

IPS Algae control system



What are algae exactly?

The term 'algae' is a name for a range of simple photosynthesizing organisms. All organisms that photosynthesize, but cannot be considered as 'plants' fall under this heading. Algae can be both unicellular and multicellular. An example of multicellular algae is seaweed, which has a relatively complex structure. The big difference between algae and plants is that algae have no leaves, roots, flowers or other typical higher plant characteristics.

There are three standard types of algae: Phytoplankton, filamentous and macrophytic. Phytoplanktonic algae are unicellular organism that float in the water. An excess of these, can colour the water green. Filamentous algae occur as long and fine green wires, mainly in water storage tanks. Macrophytic algae show most similarities with real plants: they have a complex structure with some kind of stem and leaves.

Why are algae a problem?

First of all, algae consume (at night) a lot of dissolved oxygen. An oxygen deficit disturbs plant functioning and substrate life seriously. Secondly, algae can cause blockages in the pipelines of your irrigation system. This will lead to dry spots in your crop. Thirdly, an accumulation of algae forms a very good substrate for dangerous bacteria and fungi. This so-called biofilm can lead to severe plant infections. Lastly, algae consume nutrients needed for plant growth, such as nitrate and phosphate.

How do we treat them?

Industrial Product Solutions makes use of ultrasonic technology to fight algae. Ultrasonic sound waves are waves that have a very high frequency (<20 kHz), not audible for the human ear. These waves are perfectly suitable for decreasing the algae population.

The death of algae can be realised through three different mechanisms:

- Breaking down the cell membrane of algae close to the source of the ultrasonic sound;
- Breaking down the vacuoles of algae on moderate distance of the ultrasonic sound source;
- Induced stress of algae at larger distance of the source. The frequencies of the ultrasonic waves cause resonance and the algae will die after a while.

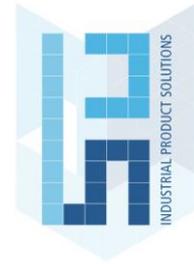
This solution is unique in the way that it does not require the use of any additional chemicals, energy consumption is low and its completely harmless for human, plant and other substrate life. Our technologies decrease existing algae populations up to 90% and prevents the development of new algae.

Industrial Product Solutions BV

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Op al onze leveringen zijn onze algemene voorwaarden van toepassing.

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Products

For the treatment of algae in large water reservoirs, e.g. water storage tanks and hydroponic ponds, Industrial Product Solutions offers four types of algae controllers. These controllers are installed inside the water reservoir. Specifications of these can be found in Table 1.

Table 1 Specifications of the IPS sonic AL product range

Product name	IPS sonic AL-05	IPS sonic AL-10	IPS sonic AL-20	IPS sonic AL-50
Range (m)	4-5	8-10	20-25	120-150
Energy consumption (W)	8-12	10-15	15-22	25-40

The fluctuations in the range an algae controller covers are caused by the degree of pollution of the water.

For the treatment of algae in pipelines, e.g. inside irrigation systems in greenhouses or inside water purification installations, we offer the IPS sonic PI-20. The IPS sonic PI-20 is installed directly on a pipeline and fights the formation of a biofilm, caused by the accumulation of algae.

When applying an algae control system at your firm, IPS will advise you on which controllers needed. Each firm has it's own composition and specifications. By giving you custom made advise, we strive to maximize the effect the algae control system will have on your application.

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