Aladdin Temp-Rite® ...better by degrees.

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J716 SERIES
REFRIGERATED ICE CREAM DISPENSER



Manual P/N 92257
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INSTALLATION, OPERATION & SERVICE MANUAL

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I. MODELS

The Aladdin J716 Series, Forced Air, Refrigerated Ice Cream Dispenser line contains two different models as specified below.

All Aladdin Refrigerated Ice Cream Dispensers are mobile modularly designed products which are able to be used independently or in conjunction with other units in a cafeteria line or tray line arrangement.

Aladdin Sales Codes	**J716**	**J716A**
Number of openings	1 small	1 large
Approximate capacities:		
3 oz. cups	252	504
5 oz. cups	126	252
Number of 20" x 20" divider platforms		5
Number of 10" x 20" divider platforms	5	
Overall Dimensions:		
Length	45"	55"
Width	32"	32"
Counter Height	37"	37"
Height with optional 1 tier	51¼"	51¼"
Height with optional 2 tiers	64"	64"
Electrical Requirements:		
Voltage / Phase	120V /1	120V /1
Amperage	12.4 AMPS	12.4 AMPS
Horsepower	1/2	1/2
Approximate Shipping Weight without options	480 lbs.	495 lbs

Options: One or two tier stainless steel over shelves. Vinyl color options.

FOR PARTS & SERVICE CALL 1 (800) 888-5426

II. RECEIVING INSPECTIONS

Your Aladdin Refrigerated Ice Cream Dispenser is factory tested for performance and is free from defects when shipped. The utmost care has been taken in packaging this product to protect against damage in transit.

You should carefully inspect your Refrigerated Ice Cream Dispenser to assure that no damage has occurred in transit. If however, damage is detected see the following damaged goods policy. Under no condition may a damaged unit be returned to Aladdin Temp-Rite without first obtaining written permission (return authorization). No credit will be issued for claims not reported to Aladdin within ten (10) business days from receipt of shipment.

ALADDIN DAMAGED GOODS POLICY

There are two types of damaged merchandise:

● Visual Damage ● Concealed Damage

Visual Damage – When the product being received is visibly damaged.

1. Receiver should not accept merchandise with visual damage.
2. Receiver must sign delivery receipt “refused merchandise due to damage” and specify damage.
3. Receiver should call Aladdin Customer Service immediately after refusal.
4. Carrier will notify Aladdin Traffic Department and a claim will be filed.
5. Carrier will send acknowledgement of claim within 7 days after receiving.

Concealed Damage – When damaged merchandise cannot be externally detected. Any receiving operation should be looking for this type of damage. Sometimes, however, depending on the type of product, it is almost impossible to notice.

1. Merchandise must not be removed from point of delivery and all packaging must be kept intact.
2. Receiver must contact Aladdin customer service to report damage.
3. Aladdin traffic department will request inspection based on the dollar value of the cargo.
4. Aladdin traffic department will file a claim based on the findings of the inspection.

Failure to comply with these policies will result in the customer’s responsibility to file claims.

III. INSTALLATION

NOTE: The installation instructions are similar for all the dispensers.

A. Position the unit into the serving line or other desired location and lock the brakes on the casters.

B. See ELECTRICAL (section IV) and START-UP (section V) before plugging unit into power supply.

IV. ELECTRICAL

All dispensers are provided with a NEMA plug type 5-20P
Electrical requirements are 115v AC, 60hz, single phase, 12amp.

V. START-UP/OPERATION

Plug the unit into a properly grounded outlet with a NEMA 5-20 compatible receptacle. The unit is ready for operation.

Turn on the compressor switch located in the louvered panel covering the compressor compartment. In approximately twenty-four hours the unit will reach its proper operating temperature and be ready for service.

The Aladdin Dispensers' refrigerated compartments are designed to keep dispensing products at approximately -5 °F.

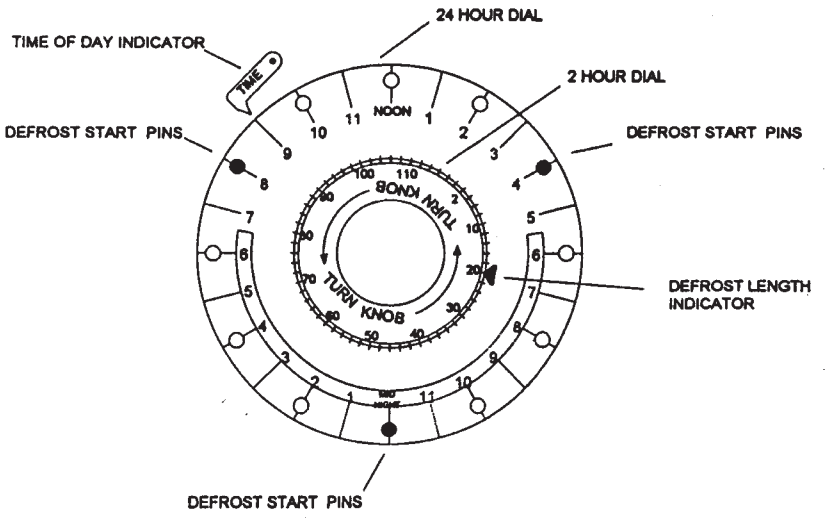
NOTE: The Aladdin Refrigerated Dispensers are not designed for long term storage.

The system temperature is controlled by a thermostat which is located in the evaporator unit cooler. There is an exposed control knob or an access hole for a screwdriver adjustment located on the side of the evaporator unit cooler. The thermostat controls a liquid line solenoid which controls the flow of refrigerant to the cooling coils. A low pressure control (physically located in the front of the compressor compartment) is used to cycle off the compressor. The low pressure control should not be adjusted from the factory settings. Adjustment of this control may cause performance problems with the unit. The temperature is directly controlled by the thermostat.

The thermostat that is used in the freezer system has a cut-out range from -30.5 to +12.5 degrees, with an 11 degree differential and a normal mid-range off setting of -12 degrees F., and a normal on setting of -1 degrees F.

SETTING THE DEFROST TIMER/TWENTY FOUR HOUR CLOCK

The correct time of day must be set on the twenty four hour clock after the unit is plugged in.



1. To set the time of day rotate the center knob in the direction of the arrow until the proper time on the twenty four dial is aligned with the time pointer in the upper left hand corner. <u>If the time of day is not properly set the unit may defrost during a peak period.</u>

2. The defrost cycles are preset for 8:00 AM, 4:00 PM, and Midnight. Each cycle is twenty (20) minutes.

3. To change the defrost start times remove the start pins by unscrewing them from the 24 hour dial and reinstalling them at another time. To change the length of the defrost cycle depress the copper defrost length indicator and move it. It is not recommended to increase the defrost cycle beyond twenty (20) minutes. Be sure to reinstall defrost start pins. If the pins are not reinstalled the unit will never go into a defrost cycle.

4. If additional defrosting is required change the defrost start times (do not increase the defrost time cycle). For example; add a cycle- Start times at 2:00 AM, 8:00 AM, 2:00 PM and 8:00 PM.

VI. CLEANING

All Aladdin Refrigerated Ice Cream Dispensers are provided with a 12" x 12" x 1" air filter located at the face of the condenser directly behind the louvered panel.

It is important to check this air filter every thirty (30) days and replace it if necessary to ensure the proper operation of the unit. Failure to check this filter and replace if necessary will cause premature compressor failure that will not be covered by factory warranty,

The purpose of this filter is to keep the condenser fins as clean as possible. If the filter is removed and discarded, but not replaced, the fins will become clogged and will require a chemical rinse to clean them.

It is very important that the facility dietary engineering personnel be informed of the filters location and the required maintenance schedule. (See page 10 for instructions and diagrams).

