

Technical Manual and Replacement Parts List

Counter Top Drop-In Merchandiser



MODEL SKFDI23 115V

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SILVER KING®

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Specifications Subject to Change Without Notice.



TECHNICAL MANUAL

SILVER KING DROP-IN MERCHANDISER MODEL SKFDI23

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

If your Silver King unit has a stainless steel exterior it 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.

Lid

For shipping purposes the Lid Assembly has been taped to the cabinet. Remove all the tape from the Lid Assembly and install the Lid Assembly on the cabinet by holding in the hinge pins at the back of the Lid Assembly and inserting them into the holes in the Hinge Brackets on the cabinet.

LOCATION

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

- When installed in a countertop, provisions need to be in place for the unit to receive proper ventilation for the compressor. The drawing on the opposite page shows minimum ventilation requirements for the unit. 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.
- 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

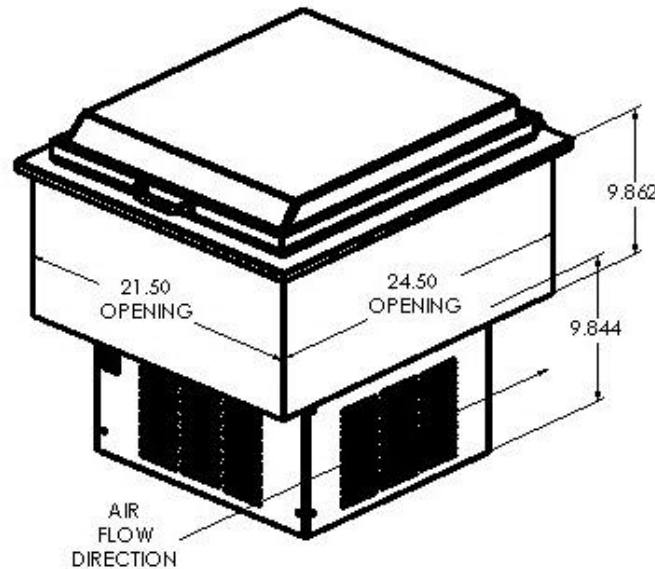
Your Silver King refrigerator has a class 4 energy rating. The refrigerator was tested at an ambient temperature of 40°C at 40% relative humidity.

Installation Instructions: Drop in Countertop Placement
Models: SKCTMDI/SKEDI23/SKFDI23

- 1) Countertop installation of this unit will require that a 21.50" x 24.50" 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 200 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



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OPERATION

Initial Start Up

After satisfying the installation requirements, the counter-top drop-in display merchandiser 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 counter-top drop-in display merchandiser 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, either move the power switch to the 'off' position or disconnect the Power Cord from the electrical receptacle, and remove 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

