

Fresh fruits and vegetables can be highly sensitive to post-harvest diseases caused by airborne bacteria and ethylene. The *Bio Turbo* range is a simple solution for removing airborne pathogens and solving these challenges faced by storage facilities, cold rooms, packaging houses, processing facilities or virtually any place between post harvest and the consumer's dinner plate!

# **POSITIVE EFFECT**

The quality of produce kept in storage may suffer in many aspects due to improper storage conditions. Mold, rot, premature ripening, shrivel, and weight loss are among the undesirable effects.

While high relative humidity helps to eliminate shrivel and weight loss, the challenges caused by airborne bacteria and ethylene (a natural ripening hormone) require a special treatment.

This is when the positive effects of Miatech's *Bio Turbo* are most beneficial. It uses a patented four stage process to eliminate ethylene gas, airborne bacteria and mold spores. It successfully prevents mold growth, eliminates unpleasant odours, and reduces unnecessary losses while preserving natural freshness and quality.

# THE SYSTEM

The Bio Turbo not only deals with both ethylene and bacteria challenges in the most advanced method, but it does this in the most economical way. The low operating costs makes *Bio Turbo* the most profitable choice. Ozone never leaves the *Bio Turbo*, as the process takes place inside the unit and not in your facility.













### **TECHNOLOGY OVERVIEW**

Bio Turbo units use a patented 4-stage purification process to achieve highest results in reducing ethylene and airborne bacteria. (Refer Figure 1)

## **ADVANCED APPROACH**

The *Bio Turbo* utilises ozone (O<sup>3</sup>) technology, but it never lets ozone leave the unit itself. Before leaving the unit, all ozone is turned back to pure oxygen (O<sup>2</sup>).

This unique feature allows ozone to be applied at much higher concentrations and achieve two significant benefits:

a more effective, better job fighting ethylene, airborne bacteria and mold spores

ozone produced never comes in contact with humans



#### STAGE (1) AIR FILTER

The air filter removes dust and visual particles from the air. STAGE (2) CELL DISRUPTER

An anti-microbial chemical is applied to the surface of a specially designed disrupter. It works by rupturing the outer membrane of the cells that make up these airborne pathogens. With efficiency rates of 99.5%+, this process stops their normal life development, thus destroying the cells.

### STAGE 3 OZONE CHAMBER

This chamber uses the positive effects of ozone to eliminate ethylene gas. The ozone is safely contained within this chamber and not dispersed throughout the storage area. STACE (A) BIO CLEAN MODULE

In this final stage, a catalyst is used to change the ozone into clean oxygen. The catalyst creates a reaction that breaks down the ozone molecule. From here the clean oxygen is released back into the environment.

Figure 1: 4-stage purification process

### **EFFECTIVE RESULTS**



The *Bio Turbo* effectively removes 99.5%+ of airborne bacteria from storage areas, preventing bacterial contamination, mold growth and unpleasant odours.



The *Bio Turbo* eliminates ethylene gas successfully preventing premature ripening and decay.

# **BIO TURBO RANGE**

With several models available; *Bio Turbo 100i, Bio Turbo 100, Bio Turbo 300, Bio Turbo 1000* and *Bio Turbo 6000,* there is a Bio Turbo to suit every application.

The model number represents the number of cubic meters each unit can process within a 24 hour period.











Bio Turbo 100i Bio Turbo 100 (for transportation) Bio Turbo 300

Bio Turbo 1000

Bio Turbo 6000

- INSTALLATION
- hangs from the ceiling
- easy, fast installation
- operates continuously
- requires 110VAC / 240VAC
- low maintenance







