



Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form
RPER 1.01
8 Mar 10

County, Town, Municipality, Jurisdiction
Header Information

Contractor _____
Mechanical License # _____
Building Plan # _____
Home Address (Street or Lot#, Block, Subdivision) _____

REQUIRED ATTACHMENTS¹

Manual J1 Form (and supporting worksheets):
or MJ1AE Form² (and supporting worksheets):
OEM performance data (heating, cooling, blower):
Manual D Friction Rate Worksheet:
Duct distribution system sketch:

ATTACHED

Yes No
Yes No
Yes No
Yes No
Yes No

HVAC LOAD CALCULATION (UMC 1106.1)

Design Conditions

Winter Design Conditions

Outdoor temperature _____ °F
Indoor temperature _____ °F
Total heat loss _____ Btu

Summer Design Conditions

Outdoor temperature _____ °F
Indoor temperature _____ °F
Grains difference _____ Δ Gr @ _____ % Rh
Sensible heat gain _____ Btu
Latent heat gain _____ Btu
Total heat gain _____ Btu

Building Construction Information

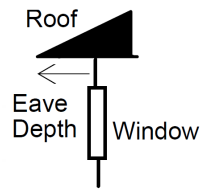
Building

Orientation (Front door faces) _____
North, East, West, South, Northeast, Northwest, Southeast, Southwest
Number of bedrooms _____
Conditioned floor area _____ Sq Ft

Number of occupants _____

Windows

Eave overhang depth _____ Ft
Internal shade _____
Blinds, drapes, etc
Number of skylights _____



HVAC EQUIPMENT SELECTION

Heating Equipment Data

Equipment type _____
Furnace, Heat pump, Boiler, etc.
Model _____
Heating output capacity _____ Btu
Heat pumps - capacity at winter design outdoor conditions
Auxiliary heat output capacity _____ Btu

Cooling Equipment Data

Equipment type _____
Air Conditioner, Heat pump, etc
Model _____
Sensible cooling capacity _____ Btu
Latent cooling capacity _____ Btu
Total cooling capacity _____ Btu

Blower Data

Heating CFM _____ CFM
Cooling CFM _____ CFM

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (UMC 601.2)

Design airflow _____ CFM Longest supply duct: _____ Ft Duct Materials Used (circle)
External Static Pressure (ESP) _____ IWC Longest return duct: _____ Ft Trunk Duct: Duct board, Flex, Sheet metal,
Component Pressure Losses (CPL) _____ IWC **Total Effective Length (TEL)** _____ Ft Lined sheet metal, Other (specify)
Available Static Pressure (ASP) _____ IWC **Friction Rate:** _____ IWC Branch Duct: Duct board, Flex, Sheet metal,
ASP = ESP - CPL Friction Rate = (ASP × 100) ÷ TEL Lined sheet metal, Other (specify)

I declare the load calculation, equipment selection, and duct system design were rigorously performed based on the building plan listed above, I understand the claims made on these forms will be subject to review and verification.

Contractor's Printed Name _____ Date _____
Contractor's Signature _____

Reserved for use by County, Town, Municipality, or Authority having jurisdiction.

¹ The AHJ shall have the discretion to accept Required Attachments printed from approved ACCA software vendors, see list on page 2 of instructions.

² If abridged version of Manual J is used for load calculation, then verify residence meets requirements, see Abridged Edition Checklist on page 13 of instructions.