

Solutions For Sustainability

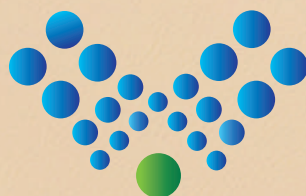
Water

Waste

Sewage



*A Simple molecule like
 H_2O can either Flourish
or Perish our Future..
Be Wise & Conserve it.*



SAWAS
Water is Life.. Let's Treat



Sistemi di aerazione



SAWAS
Water is Life.. Let's Treat

TECHNICAL CATALOGUE - DIFFUSERS

Who we are

WTE, since its establishment in 1997, is a company specialized as supplier of aeration systems for waste water treatment.

The founders, as well as the team of WTE, are experienced and motivated engineers. The mission of the company is to provide not only standard solutions, but a customized product, following customers from the engineering to the installation.

This approach helped the company to grow in national and international market.

A continuous growing

Since the beginning WTE has had a constant growth and supplied some of largest waste water treatment plants in Italy and abroad: Milan, Naples, Paris, Sofia are some of the cities where our products are currently installed.

The success of WTE is due to

- the innovative and reliable technology applied;
- trained staff;
- trustworthy suppliers of components



...a little about our products

Having a large range of diffusers available in different materials, allows us to offer the product best suited to our customers' needs.

Our range of products includes:

- Fine bubble disc diffusers
- Coarse bubble disc diffusers
- Fine bubble tube diffusers
- Coarse bubble tube diffusers

We believe that the components that make up the plant must be safe, easy to install and durable. This is the reason why we only produce aeration systems, because we focus all our resources to improve our products, to better assist our customers from design to testing the system.

All the discs and tubes diffusers in our range of products give a high oxygen transfer efficiency and a relatively low head loss to reduce the energy costs. The quality of the material has been proven in the most difficult type of industrial waste water.

Diffusers are entirely manufactured in Italy with proprietary moulds. We follow the production of our diffusers starting



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from the design, to the realization of the moulds, up to the production, with the result of providing an high performance and safe product in every field of use.

All the components of the piping have been developed and manufactured to be applied in every kind of aeration systems: from aerobic digesters to aerated grit chambers, from channel tanks to SBR and from civil waste to industrial ones.

Our flexibility permits us to find the "way" together with the customer and provide a customized solution for each different application.



Diffuser's membrane.... which material?



Different types of sewage require different membranes' materials. We can supply our diffusers with membrane in peroxic cured EPDM, EPDM PTFE coated, Silicone, and polyurethane.

EPDM

- EPDM is successfully used in most municipal and many industrial applications.
- Excellent physical characteristics, including weathering and aging, ozone resistance.
- Low plasticizer content (<10%) with reduced membranes shrinking thanks to the curing method;
- Poor performance in the presence of aliphatic or aromatic solvent or hydrocarbon oils.
- Temperature range -60 °C to 115 °C

PTFE coated EPDM

- Combine the mechanical performance of EPDM, with the protection to chemical aggression and salt sedimentation offered by PTFE;

- Reduce the fouling of the membrane;
- Decrease the necessity of maintenance;
- Temperature range -60 °C to 115 °C

Silicone

- Very resistant to heat, ozone, and to strong bases;
- Susceptible to degradation by solvents, oils and concentrated acids;
- Poor mechanical characteristic compared to EPDM;
- Temperature range is -65 °C to 200 °C;

Polyurethane (PU)

- Typically used when waste water with concentration of hydrocarbon and aromatic solvents;
- Applied in industrial wastes such as paper manufacturing and food processing;
- Concentrated acids, ketones, esters, can damage PU;
- Temperature range is -45 °C to 70 °C.

u-PVC, PP-h, AISI 304/316.... which material?

WTE usually offers the complete aeration system: diffusers and piping.

Plastic or metallic pipes can be chosen based on the submergence, air heat or type of the system (fixed or retrievable).

The air temperature increases about 10°C per m of water column of compressed air. In deep basin and with critical climatic conditions, the temperature can reach values not compatible with some type of material.

The temperature application limit considered on the pipe wall are the following:

- u-PVC max. 70 °C
- PP-h max. 100 °C
- Stainless steel AISI304L or 316L > 100 °C

A wrong choice of material can lead to high capital costs or, in the worst case, to the collapse of your aeration system.



