GeoTierre
Protecting the source of life

TUBE DIFFUSER
Tuboflex© EPDM

High-Efficiency Aeration
for Wastewater treatment plants

OXYGEN TRANSFER
High Performance

LOW HEAD LOSS
Optimized Design

LONG-LASTING
High-quality raw materials

LOW INSTALLATION COST
Quick Installation

MADE IN ITALY
Since 1983

ISO 9001:2015
Certified

Tuboflex© EPDM

FEATURES

Elastically deformable EPDM tubular membrane, ø 67mm, each equipped with a series of holes designed to contract when pressure ceases and expand under the pressure of the insufflated gas, resulting in the expulsion of any particles retained in the pores (self-cleaning).

High-thickness PP support tube designed to support membranes with PP+30% fiberglass adapter, for screwing onto nipples.

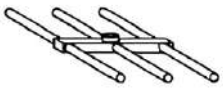
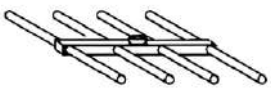
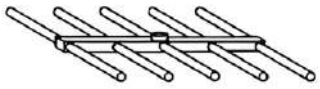
PRODUCT PROPERTIES

- low installation costs
- high operational safety powerful
- low maintenance
- low-cost construction
- application: - continuous
  - intermittent

TUBOFLEX© EPDM TUBE DIFFUSER, OPERATING RANGE

Model	Pore size µm	Range flow rate min-max x linear meter	Optimal flow rate x linear meter	Standard Thread connection*	Max temperature	Peak Air Flow x linear meter	Application
TBA500D50	60	3-12 (Nm^3/h) *1,9-7,5 (scfm)*	7(Nm^3/h) *4,4(scfm)*	3/4" F	130°C *266°F*	15 (Nm^3/h) *9 (scfm)*	Aeration tank
TBA500D100	100	5-18 (Nm^3/h) *3,1-11,2 (scfm)*	11 (Nm^3/h) *6,9 (scfm)*	3/4" F	130°C *266°F*	23 (Nm^3/h) *14 (scfm)*	Aeration tank, Anaerobic sludge digestion
TBA500D150	150	7-25 (Nm^3/h) *4,4-15,6 (scfm)*	15 (Nm^3/h) *9,3 (scfm)*	3/4" F	130°C *266°F*	32 (Nm^3/h) *20 (scfm)*	Anaerobic sludge digestion

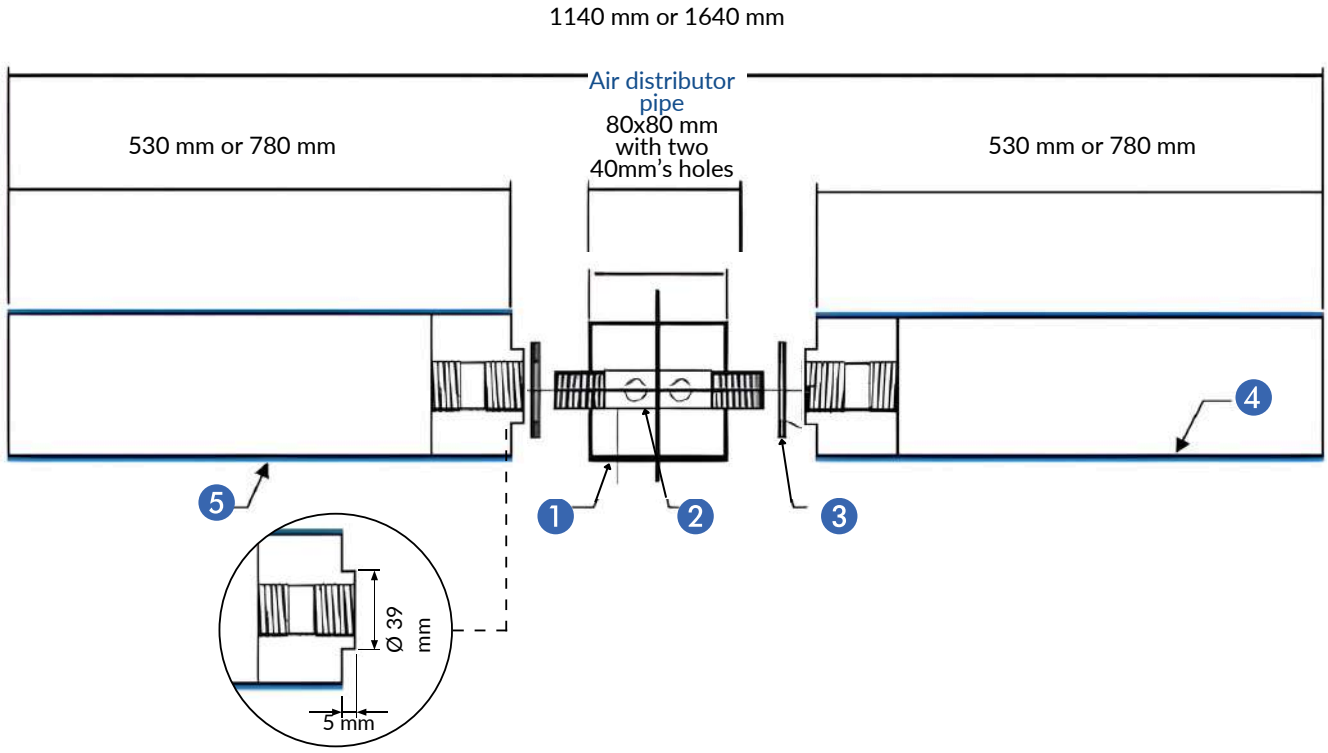
*Connection 1"F or NPT thread, available on request

Manifold in PP, Connection thread 1" female	Air distributor square pipe in AISI 304 connection 2" female			
TBA - 1001	TBA - 1002	TBA - 1003	TBA - 1004	TBA - 1005
TBA - 1501	TBA - 1502	TBA - 1503	TBA - 1504	TBA - 1505
TBA - 2001	TBA - 2002	TBA - 2003	TBA - 2004	TBA - 2005
				

Data are based on clean water 20°C temperature, 1013mbar / 68 °F, 101, 3kpa. All data are approximate!

Tuboflex© EPDM

INSTALLATION DRAWING



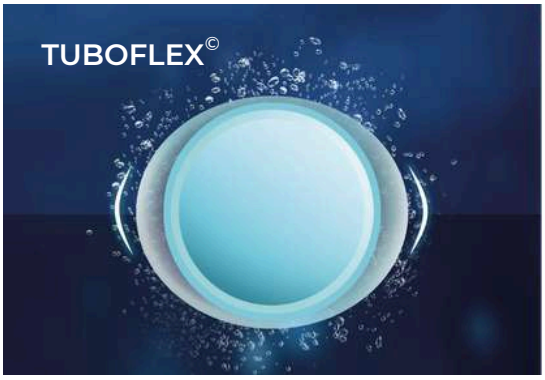
MATERIAL OF THE SINGLE COMPONENTS

Number	Description	Material
1	Air distributor square pipe	V4A material: AISI 304
2	Double nipple with ¾ external thread	V4A material: AISI 304
3	Gasket	EPDM
4	Support tube	PP
5	Membrane	EPDM

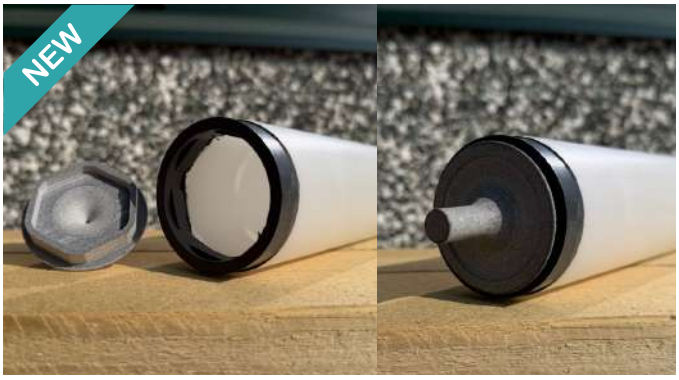
TUBOFLEX© TUBE DIFFUSER, DIMENSIONS

Type	Perforation lenght	Total lenght	Tube diameter	Pipe thickness	Perforated area	Total weight
TBA500	500 mm *19,7 in*	530 mm *20,87 in*	63 mm *2,48 in*	4,7 mm *0,19 in*	0,105 m^2 *1,13 ft^2*	0,85 kg *1,87 lb*
TBA750	750 mm *29,53 in*	780 mm *30,71 in*	63 mm *2,48 in*	4,7 mm *0,19 in*	0,157 m^2 *1,69 ft^2*	1,15 kg *2,54 lb*
TBA1000	1000 mm *39,37 in*	1030 mm *40,55 in*	63 mm *2,48 in*	4,7 mm *0,19 in*	0,210 m^2 *2,26 ft^2*	1,4 kg *3,09 lb*

