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## MECHANICAL SPECIFICATIONS

	SF 75 WSH ✓
Compressor	1/4 HP Bendix Westinghouse
Condenser	Air-Cooled
Refrigerant	25 oz. R 12
Refrigerant Control	Capillary Tube
Power Consumption	10 Amps.
Current	115 V, 60 Cycle, 1 Ph.
Worm Drive Motor	1/4 HP NEMA 48 Frame
Worm - R. P. M.	12
Water Consumption - Freezer	2 Gallons per hour

## CABINET DIMENSIONS

Depth	24 1/2"
Width	32 1/2"
Height	40"
Height with 6" legs	46"

## SHIPPING WEIGHT

Uncrated	330
Crated	360

## SPECIFICATIONS

SCOTSMAN Super Flakers are designed for restaurants, super markets, soda fountains, hospitals, bakeries, fish markets, poultry stores, packing plants, etc. It is the finest Ice Maker on the market today. It will work 24 hours a day for you, or only as needed. It produces the highest quality ice available at any price.

Approximately 225 pounds of SCOTSMAN crushed ice is delivered each 24 hours to the storage bin for immediate use.

SCOTSMAN Super Flakers are easily installed requiring only standard water, drain and electrical connections.

ATTRACTIVE COMPACT CABINET. Grey hammerloid finish with chrome trim, rounded corners, and removable panels for easy access to mechanical parts. Adjustable and removable legs are under cabinet.

SEALED REFRIGERATION SYSTEM. Provides quiet, efficient operation of the machine. Compressor motor is spring mounted and the worm motor is rubber mounted for quiet operation. Compressor motor is covered by a full 5-Year Warranty.

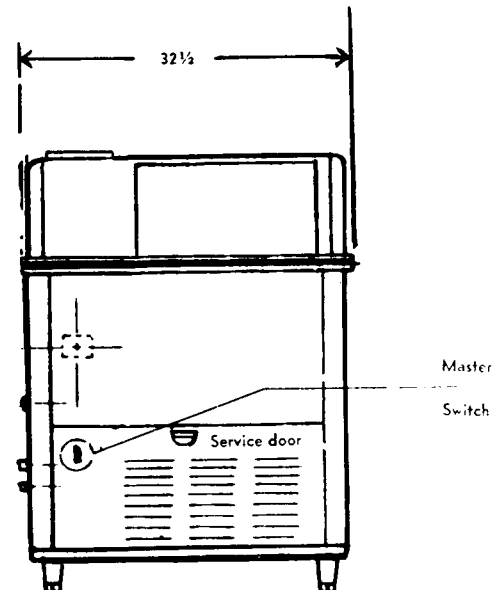
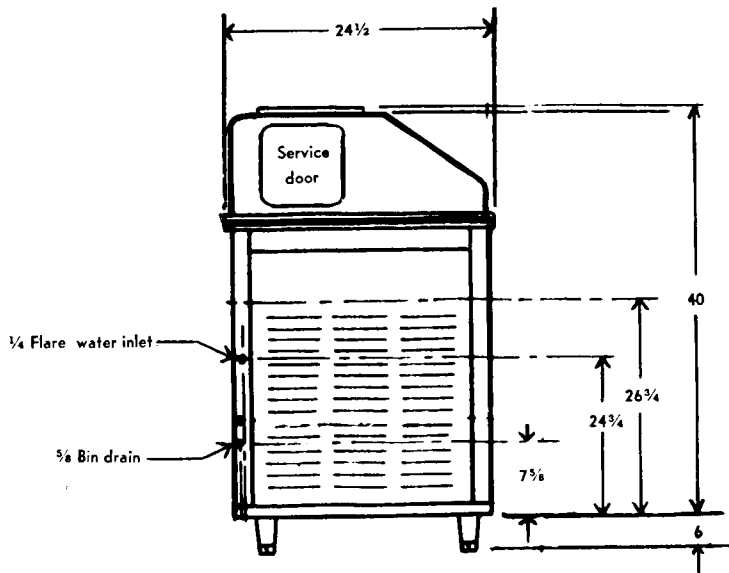
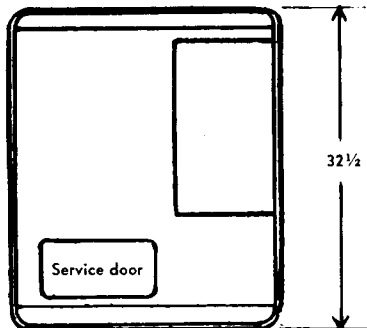
HOW IT WORKS. An exclusive patented ice-making system, wherein water in the constant level float reservoir is fed to the bottom end of the freezing cylinder and turns to ice on the inside of this cylinder. Ice from the refrigerated walls of this cylinder is extruded past the ice breaker at the top of the cylinder through a side opening by means of a stainless steel auger driven by a motor through a V belt and a gear reduction drive.

SCOTSMAN Model SF-75WSH is completely automatic. A manual switch on the front starts the machine, and from then on, produces flakes automatically. When the storage bin fills, the machine automatically shuts off and starts up again when ice is taken from the storage compartment.

# SPECIFICATIONS

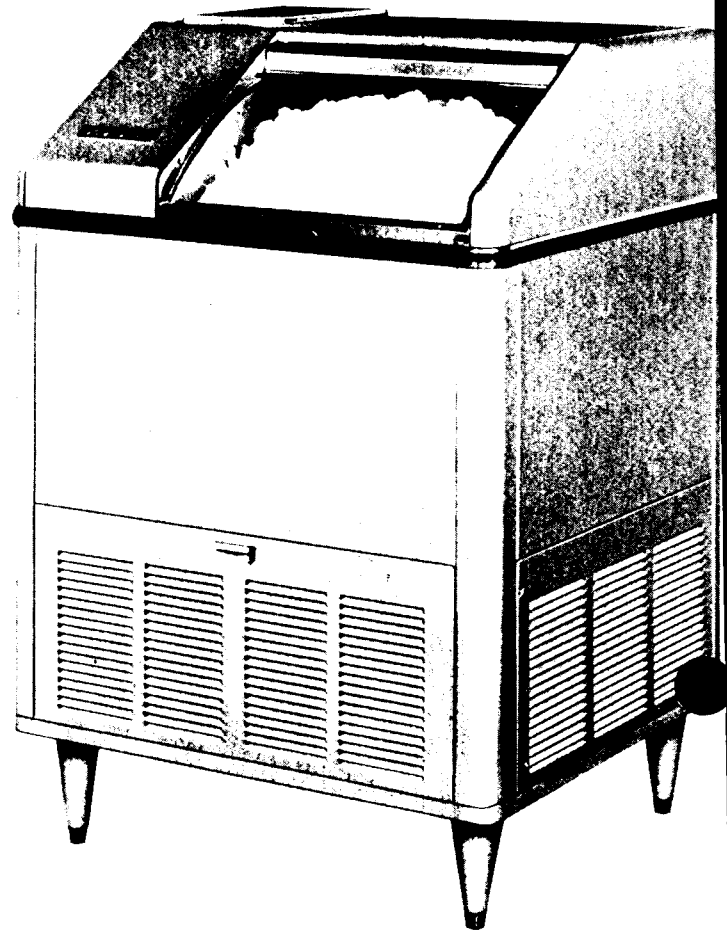
## SUPER FLAKER SF-75 SERIES (Storage Type)

	MODEL SF-75WSH	MODEL SF-75WSH-SS
Daily capacity up to 240 lbs.	X	X
Self contained 100 lb. storage bin	X	X
Air cooled condenser	X	X
Heavy duty ¼ HP. Compressor	X	X
Standard 115 V, 60 cy, 1 ph, AC	X	X
¼" water inlet SAE Flare	X	X
⅝" bin drain OD	X	X
Hammerloid grey exterior	X	
Stainless steel exterior		X
Stainless steel lined storage bin	X	X
46" height (with legs)	X	X
40" height (without legs)	X	X
32½" width	X	X
24 ½" depth	X	X
Approximate shipping weight 360 lbs.	360	360

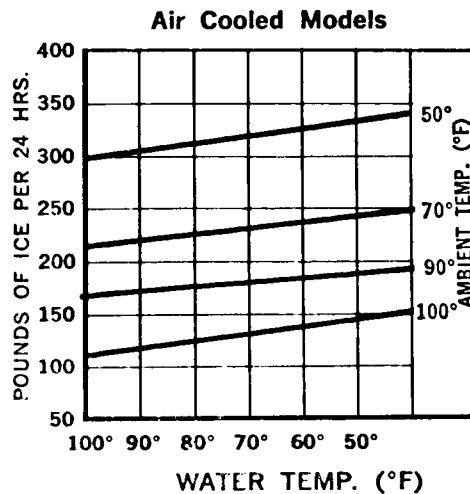


# SCOTSMAN®

## SUPER FLAKER SF-75 SERIES Storage Type



ice making capacity



SCOTSMAN SUPER FLAKERS  
PREPARATION FOR INSTALLATION

1. Inspect complete unit cabinetry for shipping damage. Notify carrier of concealed damage claims.
2. Remove all service doors and panels.
3. Remove water reservoir cover and take out paper packing around float ball. Make sure plastic overflow standpipe is securely in place.
4. Remove leg packages in compartment base and install 4 legs in unit base sockets.
5. Remove water strainer from storage bin for installation on unit or in water supply line feeding unit.
6. Open electrical control box and prepare for hook up, use knock outs, cord connectors etc. Then check unit nameplate voltage against building source voltage and make sure they correspond. Caution - Improper voltage supplied to units will void your warranty protection.
7. Select unit location prior to hook up of water drain and electricals in accordance with local and national codes. Minimum room temperatures is 50° Fahrenheit. On air cooled models, select well ventilated location.
8. Remove warranty card and Users manual from storage bin, then wipe bin clean with damp cloth.
9. Fill out warranty card completely including model and serial numbers as taken from aluminum plate found behind front service panel and forward to Scotsman Factory using self mailing card.
10. Level unit with adjustable legs then call your authorized Scotsman distributor or dealer for proper installation, start up and check out.



