



Mechanical Data

Linear-coupler basic module with connecting possibilities of independent operating zones.

- 1, 2 or 3-axial linear-coupler "X-Y-Z"
- Tube connecting from above and dispatching of carriers to below or above possible
- For every zone is a separate priority-string expandable (possibility to overtake the stored carriers)

Software

Linear-coupler (transfer mechanism to connect independent zones) with integration into the aerocom - AC-4000 control unit.

- Communication between AC-4000 Master-PC and linear coupler via RS485 bus
- Totally free selectable zone connection because of the free programmable software
- Industrial servo-motor-control, integrated in cabinet
- Processing of all signals of the linear-coupler via AC 4000 I/O controller PCB

Technique

Solid construction in a modular design. Expandable at any time.

- Robust, warp resistant base frame made of anodized aluminium-profile-bars
- Maintenance-free, accurate industrial grade linear guides for all three axes
- Maintenance-free servo motors for the "X-/Y-/Z-axis" with integrated incremental encoder
- Storage and separation of up to 5 carriers in each incoming zone
- Gentle and soft collection of the carriers into the linear-guide
- Delivery of the carrier to the send-unit without a wear- and tear-free pneumatic sealing
- Transponder-reader in the linear-coupler for receiving carriers

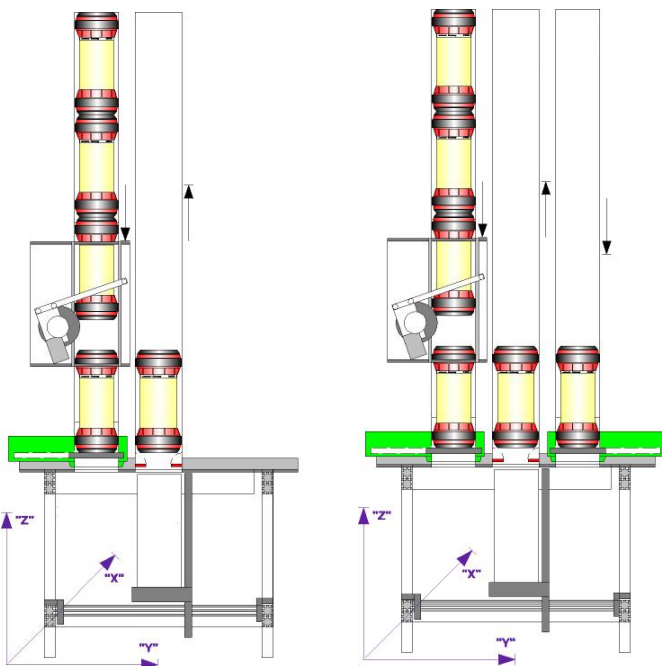
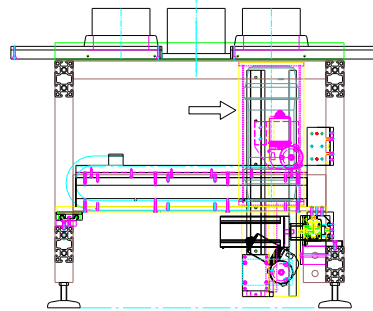
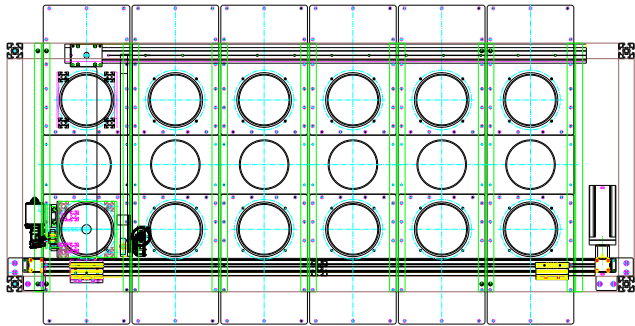
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Linear-Coupler for the Central Carrier Transfer **AC 4000**

Linear coupler V1 – **up delivery:** (3-axial-diverter x-y-z)



Carriers arrive from above and up delivery

Carriers arrive from above and up delivery, by passing for additional priority function

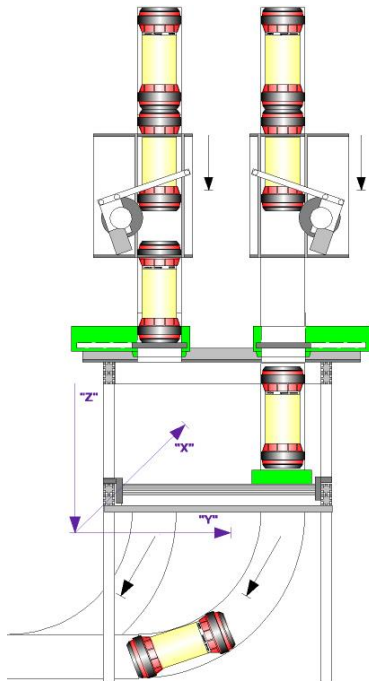
Ø	Art.-No.	Description	Motor	Width	Height without/ with carrier separator	Depth without/with control cabinet	Weight
ND 100	130.440.000	3 x 8-fold	servo motor	2140 mm	1062/1465 mm	950/1160 mm	250 kg
ND 100	130.441.000	3 x 10-fold	servo motor	2710 mm	1062/1465 mm	950/1160 mm	280 kg
4"	130.450.000	3 x 8-fold	servo motor	2140 mm	1062/1465 mm	950/1160 mm	250 kg
4"	130.451.000	3 x 10-fold	servo motor	2710 mm	1062/1465 mm	950/1160 mm	280 kg
OD 110	130.430.000	3 x 8-fold	servo motor	2140 mm	1062/1465 mm	950/1160 mm	250 kg
OD 110	130.431.000	3 x 10-fold	servo motor	2710 mm	1062/1465 mm	950/1160 mm	280 kg
ND 150	130.420.000	3 x 6-fold	servo motor	2140 mm	1124/1713 mm	950/1160 mm	280 kg
ND 150	130.421.000	3 x 8-fold	servo motor	2710 mm	1124/1713 mm	950/1160 mm	320 kg
6"	130.410.000	3 x 6-fold	servo motor	2140 mm	1124/1713 mm	950/1160 mm	280 kg
6"	130.411.000	3 x 8-fold	servo motor	2710 mm	1124/1713 mm	950/1160 mm	320 kg
OD 160	130.400.000	3 x 6-fold	servo motor	2140 mm	1124/1713 mm	950/1160 mm	280 kg
OD 160	130.401.000	3 x 8-fold	servo motor	2710 mm	1124/1713 mm	950/1160 mm	320 kg

Datasheet

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Linear coupler V2 - delivery to below: (2-axial-diverter x-y)



Carriers arrive from above,
down delivery

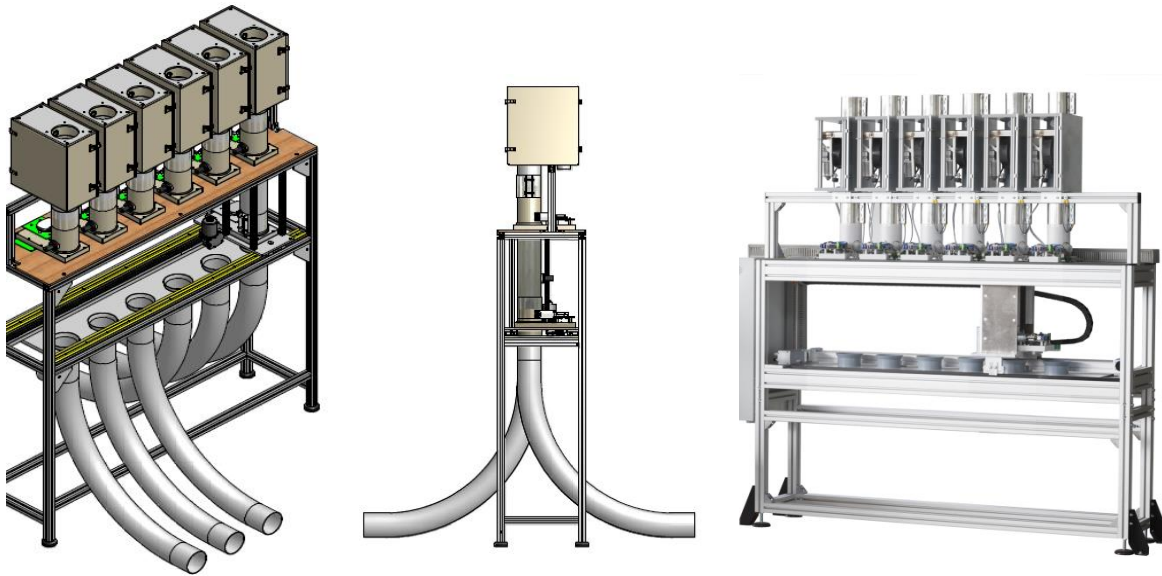
Ø	Art.-No.	Description	Bend-radius	Motor	Width	Height without/ with carrier separator	Depth without/with control cabinet	Weight
ND 100	130.442.000	3 x 8-fold	650 mm	servo motor	2140 mm	1650/2053 mm	950/1160 mm	260 kg
ND 100	130.443.000	3 x 10-fold	650 mm	servo motor	2710 mm	1650/2053 mm	950/1160 mm	290 kg
4"	130.452.000	3 x 8-fold	36"	servo motor	2140 mm	1650/2053 mm	950/1160 mm	260 kg
4"	130.453.000	3 x 10-fold	36"	servo motor	2710 mm	1650/2053 mm	950/1160 mm	290 kg
OD 110	130.432.000	3 x 8-fold	650 mm	servo motor	2140 mm	1650/2053 mm	950/1160 mm	260 kg
OD 110	130.433.000	3 x 10-fold	650 mm	servo motor	2710 mm	1650/2053 mm	950/1160 mm	290 kg
ND 150	130.422.000	3 x 6-fold	800 mm	servo motor	2140 mm	1887/2475 mm	950/1160 mm	290 kg
ND 150	130.423.000	3 x 8-fold	800 mm	servo motor	2710 mm	1887/2475 mm	950/1160 mm	330 kg
6"	130.412.000	3 x 6-fold	36"	servo motor	2140 mm	1887/2475 mm	950/1160 mm	290 kg
6"	130.413.000	3 x 8-fold	36"	servo motor	2710 mm	1887/2475 mm	950/1160 mm	330 kg
OD 160	130.402.000	3 x 6-fold	800 mm	servo motor	2140 mm	1887/2475 mm	950/1160 mm	290 kg
OD 160	130.403.000	3 x 8-fold	800 mm	servo motor	2710 mm	1887/2475 mm	950/1160 mm	330 kg

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Linear coupler V3 - basic module - delivery to below: (1-axial-diverter)



Ø	Art.-No.	Description	Bend-radius	Motor	Width	Height without/ with carrier separator	Depth without/with control cabinet	Weight
ND 100	130.444.000	1 x 6-fold	650 mm	servo motor	1780 mm	1647/2053 mm	540/686 mm	150 kg
ND 100	130.445.000	1 x 8-fold	650 mm	servo motor	2140 mm	1647/2053 mm	540/686 mm	160 kg
NW 100	130.446.000	1 x 10-fold	650 mm	servo motor	2710 mm	1647/2053 mm	540/686 mm	170 kg
4"	130.454.000	1 x 6-fold	36"	servo motor	1780 mm	1647/2053 mm	540/686 mm	150 kg
4"	130.455.000	1 x 8-fold	36"	servo motor	2140 mm	1647/2053 mm	540/686 mm	160 kg
4"	130.456.000	1 x 10-fold	36"	servo motor	2710 mm	1647/2053 mm	540/686 mm	170 kg
OD 110	130.434.000	1 x 6-fold	650 mm	servo motor	1780 mm	1647/2053 mm	540/686 mm	150 kg
OD 110	130.435.000	1 x 8-fold	650 mm	servo motor	2140 mm	1647/2053 mm	540/686 mm	160 kg
OD 110	130.436.000	1 x 10-fold	650 mm	servo motor	2710 mm	1647/2053 mm	540/686 mm	170 kg
ND 150	130.424.000	1 x 4-fold	800 mm	servo motor	1780 mm	1887/2475 mm	540/686 mm	170 kg
ND 150	130.425.000	1 x 6-fold	800 mm	servo motor	2140 mm	1887/2475 mm	540/686 mm	180 kg
ND 150	130.426.000	1 x 8-fold	800 mm	servo motor	2710 mm	1887/2475 mm	540/686 mm	190 kg
6"	130.414.000	1 x 4-fold	36"	servo motor	1780 mm	1887/2475 mm	540/686 mm	170 kg
6"	130.415.000	1 x 6-fold	36"	servo motor	2140 mm	1887/2475 mm	540/686 mm	180 kg
6"	130.416.000	1 x 8-fold	36"	servo motor	2710 mm	1887/2475 mm	540/686 mm	190 kg
OD 160	130.404.000	1 x 4-fold	800 mm	servo motor	1780 mm	1887/2475 mm	540/686 mm	170 kg
OD 160	130.405.000	1 x 6-fold	800 mm	servo motor	2140 mm	1887/2475 mm	540/686 mm	180 kg
OD 160	130.406.000	1 x 8-fold	800 mm	servo motor	2710 mm	1887/2475 mm	540/686 mm	190 kg

