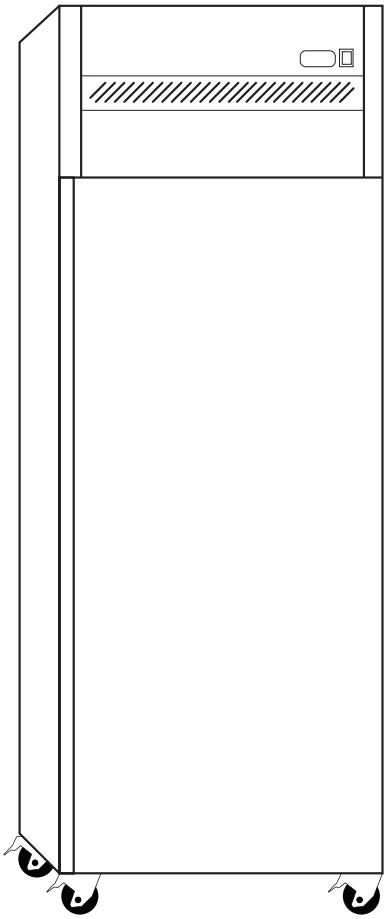
REFRIGERATION AVANTCO

User Manual



Top Mount Reach-in Refrigerator and Freezer User's Manual

11/2021

Standard Refrigerator Model:

178Z1R2A, 178Z1R2B, 178Z1R2C, 178Z1R2D, 178Z1R2E, 178Z1R2G, 178Z1R2H, 178Z1R2I, 178Z1R2J, 178Z1RGHC, 178Z1RHC, 178Z2R4K, 178Z2R4L, 178Z2R4M, 178Z2R4N, 178Z2R4O, 178Z2R4P, 178Z2R4Q, 178Z2RGHC

Standard Freezer Model:

178Z1F2A, 178Z1FHC, 178Z1R2F, 178Z2F4K, 178Z2FHC

WIFI Refrigerator Model:

178Z1R2AWMS, 178Z1R2BWMS, 178Z1R2CWMS, 178Z1R2DWMS, 178Z1R2EWMS, 178Z1R2GWMS, 178Z1R2HWMS, 178Z1R2IWMS, 178Z1R2JWMS, 178Z1RGWMS, 178Z1RWMS, 178Z2R4KWMS, 178Z2R4LWMS, 178Z2R4MWMS, 178Z2R4NWMS, 178Z2R4OWMS, 178Z2R4PWMS, 178Z2R4QWMS, 178Z2RGWMS, 178Z2RWMS

WIFI Freezer Model:

178Z1F2AWMS, 178Z1FWMS, 178Z1R2FWMS, 178Z2F4KWMS, 178Z2FWMS

Please read the manual thoroughly prior to equipment set-up, operation, and maintenance.

Warning

DANGER – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.

PELIGRO - RIESGO DE INCENDIO O EXPLOSION. REFRIGERANTE INFLAMABLE UTILIZADO. PARA SER REPARADO SOLAMENTE POR PERSONAL DE SERVICIO CALIFICADO. NO PINCHAR LA TUBERÍA REFRIGERANTE.

DANGER – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONFIER LES RÉPARATIONS À UN TECHNICIEN SPÉCIALISÉ. NE PAS PERFORER LA TUBULURE CONTENANT LE FRIGORIGENE.

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.

ATENCION - RIESGO DE INCENDIO O EXPLOSIÓN. REFRIGERANTE INFLAMABLE UTILIZADO. CONSULTE EL MANUAL DE REPARACIÓN / GUÍA DEL PROPIETARIO ANTES DE INTENTAR DAR SERVICIO A ESTE PRODUCTO. DEBEN CUMPLIR CON TODAS LAS PRECAUCIONES DE SEGURIDAD.

ATTENTION – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONSULTER LE MANUEL DU PROPRIÉTAIRE/GUIDE DE RÉPARATION AVANT DE TENTER UNE RÉPARATION. TOUTES LE MESURES DE SÉCURITÉ DOIVENT ÊTRE RESPECTÉES.

CAUTION – RISK OF FIRE OR EXPLOSION DUE TO PUNCTURE OF REFRIGERANT TUBING; FOLLOW HANDLING INSTRUCTIONS CAREFULLY. FLAMMABLE REFRIGERANT USED.

ATENCION - RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A LA PERFORACION DE LA TUBERÍA REFRIGERANTE; SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO. REFRIGERANTE INFLAMABLE UTILIZADO.

ATTENTION – RISQUE DE FEU OU D'EXPLOSION SI LA TUBULURE CONTENTANT LE FRIGORIGÈNE EST PERFORÉE; SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN. LE FRIGORIGÈNE EST INFLAMMABLE.

CAUTION – RISK OF FIRE OR EXPLOSION DUE TO FLAMMABLE REFRIGERANT USED. FOLLOW HANDLING INSTRUCTIONS CAREFULLY IN COMPLIANCE WITH LOCAL GOVERNMENT REGULATIONS.

ATENCIÓN – RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A REFRIGERANTE INFLAMABLE UTILIZADO. SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO CONFORME A LAS REGLAS DE LA MUNICIPALIDAD.

ATTENTION – RISQUE DE FEU OU D'EXPLOSION SI LE FRIGORIGÈNE EST INFLAMMABLE. SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN CONFORMÉMENT AUX RÈGLEMENTATION GOUVERNEMENTALE LOCAUX.

Installation

Please read this manual thoroughly prior to equipment set-up, operation, and maintenance.

Important!!! Please Read Before Installation

- If the unit has recently been transported on its side, please let the unit stand upright for a minimum of 24 hours before plugging it in.
- Make sure the unit has reached the desired temperature before loading the unit with products.
- Make sure all accessories are installed (shelves, shelf clips, etc…) before plugging in the unit.
- Do not attempt to remove or repair any component of the unit. Consult an authorized service technician for servicing / repair.
- Do not hang on doors or stand inside the unit.
- Please read through this manual in its entirety.

Cabinet Location Guides

- Install the unit on a strong and leveled surface.
    - If the surface is uneven, the unit may be noisy.
    - The unit may malfunction if the surface is uneven.
- Install the unit in an indoor, “well ventilated” area.
    - For best performance, maintain 6” of clearance on both sides and the back of the unit at all times.
    - Outdoor use may cause decreased efficiency and damage to the unit.
    - Avoid direct sunlight.
    - Do not store any products, boxes or materials on top of the refrigerator. This is the area where the refrigeration system exhausts heat, if blocked it will cause damage to the refrigeration system and will void the warranty.
- Avoid installation in a high humidity and / or dusty area.
    - High humidity can cause the unit to rust and may decrease efficiency.
    - Dust collected on the condenser coil may cause unit to malfunction.
    - Malfunction due to high ambient temperatures, humidity, or improperly maintained condenser coil will void the warranty.
- Select a location away from heat and moisture-generating equipment.
    - High ambient temperatures may cause the compressor to malfunction.
    - Malfunction due to high ambient temperatures and humidity will void the warranty.

Field Convertible Doors

The Avantco Z Series 1 Door Reach Ins (178Z1xxx) ship with a right-hinged door design. If you would like to convert the reach-in to a left hinged door design (solid door models), you must purchase the left hinges separately (one set per door - Avantco item #178CFD1KITFR) and follow these instructions:

Tools Needed:

- Socket Set
- Pliers
- Adjustable Wrench
- Phillips Head Screwdriver

1. Remove the small Philips head screws at the top and bottom door hinge where it attaches to the brackets. Be careful not to lose the small washers.
2. Next take off the top bracket. It is held on with 3 bolts.
3. The door should come off at this point
   - Note: Do not lose the small round brass spacer on the bottom hinge!
4. Remove the bottom bracket. It is held on with 3 bolts.
5. Replace the bottom hinge with the new left hand bottom bracket. It is held on with 3 bolts.
6. At this point, you will need to adjust the top and bottom spring tensioners so the door will close properly.
7. Put the door on the bottom hinge on the left side. You will need to reuse the brass spacer from step 5.
8. Next, place the top bracket on the top of the door before bolting it to the unit with the 3 bolts.
9. Replace the small screws on the top and bottom of the bracket and door spring. Make sure the door is on properly before you do this.