1. CABINET - INTERIOR & EXTERIOR

Clean and sanitize the interior and exterior surfaces initially prior to placing product into the compartment. Regular cleaning requires only mild soap and water.

NOTE: Do not use abrasives, harsh chemicals, or chlorine products for cleaning.

2. CONDENSER COIL

A. **Turn off unit**

B. Cleaning the condenser coil is critical for top performance and efficiency of the Aladdin 716 Series Dispensers. Clean the coil with a solution of warm soapy water and a soft bristle brush. **DO NOT BEND FINS ON COIL.** Use a soft cloth to absorb any excess water. Restart unit and allow the interior temperature to return to normal operating temperature before loading product. Check the condenser coil weekly, and clean as necessary.

3. AIR INTAKES & DISCHARGES

Keep intakes and discharges free of debris. Failure to do so will raise the temperature of the unit.

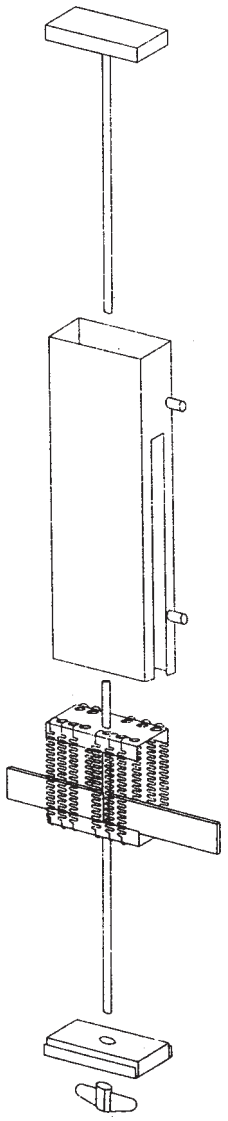
VII. DISPENSING MECHANISM

The Aladdin J716 Series Dispensers all have the same elevating dispensing mechanism. The lift of the dispensing mechanism can be modified by field adjusting it. This is done by varying the number and type of springs used. Each mechanism has the capability to hold up to twelve springs.

The total dispensing system consists of two (2) mechanisms which are mounted in a support channel which is affixed to the equipment and a product support platform. This platform spans the product area and rests on the flat bars that extend from each side of the dispenser housing.

REMOVING & CLEANING THE DISPENSING SYSTEM

1. Lift the product support platform off the flat bar extensions.
2. Lift each dispenser out of the support channel.
3. Remove the wing nut on the bottom side of the mechanism.
4. Remove the bottom cap and slide the internal spring assembly out.
5. Lift the top cover and guide rod up.
6. Place the system in a dishwasher or sink for cleaning.



FIELD ADJUSTING THE TENSION (LIFT OF THE SYSTEM)

1. Tray dispensing may need field adjusting due to different types and styles of trays. The standard spring arrangement is (6) blue springs.
2. Follow steps 1-5 above, then add or remove springs as required. See the chart below for recommended spring arrangements.

SPRING ASSEMBLY SPECIFICATIONS
FOR FIELD ADJUSTMENT

Box Size	Description	Number of Springs	Color
10 X 20	Ice Cream	6	Blue
20 X 20	Ice Cream	12	Blue

VIII. PREVENTATIVE MAINTENANCE

The Aladdin 716 Series Dispensers are provided with a sight glass in the refrigeration system. This sight glass should be visually inspected every (6) six months to ensure that the system is properly charged. View the sight glass when the system is operating, there should be a full liquid stream (no bubbles). If the system is showing bubbles, it should be inspected for leaks and repaired.

