

Permit #
Permit Date



REScheck Software Version 3.7.3 Compliance Certificate

Project Title: Carlton

Report Date: 10/06/06

Data filename: C:\Program Files\Check\BAR 71 Carlton.rck

Energy Code: 2003 IECC
Location: Manheim, Pennsylvania
Construction Type: Single Family
Glazing Area Percentage: 16%
Heating Degree Days: 5532

Construction Site: Owner/Agent: Designer/Contractor:

654 Hamaker Rd.
 Manheim, PA 17545
 Permit Date: Plan date: 10-4-06

Compliance: Passes Maximum UA: 670 Your Home UA: 585 --> 12.7% Better Than Code (UA)

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Basement Wall: Solid Concrete or Masonry:	887	5.0	0.0		75
Window: Anderson 2820: Wood Frame, Double Pane with Low-E:	4			0.390	2
Basement Wall at Full Daylight: Solid Concrete or Masonry:	297	5.0	0.0		44
Window: K&K 2828: Wood Frame:Double Pane with Low-E:	15			0.360	5
Door: 9-lite: Glass:	20			0.380	8
Basement Wall at Half Daylite: Solid Concrete or Masonry:	297	5.0	0.0		40
1st Floor: All-Wood Joist/Truss:Over Unconditioned Space:	1301	11.0	0.0		94
1st Floor Walls 2x6: Wood Frame, 16" o.c.:	1312	19.0	0.0		65
Windows: K&K 2 ea (2416): Wood Frame:Double Pane with Low-E:	18			0.360	6
Window: K&K (2420): Wood Frame:Double Pane with Low-E:	10			0.360	4
Windows: K&K 3 ea (2424 Twin): Wood Frame:Double Pane with Low-E:	72			0.360	26
Window: K&K (1628 / 5052 / 1628): Wood Frame:Double Pane with Low-E:	50			0.360	18
Front Door: Solid:	20			0.140	3
Door from House to Garage: Solid:	20			0.140	3
Summit 6-0 Slider: Glass:	42			0.380	16
Second floor walls 2x6: Wood Frame, 16" o.c.:	1276	19.0	0.0		65
Window: K&K (2420): Wood Frame:Double Pane with Low-E:	10			0.360	4
Window: K&K (2420 Twin): Wood Frame:Double Pane with Low-E:	20			0.360	7
Windows: K&K 2 ea (2828): Wood Frame:Double Pane with Low-E:	30			0.360	11
Windows: K&K 2 ea (2828 Twin): Wood Frame:Double Pane with Low-E:	60			0.360	22
Window: K&K (3224 Twin): Wood Frame:Double Pane with Low-E:	60			0.360	22
Window: K&K (KCN24P): Wood Frame:Double Pane with Low-E:	14			0.360	5
House ceiling area: Flat Ceiling or Scissor Truss:	1341	38.0	0.0		40
Gas Furnace 58MXA08020: Forced Hot Air: 92.1 AFUE					

Air Conditioner 38CKC042: Electric Central Air: 13 SEER

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2003 IECC requirements in REScheck Version 3.7.3 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Malcolm

EGSTOLTZUS HOMES

10-6-06

Builder/Designer

Company Name

Date



REScheck Software Version 3.7.3 Inspection Checklist

Date: 10/06/06

Cellings:

- House ceiling area: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation

Comments: _____

Above-Grade Walls:

- 1st Floor Walls 2x6: Wood Frame, 16" o.c., R-19.0 cavity insulation

Comments: _____

- Second floor walls 2x6: Wood Frame, 16" o.c., R-19.0 cavity insulation

Comments: _____

Basement Walls:

- Basement Wall: Solid Concrete or Masonry, 9.0' ht/8.5' bg/9.0' insul, R-5.0 cavity insulation

Comments: _____

- Basement Wall at Full Daylight: Solid Concrete or Masonry, 9.0' ht/0.0' bg/9.0' insul, R-5.0 cavity insulation

Comments: _____

- Basement Wall at Half Daylight: Solid Concrete or Masonry, 9.0' ht/4.5' bg/9.0' insul, R-5.0 cavity insulation

Comments: _____

Windows:

- Window: Anderson 2820: Wood Frame, Double Pane with Low-E, U-factor: 0.390

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

- Window: K&K 2828: Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

- Windows: K&K 2 ea (2416): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

- Window: K&K (2420): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

- Windows: K&K 3 ea (2424 Twin): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

- Window: K&K (1628 / 5052 / 1628): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: _____

- Window: K&K (2420): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: _____

- Window: K&K (2420 Twin): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: _____

- Windows: K&K 2 ea (2828): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: _____

- Windows: K&K 2 ea (2828 Twin): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: _____

- Window: K&K (3224 Twin): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: _____

