

INSTRUCTION MANUAL

T-Series™ **Air Conditioner** *T62 Model*



McLean®
COOLING TECHNOLOGY

A Pentair Company

*Protecting Electronics.
Exceeding Expectations.™*

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NOTE: Some of the information in this manual may not apply if a special unit was ordered. If additional drawings for a special unit are necessary, they have been inserted. Contact MAI if further information is required.

RECEIVING THE AIR CONDITIONER

Inspect the air conditioner. Check for concealed damage that may have occurred during shipment. Look for dents, scratches, loose assemblies, evidence of oil, etc. Damage evident upon receipt should be noted on the freight bill. Damage should be brought to the attention of the delivering carrier -- NOT to MAI -- within 15 days of delivery. Save the packing material and request an inspection. Then file a claim with the delivering carrier.

MAI cannot accept responsibility for freight damages; however, we will assist you in any way possible.

HANDLING & TESTING THE AIR CONDITIONER

If it is necessary to place the air conditioner in a horizontal position after unpacking, be certain it is placed in an upright, vertical or mounting position for a minimum of five (5) minutes before operating.

Never attempt to operate the air conditioner while it is horizontal or on its side, back or front. The refrigeration compressor is filled with lubricating oil. Running the compressor without oil in the lower part of the housing will cause permanent damage to the air conditioner. This also voids the warranty.

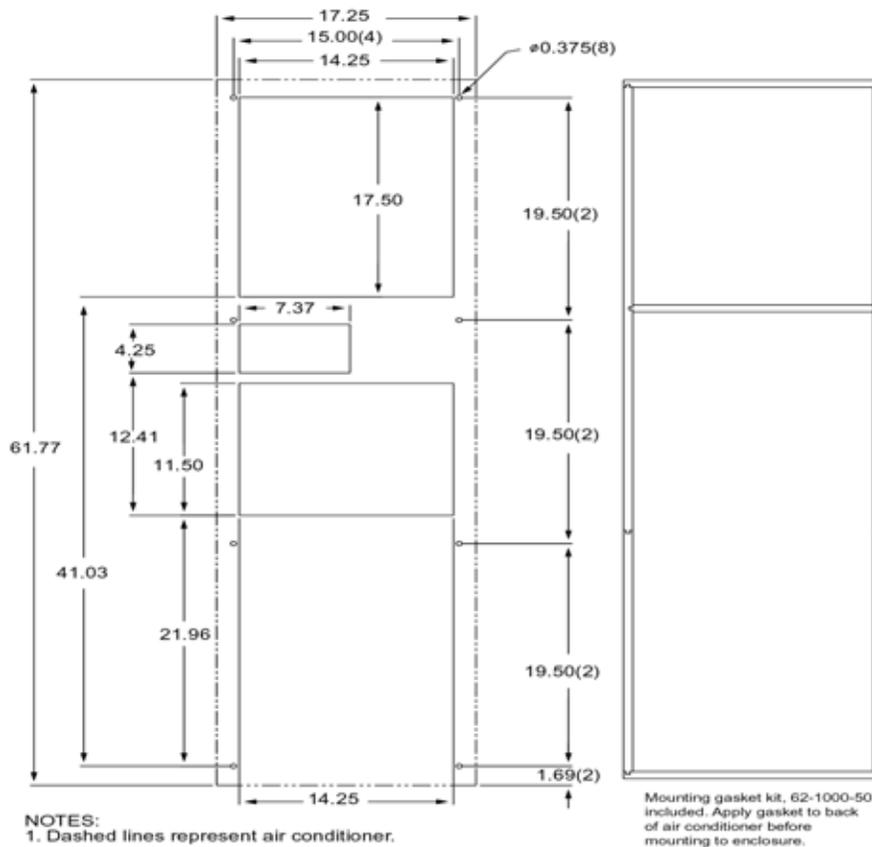
TEST FOR FUNCTIONALITY **BEFORE** MOUNTING THE AIR CONDITIONER TO THE ENCLOSURE.

Refer to nameplate for proper electrical current requirements, then wire unit to a properly grounded power supply. Minimum circuit ampacity should be at least 125% of the amperage shown in the design data section for the appropriate model. No other equipment should be connected to this circuit to prevent overloading.

Immediately after applying power the evaporator blower (enclosure air) should start running. Operate the air conditioner with the compressor running for five (5) to ten (10) minutes.

Condenser air temperatures should be warmer than normal room temperatures within a few minutes after the condenser air blower starts.

The compressor is provided with automatic reset thermal overload protection. The switch operates when the compressor overheats due to a clogged or dirty condenser coil or if ambient air temperatures exceed nameplate rating or if enclosure dissipated heat loads exceed the rated capacity of the air conditioner. The thermal overload switch will actuate and stop compressor operation. The blowers will continue to operate and the compressor will restart after it has cooled to within the thermal overload cut-in temperature setting.



Installation

Step 1: Inspect air conditioner. Verify functionality before mounting the air conditioner, see Handling & Testing the Air Conditioner on page 1.

Step 2: Using the mounting gasket kit provided with the unit, install gaskets to the air conditioner as shown in Figure 1.

Step 3: Mount air conditioner on enclosure taking care not to damage the mounting gasket. The mounting gasket is the seal between the air conditioner and the enclosure. Avoid dragging the air conditioner on the enclosure with the mounting gasket attached as this could cause rips or tears in the gasket and risk losing the water tight seal.

Step 4: Allow unit to remain upright for a minimum of five (5) minutes before starting. Caution: Air conditioner must be in upright position during operation.

Step 5: Refer to the nameplate for electrical requirements. Wire the unit to a properly grounded power supply. Electrical circuit should be fused with slow blow or HACR circuit breaker.

Step 6: The air conditioner requires a remote mounted thermostat and has an alarm feature. Wire the thermostat and alarm outputs to the appropriate terminals on the 24VAC terminal strip (note locations on the wiring diagram).

T62 Series

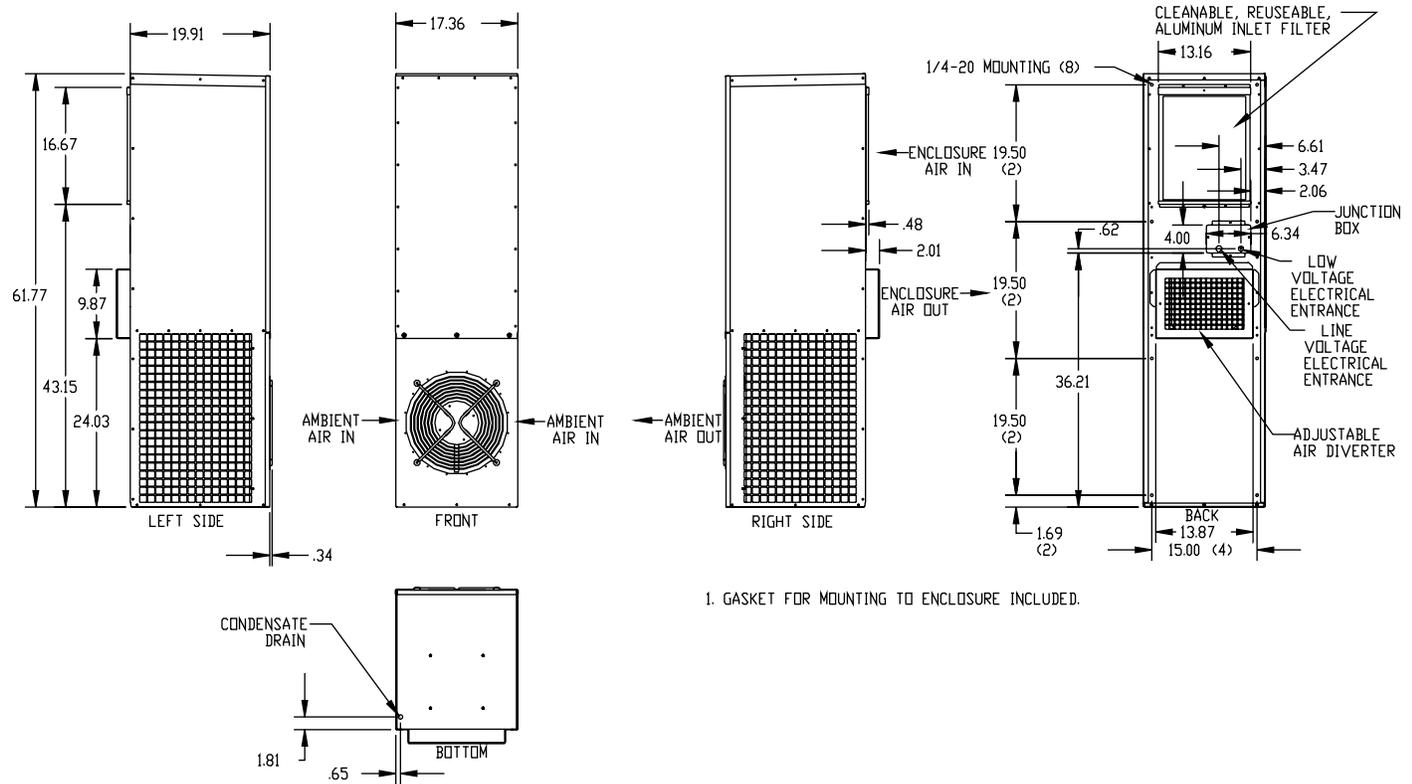
22,000 BTU/Hr. (6440 Watts)