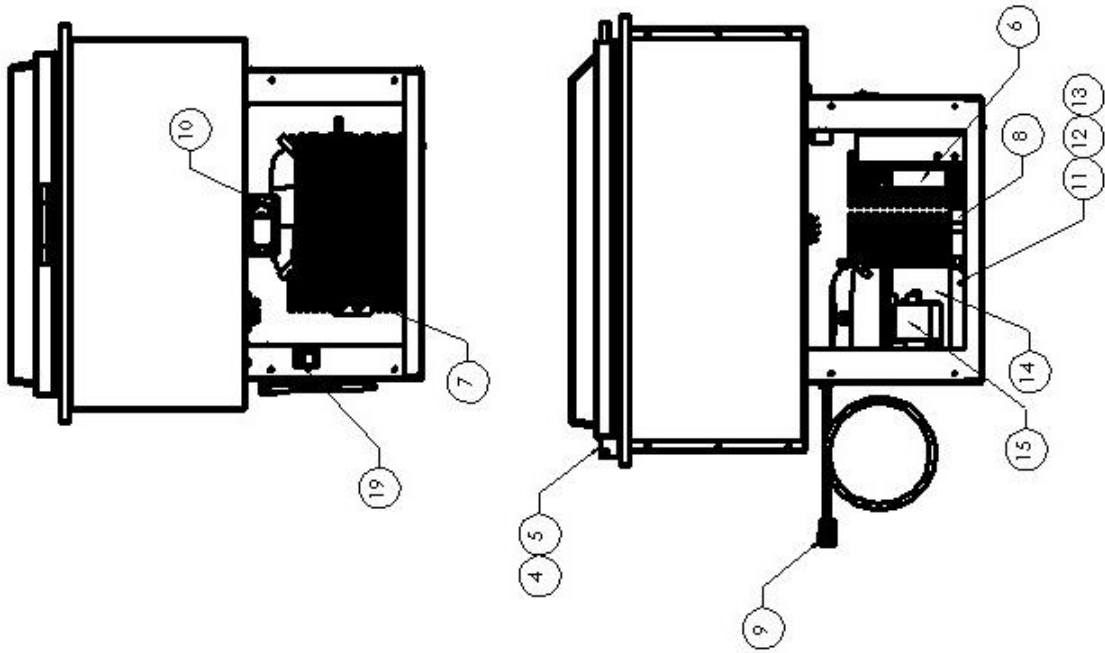
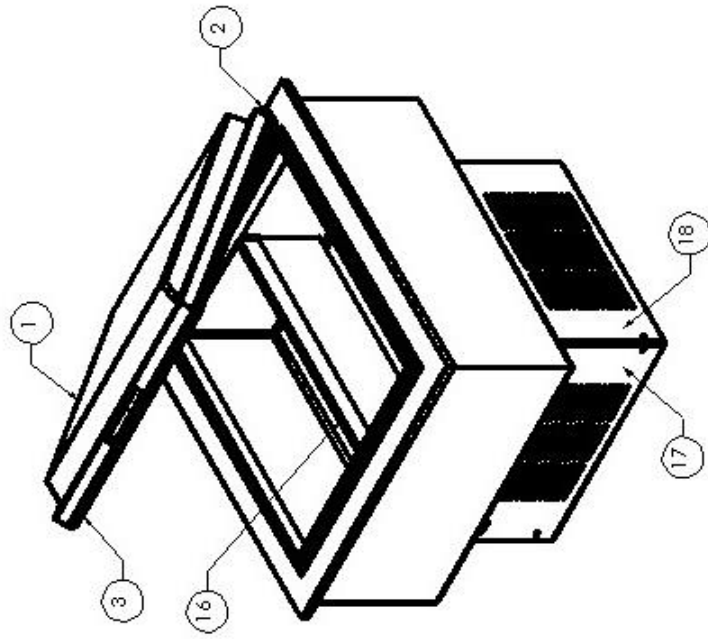
The cabinet interior and exterior surfaces should be cleaned periodically with a solution of warm water and mild soap and wiped dry with a soft cloth. A good stainless steel cleaner can also be used. Should a surface become discolored, do not attempt to clean with an abrasive cleanser or scouring pad. 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 of the unit. Remove the screws from the front cover to access the condenser. 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 – SKFDI23

ITEM NO.	PART DESCRIPTION	PART NO.
1	COVER ASSEMBLY	61522
2	GUIDE PIN LID	21113
3	GASKET LID	10310-36
4	HINGE BRACKET LEFT	21666
5	HINGE BRACKET RIGHT	23046
6	FAN MOTOR 115V/60	39577
7	CONDENSER COIL	39255
8	DRIER	22677
9	POWER SOURCE CORD 115V	32199
10	TEMPERATURE CONTROL ELECTRONIC (PROGRAMMED)	39592
11	GROMMET COMPRESSOR MOUNT	20481
12	WASHER COMPRESSOR MOUNT	22401
13	CLIP HAIRPIN COMPRESSOR MOUNT	98106
14	COMPRESSOR KIT W/ ELECTRICALS 115V/60	11700-2
15	COMPRESSOR ELECTRICAL KIT 115/60 (RELAY/OVERLOAD)	11701-2
16	DEFROST PLATE	41509
17	GUARD FRONT/LEFT	39342
18	GUARD REAR/RIGHT	39343
19	POWER SWITCH	39431
20	TEMPERATURE PROBE (NOT SHOWN)	38822
21	CAPILLARY TUBE (NOT SHOWN)	99771

