Automatic guns positioning, triggering and setting improve finishing quality and reduce powder wasted in the recovery system.

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<sup>1)</sup> Only with horizontal guns arrangement

Reduced overspray

Powder savings

Stable, improved coating quality

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Gap detection, how does it work?

- The presence of each object is detected at booth entrance (1) and tracked with the help of an encoder mounted on the conveyor.
- **Guns triggering:** powder output is on when the object is in front of the gun and is off when no object is in front of the gun (2).
Part height detection, how does it work?

- The presence and height of each object are detected at booth entrance (1) and tracked with the help of an encoder mounted on the conveyor.

- **Guns triggering (2)**: powder output is on when the object is in front of the gun and is off when no object is in front of the gun.
Part height detection, how does it work?

- The presence and height of each object are detected at booth entrance (1) and tracked with the help of an encoder mounted on the conveyor.

- **Guns triggering (2):** powder output is on when the object is in front of the gun and is off when no object is in front of the gun.

- **Stroke adjustment (3):** guns stroke is automatically adjusted depending on object height (only with horizontal guns arrangement).
Height / width detection, how does it work?

- The presence, height and width of each object are detected at booth entrance (1) and tracked with the help of an encoder mounted on the conveyor.

- **Guns triggering (2):** powder output is on when the object is in front of the gun and is off when no object is in front of the gun.

- **Stroke adjustment (3):** guns stroke is automatically adjusted depending on object height *(only with horizontal guns arrangement)*.

- **Guns positioning (4):** guns – object distance is automatically adjusted depending on object width.
Part recognition, how does it work?

- The object presence and type is identified at booth entrance (1) (either by code plates or by a 3rd party PLC) and tracked with the help of an encoder mounted on the conveyor.

- **Guns triggering (2):** powder output is on when the object is in front of the gun and is off when no object is in front of the gun.

- **Guns setting (5):** powder application parameters (powder output, electrostatics, etc.) are automatically adjusted for each object type.

- **Stroke adjustment (3):** guns stroke is automatically adjusted depending on object height (only with horizontal guns arrangement).

- **Guns positioning (4):** guns – object distance is automatically adjusted depending on object width.
Reduced overspray

- Gema part detection systems ensure that the guns spray powder only on the object.
- Guns are turned off when there is no object in front of them.
- Guns stroke is adjusted so that guns spend most of their time in front of the object.
- Excessive overspray is eliminated

→ Reduced powder waste in the recovery system
→ Reduced deterioration of powder in the recovery system
Powder savings

- Gema part detection systems reduce powder overspray to a minimum.

- **Reduced powder waste in the recovery system**

- Powder application settings can be optimized based on the object to coat

- **Optimized film thickness control**

- **Reduction of excessive film thickness**

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Stable, improved coating quality

- Gema part detection systems reduce powder overspray to a minimum.
- Reduced deterioration of powder in the recovery system

- Guns stroke, positioning and application settings can be optimized based on each individual object to coat

→ Best coating quality for each individual object type
→ Full automatic operation, no manual intervention required

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