## INSTALLATIONS

**UNDER BAR INSTALLATIONS:** Locate, if possible, so left end panel is accessible. Locate so proper circulation can be attained around the unit and behind it at least four inches.

**KITCHEN INSTALLATIONS:** As a rule, the kitchen is not the most practical place to install an air-cooled condensing unit, as grease is almost always present and makes cleaning of the condensing unit difficult. Do not locate near range or steam table or other heating devices that may be used in the kitchen.

**STOREROOM INSTALLATIONS:** Be sure storeroom is of adequate size and properly ventilated. A small, poorly ventilated room will greatly impair the efficiency of the unit. The storeroom must be kept above 50° in the winter months.

**BASEMENT INSTALLATIONS:** Locate machine in the coolest place. Locate machine in a dry place. Keep away from furnace and boiler room. Keep away from service chutes and runways; also coal and other dust of any kind. If the machine is set over a floor drain, block the machine up enough to level it. If there is any chance of basement flooding, block the machine up to eliminate any possible damage to the machine.

**UNCRATING OF MACHINE:** The complete machine comes in one crate. After the crate is removed, inspect for concealed damage. When installing the machine. Remove the bottom skids by removing all bolts. Then check all refrigerant lines for rubbing or touching other surfaces. Also check for possible transportation damage. Check for free movement of ice worm.

**PRE-INSTALLATION CLEANING:** Before machine is in final location, remove warranty card and other information from machine compartment. Remove top service door, water reservoir cover, and packing under float. Then leave cover off for float adjustment after machine is installed.

**WATER SUPPLY.** The recommended water supply line is 1/4 inch OD copper tubing for SF-75WSF. Connect to cold water supply line with regular plumbing fittings, with shut-off valve installed in an accessible place between supply line and machine. A water strainer must be installed with the unit and mounted with clean-out plug down. Locate the strainer next to the machine with the arrow in the direction of the flow. Most plumbing codes also call for double check valves in the supply water line.

The water supply line connects to the 1/4 inch flare fitting on the machine. Water supply must be installed to conform with local code. In some cases a licensed plumber and/or a plumbing permit will be required.

**DRAIN.** The recommended drain from the bin is 5/8 inch OD copper tubing. Must be run to an open trapped and vented drain. If drain is a long run, allow a 1/4 inch pitch per foot. Drain must be installed to conform with local code.

## INSTALLATION

### ELECTRICAL CONNECTIONS:

SF-75WSH  
115 Volts, 60 Cycle, 1 Phase  
15 Amp. Circuit

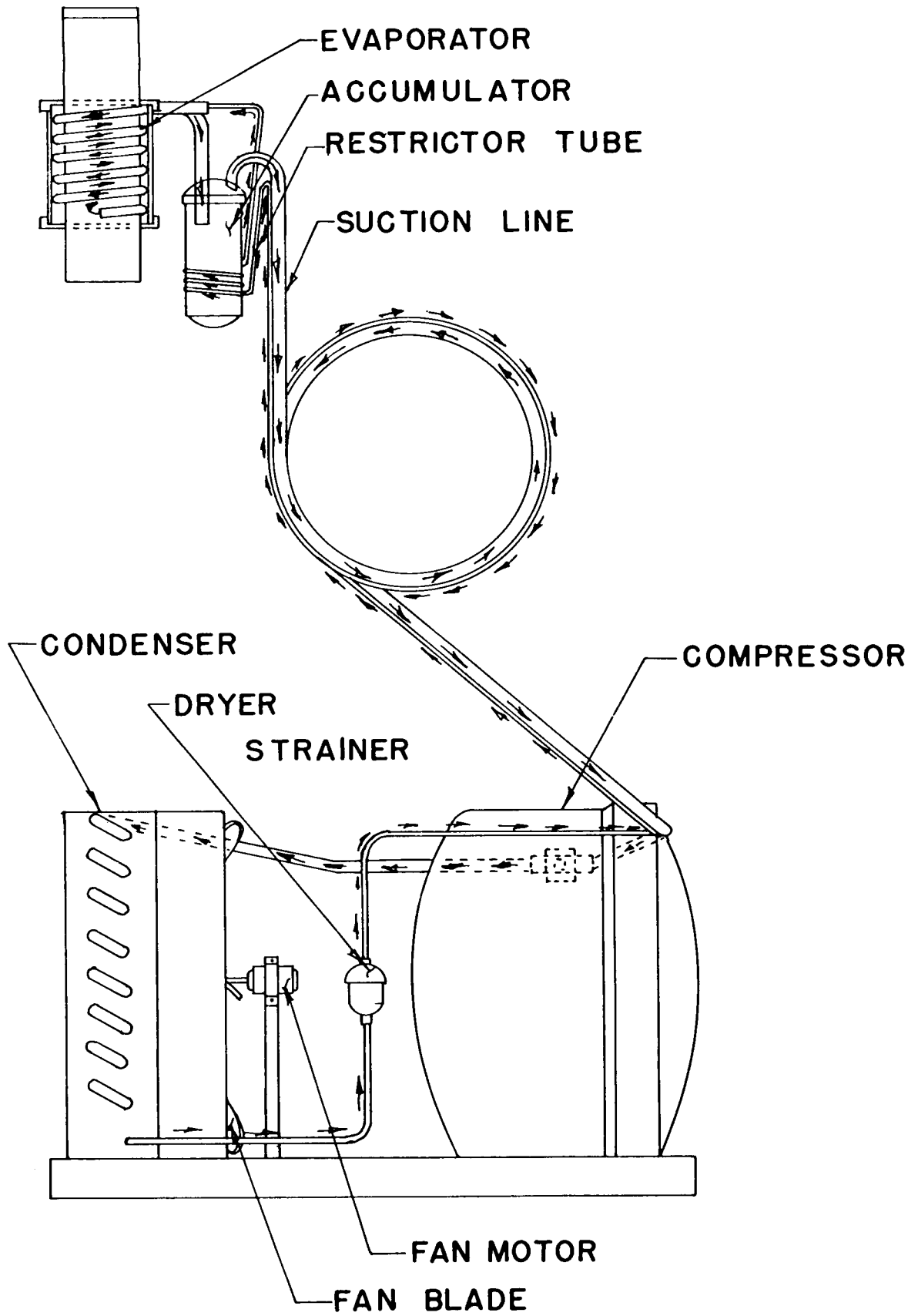
Be certain that the Super Flaker is on its own circuit and individually fused. The maximum allowable voltage variation should not exceed 10 per cent of the nameplate rating even under starting conditions. Low voltage can cause erratic operation and may be responsible for serious damage to the overload switch and motor windings.

All external wiring should conform to the National Underwriters and local Electrical Code requirements. Usually an electrical permit and the services of a licensed electrician will be required.

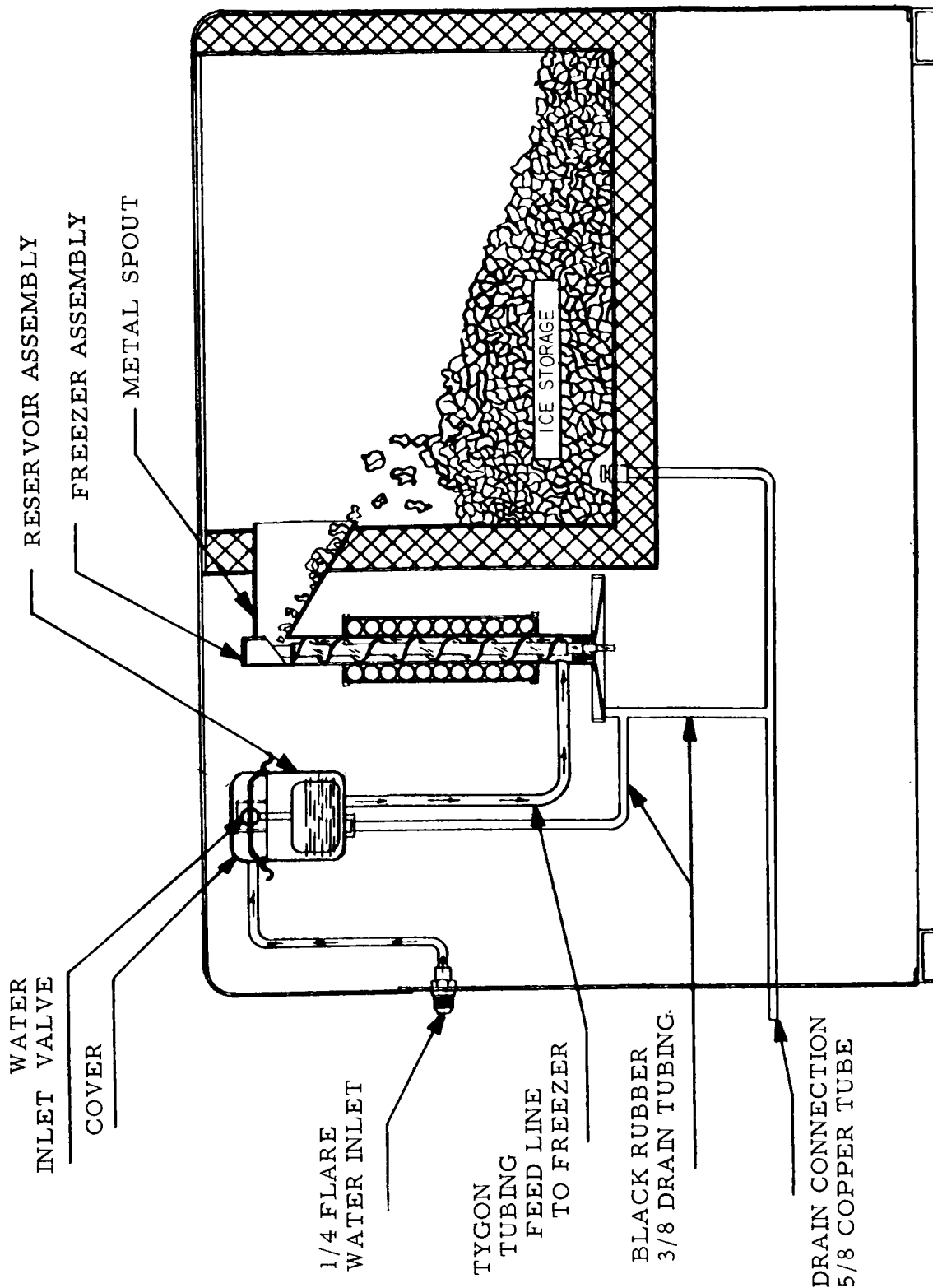
### ELECTRICAL INSTALLATION:

