



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

Property address: \_\_\_\_\_

Contractor: \_\_\_\_\_

License: \_\_\_\_\_

Telephone: \_\_\_\_\_

Building Permit: \_\_\_\_\_

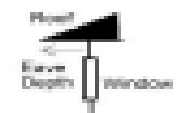
Mechanical Permit: \_\_\_\_\_

Zone No. \_\_\_\_\_ Total zone area \_\_\_\_\_ sq ft

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

**HVAC LOAD CALCULATIONS (IRC M503.3)**

<b>Design Conditions</b>		<b>Building Construction Information</b>	
<b>Winter Design Conditions</b>		<b>Building</b>	
Outdoor temperature	_____ °F	Orientation; front door facing (cross in circle below)	
Indoor temperature	_____ °F	N S E W NE NW SE SW	
Total heat loss	_____ Btu	Number of bedrooms	_____
<b>Summer Design Conditions</b>		Conditioned floor area	_____
Outdoor temperature	_____ °F	Number of occupants	_____
Indoor temperature	_____ °F	<b>Windows</b>	
Grains difference	_____ Δ Gr @ 50% RH	Base overhang depth	_____ ft
Sensible heat	_____ Btu	Internal shade	_____
Latent heat	_____ Btu	Blinds, shades, etc.	_____
Total heat gain	_____ Btu	Number of skylights	_____



**HVAC EQUIPMENT SELECTION (IRC M503.3)**

<b>Heating Equipment Data</b>		<b>Cooling Equipment Data</b>		<b>Blower Data</b>	
Equipment type	_____	Equipment type	_____	Heating	_____ CFM
<small>Forced air, gas, boiler, etc.</small>		<small>air conditioner, heat pump, etc.</small>		Cooling	_____ CFM
Mfg. & Model No.	_____	Mfg. & Model No.	_____		
Heating output capacity @ 17°F	_____ Btu	Sensible cooling capacity	_____ Btu-1 <sup>st</sup> stage		
1 <sup>st</sup> stage	_____ Btu	Sensible cooling capacity	_____ Btu-2 <sup>nd</sup> stage		
2 <sup>nd</sup> stage	_____ Btu	Total cooling capacity	_____ Btu-1 <sup>st</sup> stage		
Auxiliary heating output capacity	_____ Btu	Total cooling capacity	_____ Btu-2 <sup>nd</sup> stage		

**HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M503.4)**

Design air-flow	_____ CFM	Largest supply duct	_____ ft	<b>Duct materials used</b>		
External static pressure (ESP)	_____ INWC	Largest return duct	_____ ft	Duct board	Trunk	Branch
Component pressure losses (CPL)	_____ INWC	<b>Total effective length (TEL)</b>	_____ ft	Flex	<input type="checkbox"/>	<input type="checkbox"/>
Available static pressure (ASP)	_____ INWC	Friction rate (FR)	_____ INWC	Sheet metal	<input type="checkbox"/>	<input type="checkbox"/>
<small>ASP = ESP - CPL</small>		Friction rate = (ASP x 100) / TEL		Lined sheet metal	<input type="checkbox"/>	<input type="checkbox"/>
				Other	<input type="checkbox"/>	<input type="checkbox"/>

I hereby certify that the load calculations, equipment selection and duct system design were rigorously performed based on the building plans listed above; I understand the claims made on these forms will be subject to review and verification.

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_