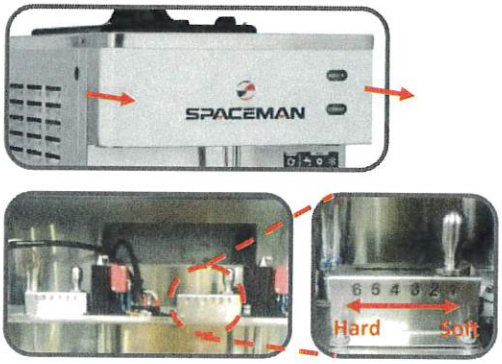
Operating Control

Spinner

Spinner operation is controlled by the paddle switch on lower portion of the spinner mount.

The paddle switch is designed for one-hand operation. Hold cup up towards the spindle while pressing in the paddle switch with the same hand. Spinner will turn on and stay on. Spinner will stop as soon as paddle switch is released.

Adjust Product Consistency



The viscosity adjustment, located behind the faceplate, controls the firmness of dispensed product. The higher the viscosity, the more firm the product. Viscosity settings should NOT need continuous adjustment.

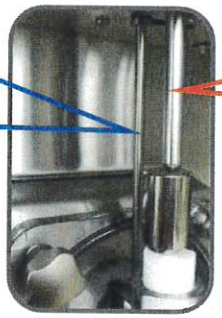
Take off the faceplate. Viscosity is from Softer to Harder from level 1 - 6. Make small adjustments each time, and allow at least 10 to 15 minutes between adjustments to evaluate product firmness.

Manage Sensor Arms

Located directly above the draw valve, this arm tells the machine when product is being dispensed and how firm the product is. Beater and cooling systems are turned on and off based on information from the sensor arms.

Flat arm moves left and right and tells machine when product is at desired consistency.

Switched RIGHT means consistency is correct. Switched LEFT or IN THE MIDDLE means consistency is not yet correct.



Arm moves up and down and tells machine when product is being dispensed.

It moves UP when draw handle is in the OPEN position.

Machine Power Reset

IMPORTANT: Machine shuts down automatically if cylinder experiences freeze-up (usually because the viscosity is set too high for the selected product to prevent motor damage.

Use the green reset button on the machine's back panel to return the machine to normal operation.

Proper Machine Reset

1. Turn power switch to OFF.
2. Firmly press green reset button.
3. Wait 15 to 20 minutes.
4. Turn power switch to WASH.
5. Observe machine performance.

CAUTION: If machine makes any abnormal noise during reset, immediately turn power switch OFF and contact service team.

NOTE: If machine doesn't turn on, turn power switch OFF, wait 30 minutes, and repeat steps 1 to 4. If problem persists, contact service team.

TROUBLESHOOTING

PROBLEM: PRODUCT WON'T DISPENSE

Probable Cause

1. Product is over-frozen in cylinder.
2. Inadequate mix in hopper.
3. Power switch is in the OFF position.
4. Unit is unplugged.
5. Tripped circuit breaker or blown fuse.
6. Improper mixing of product.
7. Machine has tripped safety reset.
8. Up down sensor arm not engaging

Remedy

1. Lower viscosity setting as required (Page 13).
2. Ensure hopper is at least half full.
3. Turn power switch to FREEZE.
4. Verify machine is plugged into power source.
5. Verify and reset circuit breaker and/or fuse.
6. Follow manufacturer instructions for mixing product; ensure correct mix ratios.
7. Reset machine (Page 13).
8. Verify sensor arms are installed and operating according to the manual.

PROBLEM: MACHINE SHUTS DOWN AUTOMATICALLY

Probable Cause

Cylinders are experiencing freeze-up (usually due to viscosity being set too high for selected product).

Remedy

1. Reset machine (Page 13), confirm there is product in the hopper, confirm there is no blockage from hopper to cylinder.
2. Confirm product was premixed properly.
3. Lower viscosity as required (Page 13).

PROBLEM: PRODUCT LEAKS EXCESSIVELY INTO INTERNAL DRIP TRAY

Probable Cause

1. Improper or inadequate lubrication of drive shaft gasket.
2. Damaged, missing, or improperly installed drive shaft gasket.
3. Debris build up in back of cylinder

Remedy

1. Use sufficient food-grade lubricant, and add sufficient lubricant inside drive shaft gasket during assembly (Page 8).
2. Replace drive shaft gasket every 1 to 3 months; replace torque assembly guide every 1 to 3 months.
3. Clean back of cylinder well taking special note around the lips of rear shell bearing connection.

