

Disc Diffuser System Type ABS Sucoflow DS 20

SULZER

Membrane disc diffusers for reliable and energy-efficient finebubble aeration of tanks in wastewater treatment plants. Suitable for normal continuous aeration systems as well as where intermittent aeration is required, e.g. biological nutrient removal and SBR processes.

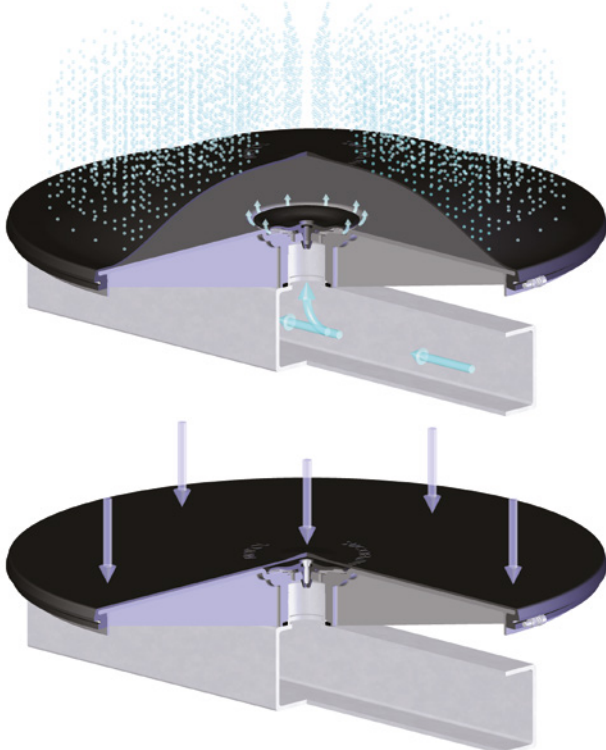
Features

- Self-cleaning EPDM membrane with slits
- The perforation of the membrane is carried out in a way that optimizes the spacing and minimizes the bubble coalescence
- The large active surface area guarantees superior oxygen transfer efficiency
- Ideal for high density aeration systems
- Robust fiberglass support plate
- A built-in non-return valve gives additional safety to the operator when the air flow is interrupted, preventing sludge infiltration into the piping system
- Easy to fit thread connection to the tube means that no glue, solvent or welding is needed in assembly
- Delivered loose to be installed on locally made distribution grids
- PVC, PP and SS are the most common solutions for the piping system
- Operating temperature up to 100°

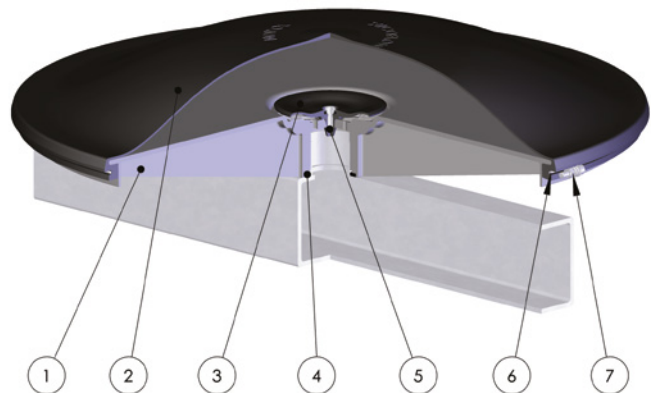
Working principle

The membrane bulges and slits open during aeration by the pressure of compressed air. The main body distributes the air evenly over the entire surface of the membrane. Air is spread into small bubbles, when released through the membrane.

When the air flow is turned off, the pressure of the water above presses the membrane disc tightly to the main body closing the small slits on the membrane. The non-return valve closes and makes sure that no water enters the pipeline.



Components and materials



	Description	Material
1	Main body HSADS20	Glass fiber reinforced PP (polypropylene)
2	Membrane disc HIKDS20	EPDM
3	Non-return valve HVKDS20	EPDM
4	O-Ring	EPDM
5	Fixing pin HVKFDS20	SS (stainless steel)
6	Wire clamp HSSD20	SS
7	Screw-washer-nut	SS

Diffuser data	
Design air flow range	1.5-15.0 m ³ /h/diffuser ¹⁾ (+20 °C; 1,013 mbar)
Air temperature, max	+ 100°C
Max/min assembly depth	3 - 8 m (optimal) ²⁾
Diffuser diameter	520 mm
Membrane surface area	0,183 m ²
Size of bubbles	1 - 3 mm
Diffuser weight	2.3 kg
Max/min interval, c/c	1.5 / 0.6 m
Thread connection	G 1½"

¹⁾When waste water contains chemicals harmful to EPDM or when water temperature is >30°C or air temperature is close to 80°C, a lower maximum air flow should be used. A peak value of 20 m³/h can be used for max. of 15 min only e.g. for cleaning the membrane.

²⁾Consult Sulzer on depths outside the range