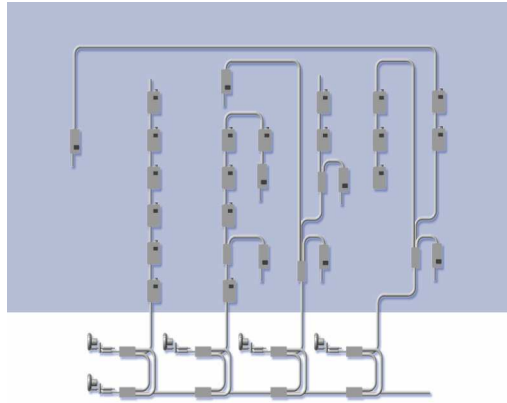
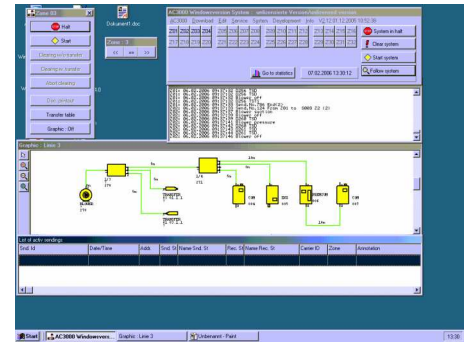







Pneumatic-Tube-Systemdescription AC 3000



- Max. number of stations:**
254 stations with 65000 destinations
- Max. number of zones:**
32 (64 optional)
- Arrival signals per station:**
16 (50 or 60 optional)
- Diverters:**
2-way, 3-way, 4-way
- Mode of operation:**
Fully-automatic multi-zone system - reversing operation



Stations	OD 63	NW 75	OD 90	NW 100	OD 110	NW 124	OD 160	OD 200	OD 315
Premium									
	✓	✓	✓	✓	✓				
COM									
	✓	✓	✓	✓	✓				
EWS									
	✓	✓	✓	✓	✓	✓	✓	✓	✓
GIGA									
							✓		
KSA									
							✓	✓	✓

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Pneumatic-Tube-Systemdescription AC 3000

Stations	OD 63	NW 75	OD 90	NW 100	OD 110	NW 124	OD 160	OD 200	OD 315
Multiload 	✓	✓	✓	✓	✓	✓	✓		
OES 					✓		✓		
Desk 			✓	✓	✓	✓	✓		
Desk horizont. 	✓	✓	✓	✓	✓	✓	✓		
UT 			✓	✓	✓	✓	✓		
OE 	✓	✓	✓	✓	✓	✓	✓		
MEGA 							✓		
ECS**	✓	✓	✓	✓	✓	✓	✓		
CRU***	✓	✓	✓	✓	✓	✓	✓		

** = Empty carrier storage

*** = Carrier return unit



Operating panel
AC 3000

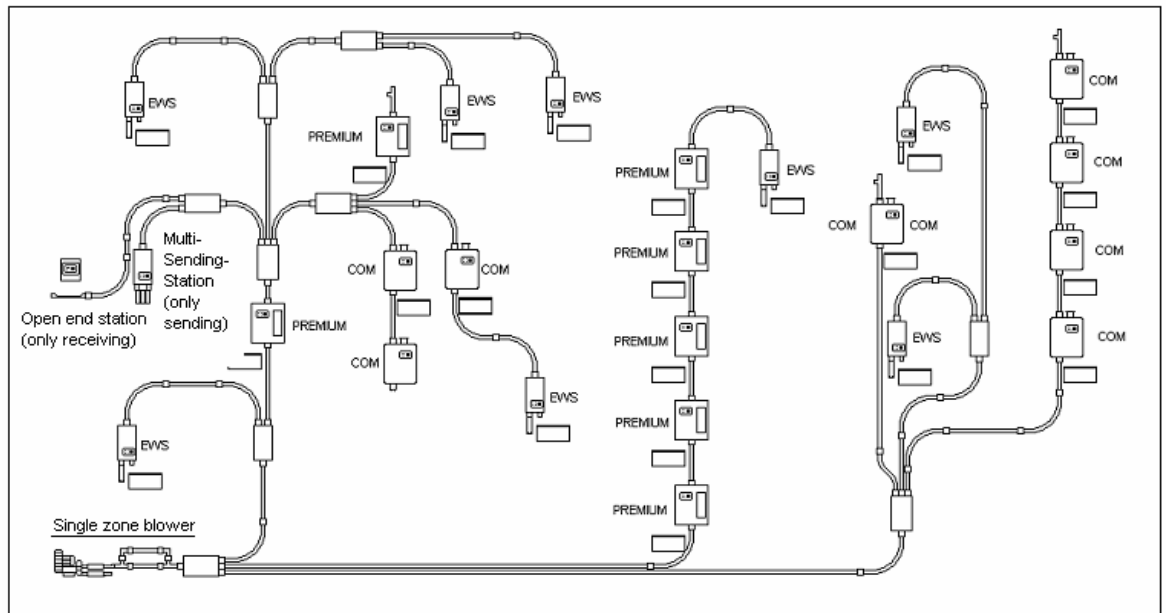


3-way diverter
AC 3000

Pneumatic-Tube-Systemdescription AC 3000

The pneumatic tube system AC 3000 can be constructed as a single zone system as well as a multi zone configuration.

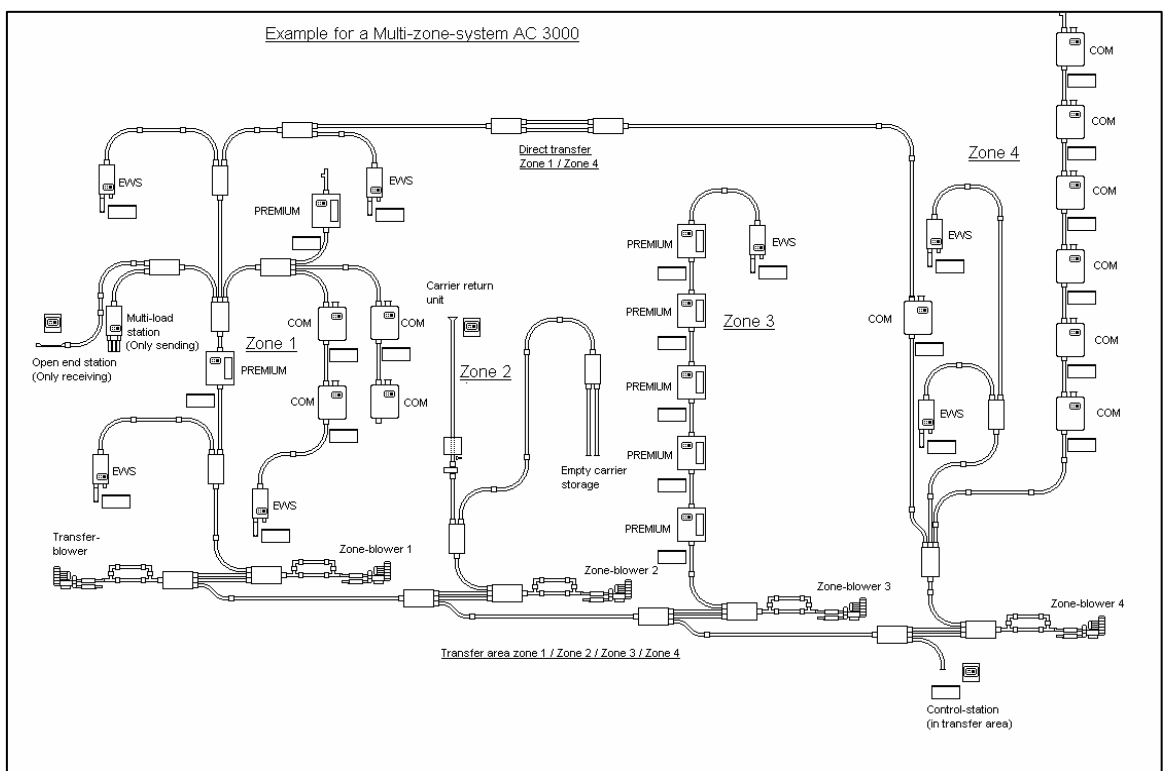
Example single zone configuration:



At any station of this single-zone-system a carrier can be stored, independent of the stage of operation. After a carrier is insert into the station, it will be always transported by the direct way to its destination.

