



**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"/>
DEH performance data (heating, cooling, blower)	<input type="checkbox"/>
Manual B 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	_____ °F	Orientation; front door facing (cross in circle below)	
Indoor temperature _____ °F	_____ °F	N S E W NE NW SE SW	
Total heat loss _____ Btu		Number of bedrooms _____	
		Conditioned floor area _____	
<b>Summer Design Conditions</b>		Number of occupants _____	
Outdoor temperature _____ °F	_____ °F	<b>Windows</b>	
Indoor temperature _____ °F	_____ °F	Base overhang depth _____ ft	
Grains difference _____ Δ°C Δ Gr @ 50% Rh		Internal shade _____	
Sensible heat _____ Btu		Blinds, shades, etc. _____	
Latent heat _____ Btu		Number of skylights _____	
Total heat gain _____ Btu			

**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, hot water, 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) _____ INCH	Largest return duct _____ ft	Duct board	Trunk	Branch
Component pressure losses (CPL) _____ INCH	<b>Total effective length (TEL) _____ ft</b>	Flex	<input type="checkbox"/>	<input type="checkbox"/>
Available static pressure (ASP) _____ INCH	Friction rate (FR) _____ INCH	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 _____		

**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: \_\_\_\_\_