SF-75WSH

Compressor	HP	1/4 Bendix-Westinghouse
	Voltage	115
	Amp. rating	5.0
	Watts input	450
	Cycle	60
	Phase	Single
Drive Motor	HP	1/4 NEMA 48 Frame
	Voltage	115
	Amp. rating	4.5
	Cycle	60
	Phase	Single

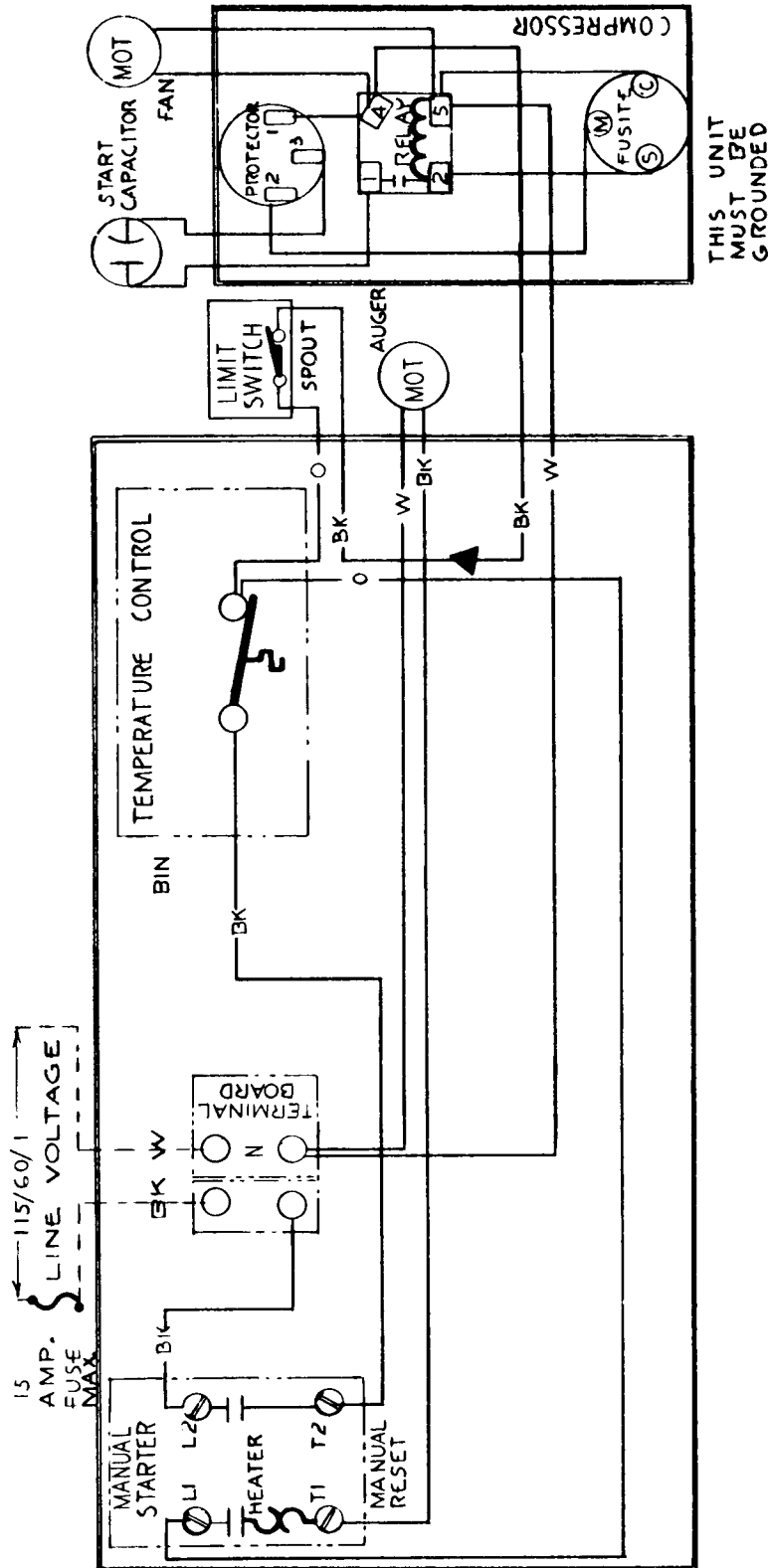


SF-75WSH  
REFRIGERATION CYCLE



WATER SCHEMATIC

SF - 75WSH



WIRING DIAGRAM  
 SF75-SWH

### FINAL CHECK LIST

1. Is the unit level? (IMPORTANT)
2. Have all electrical and piping connections been made?
3. Has the voltage been tested and checked against the nameplate rating?
4. Is the water supply valve open and the electric power on?
5. Is the water reservoir filled and shut off? All packing removed?
6. Have unit and bin been wiped clean?
7. Has owner been given the Operating Instruction Sheet, and has he been instructed on how to operate the machine?
8. Have the installation and warranty cards been filled out? This is the owner's protection.
9. Check all refrigerant and conduit lines to guard against vibration and possible failure.
10. Installed in a well ventilated room where ambient temperatures do not fall below 50<sup>o</sup> Fahrenheit.
11. Is unit installed with a minimum 4" air space around sides and back?

## SERVICE

**STARTING THE MACHINE:** When the machine is placed and inspected as per instructions and all plumbing and electrical connections are completed and tested, turn on the water supply. Be sure the float cover is removed to check on the float operation and water level in the water reservoir. Be sure the water reservoir is filled before starting the machine. Water level should be 1/4 inch below the reservoir overflow.

When this is completed, turn on the manual switch on the front of the cabinet and the machine is in automatic operation. In two to three minutes ice will start dropping off the worm shaft and out the ice chute. Let the machine operate for at least 30 minutes and check for any excess noise other than the normal compressor noise. Test the ice storage control bulb by holding a handful of ice around the bulb until the machine shuts off. One minute should be normal for the control to function. Within minutes after the ice is removed, the bulb will warm up and the machine will automatically start up. The control is factory set and should not be reset until this test is made. Normal setting of this control should be approximately 35 degrees cut out, 45 degrees cut in.

Check pressure settings at the time of start-up. Head pressure normal at 135 PSI. The frost line should extend 8" out of the accumulator if properly charged with refrigerant and suction pressure will range between 15 and 16 PSI with 50° F. inlet water.

Explain the machine to the owner, showing him how the machine works and go over the owner's instruction sheet with him. Answer all the owner's questions about the machine, and do not leave with any doubt in the owner's mind about the machine, how to operate it or where to reach you should he need service on the machine. Call back the next day to check the machine again and answer any other questions the owner may have.

Service gauge connection is available on low side service valve. Purge free of any non-condensable gases before starting any test operation.

**REFRIGERANT CHARGE:** The below refrigerant charge is approximate. When charging, set at 135 PSI head pressure and charge so that the frost line extends 8" out of the accumulator after fifteen minutes of operation. Factory charge 25 oz. refrigerant 12.

## SERVICE

**WATER SYSTEM:** A water level is maintained in the water reservoir by a float operated valve. Water is piped from the water reservoir to the freezing chamber by a gravity feed line maintaining an equal water level. A removable overflow pipe is installed in the water reservoir for cleaning the reservoir as well as preventing damage should the inlet water valve fail.

The water reservoir is equipped with a 2 inch air gap to prevent back siphoning and meet all health codes.

The water level in the water reservoir is adjusted by bending float arm. The water level should be set 1/4 inch below the overflow pipe. A condensate drip pan is connected to the drain circuit to automatically dispose of condensate moisture.

A water strainer must be installed in the supply line. Use strainer sent with machine.

**ELECTRICAL SYSTEM:** The super Flaker Model SF-75 is designed to work on standard voltage--115/60/1.

Special voltage requirements are available on special order. Therefore, always check nameplate for this information before checking electrical supply.

Nameplate voltage should not vary more than plus or minus 10 percent.

The electrical circuit consists of condensing unit, drive motor, storage bin thermostat, ON and Off switch and micro (safety) switch.

A. **CONDENSING UNIT:** The starting capacitor and starting relay are housed and fastened to the motor compressor.

B. **DRIVE MOTOR:** Model SF-75 Flakers are equipped with standard 1/2" shaft, 1/4 HP, capacitor start, induction motors. These motors turn counter-clockwise and may be replaced with any standard make motor corresponding to the nameplate rating. (Be sure motor runs counter-clockwise viewed from the shaft end.) NEMA 48 Frame.

C. **STORAGE BIN THERMOSTAT:** White Rodgers control located on frame assembly. Factory settings 35° cut-out, 45° cut-in. This control shuts off complete machine when ice in storage bin builds up to control.

D. **MICRO SAFETY SWITCH:** The micro switch is located in the top of the ice chute. The switch is operated by a plate in top of the ice chute by the ice backing up in the chute should the storage bin thermostat fail. Micro switch will shut off the condensing unit only, when operated.

