REFRIGERATED WAREHOUSE 3000 FT^2 OR GREATER AND SERVED BY THE SAME REFRIGERATION SYSTEM

CERTIFICATE OF COMPLIANCE	NRCC-PRC-08-E
Refrigerated Warehouse >3,000 ft^2 and served by the same refrigeration system	(Page 1 of 5)
Project Name:	Date Prepared:

NOTE: This form required when multiple spaces for refrigerated warehouses when equal to or more than 3,000 ft^2 of refrigerated space is served by the same refrigeration system compressor(s) and condenser(s).

A. MANDATORY MEASURES	Title 24 Sections	Indicate page reference for information on the plans or specification, or list the information below[1]				
Condenser ID or tags (e.g. Cond-1)						
Minimum condensing temperature setpoint ≤ 70ºF.	§120.6(a) 4C,D					
Condenser fans must be continuously variable speed and all fans on a common high side are to be controlled in unison.						
The condensing temperature setpoint for air-cooled condensers must be reset in response to ambient drybulb temperature. The condensing temperature setpoint for evaporative-cooled condensers or water-cooled condensers (via cooling towers or fluid coolers) shall be reset in response to ambient wetbulb temperatures.	§120.6(a) 4E					
Exception to §120.6(a)4E. Condensing temperature control strategies approved by the Executive Director that have been demonstrated to provide at least equal energy savings. Attach letter of approval to form.						
Minimum allowed condenser specific efficiency. *(Reference Table 120.6-B)*	§120.6(a) 4F					
Installed condenser specific efficiency *(Reference PRC-08-E Page 3 or 4)*						
Is the installed condenser efficiency ≥ the minimum allowed condenser efficiency?		☐	☐	☐	☐	☐
Is an evaporative condenser or water-cooled condenser served by a fluid cooler or cooling tower installed? **If Yes then fill out the next 5 lines.**	§120.6(a) 4	☐	☐	☐	☐	☐
Design wetbulb (WB) temperature (°F).	§120.6(a) 4A					
Saturated condensing temperature (SCT) under design conditions (°F).						
Maximum allowed SCT under design conditions WB ≤ 76ºF SCT = WB + 20ºF 76ºF < WB ≤ 78ºF SCT = WB + 19ºF WB > 78ºF SCT = WB + 18ºF						
Exception to §120.6(a)4A. Exempted condenser is on a refrigeration system where more than 20% of the design refrigeration load is for quick chilling or freezing (space with design cooling capacities of greater than 240 Btu/hr-ft^2), or process refrigeration cooling for other than a refrigerated space.						
Condenser exempt or is the installed condensing temperature ≤ the maximum allowed condensing temperature?		☐	☐	☐	☐	☐

1. *Fill in the reference to the sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column next to the applicable section.*

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B. MANDATORY MEASURES	**Title 24 Sections**	**Indicate page reference for information on the plans or specification, or list the information below [1]**				
Condenser ID or tags (e.g. Cond-1)						
Is an air-cooled condenser installed? **If Yes then fill out the next 9 lines.**	§120.6(a) 4	☐	☐	☐	☐	☐
Design drybulb (DB) temperature (°F)	§120.6(a) 4B					
Saturated condensing temperature (SCT) under design conditions (°F).						
Is condenser serving a cooler or freezer? (if both list freezer)						
Maximum allowed SCT under design conditions for systems serving cold storage. Freezer SCT = DB + 10ºF Cooler SCT = DB + 15ºF						
Exception 1 to §120.6(a)4B. Exempted condensing unit has a total compressor power < 100 HP.						
Exception 2 to §120.6(a)4B. Exempted air-cooled condenser is on a refrigeration system where more than 20% of the design refrigeration load is for quick chilling or freezing (space with design cooling capacities of greater than 240 Btu/hr-ft^2), or process refrigeration cooling for other than a refrigerated space.						
Condenser or condensing units(s) exempt, or is the installed condensing temperature less than or equal to the maximum allowed condensing temperature?		☐	☐	☐	☐	☐
Is the fin density < 10 fins per inch?	§120.6(a) 4G	☐	☐	☐	☐	☐
Exception to §120.6(a)4G. Condenser is a micro-channel condenser.						
Compressor ID or tags (e.g. Comp-1)						
Compressors shall be designed to operate at a minimum condensing temperature of 70ºF or less.	§120.6(a) 5A					
New open-drive screw compressors with a design saturated suction temperature (SST) ≤ 28ºF that discharges to the system condenser pressure shall control compressor speed in response to the refrigeration load.	§120.6(a) 5B					
Exception 1 to §120.6(a)5B. Exempted compressor is part of a multiple compressor suction group.						
Exception 2 to §120.6(a)5B. Exempted compressor(s) is part of a system where more than 20% of the design refrigeration load is for quick chilling or freezing (space with design cooling capacities of greater than 240 Btu/hr-ft^2), or process refrigeration cooling for other than a refrigerated space.						