PROBLEM: PRODUCT LEAKS FROM DISPENSING DOOR

Probable Cause

1. Improper or inadequate lubrication of draw valve and draw valve O-rings.
2. Cracked, broken, or worn draw valve O-rings.

Remedy

1. Use sufficient food-grade lubricant when assembling draw valve (Page 8).
2. Replace O-rings every 1 to 3 months.

PROBLEM: SCORED CYLINDER WALLS

Probable Cause

1. Broken torque or beater assembly.
2. Beater guide worn or missing.
3. Incorrect assembly of beater, blades, and guide

Remedy

1. Repair or replace torque or beater assembly.
2. Replace or install beater guide.
3. Assemble machine to manual instructions.

TROUBLESHOOTING

PROBLEM: PRODUCT IS TOO FIRM

Probable Cause

1. Inadequate mix in hopper.
2. Improper mixing of product.
3. Torque arm is not installed correctly.
4. Viscosity adjustment is set incorrectly.
5. Left/right sensor not engaging and/or is stuck to the left.
6. Up/down sensor is engaged and stuck in up position.

Remedy

1. Ensure hopper is at least half full.
2. Follow manufacturer instructions for mixing. product; ensure correct mix ratios.
3. Install torque arm on dispensing door.
4. Lower viscosity setting as required (Page 13).
5. Verify sensor arms are installed and operating according to the manual

PROBLEM: PRODUCT IS TOO SOFT

Probable Cause

1. Improper mixing of product.
2. Missing, damaged, or incorrectly installed scraper blades.
3. Viscosity adjustment is set incorrectly.
4. Beater is rotating counter-clockwise.

Remedy

1. Follow manufacturer instructions for mixing product; ensure correct mix ratios.
2. Inspect scraper blades for damage and correct installation.
3. Increase viscosity setting as required (Page 13).
4. Call Spaceman Technical Support.

PROBLEM: MACHINE WON'T OPERATE IN FREEZE OR WASH MODES

Probable Cause

1. Machine is unplugged.
2. Tripped circuit breaker or blown fuse.
3. Machine has tripped safety reset.

Remedy

1. Verify machine is plugged into power source.
2. Verify and reset circuit breaker and/or fuse.
3. Reset machine (Page 13).

PROBLEM: COMPRESSOR DOESN'T WORK WHEN MACHINE IS IN FREEZE MODE

Probable Cause

Machine has tripped safety reset due to motor overload.

Remedy

Reset machine (Page 13).

Check sensor arms.

PROBLEM: DRIVE SHAFT WON'T REMOVE

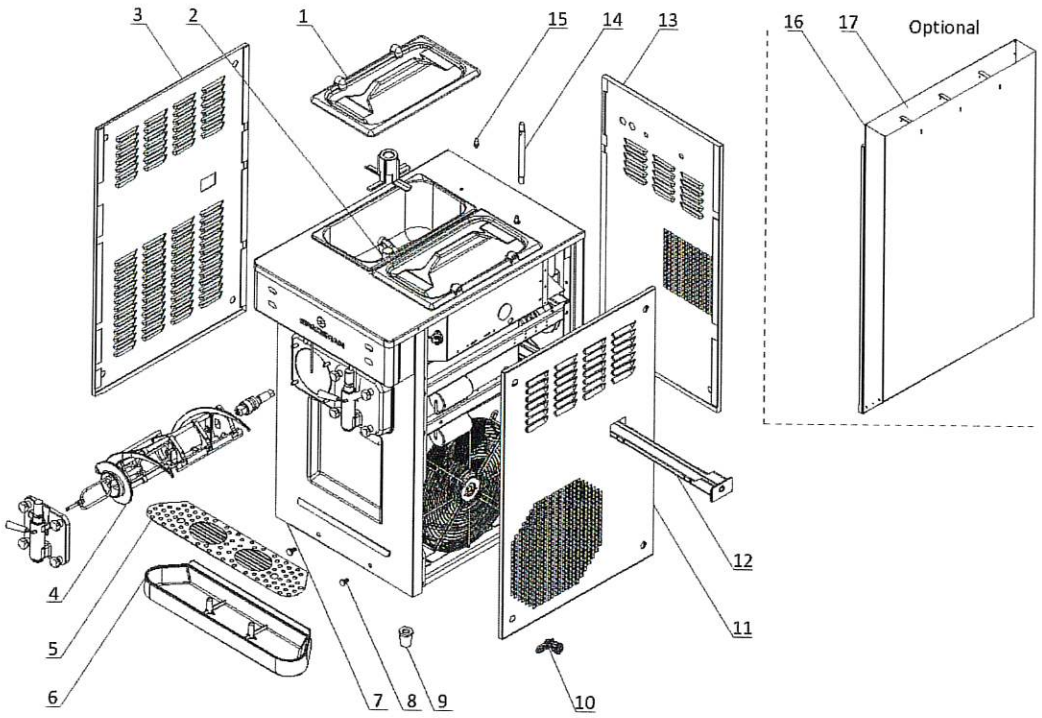
Probable Cause

1. Lubrication on square ends of drive shaft.
2. Scoring due to lack of lubrication.

Remedy

1. Do NOT lubricate the square end of the drive shaft; contact Spaceman Technical Support for instructions on removing and inspecting drive shaft and gear box for damage.
2. Replace Drive Shaft, use additional lubrication.