E. **ON-OFF SWITCH:** A manual on-off switch with built-in thermal overload protection to prevent drive motor failures is used. See overload chart for correct size. (Page No. 29)



## REMOVAL & INSTALLATION OF PARTS

### CABINET TOP (HOOD)

1. Remove two back end screws of chrome strip.
2. Pull out tape concealing screws.
3. Remove balance of screws in chrome strip.
4. Lift off hood.

### HOOD SERVICE DOOR, TOP

1. Remove screw from front edge.
2. Lift up and back to unhook pin.

### CABINET SIDE SERVICE DOOR

1. Remove four screws on edges.
2. Lift out door.

### CABINET FRONT SERVICE DOOR

1. Front door pulls out.

### CABINET REAR SERVICE DOOR

1. Remove four screws on corners of rear service door.
2. Pull door out.

### ICE STORAGE DOOR

1. Lift door up, slide back 6". Lift up on door underside and pull forward.
2. Door will now slide out.

### ICE STORAGE DOOR FRAME

1. Remove six screws at bottom and sides.
2. Frame will now lift out.

### MOTOR COMPRESSOR

1. Remove gas charge.
2. Disconnect wiring from the compressor.
3. Loosen suction line to suction valve and cap off.
4. Remove the compressor hold-down nuts and lift compressor out of the unit.
5. Reverse steps 1 through 4 in replacing compressor.

## SERVICE

### FREEZER ASSEMBLY

1. In most instances, it will be faster to remove freezer by first removing cabinet top or hood. (See Removing & Installing Cabinet Parts.) Assembly can be changed if necessary through hood top panel.
2. Shut off water supply and drain water reservoir.
3. Remove refrigerant from system.
4. Remove suction and liquid line connections. (CAUTION: Plug all connections to prevent moisture from entering system.)
5. Remove tygon tube to water inlet connection at base on freezing chamber.
6. Loosen spout bolt holding spout to freezer and remove.
7. Remove two bolts holding freezer chamber to frame.
8. Lift freezer assembly up and out of unit.
9. Remove rubber drip pan from defective freezer and install it on new assembly.
10. Reverse above procedure to install new freezer.

### FREEZER WORM SHAFT

1. Turn unit off, before removing worm shaft.
2. Shut off water supply to unit.
3. Remove hood service door.
4. Remove top and bottom straps around insulation pieces, remove pieces.
5. Remove two slotted head screws which fit through chamber wall into ice breaker.
6. Complete worm shaft with ice breaker attached will now come out by lifting up on freezer cap pull ring. NOTE: Top half of water seal will come with worm shaft.
7. To remove ice breaker from shaft, first remove retainer ring in top of ice breaker.
8. Remove freezer cap and pull ring from ice breaker.
9. Remove cap screw holding shaft through bearing and pull worm shaft free from ice breaker and bearing.
10. If shaft is defective, remove water seal top half and put on new worm shaft before reassembling--when reassembling, by reversing above, put a small amount of Vaseline on squared shaft end. This will allow shaft to slide smoothly through rubber bottom half of water seal without tearing it.

### WATER SEAL

1. To replace water seal, follow steps 1 through 6 under Worm Shaft Removal.
2. Next slide three-jaw drive coupling down on reducer shaft or else remove top half of coupling.
3. Pull rubber drip pan down.
4. Remove large brass nut holding lower bearing and lower portion of water seal in place.
5. Lightly force lower bearing out.
6. Reach in and pull bottom portion of water seal out.
7. Reassembly is reverse of above.

## SERVICE

### STORAGE BIN THERMOSTAT:

1. Disconnect electrical supply.
2. Remove bin thermostat bulb from bin location along with its capillary tube.
3. Remove control box cover.
4. Remove thermostat cover, disconnect two leads.
5. Loosen two screws in control mounting bracket.
6. Replace with new control and reassemble in reverse of above
7. CAUTION: Always check new control power element charge before installation to assure receiving an operative control. A handful of ice on bulb will register an audible 'click' at cut'off.

### WATER RESERVOIR

1. Remove service panel in cabinet hood.
2. Turn off water supply and drain reservoir.
3. Remove 1/4 inch copper inlet water line.
4. Remove 1/2 inch plastic feed line to freezer.
5. Remove two screws holding reservoir bracket to wall.
6. Lift out reservoir.
7. To replace, reverse procedure.

## SERVICE

### MICRO SWITCH IN SPOUT

1. Remove hood service panel.
2. Remove micro box cover, loosen two screws at rear of box holding switch in place, lift up.
3. Disconnect electric leads.
4. Reassemble with new micro switch.

### DRIVE MOTOR

1. Remove case hood - See Cabinet Top Removal Section.
2. Remove electrical connections.
3. Remove four base bolts.
4. Remove drive belt.
5. Lift out defective motor.
6. Remove pulley and install on new motor.
7. To replace, reverse procedure.
8. CAUTION: Drive motor rotation is COUNTER-CLOCKWISE facing shaft end.

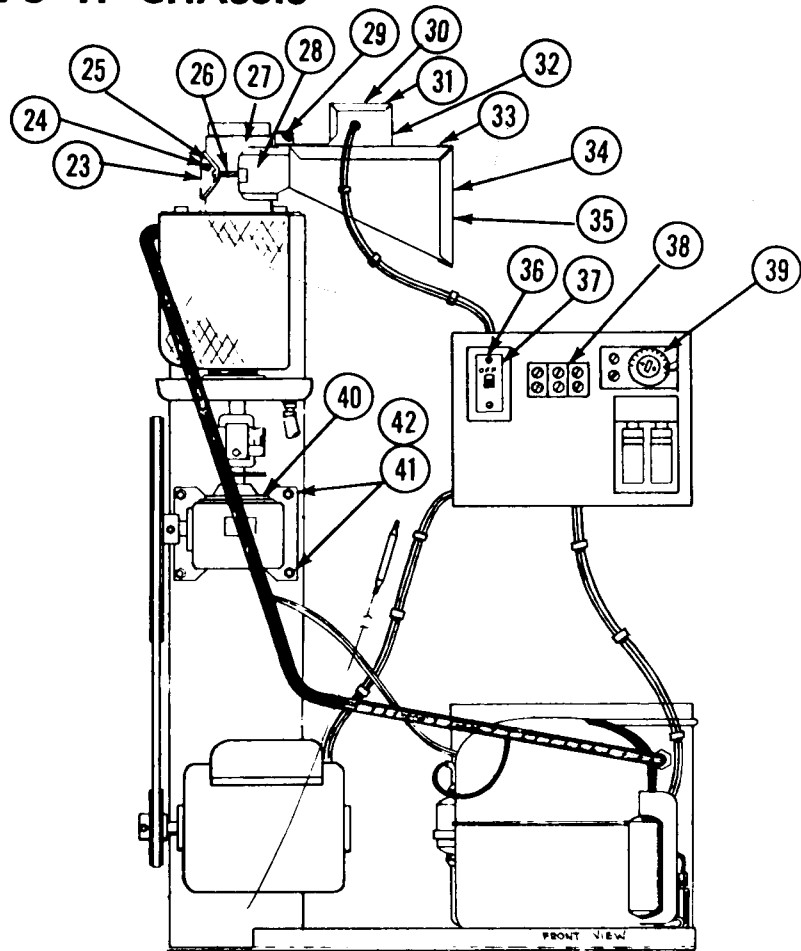
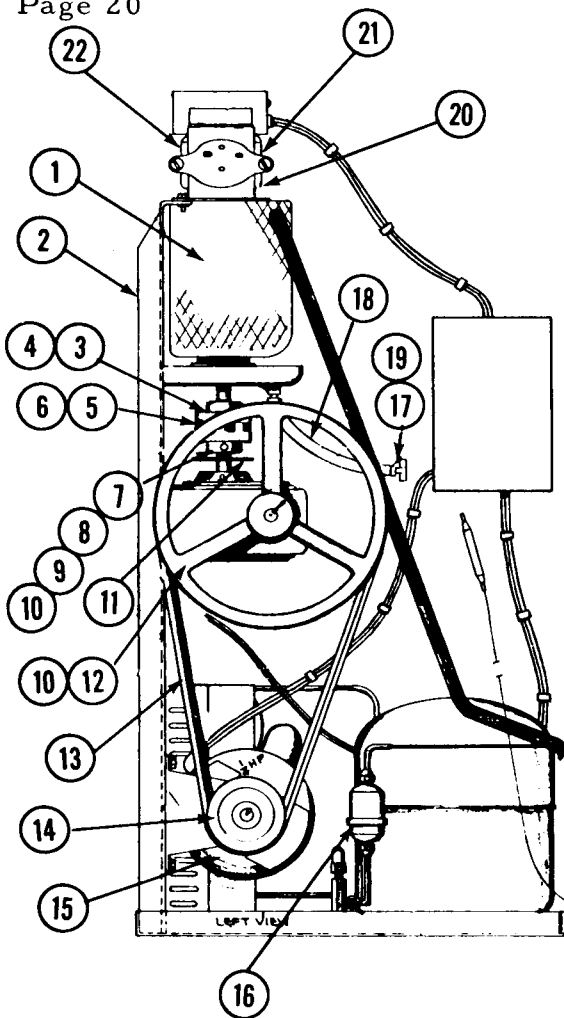
### MANUAL ON AND OFF SWITCH

1. Remove front service door.
2. Remove two screws holding switch to bracket.
3. Disconnect electrical leads from switch.
4. Remove switch.
5. To replace, reverse procedure.

### GEAR REDUCER AND COUPLING

1. Remove rear door.
2. Remove drive pulley.
3. Loosen drive coupling set screw and slide down coupling on gear reducer shaft.
4. Loosen four mounting bolts.
5. Lift out from rear of machine.
6. To replace, reverse procedure.
7. Check new gear reducer for proper oil level.
8. Remove shipping plug (brass nail) from air vent hole in top plug.