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Fixed or retractable system...which is the best choice?

This choice has a relevant impact on the cost of your aeration network; it's important to focus on the main differences between these two systems.

In the plant with a single aeration tank or if the process cannot be interrupted for service and maintenance, it is almost a must to provide a retrievable system.

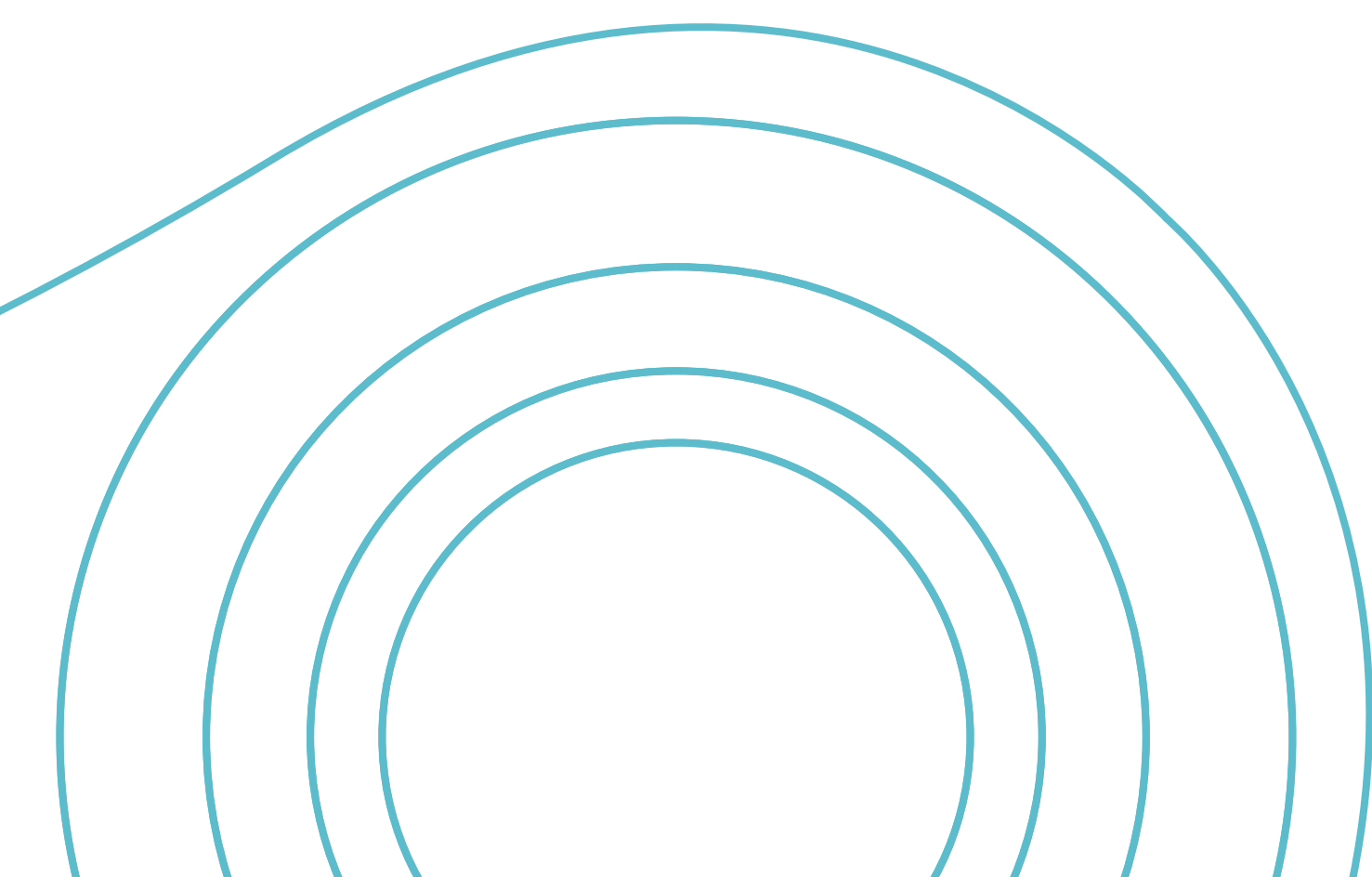
This type of system allows to perform the maintenance without shutting down the process or dewatering the tank.

