

# Technical Manual and Replacement Parts List

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## Ice Cream Cabinets



**MODEL SKFDI18 115V**



**MODEL SKFI18 115V**

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1600 Xenium Lane North, Minneapolis, MN 55441-3787  
Phone (763) 553-1881

**SILVER KING**®



## TECHNICAL MANUAL

### SILVER KING MODELS SKFD18 AND SKFI18 ICE CREAM FREEZERS

Thank you for purchasing Silver King food service equipment. Our goal is to provide our customers with the most reliable equipment in the industry today. Please read this manual and the accompanying warranty information before operating your new Silver King unit.

#### INSPECT FOR DAMAGE AND UNCRATE

Upon delivery of your new Silver King unit, uncrate at once to inspect for possible damage following the instructions printed on the exterior of the container. Report any damages to the carrier responsible for transportation and promptly present a claim for any evidence of mishandling. Save all packaging materials if a claim is to be filed.

#### PRECAUTIONS BEFORE USING THIS PRODUCT

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

- Use caution when cleaning the condenser, the fins are very sharp.

- For units with a dual hertz rating, no adjustments are required for normal operation.

- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

- This refrigeration unit is not intended to be used at altitudes higher than 2000 meters.

- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

- Use caution when moving, installing, maintaining and using this refrigeration device to avoid either damaging the refrigerant tubing or increasing the risk of a leak.

- All component parts must be replaced with like components and all servicing must be done by factory authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

- If the unit has recently been transported on its side (or placed horizontally), then please let unit stand with the casters (or feet) on the ground for a minimum of 24 hours before plugging it in.

#### FOR HYDROCARBON UNITS ONLY (R290)

**Danger** – Risk of fire or explosion. Flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigeration tubing.

**Danger** – Risk of fire or explosion. Flammable refrigerant used. Do not use mechanical devices to defrost refrigerator/freezer. Do not puncture refrigeration tubing.

**Caution** – Risk of fire or explosion. Flammable refrigerant used. Consult repair manual/owner's guide before attempting to service this product. All safety precautions must be followed.

**Caution** – Risk of fire or explosion. To be repaired only by trained service personnel. Use only Silver King approved replacement parts. Flammable refrigerant used.

**Caution** – Risk of fire or explosion. Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.



**WARNING:** This product can expose you to chemicals including lead, which are known to the State of California to cause cancer, birth defects, or other reproductive harm.

## **INSTALLATION**

### **Model SKFI18**

The Model SKFI18 has a stainless steel exterior that has been protected by a plastic covering during manufacturing and shipping. This covering can be readily stripped before installation. After removing this covering, wash the interior and exterior surfaces using a warm, mild soapy water solution and a sponge or cloth. The Model SKFI18 has louvered panels at the bottom front and rear of the cabinet. When installing the unit, these areas require a minimum spacing of six (6) inches to allow proper airflow to the condensing unit and to maintain the compressor warranty!

### **Model SKFDI18**

The Model SKFDI18 is designed to drop into a counter or bar for convenient serving. A square cutout of 16.75 inches by 16.75 inches is required to drop the cabinet into the countertop. The counter must be able to support a weight of at least 150 pounds or the unit should be supported from the bottom. Once installed into the countertop a bead of silicone should be placed around the perimeter of the top to prevent moisture from seeping through. When installing the unit into a countertop it is extremely important to provide adequate air circulation to the condensing unit to maintain the compressor warranty! If the cabinetry is not vented to allow the warm condensing unit discharge air to escape, you will need to provide holes in it for that purpose. The suggested method for venting is to cut 8.5 inch square holes in the counter directly in front of the condenser and directly behind the compressor. Once installed the interior and the exposed exterior surfaces should be washed using a warm, mild soapy water solution and a sponge or cloth.