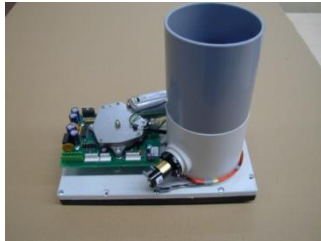
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Accessories for Linear coupler



Slide gate for priority function



Sending funnel



Sending connection to above



Separating storage for selection of carriers



Control cabinet for control of linear coupler

Ø	Article-No.	Priority function:
ND 100	262.421.000	Slide gate for pneumatic deceleration of arriving carriers in case of priority function
4"	262.420.000	Slide gate for pneumatic deceleration of arriving carriers in case of priority function
OD 110	262.422.000	Slide gate for pneumatic deceleration of arriving carriers in case of priority function
ND 150	262.423.000	Slide gate for pneumatic deceleration of arriving carriers in case of priority function
6"	262.424.000	Slide gate for pneumatic deceleration of arriving carriers in case of priority function
OD 160	262.425.000	Slide gate for pneumatic deceleration of arriving carriers in case of priority function

Ø	Sending funnel V2 + V3	Sending connection to above V1 central	Sending connection to above V1 external
ND 100	262.64.001 Servo	262.154.000	262.157.000
4"	262.170.001 Servo	262.163.000	262.163.001
OD 110	262.165.001 Servo	262.153.000	262.156.000
ND 150	262.168.001 Servo	262.160.000	262.161.000
6"	262.169.000 (262.169.001 Servo)	262.162.000	262.162.001
OD 160	262.167.000 (262.167.001 Servo)	262.152.000	262.159.000

Ø	Article-No.	Separating storage:
ND 100	262.401.000	Motor-driven separating storage with slide gate, storage and selection for arriving carrier from above
4"	262.400.000	Motor-driven separating storage with slide gate, storage and selection for arriving carrier from above
OD 110	262.402.000	Motor-driven separating storage with slide gate, storage and selection for arriving carrier from above
ND 150	262.403.000	Motor-driven separating storage with slide gate, storage and selection for arriving carrier from above
6"	262.404.000	Motor-driven separating storage with slide gate, storage and selection for arriving carrier from above
OD 160	262.405.000	Motor-driven separating storage with slide gate, storage and selection for arriving carrier from above

Article-No.	Control cabinet:	Power input:
210.400.000	Control cabinet for 3 servo axis	1000 VA
210.401.000	Control cabinet for 2 servo axis	750 VA
210.402.000	Control cabinet for 1 servo axis	500 VA