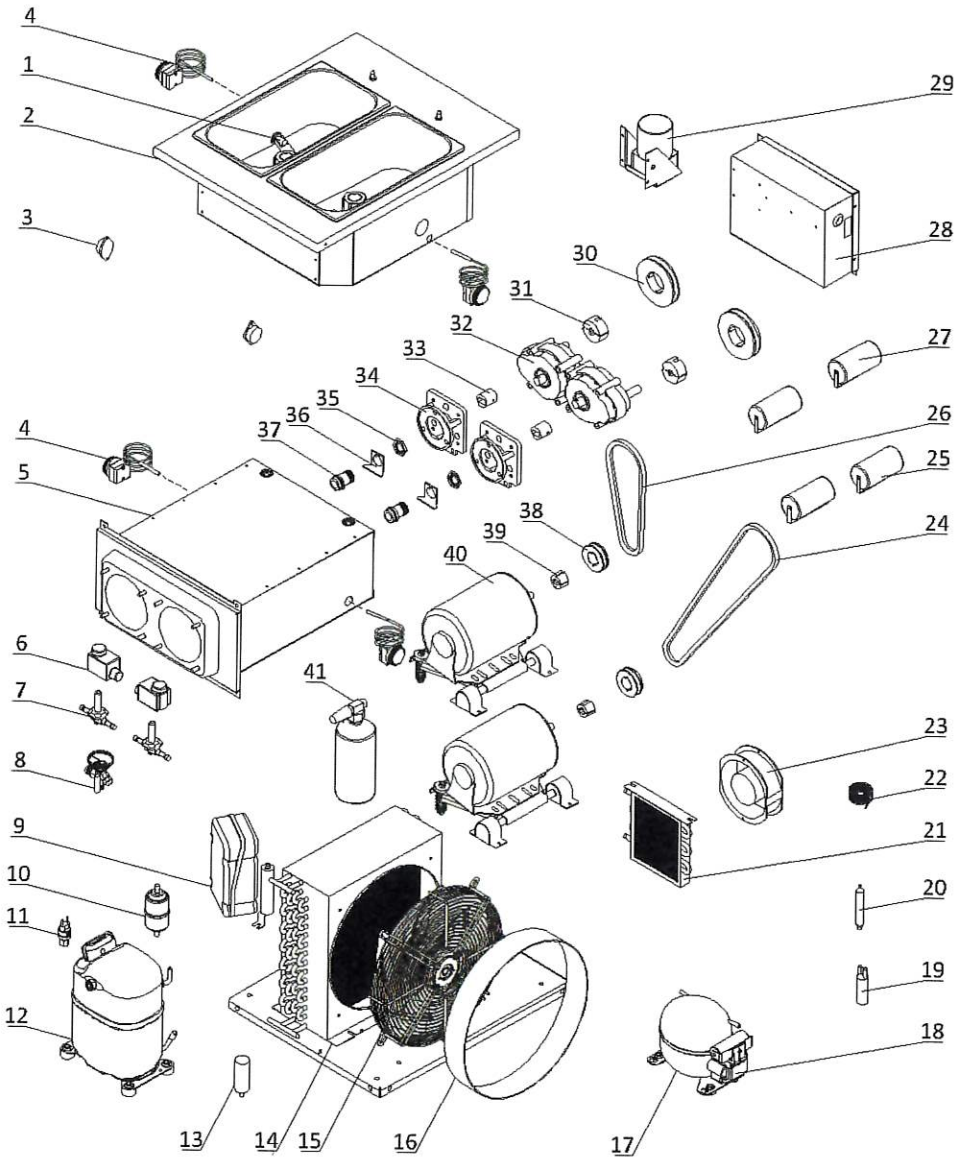
1. External Parts



1. External Parts

Item	Part Number	Description	Qty.
1	3.4.03.01.004	Hopper Lid - 12-15L	2
2	Page 7	Hopper Agitator	2
3	2.3.4.18.046	Panel - Left - 6695-C	1
4	Page 5	Dispensing Door and Beater	2
5	2.3.4.45.304	Splash Shield - Front Drip Tray - 58mm - White - D	1
6	3.4.04.01.010	Front Drip Tray - 58mm - White	1
7	2.3.4.16.048	Panel - Lower Front - 6695-C	1
8	3.6.39.004	Drip Tray Mounting Bolt	2
9	3.3.05.03.001	Leg - 45mm	4
10	8.1.07.001	Panel Lock Assembly	12
11	2.3.4.20.039	Panel - Right - 6695-C	1
12	3.4.04.02.001	Internal Drip Tray - 45mm	1
13	2.3.4.13.013	Panel - Rear - 6695-C	1
14	2.1.3.39.0006	Air Tube - FB	2
15	3.6.39.011	Hopper Lid Holder	2
16	2.3.4.20.042	Panel - Right - Air Chute - 6695-C (Optional)	1
17	2.3.4.34.025	Air Chute - 6695-C (Optional)	1