## **LOCATION**

When locating your countertop drop-in display merchandiser, convenience and accessibility are important considerations, but the following installation guidelines must be followed;

- For SKFDI18, when installed in a countertop, provisions need to be in place for the unit to receive proper ventilation for the compressor. Do not install the unit in cabinetry that does not have provisions for ventilation as that would void all warranties.
- Always avoid placing the unit next to an oven, heating element or hot air source that would affect the operation of the unit.
- The unit must be level.
- For SKEDI18 the counter must be able to support a minimum of 150 pounds.
- See installation diagram on the next page.

## **Safety**

Do not store explosive substances such as aerosol cans with a flammable propellant inside the appliance.

## **Electrical Connections**

Be sure to check the data plate, located on the liner of the cabinet, for required voltage prior to connecting the unit to power. The specifications on the data plate supersede any future discussion.

Your Silver King refrigerator is equipped with an eight (8) foot power cord. Any attempt to modify the plug will void the warranty, terminate the manufacturers responsibility, and could result in serious injury.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard."

The circuit must be protected with a 15 or 20 ampere fuse or breaker. The unit must be isolated on a circuit and not plugged into an extension cord.

## **Energy Rating**

Your Silver King refrigerator has a class 5 energy rating. The refrigerator was tested at an ambient temperature of 40°C at 40% relative humidity.

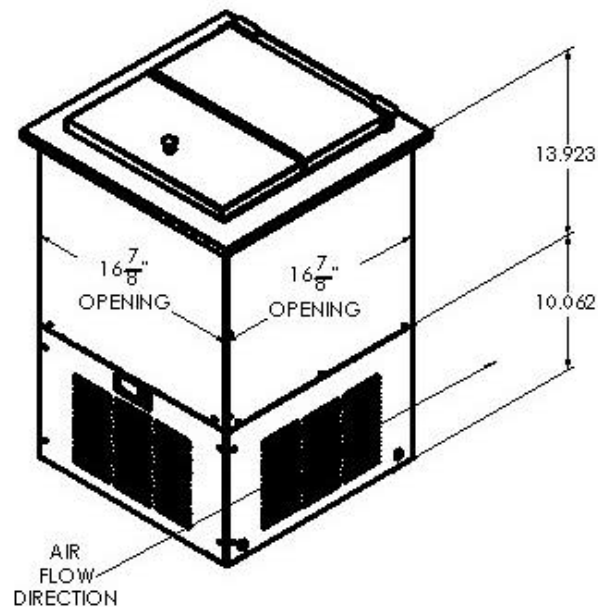
## **Installation Instructions: Drop in Countertop Placement**

### **Models: SKDI/SKEDI18**

- 1) Countertop installation of this unit will require that a  $16\frac{7}{8}$ " square hole be cut through the countertop surface.
- 2) Choose a location which will allow for adequate air circulation through the compressor compartment without recirculation.
- 3) Ventilation holes measuring 18" wide x 12" high may need to be cut into the supporting cabinet in line with the vented panels on the unit to prevent air recirculation.

#### **Inadequate airflow will impair performance and may result in damage to the compressor and void warranty**

- 4) The unit can be supported by its collar if the countertop and supporting cabinetry are capable of supporting at least 150 lbs.
- 5) Ease the unit through the cut-out until it is resting on the collar.
- 6) Apply a bead of silicone sealant around the perimeter of the collar where it meets the countertop



## **OPERATION**

### **Initial Start Up**

After satisfying the installation requirements, the freezer is ready to start. The unit will start when the power cord is connected to the required power source. If the compressor does not start when the unit is initially plugged in, check to make sure that the Temperature Control is not in the 'off' position. Allow the unit to run for two hours before loading it with product. When loading the unit with product do not load above the 'product load line' indicated on the liner.

### **Temperature Control**

The Electronic Temperature Control is located on the front of the unit. To check the temperature control set point, push and release the 'set' button on the control and the display will show the set point temperature. To adjust the set point, push and hold the 'set' button until display blinks, then push the up or down arrows to adjust the set point. Either press the 'set' button again or wait 10 seconds and the control will store the new set point. Allow the unit a minimum of one hour to respond to a control setting adjustment.

