Installation Instruction

Upflow—Downflow Heating—Cooling

CC5A Uncased Coil CD5A—CD5B Cased Coil

NOTE: Read the entire instruction manual before starting the installation.

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.

It is important to recognize safety information. This is the safety-alert symbol ⚠ . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal word— DANGER, WARNING, or CAUTION. These words are used with the safety- alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards that could result in personal injury or death. CAUTION is used to identify unsafe practices, which would result in minor personal injury or product and property damage.

⚠ **WARNING: Before installation or servicing system, always turn off main power to system. There may be more than one disconnect switch. Turn off accessory heater power if applicable. Electrical shock can cause personal injury or death.**

INTRODUCTION

Use this instruction manual to install CC5A, CD5A, CD5B indoor coils on upflow/ downflow furnaces. Do not install coil in horizontal position. Models CD5A, CD5B (Fig. 1) are enclosed in a casings, and CC5A (Fig. 4) is an unenclosed bare coil, requiring a field-fabricated enclosure.

INSTALLATION

PROCEDURE 1—INSPECT EQUIPMENT

File claim with shipper if equipment is damaged or incomplete.

PROCEDURE 2—INSTALL COIL

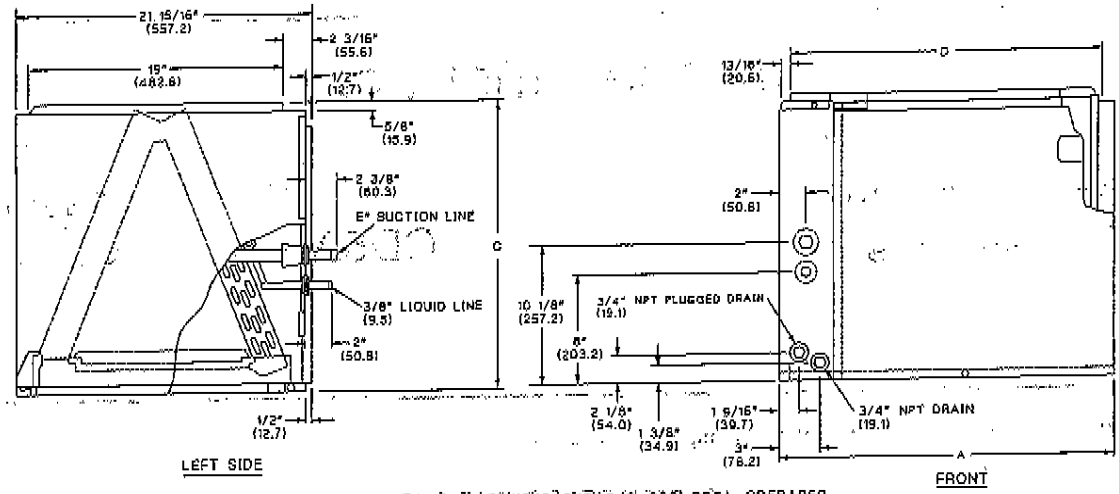
Coil/furnace combinations are shown in pre-sale literature. All coils (except A018-A030 sizes) are designed to fit furnaces in two widths. If width varies, field-fabricated adapters may be required to correctly fit coil and enclosure on furnace. Field- fabricated adapters are always required when furnace discharge air opening is larger than coil.

