Wagner movement technology for powder coating

Reliable and robust – movement technology with the highest precision!

PRECISE

ROBUST

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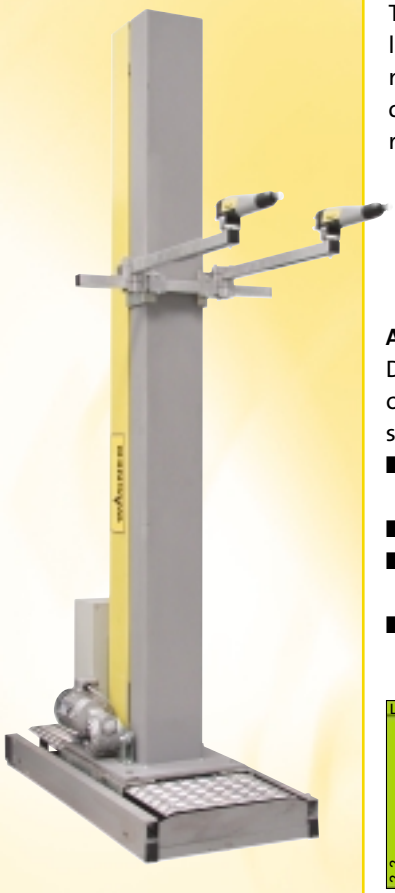
Movement technology for all coating tasks

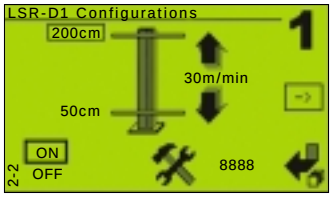


EBA-1 with positioning trolley

The automatic electric reciprocators are subjected to constant loading, so the reliability and robustness of the reciprocator mechanism is of particular importance. The electronic controller offers the latest movement technology for high application requirements and an optimal surface finish.

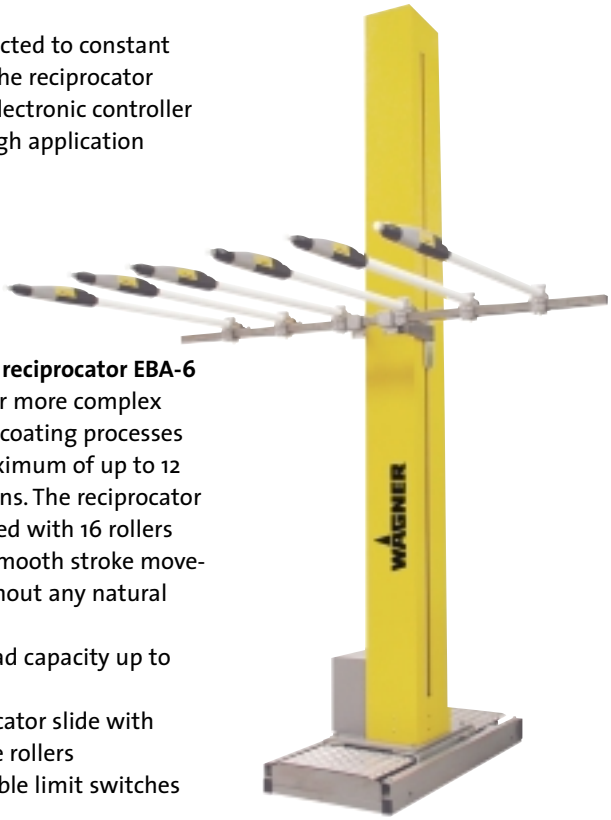
Automatic reciprocator EBA-1
Due to its motor rating of 0.75 kW, it is best suited for simple serial coating processes.

- Stroke speed up to 40 m/min
- Load capacity up to 15 kg
- Reciprocator slide with 12 guide rollers
- Adjustable limit switches



Automatic reciprocator EBA-6
Suitable for more complex automatic coating processes with a maximum of up to 12 powder guns. The reciprocator slide is fitted with 16 rollers ensuring smooth stroke movements without any natural vibrations.

- High load capacity up to 70 kg
- Reciprocator slide with 16 guide rollers
- Adjustable limit switches
- Lip seal
- Motor cover
- Suitable for Zone 22 (EX II 3D)



EBA-6 with positioning trolley

A very wide variety of work pieces have to be coated. Intelligent movement technology leads to better coating quality and a massive reduction in the powder consumption.