The need to lift the skids of the aeration system

without emptying the tank, requires the use of materials with high mechanical strength, such as stainless steel.

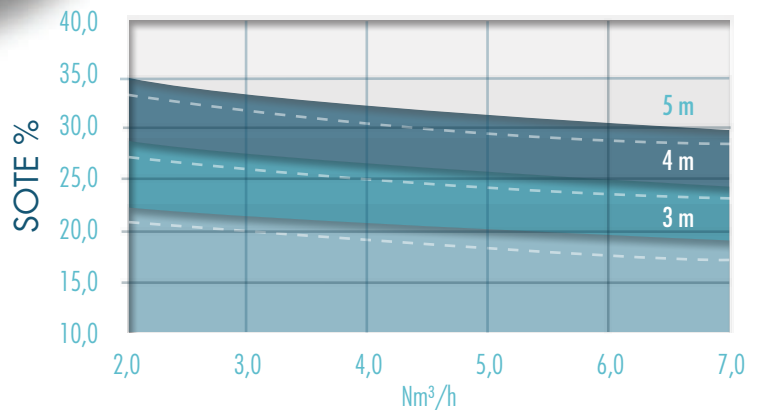
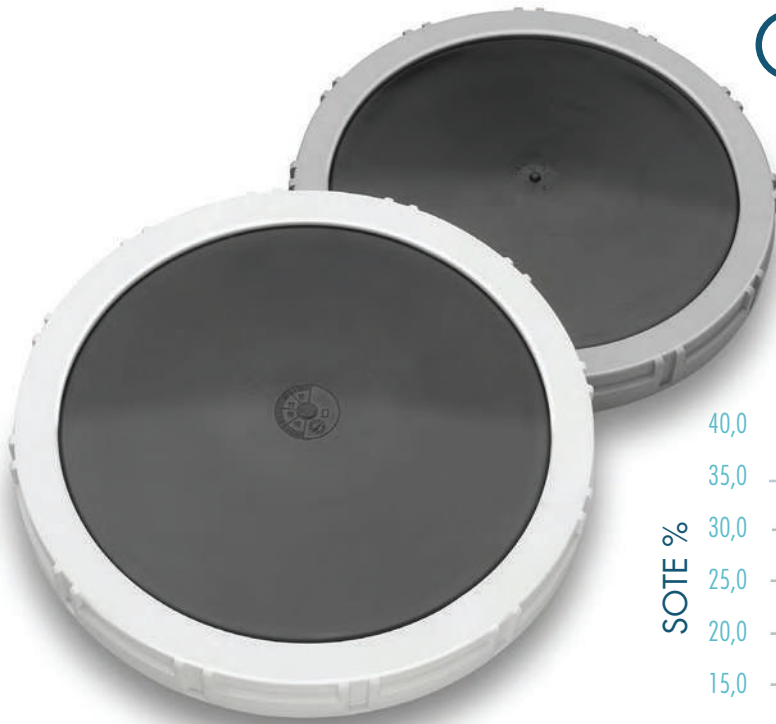
The system costs increase due to the higher cost of the stainless steel compared to u-PVC or PP-h.

A retractable aeration system is preferred in plants with specific needs as described above, or in plants with few diffusers installed or where the simple maintenance has high priority.



AirTech

9" fine
bubbles disc
diffuser
with EPDM
membrane



Dimensions

| | |
|---------------------|-------------|
| Code | 04061-04071 |
| Outer diameter [mm] | 270 |
| Threaded connection | 3/4" NPT |
| Weight [Kg] | 0,72 |

