



**CAUTION!**  
**PLEASE KEEP POWER SWITCH ON**  
**BEFORE OPERATING THE UNIT**

**Refrigerator**

**Freezer**

**Installation and Operation Manual**

*Please read this manual completely before attempting to install or operate this equipment!*



**<Solid Door>**  
**Refrigerator**  
**MSR-49NM**  
**MSR-23NM**

**Freezer**  
**MSF-49NM**  
**MSF-23NM**



**<Glass Door>**  
**Refrigerator**  
**MSR-23G-1**  
**MSR-49G-2**

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## SPECIFICATIONS

### Solid Door Refrigerators

MODEL	COMP. H.P	V/Hz	REFRIGERANT	AMPS	WEIGHT
MSR-23NM	1/3	115V/60Hz	R-134a	3.72 A	273 lbs
MSR-49NM	1/2	115V/60Hz	R-134a	7.0 A	372 lbs

### Solid Door Freezers

MODEL	COMP. H.P	V/Hz	REFRIGERANT	AMPS	WEIGHT
MSF-23NM	1/2	115V/60Hz	R-134a	7.0 A	286 lbs
MSF-49NM	1/2	115V/60Hz	R-404a	10.9A	405 lbs

### Glass Door Refrigerators

MODEL	COMP. H.P	V/Hz	REFRIGERANT	AMPS	WEIGHT
MSR-23G-1	1/2	115V/60Hz	R-134a	6.5 A	321 lbs
MSR-49G-2	1/2	115V/60Hz	R-134a	11.2 A	460 lbs

## SERIAL NUMBER

The serial number is located on the rating label which is on the left interior wall.  
Please retain the unit's serial number for the service purpose.

## INSTALLATION

### 1. GOOD AIR CIRCULATION

- Be sure to avoid any object which will restrict exhausted air flow.
- Be sure that there is ample space so that air can flow through the rear of the unit.
- Turbo air recommends that the rear of the unit should be located no less than 5 inches from the wall.

### 2. PLACE ON STRONG GROUND

- Be sure the location chosen has a floor strong enough to support the total weight of the cabinet and contents.

### 3. DO NOT PLACE NEAR THE HEAT

- Be sure to avoid hot corner and location near stove.
- High ambient temperature will make cooling efficiency lower.

### 4. INDOOR USAGE ONLY

- Be sure to install this unit indoor, so it will not get wet from the rain.

### 5. STABILIZING

- Make sure the unit is installed in a stable condition with the front wheels locked while in use.

### 6. LEVELING

- Be sure that the unit is level from front to back and side to side.

## CLEANING

### 1. CLEANING THE INTERIOR AND EXTERIOR

- The interior and exterior of the unit can be cleaned using warm water with soap.
- Do not use an abrasive cleaner because it will scratch the surface.

### 2. CLEANING THE CONDENSER FINS

- To maintain proper refrigeration performance, the Condenser coil must be free of dust, dirt, and grease.

It will require to clean it periodically. Condenser fins should be cleaned, at least every three months (90 days) or as needed.

### 3. CLEAN THE GASKET

- The door gasket should be cleaned frequently to maintain proper sealing.

### 4. CHECK AFTER CLEANING

- Check the unit again for safety.
- Check that the unit is operating properly.

## CAUTION

### 1. POWER CORD

- Be sure the power cord is connected to the proper voltage.
- Compressor warranties are void if compressor burns out due to low voltage.
- A protected circuit of the correct voltage and amperage must be run for connection of the line cord.
- Turn ' off ' the power switch before disconnecting the power cord, whenever performing maintenance functions or cleaning the refrigerated cabinet.
- If the power cord of Refrigerator (Freezer) is damaged, it must be replaced by the manufacturer or service agent or a similarly qualified person in order to avoid a hazard.
- The electrical plug must be accessible without moving the set.

### 2. RE-STARTING

- If disconnected, wait 5 minutes before re-starting.
- Young children should be supervised to ensure that they do not play with the appliance.