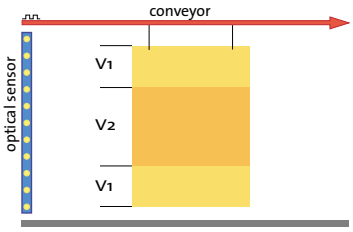
The automatic reciprocators are controlled using the following control concepts:

EcoTech control system:
Central control module CCM 2007 and reciprocator module RCM 2007

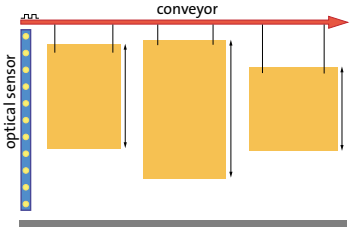
DigiTech control system:
Central control module CCM-D1 with reciprocator controller LSR-D1

ProfiTech control system:
Touch-Control (SPS)

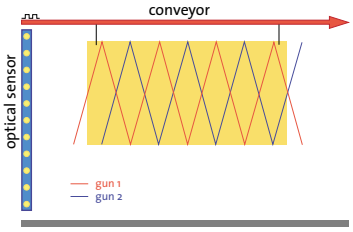
Note:
Depending on control system and equipment the displays could vary.



One and two way operation for automatic reciprocators
The stroke speed can either be held steady, or two different stroke speeds can be set. Thus for example a specific coating zone can be traversed more slowly or more quickly, and thus more or less powder applied.



Automatic stroke height controller
This is used in a combined reciprocator and gap/height controller for horizontal gun arrangements. It offers considerable benefits when coating work pieces with different dimensions as part of one coating order. The reversing points for the guns are variable so the part can hang at any height required. In addition to this, the automatic powder reduction will ensure that with shorter stroke movements the powder output will be reduced to suit.



Sine curve regulation ASR

For uniformly distributed film thickness on flat parts the automatic sine curve regulation ASR is used. This guarantees that the whole surface of the work piece will be covered evenly. For this the gap/height controller module measures the actual speed of the conveyor. The controller for the reciprocator calculates the optimal lifting and lowering speed from the stroke height and the conveyor speed and regulates these to suit.

Economical powder coating with Wagner movement technology

KHG 350 with positioning trolley

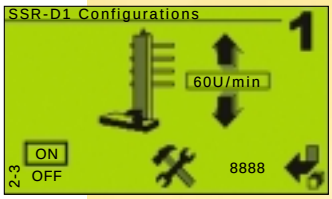
Short stroke automatic reciprocator KHG 350
For the vertical arrangement of the spray guns. This allows an optimal integration of compact, fast colour-change booths into the units.

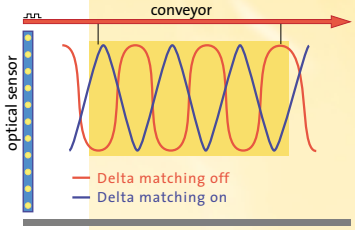
- Robust design with a high load capacity
- Adjustable stroke for a wide range of applications
- Regulation of the stroke speed from 15 m/min. to 55 m/min. using frequency converters
- Geared motor with crank mechanism

The short stroke controller SSR-D1
With this control module the short stroke unit can be controlled with a DigiTech system:

- Switching the unit on and off
- Adjusting the stroke speed
- Moving the guns into the cleaning position
- Delta matching

A special feature is the Delta matching. When using short stroke units the work pieces are coated more thickly at the top and bottom, because the guns have to travel a longer distance at the reversing points and therefore apply more powder. The SSR-D1 can increase the stroke speeds at the reversing points and thus distribute the powder evenly on the work piece.





Positioning trolley ZW
With changing depths of work piece, it is necessary to position the spray system correctly for spraying. The positioning trolley is also useful in the cleaning process, for colour changes or to facilitate maintenance.

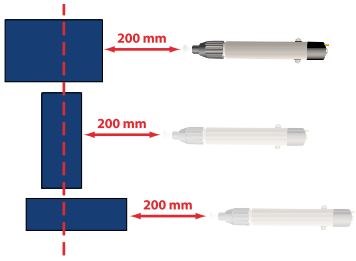
- Robust design
- Roller chain drive, worm drive motor
- Safety limit switches
- Walk-on cover

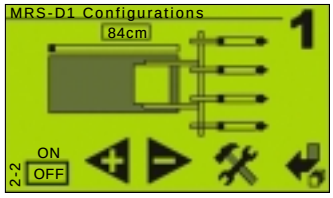
Note:
Depending on control system and equipment the displays could vary.

