



# INSTALLER'S GUIDE

**Models:**

**A.G.A. Models:**

- BYC024H1L,1LN
- BYC030H1L,1LN
- BYC036H1L,1LN,1H,3L,4L
- BYC042H1L,1LN,3L

**C.S.A. Models:**

- BYC024HSL,SH
- BYC030HSL,SH
- BYC036HSL,SM,SH,UL,UM,VL,VM
- BYC042HSL,SH,UL,UH

*Note: Canadian models not design certified by A.G.A.*

## Combination Cooling/ Gas Heat Rooftops

Library	Service Literature
Product Section	Unitary
Product	Rooftop - Lt. Comm. Single - Zone
Model	BYC
Literature Type	Installer's Guide
Sequence	7
Date	May 1987
File No.	SV-UN-RT-BYC-IN-7 5/87
Supersedes	BYC-IN-7 DATED 8/86

### Important

Read the entire manual before beginning installation procedures.

**WARNING: BODILY INJURY CAN RESULT FROM HIGH VOLTAGE ELECTRICAL COMPONENTS, FAST MOVING FAN DRIVES AND COMBUSTIBLE GAS. FOR PROTECTION FROM THESE INHERENT HAZARDS DURING INSTALLATION AND SERVICING, THE ELECTRICAL SUPPLY MUST BE DISCONNECTED AND THE MAIN GAS VALVE MUST BE TURNED OFF. IF OPERATING CHECKS MUST BE PERFORMED WITH THE UNIT OPERATING, IT IS THE TECHNICIAN'S RESPONSIBILITY TO RECOGNIZE THESE HAZARDS AND PROCEED SAFELY.**

**WARNING: DO NOT CONNECT GAS PIPING TO THE UNIT UNTIL A LINE PRESSURE TEST HAS BEEN COMPLETED. DAMAGE TO THE GAS VALVE MAY RESULT IN AN UNSAFE CONDITION. THIS UNIT SHOULD NEVER BE EXPOSED TO GAS LINE PRESSURE IN EXCESS OF 14 INCHES WATER COLUMN.**

**WARNING: ALL POWER LEGS MAY NOT BE BROKEN BY CONTACTORS. SEE WIRING DIAGRAM ON UNIT CONTROL BOX COVER.**

This unit, as shipped from the factory, is designed to use natural gas only.

Since The Trane Company has a policy of continuous product improvement, it reserves the right to change specifications and design without notice. The installation and servicing of the equipment referred to in this booklet should be done by qualified, experienced technicians.

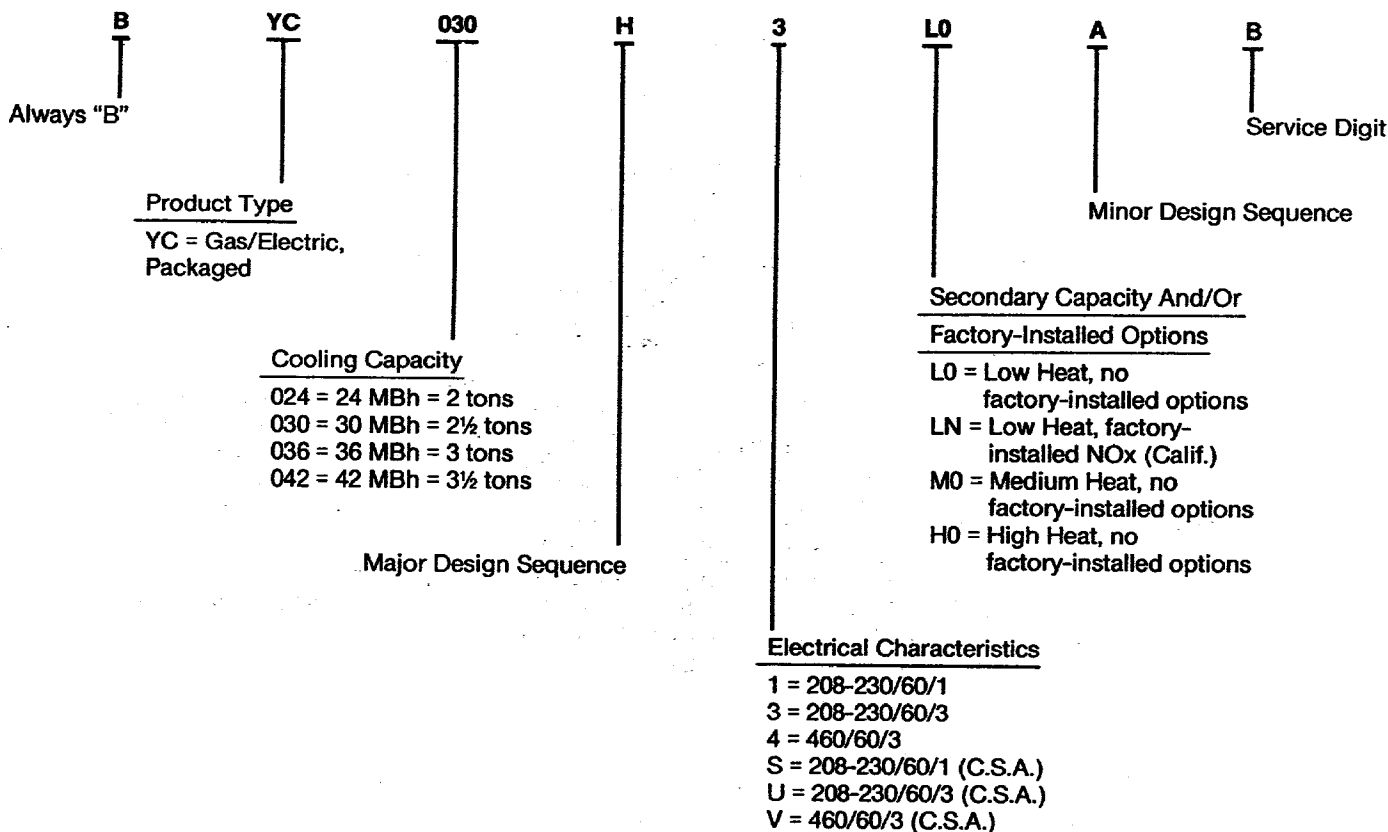
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## Unit Model Number Description

LCG products are identified by a multiple-character model number that precisely identifies a particular type of unit. An explanation of this is shown below. It will enable the owner or

service engineer to define operation, components and applicable accessories for a specific unit.



## General Information

Read this manual carefully before attempting to install, operate or perform maintenance on this unit. Installation and maintenance must be performed by qualified service technicians except where noted.

As shipped from the factory, this unit is for use with natural gas only, and is designed certified by the American Gas Association or the Canadian Standards Association. Canadian models are not design certified by A.G.A.

Model BYC024-042H heating/cooling units are designed for outdoor mounting with a vertical and side condenser discharge. They can be located either at ground level or on a roof, in accordance with local codes or the National Fuel Gas Code (ANSI-Z223.1-1984). Since these units are designed exclusively for outdoor operation, additional flue venting systems are not required. Each unit contains an operating charge of Refrigerant-22 as shipped.