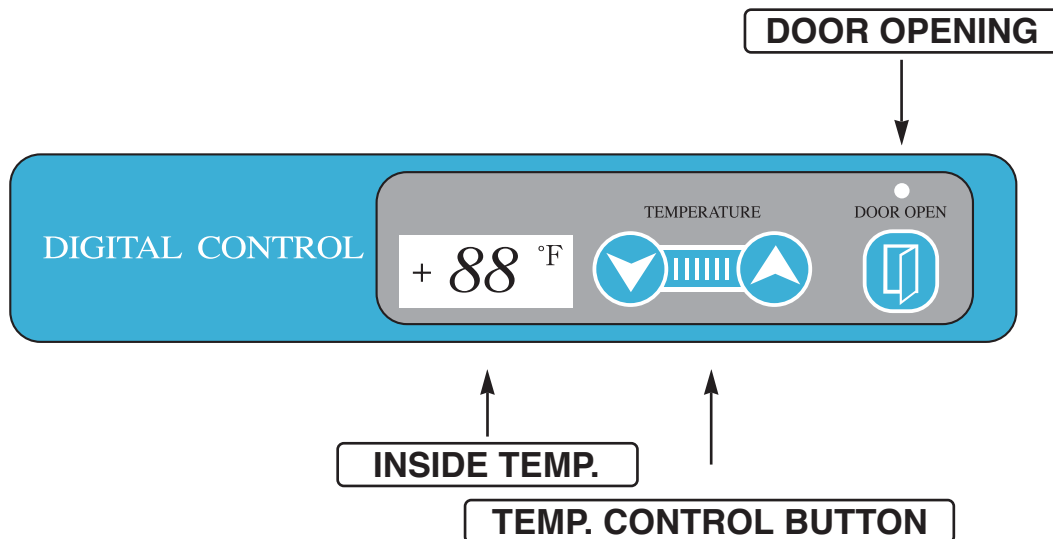
## BASIC OPERATION

MSR-23NM/MSR-49NM  
MSR-23G-1/MSR-49G-2

### REFRIGERATOR

1. Plug in and turn on the power switch located on the bottom of the top grill.  
The Display panel will be lighted. The compressor will begin to run.
2. The default temperature setting is 35°F.
3. The compressor is automatically cycled by the electronic controller (PCB).
4. Set toward "39°F" for higher temperatures and toward "28°F" for lower temperature.
5. The interior light is activated by the door switch at the bottom of the grill when the door is opened.
6. Evaporator fan motor(s) will run after all doors are completely closed.

## DISPLAY PANEL



### 1. UP / DOWN BUTTON (Temperature control button)

- By pushing the up/down button, you can set the inside temperature from "39°F" to "28°F".

### 2. DOOR OPENING INDICATOR

- If door is opened, door opening indicator will be turned on.
- 5 minutes after the door opened, the beep sound will ring continuously.
- The beep sound will stop immediately on the door closed properly.

