

# GREAT VIEW MADE IN BAVARIA



HIGH TECH INNOVATIONS  
FOR PERFECT GLASS PROTECTION.





Welcome to  
**HIGH TECH INNOVATIONS**  
FOR THE GLASS INDUSTRY MADE IN BAVARIA

Grafotec, based in Diedorf/Bavaria, Germany, is one of the world's leading specialists for separator application systems. For more than a quarter century we have been a proven leader and reliable partner providing innovative, cutting edge solutions to the glass industry.

Grafotec's mission is to provide state-of-the-art systems for powder application, liquid separators, and corrosion protection liquids. Our main concern is to ensure perfect protection of flawless glass – during its long way from the float, coating, or lamination line to the final customer.



**GRAFOTEC  
NOZZLE SYSTEM**

Our nozzle systems with fixed spray angle enable multi-purpose application in all float glass and flat glass production lines and provides for homogeneous coating and maximum protection of float and flat glass. Trouble-free integration into any existing float and flat glass production line is possible allowing for versatile customized system solutions.



**GRAFOTEC  
ROLLER SYSTEM**

With our innovative roller systems for coating windscreens with liquid separators and corrosion protection, auto glass finishing reaches a new standard of quality. High-precision rollers ensure homogeneous coating with liquid separators allowing for optimum coverage, maximum material yield and excellent performance.



More Information about the AP systems.



## AP SINGLE POWDER SPRAYER FOR FLOAT-/FLAT GLASS

Grafotec's AP SINGLE is a specially designed nozzle system for applying powder release agents for the float and flat glass industry.

Perfectly suited to standard conditions, AP SINGLE provides a basic level powder protection with an application width of maximum 3,300 mm. It is easily integrated into current production lines – not least due to its space-saving design.

### Technical Specifications:

|                    |   |
|--------------------|---|
| Application Type:  | Nozzle system with „fixed spray angle“  |
| Separator Agent:   | All separator agents for float/flat glass currently on the market.  |
| Application Width: | < 2500 mm   < 3300 mm   |
| Number of Nozzles: | 8/4   12/6   16/4x2   24/4x2  |
| Powder Reservoir:  | 15 Litres   |
| Special Features:  | <ul style="list-style-type: none"> <li>■ Automatic and manual application width adjustment.</li> <li>■ Automatic speed adjustment.</li> <li>■ Maintenance free and frequency-controlled side channel blower.</li> </ul> |



Dosing system with injection module:

The special dosage roller design guarantees accurate dosing and repeats accuracy in the application of the separator agent. The injection module is resistant to deposits and blockages.



Distribution module:

The distribution module for uniform distribution of the separator agent from the nozzle with automatic application width adjustment.



## AP TWIN POWDER SPRAYER FOR FLOAT-/FLAT GLASS

The high quality enhancement AP TWIN is a nozzle system which allows two different separating agents during the production process. With an application width from 3,300 mm and a double dosing system, the AP TWIN powder sprayer permits a clever adaption to production widths and gaps.

Efficient in terms of both energy consumption and release agent consumption, the AP TWIN allows a flexible adaption to different production lines.

### Technical Specifications:

|                    |   |
|--------------------|---|
| Application Type:  | Nozzle system with „fixed spray angle“  |
| Separator Agent:   | All separator agents for float/flat glass currently on the market.  |
| Application Width: | > 3300 mm   |
| Number of Nozzles: | 2x12/6   2x16/4x2   2x12/12   |
| Powder Reservoir:  | 2 x 15 Litres   |
| Special Features:  | <ul style="list-style-type: none"> <li>■ Automatic and manual application width adjustment.</li> <li>■ Automatic speed adjustment.</li> <li>■ Maintenance free and frequency-controlled side channel blower.</li> </ul> |



Dosing system with injection module:

Two dosage rollers guarantee accurate dosing and repeat accuracy in the application of the separator agent. The injection module is resistant to deposits and blockages.



Distribution module:

The distribution module for uniform distribution of the separator agent from the nozzle with automatic application width adjustment.



More Information about PDS.

## PDS POWDER ROLLER SYSTEM FOR FLOAT-/FLAT GLASS

The roller system PDS with electrostatic powder application is designed for a homogeneous application of release agents in the float and flat glass industry.

With an application width up to 6,500 mm the PDS can be used in different production lines. Due to its application technique the PDS provides a high solid coating quality and production reliability.

### Technical Specifications:

|                    |   |
|--------------------|---|
| Application Type:  | Roller system with „Electrostatic Powder Application“   |
| Separator Agent:   | Most separator agents for float/flat glass currently on the market.   |
| Application Width: | up to 6500 mm   |
| Special Features:  | <ul style="list-style-type: none"> <li>■ Electrostatic powder charging.</li> <li>■ Special maintenance options.</li> <li>■ Clean work environment.</li> </ul> |



## DE SYSTEM DUST EXTRACTION SYSTEM FOR A CLEAN PRODUCTION ENVIRONMENT

Grafotec's DE-system is an active dust extraction for a clean production environment. The output of the extraction system is automatically adapted to different application widths of more than 3300 mm. This is done above as well as below the production line. In doing so, not the applied quantity is changed but the extraction speed is increased by the acceleration of the volume.

