



RESIDENTIAL HEAT LOSS AND HEAT GAIN CERTIFICATION FORM FOR FORCED AIR SYSTEMS (PER ZONE)

Property address _____

Contractor _____

License _____

Telephone _____

Building Permit _____

Mechanical Permit _____

Zone No. _____ Total zone area _____ sf

Required Documentation	Attached
Manual J1 or MJ1AE Form (and supporting worksheets)	<input type="checkbox"/>
OEM performance data (heating, cooling, blower)	<input type="checkbox"/>
Manual D friction rate worksheet	<input type="checkbox"/>
Duct distribution system sketch	<input type="checkbox"/>

HVAC LOAD CALCULATIONS (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature _____ 17 _____ °F
 Indoor temperature _____ 70 _____ °F
 Total heat loss _____ Btu

Summer Design Conditions

Outdoor temperature _____ 93 _____ °F
 Indoor temperature _____ 75 IDDB/63 EWB _____ °F
 Grains difference _____ 46 _____ Δ Gr @ 50% Rh
 Sensible heat _____ Btu
 Latent heat _____ Btu
 Total heat gain _____ Btu

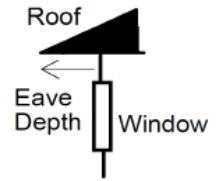
Building Construction Information

Building

Orientation; front door faces:
 N S E W NE NW SE SW
 Number of bedrooms _____
 Conditioned floor area _____
 Number of occupants _____

Windows

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



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type _____
Furnace, heat pump, boiler, etc.
 Mfg. & Model No. _____

Cooling Equipment Data

Equipment type _____
Air conditioner, heat pump, etc.
 Mfg. & Model No. _____

Blower Data

Heating _____ CFM
 Cooling _____ CFM

Heating output capacity @ 17°F:

Sensible cooling capacity _____ Btu-1st stage

1st stage _____ Btu

Sensible cooling capacity _____ Btu-2nd stage

2nd stage _____ Btu

Total cooling capacity _____ Btu-1st stage

Auxiliary heating output capacity _____ Btu

Total cooling capacity _____ Btu-2nd stage

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow _____ CFM
 External static pressure (ESP) _____ IWC
 Component pressure losses (CPL) _____ IWC
Available static pressure (ASP) _____ IWC
ASP=ESP-CPL

Longest supply duct _____ ft
 Longest return duct _____ ft
Total effective length (TEL) _____ ft
 Friction rate (FR) _____ IWC
Friction rate = (ASP x 100) ÷ TEL

Duct materials used

	Trunk	Branch
Duct board	<input type="checkbox"/>	<input type="checkbox"/>
Flex	<input type="checkbox"/>	<input type="checkbox"/>
Sheet metal	<input type="checkbox"/>	<input type="checkbox"/>
Lined sheet metal	<input type="checkbox"/>	<input type="checkbox"/>
Other:	_____	_____

I hereby certify that 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.

Print Name _____ Date _____

Signature _____