#### **COMMERCIAL REFRIGERATION**

CEC-NRCC-PRC-05-E (Revised 08/15)

CERTIFICATE OF COMPLIANCE	NRCC-PRC-US-E
Commercial Refrigeration	(Page 1 of 5)
Project Name:	Date Prepared:

#### A. GENERAL INFORMATION

Retail Food Store Conditioned Area ≥ 8,000 ft<sup>2</sup> **Building Area:** 

Retail Food Store Conditioned Area < 8,000 ft<sup>2</sup>

(Note: If the Retail Food Store Conditioned Area is  $< 8,000 \text{ ft}^2$  then the Retail Food Store need not comply)

Phase of Construction: **New Construction** Addition Alteration

# **B. MANDATORY REQUIREMENTS**

Are new condensers replacing existing condensers when:

The attached compressor system total heat of rejection does not increase?

No Yes

Less than 25% of the attached compressors and the attached refrigerated display cases are new?

Yes No

If Yes to both questions for all systems, the condenser(s) need not comply (exception §120.6(b)). Continue to page 3 or 4.

CONDENSER MANDATORY MEASURE	T-24 Sections	Indicate page reference for information on the plans or specification, or list information below				
Condenser ID or Tag (e.g. Cond-1)						
Continuously variable speed fans? Fan speed controlled in unison for all fans serving a common condenser high side?	§120.6(b)1A					
Saturated condensing temperature setpoint reset based on ambient dry bulb temperature for air-cooled condensers and ambient wet bulb temperature for evaporative condensers?	§120.6(b)1B,C					
Specify the minimum saturated condensing temperature setpoint. Complies if the minimum saturated condensing temperature setpoint $\leq 70^{\circ}F$ .	§120.6(b)1D					
Minimum allowed condenser efficiency. Reference Table 120.6-C.						
Installed condenser specific efficiency from worksheet CR-2C	§120.6(b)1E					
Is the installed condenser efficiency ≥ the minimum allowed condenser efficiency?						
<b>Exception 1 to §120.6(b)1E.</b> Condenser with total heat rejection capacity of < 150,000 Btuh at the specific efficiency conditions.						
Exception 2to §120.6(b)1E. Condenser operating in Climate Zone 1.						
Exception 3 to §120.6(b)1E. Existing condenser reused for an addition or alteration.						
Air-cooled Condenser Installed? If Yes then Fill Out Next 3 Rows						
Fin density (fins per inch). Complies if fin density ≤10.	\$430 C/L)45					
Exception 1 to §120.6(b)1F. Condenser is a micro-channel condenser.	§120.6(b)1F					
Exception 2 to §120.6(b)1F. Existing condenser is being reused.						
Existing compressor system reused? If Yes, the compressor system need not comply. Yes No		, ,		•		

If Yes to both questions for all systems, the condensers need not comply (exception §120.6(b)). Continue to page 4 or 4.

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COMPRESSOR SYSTEM MANDATORY MEASURES	T-24 Sections	Indicate page reference for information on the plans or specification, or list information below				
Compressor System / Suction Group ID or Tag (e.g. Rack A)						
Saturated suction temperature setpoint reset based on the temperature requirements of the attached refrigeration display cases or walk-ins?						
Exception 1 to §120.6(b)2A. Single compressor system with no variable capacity capability.						
Exception 2 to §120.6(b)2A. Suction group with design saturated suction temperature (SST) ≥ 30°F.	§120.6(b)2A					
<b>Exception 2 to §120.6(b)2A.</b> Suction group comprises of the high stage of a two-stage or a cascade system.						
Exception 2 to §120.6(b)2A. Suction group serves the secondary cooling fluid (e.g. glycol) chiller.						
Design Saturated Suction Temperature (SST) ≤ -10ºF and Suction Group Design Cooling Capacity Greater than 100,000 Btu/hr? If Yes then Fill Out the Next 3 Rows						
Subcooled liquid temperature at the exit of the subcooler. Complies if the temperature is $\leq 50^{\circ}$ F.						
Specify the saturated suction temperature (SST) of the suction group doing the subcooling. Complies if SST ≥18ºF.	§120.6(b)2B					
<b>Exception 1 to §120.6(b)2B.</b> Suction group is the low temperature suction group of a cascade system.						

