

Overview

In partnership with SCM Technologie, Ham Baker Adams can provide aeration systems for applications in tanks in domestic and industrial water treatment plants.



The diffusers provide microbubbles maximising the transfer rate of the oxygen thanks to the large area of the high efficiency polyurethane (PU) membrane, ensuring very low maintenance costs and high transfer yields, allowing a saving on the amount of air supplied and a saving on energy and operating consumption of the aeration system (a gain of +20% on $\text{kgO}_2 / \text{kWh}$ compared to traditional systems with disc and/or tubular diffusers).

The lengths of the two standard modules are 1.5m and 2.0m. The standard width is 0.18m.

Materials

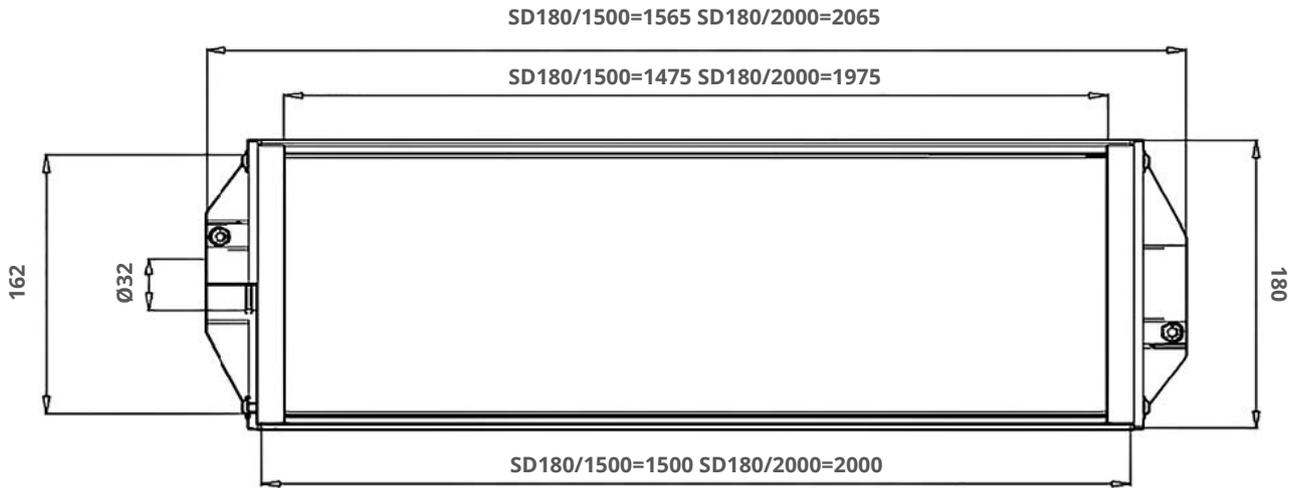
The strip diffusers have a particular PU (polyurethane) membrane which guarantees a long average lifespan in addition to a greater specific resistance than the EPDM and silicone membranes of traditional disc and tubular systems.

The PU membrane has a pore density of 28.4 pores/cm^2 , with pore size smaller than 0.3mm , thanks to which the oxygen transfer efficiency with the micro-bubbles is maximised, making the system practical and reliable

Each diffuser has an internal check valve. Another advantage is the quick and easy installation. For the positioning and dimensioning of strip diffuser networks, please contact Ham Baker Adams.

