

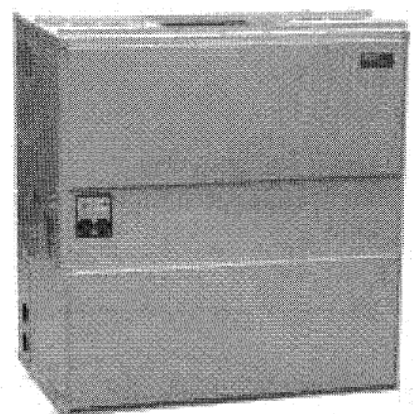
50BY/BL/BF



# คู่มือการติดตั้งเครื่องปรับอากาศ แครีเออร์

Package Water Cooled

## 50BY/BL/BF



50BY/BL/BF

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## Safety Considerations

The 50BY, BL Single-Package Cooling Units are designed to provide safe and reliable when operated within design specifications. However, due to system pressures, electrical components and equipment location, some aspects of installation, start-up and servicing of this equipment can be hazardous.

Only trained, qualified installers and service mechanics should install, start up and service this equipment.

When working on the equipment, observe all precaution on tags or labels attached to the unit, safety note in the literature and any other safety precautions that apply.

- Follow all safety codes.
- Wear safety glasses and work gloves.
- Use care in handling, rigging and placing bulky equipment.

## Danger

NEVER reach into unit while fan is running. LOCK OPEN AND TAG fan motor power disconnect before working on a fan. Remove the fuses and take them with you after noting this on tag.

## Warning

CHECK assembly and component weights to be sure rigging equipment can handle them safely. Note also any specific rigging instructions.

## Installation

**General** - The 50BY008-040 and 50BL050-080 units are self contained units arranged for vertical air discharge and wired and piped at the factory.

Fan motor and fan drive package are also factory installed in one enclosure.

**Receiving Unit** - Check unit against shipping order. Inspect carefully fan concealed shipping damage. If shipment is damage or incomplete, file claim with transportation company and advise Carrier immediately.

**Location for Installation** - Check the following when selecting a location to install unit:

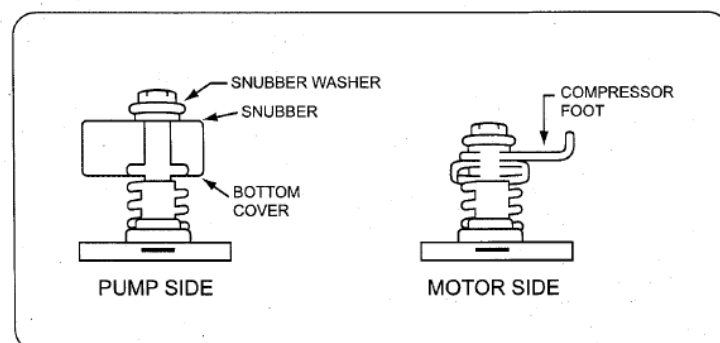
1. Location should be able to support unit operating weight. Reinforce the floor as required.
2. Allow sufficient space for service and air flow around the unit as show in Fig. Unit dimension.
3. The floor must be level. The tolerance of gradient is within 10 mm difference of height at both ends of units for the flow of condenser water and condensate drainage.
4. Where vibration is transmitted to the building structures, apply vibration isolating pad to the bottom of unit.
5. The units are designed for indoor installation. Do not locate unit where it might be exposed to the weather.

**Rigging and Moving** - Do not uncrate unit until it is at its final location. When rigging by use of cables, apply thick cloth or pads to the unit panels to prevent damage on panels. Run the cables to a central suspension point so that the angle from the horizontal is not less than 60 degree. When moving unit by use of rollers, use at least three rollers longer than the width of unit.

**Unit Placement** - Uncrate the unit at the location. Loosen the hold-down bolts and unskid the unit. The holes for the skid hold-down bolts can be used for unit mounting holes (See units dimension)

### Compressor Mounting

After unit is installed firmly, remove front panels of the compressor section, and loosen the bolt to the extent that the snubber washer can be moved slightly by finger pressure without removing the bolts.



**Water Piping** - May be connected to the unit thru the openings provided on the unit (See Fig. Unit dimension)

### CAUTIONS:

1. Do not connect supply line to condenser water outlet and return line to inlet.
2. Be sure to install water drain valve on piping.
3. Be sure to install pump on supply line, not return.
4. On city or waste water systems, install strainer to remove foreign matters.
5. Recirculating systems with low temperature water (city or well water) returning to condenser requires a water regulating valve.
6. Provide plugged tees on outlet pipe for cleaning.

**Condensate Drain** - Requires standard pipe connected to the condensate pan nipple. Pitch down to open drain. Provide trap 70 mm high (100 mm on 50BL050-080) and plugged tees for cleaning. Observe all local sanitary codes.

**Rearrangement of Connections** - The direction of water piping connections can be changed (reversed).

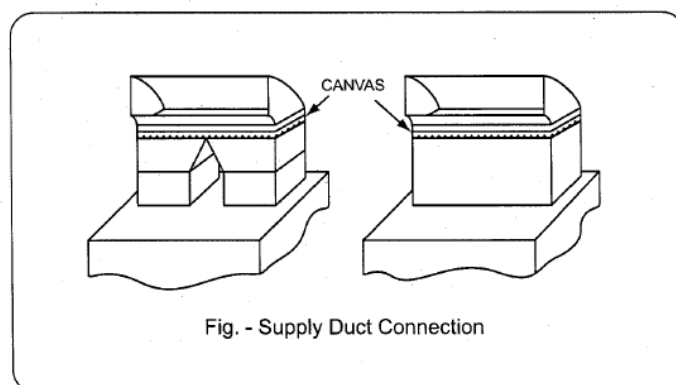
### PROCEDEURE:

1. Remove the hexagonal nut (6).
2. Take off and exchange (1) and (2) with (3) and (4) (water head covers and gaskets).
3. Fasten the bolts (5) and nuts (6).

Take care not to erroneously position head covers and gaskets. Check for water leaks.

## Air Duct Connection

**Supply Air Duct** - Connect the flanged discharge openings to the supply duct using a flexible (canvas) connection to prevent vibration. Support and fix the duct so that the weight of duct should not be borne by unit.



**Return Air Duct** - Attach matching flanges on the return air opening and connect return air duct thru a canvas connection. If outdoor air is to be introduced, connect outdoor air duct to the return air duct. Install an outdoor makeup air damper in the outdoor air duct. Install ductwork so that space for servicing can be available.

## Electrical Wiring

**Electrical Data** - All wiring must comply with local electrical code requirement. All 50BY, BL units are completely wired internally at factory for voltage shown on the nameplate. Check the available power supply with the nameplate information. Voltage at the unit, with the unit operating must be within  $\pm 10\%$  of the voltage indicated on the nameplate. Voltage between phases must be balanced within 3% and current within 10% with compressor running.

**Power Supply Wiring** - Conduit opening for all units is on left-hand side of unit near control box. Connect power wires from field-supplied disconnect switch to terminals on TB1 in the control box. Also, connect ground leads to "Earth Terminal" in the control box.

**Control Wiring** - The control circuit is factory wired for 230-volt usage if 400-3-50 main power is supplied with additional neutral wire. Refer to fig. For field control wiring to pump contactor and room thermostat.