Performance

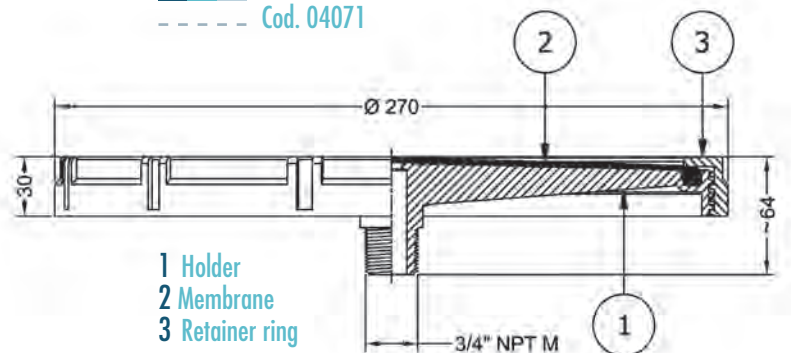
| | | |
|------------------------------|---------|---------|
| Code | 04061 | 04071 |
| Minimum airflow [Nm³/h] | 1,0 | 2,0 |
| Nominal airflow [Nm³/h] | 3,5 | 5,5 |
| Maximum airflow [Nm³/h] | 7,0 | 11,0 |
| Design airflow range [Nm³/h] | 2,0-4,0 | 4,5-6,5 |
| * Head losses [cm w.c.] | 35,0 | 28,0 |

* Head losses are calculated at nominal airflow and 4m submergence

Materials

| | |
|---------------|-------------|
| Code | 04061-04071 |
| Membrane | EPDM Perox |
| Holder | PPGF 30% |
| Retainer ring | PPGF 30% |

Cod. 04061
 Cod. 04071



Membrane

| | | |
|---------------------------|---------|---------|
| Code | 04061 | 04071 |
| Number of slits | >6.500 | >4.000 |
| Perforation [mm] | 1,0-1,0 | 1,5-1,5 |
| Active surface [m²] | 0,0381 | 0,0381 |
| Average thickness [mm] | 2,2 | 2,2 |
| Tensile strength [Kg/cm²] | >140 | >140 |
| Elongation at break [%] | 600 | 600 |
| Hardness [Shore A] | 60 | 60 |
| Plasticizer content [%] | < 10 | < 10 |

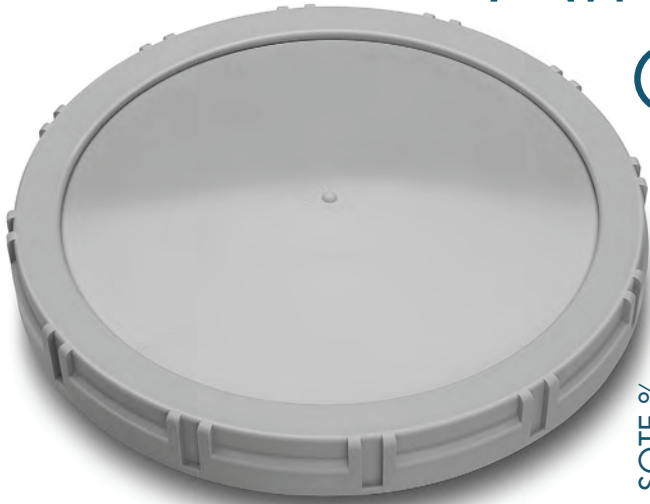
NOTES

SOTE according to EN 12255-15
 Tollerances on the thickness $\pm 0,2$ mm
 Tensile strenght according to ISO 37 type 1
 Elongation at break ISO 37 type 1

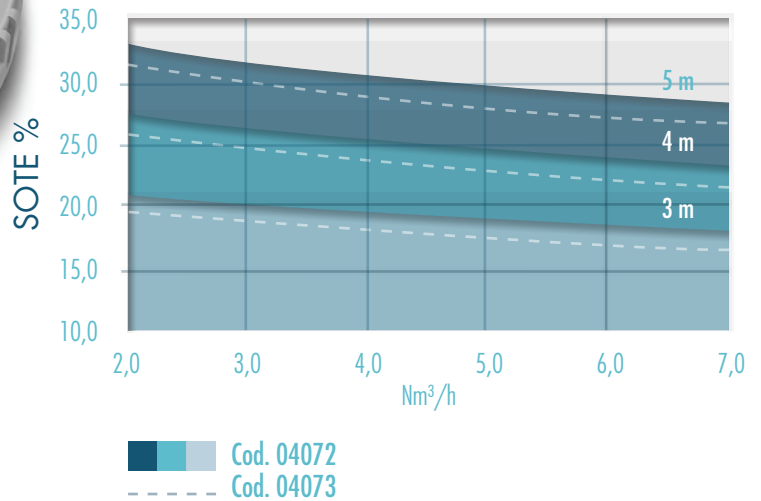


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AirTech 9"



9" fine/medium bubbles
disc diffuser with
silicone membrane



Dimensions

| Code | 04072 | 04073 |
|---------------------|----------|----------|
| Outer diameter [mm] | 270 | 270 |
| Threaded connection | 3/4" NPT | 3/4" NPT |
| Weight [Kg] | 0,72 | 0,72 |

Performance

| Code | 04072 | 04073 |
|------------------------------|---------|---------|
| Minimum airflow [Nm³/h] | 2,0 | 2,0 |
| Nominal airflow [Nm³/h] | 5,5 | 5,5 |
| Maximum airflow [Nm³/h] | 11,0 | 11,0 |
| Design airflow range [Nm³/h] | 4,5-6,5 | 4,5-6,5 |

* Head losses [cm w.c.] 20,0 28,0

* Head losses are calculated at nominal airflow and 4m submergence

Materials

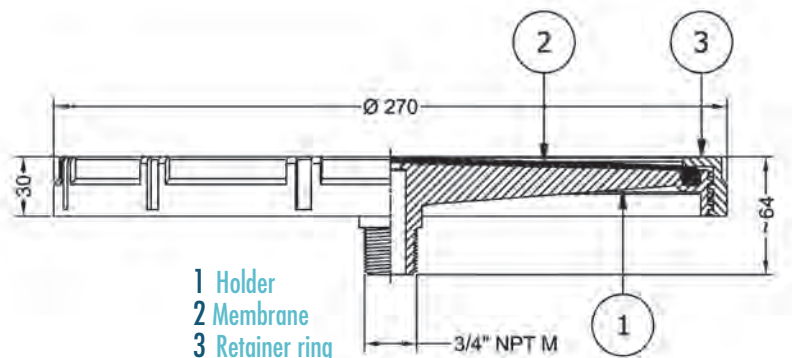
| Code | 04072 | 04073 |
|---------------|----------|----------|
| Membrane | Silicone | Silicone |
| Holder | PPGF 30% | PPGF 30% |
| Retainer ring | PPGF 30% | PPGF 30% |

Membrane

| Code | 04072 | 04073 |
|---------------------------|---------|---------|
| Number of slits | >4.000 | >2.200 |
| Perforation [mm] | 1,5-1,5 | 2,0-2,5 |
| Active surface [m²] | 0,0381 | 0,0381 |
| Average thickness [mm] | 2,2 | 2,2 |
| Tensile strength [Kg/cm²] | >88 | >88 |
| Elongation at break [%] | 450 | 450 |
| Hardness [Shore A] | 70 | 70 |
| Plasticizer content [%] | 0 | 0 |

NOTES

SOTE according to EN 12255-15
 Tollerances on the thickness $\pm 0,2$ mm
 Tensile strenght according to ISO 37 type 1
 Elongation at break ISO 37 type 1



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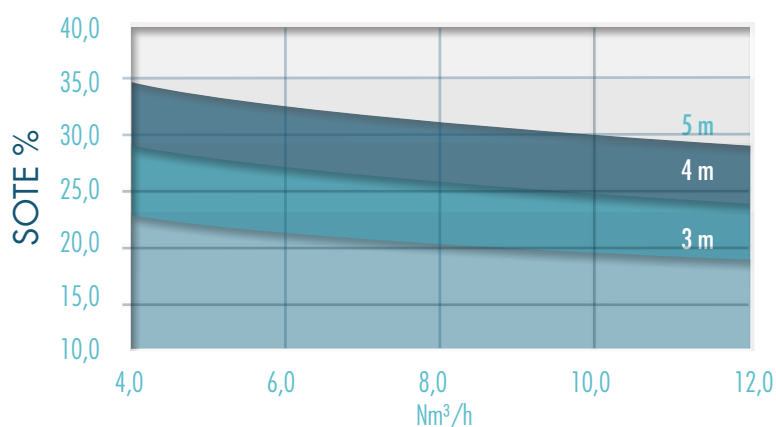
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AirTech 12"



12" fine bubbles
disc diffuser with EPDM/
EPDM+PTFE membrane



Dimensions

| | |
|---------------------|-------------|
| Code | 04037-04038 |
| Outer diameter [mm] | 344 |
| Threaded connection | 3/4" NPT |
| Weight [Kg] | 1,03 |

