

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): Yes No
or MJ1AE Form² (and supporting worksheets): Yes No
OEM performance data (heating, cooling, blower): Yes No
Manual D Friction Rate Worksheet: Yes No
Duct distribution system sketch: Yes No

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

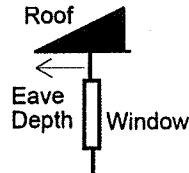
Number of bedrooms _____

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, Lined sheet metal, Other (specify) _____
Component Pressure Losses (CPL) _____	IWC	Total Effective Length (TEL) _____ Ft	Branch Duct: Duct board, Flex, Sheet metal, Lined sheet metal, Other (specify) _____
Available Static Pressure (ASP) _____	IWC	Friction Rate: _____ IWC	Friction Rate = (ASP × 100) ÷ TEL

ASP = ESP - CPL

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.