## Start-Up

**Before Initial Start-Up** - Crankcase heater must have been energized at least 24 hours before starting unit. Confirm that the following steps have been completed.

1. Compressor hold-down bolts must be snug but not tight.
2. Backseat (open) compressor discharge service valve.
3. Open liquid line shut off valve.
4. Water piping system must be properly installed and filled with clean water.
5. Confirm that all electrical wiring connections are correct and tight. Supply voltage must be  $\pm 10\%$  of unit nameplate rating and phase imbalance must not exceed 3 percent.
6. Compressor oil should be visible in sight glass. (On units)
7. Check moisture and liquid indicator located ahead of thermal expansion valve. This indicator must be full of liquid refrigerant properly indicate the moisture content of the refrigerant. The center green part indicates a dry system.

### To Start Unit:

1. Set unit selector switch at "COOL".
2. Turn on unit power switch. Check that crankcase heater is on. (Energize crankcase heater for 48 hours before starting compressor.)
3. Turn on condenser water supply.
4. On unit 008 thru 040, turn the rotary switch (RS) to "FAN" position. On units 050 thru 080, press "ON" button of FAN switch located on switch panel. Check the fan for direction of rotation.
5. (Assume room thermostat is calling for full cooling capacity.)

On units 008 thru 040, turn the rotary switch to "RUN" position. On units 050 thru 080, press "ON" button of COMPR switch on the switch panel. Compressor will start immediately. On 50BL050, 060 and 080, the start of compressor No. 2 will be delayed for 60 seconds.

On the single compressor unit (015-040), part-wiring start is employed. On 50BL

#### **To Shut Down Unit:**

1. Turn rotary switch to "FAN" position (008-040)/ On units 050-080, push "OFF" button of COMPR. switch. All compressors will stop.
2. Turn rotary switch to "OFF" position (008-040) or press "OFF" button of FAN switch 050-080. Indoor fans will stop.
3. Turn off condenser water pump, if it is not interlocked with compressor.

Keep main power supply switch on.

**Lockout Circuit** - When any one of safety devices (high and low pressure switches and compressor internal protector) is open, the lockout circuit shuts compressor down and lights the warning light on. Turn rotary switch to "OFF" position (008-040), or press "OFF" button of COMPR. switch. Check and correct the cause of trouble and turn rotary switch back to "RUN" or press "ON" button again. Compressor will start if the cause is remedied. The warning light will not come on when circuit breaker, condenser water pump, or outdoor fan is off.

The indoor fan overload is of manual reset type. When the overload is open, turn unit off. After checking and correcting the cause, follow the start up procedure again.

**Fusible Plug** - Installed on each water-cooled condenser on 50BY, BL units. Fusible plugs blow off at 72°C, discharge refrigerant to the atmosphere and relieve the head pressure.

## Maintenance and Service

### Shut off unit power supply

**Cleaning** - The entire unit should be thoroughly cleaned inside and out.

**Condensate Pan and Drains** - Must be free of dirt and trash. Clean strainer and be sure drain is open.

**Filters** - Never run unit without return air filters. Inspect filters bi-weekly. Clean or replace at least four time a year. Replace filter with dirtiest side facing upstream. Filter may be clean by dipping and washing in ordinary soap water. Dry them up before inserting into unit again.

**Lubrication** - Fan motor bearing are factory lubricated and will need no further lubrication for the first five year (three years at continuous service or excessively dirty conditions). Inspect bearing add relubricate or replace as required.

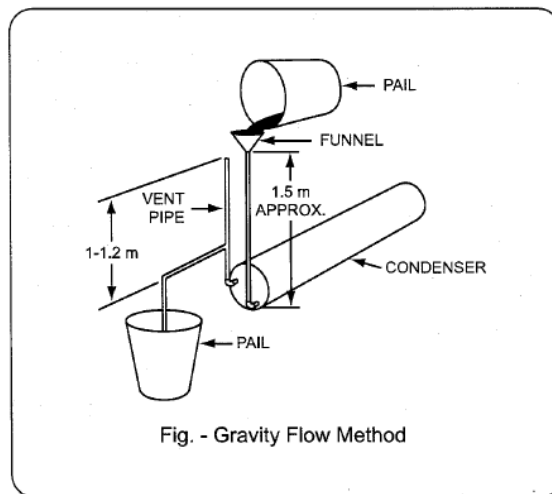
**Oil Change** - Level should be between 1/8 to 3/8 of sight glass on all 50BY(015-040), BL(050-080) units. Add Carrier approved oil, if necessary.

**Pumpdown Procedure** - when shutting down unit for an extended period of time, it is recommendable to pump down unit and store refrigerant in condenser.

1. Frontseat (close) liquid line shutoff valve.
2. Start compressor and run until low-pressure switch cuts out.
3. Shut off unit and close compressor discharge valve.

**Water Cooled Condenser** - May require cleaning of scale (water deposits). Condensers are best cleaned with an inhibited hydrochloric acid solution. Acid will stain hands and clothing and attach concrete. Without inhibitor, it will attach steel. Cover surroundings to guard against splashing. Vapors from vent pipe are not harmful but take care to prevent liquid from being carried over by the gases. Warm solution acts more readily but cold solution applied longer is just as effective.

**GRAVITY FLOW METHOD** - Do not add solution faster than vent can exhaust generated gases. When condenser is full, allow solution to remain overnight, then drain condenser and flush with clean water.



**FORCED CIRCULATION METHOD** - Fully open vent pipe when filling condenser. Vent may be closed when condenser is full and pump is operating. Regulate flow to condenser with supply line valve. If pump is non over loading type, valve may be fully close when pump is running.

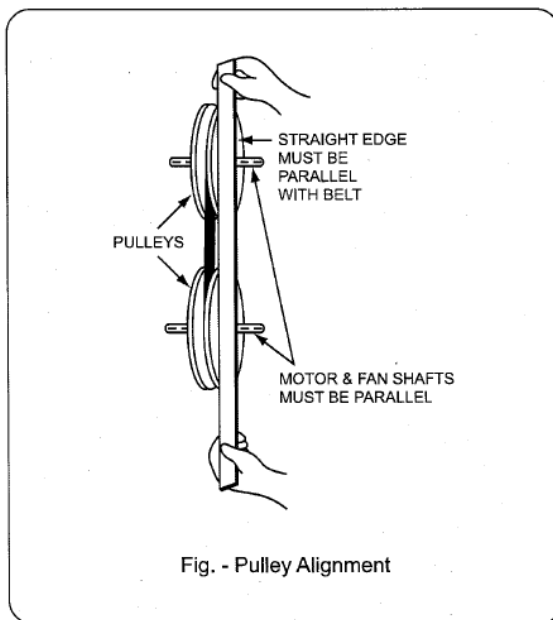
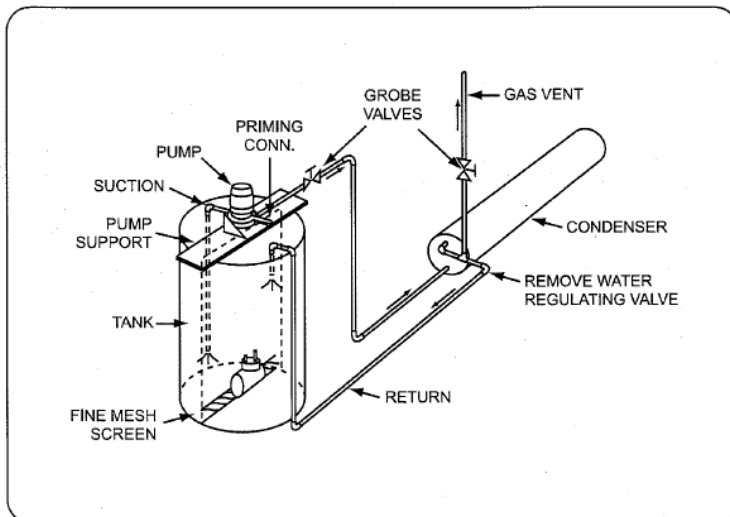
For average scale deposit, allow solution to remain in condenser overnight. For heavy deposits, allow twenty-four hours. Drain condenser and flush with clean water.