### **Defrost**

The Silver King freezer is a manual defrost unit. The unit should be defrosted whenever the walls accumulate a frost layer that is 1/4 inch thick. To defrost the unit, disconnect the Power Cord from the electrical receptacle and remove or open the Lid Assembly. After the frost has melted or come loose from the walls, wipe out the cabinet interior. Do not attempt to scrape or chisel off the frost as you could do irreparable damage to the unit.

## **MAINTENANCE**

Preventative maintenance is minimal although these few steps are very important to continued trouble free operation and maximizing the life of your appliance.

### **Cabinet Surfaces**

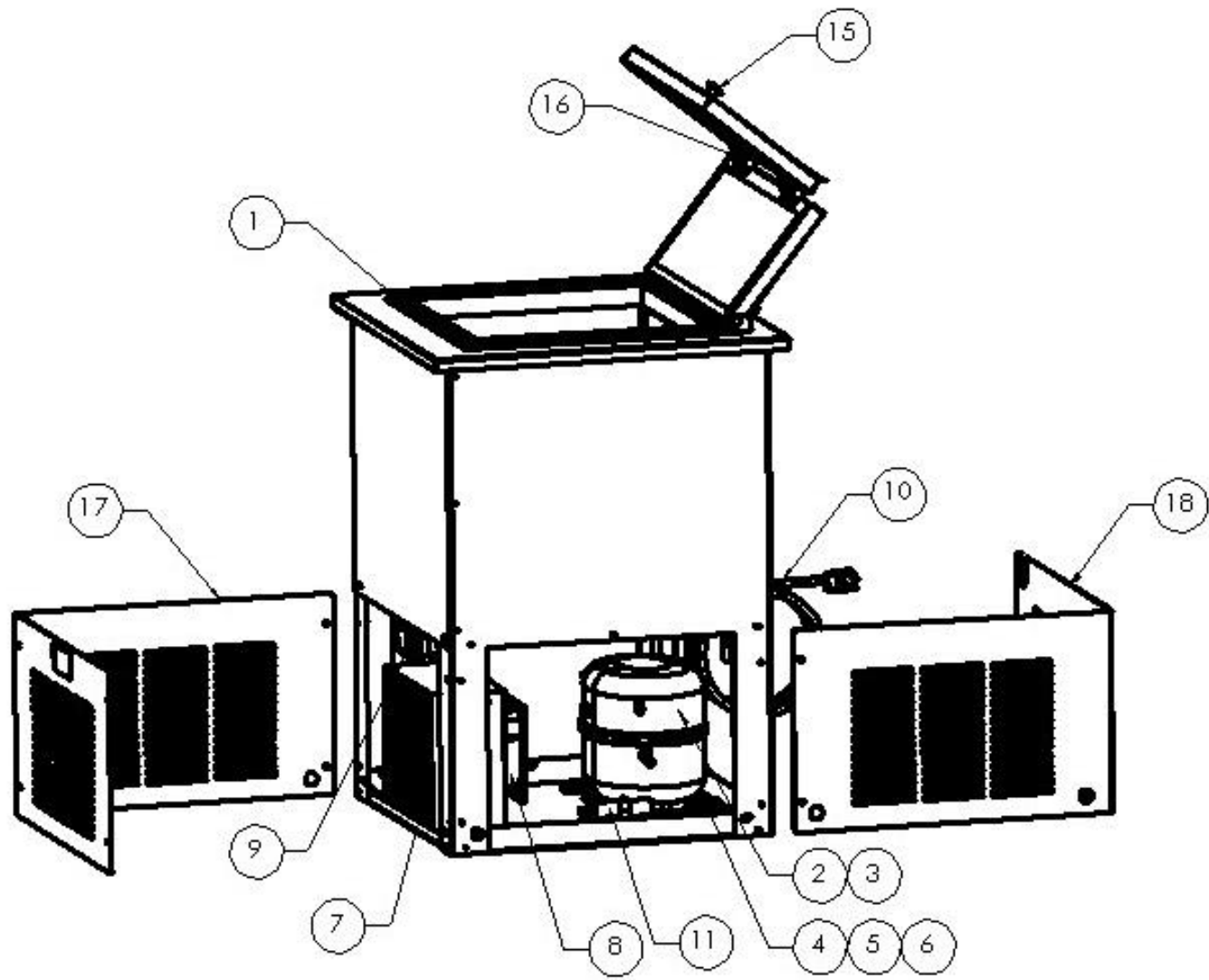
The cabinet interior and exterior surfaces should be cleaned periodically with a solution of warm water and mild soap and wiped dry with a soft cloth. A good stainless steel cleaner can also be used. Should a surface become discolored, do not attempt to clean with an abrasive cleanser or scouring pad. Use a soft cleanser and rub with the grain of the metal to avoid scratching the surface. Do not use chlorinated cleaners on the stainless steel.