Electrical

- Please ensure that the required voltage is being supplied at all times.
- The unit should be plugged into a grounded and properly-sized electrical outlet with appropriate over-current protection. Please refer to the electrical requirements on the unit's nameplate.
- The unit should have its own dedicated outlet.
- Do not use extension cords.
- Ensure the unit is not resting on or against the electrical cord.
- If the unit is not in use for a long period of time, please unplug the unit from the outlet.
- To avoid shock and fire hazards, do not plug in or unplug the unit with wet hands.
- After unplugging the unit, wait at least 10 minutes before plugging it back in. Failure to do so could cause damage to the compressor.

Adjusting the Temperature

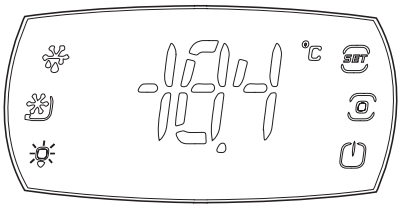
Your new freezer is already factory-set to run at optimum temperatures for food safety and should require no adjustments.

Refrigerators are set to cycle between a minimum temperature of 33 degrees Fahrenheit and a maximum temperature of 40 degrees Fahrenheit

Freezers are set to cycle between a minimum temperature of -5 degrees Fahrenheit and a maximum temperature of 2 degrees Fahrenheit.

Adjusting the temperature changes the **minimum** temperature at which your unit will run. Your unit will not run constantly at this setting. To change it, follow these instructions:

Digital Control Units



1. Hold down the menu button for 3s, (At this time, the display screen displays "--", then background button lights up)
2. Select SET button and click; At this time, enter temperature setting interface, the display screen displays the current set value
3. Adjust the downtime temperature value used by the user pressing "SET" "" "".
4. After the adjustment, click the menu button to return the menu selection interface;
5. Wait for about 7s, the digital display will automatically save and exit, and return to the normal display interface.

Always remember to calculate the differential if you change the minimum temperature setting. The cabinet temperature will fluctuate up to +7 degrees over your set minimum temperature as the compressor runs and shuts off. Setting the temperature too high will result in unsafe maximum temperatures and possible health code violations.

Your Z Series unit compressor will continue to run when the door is left ajar. After 15 minutes of being left ajar, an audible alarm will sound. At the same time, the display board will display "dor".

Automatic Alarms

Automatic alarms are programmed to sound on your unit in the following instances:

Refrigerator Cabinet High/Low Temperature Alarm:

- When the temperature reaches 8 degrees F above your set point for 30 minutes
- When the temperature reaches 1 degree F below your set point for 30 minutes
- If the refrigerator is above the temperature of 41 degrees F for 30 minutes

Freezers Cabinet High/Low Temperature Alarm:

- When the temperature reaches 10.4F degrees, which is 18F degrees above your set point, for 30 minutes
- When the temperature reaches -13.9F degrees, which is 6.3F degrees below your set point, for 30 minutes

Dirty Condenser Alarm

- If the internal system determines your condenser to be dirty an alarm will appear on the display

ALARMS

	Description		Description
AFr	Frost protection	GHI	Generic alarm high threshold
AtS	Restart in pump down	GLO	Generic alarm low threshold
CE	Configuration write error	HA	Type HA HACCP alarm (high temperature during normal working)
CHt	High condenser temperature alarm	HF	Type HF HACCP alarm (high temperature after blackout)
cht	High condenser temperature warning	HI	High temperature
COM	VCC communication error	IA	Immediate alarm from external contact
dA	Delayed alarm from external contact	IOC	Incorrect I/O configuration
dor	Door open	LO	Low temperature
E1	Probe 1 broken or disconnected	LP	Low pressure
E2	Probe 2 broken or disconnected	Pd	Maximum pump down time
E3	Probe 3 broken or disconnected	rE	Control probe broken or disconnected
E5	Probe 5 broken or disconnected	rSF	Refrigerant system failure alarm
Ed1	Defrost terminated after maximum time	SF	Configuration not completed correctly
Ed2	Defrost on second evaporator terminated after maximum time	SrC	Maintenance request
Etc	Clock not updated (if featured)	UCF	VCC operation error