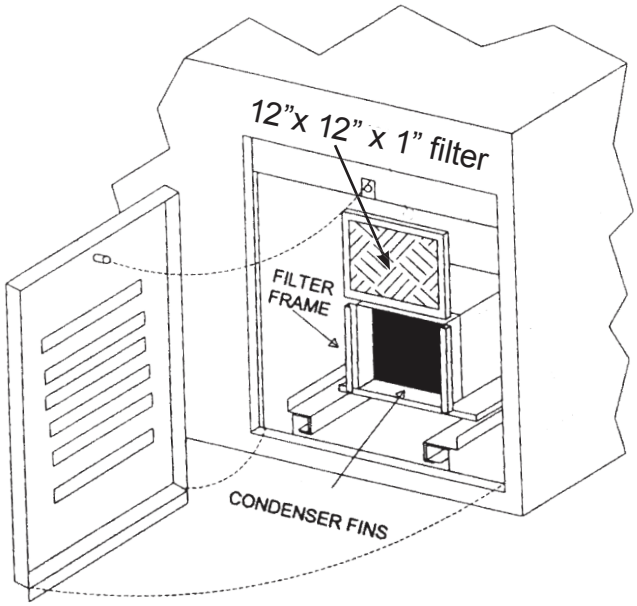
NOTE: All Aladdin self-contained refrigeration systems are provided with a 12" x 12" x 1" air filter.

It is IMPORTANT to check this filter every thirty days and clean or replace if necessary to ensure proper operation of these units. Failure to include this procedure in the normal servicing of these units can cause premature compressor failure that will not be covered by warranty.

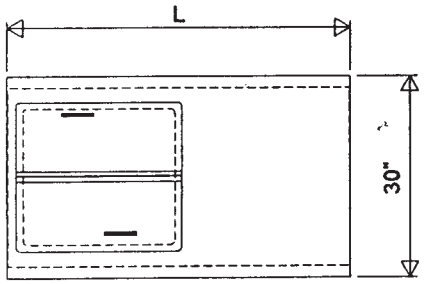
The purpose of this filter is to keep condenser fins as clean as possible. It is very important that the maintenance personnel be informed of this required procedure.

CONDENSER FILTER ACCESS-
CHANGE EVERY 30 DAYS

1. TO REMOVE THE LOUVERED PANEL LOOSEN THE THUMB SCREW LOCATED AT THE TOP OF THE PANEL
2. TILT THE TOP AND LIFT OUT
3. REMOVE THE FILTER BY LIFTING STRAIGHT UP OUT OF THE TRACK
4. WHEN REPLACING FILTER NOTE THE AIRFLOW DIRECTION IT SHOULD BE POINTING TOWARD THE COILS



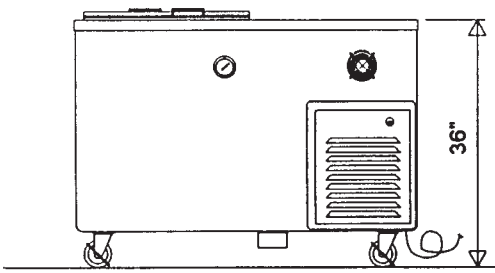
IX. DIAGRAMS / PARTS LIST



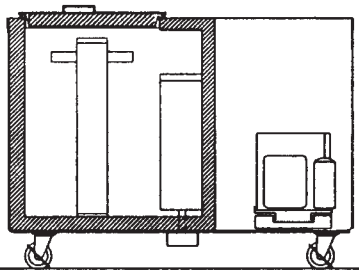
TOP VIEW

FORCED AIR ICE CREAM FREEZER

THIS DESIGN MAINTAINS ITS COMPARTMENT TEMPERATURE BY THE USE OF A FAN & FINNED TUBE TYPE EVAPORATOR LOCATED INSIDE THE PRODUCT COMPARTMENT. THIS DESIGN PROVIDES A FASTER PRODUCT PULL DOWN AND RECOVERY THAN THAT PRODUCED BY SIMILAR STATIC COLD WALL DESIGNS.

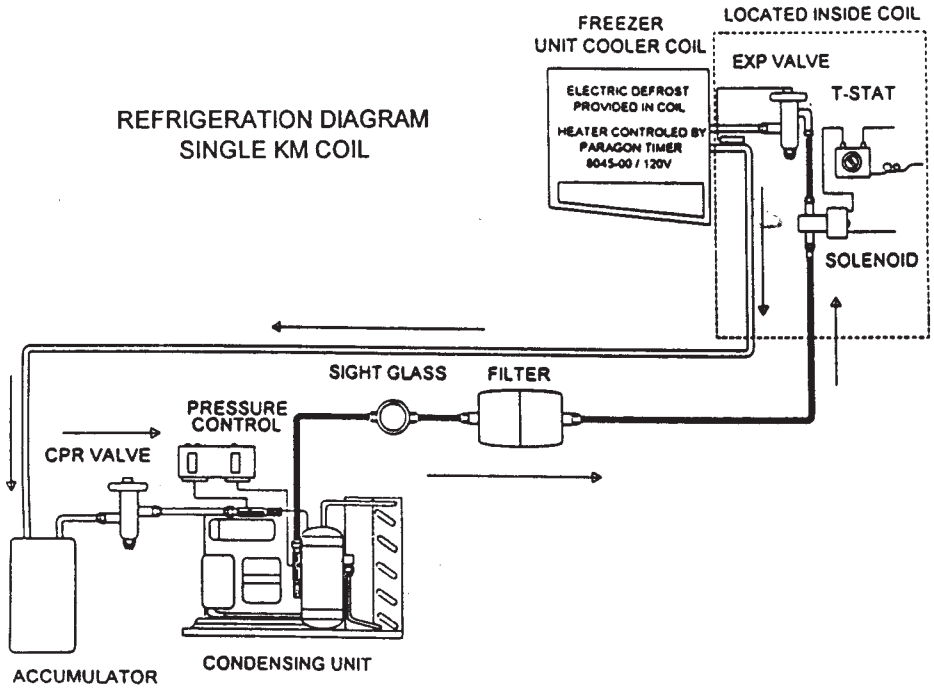


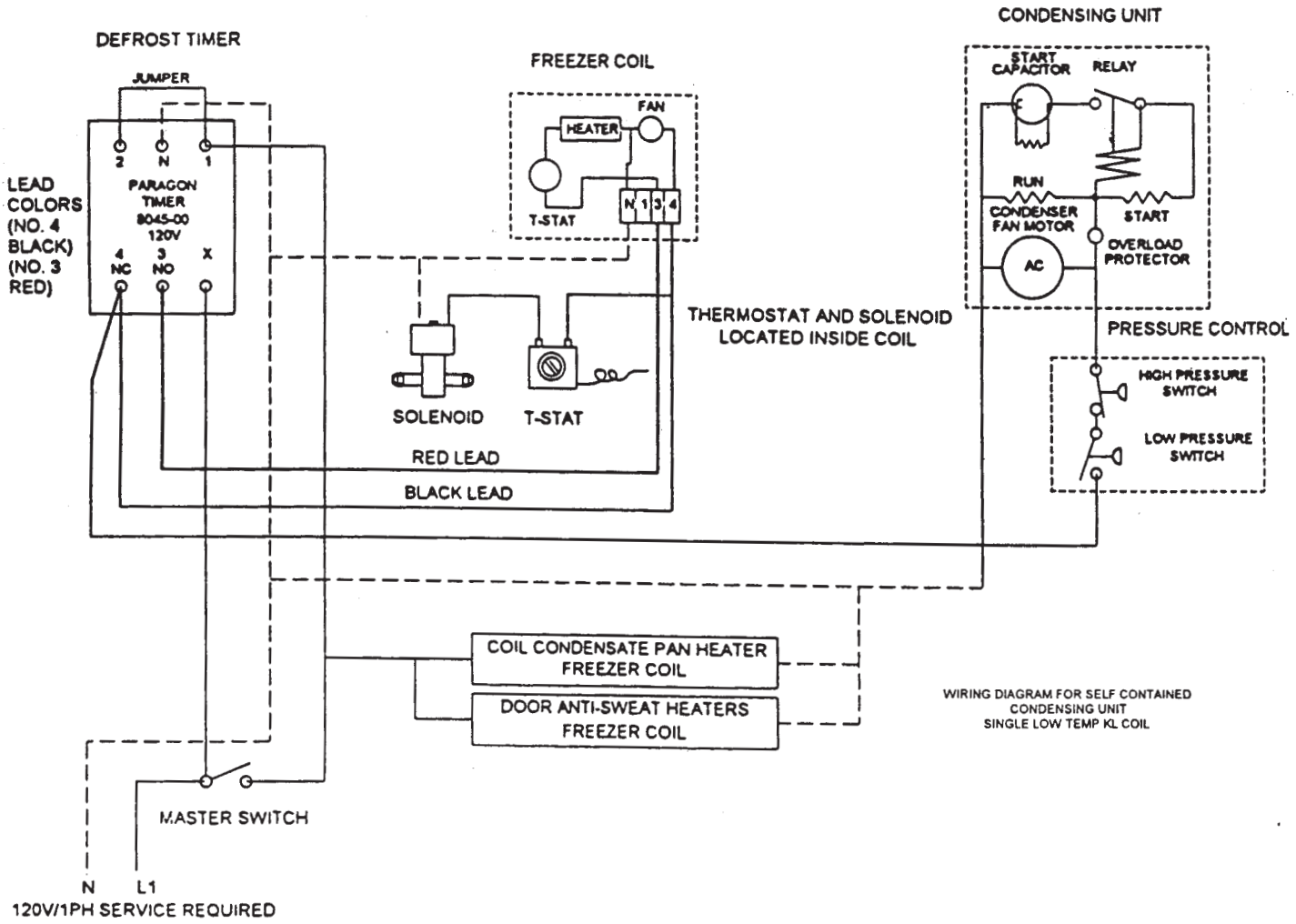
SIDE VIEW



SECTIONAL VIEW

REFRIGERATION DIAGRAM
SINGLE KM COIL





Item#	ATR Part #	Item Name	Stock#/Manufacturer	Manufacturer's Part#
1		Condensing Unit	311937 Tecumsah	AE2422ZC
2	92245	Pressure Control	208610 Ranco	012-4834-000
3		Filter Drier	282400 Sporlan	SA-12FM
5		Expansion Valve (Freezer)	282575 Sporlan	Q-0(1/8T)-RZ-5"
6		Unit Cooler (Freezer)	312110 Bohn	KL15A
7	92243	Toggle Switch	335910 Carling	TA205-PWB
8	92244	Thermometer	500010 Cooper	10-6812-01-4
9		Anti-Condensate pan	237900 Component hardware	T12-5000
10		Casters	130810 Jarvis & Jarvis	2-4056-43
11		Axial Fan	312400 Con-Air Rotron	028021
12		Accumulator	281700 Refrigerator Research	3616
13		Defrost Timer	356700 Paragon	8045-00/120V
14	92246	Crankcase Press. Reg.	281800 Sporlan	CR0-4
15	92242	Thermostat	281010 Ranco	A30-3857-000
16		12 x 12 x 1 air filter		493610

X. REFRIGERATION SYSTEM

The following section is presented to give the end user a basic knowledge of the refrigeration system and not as a repair manual. All technical problems not covered in the troubleshooting section should be referred to qualified electricians or refrigeration specialists.

All Aladdin Refrigerated Dispensers use a compression cycle system. There are two pressures that exist in a compression cycle system: Low pressure (evaporating). High pressure (condensing).

Within the compression cycle system, the refrigerant works as a transport medium, to move heat from the evaporator to the condenser where it is released to the ambient air. The refrigerant constantly changes from a liquid to a gas and back again. It is this compression and expansion of the refrigerant in a closed system that efficiently allows large quantities of heat to be absorbed and released.

THIS IS HOW THE BASIC SYSTEM WORKS.

High pressure liquid refrigerant is fed from the receiver through the liquid line and through the filter drier and sight glass to the expansion valve which works as a metering device separating the high pressure side of the system from he low pressure evaporator.