### **Condenser**

Periodically, dust on the condenser coil must be cleaned. The condenser is located behind the front cover at the right front of the unit. Remove the front cover by pulling on the bottom edge of the cover. The condenser will be exposed. Clean the accumulated dust/debris from the condenser with a vacuum or brush or chemical cleaning agent (Nu-Calgon 4171-75 or equivalent). This will need to be done regularly to maintain the compressor warranty!

**WARNING: The condenser fins are very sharp, use caution when cleaning the condenser.**

MODEL \_\_\_\_\_ SERIAL NO. \_\_\_\_\_ DATE INSTALLED \_\_\_\_\_



# REPLACEMENT PARTS LIST – SKFDI18, SKFI18

ITEM NO.	PART DESCRIPTION	PART NO.
1	BREAKER STRIP (4 REQ'D)	42286-05
2	COMPRESSOR KIT 115V/60HZ (W/ ELECTRICALS)	11700-2
3	COMPRESSOR ELECTRICAL KIT (RELAY/OVERLOAD) 115V/60HZ	11701-2
4	GROMMET COMPRESSOR MOUNT	20481
5	WASHER COMPRESSOR MOUNT	22401
6	CLIP HAIRPIN COMPRESSOR MOUNT	98106
7	CONDENSER COIL	39255
8	FAN MOTOR CONDENSER 115V	39577
9	TEMPERATURE CONTROL 115V	39592
10	POWER CORD 115V	32199
11	DRIER	22677
12	COVER ASSEMBLY	39542
13	BRACKET HINGE COVER RH	37413
14	BRACKET HINGE COVER LH	37414
15	KNOB COVER	99474
16	HINGE COVER	25226
17	GUARD FRONT/LEFT	39525
18	GUARD REAR/RIGHT	39526
19	TEMPERATURE PROBE (NOT SHOWN)	38822
20	CAPILLARY TUBE (NOT SHOWN)	99771
21	SERVICE PANEL FRONT/REAR (SKFI18 ONLY)	41661
22	LEG KIT 6" (SKFI18 ONLY)	10314-57