H x W x D: 61.77" (1568.96) x 17.36" (440.94) x 19.88" (504.95)

Model	Voltage	Hz	Amps	Full Load Phase	BTU/Hr @ Max Amb Temp	Max Amb Temp °F/°C	Shipping Weight Lbs/Kgs
T62-2226-3XXX	230	60	17.0	1	22,000	131/55	218/99.1

XXX will be replaced with a three-digit number designating all desired options. Consult the MAI for specific model numbers.

T62 Model Drawing

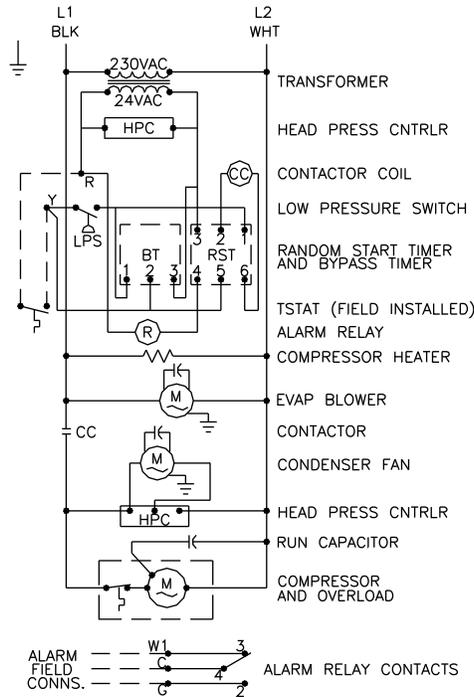


T62 Series Components List

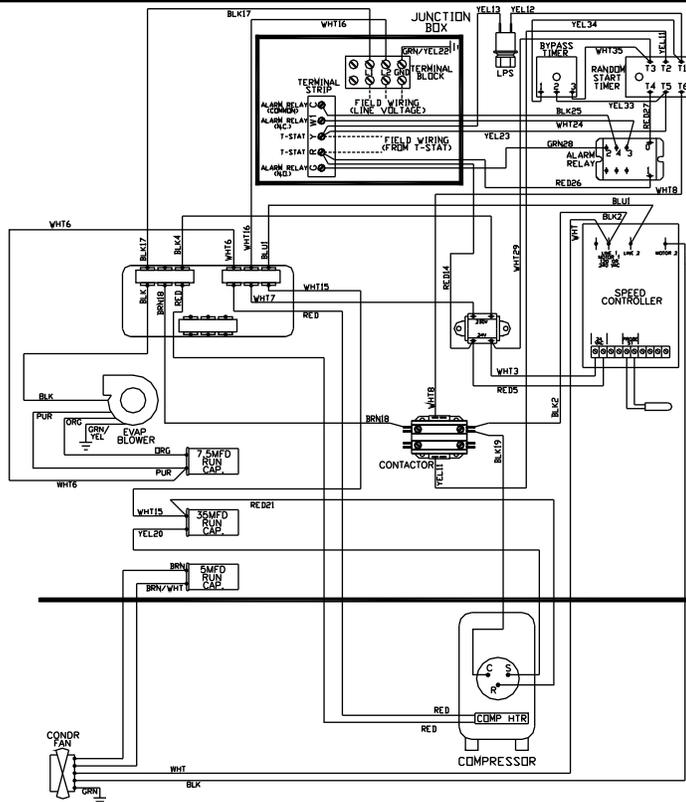
Part Description	Part Number
Blower Motor, Condenser	10-1020-14
Blower Motor, Evaporator	10-1020-15
Capacitor, Condenser Blower	52-6084-05
Capacitor, Evaporator Blower	52-6084-00
Capacitor, Compressor, Run	52-6032-06
Capacitor, Compressor, Start	10-1032-32
Coil, Condenser	62-1001-00
Coil, Evaporator	62-1001-03
Compressor	10-1026-86
Contactora, Compressor	10-1005-44
Controller, Head Pressure	10-1106-108

Part Description	Part Number
Filter/Dryer	52-6028-06
Filter, Evap Air Out (Optional)	10-1000-01
Grille, Condenser fan	13-1014-03
Relay, Alarm	10-1005-62
Relay, Compressor, Start	10-1042-13
Switch, Low Pressure	52-6104-38
Terminal Block	10-1003-31
Thermal Expansion Valve	10-1040-16
Timer, Random Start	10-1005-76
Timer, Bypass	10-1005-58
Transformer	10-1006-93

T62 Generic Schematic (actual unit options may vary)



T62 Generic Wire Diagram (actual unit options may vary)



PRINCIPLES OF OPERATION