The thermostatic expansion valve controls the feed of liquid refrigerant to the evaporator, and by means of an orifice reduces the pressure of the refrigerant to the evaporating or low pressure side.

The reduction of pressure on the liquid refrigerant causes it to boil or vaporize until the refrigerant is at the saturated temperature corresponding to its pressure. As the low temperature refrigerant passes through the evaporator coil, heat flows through the walls of the evaporator tubing to the refrigerant, causing the boiling action to continue until the refrigerant is completely vaporized.

The expansion valve regulates the flow through the evaporator as necessary to maintain a preset temperature difference between the evaporating refrigerant and vapor leaving the evaporator. As the temperature of the gas leaving the
evaporator varies, the expansion valve power element bulb senses its temperature, and acts to modulate the feed through the expansion valve as required.

The refrigerant vapor leaving the evaporator travels through the suction line to the compressor inlet. The compressor takes the low pressure vapor and compresses it, increasing both the pressure and the temperature. The hot (high pressure) gas is forced out the compressor discharge valve and into the condenser.

As the high pressure gas passes through the condenser, it is cooled by a fan blowing over a fin type condenser surface. As the temperature of the refrigerant vapor reaches the saturation temperature corresponding to the high pressure in the condenser, the vapor condenses into a liquid and flows back into the receiver to repeat the cycle.

The refrigeration process continues as long as the compressor operates. When the refrigerant vapor entering the suction side of the compressor reaches a preset value on the control, it opens a set of contacts and shuts the compressor off.

The low pressure is set by a "cut-in" and a "differential" setting. The "cut-in" is the pressure at which you want the compressor to start. This pressure corresponds to the temperature of the evaporator surface which must be maintained.

As a rule, all Aladdin J716 Series Dispensers have approximately a 15 psi differential.

XI. TROUBLESHOOTING

COMPLAINT	PROBLEM	SOLUTION
A. Compressor will not start	1. Line disconnect switch open 2. Fuse removed or blown 3. Control stuck in open position 4. Control off due to cold location	1. Close start or disconnect switch 2. Replace fuse 3. Repair or replace control 4. Relocate control
B. Compressor will not start, hums but trips overload protector	1. Low voltage to unit 2. Starting capacitor defective 3. Relay failing to close 4. Compressor motor has a winding open or shorted 5. Internal mechanical trouble in compressor	1. Call power supplier 2. Replace capacitor 3. Replace relay 4. Replace compressor 5. Replace compressor
C. Compressor starts but does not switch off of start winding	1. Low voltage to unit 2. Relay failing to open 3. Run capacitor defective 4. Excessively high discharge 5. Compressor motor has a winding open or shorted 6. Internal mechanical trouble in compressor (tight)	1. Call power supplier 2. Replace relay 3. Replace capacitor 4. Check discharge shut off valve, possible overcharge or insufficient cooling on condenser 5. Replace compressor 6. Replace compressor
D. Compressor starts and runs, but short cycles on overload protector	1. Low voltage to unit 2. Overload protector defective 3. Run capacitor defective 4. Excessive discharge pressure 5. Compressor to hot, return gas hot 6. Compressor motor has a winding shorted	1. Call power supplier 2. Check current, replace protector 3. Replace capacitor 4. Check ventilation restrictions in cooling medium, restrictions in refrigerant system 5. Check refrigerant charge (fix leak if necessary) 6. Replace compressor
E. Unit runs ok, but short cycles on and off	1. Overload protector defective 2. Thermostat 3. High pressure cut out due to: A. Insufficient air supply B. Overcharge C. Air in system	1. Check current, replace protector 2. Differential set too close, widen 3. A. Check air supply to condenser correct B. Reduce refrigeration charge C. Purge

