OUR RANGE OF PLUG&SPRAY DEVICES
TO BE USED AS COMPONENTS OR EVALUATION KITS

MICRONICE™ TECHNOLOGY

P&S-T45
Plug&Spray Integrated Tank

P&S-360
Plug&Spray Omnidirectionnal

Compact & lightweight – Silent operation – Monodispersed aerosol – Variable flowrate
No liquid pressure – No temperature rise – Low energy – No dead volume

P&S-T45 Kit with integrated tank enables you to nebulize small amounts of liquid in the vertical down. It is ideal for applications requiring control of micro-volumes as for medical or technical aerosols or deposition of thin films. It is used to evaluate the nebulization capacity of liquids.

P&S-360 Kit with remote tank enables you to aerosolize large amounts of liquid with omnidirectional orientation (360°), head-up through its pump. This multi-use kit fits all your needs especially in humidification or dissemination in the air. It is used for continuous operation for deposit applications.

To cover all your needs, we offer you to choose from three drop sizes *:

4 Microns
Fine aerosols
Don’t wet

12 Microns
Diffusion, humidification
Don’t wet

40 Microns
Liquid deposition
Wet surfaces

* Other drop sizes are available on request and subject to conditions
* The drop sizes were measured with water as a reference. It is possible that they change slightly with the sprayed liquid
OUR TECHNOLOGY
MICRONICE™

PRINCIPLE

The TEKCELEO patented MICRONICE™ technology is a breakthrough spray technology based on a very low energy consumption piezoelectric mesh vibratory aerosol generator. Thanks to the expertise of our team, we have developed a micro-perforated membrane device which, when vibrating at a certain frequency, expels the liquid as fine droplets perfectly calibrated by the tiny holes (monodispersed).

BENEFITS

- Compact and lightweight electronic nebulization device without speed and pressure from the liquid
- MICRONICE™ nebulization technology using a vibrating membrane, developed and patented by TEKCELEO
- Mono dispersed aerosol (centered on a specific particle size)
- Different types of liquids can be nebulized
- No temperature rise (no liquid alteration and no changing state)
- Low energy consumption (batteries or rechargeable cells) (hand-held devices)
- Capacity to generate small droplets (< 5 µm)
- Silent operating
- Ability to nebulize micro-volumes (electronic control)
- Droplet size can be selected by design
- No dead volume (liquid completely nebulized)

APPLICATION EXAMPLES

- **Drop deposit of micro-volumes**: chemical reagents, organic samples, ink, nano suspensions, thin organic and metallic layers...
- **Chemical molecules deposit** for surface treatment
- **Diffusion**: perfume, fragrance, disinfectant, pheromone, bactericide...
- **Aerosoltherapy**: respiratory route drug delivery
- **Precise humidification**: room, materials, organic tissues...
- **Evaporative cooling**
- **Chemical analysis**: source of mono dispersed particles
- **Process for powder and filaments generation**: spray dryer

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1180, route des Dolines – Athéna B – 06560 Valbonne France
PLUG & SPRAY

Integrated Tank P&S-T45
Preliminary data subject to change without notice

MAIN CHARACTERISTICS
- Product: water-based solution, alcoholic solution, and suspensions
- Particle size: 4µm or 12 µm
- Flow rate: from Respectively 1ml/min or 3ml/min
- Variable flow rate: from 30% to 100% (PWM)
- Vertical tilt: max. 45°
- Energy consumption: < 3W
- Battery operated or plugged into the power supply.
- Response time = 1 ms
- Noise : <35dBA

COMPONENTS OF P&S-T45 KIT

Aerosol head generator with tank
ECU (aerosol head)
Cable ECU-aerosol head
Cable power supply
Accessory : tripod

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Aerosol head type</th>
<th>Droplet size</th>
<th>Flow rate</th>
<th>GSD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 µm ± 1 µm</td>
<td>1 mL/min ± 0,2 ml</td>
<td>1,4</td>
</tr>
<tr>
<td></td>
<td>12 µm ± 3 µm</td>
<td>3 mL/min ± 0,5 ml</td>
<td>1,7</td>
</tr>
</tbody>
</table>

Electronic Control Unit (specific software for each head type)
- Power supply: Mains or built in rechargeable battery
- ON/OFF button or TTL signal to the BNC
- PWM Interface : 3,3 Vdc (option)
- Cable main-ECU length : 200 cm (78 inch)
- Cable ECU-aerosol head length: 60 cm (24 inch)

(1) Other particle sizes (« water reference ») are available on request
(2) The particle size and the flow rate depend on the liquid
(3) Geometric Standard Deviation
Electronic Control Unit (mm)

Aerosol Head (mm)

**HOW TO ORDER?**

To order a kit, please contact us and inform the references of products that interest you:

<table>
<thead>
<tr>
<th>Plug &amp; Spray</th>
<th>References P&amp;S-T45</th>
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<tbody>
<tr>
<td><strong>KIT</strong> (P&amp;S-XXX-YY)*</td>
<td>P&amp;S-T45-M04</td>
</tr>
<tr>
<td>P&amp;S-T45-M12</td>
<td></td>
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<tr>
<td><strong>Aerosol Head</strong> (H-XXX-YY)**</td>
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<td><strong>YY</strong>: Aerosol head (droplet size)</td>
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<td>Tripod</td>
<td>M04 - 4 microns</td>
</tr>
<tr>
<td>TRIPOD</td>
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* XXX: Nebulizer Type
  T45 – Integrated Tank
  360 – Remote Tank (omnidirectional)

** YY: Aerosol head (droplet size)
  M04 - 4 microns
  M12 - 12 microns

* H: Nebulizer Head

[1] The size of the electronic control unit can be highly decreased by reducing the number of options (battery, liquid end detection).
[2] On demand, a unique ECU can run several nebulizers.
PLUG & SPRAY
Ominidirectional P&S-360
Preliminary data subject to change without notice

MAIN CHARACTERISTICS
- Product: water-based solution, alcoholic solution, and suspensions
- Particle size: 4µm, 12µm or 40µm.
- Flow rate: Resp. 1ml/min, 3ml/min, 25ml/min
- Variable flow rate: from 30% to 100% (PWM)
- Aerosol orientation: 360° (omnidirectional)
- Energy consumption: < 3W
- Response time = 1 ms
- Noise : <35dB

COMPOSANTS DU KIT P&S-360

Aerosol Head
ECU Aerosol
ECU Pump + (Fan)
Accessory : Pump or (fan)

Plastic tubes
Connecting cables
Cable mains-ECU
Accessory: Tripod

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<th>ECU Pump/Fan</th>
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<tr>
<td>Power supply : mains</td>
<td>Controlled by aerosol head ECU</td>
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<td>ON/OFF button or TTL signal to the BNC.</td>
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We Accelerate Innovation
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