



**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 B friction rate worksheet	<input type="checkbox"/>
Duct distribution system sketch	<input type="checkbox"/>

HVAC LOAD CALCULATIONS (IRC M503.3)

Design Conditions		Building Construction Information	
Winter Design Conditions		Building	
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 _____	
Summer Design Conditions		Number of occupants _____	
Outdoor temperature _____ °F	_____ °F		
Indoor temperature _____ °F	_____ °F	Windows	
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)

Heating Equipment Data		Cooling Equipment Data		Blower Data	
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 st stage			
1 st stage _____ Btu		Sensible cooling capacity _____ Btu-2 nd stage			
2 nd stage _____ Btu		Total cooling capacity _____ Btu-1 st stage			
Auxiliary heating output capacity _____ Btu		Total cooling capacity _____ Btu-2 nd stage			

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M503.4)

Design air-flow _____ CFM	Largest supply duct _____ ft	Duct materials used		
External static pressure (ESP) _____ INWC	Largest return duct _____ ft	Duct board	Trunk	Branch
Component pressure losses (CPL) _____ INWC	Total effective length (TEL) _____ 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	Insulated 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: _____