**Pulley Alignment and Belt Tension** - It is important have correct pulley alignment and proper belt tension to prevent fan vibration, excessive belt wear and noise.



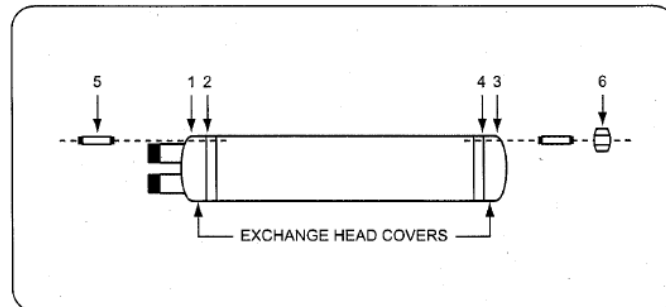
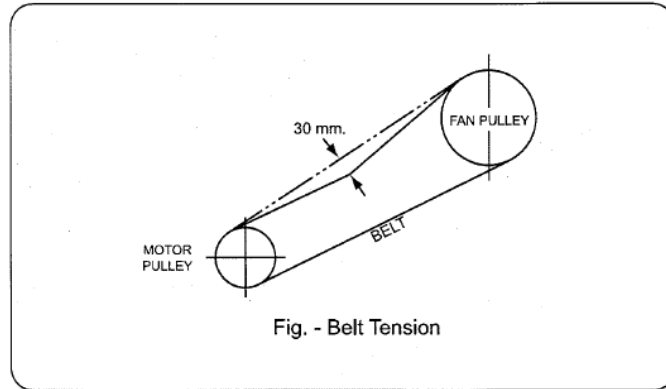
### To Alignment Fan and Motor Pulleys

Loosen fan pulley set screws and slide fan pulley along fan shaft. Make angular alignment by loosening motor from mounting plate. Check alignment with a straight edge.



### To Adjust Belt Tension

1. Loosen four motor hold-down bolts and slide motor to tighten belts.
2. Adjust belt(s) so they can be depressed 30 mm. with one finger midway between pulleys.



## Troubleshooting

SYMPTOMS	PROBABLE CAUSE	REMEDY
Power indicator light off	Power switch off Blower fuse	Turn switch on Replace
Power indicator light on	Fan belt broken Low line voltage Overload open	Replace Check and correct cause Check and correct
Overload indication light on	Fan belt broken Low line voltage Overload open	Replace Check and correct cause Check and correct
Compressor will not run	Overload open Pump motor off Thermostat settings too high Low line voltage Safety devices open	Check and correct cause Start pump motor Set thermostat properly Check and correct Check cause and reset
Insufficient evaporator air	Loose fan open Air filter clogged	Adjust belt tension Clean or replace
Pressure switches trip out frequently	Improper condenser water flow or temp. Dirty condenser tubes or coil Improper entering air temp. Low refrigerant charge	Check and adjust water flow or temp. Clean condenser Check and adjust Add refrigerant
Rattling or squealing fan section	Bearing broken Fan rubbing housing Foreign matter in fan housing Loose or worn belt	Replace Fasten fan wheel to shaft Remove foreign matter Adjust tension or replace
Noisy compressor	Improper compressor mounting	Adjust or loosen mounting bolts

# Technical Specification

## Physical Data (50BY/BL : R-22)

Description		Package Water Cooled Unit										
Model		50BY008SC	50BY010SC	50BY015SC	50BY020	50BY025	50BY030	50BY040	50BL050	50BL060	50BL080	
Nominal Capac	kW	26.38	34.20	55.69	69.49	81.68	100.91	132.06	160.20	198.15	262.46	
	Btu/Hr	90,000	116,683	190,000	237,100	278,700	344,300	450,600	546,600	676,100	895,500	
	Tons	8	10	16	20	23	29	38	46	56	75	
Operating Weight	lb.	587	700	1,280	1,473	1,676	1,830	2,205	4,234	4,763	5,865	
Operating Weight	kg.	266	318	581	668	760	830	1,000	1,921	2,160	2,660	
Operating Charge		Refrigerant type : R-22										
Circuit 1	kg.	7.0	9.5	11.0	15.0	21.0	24.0	30.0	22.0	26.0	31.5	
	kg.	-	-	-	-	-	-	-	22.0	26.0	31.5	
Compressor	Type	Scroll Compressor				Reciprocating Compressor						
Circuit 1,Circuit	No. of Unloading Cylinders	-	-	-	1	1	1	1	1	-	-	
	No. of Capacity Step	-	-	-	2	2	2	2	2	2	2	
Indoor Fan	Type	Belt Driven Centrifugal										
	No.	1	1	1	1	1	1	2	2	2	2	
	Diameter	inch	12	12	15	16	18	18	15	20	20	20
	Std. Fan revolution speed	rpm	789	800	794	860	643	720	820	538	659	730
	Max. Fan revolution speed	rpm	1,500	1,500	1,200	1,200	1,100	1,100	1,200	1,200	1,200	1,200
	No. of Belts...Fan Pulley PD	inch	1...9	1...9	1...9	1...9	2...11	2...10	2...12	2...16	2...16	2...16
	Motor Pulley PDR	inch	5	5	5	6	5	5	7	6	7	8
	Motor Std.	Kw/HP	0.75 (1HP)	1.5 (2HP)	2.2 (3HP)	3.7 (5HP)	3.7 (5HP)	5.5 (7.5HP)	7.5 (10HP)	7.5 (10HP)	11 (15HP)	15 (20HP)
	Alternate	kW	1.5 (2HP)	-	3.7 (5HP)	5.5 (7.5HP)	5.5 (7.5HP)	7.5 (10HP)	5.5 (7.5HP)	-	-	-
BELT		B-39	B-38	B-42	B-43	B-58	B-55	B-65	B-122	B-122	B-122	
Indoor Coil	Tube/Fin type	3/8 Copper tube / Aluminium fin							1/2 Copper tube / Aluminium fin			
	Row...Fin per Inch	3...15	3...15	3...13	3...13	4...15	4...15	4...15	3...15	4...13	4...13	
	Total Face Area	sq.ft.	5.81	7.85	11.72	15.60	15.60	18.83	24.53	40.89	40.89	49.71
Return Air Filters		Field Supplied										
	No.	1	1	1	1	6	6	8	15	15	18	
	Size(WxHxD)	inch	34.5x23.0	46.0x23.0	46x35	62x35	20x23x1	20x23x1	20x23x1	20x23x1	20x23x1	
Safety Device	Hi-Pressure Switch	psig	360 / 270 (Cut out / Cut in) - Auto Restart type									
	Low-Pressure Switch	psig	30 / 60 (Cut out / Cut in) - Auto Restart type									

PDR : Pitch Diameter Range  
 PD : Pulley Pitch Diameter  
 All water connection sizes are in MPT.