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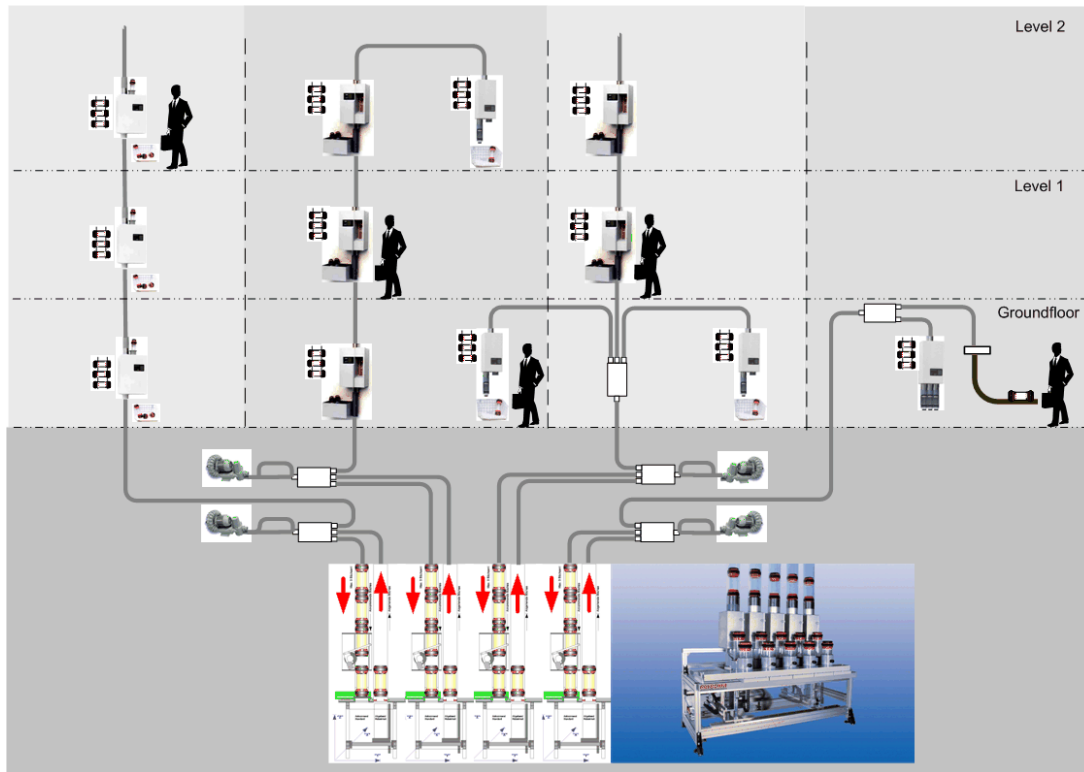
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Schematic diagram 1

This diagram shows a pneumatic tube system with an linear-coupler for 4 independent zones:

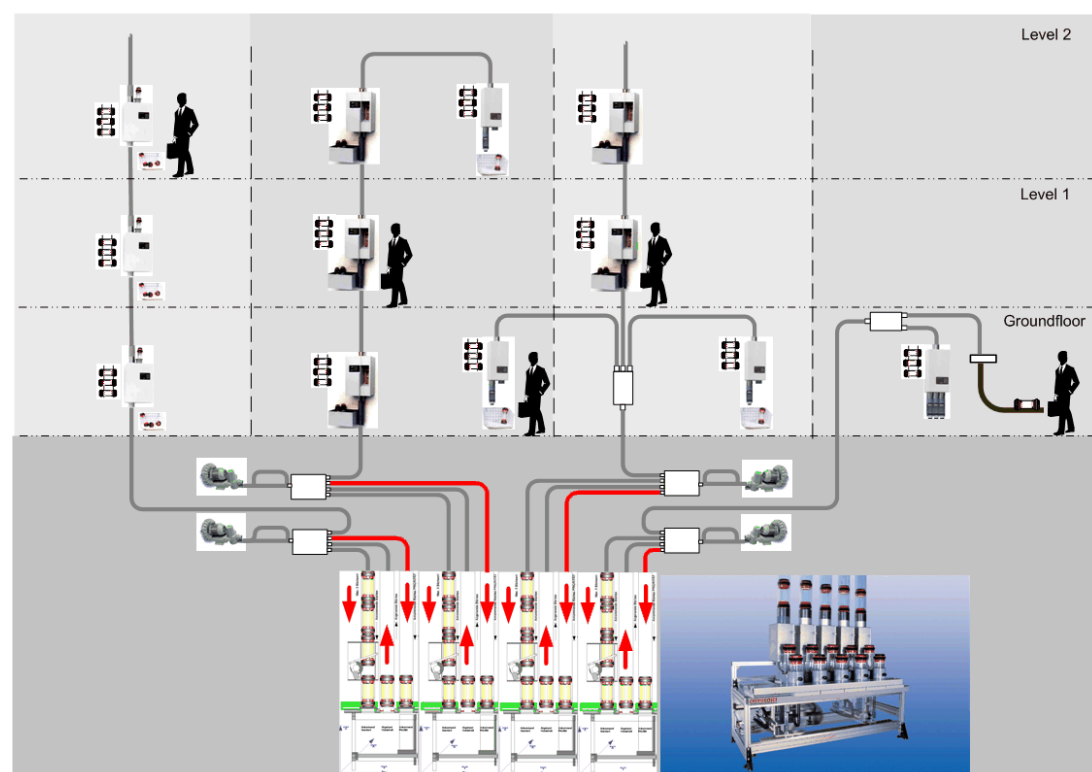
Carriers arrive from above and up delivery, without priority function.