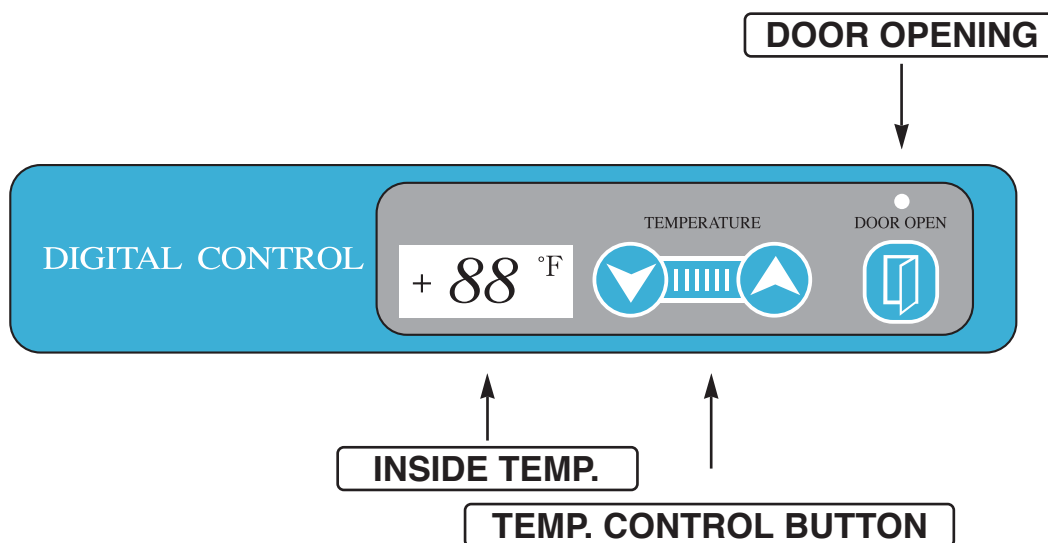
## BASIC OPERATION

MSF-23NM  
MSF-49NM

### **FREEZER**

1. Plug in and turn on the power switch located on the bottom of the top grill.  
The Display panel will be lighted. The compressor will begin to run.
2. The default temperature setting is -2°F.
3. The compressor is automatically cycled by the electronic controller (PCB, D-sensor).
4. The Defrost cycle is automatically controlled by the D-sensor and the PCB.
5. Push toward “5°F” for higher temperatures and toward “-9°F” for lower temperature.
6. The interior light is activated by the door switch at the bottom of the grill when the door is opened.
7. Evaporator fan motor(s) will run after all doors are completely closed.

## DISPLAY PANEL



### 1. UP / DOWN BUTTON (Temperature control button)

- By pushing the up/down button, you can set the inside temperature from "5°F" to "-9°F".

### 2. DEFROST

- The electronic defrost controller is set at the factory to provide a defrost cycle every 8 hours.
- If it is necessary to change the intervals of defrost due to unusual operating conditions, it can be accomplished by adjusting the switch (on the PCB) which is located on the inside of the top grill.
- Once all frost is eliminated, the defrost control is changed to the freezer mode.
- The panel displays "dF" during the defrost cycle.

### 3. DOOR OPENING INDICATOR

- If door is opened, door opening indicator will be lighted.
- 5 minutes after the door opened, the beep sound will ring continuously.
- The beep sound will stop immediately on the door closed properly.



## REVERSIBLE-DOOR ASSEMBLING METHOD

APPLIED MODEL : MSF-23NM, MSR-23NM

### 1. Taking apart TOP GRILL and GRILL ASSEMBLY

#### 1) Take apart TOP GRILL

after eliminating screw connected

Upper or downward located ①

in the PICTURE (A)

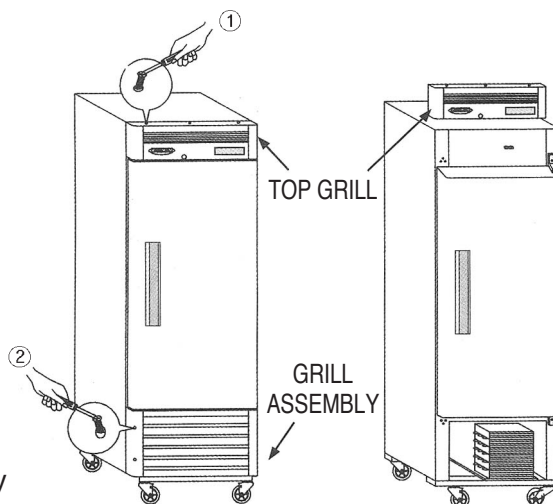
#### 2) Take apart GRILL

after eliminating the screw

connected

Left and right side located ②

in the PICTURE (A)



PICTURE A

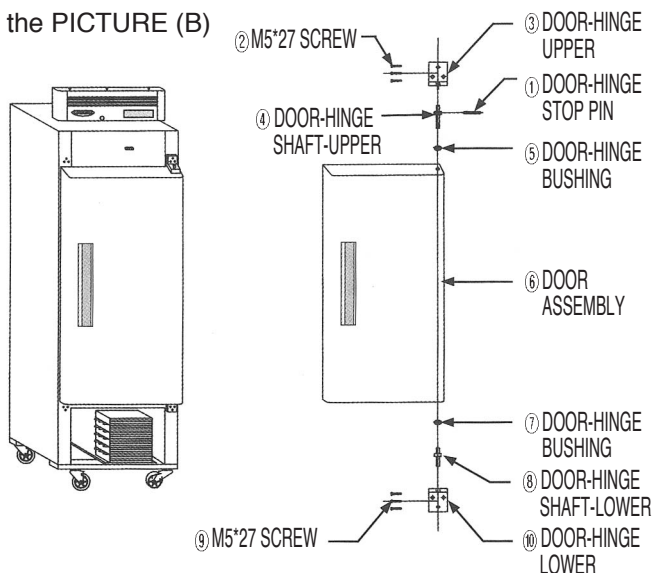
# Attention : Heed not to damage Electricity wire and not to fall top-grill from the upper.

Also be careful the sharp edges during working.

### 2. Taking apart of DOOR-ASSEMBLY

#### 1) Take apart ① ~ ⑩ in order at the PICTURE (B)

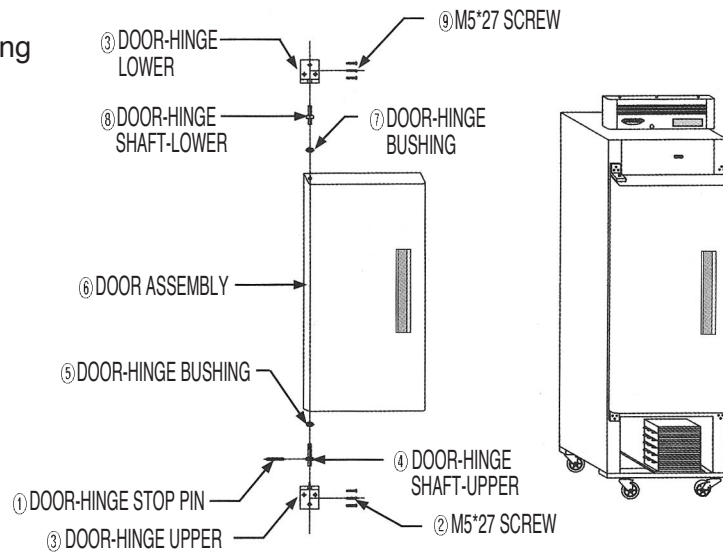
# Attention : Heed the elasticity when eliminating the PIN and the weight during taking apart DOOR ASSEMBLY.



PICTURE B

### 3. Assembling method of REVERSIBLE DOOR

- 1) After reversing 180 degree DOOR ASSEMBLY of ⑥, have the HANDLE be the requested side.
- 2) Assemble as the following order.

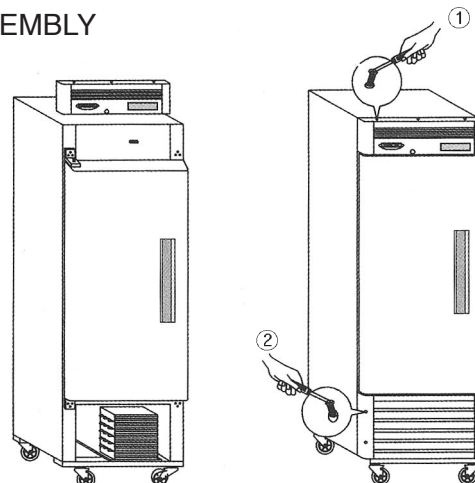


**PICTURE C**

- After assembling ③ ②, assemble ④ ⑤
  - Insert into ④ DOOR ASSEMBLY of ⑥
  - After inserting ⑦ ⑧, fix ③ ⑨
  - Insert reversible for suitable spring elasticity
- # Attention : When screw connected, should well be connected to maintain sufficient sustain

### 4. Assembling TOP GRILL and GRILL ASSEMBLY

- 1) Connect the screw at the location ① on the top and bottom of the top grill.
- 2) Connect the screw at the location ② on the left and right side of the grill assembly.