## SF-75 H CHASSIS



ITEM NO.	PART NO.	NAME
1.	A-16233-1	Freezer Assy.
2.	A-15974	Frame
3.	S-8525	Coupling, top
4.	13-131	Insert, rubber
5.	S-7716	Coupling, lower
6.	S-8496	Coupling Clamps (2)
7.	3-206	Screws (2)
8.	3-89	Lock Washers (2)
9.	3-385	Set Screw
10.	S-6035	Key *
11.	13-152	Rubber Shield
12.	2-1463	Pulley (large)
13.	13-582	Belt
14.	2-1462	Pulley (small)
15.	12-864-1	Motor 115/60/1
16.	2-350	Drier
17.	A-7387	Tee
18.	13-79	Tubing (per foot)
19.	2-534	Clamps
20.	A-8736	Clamps, Insulation *
21.	A-15070	Left Insulation *
22.	A-15071	Right Insulation

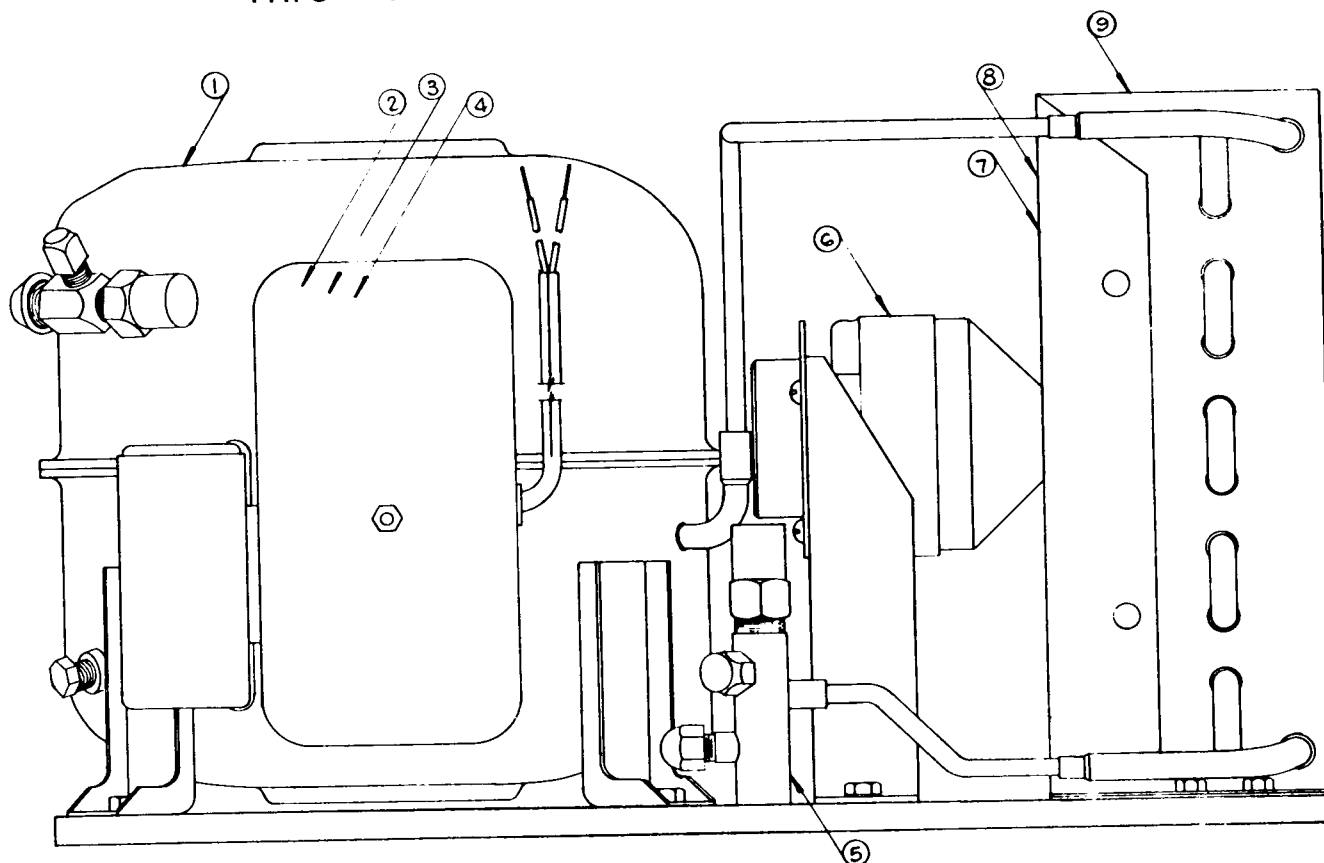
ITEM NO.	PART NO.	NAME
23.	S-9237	Spout Casting
24.	3-207	Screws (2)
25.	3-679	Washers (2)
26.	3-671	Screws (2)
27.	2-560	"O" Ring *
28.	A-14254	Front Casting
29.	A-14256	Nut
30.	A-14241	Cover
31.	3-173	Screws (2)
32.	12-1018	Switch
33.	A-16357	Spout
34.	A-16360	Press. Plate (with spring)**
35.	2-1321	Spring *
36.	12-530A	Switch
37.	12-708	Overload (state mfg.)**
38.	12-1308	Terminal Board *
39.	11-99-1	Temperature Control
40.	2-580	Gear Reducer
41.	3-265	Nut (4)
42.	3-371	Washer (4)

\* Not Shown

\*\* See Overload chart page 29 for correct dash no.

## CONDENSING UNIT

¼ HP Air Cooled Bendix Westinghouse  
Used from Serial No. 8-11-7644 and up.  
Thru "H" Models



ITEM NO.	PART NO.	NAME
1.	18-132	Motor Compressor 115/60/1
2.	18-133	Relay *
3.	18-134	Starting Capacitor (*)
4.	18-135	Klixon (*)
5.	18-138	Base Valve (high side)
6.	18-150-1	Fan Motor
7.	18-231	Fan Blade (*)
8.	A-15621	Condenser Shroud
9.	18-140	Condenser Core

(\*) Not Shown

Condenser Unit Complete Part A-18-103

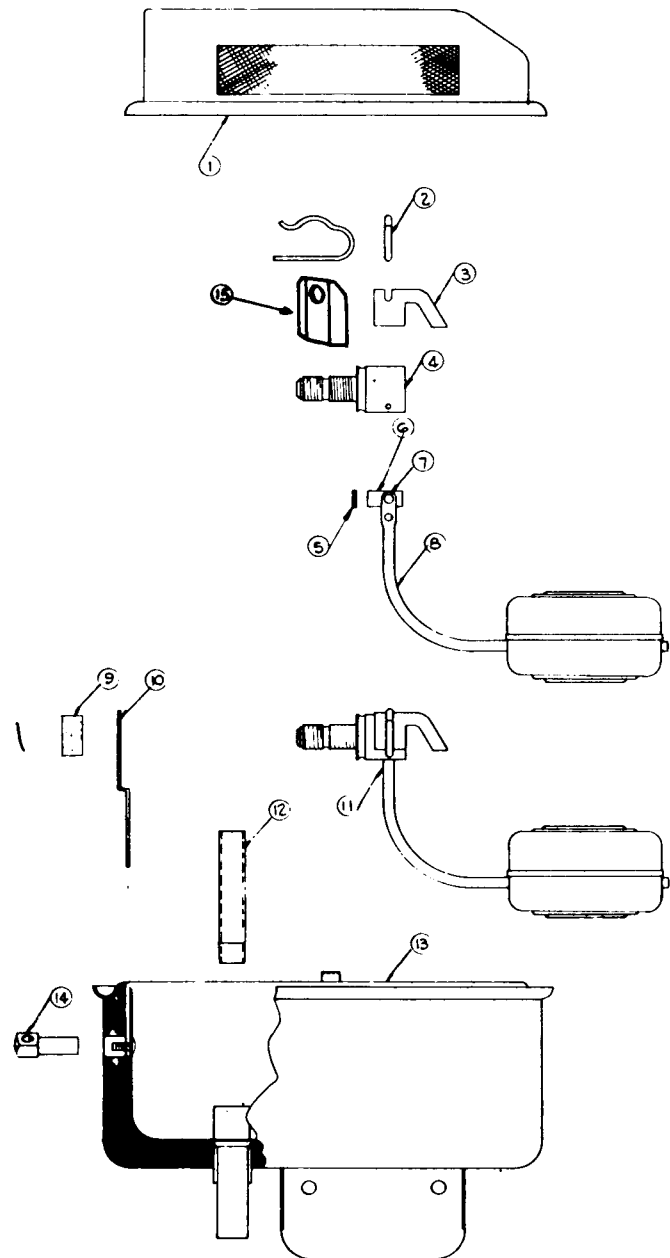
Previous to "H" Models  
18-421 Fan Motor  
18-137 Fan Blade

## RESERVOIR ASSEMBLY SF-75

Thru "H" Models \*

ITEM NO.	PART NO.	NAME
1.	A-8341	Reservoir Cover Ass'y
2.	2-1259	Float Pin
3.	2-1320	Water Deflector
4.	S-8770	Water Inlet
5.	S-8772	Valve Seat
6.	A-5777	Valve Seat Holder
7.	3-100F	Rivet
8.	A-12067	Float Ass'y (includes arm)
9.	S-7044	Nut
10.	A-12869	Inlet Water Bracket
11.	S-8138	Inlet Water Valve Ass'y (includes valve seat, holder and float assembly)
12.	S-6715	Stand Pipe
13.	A-13408	Reservoir Body Ass'y
14.	A-8055 A-8351	Bracket Nut Reservoir Complete (Less Cover)
15.	A-18418	Water Deflector