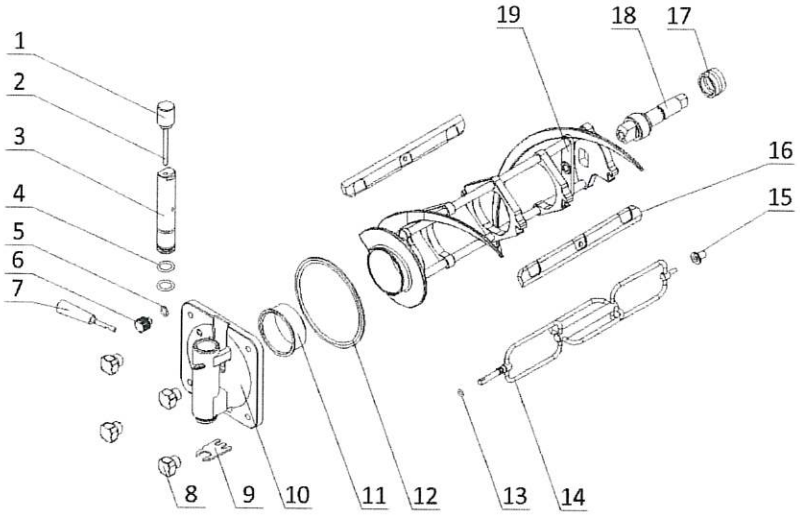
2. Internal Parts



2. Internal Parts

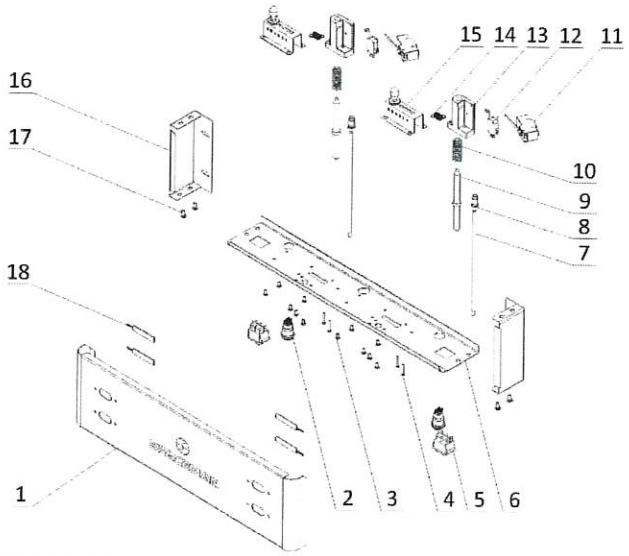
Item	Part Number	Description	Qty.
1	920.1.04.0002	Mix Low Sensor Assembly	2
2	2.1.1.03.0053	Hopper Assembly - 6695-C	1
3	3.1.02.15.003	Alarm - Low Mix - DC3-24V	2
4	3.1.01.07.003	Thermostat - 0-40°C	4
5	2.1.1.06.0119	Cylinder Assembly - 6695-C	1
6	3.2.04.04.015	Solenoid Coil - 1068	2
7	3.2.04.04.002	Solenoid Valve Body - 1068	2
8	3.2.04.01.013	Thermal Expansion Valve - TUB2134	1
9	3.2.01.04.004	Start Component - Compressor - CAJ2464Z	1
10	3.2.04.05.002	Filter Drier - Cylinder - DML083S	1
11	3.2.04.06.004	High Pressure Switch - 350~500psi	1
12	3.2.01.02.005.A	Primary Compressor - CAJ2464Z	1
13	3.2.03.04.001-2	Capacitor - Fan Motor - 450V - 5μF - CBB60	1
14	3.2.02.01.007	Main Condenser - Single - 10m²	1
15	3.2.03.04.001	Fan Motor - 220/60/1 - YWF4E-350S	1
16	2.1.3.50.0002	Fan Shroud - 120mm	1
17	3.2.01.01.002.A	Auxiliary Compressor - EM30HHR	1
18	3.2.01.01.002-1	Start Component - Compressor - EM30HHR	1
19	3.2.04.07.001	Suction Accumulator - 25×100×0.6	1
20	3.2.04.05.001	Filter Drier - Hopper - 16×2.2×120	1
21	3.2.02.01.001	Auxiliary Condenser - Single - 0.7m²	1
22	3.2.05.01.003	Capillary Tube - 2.2×0.9	1
23	3.2.03.01.001	Fan Motor - BT220-15050S2HL	1
24	3.3.03.03.019	Belt - Motor - Beater - V-A1245	1
25	3.1.02.22.062	Capacitor - Start - 330V - 160μF	2
26	3.3.03.03.015	Belt - Motor - Beater - V-A660	1
27	3.1.02.22.009	Capacitor - Running - 370V - 25μF	2
28	Page 8	Electrical and Power Control Box	1
29	Page 7	Agitator Motor Assembly	1
30	3.3.04.02.006	Pulley - Gear Box - SPA112-1-1610	2
31	3.3.04.01.008	Bushing - 1610-16	2
32	3.3.02.01.024	Gear Box - FB - 45*20 Shaft - 79mm	2
33	3.3.02.04.009	Coupling Drive - 3.4qt-4.0qt-7.3qt - 20mm - V2	2
34	2.1.3.15.0003	Bracket - Gear Box - 3.4-7.3qt - 79mm	2
35	3.3.02.02.010	Nut - Rear Shell Bearing	2
36	2.3.6.04.004	Lock Plate - Rear Shell Bearing - 42mm	2
37	3.3.02.02.002	Rear Shell Bearing - SS (3.4qt) + FB	2
38	3.3.04.02.012	Pulley - Beater Motor - SPA63-1-1008	2
39	3.3.04.01.005	Bushing - 1008-16	2
40	3.3.01.07.010	Motor - 220/60/1 - 450W - K56AC66AF41	2
41	3.2.04.08.001	liquid Receiver - 76x280	1

3. Dispensing Door and Beater



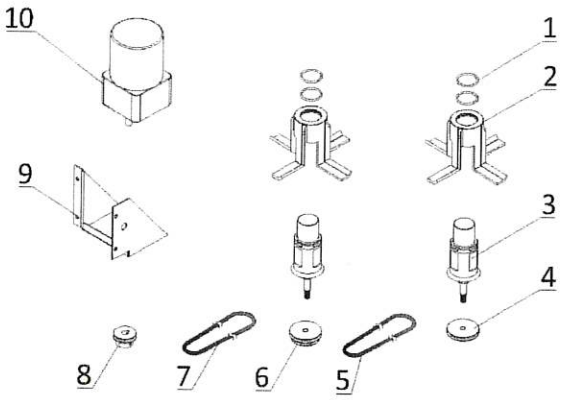
Item	Part Number	Description	Qty.
1	2.1.3.36.0004	Weight - Draw Valve - FB	2
2	2.1.3.36.0003	Pin - Draw Valve - FB	2
3	2.1.3.01.0006	Draw Valve - FB	2
4	3.4.08.01.036	O-Ring - 19x3.55	4
5	3.4.08.01.008	O-Ring - 11.5x2.5	2
6	3.4.07.08.001	Prime Plug - FB	2
7	3.4.05.01.002	Handle - Dispensing - FB	2
8	2.1.3.32.0004	Hand Screw - Dispensing - FB	8
9	2.1.4.04.014	Ice Buster - Dispensing - FB	2
10	2.1.3.14.0006	Dispensing Door - FB	2
11	3.4.01.03.003	Beater Guide - FB	2
12	3.4.08.02.005	Door Gasket - FB	2
13	3.4.08.01.017	O-Ring - 11×2.4	2
14	2.1.1.31.0003	Torque Rotor - 7.3qt - V2	2
15	3.4.01.03.012	Torque Guide - V2	2
16	3.4.02.01.006	Scraper Blade - FB - V2	4
17	3.4.07.05.002	Gasket - Drive Shaft	4
18	2.1.3.25.0003	Drive Shaft - FB	2
19	2.1.1.10.0020	Beater - FB - Standard - V2	2