- Window: K&K (KCN24P): Wood Frame:Double Pane with Low-E, U-factor: 0.360

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: _____

Doors:

- Door: 9-lite: Glass, U-factor: 0.380

Comments: _____

- Front Door: Solid, U-factor: 0.140

Comments: _____

- Door from House to Garage: Solid, U-factor: 0.140

Comments: _____

- Summit 6-0 Slider: Glass, U-factor: 0.380

Comments: _____

Floors:

- 1st Floor: All-Wood Joist/Truss:Over Unconditioned Space, R-11.0 cavity insulation

Comments: _____

Heating and Cooling Equipment:

- Gas Furnace 58MXA08020: Forced Hot Air: 92.1 AFUE or higher

Make and Model Number: _____

- Air Conditioner 38CKC042: Electric Central Air: 13 SEER or higher

Make and Model Number: _____

Air Leakage:

- Joints, penetrations, and all other such openings in the building envelope that are sources of air leakage must be sealed.
- Recessed lights must be 1) Type IC rated, or 2) installed inside an appropriate air-tight assembly with a 0.5" clearance from combustible materials. If non-IC rated, the fixture must be installed with a 3" clearance from insulation.

Skylights:

- Minimum insulation requirement for skylight shafts equal to or greater than 12 inches is R-19.

Vapor Retarder:

- Required on the warm-in-winter side of all non-vented framed ceilings, walls, and floors.

Materials Identification:

- Materials and equipment must be installed in accordance with the manufacturer's installation instructions.
- Materials and equipment must be identified so that compliance can be determined.
- Manufacturer manuals for all installed heating and cooling equipment and service water heating equipment must be provided.
- Insulation R-values, glazing U-factors, and heating equipment efficiency must be clearly marked on the building plans or specifications.

Duct Insulation:

- Supply ducts in unconditioned attics or outside the building must be insulated to R-8.
- Return ducts in unconditioned attics or outside the building must be insulated to R-4.
- Supply ducts in unconditioned spaces must be insulated to R-8.
- Return ducts in unconditioned spaces (except basements) must be insulated to R-2.
- Where exterior walls are used as plenums, the wall must be insulated to R-8.
- Insulation is not required on return ducts in basements.

Duct Construction:

- Duct connections to flanges of air distribution system equipment must be sealed and mechanically fastened.
- All joints, seams, and connections must be securely fastened with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric, or tapes. Tapes and mastics must be rated UL 181A or UL 181B.
Exception: Continuously welded and locking-type longitudinal joints and seams on ducts operating at less than 2 in. w.g. (500 Pa).
- The HVAC system must provide a means for balancing air and water systems.

Temperature Controls:

- Thermostats are required for each separate HVAC system. A manual or automatic means to partially restrict or shut off the heating and/or cooling input to each zone or floor shall be provided.

Service Water Heating:

- Water heaters with vertical pipe risers must have a heat trap on both the inlet and outlet unless the water heater has an integral heat trap or is part of a circulating system.
- Insulate circulating hot water pipes to the levels in Table 1.

Circulating Hot Water Systems:

- Insulate circulating hot water pipes to the levels in Table 1.

Swimming Pools:

- All heated swimming pools must have an on/off heater switch and require a cover unless over 20% of the heating energy is from non-depletable sources. Pool pumps require a time clock.

Heating and Cooling Piping Insulation:

- HVAC piping conveying fluids above 105 degrees F or chilled fluids below 55 degrees F must be insulated to the levels in Table 2.

Table 1: Minimum Insulation Thickness for Circulating Hot Water Pipes

Heated Water Temperature (°F)	Insulation Thickness in Inches by Pipe Sizes			
	Non-Circulating Runouts		Circulating Mains and Runouts	
	Up to 1"	Up to 1.25"	1.5" to 2.0"	Over 2"
170-180	0.5	1.0	1.5	2.0
140-169	0.5	0.5	1.0	1.5
100-139	0.5	0.5	0.5	1.0

Table 2: Minimum Insulation Thickness for HVAC Pipes

Piping System Types	Fluid Temp. Range(°F)	Insulation Thickness in Inches by Pipe Sizes			
		2" Runouts	1" and Less	1.25" to 2.0"	2.5" to 4"
Heating Systems					
Low Pressure/Temperature	201-250	1.0	1.5	1.5	2.0
Low Temperature	106-200	0.5	1.0	1.0	1.5
Steam Condensate (for feed water)	Any	1.0	1.0	1.5	2.0
Cooling Systems					
Chilled Water, Refrigerant and Brine	40-55	0.5	0.5	0.75	1.0
	Below 40	1.0	1.0	1.5	1.5

NOTES TO FIELD: (Building Department Use Only)