# Unit Accessories

*High Altitude Kit	All Models	BAYHAKT007
Coil Guards	BYC024H-030H	BAYGARD001
Coil Guards	BYC036H-042H	BAYGARD002
Low Ambient Damper	All Models	AY28X079
*LP Conversion Kit	All Models	BAYLPKT010
*Start Capacitor	BYC024H1-030H1	BAYSKT005
	BYC036H1-042H1	BAYKST006
Full System Roof Curb	All Models	BAYCURB019
Supply Return Plenum W/Manual Outside Air	All Models	BAYPLNM013
Supply Return Plenum W/Economizer	All Models	BAYPLNM014
*Crankcase Heater	BYC024H-042H (Single Phase Only)	BAYCCHT001

\*These accessories are design certified by A.G.A.

## Installation

### Unit Location and Clearances

Preferably, the unit should be located so there are no obstructions above it. However, if this is not possible, the minimum unobstructed space above the vertical air discharge should be 12 feet, measured from the top of the unit. The unit should not be enclosed on more than two sides. See Figures 1 and 2.

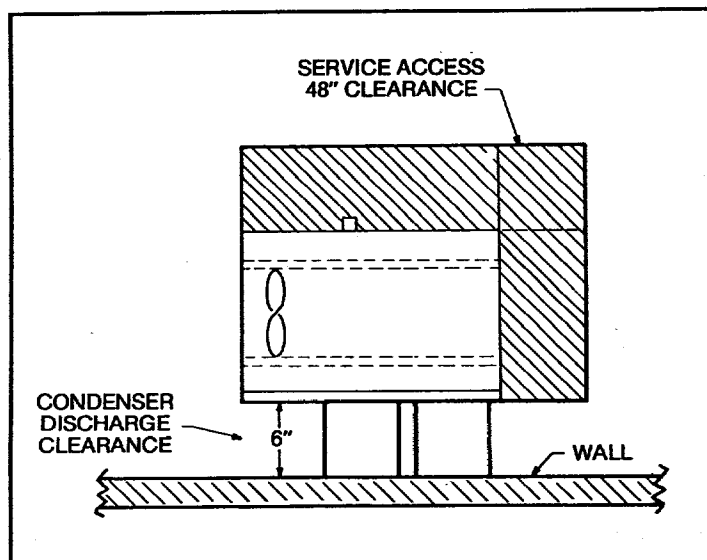


Figure 1 - Side of Building Installation—Top View

To provide proper airflow to the condenser and proper access for servicing the unit, the clearances shown in Figures 1 and 2 are recommended as minimum. It is recommended that 48-inches be provided for front and side access for all installations. A minimum of 24-inches clearance is required on all sides except the duct side - 6-inches minimum. Refer to Figure 3 and Table 1 for unit dimensions.

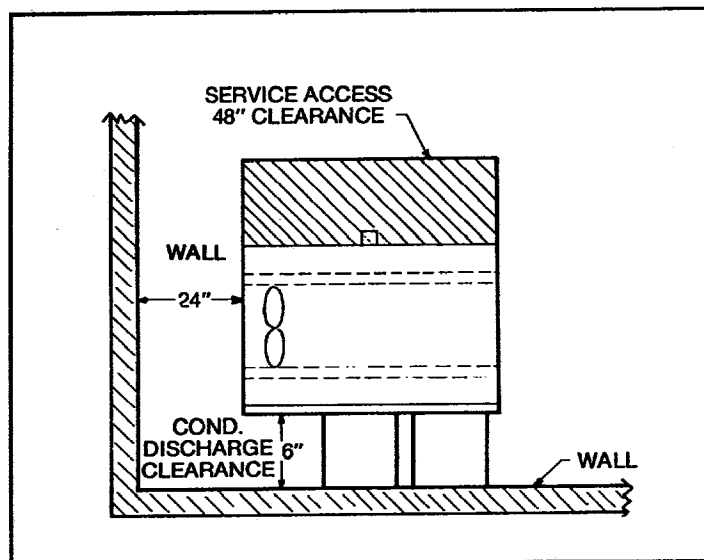


Figure 2 - Corner of Building Installation—Top View

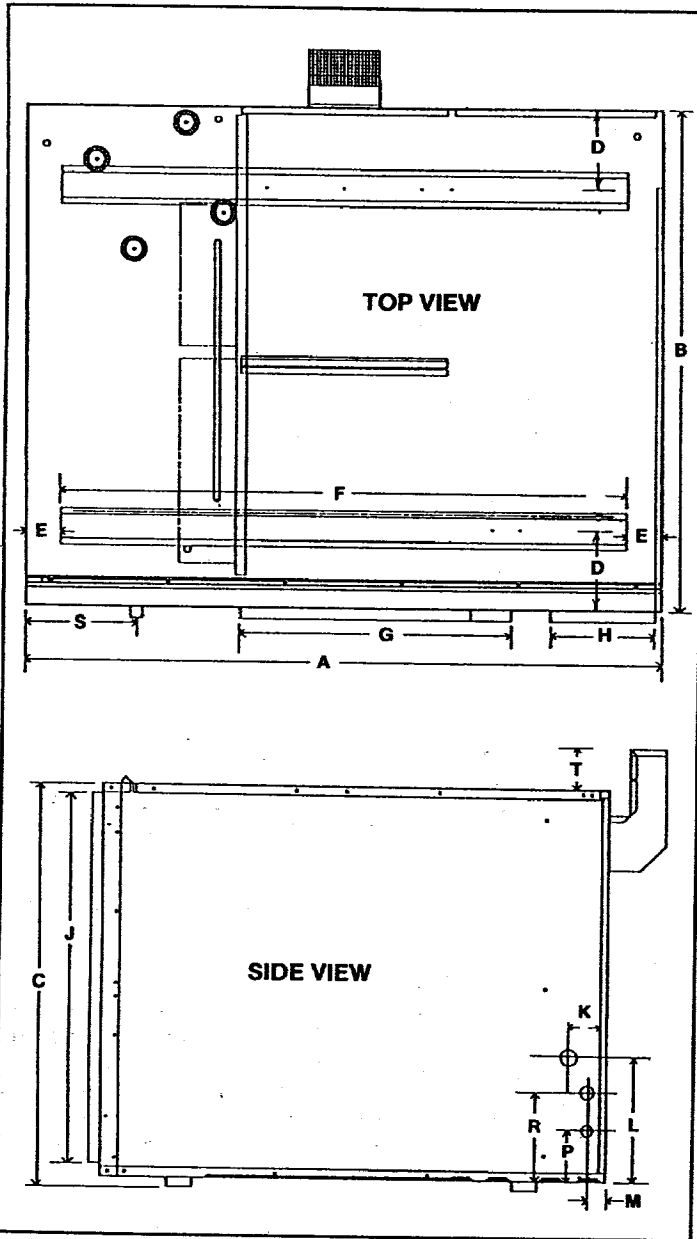
### Unit Inspection

When the unit is delivered to the jobsite, inspect all components for damage. Manually rotate the condenser fan to be sure it revolves freely. Report any damage or material shortage to the delivering carrier and record this information on the bill of lading. File damage claims with the carrier, and notify the appropriate Trane sales representative before installing a damaged unit. Any material shortages should also be reported directly to the Trane sales representative.

Compare the electrical data on the unit nameplate with the ordering and shipping information to verify that the correct unit has been received.