\* H Model SF-75 use  
A-16012 Reservoir Cover



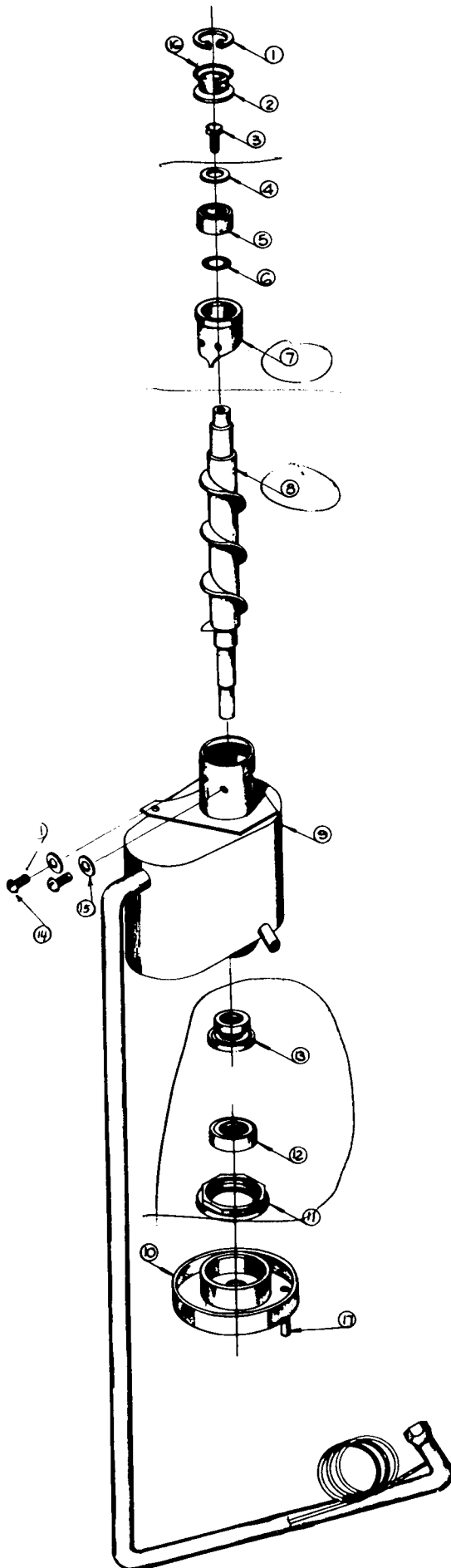
## SF-75 WSH FREEZER

Part No. A-16233-1

Use on all models thru "H"

**NOTE:**

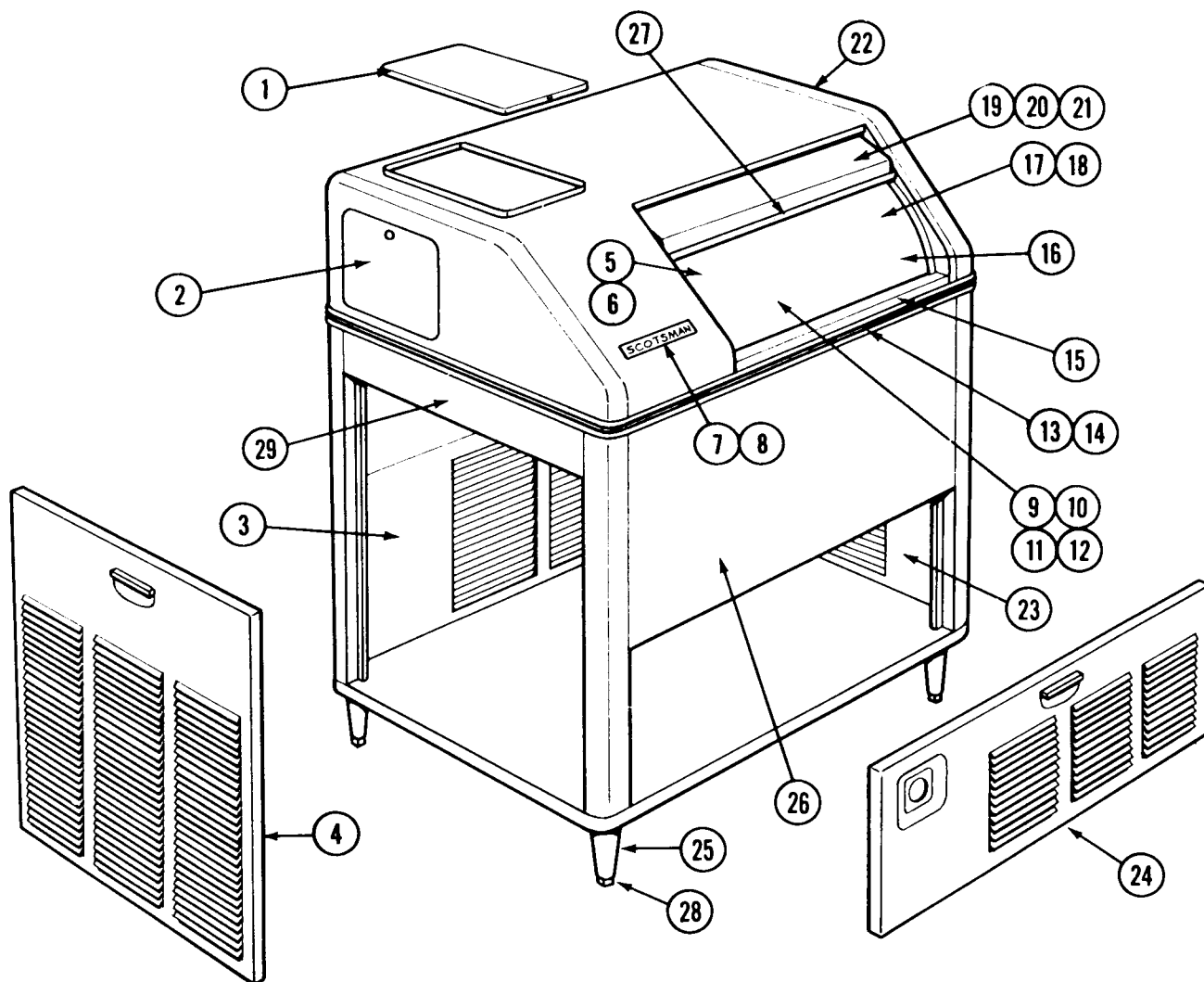
Will fit all model SF-75 thru H.  
Will replace A-9618 and A-7782-1.



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>NAME</u>
1.	3-553	Snap Ring
2.	A-7701	Worm Tube Cap
3.	3-758	Cap Screw
4.	A-7699	Worm Tube Washer
5.	2-547	Bearing, Upper
6.	2-386	'O' Ring
7.	A-9413	Ice Breaker
8.	2-1470	Worm Shaft
9.	A-9619	Worm Tube, Acc., Suc- tion Line & Cap Tube
10.	13-213	Drip Pan, Rubber
11.	S-8817	Worm Tube Nut
12.	2-417	Lower Bearing
13.	2-1300	Water Seal
14.	3-207	Screws (2 required)
15.	3-679	Washer (2 required)
16.	A-8162	Cap Hook
17.	A-8002	Drain Tube (copper) (*)
	A-16233-1	Freezer Complete



## SF-75 H CASE AND HOOD ASSEMBLY



ITEM NO.	PART NO.	NAME
1.	A-6767	Top Door Assy.
2.	A-6530	Top Side Door
3.	A-16563	Back Door
4.	S-9405	Left Door
5.	3-1212	Bulb Holder *
6.	13-557	Grommets *
7.	15-156	Emblem
8.	3-271	Nuts
9.	A-15574	Storage Bin Assy.
10.	A-18088	Drain Assy.
11.	2-1581	Bottom Insulation *
12.	A-15573	Insulation Layout *
13.	A-6510	Front Moulding
14.	15-324	Insert
15.	A-16208	Door Track Assy.*