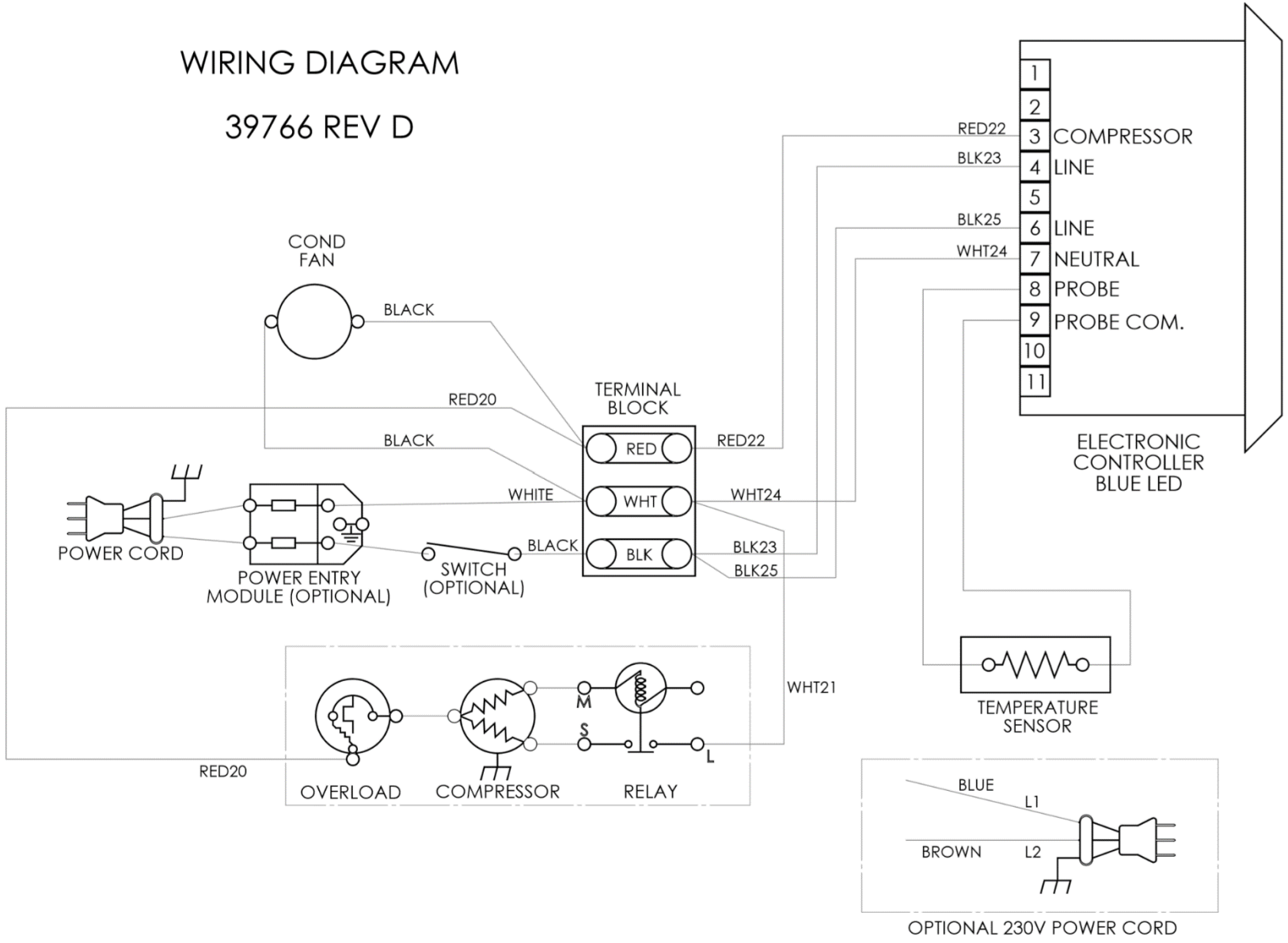
FORM 45321

WHEN ORDERING REPLACEMENT PARTS, PLEASE PROVIDE MODEL AND SERIAL NUMBERS.

# WIRING DIAGRAM

39766 REV D

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# Thermistor Field Testing

Use the guide below to test if a thermistor (temperature probe) is functioning properly. See the replacement parts list for part number information. Table 2 is valid for all thermistors listed on table 1.

## • Establish Thermistor Temperature

- Check the display's temperature reading.
- If a thermometer is available, use it to confirm the display's temperature reading by taking the temperature at the thermistor.
- If the previously stated tasks are unavailable, then use any reasonable means to estimate the thermistors temperature. See form M164 for ice bath method. (ice water is 32 °F)

## • Multimeter Set-up

- Use a multimeter and set it to the resistance ( $\Omega$ ) setting. See Figure 1.
- Disconnect the thermistor from the controller, then connect the multimeter to the thermistor. See Figure 1.
- Check and compare the multimeter's reading to Table 1.

## • Analyze Results

- If the resistance and temperature are similar, then the thermistor is working properly and does not need to be replaced.
- If the resistance and temperature are not similar or the resistance's value is not on Table 1, then the thermistor is not working properly and needs to be replaced.
- If the resistance reads over-limit, then the thermistor is not working properly and needs to be replaced.

