RETURN DUCT DESIGN AND AIR FILTER DEVICE SIZING ACCORDING TO TABLES 150.0-~~C~~B OR ~~D~~C

CERTIFICATE OF VERIFICATION		CF3R-MCH-28-H
Return Duct Design and Air Filter Device Sizing According to Tables 150.0-~~C~~B or ~~D~~C		(Page 1 of 2)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

A. System Information		
01	System Identification or Name	
02	System Location or Area Served	
03	Nominal Cooling Capacity (tons) of Condenser	
04	Number of Return Ducts	

B. One Return Duct		
01	Minimum Return Duct Diameter (inches)	
02	Installed Return Duct Diameter (inches)	
03	Minimum Total Return Filter Grille Gross Area (inch^2)	
04	Installed Total Return Filter Grille Gross Area (inch^2)	
05	Compliance Statement:	

C. Two Return Ducts		
01	Minimum Return Duct1 Diameter (inches)	
02	Installed Return Duct1 Diameter (inches)	
03	Minimum Return Duct2 Diameter (inches)	
04	Installed Return Duct2 Diameter (inches)	
05	Minimum Total Return Filter Grille Gross Area (inch^2)	
06	Installed Total Return Filter Grille Gross Area (inch^2)	
07	Compliance Statement:	

D. Additional Requirements for Compliance		
01	Qualification for the Alternative to Section 150.0(m)13B requires that the ducted space conditioning system shall not use zoning dampers. Systems that use zoning dampers shall comply with the requirements of Section 150.0(m)15.	
02	The return duct length for each return air filter grille shall not exceed 30 linear feet.	
03	The return duct(s) shall not contain more than a total of 180 degrees of bend.	
04	If the return duct contains more than 90 degrees of bend, one of the bends shall be a metal elbow.	
05	Return grille devices shall be labeled in accordance with the requirements in section 150.0(m)12A to disclose the grille's design airflow rate and a maximum allowable clean-filter pressure drop of 12.5 Pa (0.05 inches water) for the air filter media as rated in accordance with AHRI Standard 680 for the design airflow rate for the return grille.	
06	Verification Status:	
07	Correction Notes:	
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met unless otherwise noted in the Verification Status and the Corrections Notes in this table.		

E. Hole for the placement of a Static Pressure Probe (HSPP), and Permanently installed Static Pressure Probe (PSPP) in the Supply Plenum Procedures for installing HSPP or PSPP are specified in RA3.3.1.1.		
01	Method Used to Demonstrate Compliance with the HSPP/PSPP Requirement	

F. Determination of HERS Verification Compliance All applicable sections of this document shall indicate compliance with the specified verification protocol requirements in order for this Certificate of Verification as a whole to be determined to be in compliance.	
01	

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Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Verification documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company:	Date Signed:
Address:	CEA/HERS Certification Information (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 Verification is true and correct.
2. I am the certified HERS Rater who performed the verification identified and reported on this Certificate of Verification (responsible rater).
3. The installed features, materials, components, manufactured devices, or system performance diagnostic results that require HERS verification identified on this Certificate of Verification comply with the applicable requirements in Reference Appendices RA2, RA3, and the requirements specified on the Certificate of Compliance for the building approved by the enforcement agency.
4. The information reported on applicable sections of the Certificate(s) of Installation (CF2R) signed and submitted by the person(s) responsible for the construction or installation conforms to the requirements specified on the Certificate(s) of Compliance (CF1R) approved by the enforcement agency.
5. I will ensure that a registered copy of this Certificate of Verification shall be posted, or 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 registered copy of this Certificate of Verification is required to be included with the documentation the builder provides to the building owner at occupancy.

BUILDER OR INSTALLER INFORMATION AS SHOWN ON THE CERTIFICATE OF INSTALLATION	
Company Name (Installing Subcontractor, General Contractor, or Builder/Owner):	
Responsible Builder or Installer Name:	CSLB License:

HERS PROVIDER DATA REGISTRY INFORMATION	
Sample Group Number (if applicable):	Dwelling Test Status in Sample Group (if applicable):

HERS RATER INFORMATION	
HERS Rater Company Name:	
Responsible Rater Name:	Responsible Rater Signature:
Responsible Rater Certification Number w/ this HERS Provider:	Date Signed:

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CF3R-MCH-28-H User Instructions