4. Draw Switch and Front Control Panel



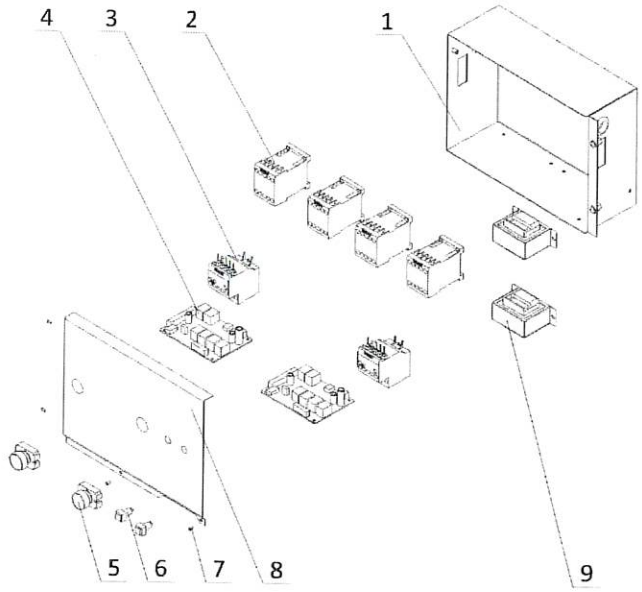
Item	Part Number	Description	Qty.
1	2.3.4.33.014	Panel - Overhead Front - 6795-C/6695-C	1
2	3.1.03.04.035	Switch - FT19QB-H22Z/S-K13P0	2
3	3.6.22.028	Screw - M4×12	12
4	3.6.22.027	Screw - M4×30	4
5	3.1.03.03.009	Power Switch - RK1-01 2X3	2
6	2.3.4.39.015	Panel - Overhead Bottom - 6795-C/6695-C	1
7	2.1.4.04.025	Torque Arm - 185mm	2
8	2.1.4.04.024	Bracket - Spring - 6690-C	2
9	2.1.3.50.0088	Shaft - Draw Switch - FB - 120.3mm	2
10	3.6.03.012	Spring - Shaft - Draw Switch	2
11	3.1.03.02.002	Micro Switch - Torque Lever	2
12	3.1.03.01.002	Micro Switch - KW-7-2	2
13	3.4.07.06.008	Bracket - Micro Switch & Shaft & Spring	2
14	3.6.02.005	Spring - Viscosity 0.7mm	2
15	920.1.03.0004	Control Levers - Viscosity Adjustment - V2	2
16	2.3.4.37.045	Panel - Overhead Side - FB	2
17	3.6.22.010	Screw - M5x10	4
18	3.1.02.14.005	LED Light - XGJ	4

5. Hopper Agitator



Item	Part Number	Description	Qty.
1	3.4.08.01.034	O-Ring - 31×2	4
2	2.1.1.23.0002	Blade - Hopper Agitator - Standard - V2	2
3	2.1.1.12.0001	Agitator Assembly - 129mm	2
4	2.1.4.02.015	Pulley - Hopper Agitator - Single - 53mm	1
5	2.1.4.08.003	Belt - Hopper Agitator - 600mm	1
6	2.1.4.02.016	Pulley - Hopper Agitator - Double - 53mm	1
7	2.1.4.08.051	Belt - Hopper Agitator - 880mm	1
8	3.3.04.04.006	Pulley - Hopper Agitator - Drive - 30mm	1
9	2.3.4.45.339	Bracket - Agitator Motor - 6695/6695-C	1
10	3.3.01.01.006	Motor - Agitator - 220V - YN80-25-6G	1