**Table 1 - Unit Dimensions**

Unit Size	Unit									Connections						
	Width	Depth	Height	Base Rails			Duct Flange			Gas		Electrical			Drain	Flue
	A	B	C	D	E	F	Supply G	Return H	J	K	L	M	P	R	S	T
024-030H	43½	34	31¼	7½	2½	38½	14½	8	28½	2½	9¼	1½	4	7	10	3¼
036H	49	39	31¼	7½	2½	43½	17½	11	28½	2½	9¼	1½	4	7	10	3¼
042H	49	39	31¼	7½	2½	43½	20½	8	28½	2½	9¼	1½	4	7	10	3¼



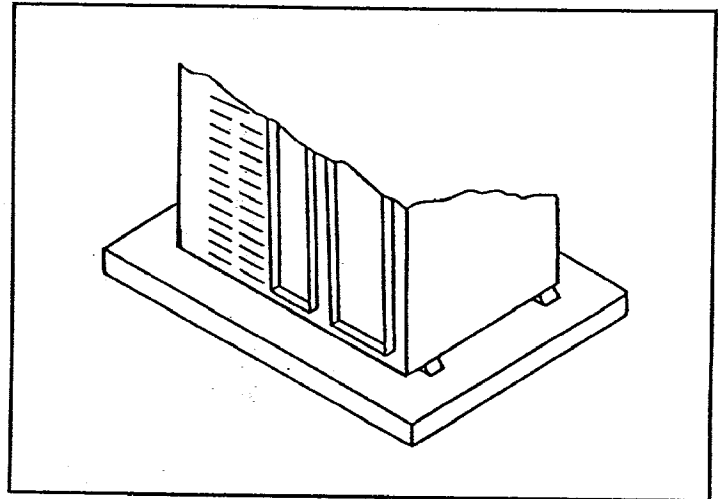
**Figure 3 - Unit Dimensions**

**Unit Mounting**

This unit is designed for mounting on combustible flooring or Class A, B or C roofing material.

For ground level installation, construct a level slab not less than 4-inches thick and extending a minimum of 6-inches beyond the sides of the cabinet in all directions as shown in Figure 4. Provide a gravel apron at least 12-inches on the sides at which air enters the condenser coil. A gravel apron is not required if some other means is used to prevent the growth of vegetation next to the coil.

Units are shipped with two 3/4-inch high mounting rails welded on the unit base pan. The mounting rails are inset 2½-inches from



**Figure 4 - Grade Level Installation**

either end of the unit and approximately 7½-inches from either side.

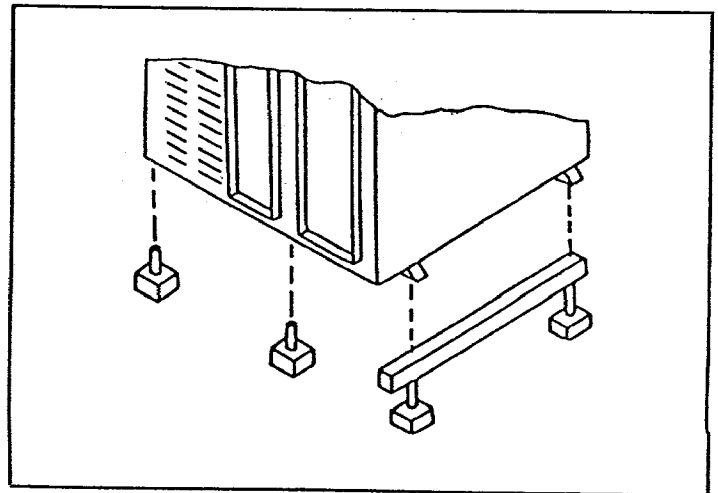
For rooftop installation, the unit support may be any convenient height. Wood or steel runners or steel pipe supports are recommended for mounting the unit, unless the full roof curb accessory is used.

If pipe supports are used, a minimum of six supports are recommended. Supports should be placed at both ends as well as in the middle of each mounting rail.

Cross members across the mounting rail from the corresponding supports are recommended. See Figure 5. After the supports have been secured to the roof, flash them as necessary.

On a pitched roof, an angle iron frame may be constructed to support the unit. The inset of the mounting rails makes it possible to fit the unit into such a frame. See Figure 6. Be sure the frame construction permits removal of the unit access doors.

The unit must be installed level in all locations.



**Figure 5 - Rooftop Installation with Pipe Supports**

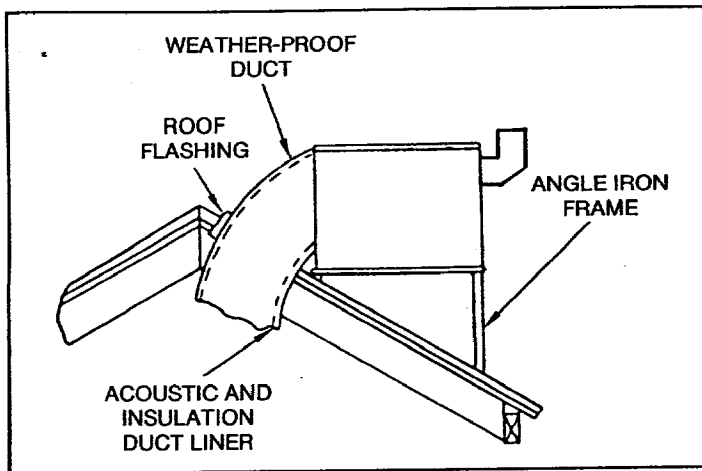


Figure 6 - Pitched Roof Installation

### Condensate Drain

A 3/4-inch copper condensate drain connection is provided on one side of the unit. See Figure 3. Follow local codes and standard piping practices when running the drain line. Pitch the line downward, away from the unit, and avoid long horizontal runs.

### Rigging

All crating should be removed and cleared away from the unit. To prevent damage in rigging, a sling should be used with spreader bars of adequate length. The sling must be placed under and across the mounting rails of the unit. The sling should never be placed lengthwise.

### Ductwork and Filters

Filters are to be used with the BYC024-042H heating/cooling units. There are no provisions for installing filters in these units. A filter rack must be provided by the installer in the ductwork. Affix filter label supplied with unit adjacent to filter access area.

Indoor air fan performance data is shown in Tables 3 through 6. As external static pressure increases, airflow drops off, bhp is reduced and rpm is increased. The airflow should be adjusted for a temperature rise within the range specified on the unit rating name plate.

Table 2 - Filter Data

Unit	Norm. Cfm	Suggested Filter Quantity and Size*	Filter Resistance**
BYC024	800	1 - (16x25x1)	.07
BYC030	1000	1 - (20x25x1)	
BYC036	1200	2 - (16x20x1)	.07
BYC042	1400	2 - (16x25x1)	

\*Based on 300 fpm face velocity.

\*\*Clean filter resistance in inches of water column, 1 inch fiberglass replacement type filters.

