


A close-up photograph of two circular diffuser components, one light-colored and one dark, with numerous small bubbles rising from them against a blue background.

DIFFUSER AERATION SYSTEM
FOR WASTEWATER TREATMENT

A large, detailed image of the Earth as seen from space, showing the Americas and surrounding oceans and clouds.

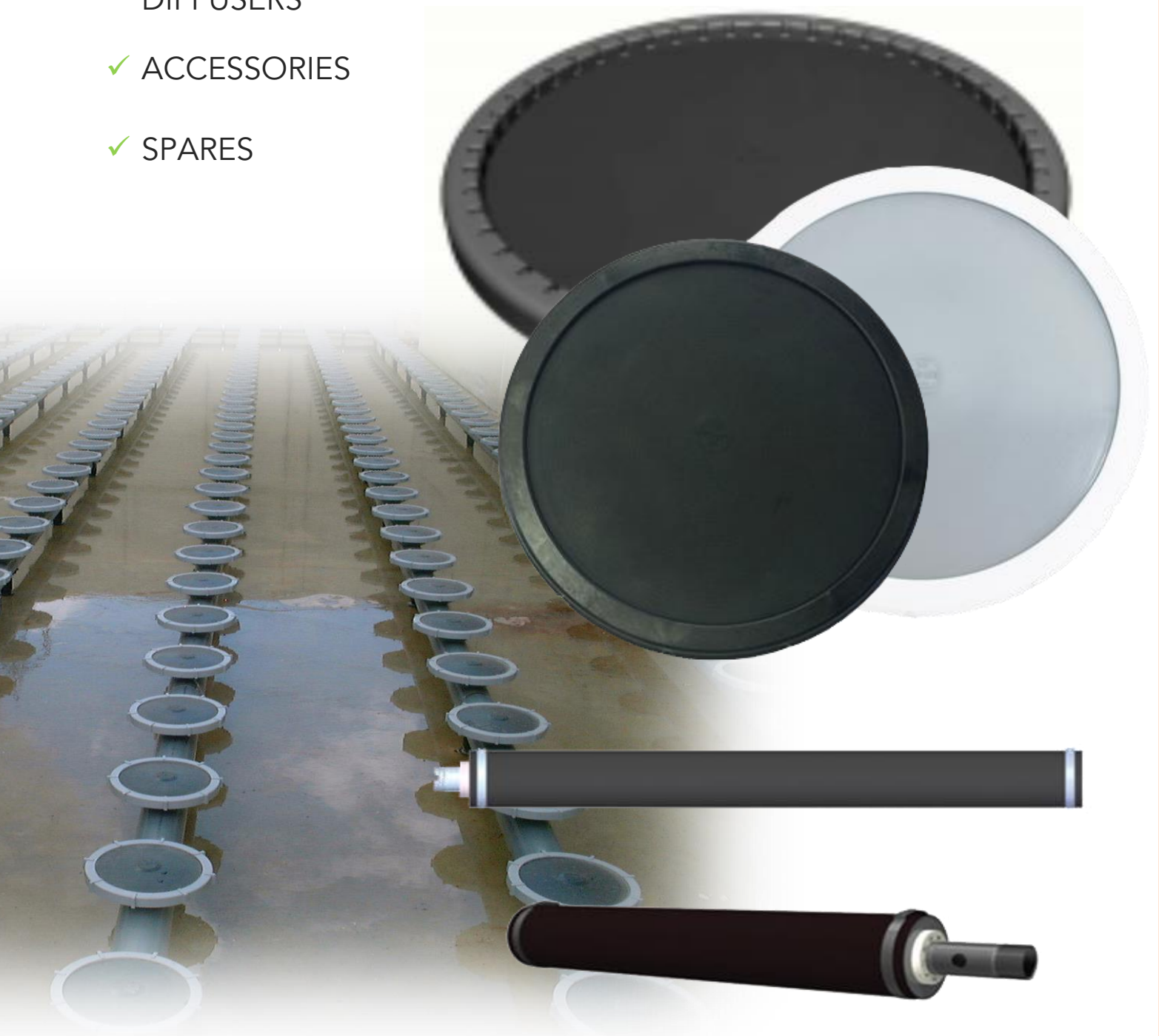
Stream Energy Systems Pvt. Ltd.

AERATION SYSTEMS

A large, detailed image of aeration system components submerged in water, showing numerous bubbles rising from the diffusers, creating a dynamic and textured blue-green scene.