Section A. System Information

1. System Identification or Name: This field is filled out automatically. It is referenced from the CF2R-MCH-01, which must be completed prior to this document.
2. System Location or Area Served: This field is filled out automatically. It is referenced from the CF2R-MCH-01, which must be completed prior to this document.
3. Nominal Cooling Capacity (tons) of Condenser: This field is filled out automatically. It is referenced from the CF2R-MCH-01, which must be completed prior to this document.
4. Number of Return Ducts: Select the number of return ducts from the options given in the pull down list, either one or two return ducts. Those are the only options for this compliance approach. Other configurations will require that airflow and fan watt draw be verified by diagnostic testing.

Section B. One Return Duct

1. Minimum Return Duct Diameter: This field is automatically calculated based on row A03. Refer to Table 150.0-~~C/D~~B/C.
2. Installed Return Duct Diameter: Enter the installed return duct diameter (inches).
3. Minimum Total Return Filter Grille Gross Area: This field is automatically calculated based on row A03. Refer to Table 150.0-~~C/D~~B/C.
4. Installed Total Return Filter Grille Gross Area: Enter the installed return filter grille gross area (inch^2). The area is equal to the length (inches) multiplied by the width (inches).
5. Compliance Statement: This field is automatically populated based on the inputs to rows B02 and B04. Compliance requires that the installed duct diameter meet the required duct diameter AND the installed filter grille area meet the required filter grille area.

Section C. Two Return Ducts

1. Minimum Return Duct1 Diameter: This field is automatically calculated based on row A03. Refer to Table 150.0-~~C~~B or ~~D~~C.
2. Installed Return Duct1 Diameter: Enter the diameter (inches) for the first return duct run.
3. Minimum Return Duct2 Diameter: This field is automatically calculated based on row A03. Refer to Table 150.0-~~C~~B or ~~D~~C.
4. Installed Return Duct2 Diameter: Enter the diameter (inches) for the second return duct run.
5. Minimum Total Return Filter Grille Gross Area: This field is automatically calculated based on row A03. Refer to Table 150.0-~~C~~B/~~D~~C.
6. Installed Total Return Filter Grille Gross Area: Enter the total return filter grille gross area by summing up the two grille areas. The area of each grill is equal to the length (inches) multiplied by the width (inches).
7. Compliance Statement: This field is automatically populated based on the inputs to row C02, C04 and C06. Compliance requires that the installed duct diameters meet the required duct diameters AND the total installed filter grille area meet the total required filter grille area.

Section D Additional Requirements for Compliance

1. This field must be a true statement (or not applicable) for the system to comply.
2. This field must be a true statement (or not applicable) for the system to comply.
3. This field must be a true statement (or not applicable) for the system to comply.
4. This field must be a true statement (or not applicable) for the system to comply.
5. This field must be a true statement (or not applicable) for the system to comply
6. Verification Status: If this Section does not apply, then select "All n/a". If the system meets all of the additional requirements for compliance then select "Pass", otherwise select "Fail". The latter selection means that the system does not meet the requirements and the system will need to be modified to meet the requirements or airflow and fan efficacy will have to be verified by diagnostic testing.
7. Correction Notes: If one or more applicable requirements are not met "Fail" will appear in the row above. When this occurs the rater is required to enter detailed notes here that describe what failed and why.

Section E. Hole for the placement of a Static Pressure Probe (HSPP), and Permanently Installed Static Pressure Probe (PSPP) in the Supply Plenum

1. A hole for a static pressure probe (HSPP) or a permanent static pressure probe (PSPP) is required when system airflow verification is required, whether the airflow test method used requires one or not. Select the appropriate choice from the following options using a dropdown box, the Static Pressure Measurement Method:
    A. If an Hole Static Pressure Probe is installed then select "HSPP Installed"
    B. If a Permanent Static Pressure Probe is installed then select "PSPP Installed"
    C. If the system is configured such that an HSPP nor PSPP can be installed, an alternate location that provides access for making supply plenum pressure measurement may be used. Select "An alternative location has been provided and clearly labeled."
    D. If the system is such that an HSPP or PSPP is not applicable, select "HSPP/PSPP are not applicable to this system".

Section F. Determination of HERS Verification Compliance

1. This field is filled out automatically. Compliance requires that all individual criteria pass.

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