

# HatchTech Pre-Humidification Unit Ensures Uniform and Superior Chick Quality

Dr. Inge van Rooyert-Reijrink M.Sc.

**Before outside air enters the incubator, the air passes an air handling unit. In an air handling unit, the air temperature is increased to 25°C. In the air handling unit, the air temperature rises, but the relative humidity of the air decreases.**

The bigger the difference between the outside air temperature and 25°C, the more the relative humidity decreases during the warming process in the air handling unit. In a situation with a low outside air temperature, a humidification system in the incubator has to spray often to reach for example a relative humidity of 50%. Consequently, eggs situated closest to the humidification system will become wet more often and their eggshell temperature will reduce every time the eggs become wet. A humidification system that sprays often creates variation in eggshell temperatures within the incubator and negatively affects hatchability and chick quality.

To minimize the use of a humidification system inside the incubator and to ensure maximum hatchability and uniform and superior chick quality, HatchTech developed

the Pre-Humidification unit. The HatchTech Pre-Humidification unit is positioned behind the air handling unit, before the air enters the incubator. In the air handling unit, the air temperature is increased and the Pre-Humidification unit adds water droplets of 1 micron to the air to increase relative humidity. When the air has passed the air handling unit and the Pre-Humidification unit, it has always a temperature of 25°C and a relative humidity of 50%. The humidification system in the incubator itself is still needed to fine tune the relative humidity, but the use of the humidification system is minimized.

The HatchTech Pre-Humidification unit supports the incubator design of HatchTech in which uniform and optimal embryo temperatures are priority number one to obtain maximum hatchability and uniform and superior chick quality.