Running a Manual Defrost Cycle

This unit is pre-programmed to run automatic defrost cycles at preset intervals. However, if you would like to run a manual defrost cycle at any time, please follow the steps below:

1. Press and hold the menu key for 3s to enter the menu selection interface; (At this time, the display screen displays "--", then background button lights up)
2. Click the button in the upper left corner to start manual defrosting
3. Wait for about 7s, the digital display returns to the normal display interface

Defrost System

Refrigerator coils are kept below the freezing point (32° F). During compressor down-time, the evaporator fan continues to circulate air through the evaporator coil. This air circulation raises the coil temperature above the freezing point, melting any accumulated frost. Run-off water is drained into the evaporator pan and evaporated. Freezer coils are defrosted electrically. Automatic defrost timers automatically initiate at pre-set intervals and for a pre-determined duration.

Operation/Maintenance

NOTE: We strongly recommend that any servicing be performed by an authorized service technician

Loading Product

- Do not block the air duct / fan at the top of the unit. Maintain a minimum of 4” of clearance between products and the fan at all times.
- Ensure all shelves are sitting level and properly secured before loading products.
- Do not store flammable and explosive gas or liquids inside the unit.
- Cleaning the Condenser Coil
  - For efficient operation, keep the condenser surface free of dust, dirt, and lint.
  - We recommend cleaning the condenser coil at least once per month.
  - Clean the condenser with a commercial condenser coil cleaner, available from any kitchen equipment retailer.
- Cleaning the Fan Blades and Motor
  - If necessary, clean the fan blades and motor with a soft cloth.
  - If it is necessary to wash the fan blades, cover the fan motor to prevent moisture damage.

Cleaning the Interior of the Unit

- When cleaning the cabinet interior, use a solvent of warm water and mild soap.
- Do not use steel wool, caustic soap, abrasive cleaners, or bleach that may damage the interior finish.
- Wash door gaskets on a regular basis, preferably weekly. Simply remove the door gasket from the frame of the door, soak it in warm water and soap for thirty (30) minutes, then dry with soft cloth and replace.
- Check door gaskets for proper seal after they are replaced.
- Periodically remove the shelves and shelf brackets from the unit and clean them with a mild soap and warm water.

Cleaning the Exterior of the Unit

- In order to properly care for the exterior surfaces of your unit, you must regularly clean the stainless steel
- Approved tools are soft cloths, microfibers, sponges, or plastic scouring pads
- Do not use steel wool, caustic cleaners, or abrasive cleaners
- Excel by Noble Chemical is a water-based aerosol cleaner / polish made to pair with your unit (Item #999EXCEL)

Troubleshooting

Compressor is Not Running

Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
Power cord unplugged.	Plug in power cord
Thermostat set too high.	Set thermostat to lower temperature.
Cabinet in defrost cycle.	Wait for defrost cycle to finish.

Cabinet Temperature Is Too Warm

Thermostat is set too high.	Set thermostat to lower temperature.
Airflow is blocked.	Re-arrange products to allow for proper air flow. Make sure there is at least four inches of clearance from the fan.
Low refrigerant levels.	Contact a service technician to check refrigerant levels.
Door is slightly ajar.	Make sure door is completely closed.

Interior Light Is Not Working

Poor switch connection.	Poor switch connection.
Bulb is not connected.	Make sure the bulb is correctly inserted in the socket.
Bulb has burned out.	Replace the bulb.
Fust blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
Dirty condensor coil.	Clean the condensor coil.

Condensation Is Collecting on the Cabinet and/or Floor

Gasket is not sealing properly.	Clean, repair, or replace the gasket as necessary.