AERATION PERFORMANCE THROUGH INNOVATION

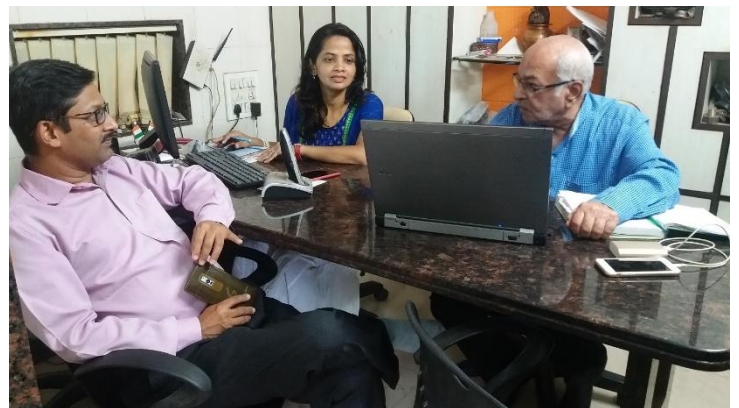
- ✓ DISC DIFFUSERS
- ✓ TUBE
DIFFUSERS
- ✓ ACCESSORIES
- ✓ SPARES



Aeration Performance though Innovation.

Why Stream Energy?

- Solutions for sustainability.
- Advanced Membrane Technology.
- Long-Life at high SOT efficiency with lower head-loss.
- Entire range of Coarse and Fine bubble diffusers.
- Fixed Grid and Retrieval arrangement.
- Total Range of diffusers for Project and Replacement application.



STREAM
ENERGY
SYSTEMS

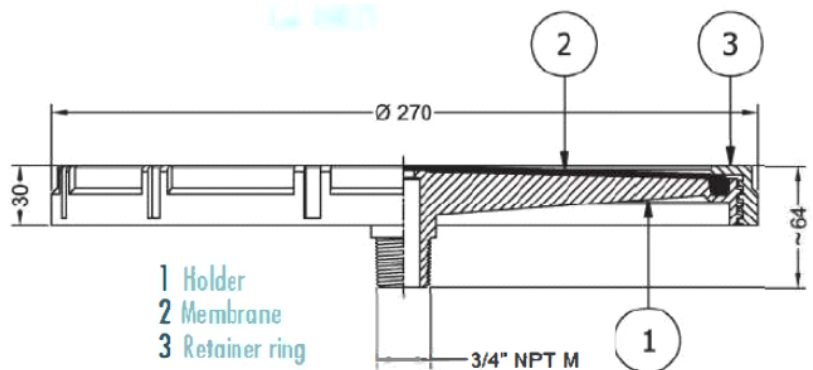
GLOBAL ENVIRONMENTAL SOLUTION

Disc Diffuser

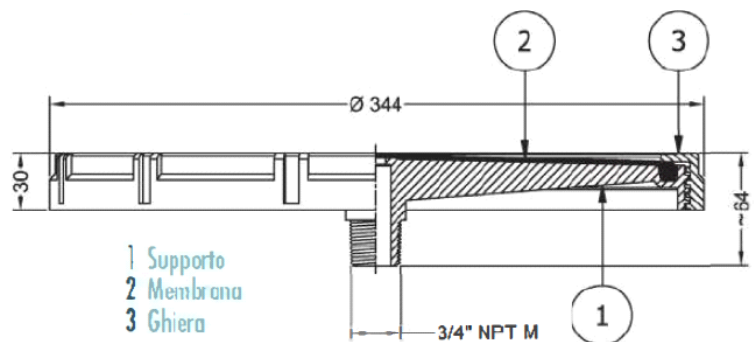


- Highest possible SOTE independently tested per ASCE, and lowest possible head-loss.
- Simple and quick installation with QC Saddle or Grommet.
- 212° F (100° C) temperature resistance and environmentally friendly polypropylene body.
- Compression-molded membranes with individual thermocouples in each cavity = 100% quality control.
- Each membrane checked for even perforation depth to ensure uniform air release.
- Low membrane plasticized content to reduce shrinkage and hardening, but enough to avoid creep.
- Multiple integral check valves keep your aeration piping system clean.

Airtech 9"



Airtech 12"



- Available in membrane material such as EPDM, Silicon, PTFE coated EPDM, PU etc.