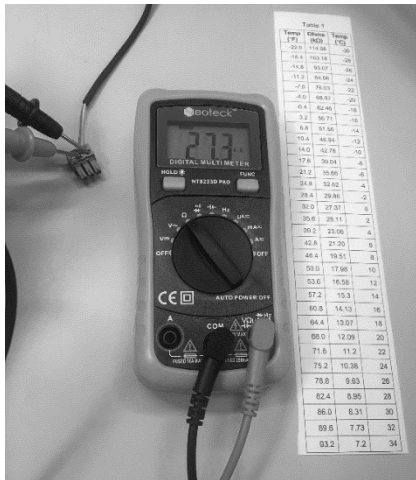


Figure 1

Table 1

Thermistor Description	Part Number
60" black	46128
120" black	46141
60" green	46127
120" green	46140
96" black	38822

Table 2

Temp (°F)	Ohms (k $\Omega$ )	Temp (°C)
-4.0	67.8	-20
-0.4	61.5	-18
3.2	56.0	-16
6.8	51.0	-14
10.4	46.5	-12
14.0	42.5	-10
17.6	38.8	-8
21.2	35.4	-6
24.8	32.4	-4
28.4	29.7	-2
32.0	27.3	0
35.6	25.0	2
39.2	23.0	4
42.8	21.2	6
46.4	19.5	8
50.0	18.0	10
53.6	16.6	12
57.2	15.3	14
60.8	14.1	16
64.4	13.0	18
68.0	12.1	20
71.6	11.2	22
75.2	10.4	24
78.8	9.6	26
82.4	8.9	28
86.0	8.3	30
89.6	7.7	32
93.2	7.2	34
96.8	6.7	36
100.4	6.3	38
104	5.8	40

## TERMS AND CONDITIONS

### LIMITED WARRANTY

Silver King warrants to the original purchaser of Silver King refrigerated Equipment (as defined below), that the Equipment shall be free from defects in material and workmanship under normal use and service as outlined in the Technical Manual. This limited warranty shall apply for a period of time not to exceed the earlier of the following: one (1) year from the date of original purchase of the Equipment or 18 months from date of production of the Equipment. Equipment includes General Market Refrigeration units and excludes all Dispensing and Custom Holding Refrigeration or extended agreements whose written terms are conditional at time of sale or contract. All warranties are subject to specific limitations outlined below.

This limited Equipment warranty does not apply to:

- Repair or replacement required as a result of carelessness or neglect.
- Improper installation, incorrect voltage supply, modifying, tampering with or altering components and/or Equipment.
- Failure to perform proper maintenance. Equipment damaged in transit, by fire, flood or an act of God is not covered.
- Unit is compromised by adding excess weight or adhering non-approved components to the frame.
- Combining the equipment with hardware, fixtures, accessories or other equipment not provided by Silver King.
- Misuse of the Equipment or use of the Equipment not in accordance with the Technical Manual.
- Warranty excludes consumables or replacement components such as shelving, trays, gaskets, etc.
- Warranty excludes interior liner or exterior shell.

The limited Equipment warranty does not include freight, handling, installation, labor (following the one (1) year labor warranty period) or other incidental or consequential costs including product and/or economic loss. This limited Equipment warranty is in lieu of all other warranties, express or implied, are hereby disclaimed and excluded including those of merchantability, and fitness for a particular purpose. This limited Equipment warranty is non-transferable. Specific provisions of this limited Equipment warranty are as follows:

### 90 DAY REPLACEMENT PARTS WARRANTY

Silver King warrants to the original Equipment purchaser that a replacement OEM part thereof will be free of defects in material and workmanship, under normal use and service, for a period of 90 days from the date of original purchase of such replacement OEM part subject to all terms and conditions herein.