1. *Fill in the reference to the sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column next to the applicable section.*

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C. Condenser Efficiency Worksheet

☐ **WATER-COOLED CONDENSER SERVED BY A FLUID COOLER (EXEMPT)**

☐ **EVAPORATIVE CONDENSER**

	Fans				Pumps				Condenser		
	A	B	C	D	E	F	G	H	I	J	K
Tag/ ID	Motor Power (HP)[1]	Motor Efficiency (%)[2]	Motor Input Power (kW) (0.746 x A/B)	Total Fan Power (kW)	Motor Power (HP)	Motor Efficiency (%)[2]	Motor Input Power (kW)[3] (0.746 x E/F)	Total Pump Power (kW)	Capacity (MBH)[4]	Total Input Power (kW) D + H	Specific Efficiency (Btuh / Watt) I / J
	1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___	1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___	1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____		1 ___ 2 ___ 3 ___ 4 ___	1 ___ 2 ___ 3 ___ 4 ___	1 ___ 2 ___ 3 ___ 4 ___				
	1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___	1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___	1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____		1 ___ 2 ___ 3 ___ 4 ___	1 ___ 2 ___ 3 ___ 4 ___	1 ___ 2 ___ 3 ___ 4 ___				
	1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___	1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___	1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____		1 ___ 2 ___ 3 ___ 4 ___	1 ___ 2 ___ 3 ___ 4 ___	1 ___ 2 ___ 3 ___ 4 ___				

1. *Enter the horsepower for each fan motor. If the manufacturer specifies the input power in kW, then skip to column C and enter it there.*
2. *Enter efficiency as decimal for calculations. Example: 92.5% = 0.925*
3. *Enter the horsepower for each pump motor. If the manufacturer specifies the input power in kW, then skip to column G and enter it there.*
4. *Enter the manufacturer's published capacity, with any required adjustment factors for the application, of the condenser at 100ºF saturated condensing temperature and 70ºF ambient wetbulb temperature.*

D. Condenser Efficiency Worksheet

☐ **AIR-COOLED CONDENSER**

	Fans				Condenser	
	A	B	C	D	E	F
Tag/ID	**Number of Fans**	**Motor Power (HP)[1]**	**Motor Efficiency (%)[2]**	**Total Input Power (kW)** (0.746x A x B / C)	**Capacity (MBH)[3]**	**Specific Efficiency (Btuh/Watt)** (E / D)

1. *Enter the horsepower for each fan motor. If the manufacturer specifies the input power in kW, then skip to column D and enter it there.*
2. *Enter efficiency as decimal for calculations. Example: 92.5% = 0.925*
3. *Enter the manufacturer's published capacity, with any required adjustment factors for the application, of the condenser at 105ºF saturated condensing temperature and 95ºF ambient drybulb temperature (10ºF temperature difference).*

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify 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, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
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: