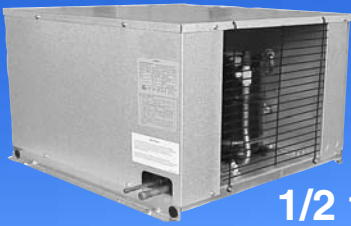




**Commercial Refrigeration**



**1/2 to 3 HP**

***MiniLine  
Air Cooled  
Condensing  
Units - 1/2 to 6 HP***



**4 to 6 HP**

Literature No. - C300.1  
January, 2006



***Medium to Low  
Temperature  
Units***

***Tecumseh hermetic  
Carlyle semi-hermetic  
Compressors***

# Description

Carrier MiniLine condensing units are ideally suited for use in a variety of commercial applications such as cafeterias, convenience stores, restaurants and fast food outlets. MiniLine units offer a winning combination of quality, economy, and flexibility coupled with lower long term operating costs.

This low profile product line has been designed around environmentally safer refrigerants. All models utilize R-22 or R-404A. Units are available with a choice of compressors: low cost hermetic or heavy duty semi-hermetic.

In addition to the basic Indoor and Outdoor models described in this bulletin, Carrier can also provide pre-engineered system packages with matching evaporators and accessories.

These MiniLine condensing units are designed for operation in ambient air temperatures up to 110°F. Oversized condensers are available for most models. Contact our Applications Engineering department for requirements exceeding 110°F ambient temperature.

# Options

- Factory installed air defrost timer
- Factory installed electric defrost timer with contactor
- Low ambient flooded control (STD on CSL models)
- Mild ambient fan cycle control (for 2 fan units only)
- Wire fan guard(s) kit
- Suction line piping to exterior of cabinet (STD on CSL models)
- Suction line kit with filter and piping
- Liquid line (piping only)
- Liquid line kit with piping, filter/ drier and sight glass (STD on CSL models)

# Features

## Indoor/Outdoor Models (CSEU/CSEC)

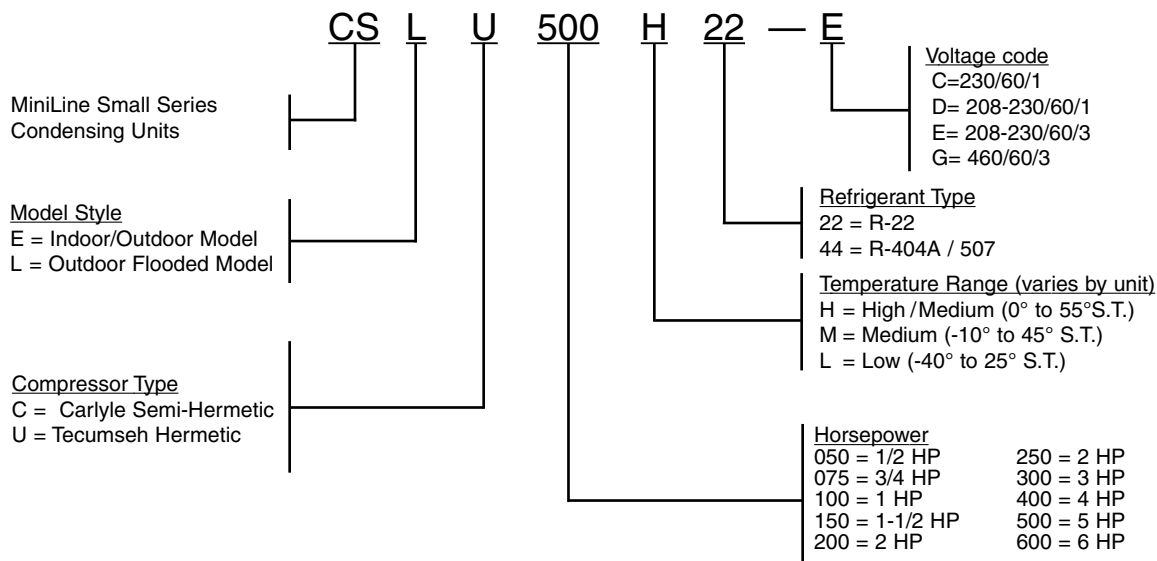
- Hermetic or Semi-hermetic compressor.
- Generously sized condenser, Copper tubes/Aluminum fins
- Large electrical control panel for power and control circuits
- Compressor contactor or start kit
- Encapsulated high and low pressure controls (adjustable low pressure control on low temp models)
- Refrigerant receiver with shutoff valve and relief plug
- All-weather housing
- UL and cUL listed for indoor or outdoor use