A. Upflow CD5A/CD5B Furnace Coil Installation

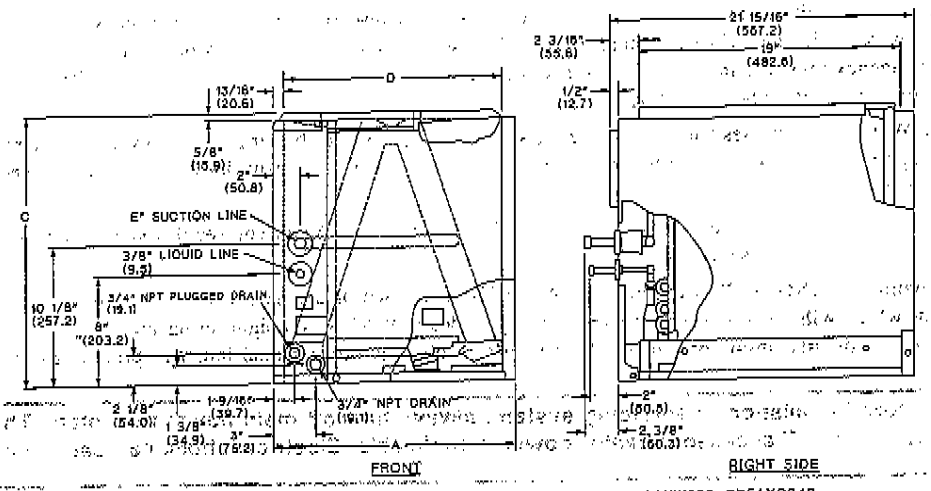
1. Field-fabricated sheet metal adapters may be required to correctly fit coil enclosure on furnace. (See Fig. 6 and 8.)
2. Set coil in place on upflow furnace discharge air opening. (See Fig. 2.)
3. Ensure coil is level for proper condensate drainage. Do not tip coil toward condensate drain. Coil enclosure need not be fastened or screwed to furnace.

B. Upflow CC5A Coil/Furnace Installation

1. Assemble field fabricated enclosure. Attach 2 coil support channels (supplied with coil) to enclosure by screwing to sides of enclosure. Refer to Table 3 for correct mounting height for upflow furnace installations. (See Fig. 5.)
2. Slide CC5A coil onto support channels in enclosure until coil rear seal contacts rear panel of enclosure. (See Fig. 5.)
3. Use sheet metal baffles at sides and rear of coil to prevent air bypass.
4. Attach front access panel to coil enclosure.
5. Insulate enclosure.
6. To select an accessory casing refer to Table 5 for available sizes.



CASED COILS-CD5A, CD5BW042, 043, 048, 060; CD5A, CD5BA060



CASED COILS CD5A, CD5BA018, 024, 030, 036, 042, 043, 048, CD5AXW036, CD5AXC048

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Table 1—CD5A/CD5B Coils Physical Data

UNIT	A		C		D		E		SHIPPING WEIGHT	
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	Kg.
CD5A, CD5B A018	14-3/16	360.4	14-3/8	365.1	12-9/16	319.1	5/8	15.88	27	12.2
CD5A, CD5B A024	14-3/16	360.4	14-3/8	365.1	12-9/16	319.1	5/8	15.88	29	13.2
CD5A, CD5B A030	14-13/16	360.4	17-5/8	447.7	12-9/16	319.1	3/4	19.05	32	14.5
CD5A, CD5B W030	17-1/2	444.5	17-5/8	447.7	15-7/8	403.2	3/4	19.05	37	16.8
CD5A, CD5B A036	17-1/2	444.5	19-5/8	498.5	15-7/8	403.2	3/4	19.05	43	19.5
CD5A, CD5B W036	21	533.4	19-5/8	498.5	19-3/8	492.1	3/4	19.05	45	20.4
CD5A, CD5B A042	21	533.4	19-5/8	498.5	19-3/8	492.1	7/8	22.23	45	20.4
CD5A, CD5B A043	21	533.4	25-5/8	651.0	19-3/8	492.1	7/8	22.23	53	24.0
CD5A, CD5B A048	21	533.4	25-5/8	651.0	19-3/8	492.1	7/8	22.23	57	25.9
CD5A, CD5B C048	21	533.4	21-1/8	536.6	19-3/8	492.1	7/8	22.23	48	21.8
CD5A, CD5B W042	24-1/2	622.3	21-1/8	536.6	22-7/8	581.0	7/8	22.23	49	22.2
CD5A, CD5B W043	24-1/2	622.3	21-1/8	536.6	22-7/8	581.0	7/8	22.23	51	23.1
CD5A, CD5B W048	24-1/2	622.3	21-1/8	536.6	22-7/8	581.0	7/8	22.23	53	24.0
CD5A, CD5B A060	24-1/2	622.3	21-1/8	536.6	22-7/8	581.0	7/8	22.23	53	24.0
CD5A, CD5B W060	31-1/2	800.1	21-1/8	536.6	29-7/8	758.8	7/8	22.23	66	29.9