If electrical power to the air conditioner is interrupted and reapplied immediately, (within 3 to 5 seconds), the compressor may not restart due to the high back pressure of the compressor. It takes a minimum of one (1) minute after shutdown for the compressor suction and discharge pressures to equalize in order for the air conditioner to restart.

Operating the air conditioner below the minimum ambient temperature or above the maximum ambient temperatures indicated on the nameplate voids all warranties.

It is recommended that the warranty section of this manual be read in order to familiarize yourself with parameters of restricted operation.

The moisture that the enclosure air can contain is limited. If moisture flows from the drain tube continuously this can only mean that ambient air is entering the enclosure. Be aware that frequent opening of the enclosure's door admits humid air that the air conditioner must then dehumidify.

MAINTENANCE

Compressor

The compressor requires no maintenance. It is hermetically sealed, properly lubricated at the factory and should provide years of satisfactory operating service.

Should the refrigerant charge be lost, recharging ports (access fittings) on the suction and discharge sides of the compressor are provided for recharging and/or checking suction and discharge pressures.

Under no circumstances should the access fitting covers be loosened, removed or tampered with.

Breaking of seals on compressor access fittings during warranty period will void warranty on hermetic system.

Recharging ports are provided for the ease and convenience of reputable refrigeration repair service personnel for recharging the air conditioner.