A self-adjusting control system makes sure that the extraction output is always kept unchanged. This output also adjusts to the used applied quantity during the operation and does not have to be adjusted manually.

Grafotec's new extraction method increases the cleanliness of the work environment and thus reduces the accident hazard. Deposits within the production line are reduced significantly, maintenance work is reduced as well. On top of this, the active extraction also provides for an improved spray pattern because the formation of drops which is caused by deposits on the plant is reduced.





More Information about the AP systems.

## LA AUTOMOTIVE LIQUID ROLLER SYSTEM FOR AUTO GLASS

The Grafotec LA AUTOMOTIVE is a specially designed roller system for applying liquid release agents for the production of windshields in the auto glass industry.

A high-speed roller with up to 6,000 revolutions per minute provides a fine spray that is applied to the glass homogeneously and without direct contact.



### Technical Specifications:

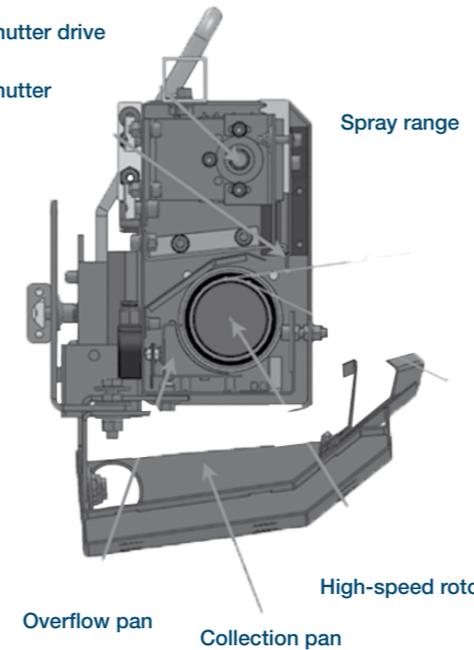
|                    |  |
|--------------------|--|
| Application Type:  | Contact free liquid roller system for windshield coating.  |
| Separator Agent:   | Liquid separator agent for the sag bending of windshields.   |
| Application Width: | 1600 / 2200 / 2500 mm  |
| Special Features:  | <ul style="list-style-type: none"> <li>■ Automatic and manual application width adjustment</li> <li>■ Automatic speed adjustment</li> <li>■ Adjustable supply pump</li> <li>■ Available automatic mixing of the separator agent</li> </ul> |



Shutter drive

Shutter

Spray range



Overflow pan

Collection pan

High-speed rotor

## LA C-PROTECTION LIQUID SYSTEM FOR CORROSION PROTECTION

The LA C-PROTECTION made by Grafotec is optimized for applying liquid corrosion protection to float and flat glass.

The applicator technique provides a constant and uniform application and a solid coating quality. The innovative design permits maintenance work without interrupting the production process.

### Technical Specifications:

|                   |  |
|-------------------|--|
| Application Type: | Contact free liquid roller system for corrosion protection   |
| Release Agent:    | Most separator agents for corrosion protection on the market   |
| Special Features: | <ul style="list-style-type: none"> <li>■ Automatic and manual application width adjustment</li> <li>■ Automatic speed adjustment</li> <li>■ Adjustable supply pump</li> <li>■ Automatic mixing unit</li> </ul> |

### Shutter drive

The shutter drive opens and closes the shutter gap.

### Shutter

The shutter gap allows to adjust the powder amount.

### Spray range

The spray range depends on the position of the lower deflectors and can be adjusted horizontal or vertical.

### High speed rotor

Position of the application roller with its specific surface geometry – it produces the „spray“.

### Collection pan

The collection pan catches the overflow from the applicator and adjusts the vertical limit of the spray range.

### Overflow pan

The overflow pan is an internal pan taking care of constant liquid level inside.

## SPECIAL ADVANTAGES FOR PERFECT GLASS PROTECTION

High tech products from Grafotec are always a step ahead. Whether a roller or nozzle system – Grafotec application systems always lead the way. Advanced technology system solutions offered by Grafotec are trendsetting.

### Solid coating quality

#### Uniform application

The spray pattern will not be affected by deposits or blocked nozzles.

#### Uniform thickness

The amount of release agent can be controlled. Even the selective amount of release agent is possible.

#### Constant quality

Due to the speed adjustment the setting will be obtained during production. In this way, a uniform quality standard is ensured, which leads to a reduction of the scrap rate.

### High production reliability

#### Enclosure

The stable standard housing ensures cleanliness and safety in the production line.

#### Downtime

Due to the easily to control and low maintenance design the downtime will be reduced.

#### Continuous operation

The construction is designed for trouble-free 24/7-operation.

#### Easy to use

Due to the simple mechanical construction the roller system is a straightforward application device.

### Saving of separating agents

#### Targeted adjustment

The control system checks the reproducibility of the application rate. By (optional automatic) adjustment to glass width and line speed release agent can be saved.

#### Amount of release agent

The amount of the release agent can be regulated both via the mixing ratio, as well as during operation of the shutter opening.

#### Low loss

With application systems made by Grafotec there is low loss of release agent because of minimal aerosol production.





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