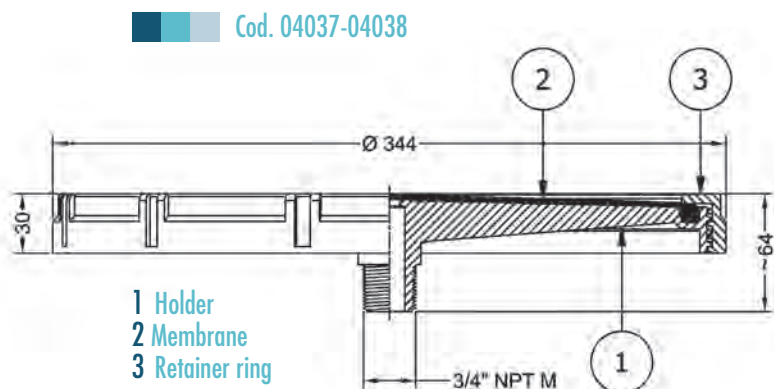
Performance

| Code | 04037 | 04038 |
|------------------------------|----------|----------|
| Minimum airflow [Nm³/h] | 2,0 | 2,0 |
| Nominal airflow [Nm³/h] | 8,0 | 8,0 |
| Maximum airflow [Nm³/h] | 16,0 | 16,0 |
| Design airflow range [Nm³/h] | 3,0-13,0 | 3,0-13,0 |
| * Head losses [cm w.c.] | 36,0 | 43,0 |

* Head losses are calculated at nominal airflow and 4m submergence

Materials

| Code | 04037 | 04038 |
|---------------|------------|-----------------|
| Membrane | EPDM Perox | EPDM Perox+PTFE |
| Holder | PPGF 30% | PPGF 30% |
| Retainer ring | PPGF 30% | PPGF 30% |



Membrane

| Code | 04037 | 04038 |
|---------------------------|---------|---------|
| Number of slits | >5.200 | >5.200 |
| Perforation [mm] | 1,2-2,0 | 1,2-2,0 |
| Active surface [m²] | 0,064 | 0,064 |
| Average thickness [mm] | 2,2 | 2,3 |
| Tensile strength [Kg/cm²] | >140 | >140 |
| Elongation at break [%] | 600 | 600 |
| Hardness [Shore A] | 60 | 60 |
| Plasticizer content [%] | < 10 | < 10 |

NOTES

SOTE according to EN 12255-15
Tolerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1



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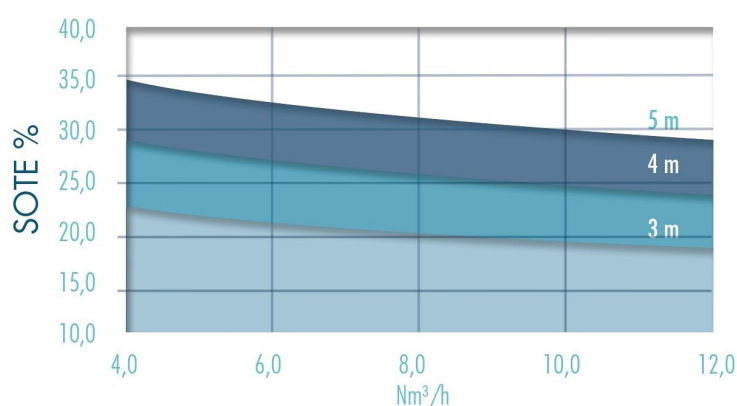


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AirTech 12"

12" fine bubbles
disc diffuser with
silicone membrane



Dimensions

| | |
|---------------------|-------------|
| Code | 04037-04038 |
| Outer diameter [mm] | 344 |
| Threaded connection | 3/4" NPT |
| Weight [Kg] | 1,03 |