## Optimized Packaged Units (CSLU/CSLC)

- Includes all Indoor model features - plus:
- Liquid line kit with filter/drier and sight glass with moisture indicator
- Suction line piping to exterior of cabinet
- Low Ambient - flooded head pressure control valve
- Crankcase heater
- Electric defrost timer with defrost contactor/relay on low temperature models (ED10-230/1)
- Air Defrost Timer (2-1/2 through 6 HP High and Medium temp models only, optional for other HP)

- Suction accumulator
- Oil separator (not available with mounted accumulator)
- Crankcase heater
- Copper fins, or coated condenser coil
- Tiered stacking
- Liquid line solenoid
- Fused disconnect
- High ambient oversized condenser coil - contact Applications
- Spring mounting for semi-hermetic compressors

# Nomenclature



## Features and Options

	DESCRIPTION	STANDARD UNITS		PACKAGED UNITS			
		CSEU		CSEC	CSLU		CSLC
	Hermetic	STD		N/A	STD		N/A
	Semi-Hermetic	N/A		STD	N/A		STD
ELECTRICAL CONTROLS	Oil failure control (as required)	N/R		STD	N/R		STD
	Encapsulated high and low pressure controls**	STANDARD		STANDARD			
	Compressor contactor (1Ø or 3Ø), start kit (1Ø)	STANDARD		STANDARD			
	Control transformer (460v to 230V) as required	STANDARD		STANDARD			
CONDENSER	Copper tubes, Aluminum fins	STANDARD		STANDARD			
	Fan motor(s) - overload protection	STANDARD		STANDARD			
	Fan blade(s) - individually balanced	STANDARD		STANDARD			
	Fan guard(s)	OPTIONAL		OPTIONAL			
PIPING COMPONENTS	Suction line (vibrasorber <sup>†</sup> and piping only)	OPTIONAL		STANDARD			
	Suction kit (vibrasorber <sup>†</sup> , piping and suction filter)	OPTIONAL		OPTIONAL			
	Suction line accumulator	OPTIONAL		OPTIONAL			
	*Liquid line kit	OPTIONAL		STANDARD			
	Discharge vibrasorber	N/R		STD††	N/R		STD††
	Replaceable core filters	CONTACT FACTORY		CONTACT FACTORY			
	Hot Gas Bypass Controls	CONTACT FACTORY		CONTACT FACTORY			
Oil Separator and Suction Accumulator (Both)	CONTACT FACTORY		CONTACT FACTORY				
Receiver	Shut-off valve(s)	STANDARD		STANDARD			
	Fusible plug	STANDARD		STANDARD			
HOUSING	Galvanized steel all weather housing	STANDARD		STANDARD			
	Control panel	STANDARD		STANDARD			
LOW AMBIENT CONTROLS	Fan cycle control (2 Fan models only)	OPTIONAL		OPTIONAL			
	Flooded head pressure control	OPTIONAL		STANDARD			
DEFROST PROVISIONS	Air defrost time clock	OPTIONAL		STANDARD			
	Electric defrost package	OPTIONAL		(1)		(1)	
	Hot Gas Defrost	CONTACT FACTORY		CONTACT FACTORY			
TESTING	UL and C-UL listed	STANDARD		STANDARD			
	Leak and dielectric tested before shipping	STANDARD		STANDARD			
	Dry Nitrogen shipping charge (25 to 35 PSI)	STANDARD		STANDARD			

STD = Standard Feature    N/R = Not Required    N/A = Not Available    OPT = Optional Feature

† Vibrasorber not required for Hermetic compressors.