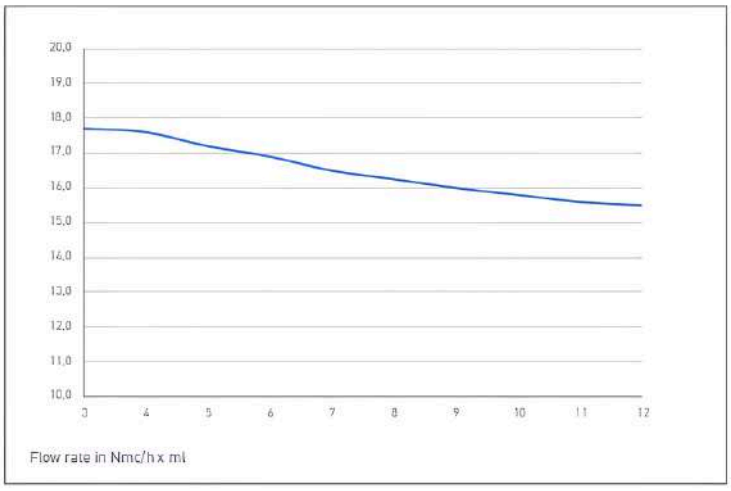
All data are approximate!



2 bigger air gaps makes airflow easier with result of **low head loss**



In option: build in system for automatic screwing and unscrewing

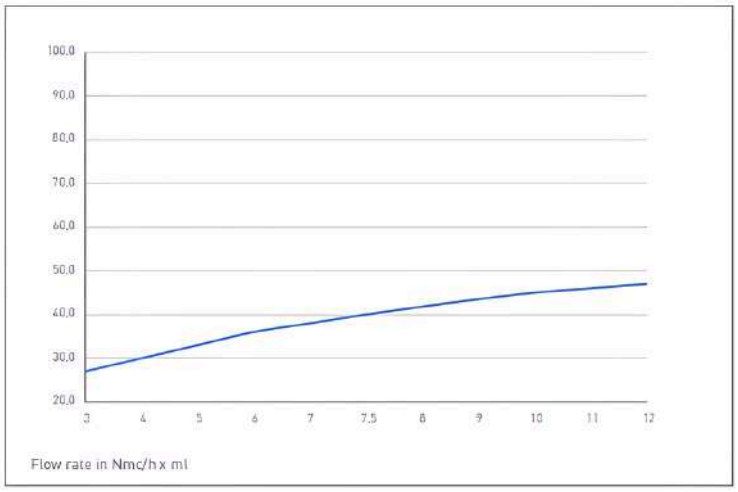


TUBOFLEX©
TUBE DIFFUSER 60 MICRO
OXYGEN TRANSFER EFFICIENCY

— Oxygen transfer rate O2 in gr / Nmc * m submersion

Data are referd to in clean tap water standard condition at 20°C, 101,3kPa

Example:
Diffuser works with 8 Nmc/h and waterlevel above diffuser surface is 5 meter, then consider:
16gr/Nmc x lm * 8Nmc/h * 5m = 640 gr /h



TUBOFLEX©
TUBE DIFFUSER
60 MICRO HEAD LOSS

— Head loss in mbar

Data are referd to in clean tap water standard condition at 20°C, 101,3kPa

Comparable values can only be obtained with a similar setup and condition. Depending on the tank geometry, slit chart, water depth and planar allocation, the quoted values can change. All the data are based on clean water 20° temperature, 1013mbar / 68°F, 101,3kpa.
All data are approximate!

AIR FLOW

The **optimal air flow area** of tube diffusers Tuboflex EPDM ranges **from 3 to 25 Nm³/h x ml (1,9 to 15,6 scfm)**, depending on the perforation.

STORAGE

Diffuser and/or rubber sleeves must be stored factory-packed in a dark, dry, ventilated and dust-free storage space according to DIN 7716. Avoid frost, heat, UV-radiation, dust and working which can cause damage of diffuser and/or packing. Do not store outdoors!

The storage of rubber parts until installation/ starting operation should not exceed one year. At onsite delivery, all rubber and plastic parts must be stored in their original packaging. Crates exposed to direct sunlight must be covered with tarpaulin to protect against UV-radiation.

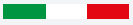
MAINTENANCE

Diffusers can only be checked, while the activated sludge tank is out of work and empty. Therefore conventional cleaning must be done during the process. Formic acid is used very successfully against scale. To keep the pores open, formic acid is sprayed into the compressed air for a short time. Also a regular use with maximum air flow for a short time helps keeping the diffuser in good condition for a long time. (refer to Maintenance Manual).

MEMBRANE LIFETIME

More than 5 years in municipal waste water treatment plants, depending on waste water compound and operating method.

Since 1983 your partner for wastewater treatment products.
Proudly Made in Italy.



CONTACT

Geoteck-Tierre S.R.L.
Phone +39 035 810296
TeleFax + 39 035 810296
email: info@geotierre.com
Via Prato Pieve 54, 24060 Casazza (BG) - ITALY

Certified ISO9001:2015

Geoteck-Tierre SRL
Via Prato Pieve 54
24060 Casazza (BG)
Italy

Azienda con sistema di gestione qualità certificato secondo la Norma ISO9001:2015

Italia