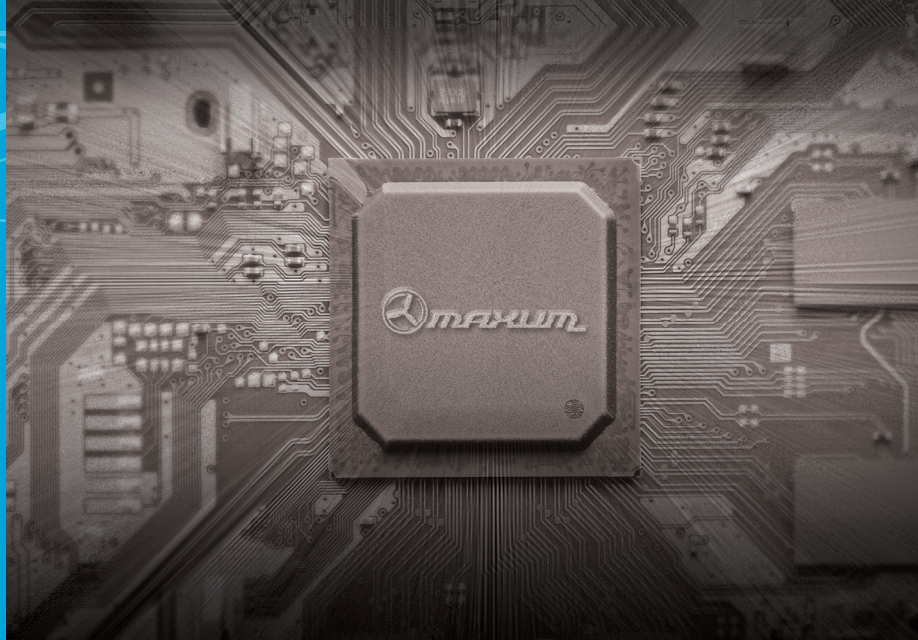


# EXPERT TRI-STAR

BUILDING VENTILATION



## Managing the complete building environment for high performance

Expert Tri-Star ventilation combines three ventilation systems into one powerful system :

- Natural ventilation
- Tunnel ventilation
- Super Cool High Pressure Misting



### EXPERT TRI-STAR IN WINTER

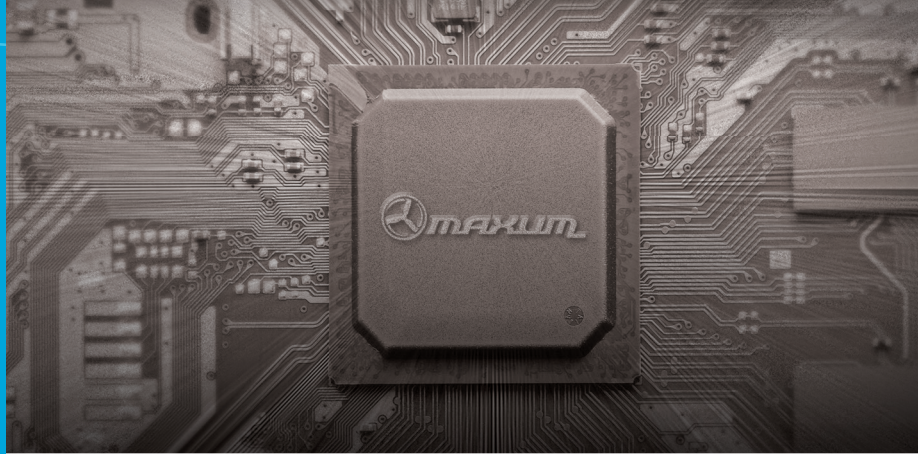
- Supplies clean fresh air evenly throughout the structure.
- Removes excess moisture. Eliminates wet ceilings.
- Removes pathogens and other contaminants.

### EXPERT TRI-STAR IN SUMMER

- Significantly reduces heat stress.
- Provides high levels of air exchange.

# EXPERT TRI-STAR

## BUILDING VENTILATION



### INSULATED CHIMNEY

- The insulated natural chimneys work like a fireplace, once the flue is warm it keeps pulling air out of the building. Opening around the damper allows warm, moist air to escape along the sides and keeps the chimney flue warm.
- The Expert Tri-Star has up to four chimney damper outputs for maximum design and expansion flexibility.



### RELATIVE HUMIDITY PROBE

- Expert Tri-Star enables up to 2 inside and 1 outside probe.
- Using the Relative Humidity Probe ensures that the chimneys and panels are adjusted to maintain the desired moisture conditions. The minimum ventilation rate can be set precisely to the building.



### INSULATED PANEL

- Expert Tri-Star operates up to 8 independent sidewall panels.
- Panels start opening in very small increments. The increment increases as the panel continues to open.
- De-icing cycle is activated when a panel has not moved for a selected period of time when the outside temperature is below the selected value.
- All panels will go through the de-icing cycle at different times to avoid large amounts of cold air entering the building at one time.
- Security setting based on actual building temperatures rather than the set point temperature is insurance against freezing up the building with too much airflow.



### TEMPERATURE PROBE

- The Expert Tri-Star enables up to 2 probes per panel plus 1 for outside temperature.

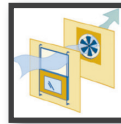


### CIRCULATING FAN

- Circulating fans do not provide the same level of effective cooling as tunnel but in conjunction with Super Cool High Pressure Misting it can be used as an alternative to tunnel where tunnel is not practical.
- Expert Tri-Star enables up to 4 stages of circ fans with possibility of 2 of these stages being variable.
- Select the start and stop temperatures for each stage.
- Expert Tri-Star will monitor the difference between all assigned temperature probes and if the difference is too high Expert Tri-Star will activate a circ fan stage to reduce the difference.

### TUNNEL VENTILATION WITH TRI-STAR

When temperature rises, tunnel ventilation effectively reduces the actual temperature of the building. Avoid heat stress with the Expert Tri-Star.



### TUNNEL VENTILATION

- Expert Tri-Star control provides a smooth transition from natural to tunnel back to natural. Fans start and shut-off and pannels open and close in programmed stages to eliminate any ventilation gap during the transition.
- Expert Tri-Star checks the outside temperature before starting the tunnel mode. If the outside temperature is below the selected safety temperature it will not go into tunnel mode.
- Expert Tri-Star provides an automatic fan rotation feature where the fan that has been used least is turned on ahead of fans which have been most recently used. This feature can be assigned to any fans. Increases the lifespan of the fan.



### SUPER COOL HIGH PRESSURE MISTING

- As temperature rises, humidity comes down and Super Cool increases the misting rate and the cooling effect.
- If the humidity level rises over the selected RH limit, the Super Cool automatically reduces the misting rate. Super cool keeps modulating up and down as needed, providing the maximum cooling possible under the existing temperature and humidity conditions.



### WIND COMPENSATION

- If either the wind speed or wind direction are unfavorable for the current ventilation in the building the Expert Tri-Star will reduce the panel opening to compensate for the wind.



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