Booth

Painting

Aluengineering

Aluengineering spraying booths are dimensioned according to the productivity of the plant and in relation to the speed of the conveyor.

Main Features:

- 98% yield of the powder
- Fast automatic cleaning system which allows color change in about 15 min.

Elements of the Plant:

A) Superwinding Multicolor powder spray – booth

B) Suction and filtration unit

C) Color change box

D) Electric and pneumatic control panel

E) Blow-out bottom booth device

F) Blow-out roof booth device

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A) Superwinding Multicolor powder spray – booth

The powder spray booth is made of an external metal structure and adopts a new type of "dielectric sandwich" multi-layer inner lining, which prevents the charged powder to stick to the inner walls, while retaining electrical charge dissipation towards the outside of the booth.

A further particularity of the lining is that it allows dissipation in a regular way so to avoid the effect of electrical repulsion which can interfere with the painting process.

A new suction system for powder is installed which includes:

- Self cleaning connection channels
- A self cleaning cyclone unit (type HR 1280) with high efficiency, which allows up to 97 – 98% powder recovery.

Conformity: it complies with directives EEC 89/382 and ATEX 94-9-EEC.

B) Suction and filtration unit

The suction and filtration unit is composed of plated cartridges in polyester with automatic cleaning by means of rotating devices fed with compressed air.
Technical data: Flow rate 16.000 m³/h, power consumption kW 30

C) Color change box

- Connection to the booth filter
- Unit complete of powder feeding and distributors washing, tailored for 8 distributors
- Guns automatic cleaning device
- Control and direction panel by means of PLC
- Under - cyclone peristaltic valve
- 2 feeding tanks

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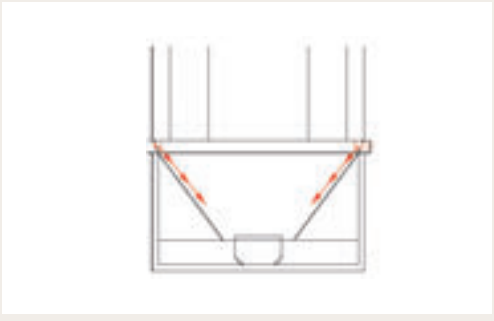
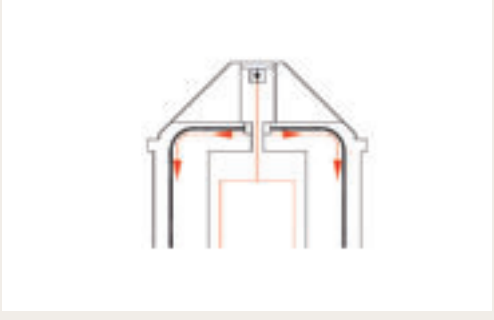
D) Electric and pneumatic control panel

The control of the electrical and pneumatic equipments is centralized in a unique control board which allows the management of the system in a simple and quick way. The electric commands and signaling alarms are inserted in the upper part of the board, whereas, in the inferior part, the pneumatic commands are inserted.



E) Blow out bottom booth device

- 2 longitudinal blowing ramps
- Compressed air feeding valves
- Control and managing card



F) Blow out roof booth device

- 2 longitudinal blowing ramps
- Compressed air feeding valves
- Control and managing card

