

# Venmar...a cure for the horse clinic!



*"Our requirements for air circulation, odor and humidity control were rather unique. Because of the high volume of urine and expired water vapor, along with daily washing of all walls and floors, condensation on walls and ceilings was a constant concern. We have now used the Venmar system for 10 months and are very pleased. There is no condensation on walls or ceilings, even in winter when the doors and windows are closed. There is no odor from the hospital stalls into the office area of the hospital. We are very impressed with the air quality, odor, and humidity control this system provides."*

*Tom Juergens, D.V.M.  
Anoka Equine Veterinary Services Ltd.  
Elk River, Minnesota*

"Stench" is the word that best describes the odor that greeted clients at the Anoka Equine (Horse) Clinic on the outskirts of Minneapolis, Minnesota. Operating 24 hours a day, year-round, the 6,000 square-foot facility housed 2 to 4 horses whose by-products had a strong, negative impact on air quality (urine is almost 80% ammonia). Compounding the problem was the high relative humidity, reaching levels of 80% during peak periods of the day.

Needless to say, it was not good for business. What horse owner would want his quarter-of-a-million-dollar horse in such an environment? Employees complained. Clients complained. Potential clients simply took their business elsewhere. It was

obvious the clinic's owner had little choice but to address the issue immediately. Budget, however, remained a consideration.

## **Venmar rides to the rescue!**

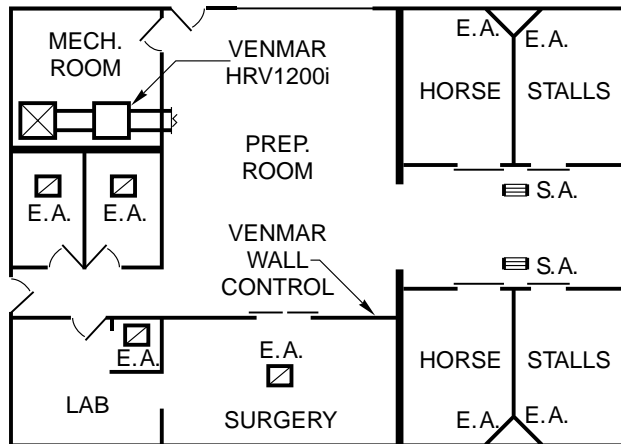
### **Situation**

The clinic's rural setting provided clean, fresh air for ventilation but:

- ventilation was overlooked in the original design
- horse stalls were heated by gas-fired units
- surgical area, lab, office, and lobby areas were heated and cooled by a conventional packaged system which did not ventilate the building

## Standards and Requirements

Reference standard	ASHRAE 62-89
Air exchange rate (ach - air change per hour)	2 ach in horse area; 1 ach in remainder of facility
Building type	Horse clinic
Occupancy	2 - 4 horses; 10 people
Ventilation required	800 - 1100 cfm



E.A. - EXHAUST AIR GRILLE  
S.A. - SUPPLY AIR GRILLE

## Design Solution

A Venmar HRV1200i model was recommended for this project. In continuous, round-the-clock operation, it would generate:

- the required 800 cfm (with the option of 1100 cfm) when activated by a remote wall-mounted fan control and dehumidistat
- low noise levels

The building's design incorporated exhaust outlets in the horse stalls, horse wash areas, and the surgical facility. The unit would bring fresh air into the building through the existing heating system's return ductwork.

## Restrictions and Limitations

The building's original design did not allow for a ventilation system, therefore:

- space was limited inside the mechanical room that would have to accommodate the selected unit
- budgetary limitations had to be taken into account

Also, the nature of the business was such that the system would be required to operate 24 hours a day.

## The Results

Satisfied customers! For Venmar *and* the Anoka Equine facility.

- The original odors have been almost completely eliminated
- Air moisture is down to an acceptable level
- The system provided the required ventilation while generating savings of 52% on operating costs (annual savings of \$2,714 based on normal operating costs of \$5,226 a year for a system without heat recovery)

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