Note : NOMINAL TOTAL CAPACITY BASED ON NOMINAL EVAPORATOR AIR, 67°F ENTERING WET BULB AND 95°F CONDENSER LEAVING WATER TEMPERATURE.

## Condenser Water Connecting Pipe Size

Unit 50BY/BL		008 to 015	020 to 030	040	050 to 060	080
Size	Condenser Inlet No. ....inch	1.....2	1.....2-1/2	1.....3	2.....2-1/2	2.....3
	Condenser Outlet No. ....inch	1.....2	1.....2-1/2	1.....3	2.....2-1/2	2.....3

# Technical Specification

## Physical Data (50BF : R-407C)

Description		Package Water Cooled Unit									
Model		50BF008SC	50BF010SC	50BF015SC	50BF020	50BF025	50BF030	50BF040	50BF050	50BF060	50BF080
Nominal Capacity	kW	26.38	34.20	55.69	69.49	81.68	100.91	132.06	160.20	198.15	262.46
	Btu/Hr	90,000	116,683	190,000	237,100	278,700	344,300	450,600	546,600	676,100	895,500
	Tons	8	10	16	20	23	29	38	46	56	75
Operating Weight	lb.	587	700	1,280	1,473	1,676	1,830	2,205	4,234	4,763	5,865
Operating Weight	kg.	266	318	581	668	760	830	1,000	1,921	2,160	2,660
Operating Charge		Refrigerant type : R-407C									
Circuit 1	kg.	7.0	9.5	11.0	15.0	21.0	24.0	30.0	22.0	26.0	31.5
	kg.	-	-	-	-	-	-	-	22.0	26.0	31.5
Compressor		Scroll Compressor					Reciprocating Compressor				
Circuit 1, Circuit 2	No. of Unloading Cylinders	-	-	-	1	1	1	1	1	-	-
	No. of Capacity Step	-	-	-	2	2	2	2	2	2	2
Indoor Fan		Belt Driven Centrifugal									
Type		Belt Driven Centrifugal									
No.		1	1	1	1	1	1	2	2	2	2
Diameter inch		12	12	15	15	18	18	15	20	20	20
Std. Fan revolution speed rpm		789	800	794	960	643	720	820	538	659	730
Max. Fan revolution speed rpm		1,500	1,500	1,200	1,200	1,100	1,100	1,200	1,200	1,200	1,200
No. of Belts..Fan Pulley PE inch		1..9	1..9	1..9	1..9	2..11	2..10	2..12	2..16	2..16	2..16
Motor Pulley PDR inch		5	5	5	6	5	5	7	6	7	8
Motor Std. Kw/HP		0.75 (1HP)	1.5 (2HP)	2.2 (3HP)	3.7 (5HP)	3.7 (5HP)	5.5 (7.5HP)	7.5 (10HP)	7.5 (10HP)	11 (15HP)	15 (20HP)
Alternate kW		1.5 (2HP)	-	3.7 (5HP)	5.5 (7.5HP)	5.5 (7.5HP)	7.5 (10HP)	5.5 (7.5HP)	-	-	-
BELT		B-39	B-38	B-42	B-42	B-58	B-55	B-65	B-122	B-122	B-122
Indoor Coil		3/8 Copper tube / Aluminium fin						1/2 Copper tube / Aluminium fin			
Tube/Fin type		3/8 Copper tube / Aluminium fin						1/2 Copper tube / Aluminium fin			
Row..Fin per Inch		3..15	3..15	3..13	3..13	4..15	4..15	4..15	3..15	4..13	4..13
Total Face Area sq.ft.		5.81	7.85	11.72	15.60	15.60	18.83	24.53	40.89	40.89	49.71
Return Air Filters		Field Supplied									
No.		1	1	1	1	6	6	8	15	15	18
Size(WxHxD) inch		34.5x23.0	46.0x23.0	46x35	62x35	20x23x1	20x23x1	20x23x1	20x23x1	20x23x1	20x23x1
Safety Device		360 / 270 (Cut out / Cut in) - Auto Restart type									
Hi-Pressure Switch		30 / 60 (Cut out / Cut in) - Auto Restart type									
Low-Pressure Switch		30 / 60 (Cut out / Cut in) - Auto Restart type									

PDR : Pitch Diameter Range  
 PD : Pulley Pitch Diameter  
 All water connection sizes are in MPT.

**Note:** Nominal total capacity based on  
 1. Entering Air temp. 80°Fdb/67°Fwb  
 2. Condenser Water Temp inlet / outlet = 90/100°F

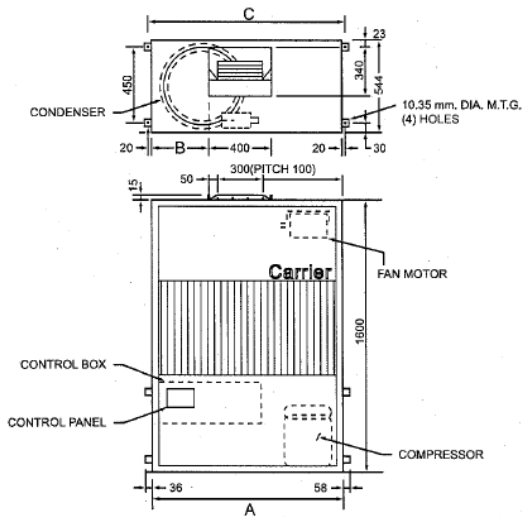
## Condenser Water Connecting Pipe Size

Unit 50BF		008 to 015	020 to 030	040	050 to 060	080
Size	Condenser Inlet No. ....inch	1.....2	1.....2-1/2	1.....3	2.....2-1/2	2.....3
	Condenser Outlet No. ....inch	1.....2	1.....2-1/2	1.....3	2.....2-1/2	2.....3

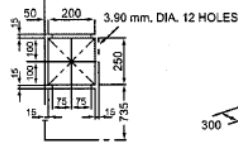
# Unit Dimensions

## 50BY/BF008,010

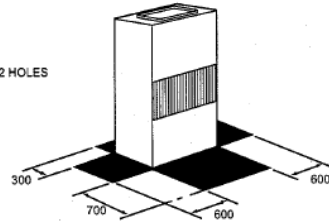
Unit	A	B	C
50BY/BF008	1090	264	1130
50BY/BF010	1340	470	1380



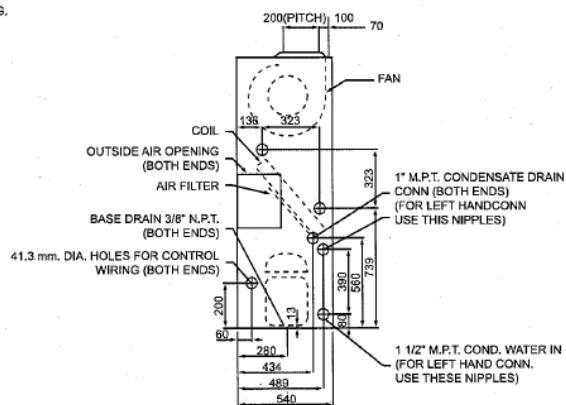
OUTSIDE AIR OPENING



RECOMMENDED SERVICE SPACE (mm.)