Add optional kit SPR-VB if suction vibrasorber required.

†† Standard for 2-1/2 through 6HP Models. For 1/2 to 2HP models, add kit number SPR-VB to include vibrasorbers and compressor spring mounting.

\*Liquid line kit includes: piping, filter drier, sight glass/moisture indicator.

\*\* Adjustable low pressure control on low temp models in lieu of fixed control.

(1) Electric defrost kit is included on Low temperature models. ED-10-230/1 for 1/2 to 3 HP models, and ED11-230/3 for 4 to 6 HP models.

# Performance Data

# Physical Data

## Hermetic Models

	MODEL NUMBER	NOM HP	CAPACITY (BTUH) AT 95°F AMBIENT											REC'R @ 90% (LBS)	FIG.	CONN. (ODS, IN.)		APPROX. SHIP WT. (lbs.)
			SUCTION TEMPERATURE °F													LIQ.	SUC.	
			+40°	+30°	+25°	+20°	+10°	0°	-10°	-20°	-25°	-30°	-40°					
404A	CS*U050M44	0.50	----	5140	4640	4130	3150	----	----	----	----	----	----	5.1	1	3/8	5/8	152
	CS*U075M44	0.75	----	7450	6810	6210	5070	3920	----	----	----	----	----	5.1	1	3/8	5/8	167
	CS*U101M44	1.00	----	11680	10800	9910	8100	6350	4780	----	----	----	----	8.6	2	3/8	5/8	195
	CS*U150M44	1.50	----	13900	12780	11660	9460	7300	5160	----	----	----	----	8.6	2	3/8	7/8	228
	CS*U200M44	2.00	----	21700	20100	18600	15700	13000	9940	----	----	----	----	8.6	2	3/8	7/8	253
	CS*U300M44	3.00	----	24100	22600	20800	16900	12600	----	----	----	----	----	13.7	2	1/2	1-1/8	273
	CS*U400M44	4.00	----	35100	32300	29600	24400	19100	----	----	----	----	----	24.3	3	1/2	1-1/8	390
	CS*U500M44	5.00	----	36400	33200	30300	24700	19200	----	----	----	----	----	24.3	3	1/2	1-1/8	405
	CS*U050L44	0.50	----	----	----	----	----	2650	2010	1520	1200	----	----	5.1	1	3/8	5/8	152
	CS*U075L44	0.75	----	----	----	----	----	4450	3590	2820	2470	2150	1630	5.1	1	3/8	5/8	157
CS*U100L44	1.00	----	----	----	----	----	5840	4720	3690	3220	2780	1990	5.1	1	3/8	5/8	180	
CS*U150L44	1.50	----	----	----	----	----	9580	7440	5510	4620	3780	2260	8.6	2	3/8	7/8	195	
CS*U200L44	2.00	----	----	----	----	----	13200	10400	7980	6840	5750	3720	8.6	2	3/8	7/8	243	
CS*U300L44	3.00	----	----	----	----	----	15800	12800	9760	8320	6940	4390	13.7	2	1/2	1-1/8	255	
22	CS*U050H22	0.50	7250	5910	5280	4650	3630	2660	----	----	----	----	----	6.0	1	3/8	5/8	170
	CS*U075H22	0.75	9760	8090	7290	6300	5290	4220	----	----	----	----	----	6.0	1	3/8	5/8	175
	CS*U125H22	1.00	14100	11600	10500	9330	7330	5480	----	----	----	----	----	6.0	1	3/8	5/8	180
	CS*U150H22	1.50	16900	13800	12300	10900	8340	6100	----	----	----	----	----	10.0	2	3/8	7/8	210
	CS*U200H22	2.00	20600	16800	15100	13400	10300	7420	----	----	----	----	----	10.0	2	3/8	7/8	223
	CS*U250H22	2.50	26200	21200	18900	16700	12700	9540	----	----	----	----	----	16.0	2	1/2	7/8	245
	CS*U300H22	3.00	32300	26500	23800	21300	16500	12000	----	----	----	----	----	16.0	2	1/2	7/8	260
CS*U400H22	4.00	41400	33500	29700	26200	19900	14500	----	----	----	----	----	28.2	3	1/2	7/8	348	
CS*U500H22	4.00	52300	42900	38500	34400	26900	20500	----	----	----	----	----	28.2	3	1/2	7/8	348	

NOTE: For 90°F ambient multiply capacity by 1.03. Reduce capacity by 3% for each 5° increase in ambient temperature.  
 Consult factory for capacities above 110°F Amb.  
 \* See rear cover for dimensional drawings



1/2 through 3 HP

## Electrical Data

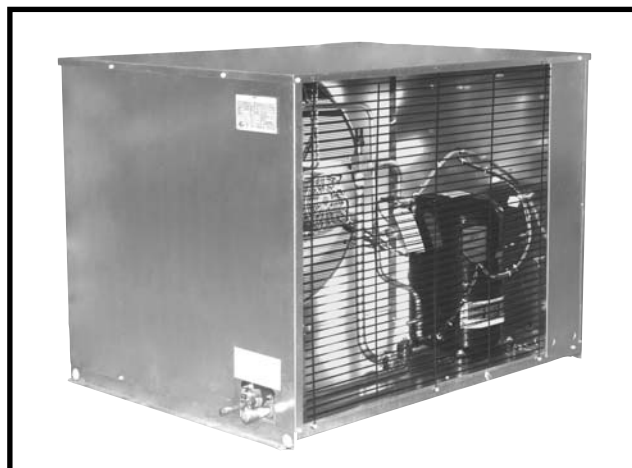
### Hermetic Models

MODEL NUMBER	COMP. MODEL NUMBER	AMPS @ 230/1/60					AMPS @ 208/230/3/60					AMPS @ 460/3/60				
		COMPRESSOR		COND	TOTAL	MCA	COMPRESSOR		COND	TOTAL	MCA	COMPRESSOR		COND	TOTAL	MCA
		RLA	LRA	FLA	UNIT†	‡	RLA	LRA	FLA	UNIT†	‡	RLA	LRA	FLA	UNIT†	‡
CS*U050M44	AKA9438Z	4.3	31.0	1.0	6.3	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U075M44	AKA9462Z	6.8	34.0	1.0	8.8	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U101M44	AJA7494Z	8.9	54.0	2.0	14.0	17.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U150M44	AWA9512Z	8.9	60.0	2.0	13.9	17.0	5.5	50.0	2.0	10.5	15.0	-----	-----	-----	-----	-----
CS*U200M44	AVA9519Z	14.5	95.0	2.0	19.0	23.0	9.4	73.4	2.0	13.4	16.0	-----	-----	-----	-----	-----
CS*U300M44	AVA9522Z	17.0	108.0	2.0	21.0	26.0	10.3	74.0	2.0	14.4	19.0	-----	-----	-----	-----	-----
CS*U400M44	AVA9528Z	20.0	132.0	3.2	28.1	35.0	13.3	110.0	3.2	19.5	24.0	6.6	55.0	2.1	9.7	15.0
CS*U500M44	AGA9530Z	25.0	165.0	3.2	34.9	43.0	16.0	126.0	3.2	24.9	31.0	7.5	62.0	2.1	11.2	15.0
CS*U050L44	AKA9438Z	4.3	31.0	1.0	7.4	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U075L44	AJB2433Z	4.7	37.0	1.0	6.7	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U100L44	AJB2444Z	6.5	55.0	1.0	8.5	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U150L44	AWA2460Z	8.2	86.0	2.0	14.4	18.0	5.6	63.4	2.0	10.0	15.0	-----	-----	-----	-----	-----
CS*U200L44	AVA2490Z	11.4	106.6	2.0	19.7	24.0	7.4	65.1	2.0	13.2	16.0	-----	-----	-----	-----	-----
CS*U300L44	AVA2512Z	16.9	120.3	2.0	23.5	28.0	9.3	65.1	2.0	15.3	18.0	4.6	38.3	1.0	8.1	15.0
CS*U050H22	AKA9442E	4.0	31.0	1.0	7.9	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U075H22	AKA9455E	4.9	31.0	1.0	9.1	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U125H22	AJA9484E	6.9	54.0	1.0	9.0	15.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CS*U150H22	AWG5520E	9.3	52.0	2.0	12.0	15.0	5.8	51.0	2.0	9.0	15.0	-----	-----	-----	-----	-----
CS*U200H22	AWG5524E	11.0	60.0	2.0	16.5	20.0	6.7	50.0	2.0	10.5	15.0	-----	-----	-----	-----	-----
CS*U250H22	AVA5532E	14.5	78.0	2.0	19.0	23.0	8.9	59.5	2.0	13.6	17.0	4.4	32.8	1.0	6.2	15.0
CS*U300H22	AVA5542E	19.7	108.0	2.0	22.4	28.0	12.0	74.0	2.0	16.1	20.0	6.0	37.0	1.0	7.4	15.0
CS*U400H22	AVD5548E	19.2	110.0	3.2	23.4	29.0	12.3	105.0	3.2	16.5	20.0	6.2	52.2	2.1	8.8	15.0
CS*U500H22	AVB5558E	24.8	141.0	3.2	33.2	41.0	15.7	110.0	3.2	22.2	27.0	7.8	55.0	2.1	11.7	15.0

† Total Unit Amps includes approximate allowance for control circuit as follows: 1A @ 208/230V; 0.5A @ 460V

‡ MCA (Minimum Branch Circuit Ampacity) does not include evaporator(s) electrical requirements (evaporator fan motor amps, defrost heater amps).

Contact factory for more details.



4 through 6 HP

# Performance Data

# Physical Data

## Semi-Hermetic Models

	MODEL NUMBER	NOM. H.P.	CAPACITY (BTUH) AT 95° F AMBIENT											REC'R @ 90% (LBS)	FIG	CONN. (ODS. IN.)		APPROX SHIP WT (LBS)
			SUCTION TEMPERATURE													LIQ.	SUC.	
			+40	+35	+25	+20	+10	0	-10	-20	-25	-35	-40					
4 0 4 A	CS*C300M44	3.0	----	----	26420	23960	19330	15130	----	----	----	----	----	13.7	2	1/2	7/8	330
	CS*C400M44	5.0	----	----	42130	37930	29990	22750	----	----	----	----	----	24.3	3	1/2	7/8	455
	CS*C500M44	5.0	----	----	55620	50040	39720	30560	----	----	----	----	----	24.3	3	1/2	1-1/8	475
	CS*C600M44	6.5	----	----	63150	57000	45580	35340	----	----	----	----	----	24.3	3	1/2	1-1/8	490
	CS*C200L44	2.0	----	----	----	----	----	17320	13840	10770	9400	6990	5930	13.7	2	1/2	7/8	340
	CS*C300L44	3.0	----	----	----	----	----	25750	19630	14440	12180	8320	6690	24.3	3	1/2	1-1/8	470
	CS*C400L44	4.0	----	----	----	----	----	33470	26470	20290	17510	12560	10380	24.3	3	1/2	1-1/8	475
	CS*C500L44	5.0	----	----	----	----	----	38890	31300	24520	21430	15850	13350	24.3	3	1/2	1-3/8	490
	CS*C600L44	6.5	----	----	----	----	----	45520	36120	27840	24120	17500	14590	24.3	3	1/2	1-3/8	500
2 2	CS*C300M22	3.0	----	----	25350	22740	17980	13810	----	----	----	----	----	16.0	2	1/2	7/8	330
	CS*C400M22	5.0	57730	52140	41930	37300	28960	21790	----	----	----	----	----	28.2	3	1/2	7/8	455
	CS*C500M22	5.0	70520	63920	51850	46370	36510	28050	----	----	----	----	----	28.2	3	1/2	1-1/8	475
	CS*C600M22	6.5	----	72850	59240	53000	41670	31800	----	----	----	----	----	28.2	3	1/2	1-1/8	490
	CS*C200L22	2.0	----	----	----	----	----	15930	12360	9230	7760	4930	----	10.0	2	1/2	7/8	340
	CS*C300L22	3.0	----	----	----	----	----	25140	19610	14830	12620	8370	----	28.2	3	1/2	1-1/8	470
	CS*C400L22	4.0	----	----	----	----	----	30010	23620	18070	15510	10580	----	28.2	3	1/2	1-1/8	475
	CS*C500L22	5.0	----	----	----	----	----	34160	27100	20980	18150	12710	----	28.2	3	1/2	1-3/8	490
	CS*C600L22	6.5	----	----	----	----	----	41100	32420	25090	21760	15400	----	28.2	3	1/2	1-3/8	500