Table 3 - Evaporator Fan Performance

Model	Speed	Heating or Cooling	External Static Pressure (W.C.)							
			.10"	.20"	.30"	.40"	.50"	.60"	.70"	.80"
2 TON										
AIRFLOW IN CFM										
BYC024	Low	Cooling	1050	1015	970	920	865	800	730	645
BYC024	Low	Heating	1065	1035	995	950	895	835	765	690
BYC024	High	Cooling	—	—	—	—	1135	1065	975	850
BYC024	High	Heating	—	—	—	—	1165	1100	1025	915
2½ TON										
BYC030	Low	Cooling	1050	1015	970	920	865	800	730	645
BYC030	Low	Heating	1065	1035	995	950	895	835	765	690
BYC030	High	Cooling	1330	1290	1250	1190	1135	1065	975	850
BYC030	High	Heating	1345	1310	1270	1220	1165	1100	1025	915
3 TON										
BYC036	Low	Cooling	1420	1385	1345	1290	1220	1145	1050	930
BYC036	Low	Heating	1435	1405	1365	1320	1255	1185	1100	990
BYC036	High	Cooling	—	—	—	—	1595	1500	1390	1240
BYC036	High	Heating	—	—	—	—	1635	1550	1450	1325
3½ TON										
BYC042	Low	Cooling	1420	1385	1345	1290	1220	1145	1050	930
BYC042	Low	Heating	1435	1405	1365	1320	1255	1185	1100	990
BYC042	High	Cooling	1855	1800	1740	1670	1595	1500	1390	1240
BYC042	High	Heating	1885	1825	1770	1705	1635	1550	1450	1325

#### NOTES:

1. Airflow values are without air filters.
2. Heating airflows are with a dry coil.
3. Cooling airflows are with a wet coil.
4. A dash (—) indicates unit should not be operated at these conditions.

Table 4 - Maximum Nameplate External Static Pressure (Certified by A.G.A.)

Model	Voltage	Max. Static Pressure
BYC024H1L	208-230/60/1	.35
BYC030H1L	208-230/60/1	.35
BYC036H1L	208-230/60/1	.45
BYC036H3L	208-230/60/3	.45
BYC036H1H	208-230/60/1	.45
BYC036H4L	460/60/3	.45
BYC042H1L	208/230/60/1	.45
BYC042H3L	208-230/60/3	.45

Table 5 - Pressure Drop Through Accessories And Filter (Inches W.C.)

Model	CFM	Downflow Plenum With or Without Manual Fresh Air Damper	Downflow Plenum with Economizer (100% Return Air)	(Typical) 15" x 30" Permanent Filter
BYC024	800	0.18	0.18	.04
BYC030	1000	0.24	0.24	.06
BYC036	1200	0.28	0.28	.08
BYC042	1400	0.35	0.35	.10

#### NOTE:

These accessories are not design certified by A.G.A.

## \*Flue Vent Cap Installation

The flue cap, which is located in the electrical compartment to prevent shipping damage, should be installed after the unit has been rigged.

**Note:** Make certain the flue cap top flange is installed under the roof flange.

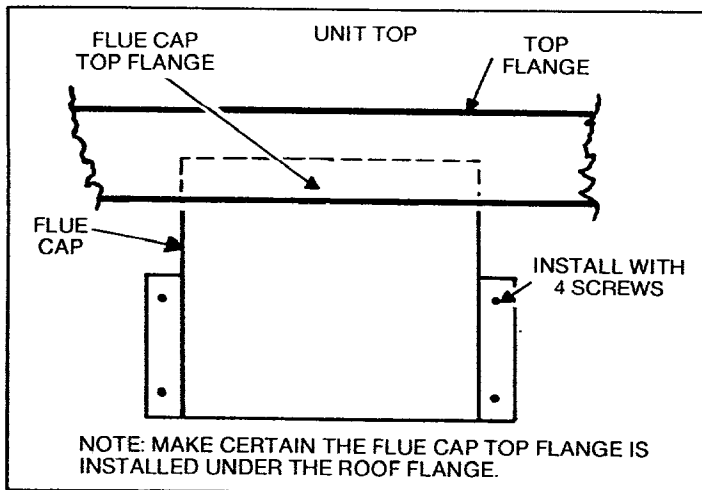


Figure 7 - Flue Vent Installation

## Firing Rate Selection — Domestic Units Only

All units except the BYC036H1H0 and those with LN in the 9th and 10th digit are capable of firing at a low or high rate. All of these units are shipped from the factory equipped for the low firing rate.

If the unit is to be fired at the low rate, scratch an X in the box to the left of the lower input rate.

If the higher input rate is desired, the conversion is made as follows:

1. Be sure the unit electrical disconnect is open.
2. Be sure the manual gas valve is closed.
3. Remove the control, heat and condenser access panels.
4. Remove the presently installed gas orifices and replace with the #40 gas orifices shipped with the unit. The extra orifices are shipped in the lower section of the control compartment.
5. Remove the presently installed combustion air orifice and replace with the one provided in the cloth bag. The combustion air orifice is mounted across the front of the combustion blower with 3 screws. Throw away the changed orifices.
6. Reinstall the control, heat and condenser access panels.
7. Open the manual gas valve.
8. Close the unit electrical disconnect.
9. Follow the heating cycle instructions to test the unit's function.
10. Mark an X in the nameplate block to the left of the higher input block.

Table 6 - Heating Section Data

BYC	024H	030H	036H	036H	042H
Gas Input	60/75	60/75	80/100	125	100/125
No. of Burners	3	3	4	5	5
No. of Heat Exchanger Elements	3	3	4	5	5
Gas Conn. Pipe Size (In.)	1/2	1/2	1/2	1/2	1/2
Min. Gas Pipe Size (In.)					
25 Ft.	1/2	1/2	3/4	3/4	3/4
50 Ft.	3/4	3/4	3/4	3/4	3/4
100 Ft.	3/4	3/4	3/4	3/4	3/4

### NOTE:

For natural gas 900-1100 Btu/Cu. Ft. 0.65 specific gravity, based on approximately 0.4 inch water gauge pipe loss.

BYC-IN-7

## Gas Pressure

Before connecting the unit to a gas supply line, determine the pressure and the Btu rating of the gas. If the pressure is greater than 14-inches water column, install a pressure reducing regulator either at the supply source or in the branch circuit serving the heating section. If gas pressure is below the minimum supply pressure specified on the unit nameplate, contact the local gas company.

**Note:** The maximum pressure that the manifold pressure regulator can operate effectively is 14-inches water column.

The manifold pressure regulator is factory installed and adjusted to 3.5-inches water column.

## Gas Piping Installation

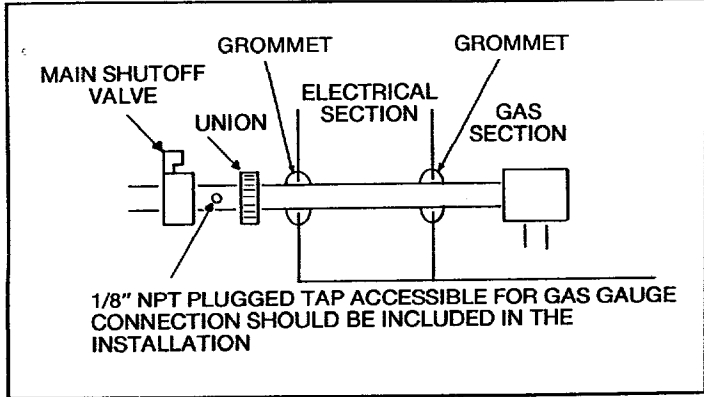
Recommended gas pipe sizes are listed in Table 6.

The main shutoff valve must be installed outside of the unit. Installation should comply with local codes. The main shutoff is not furnished by Trane.

All pipe connections should use a piping joint sealant, which is resistant to liquified petroleum gas.

Provide and install a ground joint union between the combination gas valve-regulator and the main shutoff valve. This will allow easy access to the burner if servicing is required. See Figure 8.