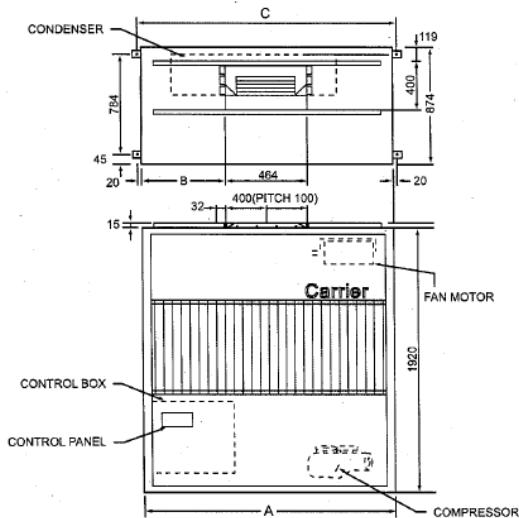


RIGHT END VIEW

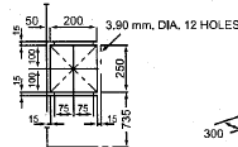


## 50BY/BF015, 020

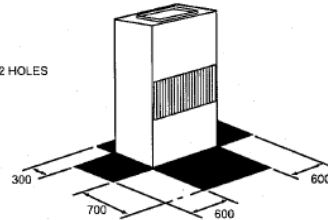
Unit	A	B	C
50BY/BF015	1490	513	1530
50BY/BF020	1740	638	1780



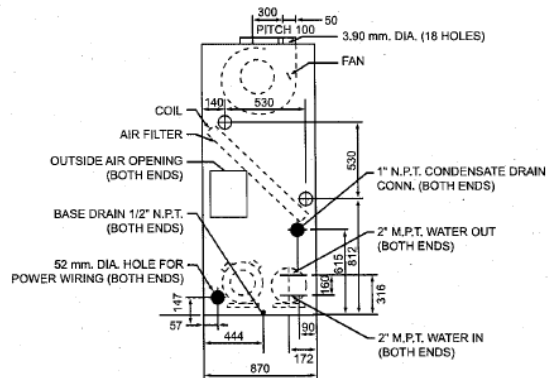
OUTSIDE AIR OPENING



RECOMMENDED SERVICE SPACE (mm.)



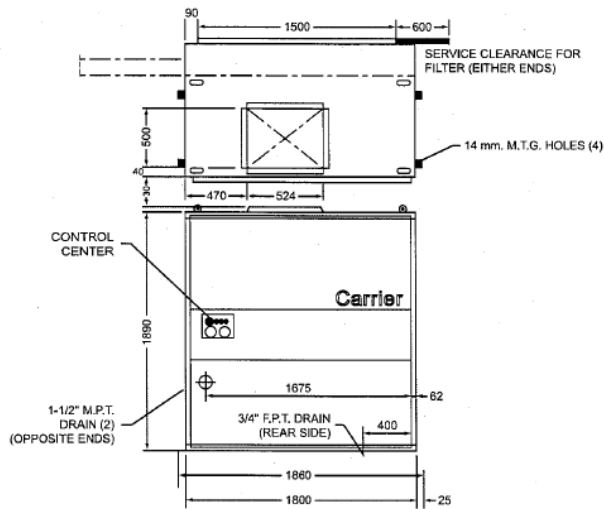
RIGHT END VIEW



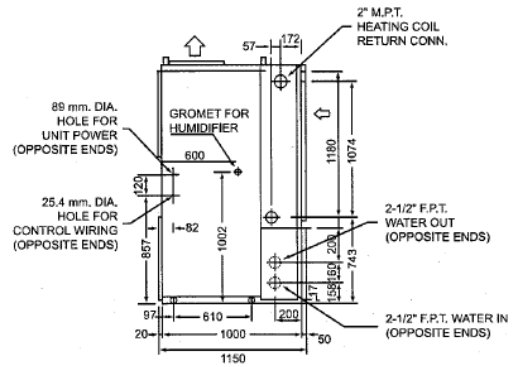
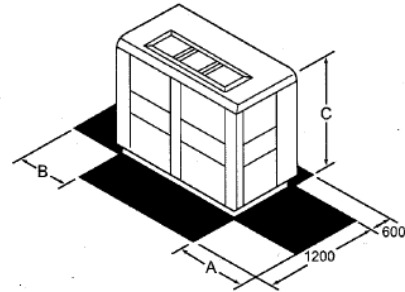
# Unit Dimensions

## 50BY/BF025, 030

Unit	A	B	C
50BY/BF025,030	800	1800	1890

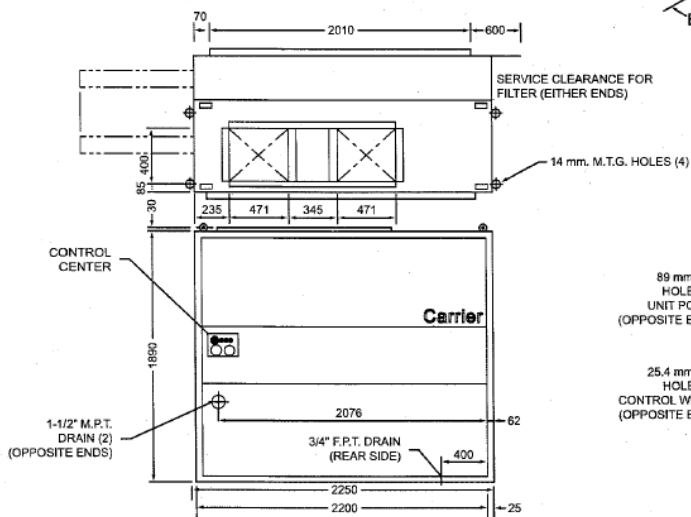


RECOMMENDED SERVICE SPACE (mm.)

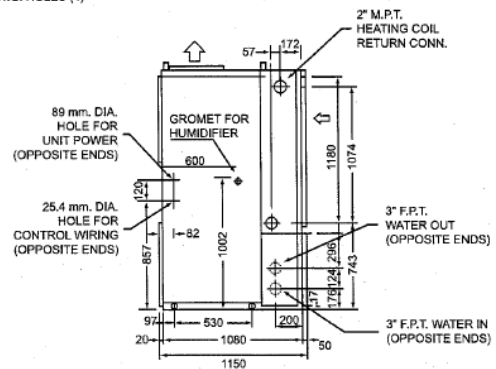
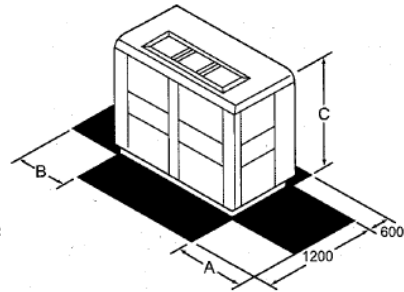


## 50BY/BF040

Unit	A	B	C
50BY/BF040	800	2300	1890



RECOMMENDED SERVICE SPACE (mm.)

