



Robotic external charge atomizer for waterborne paints

SAMES' external charge is the most efficient in the world [**IPA*** assessment tests]. It allows reaching unequalled transfer efficiency while enabling high tip speed [**95% TE**** at 500 cc/min at 800 mm/sec].

Equipped with SAMES **Hi-TE spraying technology**, the performances in terms of productivity, transfer efficiency and quality of finish position SAMES' PPH707-EXT RC as **THE reference** of the external charge applicators in the world of the automotive paint.

* : Institute Produktionstechnik und Automatisierung, Test laboratory considered as a worldwide reference ** : Transfer Efficiency

CUSTOMERS' BENEFITS

High finish quality:

• Hi-TE technology allows combining both a really fine atomization with an accurate control of the paint pattern, what gives a finish quality meeting the most severe criteria of appearance and D.O.I. (Quality of reflection).



• The implementation of the Hi-TE is very simple: only one air adjustment is necessary for the application.

• The robustness of the pattern is guaranteed all along the production, the paint spray remains regular and stable throughout the wide range of variation proposed by the Hi-TE.

Sturdiness in production:

• The high voltage unit is of very high power; it will run even in severe application conditions (dirt/overspray, application within bodies, or close to the potential of the earth,...).





Easy integration:

• Its implementation is easy for waterborne paint application: PPH 707-EXT can be installed on an existing line without any modification of the paint supply equipment.



• Possibility to apply an unlimited number of colors and to achieve fast color changes.

Paint savings:

• The variation of the pattern is possible while spraying thanks to the Hi-TE technology which allows instantaneous pattern changes:

- from a narrow pattern dedicated to edges and very small surfaces (= less paint out of the target),

- to a wide pattern for large surfaces (= reduction of application time).



• Specially developed for the robotic application, PPH 707-EXT is compact. The atomizer makes it easier the robot trajectories, what is an advantage for spraying on difficult angles or on complex shapes.





SUMMARY OF THE ADVANTAGES :

PPH 707-EXT is exclusively equipped with the EX 65 Hi-TE EXT spraying technology; it procures the following advantages:

> High transfer efficiency with a Bell/Bell process

> Easy application on the outer surfaces of the car bodies (waterborne primers and base coats)

- > Really good color matching application
- > Robustness of pattern
- > Easy application of metallic base coats

> Very simple implementation of Hi-TE technology: only one air adjustment

> Approved for high paint flow and high tip speed

> Respect of the new environment protection regulations: PPH 707-EXT allows a significant decrease of VOC (Volatil Organic Compound) emanations





The outer cover is composed of pairs of combined air holes. This outer cover allows several aimed applications; the pattern can fastly vary from a narrow and penetrating spray to a wide and wrapping spray for an optimal transfer efficiency.

Principle of the external electrostatic charge:



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TECHNICAL CHARACTERISTICS

| Weight | PPH 707-EXT | |
|--|--|--|
| Spare atomizer, without cable or hose | 7 kg | |
| Pneumatic supply | | |
| Nano-valve drive air pressure | 8 bar mini (120 psi) - 10 bar max. (150 psi) | |
| Magnetic turbine bearing air pressure | 5.5 bar mini (75 psi) - 7 bar max. (105 psi) from 130 L/min | |
| Shaping air pressure | 6 bar (90 psi) recommended on manifold | |
| Micro air pressure | 0.5 mini (7.5 psi) at 1 bar (15 psi) maxi. from 20 L/min to 40 L/min | |
| Drive air consumption | 10 NI/min. | |
| Magnetic turbine bearing air consumption | 125 NI/min. | |
| Shaping air consumption (with respect to air shroud and bell being used) | From 100 to 600 NI/min. | |
| Turbine rotation air consumption | From 100 to 700 NI/min. ⁽¹⁾ | |
| Safeguard air quantity | 25 litres at 6 bar (90 psi) | |
| (1): with respect to sprayed flow and rotation speed | | |
| Product supply | | |
| Standard product supply pressure | 6 (90 psi) to 8 (120 psi) bar | |
| Maximum product pressure | 10 bar (150 psi) | |
| Paint flow (depending on paint type) | 30 to 1000 cc/min. maxi. | |
| Viscosity scale (for minimum results) | 20 to 45 seconds FORD #4 Cup | |
| Performances | HVT | |
| Rotation speed | 15 to 70 000 rpm | |
| Application speed | up to 900 mm/sec | |
| High Voltage | UHT 330 EEx e | |
| Voltage maxi. | 85 kV | |
| Current maxi. | 500 μΑ | |
| Color change | PPH 707-EXT | |
| Paint consumption | 25 cm ³ (paint circuit) & 25 cm ³ (paint cicuit) | |
| Rinsing product consumption | 300 cm ³ (not included rinsing box) | |
| Standard process time | 10 sec. (with REVERSE FLUSH) | |
| Optimized process time | 5 sec. (with REVERSE FLUSH on circuit 1 & 2) | |
| Same Color (head rinsing + bell cup) | PPH 707-EXT | |
| Time | 6 sec. | |
| Rinsing product consumption | 50 cm ³ | |

PPH 707-E

ATEX Marking:

PPH 707-EXT RC : **(€** 0080 € 11 2 G EEx > 350 mJ ISSeP06ATEX032X

GNM 200⁽¹⁾: (€ 0080 🚱 II (2) GD [EEx > 350 mJ] ISSeP01ATEX002U ISSeP05ATEX032X ISSeP06ATEX032X ISSeP07ATEX001X

(1): This control module allows piloting the UHT 330 EEx e. It is a combined device that is part of the configuration of the certified equipment and that contributes to its good working. It has to be installed into a non explosive area.

UHT 330 EEx e :

(Ex) || 2 GD

EEx e ll

| Your SAMES expert distributor | |
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