

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 Omnidirectional

**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 position. 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 biocide atomization. It is used for continuous operation.

To cover all your needs, we offer you a choice of three droplet sizes *:



4 Microns

Fine aerosols
Surfaces don't get wet



12 Microns

Diffusion, humidification
Surfaces don't get wet



40 Microns

Liquid deposition
Wet surfaces

* Other droplet sizes may be available upon request and under conditions.

* The droplet sizes might be slightly different depending on the sprayed liquid.

OUR TECHNOLOGY

MICRONICE™

PRINCIPLE

The TEKCELEO patented MICRONICE™ technology is a breakthrough spray technology based on a low power amplified piezoelectric effect. Thanks to the expertise of our team, we have developed a micro-perforated mesh device which, when vibrating at a certain frequency, expels the liquid as fine droplets perfectly calibrated (monodispersed). (Droplets distribution measurements upon request: Sympatec Helos particle size analyser).

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 operation
- Ability to nebulize micro-volumes (precision electronic control)
- Droplet size can be selected by design
- No dead volume (liquid completely nebulized)

APPLICATION EXAMPLES

- **Bio decontamination:** Contamination control of small or medium volumes. Chamber decontamination. Biocide atomization (H₂O₂ and more)
- **Drop deposit of micro-volumes:** chemical reagents, organic samples, ink, nano suspensions, thin organic and metallic layers...
- **Chemical molecules deposit** for surface treatment.
- **Diffusion:** parfume, fragrance, phéromone...
- **Aerosol therapy:** respiratory route drug delivery
- **Precise humidification:** room, materials, organic tissues...
- Evaporative **cooling**.
- **Chemical analysis:** source of monodispersed particles



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PLUG & SPRAY

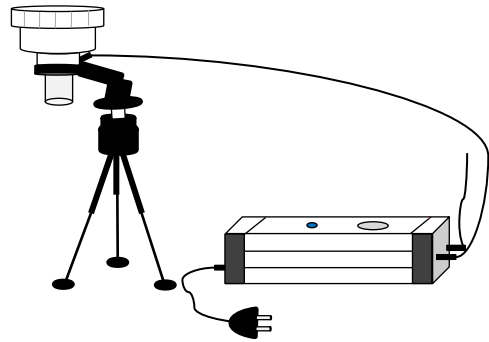
Integrated Tank P&S-T45

Technical data subject to change without notice



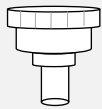
MAIN CHARACTERISTICS

- Product: water-based solution, alcoholic solution and suspensions
- Particle size: 4µm or 12 µm (standard)
- Flow rate: 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

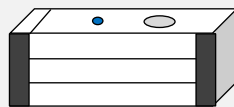


P&S-T45 KIT COMPONENTS

Aerosol head generator with tank



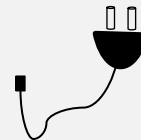
Electronic Controller Unit (aerosol head)



Cable E.C.U. aerosol head



Cable power supply



Accessory : tripod



TECHNICAL SPECIFICATIONS

Aerosol head type		
Droplet size ⁽¹⁾	Flow rate ⁽²⁾	GSD ⁽³⁾
4 µm ± 1 µm	1 mL/min ± 0,2 ml	1,4
12 µm ± 3 µm	3 mL/min ± 0,5 ml	1,7

⁽¹⁾ Other particle sizes are available upon request

⁽²⁾ The particle size and the flow rate depend on the liquid

⁽³⁾ Geometric Standard Deviation

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)