Specifications	Airtech 9"	Airtech 12"
Airflow rate [Nm ³ /h]	1 – 6	1 – 10
Recommended Airflow rate [Nm ³ /h]	4	6
Head-loss (with recommend airflow rate 4mtr water depth) cm w.c.]	36	36
No. of Slits	>6,500	>12,000
Perforation [mm]	1	1.2 – 2
Active Surface [m ²]	0.038	0.064
Avg. Thickness [mm]	2	2.2
Tensile Strength [Kg/cm ²]	>140	>140
Elongation at break [%]	600	600
Hardness [Shore A]	60	60
Plasticizer content [%]	<10	<10

AirTech 9"



OTE %

9" fine/medium bubbles
disc diffuser with
silicone membrane



Tube Diffusers



- Highest possible quality and technology means years of trouble-free efficient operation.
- Highest possible SOTE independently tested per ASCE and lowest possible headloss.
- Compression molded EPDM membranes have very tight wall thickness tolerances, a long track record and exhibit even air distribution and minimal shrinkage over time.
- Single orifice on top center line of pipe means little chance for a single diffuser failure to piping system contaminate all diffusers.
- Multiple integral check valves to keep your aeration piping system clean.
- Integral register prevents cantilevered diffusers from axial rotation around the header pipe.
- Individual thermocouples in each cavity of compression mold = 100% quality control.
- Low membrane plasticized content to reduce shrinkage and hardening, but enough to avoid creep.
- One-piece lightweight but strong ABS body makes handling during installation very easy.

Disc & Tube Diffusers Datasheet

Standard Model/Type Airtech Fine Bubble	Diameter Height [mm]	Diameter Length [mm]	Effective Perforation Area	Airflow Rate design/ Range [Nm ³ /hr.]	Airflow Recomm ended Max [Nm ³ /hr.]	Head-Loss [Considering 4m depth of water]	Head-Loss Threaded End Connection	Weight [Kg]
270 9" Disc	64	270	0.04	2 – 8	3 – 4	360	¾" male	0.7
350 12" Disc	64	350	0.064	2 – 10	5 – 6	360	5/4" male	1.03
63 x 500	65	500	0.1	4 – 6	4	540	¾" female	0.9
63 x 1000	65	1000	0.2	8 – 10	8	540	¾" female	1.6
90 x 500	90	500	0.13	5 – 6	5	540	1" female	1.0
90 x 1000	90	1000	0.25	10 – 12	10	540	1" female	1.8

Other Products

a. Coarse Bubble Diffusers

This excellent diffuser is a non-clog type that automatically closes and seals completely when air is turned off. Unlike stainless steel wideband-type diffusers, this model will not be clogged by rags in the tank.

Features & Benefits

- The Membrane which has one year guarantee is specially formulated for waste water chemical environment.
- The standard 3/4" diffuser pipe thread makes it convenient to replace other coarse/old bubble diffusers.
- Maximum oxygen transfer.
- Low maintenance requirements.
- Wide air flow range
- High resistance to clogging and corrosion.
- NOTE: Also available in
 - Disc Size 150mm
 - Tubular size 90mm Dia x 800mm length MOC : PVC
 - Tubular size 90MM Dia X 600mm LENGTH SS



Coarse Bubble Diffusers Datasheet

MODEL	SECBD – 80	CBD - 150
SHAPE OF AERATOR	DISC TYPE	DISC TYPE
MOC OF MEMBRANE	EPDM/Silica	EPDM
SIZE OF AERATOR [mm dia.]	80	150
TYPE OF BUBBLE	COARSE BUBBLE	COARSE BUBBLE
SIZE OF BUBBLES [mm]	4 - 5	4 - 5
AIR FLOW RATE [m ³ /hr.]	2 - 5	4 - 10
MOC OF MEMBRANE SUPPORT	ABS	ABS
OPERATING TEMPERATURE RANGE [°C]	35	35
TEMPERATURE TOLERANCE [Max. °C]	85	85
SIZE OF END CONNECTION	3/4" BSP, MALE	1" BSP, MALE
TYPE OF AIR DISCHARGE	TOP AIR DISCHARGE	PERIPHERAL AIR DISCHARGE

b. Accessories & Spares

i. Membrane Spare

Membranes



We offer a wide range of Membranes with material like EPDM, PTFE Coated, SILICONE and Others special Materials.

The membranes will be suitable for replacement to any specific make of diffuser of the different diameter:

- 62mm, 67mm, 70mm, 90mm, 93mm, 117mm.
- With different Materials of Construction like EPDM, Silica, PU etc.

ii. SS Clamp

SS Clamps are specially manufactured for mounting the Membranes on the Tube with required degree of clamping. This is suitable for all the sizes and makes of Tube diffusers.



c. Biopac Media

Also referred as Fab Media or MBBR media is now used in all Modern aeration plants i.e. moving bed bio reactors.

The media expedites the process of oxidation and thereby helps to reduce the cycle time and tank size.

The Salient features are:

- Clog free operation
- Provide high Bio surface area
- No back wash needed
- Longer media life.



