



**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	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	_____
Summer Design Conditions		Conditioned floor area	_____
Outdoor temperature	_____ °F	Number of occupants	_____
Indoor temperature	_____ °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)	_____ INCH	Largest return duct	_____ ft	Duct board	Trunk	Branch
Component pressure losses (CPL)	_____ INCH	Total effective length (TEL)	_____ ft	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	<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: _____