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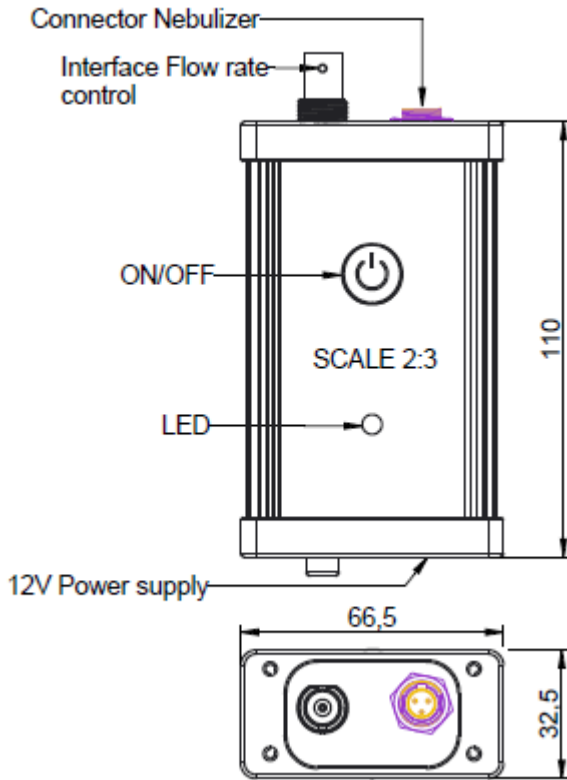
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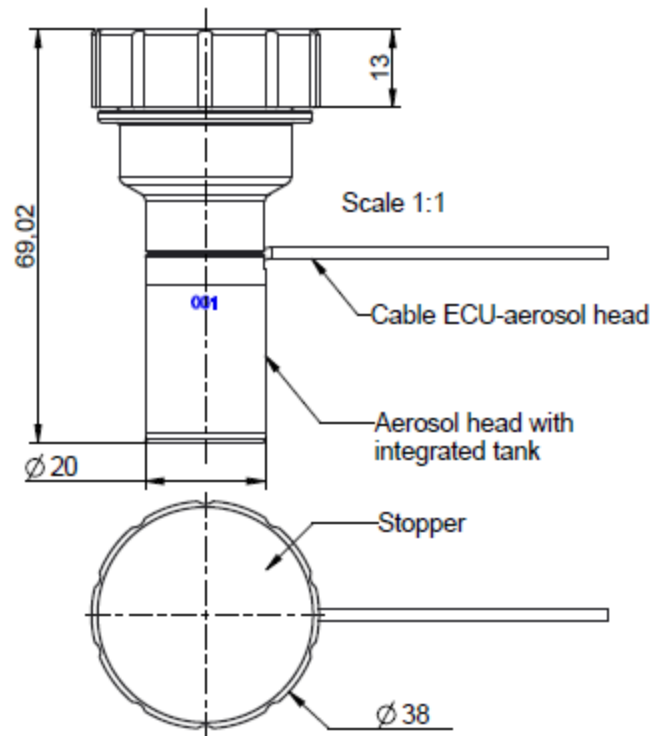
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TECHNICAL DRAWING

Electronic Control Unit (mm)



Aerosol Head (mm)



HOW TO ORDER?

To order a kit, please provide us with the references of the items you would like to purchase:

Plug & Spray	References P&S-T45
KIT (P&S-XXX-YY)*	P&S-T45-M04 P&S-T45-M12
Aerosol Head (H-XXX-YY)**	H-T45-M04 H-T45-M12
Accessories	<i>Tripod</i> TRIPOD



Order

* **XXX:** Nebulizer Type

** **YY:** Aerosol head (droplet size)

T45 – Integrated Tank

M04 - 4 microns

360 – Remote Tank (omnidirectional)

M12 - 12 microns

* **H:** Nebulizer Head



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PLUG & SPRAY

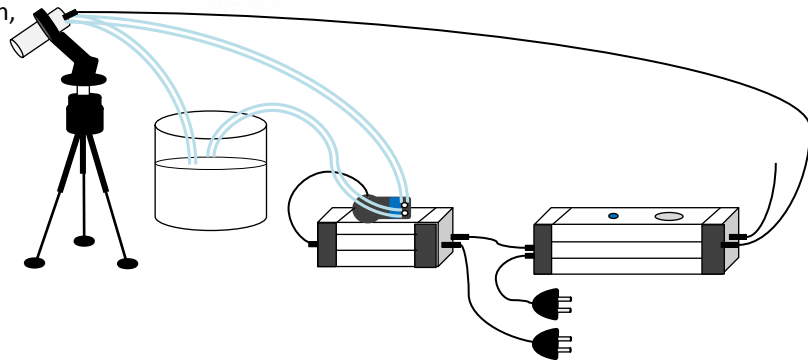
Omnidirectional P&S-360

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



P&S-360 KIT COMPONENTS

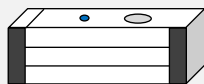
Aerosol Head



Plastic tubes



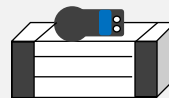
ECU Aerosol



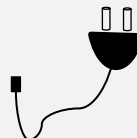
Connecting cables



ECU Pump + (Fan)



Cable mains-ECU



Accessory : Pump or (fan)