After gas piping has been installed, be sure that both grommets remain in proper location. Also make sure the grommets form a seal tightly around the gas pipe. See Figure 8.



**Figure 8 - Recommended Gas Piping Installation**

**WARNING: NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

Check all gas piping for leaks using a soap and water solution or other acceptable methods.

The heating system and its individual shutoff valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig. The heating system must be isolated from the gas supply piping by closing its individual manual shutoff valve during any pressure testing of the gas supply piping at test pressures equal to or less than 1/2 psig.

**Wiring**

**WARNING: OPEN THE ELECTRICAL DISCONNECT SWITCH AND SECURE TO PREVENT ACCIDENTAL STARTING OF THE EQUIPMENT. SERVICING THE COMPRESSOR WITH THE JUNCTION BOX COVER REMOVED MAY BE HAZARDOUS IN**

THE EVENT THAT DAMAGE HAS OR DOES OCCUR TO THE GLASS SEALED TERMINALS. TERMINAL FAILURE MAY RESULT IN REFRIGERANT/OIL PRESSURE RELEASE, FIRE AND POSSIBLE EXPLOSION, CAUSING PERSONAL INJURY OR DEATH.

**WARNING: THE UNIT MUST BE ELECTRICALLY GROUNDED IN ACCORDANCE WITH LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL ELECTRICAL CODE ANSI/NFPA NO. 70-1984. FAILURE TO INCLUDE PROPER GROUNDING COULD RESULT IN EQUIPMENT DAMAGE OR PERSONAL INJURY OR DEATH.**

The installation of electrical wiring at the jobsite must be in accordance with the National Electrical Code and any applicable local codes. Unit electrical data is shown in Tables 8 and 9. The disconnect must also be mounted in accordance with applicable codes. It should not be mounted on any of the unit access panels.

**Table 7 - Unit Electrical Data**

BYC Model	Unit Operating Voltage	Maximum Fuse Size	Dual Element Size	Minimum Circuit Amps
024H1	208-230/60/1	30	25	19
030H1	208-230/60/1	35	30	24
036H1	208-230/60/1	45	35	28
036H3	208-230/60/3	30	25	20
036H4	460/60/3	15	15	10
042H1	208-230/60/1	50	40	32
042H3	208-230/60/3	35	30	23

**Table 8 - Electrical Characteristics**

BYC Model	Compressor Motor						Condenser Fan Motor						Evaporator Fan Motor					
	HP	Rpm	Volts	CYC	Ph	Amps	HP	Rpm	Volts	CYC	Ph	Amps FL	HP	Rpm	Volts	CYC	Ph	Amps FL
024H1	2	3450	208-230	60	1	11.8 60.0	1/4	1075	208-230	60	1	1.7	1/4	950/1075	208-230	60	1	2.5
030H1	2½	3450	208-230	60	1	14.9 75.0	1/4	1075	208-230	60	1	1.7	1/4	950/1075	208-230	60	1	2.9
036H1	2¾	3450	208-230	60	1	17.9 83.5	1/3	1075	208-230	60	1	2.4	1/3	950/1075	208-230	60	1	3.2
036H3	2¾	3450	208-230	60	3	11.2 66.0	1/3	1075	208-230	60	1	2.4	1/3	950/1075	208-230	60	1	3.2
036H4	2¾	3450	460	60	3	5.2 35.0	1/3	1075	460	60	1	1.3	1/3	950/1075	460	60	1	1.6
042H1	3	3450	208-230	60	1	20.2 93.0	1/3	1075	208-230	60	1	2.4	1/3	950/1075	208-230	60	1	4.0
042H3	3	3450	208-230	60	3	12.8 74.0	1/3	1075	208-230	60	1	2.4	1/3	950/1075	208-230	60	1	4.0

**Thermostat**

Size the thermostat wiring to limit the resistance to 1 ohm or less. See Table 9 for wiring sizing.

**Table 9 - Thermostat Wire Size and Maximum Length**

Wire Size	Maximum Length (Ft.)
22	30
20	50
18	75
16	125
14	200

Mount the thermostat in a frequently occupied area of the building. Place it about 5 feet from the floor where it will be activated by free circulation of air at average temperature. Avoid the following areas:

1. Behind doors or in corners where the air cannot circulate freely.
2. Locations where the sun, radiation from appliances or vibration may affect the thermostat operation.
3. Adjacent to or in line with conditioned air discharge grilles.
4. On outside walls.

**Note:** The system wiring diagram for the unit is mounted on the back of the control box access panel.

**Heat Anticipator**

Most thermostats contain a heat anticipator (Figure 9) to help the thermostat control closer to the desired temperature range. The heat anticipator should be adjusted to the correct setting to provide satisfactory operation. This adjustment should be made after unit start-up. Refer to the start-up—Heating Cycle section.

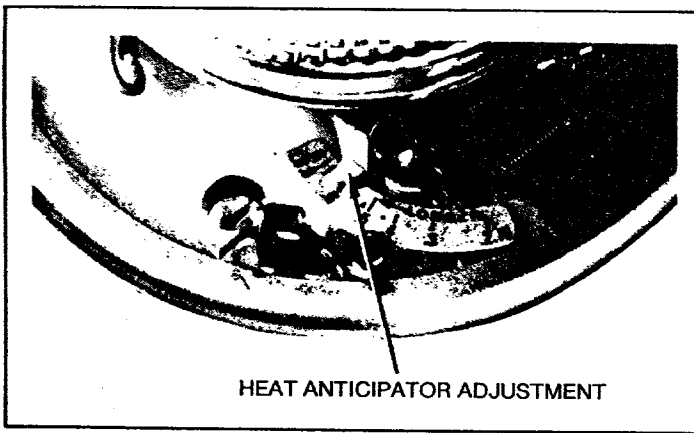


Figure 9 - Typical Thermostat Heat Anticipator

## Start-Up Cooling Cycle

Before starting the unit for the first time, and with the power supply disconnected, rotate all fans and the combustion blower to be sure they are free to move. Test the entire refrigeration circuit for leaks. Check all electrical circuits. Check the supply voltage and compare the reading with the compressor and the unit nameplate voltage.

To start the unit on the cooling cycle, close the disconnect switch, set the system switch to COOL and move the thermostat cool indicator to a setpoint below room temperature. The condenser motor, compressor and evaporator fan motor will operate.

## Start Capacitor Kit (Single-Phase Units Only)

Normally, BYC024-042H units do not require hard start kits. However, under certain conditions, the accessory start capacitor kit may be required on those units that need a higher starting torque for the compressor. This is dependent on the minimum voltage conditions under which the compressor is required to start. Before installing a permanent start accessory, perform the following procedure:

1. Attempt to start the unit without the aid of a start accessory. After the system has started, allow it to run for 30 minutes, to insure compressor break-in.
2. If the compressor does not start, check all wiring connections to insure that they are tight and properly wired. Check the voltage drop across the compressor run (R) and common (C) terminals to verify that it meets the specifications on the unit nameplate.
3. Apply a temporary start kit to get the compressor started for the first time. Allow the compressor to run continuously for 30 minutes.
4. Disconnect unit power and remove the temporary start kit. Wait at least four minutes to allow the system to equalize before trying to start. If the compressor will not start, install a start accessory according to the list given in Table 10.