### Three (3) Year Drawer Slide Warranty

Silver King warrants to the original Equipment purchaser for a period of time not to exceed the earlier of the following: three (3) years from the date of original purchase of the Equipment or three (3) years and six (6) months from the date of shipment from the factory of the equipment, that it will replace the drawer slides with one of similar design and capacity, exclusive of delivery and installation charges, if it is found in Silver King's review to be inefficient or inoperative due to defects in material or factory workmanship.

### FIVE (5) YEAR COMPRESSOR WARRANTY

Silver King warrants to the original Equipment purchaser for a period of time not to exceed the following: five (5) years from the date of original purchase of the Equipment or five (5) years and six (6) months from the date of shipment from the factory of the Equipment, that it will replace the compressor with one of similar design and capacity, exclusive of delivery and installation charges, if it is found subject to Silver King's review to be inefficient or inoperative due to defects in material or factory workmanship. It is the original purchaser's responsibility to return the serial plate of the defective compressor, or at Silver King's option the complete compressor, to the factory. Failure to do so will void this limited compressor warranty. This limited compressor warranty shall be limited to parts only after the LIMITED WARRANTY period applicable to the Equipment has expired.

This limited Equipment warranty is limited to repairing or replacing any parts that, at Silver King's discretion, are deemed to be defective within the time period covered by this warranty. The 90 day parts warranty covers standard

freight and handling charges. Special handling charges or expedited means for transport are excluded from reimbursement. Use of non-OEM parts may, at Silver King's discretion, void this warranty. If approved, warranty credit for non-OEM parts will be issued at the OEM cost. Replacement parts sold separately are warranted for 90-days from date of purchase.

### ADDITIONAL WARRANTY GUIDELINES:

A factory issued Service Authorization Number must be obtained prior to work being performed under the one (1) year labor warranty. Contact your supplier or Silver King. Claims submitted without a Service Authorization Number will be paid at Silver King's discretion. The labor warranty includes standard straight time labor charges in accordance with Silver King's Labor Warranty Guidelines and reasonable travel time, as determined as determined in the Silver King time – rate guide.

Silver King, at its discretion, may request photos during or prior to service being dispatched to validate a technical issue. Failure to comply with the request may result in the cost of service being the responsibility of the service requestor or site.

The limited labor warranty does not cover original installation, startup, normal adjustments or maintenance. Normal adjustments and maintenance include, but are not limited to; temperature control adjustments, temperature indicator calibrations, coil and filter cleaning, or condensate drain cleaning.

A second service call for a related failure is not covered.

Use of refrigerants other than specified on the Equipment serial plate voids the warranty. All claims must include; model and serial number of equipment, date of purchase, date of failure, and a copy of the service invoice detailing the defect and service performed. No claim will be processed without this information. All claims must be filed within 30 days from date of service.

### PRODUCT ORDERING INFORMATION

Call us toll free at 1-800-328-3329 or 1-763-923-2441 Fax us at 1-763-553-1209

Visit [www.silverking.com](http://www.silverking.com) for stocking distributor, equipment specs and current price list for your area.

### SERVICE / PARTS ORDERING INFORMATION

Call us toll free at 1-800-328-3329, prompt 1 or 2

### TERMS AND CONDITIONS

- This price list and conditions are effective January 1, 2019 and supersedes all previous pricelists.
  - LIMITED WARRANTY period may vary from customer to customer and is contract specific.
  - All prices reflect payment in U.S. Dollars.
  - Prices do not include any freight, duty, or taxes.
  - Pricing subject to change without notice.
  - No returns are accepted without prior written approval from the factory. An RMA (Returned Merchandise Authorization) form must be completed and then approved by Silver King. Please contact Silver King for details. Restocking fee will apply.
  - All electrical equipment is single phase.
  - Prices, designs, and specifications are subject to change without notice.
  - Payments via credit card are subject to a 3% surcharge.
- Silver King  
1600 Xenium Lane, Plymouth, MN 55441-3706  
[www.silverking.com](http://www.silverking.com) • 1-800-328-3329

© Silver King 2019 Prices Subject To Change

The logo for Silver King, featuring the word "SILVERKING" in a bold, sans-serif font. Above the letter "I" in "KING" is a stylized crown icon.

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