Accessory: Tripod



TECHNICAL SPECIFICATIONS

Aerosol head type		
Droplet diameter ⁽¹⁾	Flowrate ⁽²⁾	GSD ⁽³⁾
4 µm ± 1 µm	1 mL/min ± 0,2 ml	1,4
12 µm ± 3 µm	3 mL/min ± 0,5 ml	1,7
40 µm ± 3 µm	25 mL/min ± 2 ml	1,8

⁽¹⁾ Other particle sizes are available on request

⁽²⁾ The particle size and the flow rate depend on the liquid

⁽³⁾ Geometric Standard Deviation

Electronic Control Unit (specific software for each head type)	ECU Pump/Fan
Power supply : mains or built in rechargeable battery	Power supply : mains
ON/OFF button or TTL signal to the BNC.	Controlled by aerosol head ECU
PWM Interface : 3,3 Vdc (option)	Cable ECU-aerosol head length: 60 cm (24 inch)
Cable main-ECU length : 200 cm (78 inch)	Cable main-ECU length : 200 cm (78 inch)
Cable ECU-aerosol head length: 60 cm (24 inch)	Cable ECU(aerosol)-ECU(pump) length: 100 cm



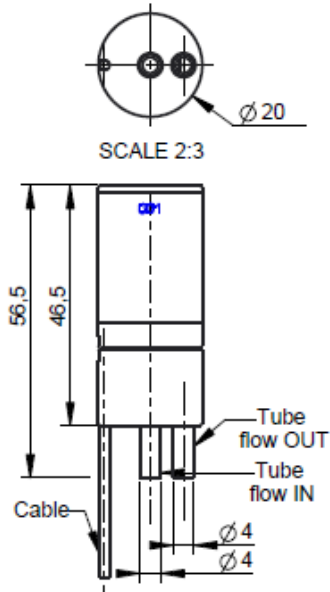
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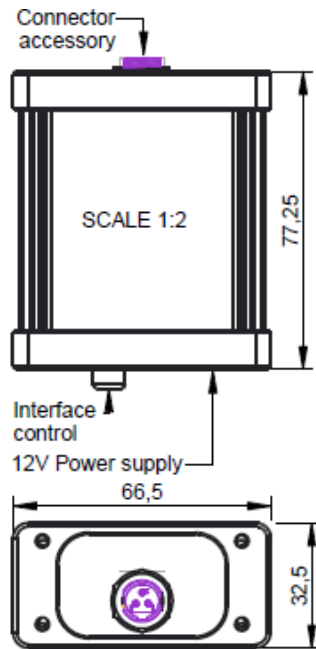
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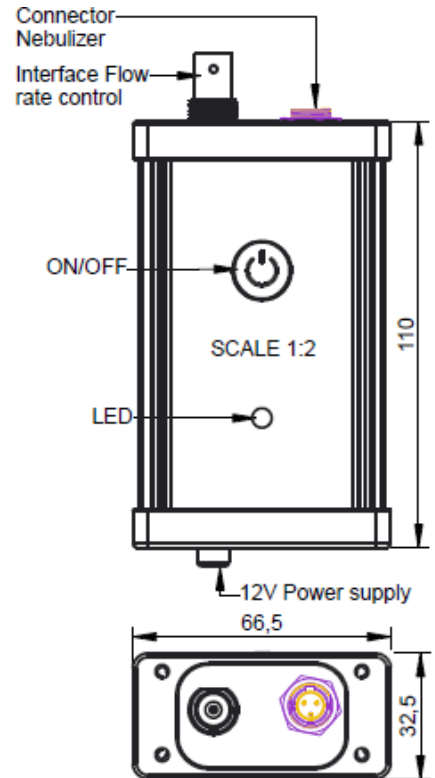
Aerosol Head (mm)



ECU Pump/Fan (mm)



ECU Aerosol (mm)



HOW TO ORDER?

To order a kit, please provide us with the references of the items you would like to purchase:

Plug & Spray	References P&S-360
KIT (P&S-XXX-YY)*	P&S-360-M04 P&S-360-M12 P&S-360-M40
Aerosol Head (H-XXX-YY)**	H-360-M04 H-360-M12 H-360-M40
Accessories	<i>Reservoir : TANK</i> <i>Tripod : TRIPOD</i>



Order

* XXX: Nebulizer Type

T45 – Integrated Tank

360 – Remote Tank (omnidirectional)

* H: Nebulizer Head

** YY: Aerosol head (droplet size)

M04 - 4 microns

M12 - 12 microns

M40 - 40 microns

[1] OEM ECU units without metallic cases are available on demand to be integrated in your system.

[2] On demand, a unique ECU can run several nebulizers.



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