



Alternatives for Application of Manitoba's new Energy and Water Efficiency Regulations

Some concerns have been raised by retailers and suppliers that cannot be addressed by the December 1, 2010 effective date and as such the Office of the Fire Commissioner is providing a Guide on how to apply these Regulations in the interim. The permission to provide these guidelines is given to the OFC through Section 3.1 of *The Building and Mobile Homes Act*.

With respect to both the Manitoba Building Code Amendment 142/2010 and the Manitoba Plumbing Code Amendment 143/2010; any home built within the Province of Manitoba that has a signed contract dated before December 1, 2010 will be permitted to be built under the 2006 Manitoba Building and Plumbing Codes and may exclude additional the requirements of 142/2010 and 143/2010. To ensure that these homes are excluded from the new requirements, a list of the signed contracts must be provided to the Authority Having Jurisdiction no later than December 17, 2010.

Section 1 – Manitoba Building Code Amendment 142/2010

Definitions:

Seasonal dwelling is defined as a single family dwelling that is not a primary place of residence.

1(2.1) A further Amendment will be made to this section to have the energy modelling software meet *ASHRAE 140-2004 Standards Method of Test for the Evaluation of Building Energy Analysis Computer Programs*. This will coincide with the National Building Code Amendment that is forthcoming in 2012 under Energy Efficiency for Houses. As such, the Province of Manitoba will allow the use of any energy modelling software which meets ASHRAE 140 – 2004 to be used to show alternative compliance with this Regulation.

2(13.2) Replacing Article 9.7.1.4

The 12.7 mm spacer that is defined in the Regulation is an average distance. In cases of larger windows the spacing will be smaller and in smaller windows the spacing can be larger, however, the minimum spacer shall not be not less than 10 mm. The intent of

Sentence 9.7.1.4 (2) is that low conductivity spacers be provided between glazing layers and that each glazing layer on a dual pane window have a low-e coating. Tri pane windows do not require low-e coatings.

5(3) Table 9.25.5.2 is amended by replacing the row “Roofs (attics)” with the following:

Roofs (attics) ⁵	RSI - 8.8 (R50)	RSI - 8.8 (R50)
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In addition the following footnote shall be added to the Table.

- (5) The thermal resistance rating of attic space insulation may be reduced for a distance of 1.0 m from the exterior wall in dwellings where the R-value of the wall below is either R-20 or R-26.

The rationale for this change is that the modular home industry is also regulated by Manitoba Transportation which places load height limits on the homes that are shipped throughout Manitoba to ensure they will clear overpasses and other overhead obstructions. These height limits impact most of the 16' to 24' wide homes and prevent the industry from being able to achieve R-50 in the roof truss heel area adjacent to exterior walls.

5(4) Article 9.25.5.5 Equipment Efficiency for Buildings – Residential Occupancy

Under this section two issues have arisen, the first being that there is existing stock of many 92% AFUE furnaces in Manitoba. As such, the province will allow the installation of 92% AFUE furnaces until April 1, 2011.

The second issue that has arisen is that certified 94% AFUE furnaces will not be available for installation in modular homes until after July 1, 2011. Until this date the province will allow a 90% AFUE furnace to be installed in modular homes as they are the most efficient on the market at this time.

5(4) Article 9.25.5.6 Gas-fuelled Fireplaces

Clarification is being provided on the intent of Sentence 9.25.5.6 (1) (b). For the purposes of natural gas fired appliances a direct vent is required to be installed as per the manufacturer's instructions. Furthermore, a chimney used for a wood burning appliance would not meet the intent of this code provision.

2(21.1) Article 9.32.3.12 Heat Recovery Ventilators (HRV)

To ensure that suppliers can stock the appropriate number of HRV's, homes will be permitted to be built without HRV's until April 1, 2011.