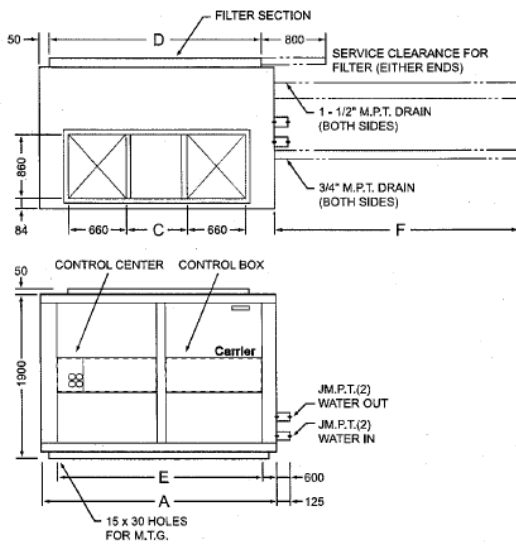


# Unit Dimensions

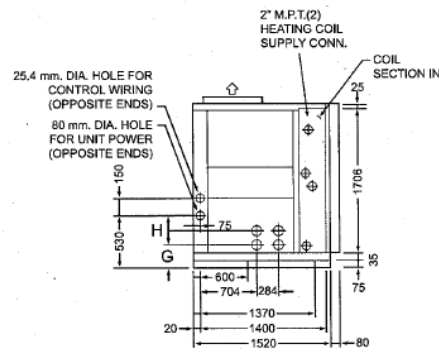
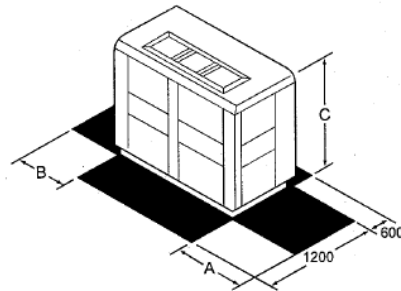
50BL/BF050, 060, 080

Unit	A	B	C	D	E	F	G	H	J
50BL/BF050	2600	334	612	2500	1400	2600	232	160	2.5"
50BL/BF060	2600	334	612	2500	1400	2600	232	160	2.5"
50BL/BF080	3100	534	712	3000	1900	3100	250	124	3"

Unit	A	B	C
50BL/BF050	2600	800	1900
50BL/BF060	2600	800	1900
50BL/BF080	3100	800	1900



RECOMMENDED SERVICE SPACE (mm.)



# Electrical Data

Unit Model 50BY/BL/BF	Nominal Voltage	Voltage Range		Compressor			Indoor fan Motor		Power Wire (sq.m.m.)	Ground Wire (sq.m.m.)	Recommended field CB (AT)
		Min	Max	RLA	LRA	QTY	kW	RLA			
008SC	380V/3Ph/50Hz	360	440	1 ... 18	1 ... 111	1	0.75	1.8	6	2.5	25
010SC	380V/3Ph/50Hz	360	440	1 ... 22	1 ... 118	1	1.50	3.3	10	4	35
015SC	380V/3Ph/50Hz	360	440	1 ... 33	1 ... 174	1	2.20	4.7	25	6	60
020	380V/3Ph/50Hz	360	440	1 ... 44	1 ... 153	1	3.70	8.0	35	10	80
025	380V/3Ph/50Hz	360	440	1 ... 44	1 ... 153	1	3.70	8.0	35	10	80
030	380V/3Ph/50Hz	360	440	1 ... 58	1 ... 210	1	5.50	11.5	50	10	100
040	380V/3Ph/50Hz	360	440	1 ... 97	1 ... 307	1	7.50	14.0	95	16	150
050	380V/3Ph/50Hz	360	440	2 ... 44	2 ... 153	1	7.50	14.0	95	16	150
060	380V/3Ph/50Hz	360	440	2 ... 58	2 ... 210	1	11.00	21.6	150	16	200
080	380V/3Ph/50Hz	360	440	2 ... 97	2 ... 307	1	15.00	28.3	240	25	300

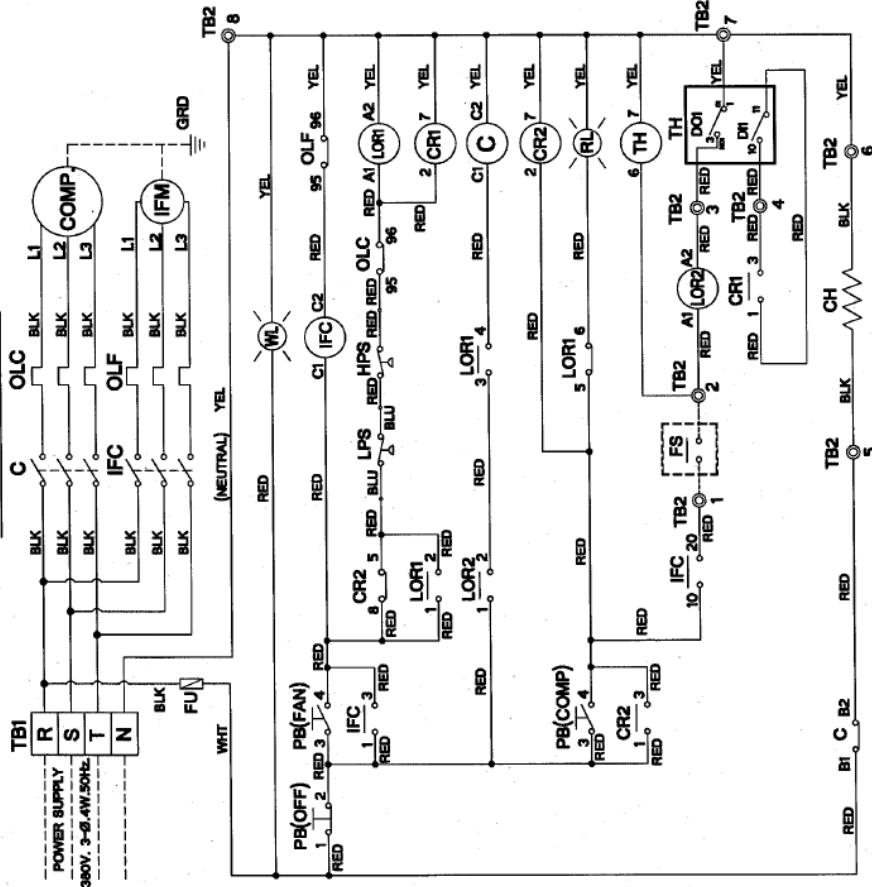
Note:  
Unit 50BY/BF050, 060, 080 have 2 compressors. Values are for each compressor  
FLA : Full Load Amps  
RLA : Rated Load Amps  
LRA : Locked Rotor Amps  
MOCP: Maximum Overcurrent Protective Device