Fig. 1—Model CD5A/CD5B Coil Dimensions

OVERHANG INSTALLATION

CC5A-Field-fabricated sheet metal adapters are required when uncased coil enclosure overhangs furnace. (See Fig. 6.) These adapters are screwed to the furnace and the to the enclosure as shown.

CD5A/CD5B-Cased coils (except A018-A030 sizes) are designed to fit two sizes of furnace widths, with no field-fabricated adapters. (See Table 4.)

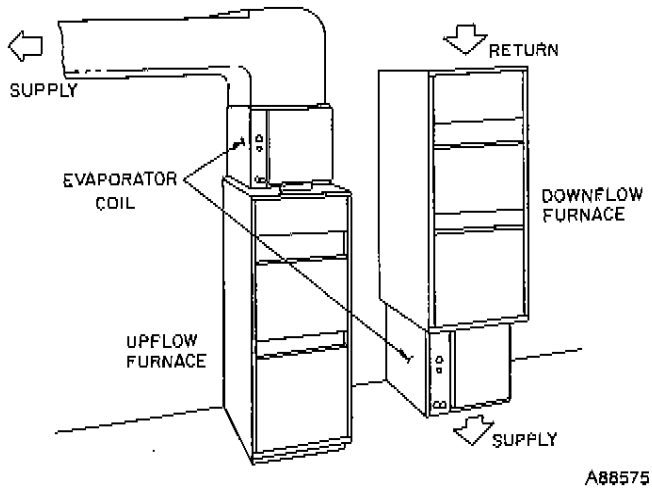


Fig. 2—Typical Installations, CD5A/CD5B Coil

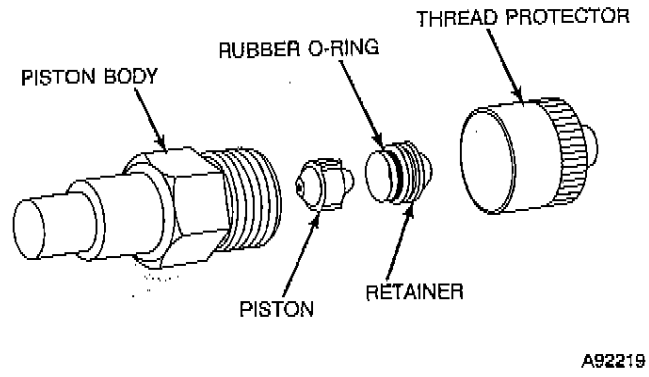


Fig. 3—Refrigerant Control Device (Bypass Type) Components

Table 3—Coil Mounting Position in Upflow Field Fabricated Plenum

COIL CC5A	FIELD-SUPPLIED PLENUM WIDTH (IN.)	COIL MOUNTING HEIGHT ABOVE FURNACE FLANGES (IN.)
A018, A024	12-1/2 15-13/16	0* 3-3/4
W030, A036	15-13/16 19-5/16	0* 3 1/4
A042, A043	19-5/16 22-13/16	0* 3-1/4
W042, A043, A060	22-13/16	0*
W060	29-7/8	0*

*Coil support channels mounted on furnace flanges. This is not possible when field-fabricated adapters are used. (See Fig. 5.)

UNDERHANG INSTALLATION

Field-fabricated adapters are required when furnace discharge air opening is larger than coil enclosure.

When coil underhangs furnace on two or four sides of discharge air opening, field fabricate a sheet metal adapter that attaches to furnace flanges and supports coil above furnace. Set coil on adapter support flanges. (See Fig. 8.)

DOWNFLOW CD5A, CD5B, CC5A COIL/FURNACE INSTALLATION

Place coil on furnace supply air opening using same methods described for coil placement on upflow furnace discharge air opening. (See Fig. 2.)