**NOTE:** For 90°F ambient multiply capacity by 1.03. Reduce capacity by 3% for each 5° increase in ambient temperature.  
Consult factory for capacities above 110°F Amb.  
\* See rear cover for dimensional drawings

## Also available from Carrier:

### Low Profile Unit Coolers

Model CWA / CWE  
For Walk - In Coolers & Freezers  
3,900 to 39,000 BTUH

See Publication number  
C - 200 for details



### Low Air Velocity Unit Coolers

Model LWA / LWE  
For Walk - In Coolers  
6,700 to 37,000 BTUH



See Publication number  
C - 240 for details

## Electrical Data

### Semi-Hermetic Models

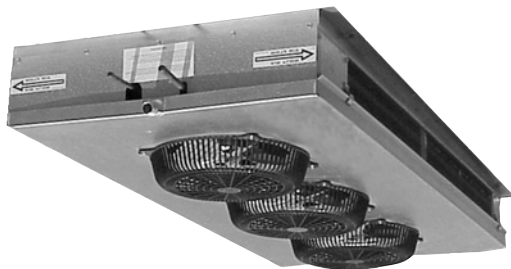
MODEL NUMBER	COMP. MODEL NUMBER	AMPS @ 230/1/60					AMPS @ 208-230/3/60					AMPS @ 460/3/60				
		COMPRESSOR		COND	TOTAL	MCA‡	COMPRESSOR		COND	TOTAL	MCA‡	COMPRESSOR		COND	TOTAL	MCA‡
		RLA	LRA	FLA	UNIT†		RLA	LRA	FLA	UNIT†		RLA	LRA	FLA	UNIT†	
CS*C300M44	06DM808	20.0	110.0	2.0	23.0	28.0	11.2	71.0	2.0	14.2	17.0	5.6	35.5	1.0	7.1	9.0
CS*C400M44	06DM313	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C500M44	06DM316	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C600M44	06DA818	----	----	----	----	----	28.2	160.0	3.2	32.4	40.0	14.1	80.0	2.1	16.7	21.0
CS*C200L44	06DR109	17.1	110.0	2.0	20.1	25.0	7.6	53.3	2.0	10.6	13.0	3.5	26.3	1.0	5.0	6.0
CS*C300L44	06DR013	23.3	100.0	3.2	27.5	34.0	11.2	71.0	3.2	15.4	19.0	5.6	35.5	2.1	8.2	10.0
CS*C400L44	06DR316	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C500L44	06DR718	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C600L44	06DR820	----	----	----	----	----	28.2	160.0	3.2	32.4	40.0	14.1	80.0	2.1	16.7	21.0
CS*C300M22	06DM808	20.0	110.0	2.0	23.0	28.0	11.2	71.0	2.0	14.2	17.0	5.6	35.5	1.0	7.1	9.0
CS*C400M22	06DM313	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C500M22	06DM316	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C600M22	06DA818	----	----	----	----	----	28.2	160.0	3.2	32.4	40.0	14.1	80.0	2.1	16.7	21.0
CS*C200L22	06DR109	17.1	110.0	2.0	20.1	25.0	7.6	53.3	2.0	10.6	13.0	3.5	26.3	1.0	5.0	6.0
CS*C300L22	06DR013	23.3	100.0	3.2	27.5	34.0	11.2	71.0	3.2	15.4	19.0	5.6	35.5	2.1	8.2	10.0
CS*C400L22	06DR316	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C500L22	06DR718	28.6	150.0	3.2	32.8	40.0	17.3	100.0	3.2	21.5	26.0	8.6	50.0	2.1	11.2	14.0
CS*C600L22	06DR820	----	----	----	----	----	28.2	160.0	3.2	32.4	40.0	14.1	80.0	2.1	16.7	21.0