Control functions with MRS-D1 positioning trolley controller

Depth controller
The automatic depth controller is recommended for production runs with work pieces of different depths. The depth of the components is recorded immediately they enter the booth, using horizontal light strips, and is passed on to the MRS-D1 control module.

- High coating quality due to optimal gun distance
- Time saving
- Avoids collision of the guns with the work pieces





Position controller
The pre-defined position of the spray units is entered as a parameter for the work piece. When the parameter is called up, the guns are automatically moved into the desired position.

- High coating quality due to optimal gun distance
- Time saving

Positioning trolley controller MRS-D1
The MRS-D1 is operated through the CCM-D1 central control module. The following functions can be executed:

Parking position
When changing the colour, doing maintenance or cleaning the powder booth, the guns have to be moved out of the booth. The parking position can be pre-defined and stored as a parameter and if required be called up and automatically moved to.

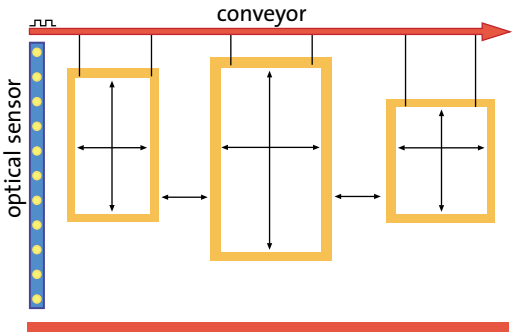
The "ZW" can be operated through a manual forward and reverse switch or by an external WAGNER Controller from the EcoTech, DigiTech or ProfiTech control system range.

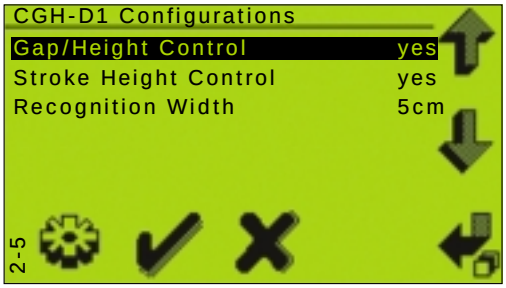
Sensing, recording, controlling – the gap and height controller

Gap controller
Ensures that spraying only occurs when there is a work piece in front of the gun. The powder feed is switched off in the gaps.

Height controller
The height controller is used with vertically aligned guns for coating components of varying heights. Here the stroke remains constant. The sequence and the gap between the parts of different heights can be freely selected. Powder guns that would spray past the work piece are not switched on.

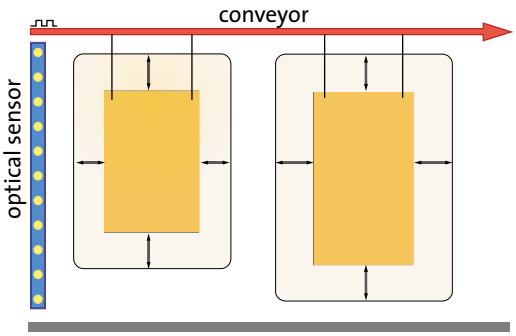
Note:
Depending on control system and equipment the displays could vary.





The outline of the work piece is scanned by means of light barriers or by light strips.

Automatic pre- and after-spraying
Since the position of the work pieces is known precisely due to the recording of the component, the point of action of the guns can be specified exactly, so it is possible to define a pre- or after spraying distance. The same applies if it is intended to spray over or under the work piece.



Technical Data

Automatic reciprocator	EBA-1	EBA-6 S	EBA-6 L	KHG 350	ZW
Motor rating	0.75 kW	1.5 kW	1.5 kW	0.75 kW	90 W
Electrical supply	220 V/380 V/50 Hz	220 V/400 V/50 Hz		220 V/ 400 V/50 Hz	220 V/380 V/50 Hz
Enclosure Class	IP 54	IP 54	IP 54	IP 54	IP 54
Max. stroke speed	40 m/min.	60 m/min.	60 m/min.	55 m/min.	3 m/min.
Load on the module support max.	15 kg at a distance of 200 mm	30 kg at a distance of 200 mm	70 kg	up to 200 mm lift: 50 kg over 200 mm lift: 50 kg at a distance of 200 mm	700 kg
Lift heights	Reciprocators with different stroke heights are available			100-350 mm in 25 mm steps	600 mm 900 mm 1200 mm

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