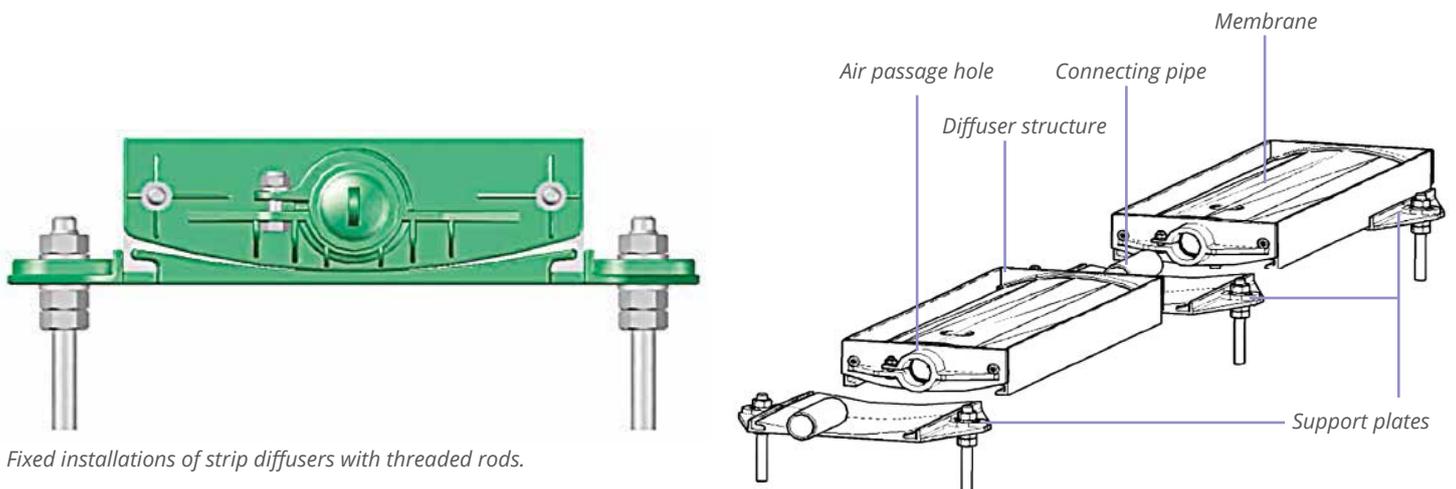


Dimensions and air flow rate

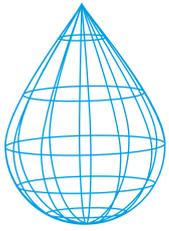


Type	Air connection passage	Diffuser thickness	Membrane area	Recommended air flow rate range	Max air flow rate (*)
	mm	mm	m ²	Nm ³ /h	Nm ³ /h
SD180/1500	32	53	0.25	1.5 : 29	≤ 36
SD180/2000	32	53	0.32	2.0 : 38	≤ 48

(*) Not to be exceeded for more than 10 minutes while purging the manifold

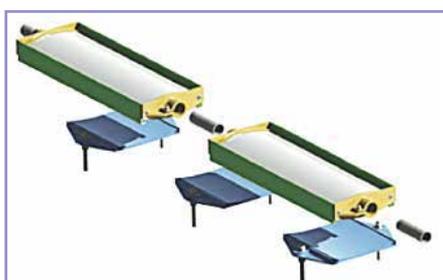
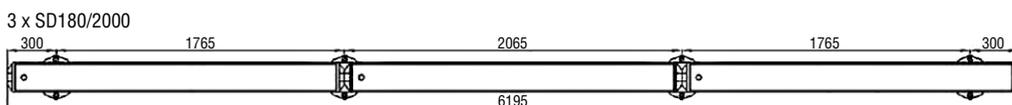
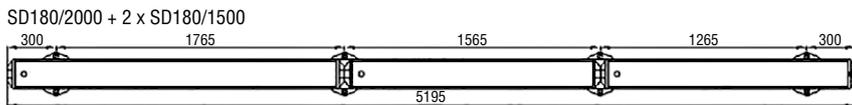
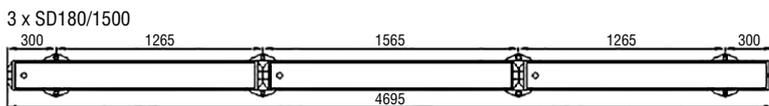
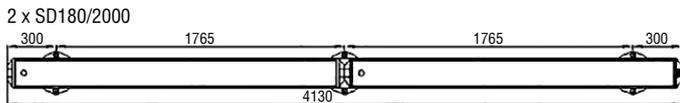
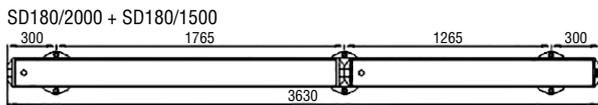
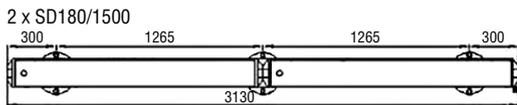
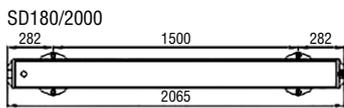
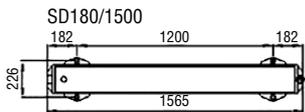


Fixed installations of strip diffusers with threaded rods.



Connection/support system

The system is modular allowing, through the combination of the two basic models (SD180/1500 and SD180/2000), different lengths according to the different lengths to cover.



Exploded view of the strip diffuser system components.