COMPLAINT	PROBLEM	SOLUTION
E. Unit runs ok, but short cycles on and off	4. Low pressure cut out due to: A. Undercharged B. Expansion valve out of adjustment C. Restriction in expansion valve	4. A. Fix leak, add refrigerant B. Readjust valve C. Replace valve
F. Unit operates long or continuously	1. Shortage of refrigerant 2. Control contacts stuck or frozen closed 3. Refrigerant or air conditioned space has excessive load or poor insulation 4. Evaporator coil iced 5. Restriction in refrigerant system 6. Dirty condenser 7. Filter dirty	1. Fix leak add charge 2. Clean contacts or replace control 3. Determine fault and correct 4. Defrost 5. Determine location and remove 6. Clean condenser 7. Clean or replace
G. Start capacitor open shorted or blown	1. Relay contacts not opening properly 2. Prolonged operation on start cycle due to: A. Low voltage to unit B. Improper relay 3. Excessive short cycle	1. Clean contacts or replace if necessary 2. A. Call power supplier B. Replace 3. Determine reason for short cycle (see E. and correct)

XII. SERVICE

In the event service is required on your Aladdin J716 Series Dispensers, please call:

ALADDIN TEMP-RITE SERVICE DEPARTMENT 1-800-888-5426

XII . WARRANTY & LIABILITY

ALADDIN TEMP-RITE
EQUIPMENT
LIMITED WARRANTY

Effective August, 2005

Aladdin Temp-Rite ("ATR") warrants to the original purchaser that the equipment listed below shall be free from defects in material and workmanship under normal use for the applicable warranty term set forth below. ATR's obligation under this warranty is limited to the repair or replacement , at the sole option of ATR, of any part which upon inspection and examination by ATR or its authorized agent is found to be defective. A written description detailing the nature of the claimed defect, together with the equipment claimed to be defective if required by ATR, must be delivered to ATR or its authorized agent within 30 days of discovery of the claimed defect (but in no event later than 30 days after the expiration of the applicable warranty term).

EQUIPMENT	WARRANTY TERM		COMPRESSOR WARRANTY TERM* PARTS ONLY**
	PARTS	LABOR	
J716	1 Year	90 Days	5 Years
J716A	1 Year	90 Days	5 Years

*The warranty term commences 30 days after the date of ATR's invoice for the equipment.

**The compressor warranty covers the compressor only and does not include any shipping charges, other transportation costs, any external parts or electrical components, labor, refrigerants and taxes.

THE WARRANTIES AND REPRESENTATIONS OF ATR CONTAINED HEREIN ARE EXPRESSLY IN LIEU OF, AND THE BUYER WAIVES, ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY OTHER REMEDIES AGAINST ATR, WHETHER BASED UPON CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE. ATR SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES OR ECONOMIC LOSS OF ANY NATURE (INCLUDING WITHOUT LIMITATION LOSS OF REVENUES AND/OR PROFITS) THAT MAY BE CLAIMED TO RESULT FROM ANY NEGLIGENCE OR BREACH OF WARRANTY OR CONTRACT BY ATR.

Exceptions and Exclusions

This warranty is issued only to the original purchaser, and is not transferable and applies only to the products installed within the United State of America, its territories and Canada. During the term of any labor warranty, ATR will pay all pre-approved shipping charges incurred in returning defective equipment to ATR and labor costs incurred in the removal and reinstallation of such equipment. Contact ATR before returning any defective equipment or otherwise performing any warranty repairs. ATR assumes no liability for any work or repair performed without its prior approval. After the expiration of any labor warranty, the original purchaser is responsible for all shipping charges incurred in returning defective equipment to ATR and labor for removing and reinstalling such equipment. ATR shall not be responsible for the replacement of expendable items like lamps and fuses or product failure resulting from normal wear and tear, improper installation, misuse, sabotage, abuse, neglect, accident, unauthorized alterations to repair, or other factors beyond the control of ATR. Neither this warranty, not the liability of ATR may be modified or extended by action of any agent, distributor or other person or by custom or practice.

CALL ATR TOLL FREE AT 1-800-888-5426 IF YOU HAVE ANY QUESTIONS ABOUT THIS WARRANTY OR YOUR ATR PRODUCT.