Table 10 - Start Capacitor Kit Selection

Unit	Compressor	Kit
BYC024H1	Copeland CRD4-0200	BAYKSKT005
BYC030H1	Copeland CRF4-0250	BAYKSKT005
BYC036H1	Copeland CRH3-0275	BAYKSKT006
BYC042H1	Copeland CRJ3-0300	BAYKSKT006

## Operating Pressure

After the unit has operated for a brief period, install a pressure gauge on the gauge port of the discharge line valve and the gauge port of the suction line valve. Check the operating pressures. Approximate operating pressures are given in Charts 1 through 5

**Note:** Do not use these pressures to determine the unit refrigerant charge. The correct operating charge is shown on the unit nameplate. Also proper airflow must be verified prior to any attempt to charge a unit.

## Voltage

With the compressor operating, check the line voltage at the unit. The voltage should be within the range shown on the unit nameplate. If low voltage is encountered, check the size and the length of the supply line from the main disconnect to the unit. The line may be undersized for the length of the run.

## Heating Cycle

These units are equipped with a solid-state pilot ignition control that lights the pilot burner each time the thermostat calls for heat (intermittent pilot). The main burner and pilot burner are extinguished during the "OFF" cycle.

**CAUTION:** These units are designed to operate with the combustion chamber pressurized. Access panels of the furnace section must be in place for proper burner flame. The flame may be observed by removing the plug button from the access panel and holding plexiglass over the hole.

The heating section of the unit can be started using the following procedure:

1. Be sure the thermostat is at its lowest setting and power to the unit is off.
  - a. Turn the main shutoff valve on the gas supply line "on."
  - b. Turn the manual valve on the combination gas valve to the "ON" position. No gas should flow to the pilot or main burners.
2. Be sure all burner compartment access panels are in place.
  - a. Turn on electrical power to the unit.
  - b. Turn the thermostat to its highest setting in the heating mode.

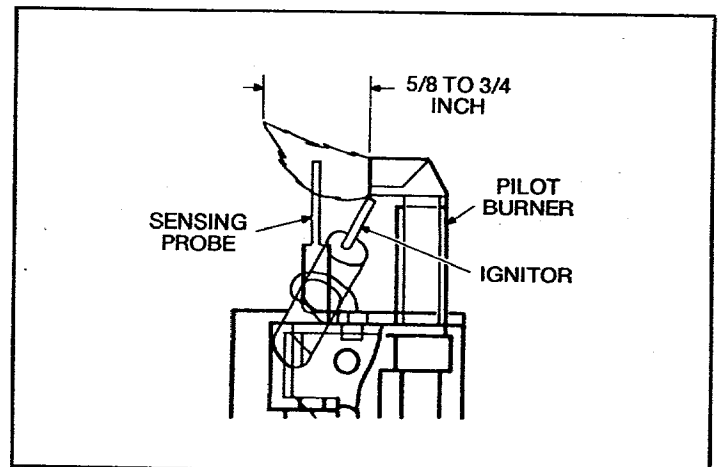


Figure 10 - Pilot Burner Flame

3. As the thermostat calls for heat, the system cycles as follows:
  - a. The combustion blower is energized.
  - b. The combustion air switch closes.
  - c. The pilot valve opens and the ignitor lights the pilot burner. (On initial start-up, allow time for air to purge through the pilot line).

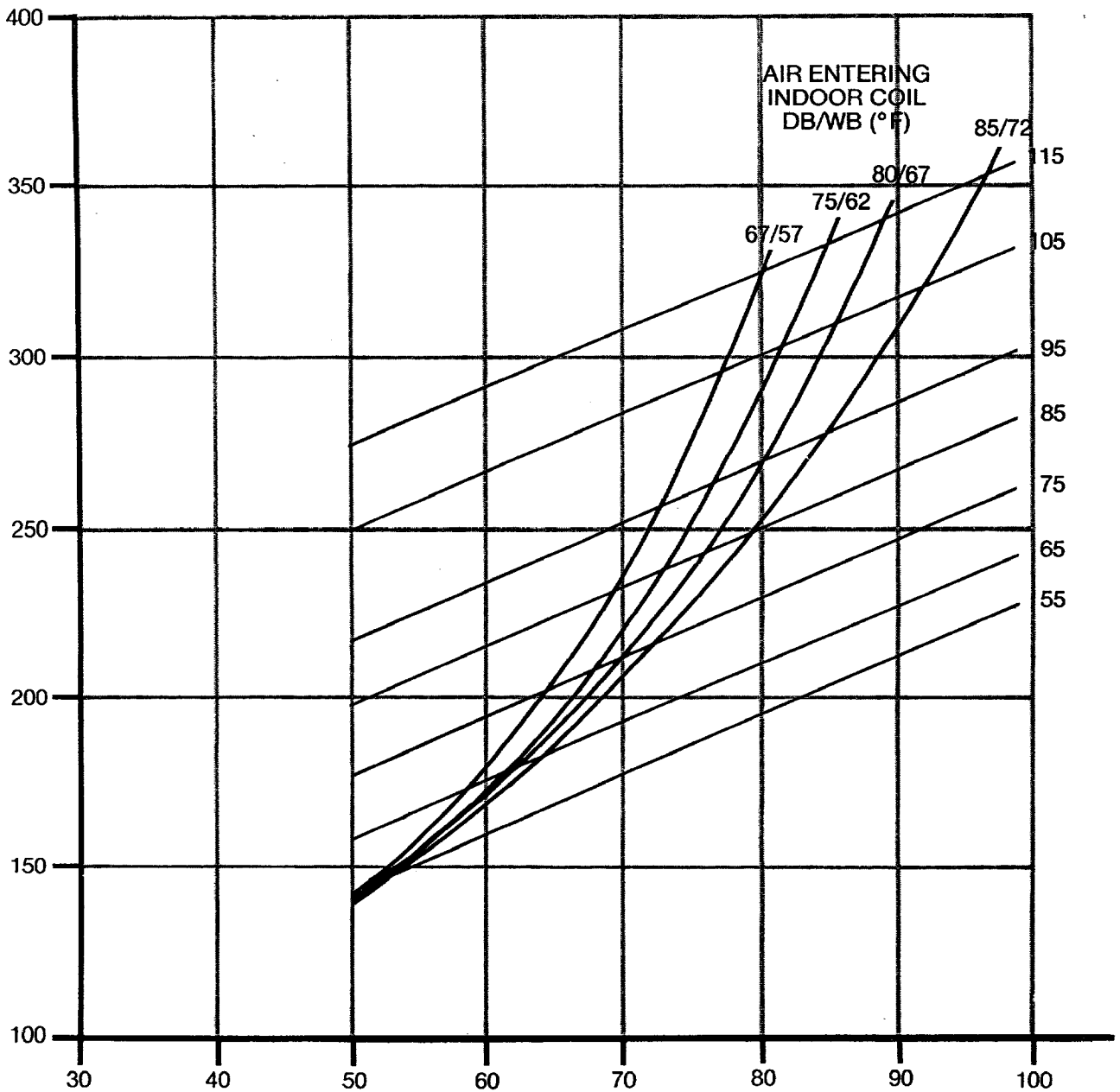


- d. The instant the pilot burner flame is established, gas will flow to the main burners.
- e. Visually check the pilot flame (Figure 10). The flame should be 5/8 to 3/4 inch long to properly surround the sensing probe. To adjust the flame, remove the cap over the adjusting screw on the gas valve. Turn the screw counterclockwise to increase the flame and clockwise to decrease the flame. Replace the cap.
- f. Cycle the thermostat on and off a few times to check out the control system and burner operating characteristics.  
Units equipped with a slow opening gas valve, the valve will open in 6 to 10 seconds.
4. With the main burners operating, check the manifold pressure with a manometer. Do not exceed recommended pressures.

