

## AC3000 for Manufacturing & Industrial

# When Timing is Everything...

**In today's manufacturing facilities, efficient operation is key which means innovation is a must.**

Manufacturers have found ways to restructure operational processes for years. In keeping current with trending models they have turned to technology for answers. Surprising to many, solutions have turned up in an antiquated idea which is now offering some of the newest technologies relevant to the operations for manufacturers.

Pneumatic tube systems are revolutionizing the way our facilities are experiencing revitalization. Because we are able to move samples from production lines and parts through assembly lines at speeds up to 25 feet per seconds, productivity is increased. Wasted labor hours are cut by keeping valuable staff in the lab or on the line. Safety hazards are reduced, production increased and overall operations are improved.

Let Aerocom walk you through the advantages of pneumatic transport and assess your facilities needs today!

**C**onnect your staff to the  
**TECHNOLOGY** resources  
they need

## Aerocom's AC3000 Automatic Pneumatic Transport System

**The fully automated system designed for industrial facilities is making product, parts, paperwork and sampling transportation easy, efficient, and safe.**

### **ADVANTAGES:**

- Optimize Internal Logistics
- Increase Production and Revenue
- Reduce Safety Hazards by Eliminating Foot Traffic
- Utilize Multi-Zone Configuration for Simultaneous Carrier Transfer
- Incorporate Pass-Thru Station Technology to Reduce Routing
- Conserve energy with Low Voltage Requirements

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# Aerocom's AC3000—How it Works

## Optimizing Your Internal Logistics

By understanding your facilities operational needs, Aerocom can design and configure the right application and features to maximize your production. The AC3000 system has the capability to operate as a single zone or multi-zone system. It serves up to 1000 stations and can connect as many as 128 independently operating zones.

When zones need to connect, transfer units (called direct connects) allow the exchange of carriers between zones. These zones can then operate concurrently. If your facility requires a system with multi zones, Aerocom's Direct Connect units will dramatically enable transit and wait time reduction by directing carriers through the most direct path to its destination. No matter the configuration or set-up needed, internal operations will be sped to the tune of 25 feet per second. Foot traffic will be reduced, hence, reducing safety hazards on the floor.

Pass-Through station technology is a coveted feature when multiple floors are involved. This new technology reduces the travelled route by utilizing the station as a through route to its destination. No longer is the station a simple end point. This can significantly add value engineering to any project as routing needs can be optimized.

Low voltage requirements for the Aerocom system is another way our clients see savings. The AC 3000 is powered through a central power supply and then stepped down to 24 volts DC. Additional data cable ports and 110v outlets are not needed at each station or diverter location (as with high voltage systems).

**P**roviding value engineering throughout your facility



Carriers transporting paperwork, product, parts, or even samples to the lab not only speeds transit time, but it reduces foot traffic ultimately reducing safety risk on the floor. The number of carriers that can be in transit at the same time equals to the number of zones installed.



## Reducing Risk

Now that you have decided to implement the AC3000 pneumatic tube system into your facilities operations, hazardous encounters on the floor can be reduced. Re-routing your internal logistics by hanging pneumatic tubing from your ceiling truss will speed transport and eliminate traffic jams. With specifically designed routing and configurations, hot links or direct connect units will provide safe and speedy transportation from any location to any location.

Connecting production line to Lab, Shipping and Receiving to main office, upstairs to downstairs; no matter the route, transport moves at 25 feet per second with no interruption in its route. So, when safety is an important aspect of your facility, Aerocom can help reduce the risk and speed your transit time.



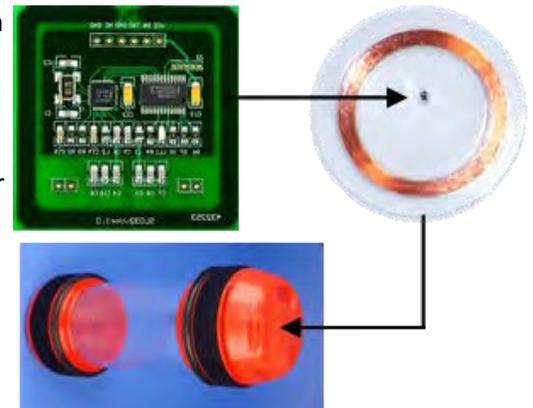
## Communications

### RFID Tagging

RFID tagging has become a well known technology in many industries today. The way pneumatic tube systems have come to use the technology is simply by programming the chip with a unique identifier. This unique identifier is an address or sequence of numbers that correlate with a specific station address or sequence of numbers. We call this correlation “home addressing”.

The programmed chip is inserted into the carrier’s structure and now each time the carrier is sent out all that must be done to return the carrier to its original location is to simply place the carrier back in a station port. The stations sensor will read the home address in the chip and send the carrier back home every time.

This tagging is also responsible for counting how many transactions a carrier has made. Once a carrier has reached its allotted transactions, the RFID tag alerts the system and automatically pulls the carrier out of service for regular maintenance.

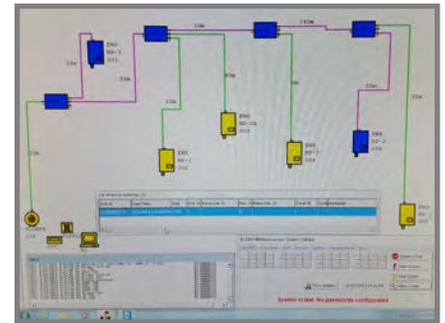
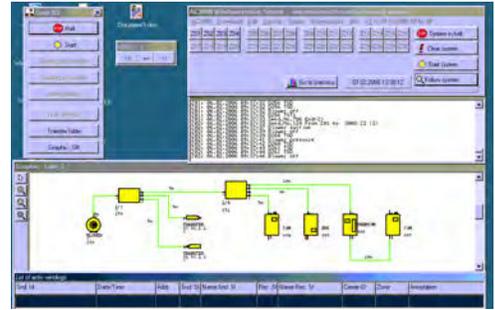


# Aerocom's AC3000—Platform

## WIN 3000 Platform

The AC3000 operating system is based on a WIN3000 platform and is compatible with Windows XP and Windows 7. Connections between the independent zones of the system are managed by a central PC control unit that communicates with the diverters placed throughout the routing. This platform allows for functions such as priority send/receive, automatic forwarding of carriers in case of power failures and system updating. When updates are needed, an Aerocom service engineer can access the data through the “programming mode” and download the changes necessary with only a few minutes of system interruption.

Remote system diagnostic testing through a secure internet connection can also be performed on this platform. An Aerocom technician dials in to the AC3000 PC and can resolve many performance issues without dispatching a technician, leaving your facility with maximum reliability and uptime for operations.



# Aerocom's AC3000 Configuration



# Station Options

## Stations that can handle your environment!

The AC3000 utilizes industrial grade stations, equipment and controls designed to withstand almost any type of environment. No matter if it is cold, hot, dirty or clean, Aerocom has the application that will be right for you.

TITAN Pass-Thru



Industrial Stainless Set-up



Multi-Load and Rail Set-up



Multi-Load



OES



Slide Gate



6" EWS



Integration

Industrial Stainless Lab Set-up



Multi-Zone Lab Set-up



# Diverter

## Uses:

AeroCom's 3 port diverter is a switching device used in pneumatic tube systems at branching points to direct the path of a carrier in transport. With the help of a magnetic proximity switch, the inner S-tube is aligned with the correct port on the opposite end of the diverter. A teflon seal ring keeps the S-tube tight so vacuum and pressure remain consistent allowing the carrier to reach it's destination station.

Diverter also serve as direct connect units when coupled together to provide inter-zone transmission for multi-zone systems.



## Features:

- Double walled transmission tube for quiet transfer
- Function testing capabilities directly from diverter box service switch
- Electronically monitored through system communication
- Remote operation capability
- Alignment through magnetic proximity switch
- Industrial grade, heavy duty motor
- Diagnostic Gauges and Indicators

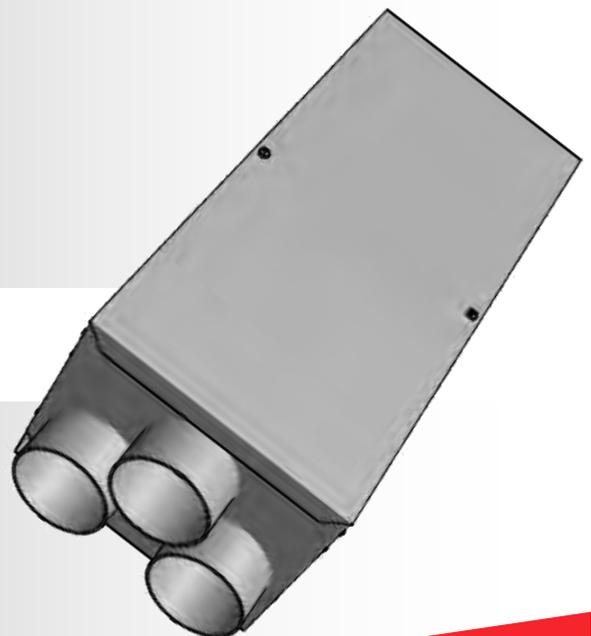


## Specifications:

- Electromechanical Drive Mechanism
- Alignment Timing 2 seconds
- 24 Volt Power Requirement (flows from AeroCom's power supply)
- 4 Conductor Cable; #24 AWG Stranded
- System Vacuum/Pressure maximum 10 psi

## Maintenance Advantages

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# Blowers

## Uses:

The three-phase-blower switches from pressure to vacuum in a split second through the three position valve. As soon as all pending sending processes are finished, the three-phase-blower will automatically shutoff. Noise should not be an issue as the blower is housed in noise-reducing cast aluminum.

## Features:

- Side Channel Airflow
- Energy Efficient IE2/NEMA Motor
- Conformant to IEC6003430
- Air Volume Dissipates Heat Generated
- Reduces Operating Energy and Costs
- Long-lasting Service Life



## Installation:

The three phase blower is typically installed on the floor, in the ceiling or on the wall in close proximity to the main system controls and/or the master station.

## Data:

Blower Housing and open/closed impellers made of cast aluminum, Direct motor, IE2-compliant, Integrated silencer, Compact construction, Corrosion-resistant.

- Efficiency Class: IE2
- Enclosure: IP 54
- Frequency: 60 Hz
- Allowable Ambient Temperature: -20°C to +60°C

# Tubing Options



**Aluminum**



**PVC**



**Stainless**

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## ***pneumatic tube systems worldwide***



Aerocom is a world leader in pneumatic tube system technology and has conducted business for 80 years in more than 70 countries. In addition to possessing a wide range of standard products for the industry, we also have the experience and expertise to custom design system solutions for unique and innovative applications. Aerocom provides factory direct representation and support of our products through an exclusive distributor network. We are proud to maintain and manage thousands of pneumatic tube systems worldwide.

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