G) Low out external guns system

- 8 Blowout units
- Compressed air feeding valves
- Control and managing card

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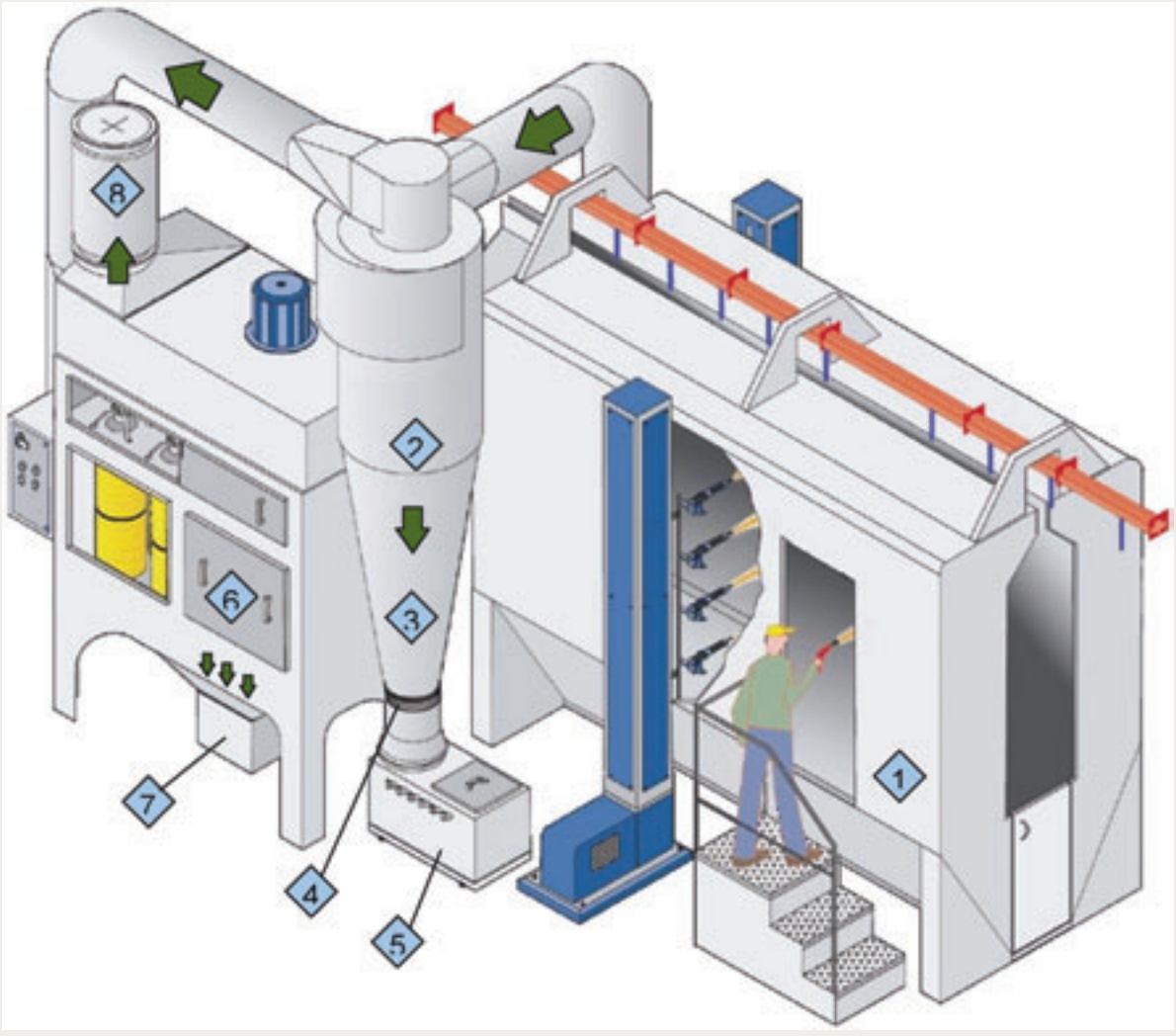
Functional cycle



Powder is introduced and fluidified in the Tank **(5)**, through injectors and is sent to the guns which spray a mixture of air/powder on the pieces traveling in the application Booth **(1)**.

Powder overspray is sucked by the separator Cyclone **(2)** where powder falls along the cone, reaches the sieve **(3)** and then, through a special discharge Valve **(4)** returns in the recovery tank **(5)**.

Thin powders which the Cyclone doesn't succeed in knocking down, reach the cartridges filter **(6)** where the ultimate air/powder separation takes place.

Powder falls in the collection Basket **(7)** while air is sent outside by means of the exhaust unit **(8)**.