PROCEDURE 3—CONNECT REFRIGERANT PIPING

Refrigerant Liquid and Suction Lines

For match and mix-match system, use system suction line sizes recommended in outdoor unit installation instruction.

See Fig. 1, 4 and Table 1 and 2 for coil connection sizes and location. CD5A,CD5B,CC5A coils can be connected to outdoor units using accessory tubing packages or field-supplied tubing of refrigerant grade. Always evacuate or purge when sweat connections are made or when tubing must be flared. If field-supplied tubing is used, insulate entire suction line.

⚠ **CAUTION: If unit is to be installed on system with a thermostatic expansion valve, removal of the indoor coil piston is required.**

A. Suction Line

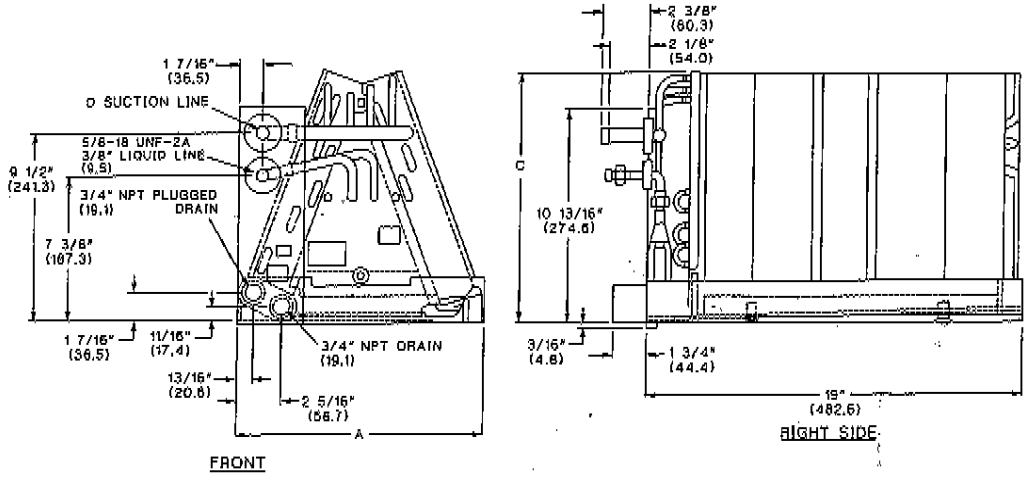
Suction line is designed for field sweat connection. Line is plugged to keep out moisture and dirt. Remove these plugs only when ready to make connection.

⚠ **CAUTION: To avoid valve damage while brazing, service valves must be wrapped with a heat-sinking material such as a wet cloth.**