Immediately after one sending process has been finished, the next carrier can start. All station- and diverter types can be mixed up in one zone.

Example multi zone configuration:



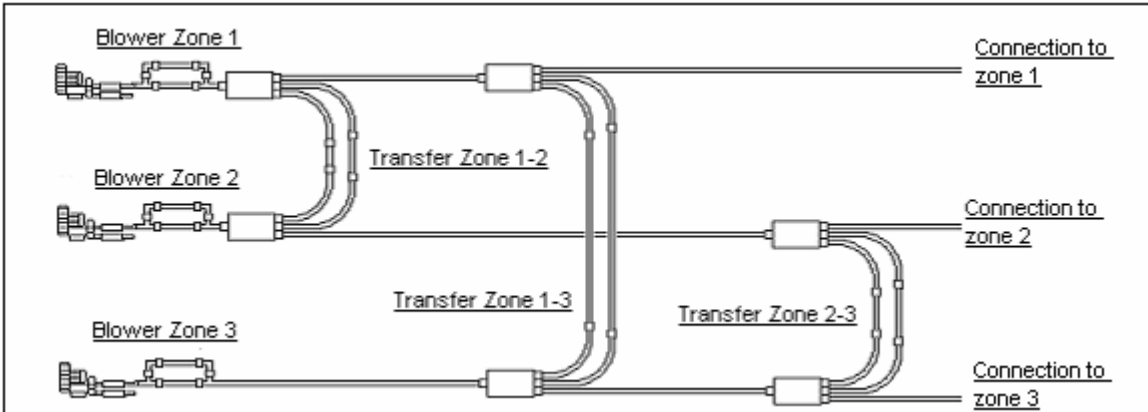
Compared to a single zone system, the shown system layout can be divided into various independent working zones. Our system AC 3000 allows to divide up to 32 (64) zones. These zones are connected together by a transfer system. Inside this transfer area the carriers are stored in so-called waiting lines. They continue their way immediately, when the receiving zone is free. If the receiving zone is already free (standard case), the carrier continues its way immediately. Because each zone has

its independent air supply, in each zone a transmission can take place at the same time. Thereby dividing a system into multi zone configuration, in relation to the number of zones, an increasing amount of carriers can be transported at the same time. In this case the performance per hour of the complete system will increase. As shown in the system, 10 carriers can be transported at the same time.

Different transfer-zone-variations:

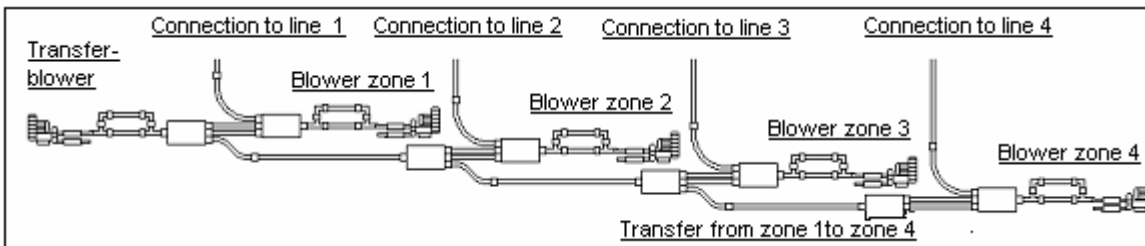
In comparison to other transfer-zone-configurations we are not convinced of centralizing the multi-zone-configurations of a large system. The disadvantages of such a transfer system are the lack of flexibility in use

and very long running times. Furthermore priority carriers would lose their priority-status. By using diverters to realize a transfer unit a central as well as a decentral disposition is possible.



Direct transfer-zone-configuration from line to line, without separate transfer zone. The dispatch- and receiving storages can be installed central as well as decentral, so that there is more flexibility concerning

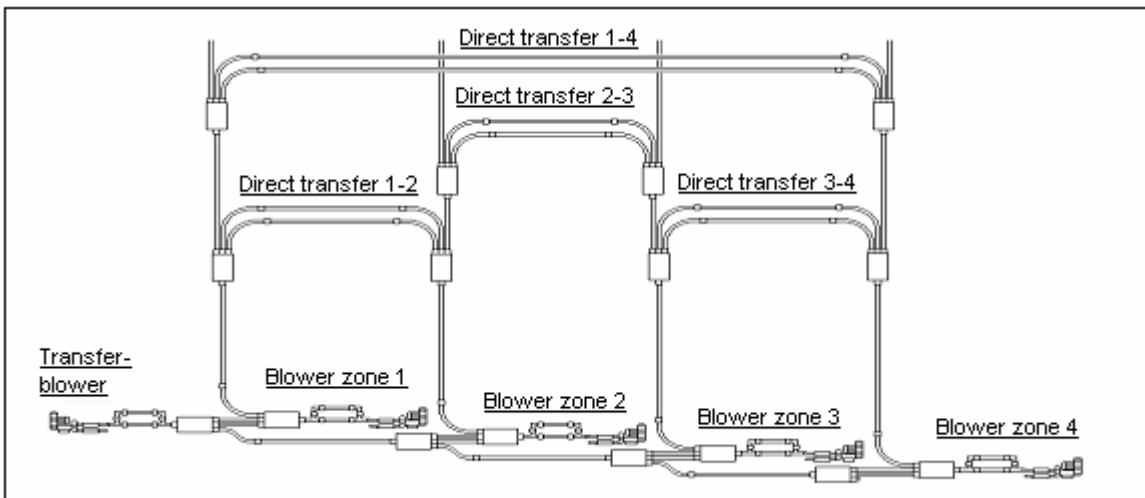
the organization of the customer and the constructional conditions. This form of a multi-zone-configuration can be chosen for up to 3 independent working zones.



Indirect multi-zone-configuration between the zones. The transfer between different zones will be realised with a separate transfer-zone. The dispatch- and receiving storages between the diverters can be installed central as well as decentral, so that there is more

flexibility concerning the organization of the customer and the constructional conditions. The advantage of this version is that a carrier also can move in the transfer-zone so that the capacity of the system can be increased.

Universal network of a multi zone system:



As an additional possibility of extension, the separate zones of a system can be connected by a universal network. This means, that the transfers between separate zones are not only done by the main-transfer-

area, but there is the possibility of various interchanges. Thereby basically the shortest route is assigned to a carrier. This means again a faster transfer procedure and an additional increase of the system performance.

Pneumatic-Tube-Systemdescription AC 3000

Microprocessor controls for the fully automatic monitoring and co-ordination of all functions:

Remark: It is basically recommended to use a PC, although it is not necessary for the function of a single zone system. However for the controls of a multi-zone-system a PC with Pentium IV-Processor or more

advanced is urgently required. The PC includes screen, keyboard and the AeroCom – software package. This system can be extended up to 32 (64) zones. Following the features and functions are listed:

Features	Single-zone-system excl. PC	Single-zone-system incl. PC	Multi-zone-system incl. PC
Operating system : Windows 2000 or XP		✓	✓
PC-Keyboard, 17" Monitor, optional LCD-Monitor		✓	✓
Help menus for easy operation guidance		✓	✓
Graphical display of all zones		✓	✓
Monitoring and carrier flow in graphic and alphanumeric		✓	✓
Status indication of all zones in different colors		✓	✓
Operation and control of all parts in service mode		✓	✓
Feedback by un-coded text or easy discernible symbols		✓	✓
Modem connection for remote control possible		✓	✓
Access to programming mode with 20 different passwords in different access-levels.		✓	✓
The programming mode enables the service engineer to enter the system data and topography by means of the keyboard of the PC. Any changes can be downloaded to the system at any time and need only a few minutes of operation interruption.		✓	✓
Statistic for system, zones, stations, receiving and sending of carriers in graphical and alpha-numeric indication.		✓	✓
In a service mode, all system devices can be exercised and analysed from the CCU.		✓	✓
Preventive maintenance indication		✓	✓
Autostart will automatically complete any transaction in progress when power is lost.		✓	✓
Station can be switched off for receive done in 6 individual time zones for every station by date, day and time.		✓	✓
Stations can be easily deactivated by pressing a button without system disruption.	✓	✓	✓
Disturbed system parts will be automatically cancelled without system disruption.		✓	✓
Real time dock	✓	✓	✓
Parallel centronics interface		✓	✓
Printer optional, serial current-loop interface		✓	✓
Interface for serial data transfer	✓	✓	✓
Sending history tracking, data are continuously stored in the background	✓	✓	✓
Printer history, continuous storing of all transmissions with date and time.	✓	✓	✓
Journal print-out is alternatively continuously or only in case of irregularities.		✓	✓
Zone master: System data, topography and actual data are stored. They remain even if power is lost.	✓	✓	✓
2 dry contacts for building services control center	✓	✓	✓
A fire alarm system from the building supplies switches off the blowers immediately to avoid the spread of smoke and toxic gases.	✓	✓	✓
In case of disturbance the place of disturbance is indicated in the display of all stations of the involved line.	✓	✓	✓
The absence mode diverts carriers to an alternate station (Follow me). This can be done in 6 individual time zones for every destination by date, day and time.	✓	✓	✓
To avoid condense water, the blower can be programmed on a certain sequence. A special program operates the blower from time to time. This process can be additionally shown on the screen or printed out with date and time.	✓	✓	✓