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CERTIFICATE OF COMPLIANCE

Commercial Refrigeration

Project Name:

Date Prepared:

	REFRIGERATED DISPLAY CASES MANDATORY MEASURES	T-24 Sections	Indicate page reference for information on the plans or specification, or list information below			
Refrig	erated Display Cases					
Lights	in the refrigerated display cases and lights installed on walk-in glass doors automatically turned					
	ring non-business hours, or reduced by 50% of lighting power within 30 minutes after the y area is vacated?	§120.6(b)3	Yes No			
Exc	eption 1 to §120.6(b)3. Retail Food Store is open for business for 140 hours or more per week.					
	HEAT RECOVERY MANDATORY MEASURES	T-24 Sections	Indicate page reference for information on the plans or specification, or list information below			
Heat I	Recovery System ID or Tag (e.g. HR-1)					
Heat r	ecovery of at least 25% of the sum of the total heat rejection of the refrigeration systems with >					
150,00	00 Btuh individual total heat rejection at design conditions?	§120.6(b)4A				
Identi	fy the page in plans showing the heat recovery calculations or attach the calculations to this					
form.						
Exc	eption 1 to §120.6(b)4A. Retail Food Store located in Climate Zone 15.					
Exc	eption 2 to §120.6(b)4A. Reused refrigeration and HVAC systems for an addition or alteration.					
Identi	fy the page number in plans showing the charge increase calculations or attach the calculations					
to this	from.					
Α	Specify the increase in refrigerant charge associated with heat recovery equipment and piping in lbs	§120.6(b)4B				
В	Specify the total amount of heat recovery heating capacity in MBH [MBH = 1,000 Btuh]					
С	A / B. Complies if C < 0.35 lbs/MBH.					

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# C. Fan-Powered Condenser Specific Efficiency Worksheet EVAPORATIVE CONDENSER

	Fans			Pumps			Condenser				
	Α	В	С	D	E	F	G	Н	ı	J	К
T/1D	Motor Power	Motor	Motor Input Power (kW)	Total Fan	Motor Power	Motor	Motor Input Power (kW)	Total Pump	Capacity	Total Input Power (kW)	Specific Efficiency (Btuh/Watt)
Tag/ID	(HP) <sup>1</sup> Fan 1	Efficiency Fan 1	0.746 * A / B Fan 1	Power (kW)	(HP)	Efficiency	0.746 * E / F	Power (kW)	(MBH) <sup>2</sup>	D + H	I/J
	Fan 2 Fan 3	Fan 2 Fan 3	Fan 2 Fan 3		Pump 1 Pump 2	Pump 1 Pump 2	Pump 1 Pump 2				
	Fan 1 Fan 2 Fan 3	Fan 1 Fan 2 Fan 3	Fan 1 Fan 2 Fan 3		Pump 1 Pump 2	Pump 1 Pump 2	Pump 1 Pump 2				

- 1. Enter the nominal HP for each fan motor. If the manufacturer specifies the input power in kW, then skip to column C and enter it there.
- 2. Enter the rated capacity of the condenser at 100°F saturated condensing temperature and 70°F ambient wetbulb temperature.

#### AIR-COOLED CONDENSER

	Fa	Cond	enser		
Α	В	С	D	E	F
Number of Fans	Motor Power (HP) <sup>1</sup>	Motor Efficiency	Total Input Power (Watts) 0.746 * A * B / C	Capacity (Btuh) <sup>2</sup>	Specific Efficiency (Btuh/Watt) E / D
		A B		A B C D  Total Input Power (Watts)	A B C D E  Total Input Power (Watts)

- 1. Enter the nominal HP for each fan motor. If the manufacturer specifies the input power in kW, then skip to column D and enter it there.
- 2. Enter the rated capacity of the condenser at 105°F saturated condensing temperature and 95°F ambient drybulb temperature (10°F temperature difference).

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DO	CUMENTATION AUTHOR'S DECLARATION STATEMENT					
1.	I certify that this Certificate of Compliance documentation is accurate and complete.					
Docu	umentation Author Name:	Documentation Author Signature:				
Com	pany:	Signature Date:				
Addr	ress:	CEA/ HERS Certification Identification (if applicable):				
City/	/State/Zip:	Phone:				
RES	SPONSIBLE PERSON'S DECLARATION STATEMENT					
I ce	ertify the following under penalty of perjury, under the laws of the State of California:					
1.	The information provided on this Certificate of Compliance is true and correct.					
2.	. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible					
	designer).					
3.	The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.					
4.	The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents,					

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone: