

HOT2000

Natural Resources CANADA
Version 10.51



File: 7V01-001.HSE
Application Type: General

Weather Library: C:\H2KV10~1\Dat\Wth100.dir

Weather Data for OTTAWA, ONTARIO

Builder Code: 7V01-001

Data Entry by: Larry Widdifield
Date of entry: 2017-01-30
Company: OVEC

Client name: Morocz, Tom
Street address: 29 Vanstone Drive

City: Ottawa
Postal code:

Region: Ontario
Telephone:

Mailing address:

City: Ottawa
Postal Code:

Region: Ontario

GENERAL HOUSE CHARACTERISTICS

House type: Single Detached
Number of storeys: One storey
Plan shape: Rectangular
Front orientation: Northeast
Year House Built: 1985
Wall colour: Default
Roof colour: Medium brown
Soil Condition: Normal conductivity (dry sand, loam, clay)
Water Table Level: Normal (7-10m/23-33ft)

Absorptivity: 0.40
Absorptivity: 0.84

House Thermal Mass Level: (A) Light, wood frame

Effective mass fraction 1.000

Occupants :
2 Adults for 50.0% of the time
0 Children for 50.0% of the time
0 Infants for 0.0% of the time

Sensible Internal Heat Gain From Occupants: 1.60 kWh/day

HOUSE TEMPERATURES

Heating Temperatures

Main Floor:	69.8 °F
Basement:	66.2 °F
TEMP. Rise from 69.8 °F:	5.0 °F
Cooling Temperature: Main Floor + Basement:	77.00 °F

Basement is- Heated: YES Cooled: YES Separate T/S: NO
Fraction of internal gains released in basement : 0.150

Indoor design temperatures for equipment sizing

Heating:	71.6 °F
Cooling:	74.0 °F

ANNUAL DOMESTIC WATER HEATING SUMMARY

Daily Hot Water Consumption:	49.49 Imp Gal
Hot Water Temperature:	131.00 °F
Estimated Domestic Water Heating Load:	15 Mil.BTU
Primary Domestic Water Heating Energy Consumption:	26.08 Mil.BTU
Primary System Seasonal Efficiency:	58.51%

ANNUAL SPACE HEATING SUMMARY

Design Heat Loss at -16.60 °F (1.84 BTU/hr / Ft3):	44797.24 BTU/hr
Gross Space Heat Loss:	109.39 Mil.BTU
Gross Space Heating Load:	109.39 Mil.BTU
Usable Internal Gains:	27.17 Mil.BTU
Usable Internal Gains Fraction:	24.84 %
Usable Solar Gains:	22.23 Mil.BTU
Usable Solar Gains Fraction:	20.32 %
Auxiliary Energy Required:	59.99 Mil.BTU
Space Heating System Load:	59.99 Mil.BTU
Furnace/Boiler Seasonal efficiency:	63.36 %
Furnace/Boiler Annual Energy Consumption:	93.54 Mil.BTU

ANNUAL SPACE COOLING SUMMARY

Design Cooling Load for July at 86.00 °F:	22664.82 BTU/hr
Design Sensible Heat Ratio:	0.769
Estimated Annual Space Cooling Energy:	2204.17
Seasonal COP (January to December):	2.108

BASE LOADS SUMMARY

	kwh/day	Annual kWh
Interior Lighting	3.40	1241.00
Appliances	9.00	3285.00
Other	7.60	2774.00
Exterior Use	4.00	1460.00
HVAC Fans		
HRV/Exhaust	0.24	87.60
Space Heating	0.92	334.59
Space Cooling	0.82	298.15
Total Average Electrical Load	25.97	9480.33

FAN OPERATION SUMMARY (kWh)

Hours	HRV/Exhaust Fans	Space Heating	Space Cooling
Heating	54.6	334.6	0.0
Neither	0.0	0.0	0.0
Cooling	33.0	0.0	298.1
Total	87.6	334.6	298.1

ENERGY CONSUMPTION SUMMARY REPORT

Estimated Annual Space Heating Energy Consumption	= 99889.81 MJ	= 27747.17 kWh
Ventilator Electrical Consumption: Heating Hours	= 0.00 MJ	= 0.00 kWh
Estimated Annual DHW Heating Energy Consumption	= 27517.47 MJ	= 7643.74 kWh

ESTIMATED ANNUAL SPACE + DHW ENERGY CONSUMPTION	= 127407.28 MJ	= 35390.91 kWh
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Estimated Greenhouse Gas Emissions 12.506 tonnes/year

The calculated heat losses and energy consumptions are only estimates, based upon the data entered and assumptions within the program. Actual energy consumption and heat losses will be influenced by construction practices, localized weather, equipment characteristics and the lifestyle of the occupants.