Schematic diagram 2

This diagram shows a linear-coupler system for 4 independent lines:

Carriers arrive from above and up delivery, **with priority- and overtake-function**, to get the possibility to overtake the carriers which are waiting in the separating storage unit, to handle important and sensitive goods faster to its destination.



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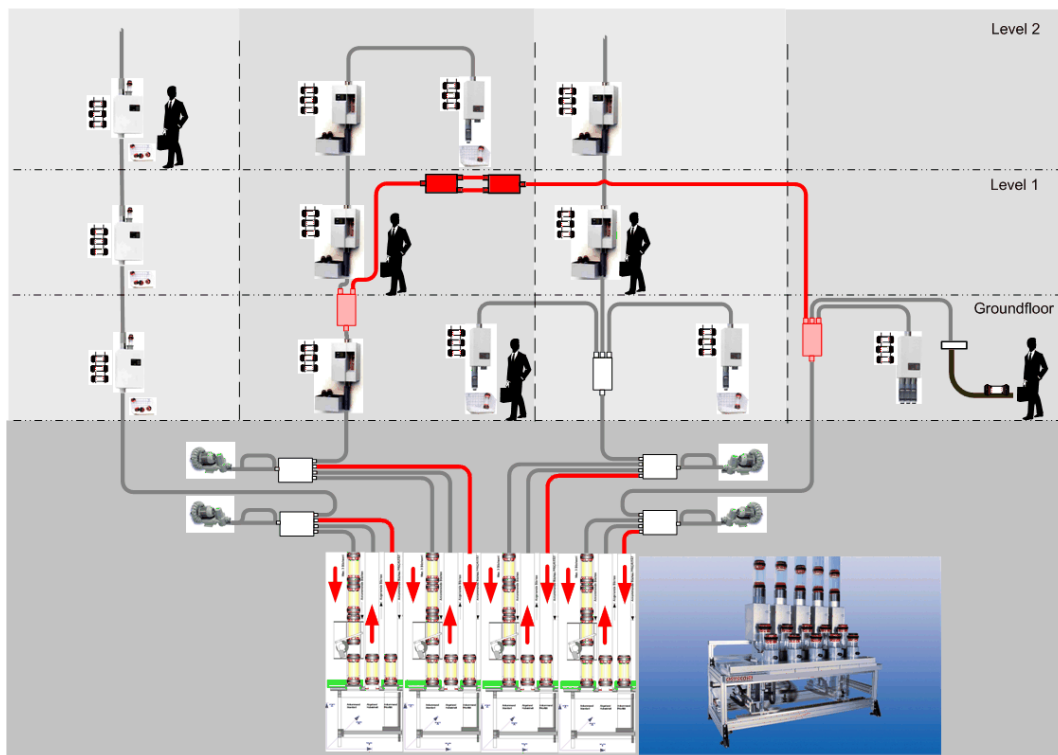
Schematic diagram 3

This diagram shows a linear-coupler system for 4 independent lines:

Carriers arrive from above and up delivery, **with priority- and overtakefunction and direct connection.**

The separate zones of the pneumatic tube system can be connected with diverters, independent from the linear-coupler transfer-unit. This means, that the transfer between the separate zones not only will be handled by the linear-coupler, it also can be switched over at several points. In that case the carrier always find the shortest way, controlled by the AC 3000-PC.

This cause a faster transaction and higher capacity of the system, because a carrier basically runs the shortest way. If this way is occupied, the next possible dispatch will be taken.



Overview about the benefits of our system

- Robust, warp resistant base frame made of anodized aluminium-profile-bars, built in 3 lines, thereby shorter connection ways and runtimes
- Tube connecting from above or below possible
- For every zone is a separate priority-string expandable. (Possibility to overtake the stored carriers)
- Storage and separation of 5 carriers in each incoming zone
- Totally freely selectable zone connection, thereby shorter connection ways between highly frequented lines
- Communication between AC 4000 I/O PCB, connection to our AC 4000 software via RS485 interface
- Accurate industrial grade linear guides for all three axes
- Maintenance-free servo motor with integrated reverberation-sensors
- Gentle and soft collection of the carriers due to the additional „Z-axis“
- Additional direct connections between several zones are possible to increase the capacity of the system and to shorten the running time between high frequented stations

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