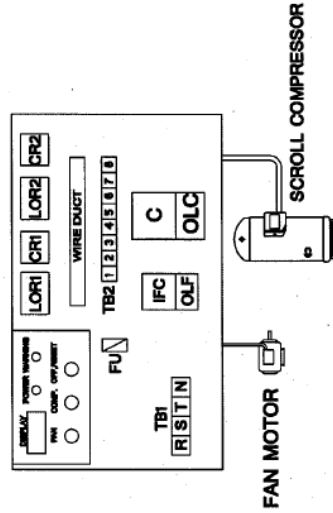


# Electrical Wiring Diagram

**SCHEMATIC DIAGRAM**



**COMPONENT ARRANGEMENT**



**LEGEND:**

C	COMPRESSOR CONTACTOR	LPS	LOW PRESSURE SWITCH
CH	CHAMKCAISE HEATER	OLC	OVERLOAD RELAY COMP
COMP	COMPRESSOR	OLF	OVERLOAD RELAY FAN MOTOR
CR	CONTROL RELAY	PB	PUSH BUTTON
DI1	DIGITAL INPUT	RL	RED LIGHT (WARNING)
DOI	DIGITAL OUTPUT	TB	TERMINAL BLOCK
FS	FLOW SWITCH	TH	THERMOSTAT ELECTRONIC CONTROLLER
FU	FUSE	WL	WHITE LIGHT (POWER)
HPS	HIGH PRESSURE SWITCH	---	FIELD WIRING
IFC	INDOOR FAN CONTACTOR	---	FACTORY WIRING
IFM	INDOOR FAN MOTOR	---	---
LOR	LOCK OUT RELAY	---	---

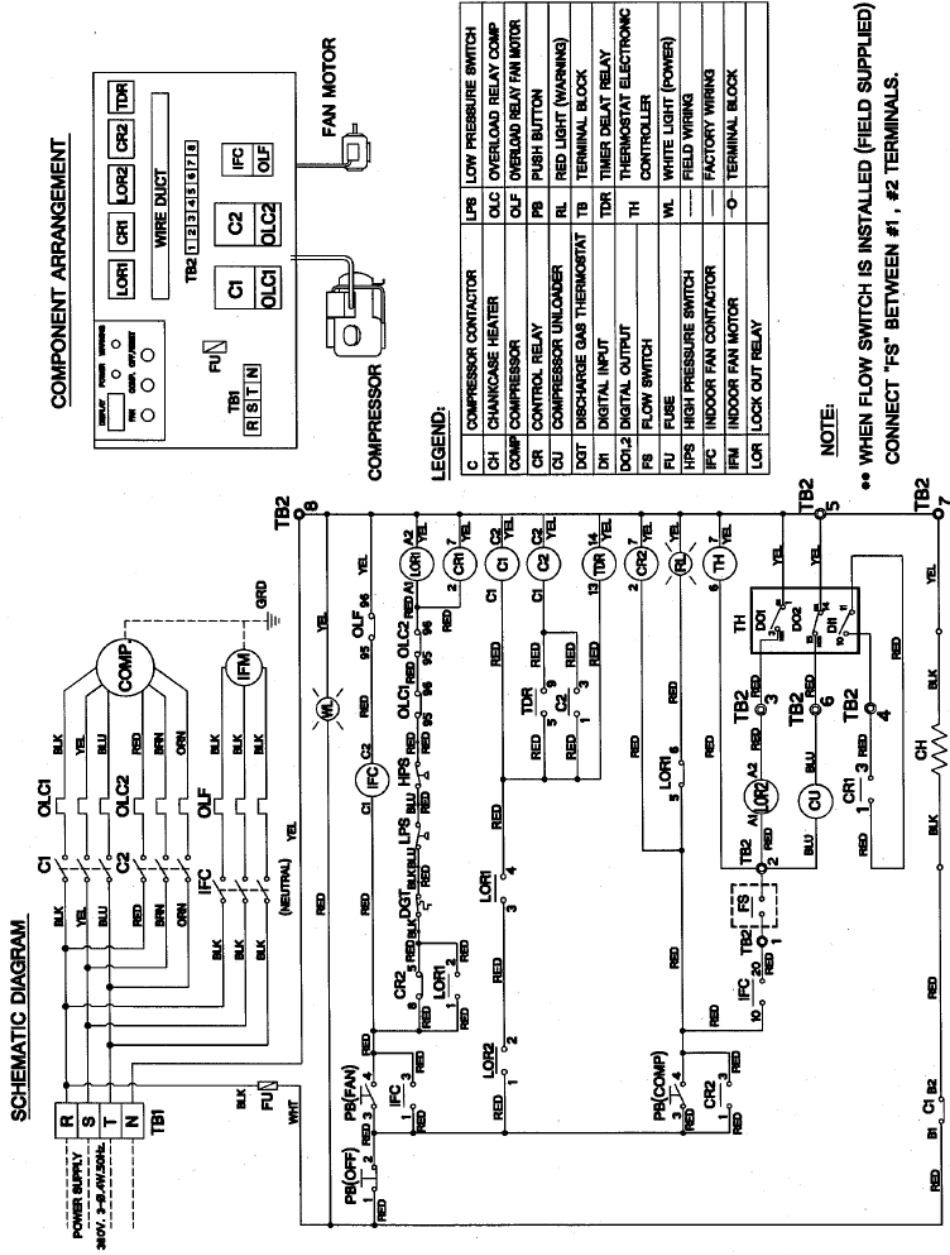
**NOTE:**

•• WHEN FLOW SWITCH IS INSTALLED (FIELD SUPPLIED) CONNECT "FS" BETWEEN #1 , #2 TERMINALS.

Model: 50BY/BF015SC

ITEM: 39SX0040 (PT300150)

# Electrical Wiring Diagram

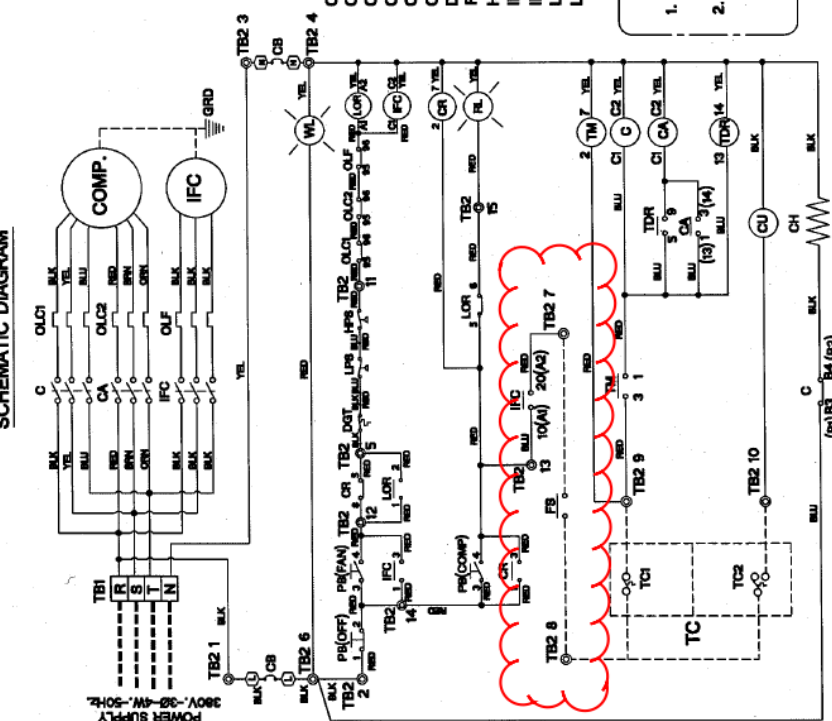


ITEM. 39SX0041 (PT300151)

