

# ENERGY CALCULATION WORKSHEET

CITY OF DUNDAS  
BUILDING INSPECTIONS DEPARTMENT  
DUNDAS CITY HALL  
216 RAILWAY STREET NORTH, PO BOX 70  
DUNDAS, MN 55019  
507-645-2852

PLEASE PRINT CLEARLY

Date \_\_\_\_\_ Address \_\_\_\_\_

Contractor \_\_\_\_\_ Contact Person \_\_\_\_\_

Phone Number \_\_\_\_\_

Complete this form. Your application **will not** be processed unless all required information is available for review.

Code Type: (check one) \_\_\_\_\_ Category I \_\_\_\_\_ 2000 Energy Code (include Prescriptive Path Worksheet)

Energy Calculations: (check one) \_\_\_\_\_ Cook Book \_\_\_\_\_ MNCheck \_\_\_\_\_ Exterior Envelope

Furnace Type: (check one) \_\_\_\_\_ Sealed Combustion \_\_\_\_\_ Power Vented \_\_\_\_\_ Direct Vented \_\_\_\_\_ Other

Furnace Make and Model \_\_\_\_\_

Water Heater: (check one) \_\_\_\_\_ Sealed \_\_\_\_\_ Power Vent \_\_\_\_\_ Natural Draft \_\_\_\_\_ Electric

Fireplace/List fuel type and venting \_\_\_\_\_

List all exhausting appliances with CFM on the back (bath fans, range hood, dryer)

Heat Recovery System: (check one) \_\_\_\_\_ Yes \_\_\_\_\_ No

Ventilation: Describe how the required ventilation will be achieved. Include all make up air. Ventilation worksheet required. (Use back side if needed.)

Information required on building plans:

Elevations

Floor plans (sky light location)

Complete structural information

Footing and foundation plan

Cross section:

Wall construction

Rim joist detail (with air barrier detail)

Interior and exterior air barrier detail

Truss detail (7" heel)

Insulation and vapor barrier

Window and door U values

Building Address: \_\_\_\_\_

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

House conditioned floor area (including the basement) \_\_\_\_\_ square feet

Number of bedrooms (finished) \_\_\_\_\_

Number of bedrooms (unfinished) \_\_\_\_\_

**VENTILATION QUANTITY:**

A. People ventilation requirement per square foot (see chart) \_\_\_\_\_ CFM

B. People ventilation (# of bedrooms x 15 + 15) \_\_\_\_\_ CFM

2 people first bedroom plus 1 person each additional bedroom.

Add 1 bedroom in each unfinished level if not on plan.

TOTAL VENTILATION REQUIRED PER SQUARE FOOT OF AREA  
.35 AC/HR PEOPLE VENTILATION

SIZING OF PASSIVE MAKEUP AIR OPENINGS  
CATEGORY 1 CONSTRUCTION

	8' CEILING	9' CEILING
1000 SQ FT	47CFM.....	53CFM
1100 SQ FT	52CFM.....	58CFM
1200 SQ FT	56CFM.....	63CFM
1300 SQ FT	61CFM.....	69CFM
1400 SQ FT	66CFM.....	74CFM
1500 SQ FT	70CFM.....	79CFM
1600 SQ FT	75CFM.....	84CFM
EACH ADDITIONAL 100 ADD 5 CFM		
2000 SQ FT	94CFM.....	105CFM
2500 SQ FT	117CFM.....	132CFM
3000 SQ FT	140CFM.....	158CFM
3500 SQ FT	164CFM.....	184CFM
4000 SQ FT	187CFM.....	210CFM
4500 SQ FT	210CFM.....	237CFM
5000 SQ FT	234CFM.....	263CFM

DUCT DIAMETER	
3INCH .....	35CFM
4INCH .....	60CFM
5INCH .....	100CFM
6INCH .....	140CFM
7INCH .....	190CFM
8INCH .....	250CFM
9INCH .....	320CFM
10INCH .....	400CFM

**Step 1: Ventilation Equipment Requirements (check to confirm compliance).**

\_\_\_\_\_ Total ventilation required (CFM) equals the larger of A or B above. **IF HRV, SKIP TO STEP 2.**

\_\_\_\_\_ Size of passive opening (see chart).

\_\_\_\_\_ People ventilation fans listed for continuous operation and sound rating should not exceed 1.0 sone (surface mounted) or 1.5 zone (all others).

**Step 2: Heat Recovery Ventilator (HRV).**

\_\_\_\_\_ HRV meets UL standard 1812 or equivalent.

\_\_\_\_\_ HRV should have a permanent label of net air flow and sensible recovery efficiency.

**Distribution, Installation and Certification Requirements**

\_\_\_\_\_ Direct vent, power vent or sealed combustion equipment.

\_\_\_\_\_ All ducts outside the interior air barrier sealed with UL 181 or equivalent product.

\_\_\_\_\_ Controls for people ventilation are readily accessible and labeled.

\_\_\_\_\_ If passive makeup air opening ductwork is connected to furnace ductwork, or ventilation air not distributed to each room, controls are installed to run the furnace blower intermittently to distribute outdoor air to habitable rooms (i.e., fan recycler – interlock system).

CFM Kitchen Hood \_\_\_\_\_ Amount

CFM Dryer \_\_\_\_\_ Amount

CFM Bath Fans \_\_\_\_\_ Amount

\_\_\_\_\_ If any single exhaust devices over 300 CFM is installed, sealed combustion space heating equipment or an alternate make up source must be used.

Statement of compliance: The proposed building design represented in these documents is consistent with the building plans, specifications and other calculations submitted with the permit allocation. The proposed building has been designed to meet the requirements of the Minnesota Energy Code.

\_\_\_\_\_  
Applicant (Print Name)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Telephone Number