**PICTURE D**

## BEFORE REQUESTING SERVICE

SYMPTOMS	CAUSES	SOLUTIONS
Refrigerator/Freezer is freezing melting food.	<ul style="list-style-type: none"> <li>● The Temp. is set too low high to maintain food freshness.</li> </ul>	<ul style="list-style-type: none"> <li>● Push the button to a warmer colder position.</li> </ul>
The unit does not refrigerate at all.	<ul style="list-style-type: none"> <li>● There is a power connection failure problem.</li> </ul>	<ul style="list-style-type: none"> <li>● Check the power cord to make sure the unit is plugged in it correctly.</li> </ul>
The unit does not refrigerate well.	<ul style="list-style-type: none"> <li>● The unit is in sunlight or near a heating device.</li> <li>● The unit contains hot food or too much food.</li> <li>● The unit door is opened too frequently or left open too long.</li> <li>● The temp. setted is not on the correct position.</li> <li>● The condenser is clogged.</li> </ul>	<ul style="list-style-type: none"> <li>● Check the installation place.</li> <li>● Check the condition of stored food.</li> <li>● Check the position of the temperature setted.</li> </ul>
There is a loud noise.	<ul style="list-style-type: none"> <li>● The floor is too weak or the leveling feet are set incorrectly.</li> <li>● The back-side of the unit is too close to the wall.</li> <li>● The tray is not in the correct position.</li> </ul>	<ul style="list-style-type: none"> <li>● Check the installation and adjust the tray position.</li> </ul>
There are dew-drops on the unit exterior.	<ul style="list-style-type: none"> <li>● High-moisture air can produce dew-drops during rainy seasons.</li> </ul>	<ul style="list-style-type: none"> <li>● Wipe with a dry cloth.</li> </ul>
There are dew-drops on the unit interior.	<ul style="list-style-type: none"> <li>● The door is opened too frequently or left open too long.</li> <li>● Damp food is stored.</li> </ul>	<ul style="list-style-type: none"> <li>● Keep the door closed to remove dew-drops.</li> </ul>
The door does not close tightly.	<ul style="list-style-type: none"> <li>● The door is bent.</li> <li>● The door gasket has come out.</li> <li>● The unit is not level.</li> </ul>	<ul style="list-style-type: none"> <li>● Reposition the gasket.</li> <li>● Level the unit again.</li> </ul>

### The following points does not malfunctions :

- A water flowing sound can be heard when the compressor stops.  
This is the sound of REFRIGERANT flowing.
- The compressor does not run during defrosting function.

## Warranty Claims

All claims for labor or parts must be made directly through Turbo Air. If unit was manufactured more than one year, proof of purchase must be faxed in or sent with claim. All claims should include: model number of the unit, the serial number of the cabinet, and all pertinent information supporting the existence of the alleged defect.

If compressor is replaced under warranty, Turbo Air will either request the compressor or compressor tag be returned. Compressor or tag must be returned with all information related to the unit. Any action or breach of these warranty provisions must be commenced within one year after said cause of action has occurred.

## One Year Parts & Labor Warranty

Turbo Air warrants to the original purchaser of every new Turbo Air refrigerated unit, the cabinet and all parts thereof, to be free from defects in material or workmanship, under normal and proper use and maintenance service as specified by Turbo Air and upon proper installation and start-up in accordance with the instruction packet supplied with each Turbo Air unit. Turbo Air's obligation under this warranty is limited to a period of one (1) year from the date of original installation or 15 months after shipment date from Turbo Air, whichever occurs first.

Any parts, covered under this warranty, that are determined by Turbo Air to have been defective within one (1) year of original installation or fifteen (15) months after shipment date from manufacturer, whichever occurs first, is limited to the repair or replacement, including labor charges, of defective parts or assemblies. The labor warranty shall include standard straight time labor charges only and reasonable travel time, as determined by Turbo Air.

## Additional Four Year Compressor Warranty

In addition to the one (1) year warranty stated above, Turbo Air warrants its hermetically sealed compressor to be free from defects in both material and workmanship under normal and proper use and maintenance service for a period of four (4) additional years from the date of original installation, but not to exceed five (5) years and three (3) months after shipment from the manufacturer.