† Total Unit Amps includes approximate allowance for control circuit as follows: 1A - 208/230V; 0.5A - 460V.

‡ MCA Minimum Circuit Ampacity does not include evaporator(s) electrical requirements. (Evaporator fan motor amps, defrost heater amps)  
Contact factory for specific details.

*Also available from Carrier:*

### Dual Air Discharge Unit Coolers



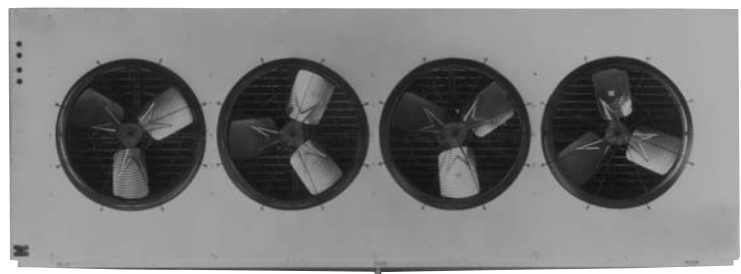
Model DWA / DWE  
For Walk - In Coolers & Freezers  
3,900 to 39,000 BTUH

See Publication number  
C - 230 for details

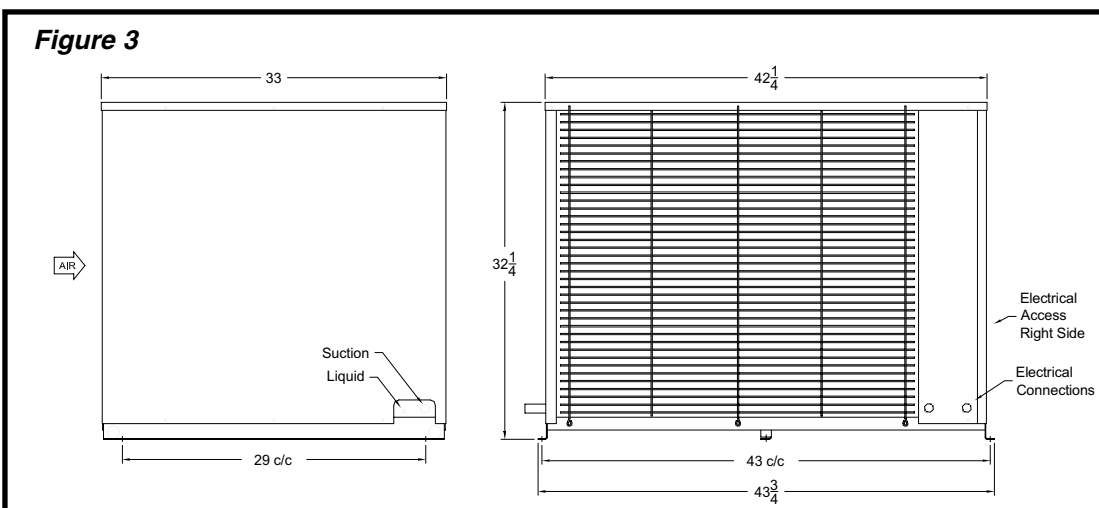
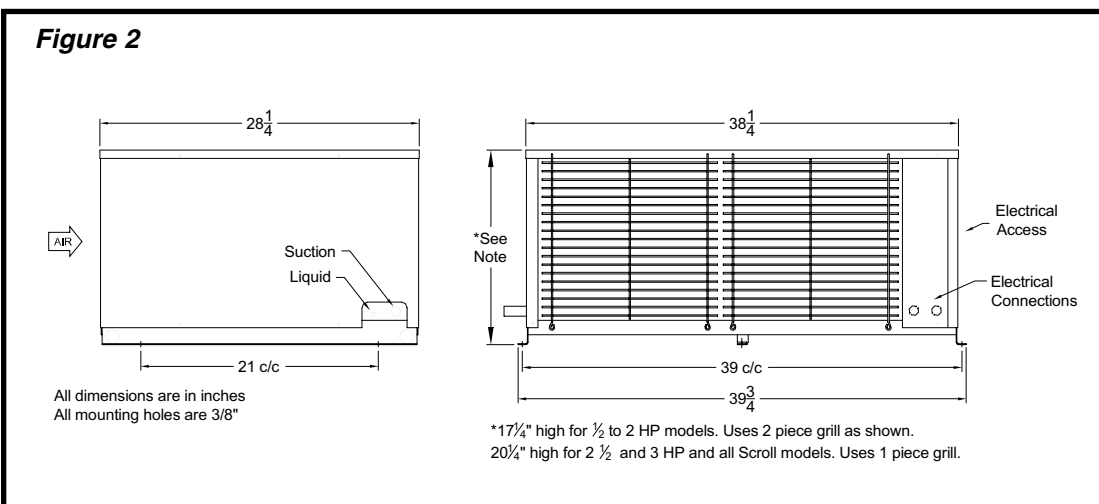