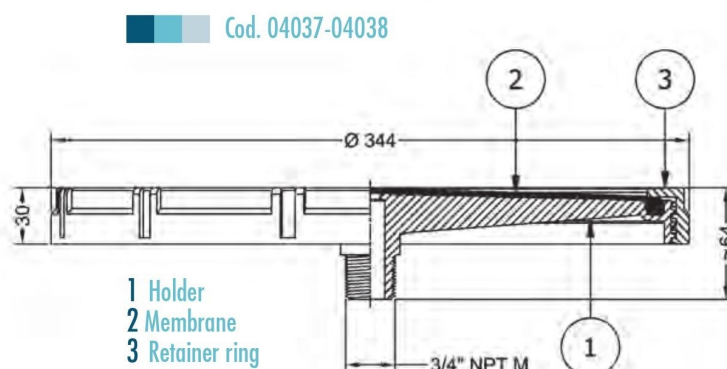
Performance

| Code | 04037 | 04038 |
|------------------------------|----------|----------|
| Minimum airflow [Nm³/h] | 2,0 | 2,0 |
| Nominal airflow [Nm³/h] | 8,0 | 8,0 |
| Maximum airflow [Nm³/h] | 16,0 | 16,0 |
| Design airflow range [Nm³/h] | 3,0-13,0 | 3,0-13,0 |
| * Head losses [cm w.c.] | 36,0 | 43,0 |

* Head losses are calculated at nominal airflow and 4m submergence

Materials

| Code | 04037 | 04038 |
|---------------|----------|----------|
| Membrane | Silicone | Silicone |
| Holder | PPGF 30% | PPGF 30% |
| Retainer ring | PPGF 30% | PPGF 30% |



Membrane

| Code | 04037 | 04038 |
|---------------------------|---------|---------|
| Number of slits | >5.200 | >5.200 |
| Perforation [mm] | 1,5-1,5 | 2,0-2,5 |
| Active surface [m²] | 0,064 | 0,064 |
| Average thickness [mm] | 2,2 | 2,3 |
| Tensile strength [Kg/cm²] | >88 | >88 |
| Elongation at break [%] | 450 | 450 |
| Hardness [Shore A] | 70 | 70 |
| Plasticizer content [%] | 0 | 0 |

NOTES

SOTE according to EN 12255-15
Tolerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1



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AirTech

5" coarse bubbles
diffuser with
EPDM membrane

5"



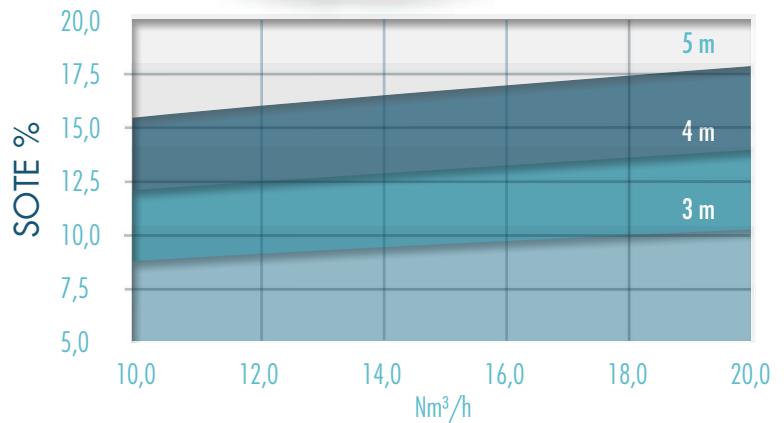
Dimensions

| | |
|---------------------|----------|
| Code | 04032 |
| Outer diameter [mm] | 127 |
| Threaded connection | 3/4" NPT |
| Weight [Kg] | 0,09 |

Performance

| | |
|---|-----------|
| Code | 04032 |
| Minimum airflow [Nm ³ /h] | 2,0 |
| Nominal airflow [Nm ³ /h] | 15,0 |
| Maximum airflow [Nm ³ /h] | 30,0 |
| Design airflow range [Nm ³ /h] | 10,0-20,0 |
| * Head losses [cm w.c.] | 12,4 |

