

# Datasheet

## Octopus Scarifier OSC

### Scarification



Models	OSC	OSC_Premium
Embedded modules	 <p>Versatile platform</p>  <p>Scarifier / rototiller</p>	 <p>Versatile platform</p>  <p>Scarifier / rototiller</p>
Options		 <p>Sensors pack *</p> <p>(* ) Systems for sensing ammonia, moisture and temperature levels at poultry height.</p>
Use	Poultry sheds/barns/houses. On a daily basis, in the presence of animals	
Types of litter / beddings	Short-straw (strands not exceeding 2 cm long), wood-shavings, sawdust, rice husk, pellets...	
Applications	Scarification	Scarification
Target	Litter/bedding	Litter/bedding
Localizations & Actions	Scarifier at the back of the robot beneath the protective skirt (no dust emissions). The robot turns, aerates and dries the litter daily and keeps it loose.	
Treatment	Autonomous robot, no human intervention during operations.	
Environment	The robot operates mechanically. It emits no molecules into the air. On the contrary, it reduces atmospheric emissions of carbon dioxide and ammonia. Ammonia is responsible for environmental eutrophication and acidification. The robot is powered by an electric battery. It is therefore possible to use renewable energy.	
Power supply	Battery (100A/h)	
Battery life	4 to 6 hours	
Recharge time and mode	3 hours, mains or docking station with integrated power supply and charging function (as an extra option).	
Dimensions (mm)	1120 X 1400 X 800	

# Datasheet

## Octopus Scarifier OSC

Scarification

Turning / aeration of litter

### Animal welfare

#### Improvements of living conditions:

- . Plumage does not get soiled (wet and dirty)
- . Natural behaviors are possible (scratching, dust bathing, etc.)
- . Stimulation/distraction of the animals
- . Better ambient air smell <sup>(2)</sup>
- . Better quality of litter (more give, lower moisture content, fewer insects, etc.)

### Health

#### Improvements in health:

- . Reduction in footpad dermatitis, in keel and tarsus dermatitis
- . Fewer illnesses, a smaller entry door for pathogens
- . Reduction in breathing difficulties
- . Reduction in ascites <sup>(3)</sup>
- . Reduction in the fermentation of uric acid into ammonia (NH<sub>3</sub>) and carbon dioxide (CO<sub>2</sub>)
- . More effective heat regulation (because the plumage is not soiled)
- . Reduction in the harmfulness of ammonia

### BENEFITS

### Productivity

#### Improvements in productivity:

- . Reduction in mortality
- . Reduction in the use of medical treatments
- . Reduction of penalties and seizures at slaughterhouse
- . Better growth, better feed conversion ratio (FCR)
- . Total traceability of the day-to-day operations
- . Reduced hardship at work

### Safety

#### Improvements in safety:

- . No human intervention required during operations
- . Limitation of the exposure of operators to pathogens
- . Limitation of operators' exposure to ammonia and carbon dioxide

### Compliance

#### Anticipation of the regulation:

- . Reduction in the concentration of ammonia in buildings:
  - Directive 2007/43/EC: < 20 ppm ammoniac, < 3000 ppm carbon dioxide
  - Directive EU NERCS 2030: 123 000 km<sup>2</sup> forest ecosystems saved from eutrophication <sup>(4)</sup> (a 35% reduction)
  - 19 000 km<sup>2</sup> of forest ecosystems protected from acidification (an 86% reduction)

(1) According to the regulations in force in the country, (2) The fermentation of uric acid results in the emission of gases: ammonia (NH<sub>3</sub>) and carbon dioxide (CO<sub>2</sub>),

(3) Ascites: accumulation of liquid in the abdomen, (4) Eutrophication: excessive richness of nutrients in an ecosystem (caused by ammonia, for example).

### Shed plan view – Sensor mapping (OSC\_Premium robot)

