What is an airstone and how to use them in your tank.

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What is an airstone? What are air pumps? How are they different from standard pumps, and why are they important?

Customers always ask us; 'What is an airstone?' when we mention them. Airstones are a brilliant way to get more oxygen into your tank. This will benefit your fish which will, in turn, benefit your plants. Lots of people love the aesthetics of a column of bubbles, too! Airstones can be placed wherever you like in a tank and come in a wide variety of styles. You can have plain hardware that you may wish to hide and disguise yourself, or you can have air-operated ornaments. These often have a moving part that is pushed by the bubbles to add some additional movement and interest to the tank.

What is an airstone?

An airstone is a porous node that breaks up an air flow as oxygen flows through it to create lots of small bubbles. These bubbles travel to the surface of your tank and pop, providing surface agitation. This surface agitation increases what is known as the 'gas exchange'. This is the process that allows oxygen into the water and carbon dioxode out. Think about it as a way to keep your fish from feeling the tank becoming 'stuffy'.

That can be tricky to get your head around. The image below shows the difference. In this instance, both the airline and the airstone have the same amount of air being put through them. The difference with the bubbles is that they present a much greater surface area to the surface water, allowing more oxygen to transfer into the water effectively.

[what is an airstone? Airstones diffuse the oxygen through the water more efficiently than airline]

Airstones give brilliant aeration via bubbles

Airstones come in all shapes and sizes - here are some of our options;

What is an air pump?

Airstones are fed by an air pump, not a water pump! An air pump is a bit of equipment that is separate from your tank. They work by taking in air from their surroundings, compressing it, and pumping it out. This will then travel along your airline and out through your airstone.

They must be kept dry and cannot be submerged. **It's vitally important you add a non-return valve into your airline to prevent water getting back along the tube and into your pump.** The good news is, these valves are less than £2 and can be added to your airline very easily.

When setting up your airstone (or multiple airstone) you just need to connect your airline to your pump at one end and connect it to your airstone at the other end. Put your non-return valve in your airline between where the line enters the water and the connection to the pump. Then place the airstones wherever you like in your tank!

[airstone at the back of a platy tank]

We use airstones in our fishroom tanks.

Airstones are good for water circulation

Most aquariums are rectangular. This is because a large surface area allows for better gas exchange. However, the down side of this shape is 'dead spots' and poor water circulation in areas like the corners. Plants and ornaments can also increase these deadspots. These 'dead spots' are areas where uneaten food and fish waste can gather and cause problems for your water chemistry.

The additional water movement caused by airstones increases your water circulation. This helps shift all that debris to your filter rather than you having to get involved yourself. This, in turn, keeps your water cleaner!

Airstones are great for Bettas (Siamese Fighting Fish)

Airstones are great alternatives for fish that prefer gentle currents, like Bettas or Goldfish. Rather than have a water return or outlet that you have to turn right down it may suit you better to use an airstone for gas exchange without the current being created. **This does not mean you can keep Betta's without filters!**

[How to feed frozen bloodworm to fish]

Bettas prefer weak current as it's easier for them to swim in.

Lots of fish thrive with a bit of extra oxygen, too. Discus, for example, benefit from a couple of airstones in their tanks. Discus are among the most popular tropical fish to keep. If you've ever considered keeping them now is the time as the world famous STENDKER breeding programme is coming to an end! Discus will be a lot harder to source (and a lot more expensive!) from 2023 onwards. We've provided a few guides on everything you need to know to keep perfect discus.

Air pumps and airstones are great emergency backups

If you experience a power cut your filter will stop returning water to your tank. You'll lose your gas exchange which, in the short term, is more important to replace than worrying the filter cleaning your water. Having a battery powered air pump in the cupboard can be a great way to get that gas exchange going again. They're also very affordable so having one as an insurance policy isn't going to break bank. Please remember this pump doesn't come with air line, non-return valve, or an airstone - so you'll need those, too.

Get creative with airstones!

Remember, airstones don't have to look like the examples in the pictures above. Get creative with your airline! You can run it along aquascaping rocks or wood, nestle in in plants, or bury it in your substrate. There are lots of gadgets and gizmos that can split an airline into multiple lines to allow

you to place 2, 3, 4 airsones in a tank at once! Or air curtains can give you 'sheets' of bubbles along one side or up the back of your tank. If you can imagine it, chances are you can make it happen. We'd love to see what you come up with so remember to tag us on Facebook, Instagram, and YouTube!