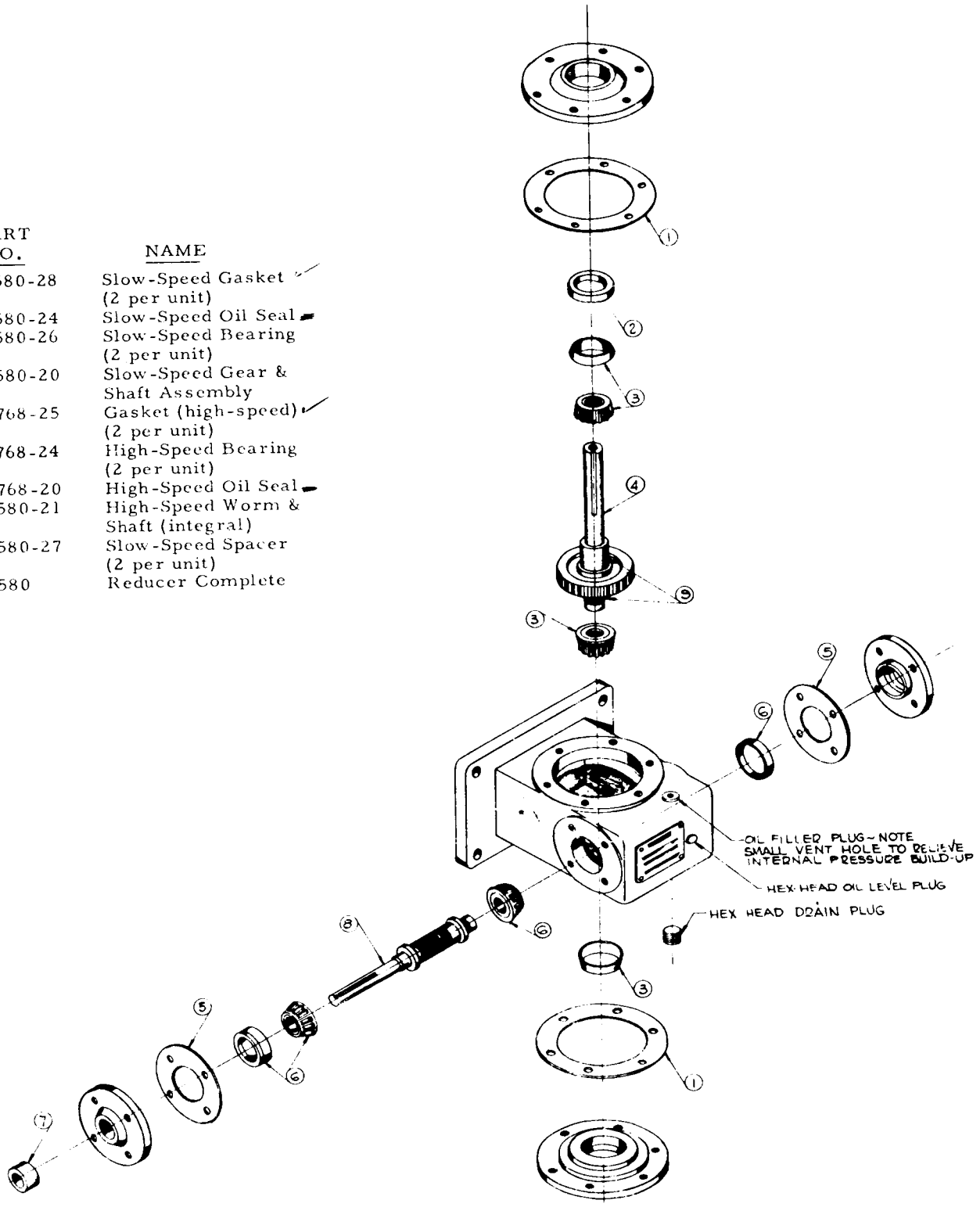
ITEM NO.	PART NO.	NAME
16.	A-18090	* Drain Fitting (female)
17.	A-6448	Drain Strainer *
18.	2-530	"O" Ring *
19.	A-15559	Door Assembly
20.	3-640	Door Glides *
21.	3-1195	Door Glides (hood)*
22.	A-15599	Hood Assembly
23.	A-16561	Right Door
24.	A-15789	Front Door
25.	A-15803	Leg
26.	A-16519	Case Assembly
27.	A-16209	Door Catch *
28.	8-522	Leg Leveler
29.	A-7714	Left Panel

\* Not Shown  
Add an "S" to panel Nos. for stainless steel

## GEAR REDUCER

Scotsman Part No. 2-580  
Winsmith Part No. (3CT)  
SF-75 thru "H" Models

ITEM NO.	PART NO.	NAME
1.	2-580-28	Slow-Speed Gasket (2 per unit) ✓
2.	2-580-24	Slow-Speed Oil Seal
3.	2-580-26	Slow-Speed Bearing (2 per unit)
4.	2-580-20	Slow-Speed Gear & Shaft Assembly
5.	2-768-25	Gasket (high-speed) ✓
6.	2-768-24	High-Speed Bearing (2 per unit)
7.	2-768-20	High-Speed Oil Seal
8.	2-580-21	High-Speed Worm & Shaft (integral)
9.	2-580-27	Slow-Speed Spacer (2 per unit)
10.	2-580	Reducer Complete



In answer to many field requests, we are pleased to release the following chart showing the companies whose products are acceptable substitutes for the 600W supplies by Winsmith as factory recommended.

Note the third column which most accurately represents the normal temperature operating range. Also the Alemite or Zerk fitting to bearing is greased with Mobilgrease BRB No. 1, or any good grade ball bearing grease as obtained from local service stations.

600W oils and equivalents are classified as industrial oils and most likely will be found in bulk plants rather than local service stations.

WORM GEAR REDUCERS

CB-CT-CV-CBD-CVD-CBX-CTX-CVX-DBI-TSR

	-30 to 15	'16 to 50	51 to 110	111 to 165
Ambient Temperature °F	-30 to 15	'16 to 50	51 to 110	111 to 165
Maximum Operating Temperature °F	150	185	225	225
Viscosity @ 210°F, SUS	40 to 90	90 to 125	125 to 190	190 to 350
Compounded with	(Optional)	3 to 10% Acidless Tallow or E.P. Base	3 to 10% Acidless Tallow or E.P. Base	3 to 10% Acidless Tallow or E.P. Base
AGMA Lubricant		#7 Compound	#8 Compound	
Cities Service Oil Co.	Pacemaker Oil #5	Optimus Oil #10	Optimus Oil #6	Optimus Oil #12
Fiske Bros. Refining Co.	#3Lubriplate	#8Lubriplate	#8Lubriplate	APG Lubriplate
Gulf Oil Corporation	Multipurpose Gear Lubri- cant	E.P. Lubri- cant #115	E.P. Lubri- cant #145	E.P. Lubri- cant #250
Shell Oil Company	Vitrea Oil 71	Valvata Oil #J 78	Valvata Oil #J 78	Valvata Oil #J 83
Sinclair Refining Co.	Duro Oil 160	#87 Heavy Duty Oil	#101 Super- Heat Valve Oil	#212 Super- Heat Valve Oil
Standard Oil Co.	Stanogear Compound #1	Stanogear Compound #4	Standard Worm Gear Oil	Calumet SH Cylinder Oil
Sun Oil Company	Sunep 70	Sunep #110	Sunep #150	HV Cyl. Oil
Socony Mobil Oil Co., Inc.	Vactra Oil #1	Mobil Com- pound DD	Mobil Cyl- inder Oil #600W	Mobil Cyl- inder Oil # 600W
The Texas Company	Meropa Lub. #1	Meropa Lub. #3	Meropa Lub. #6	Meropa Lub. #6

SERVICE ANALYSIS

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Unit will not run	Blown Fuse Thermostat set too high Loose electrical connection Switch in OFF position Inoperative master switch	Replace fuse and check for cause of blown fuse. Adjust thermostat. 35° cut-out and 45° cut-in. Check wiring. Turn switch to ON. Replace switch.
Compressor cycles intermittently	Low voltage Dirty Condenser Air circulation blocked Inoperative condenser motor Non-condensable gases in system	Check for overloading. Clean. Move unit to correct. Replace. Purge off.
Making wet ice	Surrounding air temperature Under or over-charge of refrigerant High water level in water reservoir Faulty compressor	Correct or move unit. Recharge with the proper amount. Lower to 1/4 inch below overflow pipe. Repair or replace.
Low ice production	Loss of refrigerant, under or over-charge of refrigerant. Dirty or plugged condenser Low water level in water reservoir Partial restriction in capillary tube or drier Inlet water strainer partially plugged. Corroded or stained worm shaft due to water condition	Check and recharge with proper amount of refrigerant. Clean condenser Adjust to 1/4 inch below overflow pipe. Moisture in system. Over-charge of oil in system. Remove charge and drier. Replace and recharge system. Remove screen and clean. Remove worm shaft and clean.
Machine runs but makes no ice	Loss or under-charge of refrigerant Drive motor, belts, gear reducer or drive coupling inoperative Pulleys loose on shafts Water not entering freezing chamber Moisture in system Water seal leaking Defective manual overload switch.	Check for leaks and recharge Check. Repair and/or replace. Tighten - repair or replace. Plugged strainer or supply line. Check and clean. Air lock in gravity feed line. Check and remove air lock. Check and remove charge and drier. Replace and recharge. Replace seal. Replace switch.

SERVICE ANALYSIS

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Water Leaks	Defective water seal Gravity feed line leaking 'O' ring in spout casting leaking  Storage bin drain & connecting fittings Water level in reservoir too high	Replace Check hose clamps Remove spout casting and install new 'O' ring Check and repair.  Adjust to 1/4 inch below overflow pipe.
Excessive noise or chattering	Mineral or scale deposit on auger and inner freezing chamber walls.     Low suction  Intermittent water supply   Water level in reservoir too low  Misaligned coupling or worn insert Gear reducer low on oil charge  Gear reducer loose on frame Pulleys worn or loose on shaft Belt cracked or worn Drive motor end-play or worn bearings	Remove and manually polish auger, polish inner chamber walls of freezer barrel.  For lighter concentrations use Scotsman Ice Machine Cleaner periodically. Add gas to raise suction pressure. Check & clean water strainer. Check gravity feed line for air lock. Remove air lock. Adjust to 1/4 inch below overflow pipe. Repair or replace. Check oil level and refill to oil level plug. Tighten. Repair or replace. Replace belt.  Repair or replace.
Machine continues to run with full storage bin	Storage bin thermostat not properly set	Reset or replace. 35° cut-out, 45° cut-in Check operation with handful of ice.