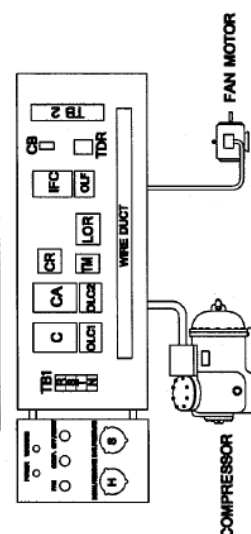
MODEL: 50BY/BF020

# Electrical Wiring Diagram

**SCHMATIC DIAGRAM**



**COMPONENT ARRANGEMENT**



**LEGEND:**

- C(A) COMPRESSOR CONTACTOR
- CB CIRCUIT BREAKER (WIRING CONTROL)
- CH CRANKCASE HEATER
- COMP COMPRESSOR
- CR CONTROL RELAY
- CU COMPRESSOR UNLOADER
- DGT DISCHARGE GAS THERMOSTAT
- FS FLOW SWITCH
- HPS HIGH PRESSURE SWITCH
- IFC INDOOR FAN CONTACTOR
- IFM INDOOR FAN MOTOR
- LOR LOCK OUT RELAY
- LPS LOW PRESSURE SWITCH
- OLC OVERLOAD COMPRESSOR
- OLF OVERLOAD FAN
- PB PUSH BUTTON
- RL RED LIGHT (WARNING)
- TDR TIMER DELAY RELAY
- TM TERMINAL BLOCK
- TB THERMOSTAT COOLING
- TC THERMOSTAT COOLING
- WL WHITE LIGHT (POWER)
- FACTORY WIRING (CONTROL)
- FIELD POWER SUPPLY
- TERMINALS (TB2)

**NOTE:**

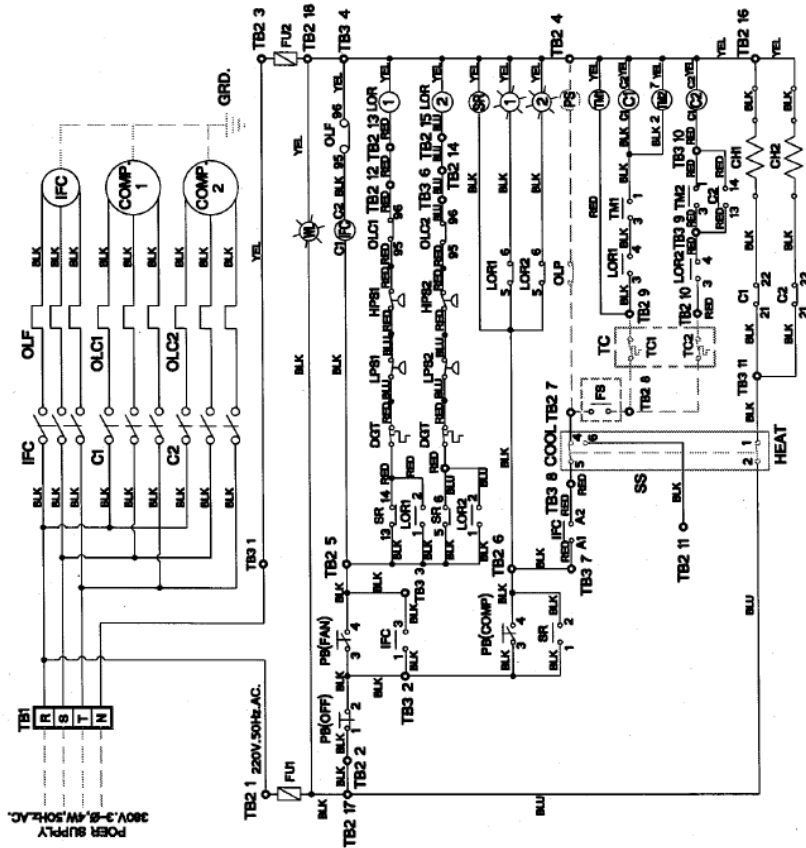
1. WHEN FLOW SWITCH IS INSTALLED (FIELD SUPPLIED) CONNECT "FS" BETWEEN #7, #8 TERMINALS.
2. INSTALL SINGLE STAGE THERMOSTAT BETWEEN #8 AND #9 IF COMPRESSOR UNLOADING (ONE-BANK) IS REQUIRED, USE TWO SINGLE STAGE THERMOSTAT OR ONE TWO-STAGE THERMOSTAT

Model:50BY/BF025.030,040

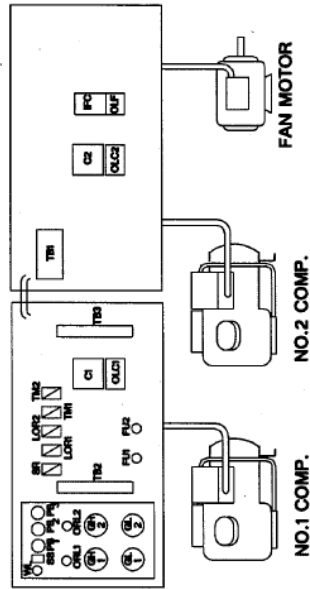
ITEM.39SX0042 (PT300152,A)

# Electrical Wiring Diagram

**SCHEMATIC DIAGRAM**



**COMPONENT ARRANGEMENT**



- NOTE:**
1. CONNECT AUXILIARY CONTACTS (NORMALLY OPEN) FOR WATER PUMP OR FLOW SWITCH BETWEEN TERMINAL#7 AND #6 ON TB2
  2. CONNECT A FIELD SUPPLIED THERMOSTAT BETWEEN TERMINAL#8 AND #9 , #6 AND #10

**LEGEND:**

C	CONTACTOR COMPRESSOR	OLP	OVERLOAD RELAY, PUMP MOTOR
CH	CRANKCASE HEATER	ORL	ORANGE LIGHT (WARNING)
COMP	COMPRESSOR	PB	PUSH BUTTON
DGT	DISCHARGE GAS THERMOSTAT	PS	PUMP STARTER
FS	FLOW SWITCH	SR	STARTING AUX. RELAY
FU	FUSE	SS	SELECTOR SWITCH
HPS	HIGH PRESSURE SWITCH	TB	TERMINAL BLOCK
IFC	INDOOR FAN CONTACTOR	TC	THERMOSTAT, COOLING
IFM	INDOOR FAN MOTOR	TM	TIMER
LOR	LOCK OUT RELAY	WL	WHITE LIGHT
LPS	LOW PRESSURE SWITCH	---	FACTORY WIRING
OLC	OVERLOAD RELAY, COMP/MOTOR	---	FIELD WIRING
OLF	OVERLOAD RELAY, FAN MOTOR	⊕	TERMINAL (TB) 2.3

PT300002.F  
ITEM NO. 39SX0002

50BLO50,060,080  
ITEM NO. 39SX0002 (PT300002.F)



**Carrier**

A United Technologies Company



บริษัท แครีเยอร์ (ประเทศไทย) จำกัด ชั้น 14-15 เลขที่ 1858/63-74 ถนนบางนา-ตราด กม.4.5 แขวงบางนา เขตบางนา กรุงเทพฯ 10260 โทร: 0-2762-9222 แฟกซ์: 0-2751-4778  
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50BYBL/09/2015