To adjust the regulator in the unit, remove the cap and turn the adjusting screw clockwise to increase pressure and counterclockwise to decrease pressure.

**Note:** For manifold pressures and orifice sizes for gas with other Btu ratings, contact the local gas utility. Manifold pressure should be 3.5-inches water column (+ .1). Input must not exceed the value shown on the rating plate.

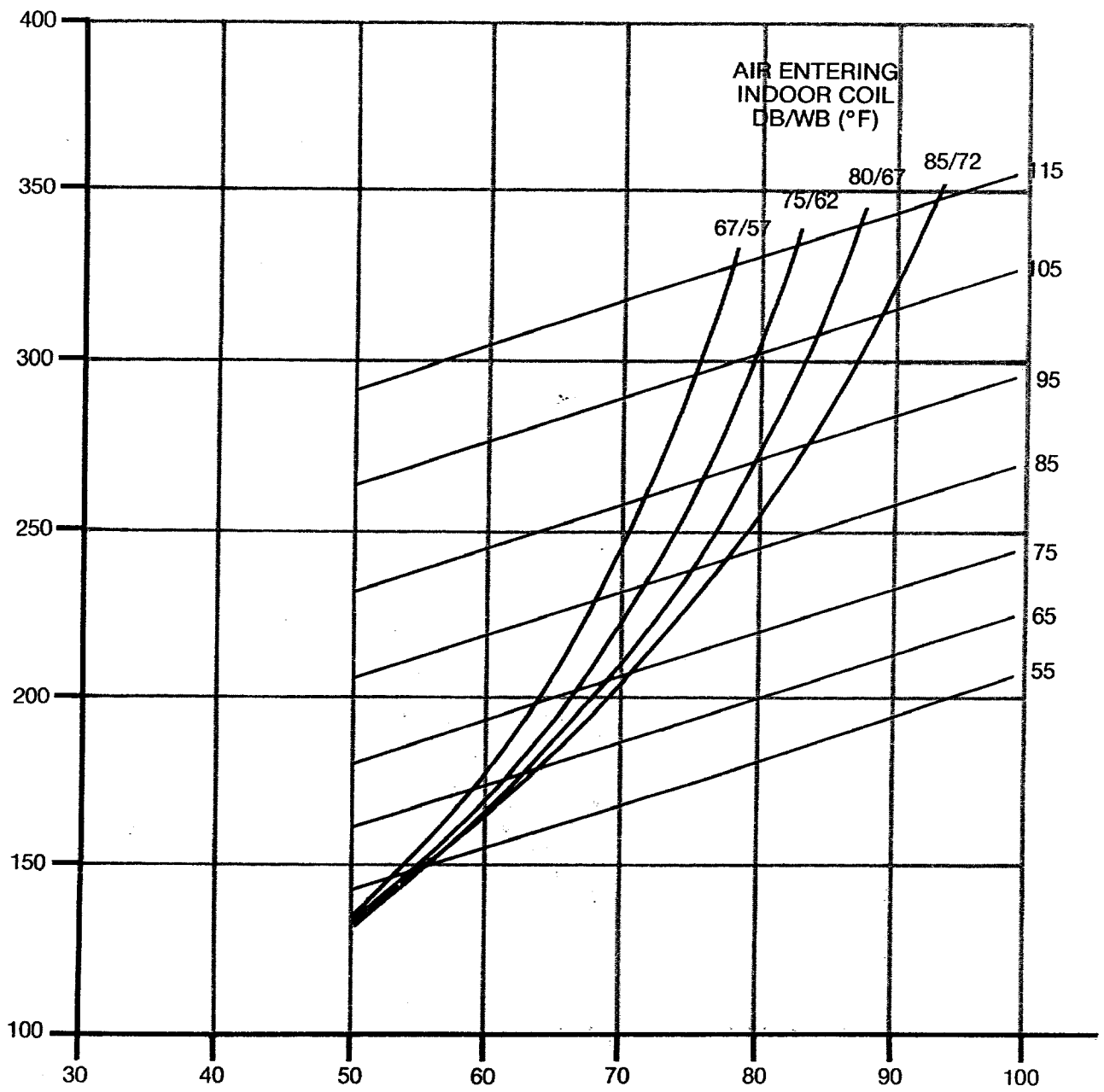
5. Set the heat anticipator of the thermostat to equal the amperage draw of the gas valve.
6. Set the thermostat at the desired temperature setting and the unit will function automatically.



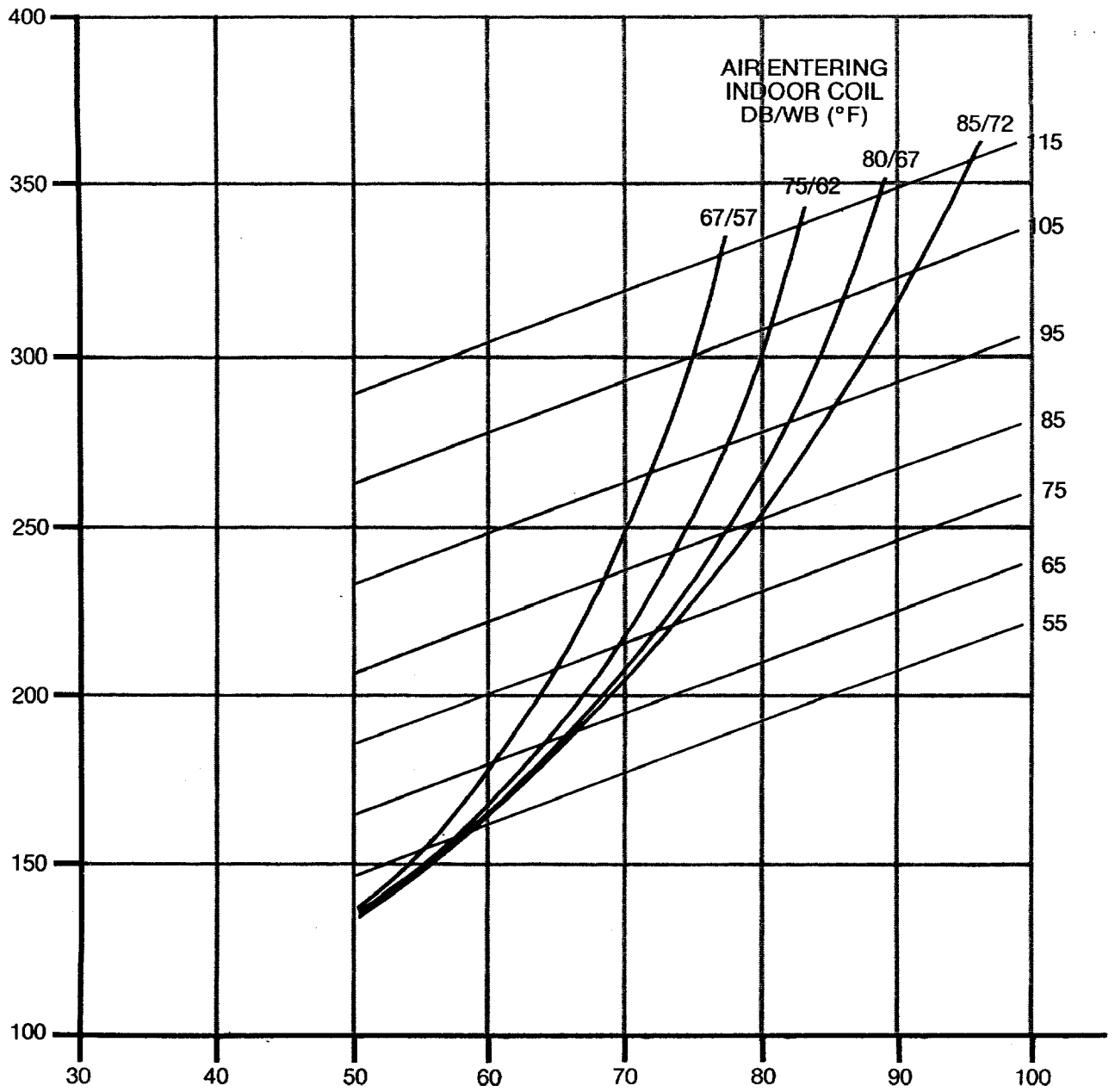
**Chart 1 - Cooling Cycle Operating Pressures — BYC024H (Chart based on 400 CFM/Ton indoor airflow)**