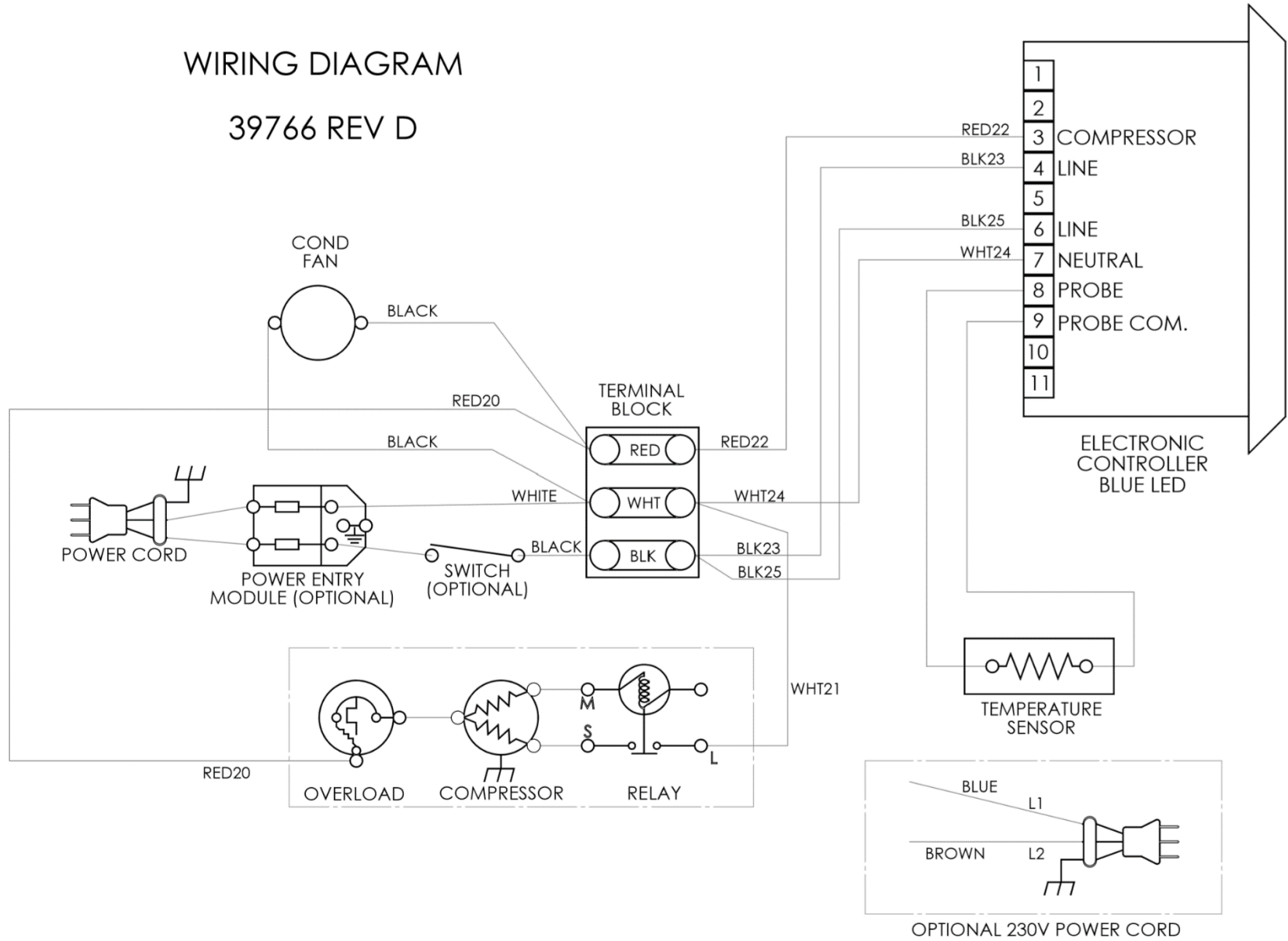
FORM 45363

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

WIRING DIAGRAM

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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 (Ω) 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.

