

Venmar...ventilation in a class by itself!



"We are extremely pleased with the performance of the (Venmar) HRV450w. It has produced the results we wanted to achieve, while still maintaining the integrity of the existing heating system. It is our intention of progressing with the installation of additional units."

*Tim Halstead
Saskatoon School Board, Maintenance Division*

The Saskatoon Board of Education's portable classrooms were a headache for staff and students alike. These 1200-square foot semi-detached facilities were equipped with rooftop heat/cool units that were not designed to provide adequate fresh air during the cold season. This resulted in headaches, lethargy, impaired attention, burning eyes and mildew odor, to mention a few! Indeed, extensive air quality testing revealed that at the height of the heating season CO₂ levels reached 2500 ppm. The classrooms needed a low cost system that would provide the required 15 cfm of fresh air per person for a class of 30 students.

The Board did its homework and came up with the right answer; Venmar!

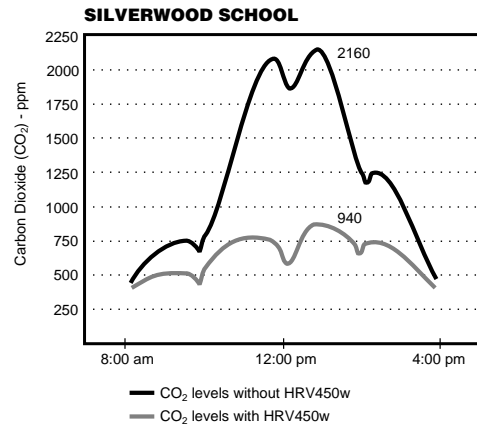
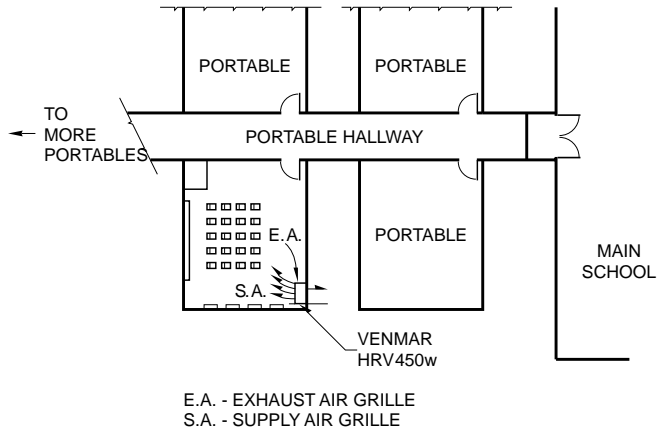
Situation

The portable classrooms were stand alone facilities connected to the main body of the school by an adjoining hallway. They were not served by the school's ventilation system.

Each portable was equipped with:

- a combination gas fired heat/cool rooftop unit with a 70,000 Btu/hr capacity
- single room thermostat located in the heated space

These units did not provide ventilation. In fact, the only ventilation came in the form of infiltration through the building envelope.



Standards and Requirements

Reference Standard	ASHRAE 62-89
CFM Per Person	15
Building Type	Portable classroom
Occupancy	30 students
Ventilation Required	450 cfm

Restrictions and Limitations

The selected system would have to complement existing heating units which had an expected lifespan of 15 to 20 more years. It also had to be:

- designed to fit any of the portables in the system
- easily transferred from one portable classroom to another if a portable was removed from the school.

Budget constraints were another serious consideration.

Design Solution

Taking all requirements and limitations into consideration, Venmar's HRV450w was found to be the most cost-effective solution providing excellent ventilation. This unit:

- recovered heat, while allowing the use of the existing heating system

- offered the required degree of adaptability and portability
- was half the cost of an adequate air exchanging rooftop unit
- could be located on any one of three outside walls.

Furthermore, simple ducting ensured the adequate separation of air intake and exhaust.

The Results

In addition to reducing CO₂ levels to 950 ppm, on low speed the HRV450w unit provided:

- acceptable noise levels
- free cooling modes during the warm season
- automatic night setback during the heating season.

For more information, contact:

Venmar CES Inc.
2525 WENTZ AVE
SASKATOON SK S7K 2K9
CANADA

Phone (306) 242-3663
Toll Free 1-800-667-3717
Fax (306) 242-3484

Printed in Canada
© Copyright Venmar CES Inc. 1996

PN 152108
12/99