

The above Computational Fluid Dynamics (CFD) snapshot demonstrates how air curtains provide separation at an open door, keeping valuable heated air inside.



## Berner International Corp.

### The Impact of NOT using Berner Air Curtains

- ***Unconditioned air/wind will enter the facility***

- Higher energy costs during winter and summer months. 70% of the energy air curtains save will be lost.
- If a vestibule is chosen as the energy saving method, valuable square feet will be lost from facility. Even worse, vestibules cost much more to build and aren't as effective as air curtains at saving energy.
- Laboratory tests show that in winter conditions, Berner air curtains keep the area near the front door 35% warmer than a vestibule, and 65% warmer than just a door.

- ***Higher energy costs due to stratified air in the facility***

- During winter months, the heat pumped into the building tends to rise above the thermostat. In taller structures, it's not uncommon for the air near the ceiling to be 20 degrees warmer than the floor. Berner air curtains keep air circulating and bring warm air down to the workspace and thermostat for more efficient heating.

- ***Customers and employees may be uncomfortable near the door***

- Customers who are seated near the door during winter months may be uncomfortable and are less likely to be repeat customers.
- Employees who work in cold or hot and humid environments are less productive.
- Berner air curtains create comfortable environments by preventing unconditioned air from entering the building. In hot environments, air curtains can be used to circulate air to increase comfort.

- ***Dirt, dust, and insects will enter the facility***

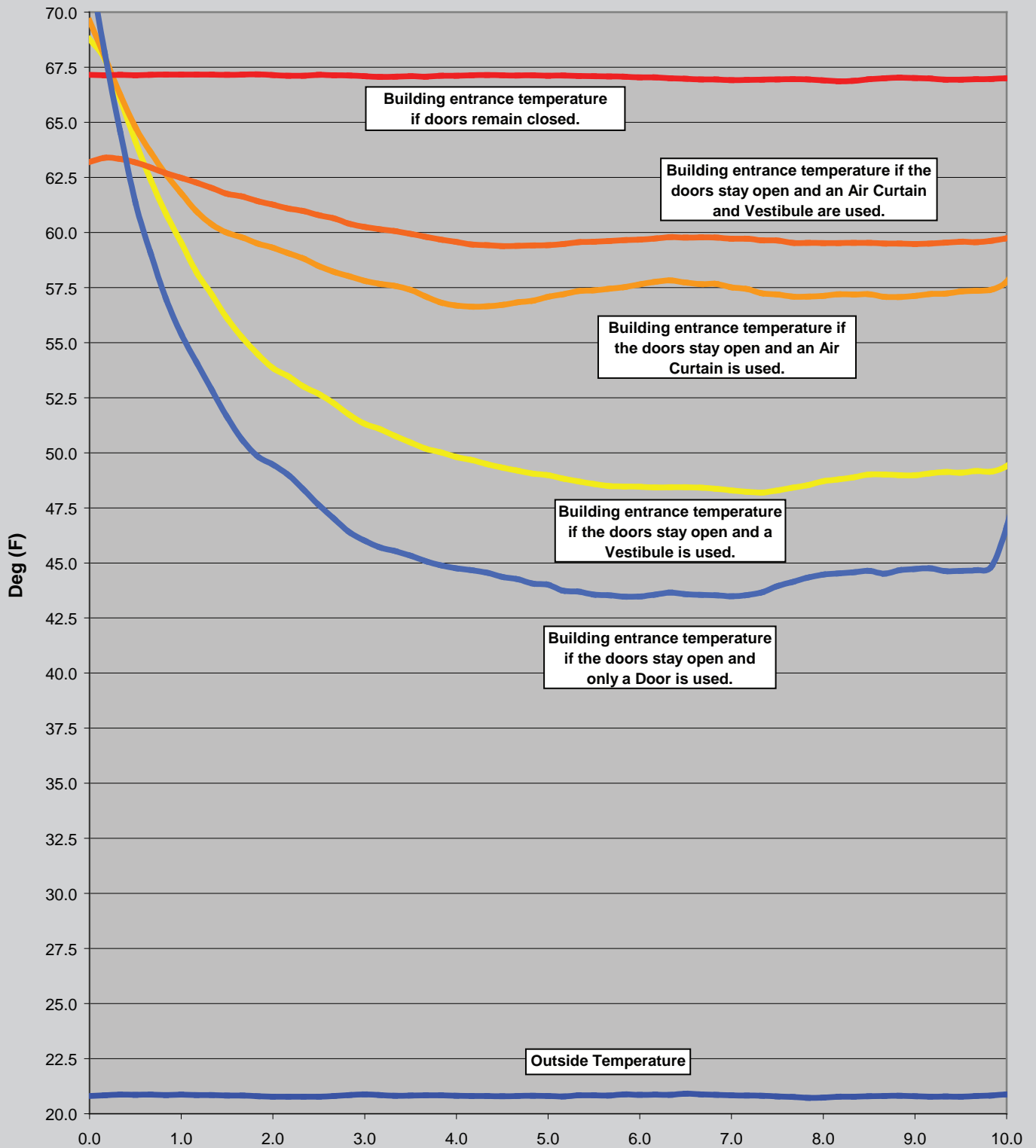
- Contaminants will enter through doors near customers and merchandise.
- Air handler volume may need to be increased to create a positive pressure in the facility to minimize infiltration. This additional air will have to be conditioned and will increase the building's energy bill.
- The smell of food at restaurants and convenience stores will attract bees and flies.



*Saving Energy and Creating Healthy, Comfortable Environments*

# Berner Air Curtain vs. Vestibule Laboratory Test Results

## March 3, 2010



Doors opened for 10 minutes to simulate high customer traffic and low wind conditions