**TO CHECK OPERATING PRESSURES:**

1. Run unit and allow pressures to stabilize.
2. Measure indoor air DB/WB (°F) entering the indoor coil.
3. Measure outdoor dry bulb temperature.
4. Take discharge and suction pressures.
5. Locate the intersection of the outdoor dry bulb and indoor DB/WB temperature on the proper chart.
6. Then read down for suction pressure and read to the left for discharge pressure.



**Chart 2 - Cooling Cycle Operating Pressures - BYC030H (Chart based on 400 CFM/TON indoor airflow)**



**Chart 3 - Cooling Cycle Operating Pressures - BYC036H (Chart based on 400 CFM/TON indoor airflow)**

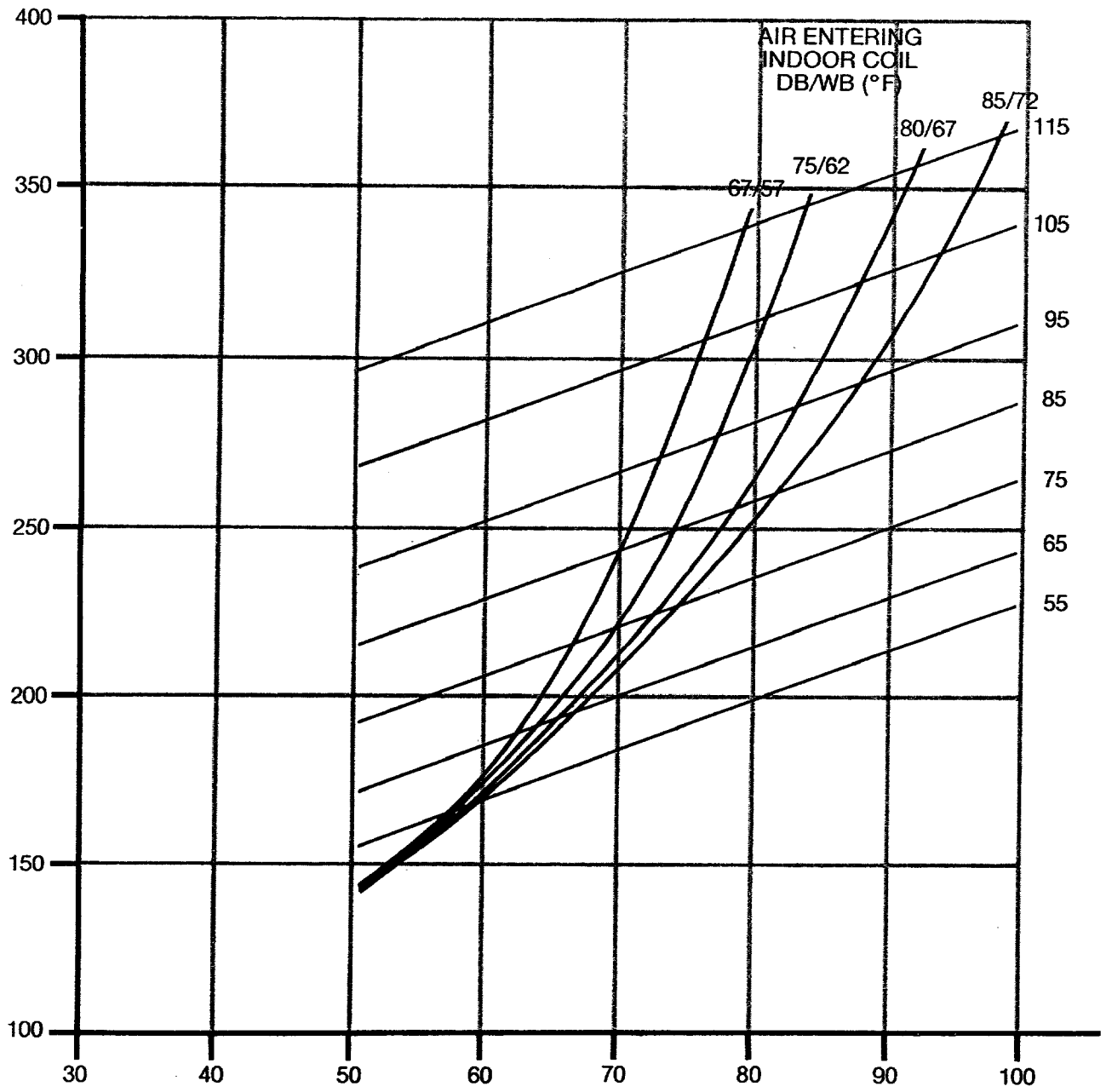


Chart 4 - Cooling Cycle Operating Pressures - BYC042H (Chart based on 400 CFM/TON indoor airflow)

# Start-Up Log

Date \_\_\_\_\_

## I. Nameplate Information

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_  
Voltage \_\_\_\_\_ R1a \_\_\_\_\_

## II. Compressor

A. Insulation Megohms  
Phase 1 \_\_\_\_\_ Phase 2 \_\_\_\_\_ Phase 3 \_\_\_\_\_

B. Voltage at Compressor Terminals  
T1 \_\_\_\_\_ T2 \_\_\_\_\_ T3 \_\_\_\_\_

C. Amp Draw  
L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_

## III. Operating Conditions

Head Pressure \_\_\_\_\_  
Suction Pressure \_\_\_\_\_  
Liquid Line Temp. \_\_\_\_\_  
Suction Line Temp. \_\_\_\_\_  
Subcooling \_\_\_\_\_  
Superheat \_\_\_\_\_  
Ambient Temp. \_\_\_\_\_  
Cond. Discharge Air Temp. \_\_\_\_\_  
Evap. Entering Air Temp. \_\_\_\_\_  
Evap. Discharge Air Temp. \_\_\_\_\_