6. Electrical and Power Control Box



Ite	Part Number	Description	Qty.
1	2.2.4.17.0027	Electrical Box - 6695/6695-C	1
2	3.1.01.01.010	Contactor - 220V - 3RT6017-1AN21	4
3	3.1.01.02.010	Thermal Overload Relay - 3RU6116-1EB0	2
4	2.1.1.30.0012	Control Board - FB	2
5	3.1.03.04.002	Reset Button - Thermal Overload	2
6	3.1.03.04.003	Switch - FB - Low Mix Alarm - Green Square	2
7	3.6.22.005	Screw - M4X10	4
8	2.2.4.20.0027	Cover - Electrical Box - 6695/6695-C	1
9	3.1.01.04.007	Transformer - 50W - 50313MW-32	2

3M™ Water Filtration Products

SPEC# _____

QUANTITY _____

application: **MULTIPLE EQUIPMENT**

models:

DP290/DP295

ENHANCED

3M Purification Inc. Water Filtration Products Models DP290 & DP295 dual port water filtration systems help provide consistent high quality water for the multiple applications of cold beverages, ice and coffee at a combined flow rate of up to 10 gpm (37.9 lpm). Two separate streams exit the manifold. Both streams have reduced sediment and chlorine taste and odor. One stream has added scale inhibition media from a dedicated cartridge to help reduce the ability of calcium and magnesium to precipitate as hard scale on the evaporator plates of an ice machine and/or the heating coils of a coffee brewer. The second stream supplies cold beverage dispensers and includes no added scale inhibitor.

The DP290 filters combine chlorine taste and odor reduction with cyst, bacteria and sediment reduction to 0.2 micron. **The DP295 filters** combine chlorine taste and odor reduction with sediment reduction to 3 micron for more turbid water.

PRODUCT BENEFITS

- One system with dual outlet connections simultaneously supplies cold beverage dispensers and ice machines/coffee brewers.
- Up to 10 gpm (37.9 lpm) total flow of water especially treated for consistent great tasting cold beverages, clearer and consistent ice and the perfect cup of coffee or tea.
- Revolutionary **I**ntegrated **M**embrane **P**re-**A**ctivated **C**arbon **T**echnology (**"IMPACT"**) dual-zone media cartridge construction combines a membrane in series with premium activated carbon to provide superior throughput and cartridge life.
- Reduction of up to 99.99% of common water-borne heterotrophic bacteria by membrane filtration as tested by 3M Purification (HF90 replacement cartridge).
- NSF and/or FDA CFR-21 compliant materials.
- Built-in bacteria inhibitor intended to reduce fouling of media (HF90 replacement cartridge).
- Reduction of scale build-up on evaporator plates and heating coils from a controlled forced-feed orifice addition of scale inhibitor, as tested by 3M Purification.
- Sanitary Quick Change (SQC) encapsulated cartridge design allows for fast and easy cartridge change-outs with a 1/4 turn.
- 3/4" NPT horizontal inlet and outlet ports allow direct or easily adaptable connections to existing plumbing lines.
- Expansion kit available to serve higher capacities and flow rates.
- Auxiliary inlet gauge port allows optional monitoring of differential water pressure.
- Manifold includes outlet check valves and vent valve.

PRODUCT SPECIFICATIONS

Model Number	Part Number	Reduction Claims	Nominal Micron Rating	Capacity	Service Flow Rate	Application	Replacement Cartridge	Sizing
DP290	56242-01	Cysts[1], Bacteria[2], Sediment, Chlorine Taste and Odor, Scale	0.2	108,000 gallons (408,823 liters)	10.0 gpm (37.9 lpm)	Most Normal Water	DP290 CARTPAK 56138-02 (HF90 (Qty. 2) & HF8-S)	For simultaneous operation of carbonators, coffee machines and ice machines
DP295	56242-02	Sediment, Chlorine Taste and Odor, Scale	3			Higher Turbidity Water	DP295 CARTPAK 56138-05 (HF95 (Qty. 2) & HF8-S)	

[1]Includes oocysts of cryptosporidium and toxoplasma and cysts of giardia and entamueba
[2]As tested with E.Coli ATCC (11229)