Compressor determined by Turbo Air to have been defective within this extended period will, at Turbo Air's option, be either repaired or replaced with a compressor or compressor parts of similar design and capacity.

The four (4) year extended compressor warranty applies only to hermetically sealed parts of the compressor and does not apply to any other parts or components, including, but not limited to, cabinet, paint finish, temperature control, refrigerant, metering device, driers, motor starting equipment, fan assembly or and other electrical component, etcetera.

## 404A / 134A Compressor Warranty

The four-year compressor warranty detailed above will be voided if the following procedure is not carefully adhered to:

1. This system contains R404A or R134A refrigerant and polyol ester lubricant. The polyol ester lubricant has rapid moisture absorbing qualities.
2. Drier replacement is very important and must be changed when a system is opened for servicing. A 620 copper drier or better is highly recommended.
3. Micron level vacuums must be achieved to insure low moisture levels in the system. 500 microns or lower must be obtained.
4. When compressor is grounded, suction filter drier and 620 drier or better must be replaced.
5. Compressor must be obtained through Turbo Air Inc., unless otherwise specified in writing, through Turbo Air's warranty department.

## What Is Not Covered By This Warranty

Turbo Air's sole obligation under this warranty is limited to either repair or replacement of parts, subject to the additional limitations below.

This warranty neither assumes nor authorizes any person to assume obligations other than those expressly covered by this warranty.

**NO CONSEQUENTIAL DAMAGES.** TURBO AIR IS NOT RESPONSIBLE FOR ECONOMIC LOSS; PROFIT LOSS; OR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOSSES, OR DAMAGES ARISING FROM FOOD OR PRODUCT SPOILAGE CLAIMS WHETHER OR NOT BECAUSE OF REFRIGERATION FAILURE.

**WARRANTY IS NOT TRANSFERABLE.** This warranty is not assignable and applies only in favor of the original purchaser / user to whom delivered. ANY SUCH ASSIGNMENT OR TRANSFER SHALL VOID THE WARRANTIES HEREIN MADE AND SHALL VOID ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

**IMPROPER USAGE.** TURBO AIR ASSUMES NO LIABILITY FOR PARTS OR LABOR COVERAGE FOR COMPONENT FAILURE OR OTHER DAMAGES RESULTING FROM IMPROPER USAGE OR INSTALLATION OR FAILURE TO CLEAN AND / OR MAINTAIN PRODUCT AS SET FORTH IN THE WARRANTY PACKET PROVIDED WITH THE UNIT.

**ALTERATION, NEGLIGENCE, ABUSE, MISUSE, ACCIDENT, DAMAGE DURING TRANSIT OR INSTALLATION, FIRE, FLOOD, ACTS OF GOD.** Turbo Air is not responsible for the repair or replacement of any parts that Turbo Air determines have been subjected after the date of manufacture to alteration, neglect, abuse, misuse, accident, damage during transit or installation, fire, flood, or act of God.

**IMPROPER ELECTRICAL CONNECTIONS.** TURBO AIR IS NOT RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF FAILED OR DAMAGED COMPONENTS RESULTING FROM ELECTRICAL POWER FAILURE, THE USE OF EXTENSION CORDS, LOW VOLTAGE, OR VOLTAGE DROPS TO THE UNIT.

**NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE:** THERE ARE NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, EXCEPT THE ONE (1) YEAR PARTS & LABOR WARRANTY AND THE ADDITIONAL FOUR (4) YEAR COMPRESSOR WARRANTY AS DESCRIBED ABOVE. THESE WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTY AND MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

**OUTSIDE U.S. AND CANADA:** This warranty does not apply to, and Turbo Air is not responsible for, any warranty claims made on products sold or used outside the United State and Canada.

**CHANGES MADE TO WARRANTY COMMENCED ON 5/1/2002**

## MEMO

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***Turbo*** REFRIGERATOR MANUFACTURER ***air***

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