Secondly, the proposed 9.32.3.12 in the 142/2010 was never meant to replace the full section. It was meant to clarify that a HRV is to be installed in every new single and two family dwelling except seasonal dwellings. Thus, Sentence (1) of the Amendment should read as Sentence (7) and Sentence (8) shall be added. Sentences (2) and (3) from the Amendment should be struck from the Regulation completely.

Furthermore, due to concerns by the industry the revised Sentence (7) should read:

9.32.3.12.

- 7) *Heat or energy recovery ventilators shall be designed to provide a minimum 55% sensible heat recovery efficiency when tested to the low temperature thermal and ventilation performance test method set out in CAN/CSA-C439, "Rating the Performance of Heat/Energy-Recovery Ventilators", at a test temperature of -25°C at an air flow not less than 30 L/s (or 60 CFM).*
- 8) *Heat recovery ventilators shall be installed in all residential occupancies except seasonal dwellings.*

To find a list of acceptable HRV's and ERV's in Manitoba you can go to the HVI Certified Products Directory at <http://www.hvi.org>.

As an example of how to read the Certified Products Directory see below:

The required minimum efficiency and airflow rating point are found in the listings or in the manufacturer's literature as shown in the sample below. The required factors from the test results, of Supply Temperature at -25°C, Net Air Flow – L/s no less than 30 L/s, and Sensible Recovery Efficiency of greater than 55% on the -25°C line are shown in the boxes on a typical reported test result from the HVI Certified Products Directory.

In the example below, at -25°C the L/s are listed at 35 and the Sensible Recovery Efficiency is 66, thus HRV "X" would be considered acceptable for use in Manitoba.

HRV "X"
 Electrical Requirements: Volts: 120 Amps:1.4
 Exhaust Air Transfer Ratio: 0.04 @100 Pa/0.4 in. wg.0.03@50 Pa/0.2 in. wg.
 Low Temp. Vent Reduction Factor: 3.7% Supply 13.8% Exhaust Low Temp. Factor:1.04

Ventilation Performance

Pa	EXT. STATIC PRESSURE		NET SUPPLY AIR FLOW		GROSS AIR FLOW		
	In. wg.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.1	68	144	70	149	80	171
50	0.2	63	134	65	139	78	165
75	0.3	59	125	61	129	75	160
100	0.4	53	113	55	117	74	157
125	0.5	43	92	45	95	70	149
150	0.6	34	73	36	76	64	137
175	0.7	28	59	29	61	57	122

ENERGY PERFORMANCE

	SUPPLY TEMPERATURE		NET AIR FLOW		POWER CONSUMED	SENSIBLE RECOVERY EFFICIENCY	APPARENT SENSIBLE EFFECTIVENESS	LATENT RECOVERY/MOISTURE TRANSFER
	°C	°F	L/S	CFM	WATTS			
HEATING	0	+32	30	64	78	64	73	0.00
	0	+32	45	96	104	63	71	0.01
	0	+32	55	117	119	61	69	0.01
	-25	-13	35	74	96	66	78	0.00
COOLING	+35	+95	29	62	77		TOTAL RECOVERY EFFICIENCY 17	

Section 2 – Manitoba Plumbing Code Amendment 143/2010

2(1.2) Article 2.2.11.1(1)

A typo was noticed in Sentence (1). The references to “control valves” in both places must be deleted. The intent of this section was to regulate the flow of the fixture and not the control valve.

2(1.2) Table 2.1.11.1

The flow rate for Laundry Tub Faucets shall meet the minimum flow rate as opposed to the maximum flow rate, as per CSA B125 – Plumbing Fittings.

The maximum flow rate for Showerheads refers to the primary showerhead only, this means that in a multi-showerhead shower only the primary showerhead must meet the specified flow rate.

2(1.2) Article 2.1.11.1(1)

The reference for CAN/CSA B45 - Plumbing Fixtures has been replaced by ASME A112.19.2-2008/CSA B45.1-08 - Plumbing Fixtures.