OVERLOAD HEATER CHART FOR MANUAL STARTER SWITCH

QUEEN PART NO. 12-530, GE PART NO. CR101H1, QUEEN PART NO. 12-1221 AND WESTINGHOUSE PART NO. MST02SN

Queen Motor No.	Manufacturer	Electrical Characteristics	Manuf. Part No.	Queen Part No. for G.E. Overload	Manuf. Part No.	Queen Part No. For Westinghouse Overload	Manuf. Part No.
12-864-1	G. E.	115/60/1 1/3 HP	KC35KG312	12-708-29	123H6.25A	12-1221-27	MSH6.0A
12-864-1	Westinghouse	115/60/1 1/3 HP	S309P520	12-708-27	123H5.29A	12-1221-27	MSH6.0A
12-864-1	Century	115/60/1 1/3 HP	CSF48HKA	12-708-26	123H4.86A	12-1221-25	MSH5.0A
12-864-2	G. E.	230/60/1 1/3 HP	KC35KG319	12-708-21	123H3.17A	12-1221-20	MSH3.1A
12-864-2	Westinghouse	230/60/1 1/3 HP	S309P334	12-708-20	123H2.91A	12-1221-19	MSH2.8A
12-864-2	Century	230/60/1 1/3 HP	CSF48HKA	12-708-18	123H2.45A	12-1221-19	MSH2.8A
12-864-7	G. E.	208/60/1 1/3 HP	KC35KG317	12-708-22	123H3.46A	12-1221-21	MSH3.4A
12-864-7	Westinghouse	208/60/1 1/3 HP	S309P334	12-708-19	123H2.67A	12-1221-18	MSH2.5A
12-864-7	Century	208/60/1 1/3 HP	CSF48HKA	12-708-20	123H2.91A	12-1221-19	MSH2.8A
12-649-1	Westinghouse	115/60/1 1/3 HP	311P096	12-708-33	123H8.73A	12-1221-31	MSH8.8A
12-649-1	Century	115/60/1 1/3 HP	CSJ56-KKA	12-708-29	123H6.25A	12-1221-27	MSH6.0A
12-649-1	G. E.	115/60/1 1/3 HP	5KC42JG24	12-708-30	123H6.80A	12-1221-28	MSH6.6A
12-649-2	Westinghouse	230/60/1 1/3 HP	311P061	12-708-25	123H4.46A	12-1221-24	MSH4.5A
12-649-2	Century	230/60/1 1/3 HP	CSJ56-KKA	12-708-21	123H3.17A	12-1221-20	MSH3.1A
12-649-2	G. E.	230/60/1 1/3 HP	5KC42JG2	12-708-22	123H3.46A	12-1221-21	MSH3.4A
12-649-7	Century	208/60/1 1/3 HP	CSJ56-KKA	12-708-22	123H3.46A	12-1221-21	MSH3.4A
12-649-7	G. E.	208/60/1 1/3 HP	5KC42JG31E	12-708-22	123H3.46A	12-1221-21	MSH3.4A
12-649-7	Westinghouse	208/60/1 1/3 HP	311P061	12-708-24	123H4.10A	12-1221-31	MSH8.8A

NOTE: The overloads as listed are in accordance with Underwriters requirements. Any deviation will be in violation.

## MAINTENANCE INSTRUCTIONS - FLAKERS

THE FOLLOWING MAINTENANCE MUST BE ACCOMPLISHED TWO TIMES PER YEAR ON ALL SCOTSMAN SUPER FLAKERS. CALL YOUR AUTHORIZED SCOTSMAN SERVICE DEPARTMENT.

1. Check and clean water strainers and float valve. Depress float valve to insure full stream of water.
2. Check water level and machine level, keep water level below overflow, but as high as possible and still not run out of spout opening with machine off. Water droplets come out of spout with ice at all times. Adjust as required.
3. Clean reservoir and interior of freezer using SCOTSMAN Ice Machine Cleaner.
  - A. If machine has been cleaned regularly and no problems such as dry ice or chatter are noticed, clean as per the following instructions:

1. Set main switch to OFF.
2. Remove all ice from storage bin.
3. Turn off water supply or block float. Drain reservoir by removing overflow tube (gray plastic tube) in reservoir. Replace overflow tube.
4. Set main switch to ON and pour cleaning solution into reservoir. Do not fill above overflow tube.
  - Models SF1 & SF75--Use 4 oz. of Scotsman cleaner and 1 qt. hot water.
  - Model SF2 & SF3--Use 6 oz. of Scotsman cleaner and 1 1/2 qt. hot water.
  - Model SF5--Use 8 oz. of Scotsman cleaner & 2 qts. hot water.
  - Model SF8--Use 16oz. of Scotsman cleaner & 4 qts. hot water.
5. Continue to make ice on solution until the solution is used up and reservoir is empty.
6. Set main switch to Off. Remove overflow tube, wash and rinse reservoir, replace overflow tube, turn water on or remove float block.
7. Turn MAIN SWITCH to ON. Let unit run for at least (15) minutes to flush out any cleaning fluid. Check ice for acid taste.-- run until ice tastes sweet.
8. Turn MAIN SWITCH to OFF. Add hot water to ice bin, using this melt water, thoroughly wash and rinse all surfaces within the storage bin.
9. Turn MAIN SWITCH to On. Replace Service Door. Unit is ready for normal operation.

### MAINTENANCE INSTRUCTIONS (Continued)

- B. If heavy mineral deposits on auger and walls, or sediment at inlet to freezer are encountered, clean by pouring strong solution (1/2 acid-1/2 water) into reservoir and operate drive motor only for agitation. Allow 1/2 hour or longer as required. Drain by disconnecting tygon at water inlet to freezer.

NOTE: Cleaning requirements vary according to local water conditions. Visual inspection of the auger before and after cleaning will indicate best procedure to be followed in local areas.

4. Check high and low side pressures. On air-cooled models head pressures range between 130 and 145 PSI. Suction pressure should be above 12 PSI and will range up to 16 PSI depending upon water and ambient temperatures.
5. Change oil in gear reducer. Use Mobiloil 600W or equivalent good grade of gear oil with a viscosity of 125 to 190. For unit with grease fittings use Mobilgrease BRB No. 1 or any good grade ball bearing grease. Particularly important when there is evidence that water has gotten into gear housing. Remove gear reducer to facilitate.
6. Oil drive motor. Use SAE10 oil.
7. Check top bearing of freezing tube. Remove retainer ring around edge of stamped brass cap. If moisture is around bearing, wipe up and remove grease. Add new grease. Use Beacon No. 325. Replace cap and retainer ring.
8. Check and adjust V belt tension.
9. Clean air-cooled condenser. Inform customer to clean frequently. Always shut off machine when cleaning.
10. Oil condenser fan motor when possible.
11. Check for refrigerant leaks and proper frost line. Should frost out of accumulator at least one-half way to compressor, and in some areas back to service valve.
12. Check for water leaks. Tighten drain line connections. Run water down bin drain line to make sure it is open.
13. Check quality of ice. Ice should be wet when formed, but will cure rapidly to normal hardness in bin.
14. Check thermostat and pressure plate cut off. Micro switch cuts off only compressor. Bin thermostat should be set at 10° differential and should keep entire machine off at least twenty minutes in high ambients (longer in low) during normal operation.



PARTS LIST  
SF-75WSH

ELECTRICAL COMPONENTS

Bin Thermostat	11-99-1
Micro Switch-Spout	12-1018
On/Off Switch	12-530A
Overload Heater for Switch - See overload chart pg. 29	12-708

CONDENSING UNIT (BENDIX-WESTINGHOUSE

Motor-Compressor 115/60/1 1/4 HP)	18-132
Dryer	2-350
Relay	18-133
Starting Capacitor	18-134
Fan Motor	18-150-1
Fan Blade	18-231
Fan Shroud	A-15621

MISCELLANEOUS

Spring Clamp Pliers	50-46
Worm Tube Nut Wrench	A-8497
Ice Scoop	2-540
Ice Machine Cleaner - 8 oz. bottle	19-343
Grey Spray-On Touch-Up Paint	10-153
600W Gear Reducer Oil - Pints	19-359
Tygon Tubing - 9/16" ID	5-179
Tygon Tubing - 1/2" ID	5-186
Rubber Tubing - 3/8" ID	13-79
Clamp (for 5-179)	2-536
Clamp (for 5-186)	2-536
Clamp (for 5/8 drain tube)	2-534
Clamp (for 11/16 drain tube - Green)	2-535
Retainer Ring Plier	50-637

PARTS LIST  
SF-75 WSH

DRIVE CIRCUIT

Gear Reducer	2-580
Gear Reducer Repair Kit	A-6397
Three Jaw Coupling (bottom)	S-7716
Three Jaw Coupling (top)	S-8525
Insert, Coupling	13-131
Allen Set Screw	3-385
Clamp	S-8496
Cap Screw	3-206
Rubber Drip Shield	13-152
"v" Drive Belt - 48"	13-582
Drive Motor - 1/4 HP	12-864-1
Pulley - 2 1/2"	2-1462
Pulley - 8"	2-1463
Key	S-6035

FREEZER ASSEMBLY COMPLETE

Freezer Assembly Complete	A-16233-1
Ice Breaker	A-9413
'O' Ring	2-386
Top Bearing	2-547
Cap Screw	3-758
Worm Tube Washer	A-7699
Worm Tube Cap	A-7701
Retainer Ring	3-553
Worm Shaft	2-1470
Water Seal	2-1300
Bearing, Bottom	2-417
Worm Tube Nut	S-8817
Back Casting	S-9237
Rubber Drip Pan	13-213
Front Casting	A-14254
Spout only	A-16357
'O' Ring	2-560

PARTS LIST  
SF-75WSH

CABINET PARTS

Machine Case (less doors)	A-16519
Storage Bin Assembly	A-15574
Drain Assembly, Female	A-18090
Drain 'O' Ring	2-530
Thermo Bulb Bracket	3-1212
Storage Drain Fitting (male)	A-18088
Case Hood Assembly (less doors)	A-15559
Door Slide Assembly	A-16208
Bin Drain Screen	A-6448
Sliding Door	A-15599
Front Door	A-15789
Right Side Door	A-16561
Rear Door	A-16563
Left Side Door	S-9405
Hood Top Door Assembly	A-6767
Hood Side Door Assembly	A-6530
Rear Moulding Strip - 24"	A-6509
Front Moulding Strip - 87 1/4"	A-6510
Emblem	15-156
Leg	A-15803
Leg Leveler	8-522
Plywood Crate	1-650

WATER CIRCUIT

Water Reservoir Assembly Complete, less cover	A-8351
Water Inlet Valve	S-8138
Float Assembly	A-12067
Rubber Valve Seats	S-6947
Float Pin	2-1254
Water Deflector	2-1320
Stand Pipe	S-6715
Reservoir Cover	A-16012
Water Strainer	16-162