Pneumatic-Tube-Systemdescription AC 3000

Features	Singlezone-system ind. PC	Singlezone-system excl. PC	Multizone-system ind. PC
Automatic or manual clearing	✓	✓	✓
The handling of a station is very simple. Just enter the desired destination number and place the carrier in the carrier storage. The departure of the carrier will be carried out fully automated without any further activation. (Except Giga-station)	✓	✓	✓
The station display also shows all relevant information double-spaced with 24 figures as plaintext.	✓	✓	✓
Each station disposes of an electronic stored index. By pushing a button a programmed destination from A-Z can be selected, so it is not necessary to type the destination number.	✓	✓	✓
Sending and receiving priorities can be designated to every station destination.	✓	✓	✓
System speed slow down for the transportation of sensitive goods can be automatically or momentarily programmed to any desired sending- or receiving address.	✓	✓	✓
A control system assures that the system is ready as soon as a stored carrier is removed.	✓	✓	✓
The indication of the time is alternatively possible in the display of the station.	✓	✓	✓
The connection of a second, displaced actuator at a station is alternatively possible.	✓	✓	✓
The connection of up to 16 arrival signals is possible. Several destination numbers can be connected to one signal.	✓	✓	✓
The arrival signal is alternatively able to delete itself within 10 seconds or has to be deleted manually by pushing a button.	✓	✓	✓
The arrival signal will be especially prepared, so that the signaling will be transferred to an existing telephone network or to a paging system.	✓	✓	✓
Automatic distribution of empty carriers. A certain number of carriers can be assigned to each station. Each arriving carrier is now added to this programmed carrier stock, while each dispatched carrier is subtracted. Users, who have to many carriers, can send them to empty carrier destination. The control unit distributes these carriers automatically to a station, which has less carriers.	✓	✓	✓
Exclusive transport (Option) Security transport between selected stations	✓	✓	✓
Carriers can be re-called from an empty-carrier-storage.	✓	✓	✓
Receiving Code (Pin-Code end station) When using fully automatic <u>end stations</u> behind a diverter; this type can be programmed in a way that the receiving carriers stay inside the station until it is released by a PIN code. Only authorized users have access to the arrived carrier and their content.	✓	✓	✓
Authorized users can activate an aware blocked station with a sending code. This procedure is registered in the statistic and respectively on the printer. Only authorized users have access to the arrived carrier and their content.	✓	✓	✓
For identifying an user of a sending station, it can be activated with a Swipe-Card. This action is registered in the statistic and respectively on the printer.	✓	✓	✓
Automatic empty carrier return. Heavily used stations for returning empty carriers to their home station can be equipped with a scanner unit to read a <u>transponder</u> in the carrier, which identifies the home address of the carriers and guides this carriers automatically to its homestation without entering the destination number manually. The same reading unit (transponder reader) is used in the carrier return unit, where several carriers are stocked for return. This helps for a speedy and automatic dispatch to the home station.	✓	✓	✓