Condenser and Evaporator Air Movers

Blower and impeller motors require no maintenance. All bearings, shafts, etc. are lubricated during manufacturing for the life of the motor.

If the condenser blower motor (ambient blower) should fail, it is not necessary to remove the air conditioner from the cabinet or enclosure to replace the blower. The condenser blower is mounted on its own bulkhead and is easily accessible by removing the front cover.

Caution: Operation of the air conditioner in areas containing airborne caustics or chemicals can rapidly deteriorate filters, condenser coils, blowers and motors, etc. Contact McLean Cooling Technology for special recommendations.

Refrigerant Loss

Each air conditioner is thoroughly tested prior to leaving the factory to insure against refrigeration leaks. Shipping damage or microscopic leaks not found with sensitive electronic refrigerant leak detection equipment during manufacture may require repair or recharging of the system. This work should only be performed by qualified professionals, generally available through a local, reputable air conditioning repair or service company.

Refer to the data on the nameplate, which specifies the type of refrigerant and the charge size in ounces. Before recharging, make sure there are no leaks and that the system has been properly evacuated into a deep vacuum.

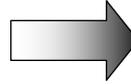
TROUBLE SHOOTING

Basic Air Conditioning Trouble Shooting Check List

1. Check manufacturer's nameplate located on the unit for correct power supply.
2. Turn the power to the unit on. The evaporator (Enclosure or "COLD" air) blower should come on. Is there airflow?

YES, proceed to step # 3.

NO, possible: Open motor winding
 Stuck blower motor
 Obstructed wheels/blades

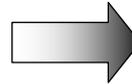


**Repair or Replace
defective part**

3. Check thermostat setting? Adjust thermostat to the lowest setting. This should turn the condenser blower and the compressor on. Did condenser blower and compressor come on when the thermostat was turned on?

YES, proceed to step #4.

NO, possible: Defective thermostat

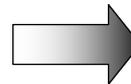


Replace part

4. Are both blowers and the compressor running? If not the unit will not cool properly.
5. Check condenser (Ambient or "HOT" air) blower for airflow. Is there airflow?

YES, proceed to step # 6.

NO, possible: Defective thermostat
 Open motor winding
 Stuck blower motor
 Obstructed wheels/blades



**Repair or Replace
defective part**

6. Carefully check the compressor for operation - motor should cause slight vibration, and the outer case of the compressor should be warm.

YES, wait 5 minutes, then proceed to step #7.

NO, possible: Defective thermostat
 Defective capacitor
 Defective overload
 Defective relay



**Repair or Replace
defective part**

7. Make sure the coils are clean. Then check evaporator "air in" and "air out" temperatures. If the temperatures are the same:

Possible loss of refrigerant
Possible bad valves in the compressor



**Repair or Replace
defective part**

8. To check for a bad thermostat. Turn power to the unit off. Remove control box cover, place both thermostat wires onto one terminal (replace control box cover for safety). This will pass the switch in the thermostat. Turn the power on. If both blowers and the compressor come on, the thermostat needs to be replaced.

Symptoms and Possible Causes:

<u>SYMPTOM</u>	<u>POSSIBLE CAUSE</u>
Unit won't cool	<ul style="list-style-type: none">* Clogged fins on coil(s)* Dirty filters* Blowers/fans not running* Compressor not running* Compressor runs, but has bad valves* Loss of refrigerant
Compressor tries to start but won't run	<ul style="list-style-type: none">* Low line voltage at start. Should be +/-10% rated voltage* Compressor motor stuck* Bad contactor* Bad overload switch* Bad run/start capacitor
Unit blows breakers	<ul style="list-style-type: none">* Under sized breaker/fuse or not time delayed* Short in system
Getting water in enclosure	<ul style="list-style-type: none">* Drain plugged* Drain tube kinked* Enclosure not sealed (allowing humidity in)* Mounting gasket damaged

For additional technical information (i.e., amp draw, pressures, temperatures) contact MAI at 317-257-6811.

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