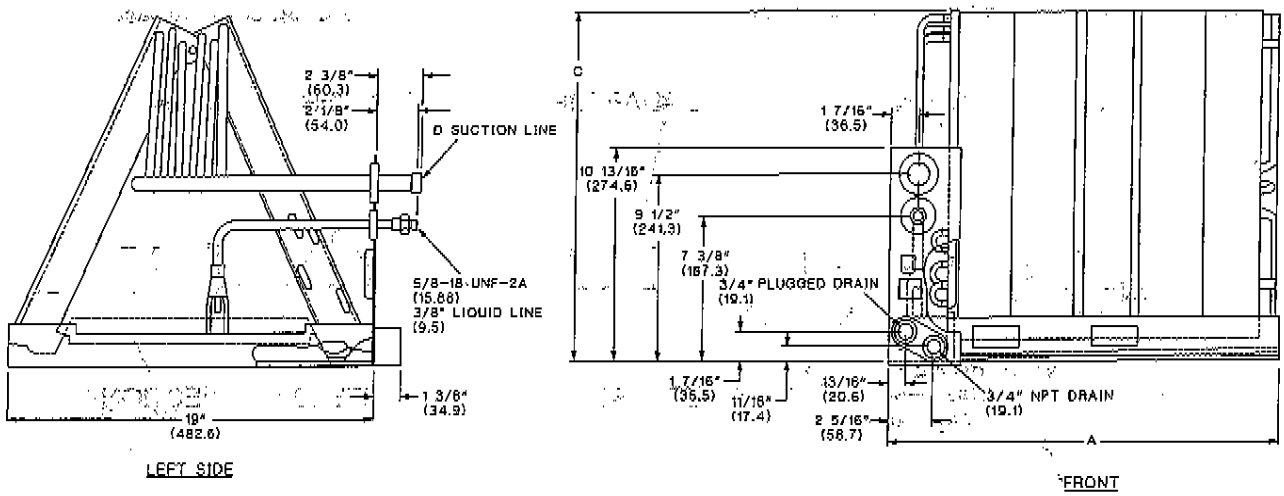
B. Liquid Line

Liquid line is designed for sweat connection. During installation the following steps should be followed.

1. Remove plastic bag taped to liquid line containing flair adapter, liquid line strainer and sticker.
2. Remove thread protector. (See Fig. 3.)
3. Replace piston if necessary.
4. Attach flair adaptor to piston body.



UNCASED COILS CC5AXA018, 024, 030, 036, 042, 043, CC5AXW030, CC5AXC048



UNCASED COILS CC5AXW042, 043, 048, 050, CC5AXA060

Fig. 4—Model CC5A Coil Dimensions

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Table 2—CC5A Coil Physical Data

UNIT	A		C		D		SHIPPING WEIGHT	
	In.	mm	In.	mm	In.	mm	Lbs.	Kg.
CC5A A018	12-5/8	320.7	10-9/16	268.3	5/8	15.88	15	6.8
CC5A A024	12-5/8	320.7	12-11/16	322.2	5/8	15.88	17	7.7
CC5A A030	12-5/8	320.7	15-1/8	384.2	3/4	19.05	20	9.1
CC5A W030	15-15/16	404.8	14-3/4	374.6	3/4	19.05	22	10.0
CC5A A036	15-15/16	404.8	18-1/2	469.9	3/4	19.05	24	10.9
CC5A A042	19-3/8	492.1	17-3/4	450.8	7/8	22.23	26	11.8
CC5A A043	19-3/8	492.1	22-1/8	562.0	7/8	22.23	31	14
CC5A W042	22-15/16	582.6	16-3/16	411.1	7/8	22.23	28	12.7
CC5A W043	22-15/16	582.6	17-7/8	454.1	7/8	22.23	29	13.2
CC5A W048	22-15/16	582.6	20-1/16	509.6	7/8	22.23	31	14.0
CC5A C048	19-3/8	492.1	20-1/16	509.6	7/8	22.23	27	12.2
CC5A A060	22-15/16	582.6	20-1/16	509.6	7/8	22.23	31	14.0
CC5A W060	29-15/16	760.4	20-1/16	509.6	7/8	22.23	39	17.7

5. Insert strainer and connect liquid line.
6. Attach label to liquid line near strainer. (See Fig. 7.)

⚠ **CAUTION: DO NOT BURY MORE THAN 36 IN. (914mm) OF REFRIGERANT TUBING IN GROUND. If any section of tubing is buried, there must be a 6- in.(152mm) vertical rise to the valve connections on the outdoor unit. If more than the recommended length is buried, refrigerant may migrate to cooler buried section during extended periods of unit shutdown, causing refrigerant slugging and possible compressor damage at start-up.**