Example of installation



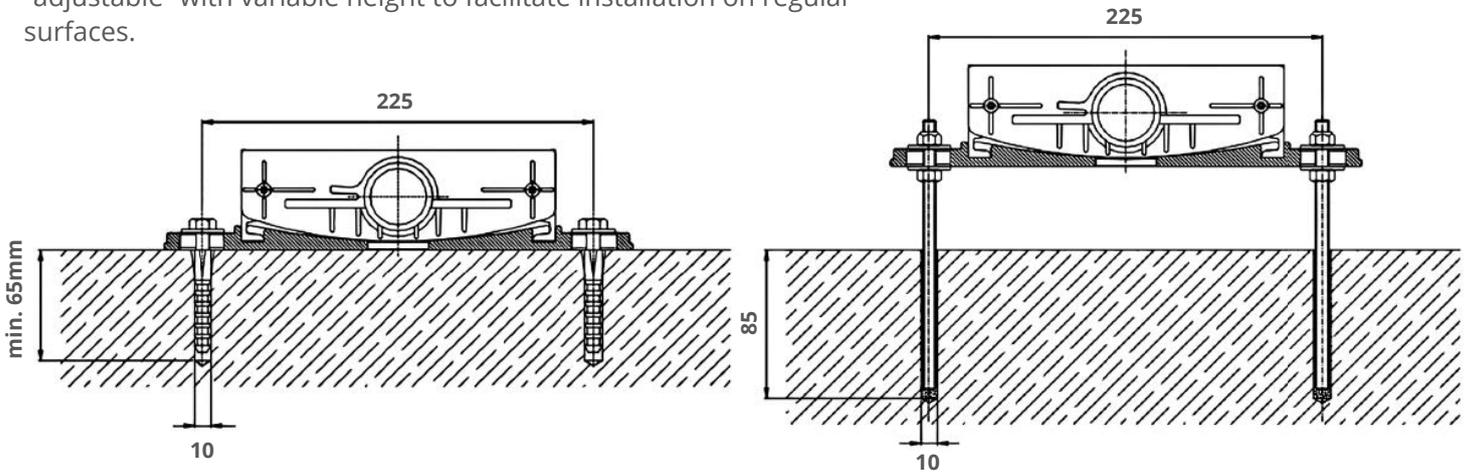
Example of installation



The serial connection between the different modules (diffusers) is very simple to make and takes place through a 32mm diameter pipe (compatible materials are: PE/PP/PVC).

The system is suitable for fixed installations on the bottom of the tank or removable installations on AISI 304 stainless steel extractable frames (for example).

The "fixed" system is attached with nylon anchors or chemical anchors directly on the tank bottom. Alternatively, the "fixed" system can be "adjustable" with variable height to facilitate installation on regular surfaces.

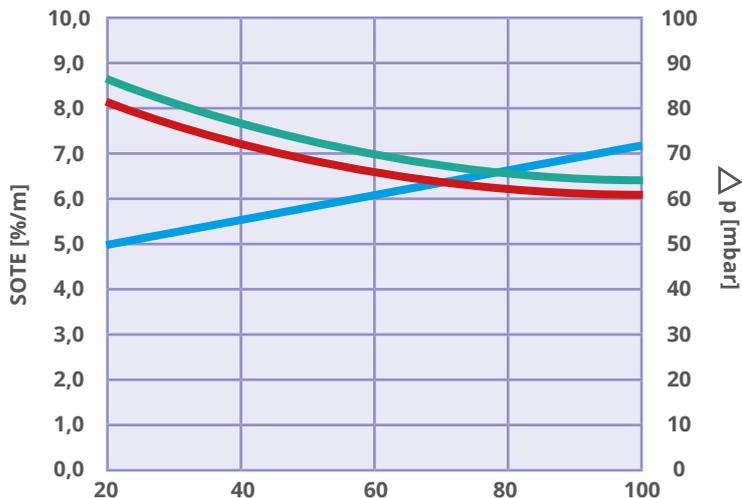


Type	Screw	Anchoring Type
1-1	SS 8 × 60	53
1-2	SS M8 × 30	53
1-3	anchoring pin M8 × 50	
1-4	SS M8 × 100	chemical anchor

Type	Screw	Anchoring Type
1-2	SS 8 × 110	drop-in anchor
1-4	SS M8 × 250	chemical anchor

Oxygen transfer efficiency

at 10% and 20%



— SOTE (10% bottom coverage)

— SOTE (20% bottom coverage)

— Diffuser load loss

Materials

Membrane	PU (polyurethane)
Diffuser structure	PVC
Air connections and check valve	PP 30%GF
Base bracket (support plate)	PP 30%GF
Fasteners (screws, nuts, bolts)	Class A2 - AISI 304
Air sealing O-ring	EPDM

Operation Mode

Continuous/intermittent

Storage

The strip diffusers should be stored in a ventilated, dry place in accordance with the DIN 7716 standard. Do not expose the items to the following environmental conditions: cold, heat, UV radiation, dust or extreme manoeuvres such as to compromise the integrity of the item and its packaging. Do not store outdoors. The storage period should not exceed 12 months prior to the installation of the product. The cases exposed to direct sunlight must be covered with tarpaulin against UV radiation.

Membrane Lifespan

Long in municipal treatment plants, depending on the operating conditions and the types of wastewater.

Disclaimer

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