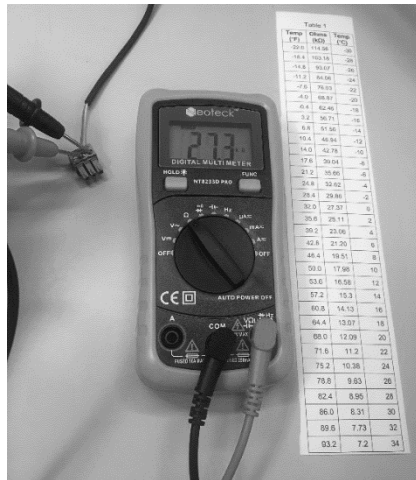


Figure 1

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 Ω)	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

SILVER KING WARRANTY – LEGACY PRODUCT LINE

Silver King warrants to the original purchaser of every new Silver King Legacy refrigerated self-contained unit (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 for a period of one (1) year from the later of either (a) the date of shipment from the manufacturer or (b) the date of installation (the “Warranty Period”), but in no event shall the Warranty Period commence later than six (6) months from the date of shipment from the manufacturer unless otherwise agreed upon by the parties in writing. 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 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. This warranty does not apply to damage resulting from fire, water, burglary, accident, abuse, misuse, transit, acts of God, terrorism, attempted repairs, improper installation or maintenance by unauthorized persons, and does not apply to food loss. 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. Condensing coils must be cleaned at regular intervals. Failure to do so can cause compressor malfunction and will void warranty. Although cleaning requirements vary in accordance with operation of various products, Silver King advocates a minimum monthly cleaning.

The Equipment warranty does not include freight, handling, installation, labor (following the (1) year labor warranty period) or other incidental or consequential costs including product and/or economic loss. This 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 Equipment warranty is non-transferable. Specific provisions of this 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.

LIFETIME HINGE AND HANDLE WARRANTY Silver King provides a lifetime warranty on hinges and primary (door or drawer) handles. In the event of a non-conforming hinge or primary handle, Silver King shall provide a replacement part; however, Purchaser shall be responsible for any other replacement costs, including but not limited to shipping, installation and labor.

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 WARRANTY period applicable to the Equipment has expired.

This 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 three (3) year 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. Special installation/applications, including remote locations, are limited in coverage by this warranty. Any installation that requires extra work, and or travel, is the sole responsibility of the equipment purchaser.

ADDITIONAL WARRANTY GUIDELINES: A factory issued Service Authorization Number must be obtained prior to work being performed under the (1) one-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 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 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 Equipment Service and Tech Support or 2 Parts

TERMS AND CONDITIONS • This price list and conditions are effective January 1, 2020 and supersedes all previous price lists. •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 3.5% surcharge. •

Any and all environmental attributes, including environmental offset credit rights, with respect to Silver King refrigeration units manufactured after September 1, 2015, shall remain the property of Silver King and are not transferred.

IN NO EVENT SHALL SILVER KING BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES. THE REMEDIES OF PURCHASER SET FORTH HEREIN ARE EXCLUSIVE AND THE TOTAL LIABILITY OF SILVER KING, WHETHER BASED ON CONTRACT, WARRANTY, NEGLIGENCE, INDEMNIFICATION, STRICT LIABILITY, TORT, OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE OF THE COMPONENT UPON WHICH LIABILITY IS BASED. SILVER KING SHALL HAVE NO OBLIGATION OR LIABILITY FOR CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING BUT NOT LIMITED TO INDIRECT, PUNITIVE DAMAGES, LOSS OF USE, LOSS OF PRODUCT, DOWNTIME OR LOST PROFITS, ARISING OUT OR, RELATED TO OR CONNECTED IN ANY WAY WITH THE PRODUCT OR ITS USE.

Silver King 1600 Xenium Lane, Plymouth, MN 55441-3706 www.silverking.com • 1-800-328-3329

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Note: Additional Terms and Conditions of sale may apply. Notice: Specifications Subject to Change Without Notice. Contact factory for specific model agency approval.