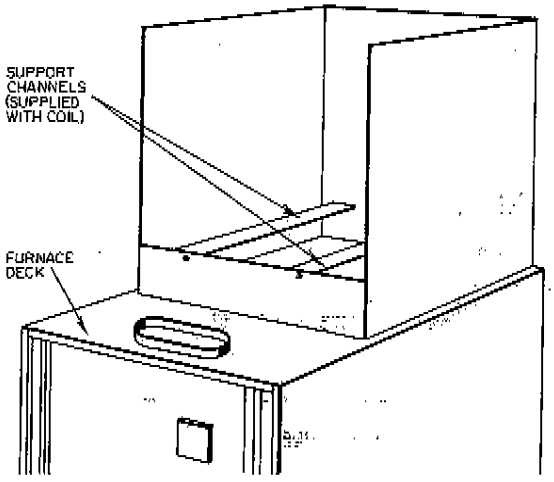

Fig. 5—Upflow Field-Supplied Enclosure for CC5A Coil

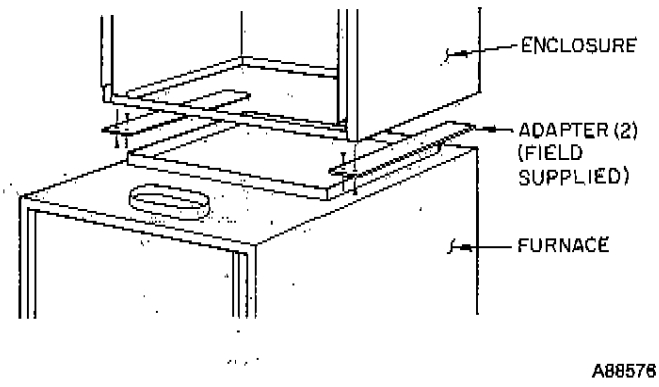

Fig. 6—Adapter Installation when Field- Supplied Enclosure Overhangs Furnace

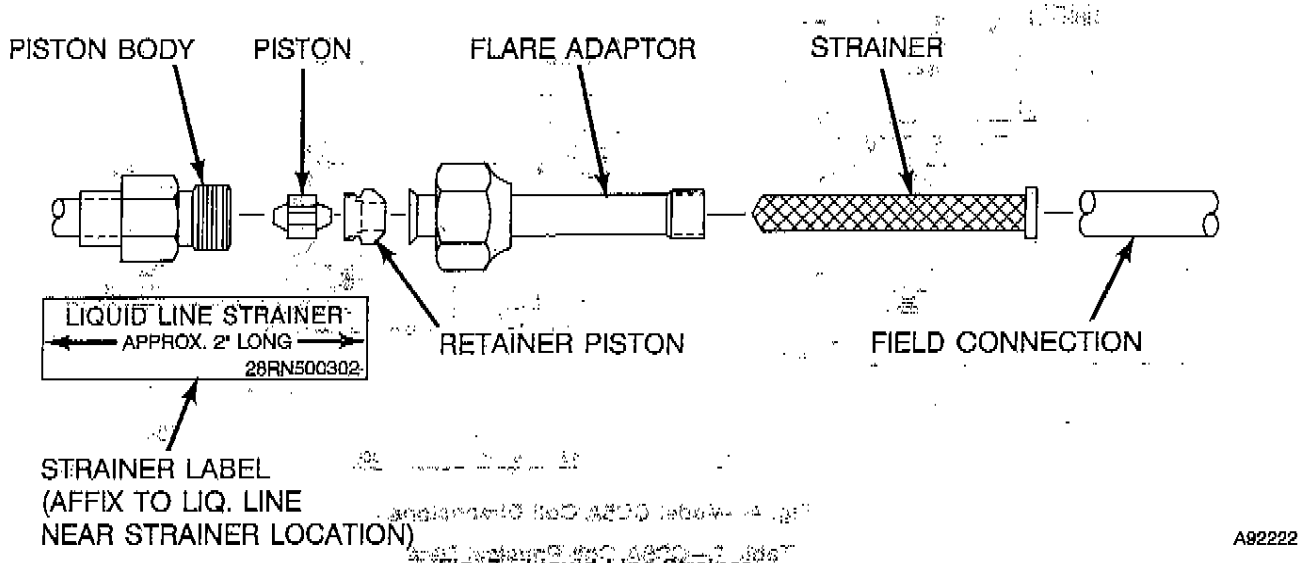

Fig. 7—Liquid Line Strainer

NOTE: Wrap a wet cloth around rear of fitting to prevent damaging factory-made joints.