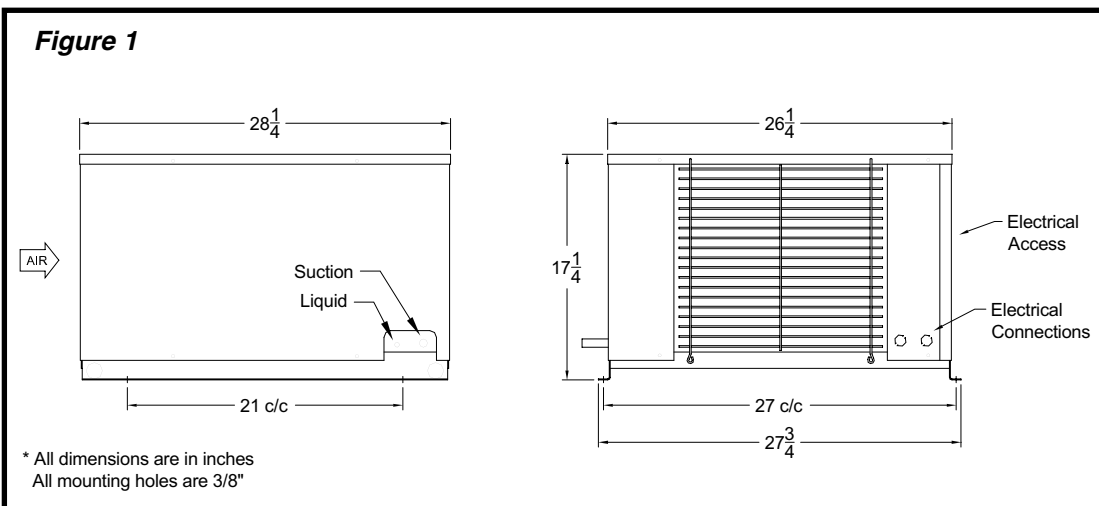
### Large Profile Unit Coolers

Model LWA / LWE  
For Refrigerated Warehouses  
16,400 to 273,000 BTUH

See Publication number  
C - 220 for details



## Physical Dimensions - All Models



**Commercial Refrigeration**

**A member of the United Technologies Corporation family.  
Stock Symbol - UTX**

Manufacture reserves the right to discontinue, or change at any time, specifications or designs without notice or without incurring obligations.

221 South Berry St., Brea, CA 92821  
Tel: (714) 529-9571 • Fax: (714) 529-7203