MODEL	PP 22
EFFECTIVE SPECIFIC SURFACE AREA OF MEDIA	400 M2/M3
COLOUR	BLACK
MEDIA HEIGHT	16 MM
MEDIA DIAMETER	22 MM
TYPE OF MEDIA	FLUIDIZED BIO MEDIA
MOC OF MEDIA	VIRGIN PP UV STABILIZED
STRUCTURE	CYLINDRICAL WITH EXTERNAL FINS
PSA/TSA RATIO (%)	75
SPECIFIC WEGIHT (Kg/M2) SURFACE AREA	0.37
SPECIFIC GRAVITY	0.90 – 0.95 gms/cm3
MAX CONTINUOUS OPERATING TEMPERATURE	800C
VOIDAGE	> 98%
DENSITY (GM/CC)	0.93
MEDIA FILL RATE RANGE, % FILL OF V	25 – 55

d. Tube Settler Media

Also referred as Lamina separator, Tube deck media or chevron separator is now used in all modern plants in the clarifier /secondary clarifier. The media effectively enhances the suspended solids concentration thereby helping in sludge separation and increasing the capacity of the clarifier.



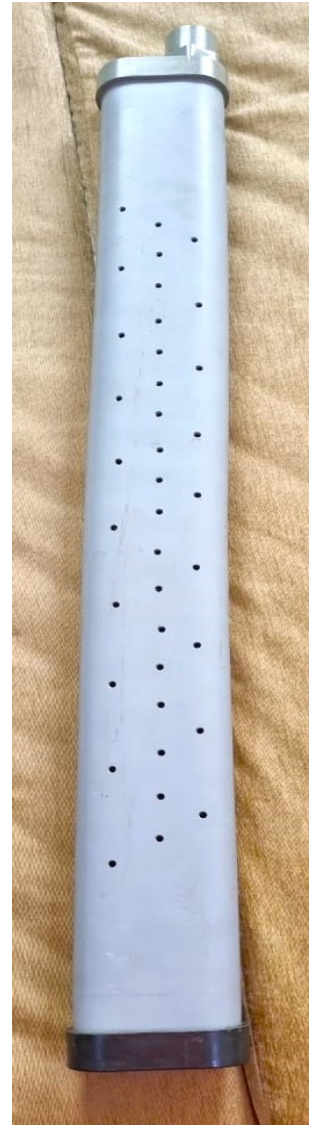
The Salient features are:

- Increases capacity of clarifier
- Enhances particle agglomeration and growth
- Enhances suspended solids concentration
- Installation is fast and easy.

Tube Settler Media Datasheet

MODEL	PP-TSM-99	
PLAN SETTLING AREA OF MEDIA	600 Slope	11.0 m ² /m ³
	550 Slope	13.0 m ² /m ³
CROSS SECTIONAL AREA	120 mm X 44 mm	
SHAPE	HEXAGONAL CHEVRON	
HYDRAULIC RADIUS	1.5 cm	
MOC OF MEDIA	PVC	
THICKNESS	1.1 mm (+/- 0.1 mm)	
FITTING ARRANGEMENT	TONGUE & GROOVE	
MAX CONTINUOUS OPERATING TEMPERATURE	550 CELSIUS	
COLOUR	BLACK	
DISTANCE BETWEEN ADJACENT TUBES	HORIZONTAL	120.0 mm
	VERTICAL	44.0 mm
WEIGHT	75.0 kg/m ³ (APPROX.)	
SEPERATOR HEIGHTS	500 mm	5.5 m ² SETTLING AREA/ m ²
	1000 mm	11.0 m ² SETTLING AREA/ m ²
	OTHER HEIGHT	UPON REQUEST

e. Wide Band Media



WIDEBAND MEDIA DATASHEET

MODEL	CBDT-800
TYPE OF DIFFUSER	WIDEBAND, OVAL SHAPED
SIZE	DIA 90mm x 800mm LONG
MOC OF MEMBRANE	NON-MEMBRANE
MOC OF DIFFUSER BASE	PVC
END CONNECTION	¾" NPT
AREA OF INFLUENTIAL ZONE [m ²]	2 – 2.25
OPTIMAL THROUGHPUT [m ³ /hr.]	5 – 10
MINIMUM THROUGHPUT [m ³ /hr.]	2
MAXIMUM THROUGHPUT [m ³ /hr.]	17
MAXIMUM ALLOWED PRESSURE [Kg/cm ²]	0.7
STANDARD OXYGEN TRANSFER EFFICIENCY	1.5 – 3 % per m. submergence



Thank You

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