PROCEDURE 4—MAKE CONDENSATE DRAIN LINE CONNECTION

The coil is designed to dispose of accumulated water through built-in condensate drain fitting. Two 3/4 in. female threaded pipe connections are provided in each coil.

Install a trap in condensate line of CD5A, CD5B, CC5A coil as close to coil as possible. Make trap at least 3 in. deep and not higher than bottom of unit condensate drain opening. (See Fig. 9.) Pitch condensate line to open drain or sump.

NOTE: When coil is installed over a finished ceiling and/or living area, a secondary sheet metal condensate pan must be constructed and installed under entire unit.

Table 4—Furnace Widths

CD5A/CD5B CASED COILS	FIT FURNACE WIDTH (IN.)
A018, A024, A030	14-3/16
W030, A036	17-1/2
W036, A042, A043, A048, C048	21
W042, W043, W048, A060	24-1/2
W060	31-1/2

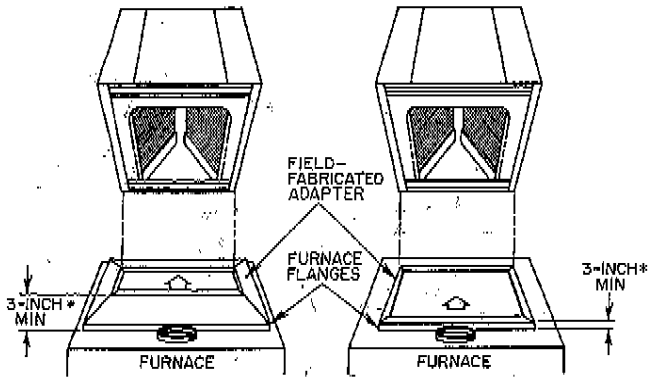

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Fig. 8—Adapter Installation when Coil Enclosure Underhangs Furnace

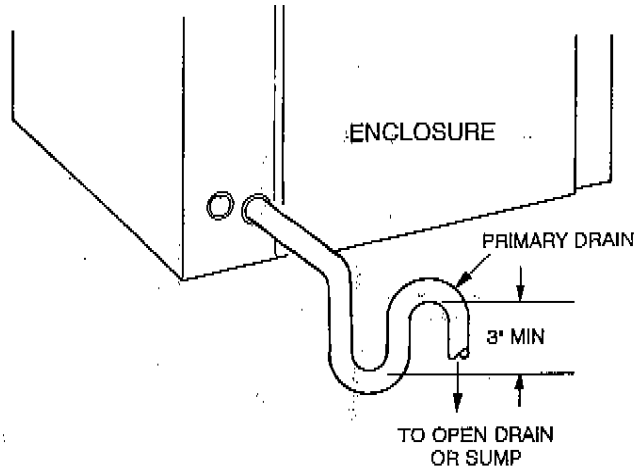

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Fig. 9—Condensate Trap

Table 5—Accessories

DESCRIPTION	PART NO.	USED ON MODEL
Casing For CC5A	KCAKC0101	A018, A024, A030
	KCAKC0201	W030, A036
	KCAKC0601	A043
	KCAKC0301	W042, W043, W048, A060
	KCAKC0401	W060
	KCAKC0501	A042, C048

System Control

A refrigerant control device (bypass type) is factory supplied with coil. (See Table 6.) Bypass-type components are shown in Fig. 3. The piston has a refrigerant metering hole through it, and is field replaceable.

The piston required for the indoor coil is shipped with the outdoor unit. If the piston shipped with the indoor coil differs in size from the required piston for the indoor coil (shipped with the outdoor unit), change the piston shipped with the indoor coil to the indoor piston shipped with the outdoor unit, regardless of the indoor coil.

Table 6—Refrigerant Metering Device

MODELS CD5A,CD5B,CC5A	FACTORY SHIPPED PISTON NO.
A018	52
A024	59
A030, W030	67
A036, W036	70
A042, A043, W042, W043	78
A048, W048, C048	84
A060, W060	90