3M

DP290/DP295

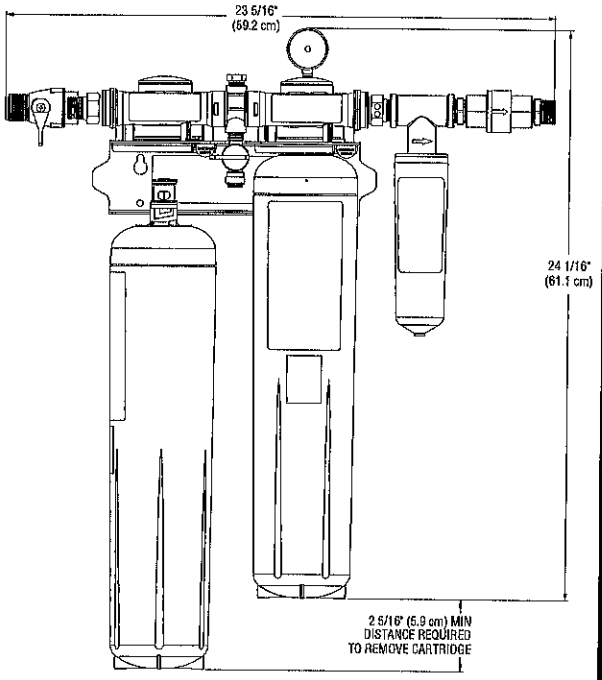
SPEC# _____

QUANTITY _____

MODEL NUMBER _____

PART NUMBER _____

3M Purification Inc. Water Filtration Products



⚠ WARNING: To reduce the risk associated with the ingestion of contaminants:

- **Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.** Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts. EPA Establishment #070595-CT-001

3M Purification Inc. recommends regularly scheduled maintenance and replacement of the filter cartridge(s) in order for the product to perform as advertised/sold. 3M Purification shall not be liable for system failures due to improper maintenance.

PHYSICAL SPECIFICATIONS

- System includes a two cartridge manifold with built-in pressure gauge, inlet water shut-off valve, outlet check valves, mounting brackets, two cartridge filters and a dedicated external scale inhibition cartridge.
- Auxiliary inlet gauge port allows optional monitoring of differential water pressure.
- Inlet and outlet plumbing connections are 3/4" NPT (choice of male or female is included).
- Filter cartridges are o-ring seal type.
- System maximum operating pressure of 125 psi (862 kPa) and operating temperature of 100°F (37.8°C).
- Recommended combined service flow rate is up to 10 gpm (37.9 lpm).
- Two large filter cartridges incorporate a bacteriostatic carbon block filtration medium (HF90 replacement cartridge). Third cartridge includes a scale inhibition medium (HF8-S).
- System materials are NSF and/or FDA CFR-21 compliant.
- Cartridges are sanitary in design, requiring no contact with the filter media during cartridge change-out.
- Filter cartridges require no pre-activation.
- Shipping weight: Contact factory.
- Operating weight: 28.9 lbs. (13.1 kg).

IMPORTANT: INSTALLATION TIPS

These installation tips are for informational purposes only and are not intended to be used as actual installation instructions. CAUTION: To reduce the risk associated with property damage due to water leakage:

- **Read and follow** Use Instructions before installation and use of this system.
- Installation and use **MUST** comply with all state and local plumbing codes.
- **Protect from freezing,** remove filter cartridge when temperatures are expected to drop below 40°F (4.4°C).
- **Do not install on hot water supply lines.** The maximum operating water temperature of this filter system is 100°F (37.8°C).
- **Do not install** if water pressure exceeds 125 psi (862 kPa). If your water pressure exceeds 80 psi (552 kPa), you must install a pressure limiting valve. Contact a plumbing professional if you are uncertain how to check your water pressure.
- **Do not install** where water hammer conditions may occur. If water hammer conditions exist you must install a water hammer arrester. Contact a plumbing professional if you are uncertain how to check for this condition.
- The disposable filter cartridge **MUST** be replaced every 12 months, at the rated capacity or if a noticeable reduction in flow rate occurs.

LIMITED WARRANTY

3M Purification Inc. warrants this Product will be free from defects in material and manufacture for five (5) years from the date of purchase: The filter cartridge or filter membrane is warranted to be free from defects in material and manufacture for one (1) year. This warranty does not cover failures resulting from abuse, misuse, alteration or damage not caused by 3M Purification Inc. or failure to follow installation and use instructions. No warranty is given as to the service life of any filter cartridge or membrane as it will vary with local water conditions and water consumption. **3M PURIFICATION INC. MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOMER OR USAGE OF TRADE.** If the Product fails to satisfy this Limited Warranty during the warranty period, 3M Purification Inc. will replace the Product or refund your Product purchase price. This warranty does not cover labor. **The remedy stated in this paragraph is Customer's sole remedy and 3M Purification Inc.'s exclusive obligation. For additional information, see the entire Limited Warranty located in the product Installation and Operating Instruction Manual.**

Limitation of Liability: 3M Purification Inc. will not be liable for any loss or damage arising from this 3M Purification Inc. product, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability. Some states and countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

3M

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