

Sanford YMCA in Fargo, North Dakota

Natatorium Ventilation with Underground Duct

Non Corrosive — Condensation Free Windows



Warning:
Don't stand
on other
under ground
duct systems.



Sanford Health Systems mission is centered on the health and wellness of their patients. Not only are they expanding their network of hospitals and clinics, but they are also providing for preventative care. One aspect of this preventative care is to team up with the YMCA to build a state-of-the-art fitness center for the people of their community to stay active during the long winter months in Fargo, ND.

The centerpiece of this new facility is the natatorium.

The wall of glass separating the pool space from the cold outdoor air is always a concern for natatorium design. The indoor climate is controlled to 84°F with 50%

relative humidity and the outdoor climate can be as cold as -30°F. The challenge for the mechanical design team at ONE of Fargo is to keep the glass clear of frost and condensation throughout the year. With a 114°F temperature differential separated by a wall of glass, the design team had no room for error.

Jeremiah Christenson, Managing Principal of ONE, selected The BlueDuct for its inherent features of being air tight, water tight, insulated and able to last as long as the building itself to supply warm, dry air to "wash" the glass clear of condensation. The BlueDuct is also made of high density polyethylene making it a great

choice due to stand up to the highly corrosive environment of a natatorium space.

The linear supply diffusers were all uniquely incorporated into the a small raised floor at the base of the windows. This allows the warm air to raise up along the glass using the natural convection to cover the glass surface with a minimum throw velocity. It also limits the amount of pool water that can drop down into the duct.

The BlueDuct underground air duct supplies air to the linear diffusers in the natatorium area at the base of the tall glass.