* Head losses are calculated at nominal airflow and 4m submergence



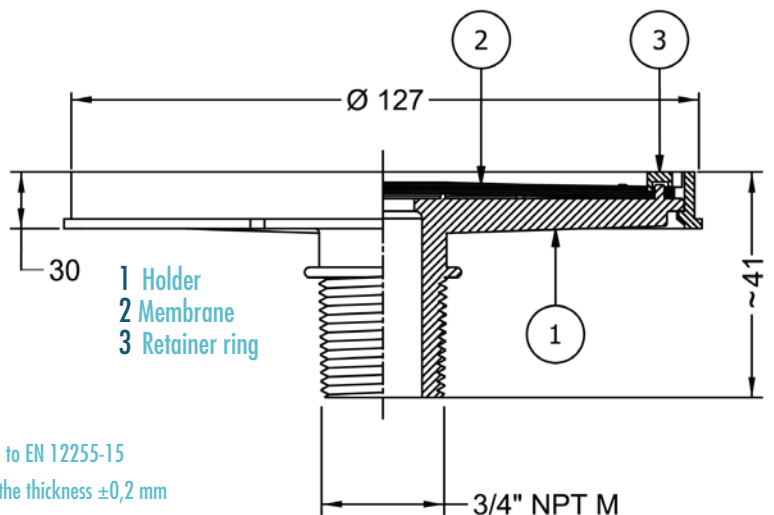
Materials

| | |
|---------------|------------|
| Code | 04032 |
| Membrane | EPDM Perox |
| Holder | ABS |
| Retainer ring | ABS |

Membrane

| | |
|--|-------|
| Code | 04032 |
| Number of slits | 12xØ6 |
| Perforation [mm] | Ø 6 |
| Active surface [m ²] | — |
| Average thickness [mm] | 2,30 |
| Tensile strength [Kg/cm ²] | >140 |
| Elongation at break [%] | 600 |
| Hardness [Shore A] | 60 |
| Plasticizer content [%] | <10 |

Cod. 04032



NOTES

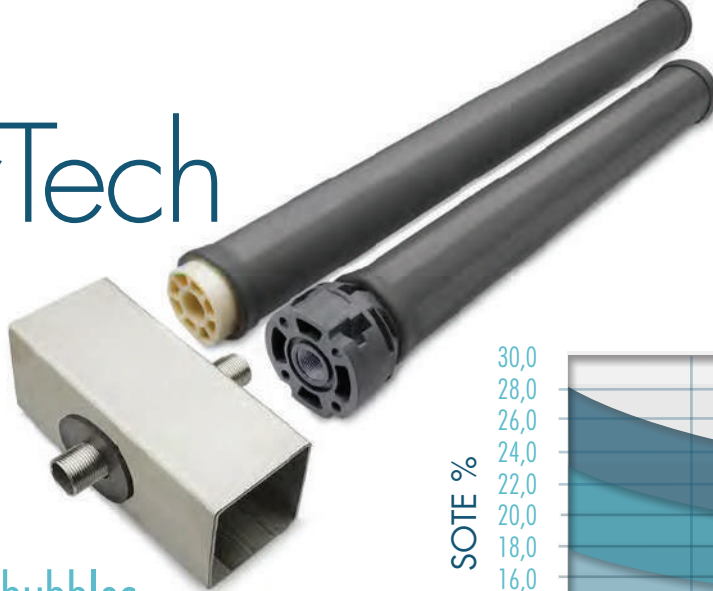
SOTE according to EN 12255-15
Tolerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1



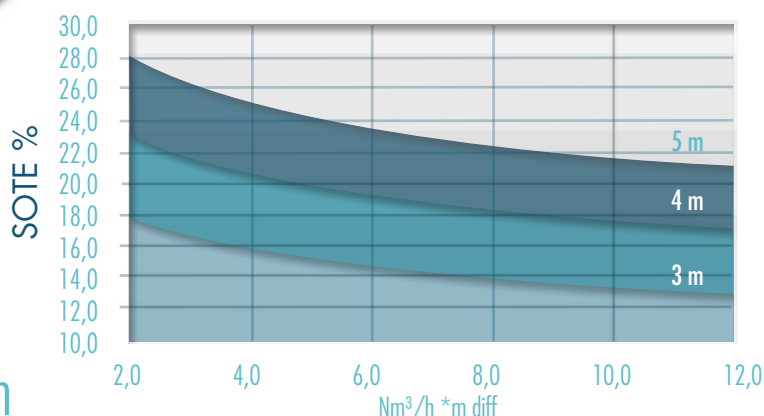
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AirTech

TF63



2" fine bubbles
tubular diffuser with EPDM
membrane - threaded connection



Cod. 04080-04105-04081-04106-04082-04107

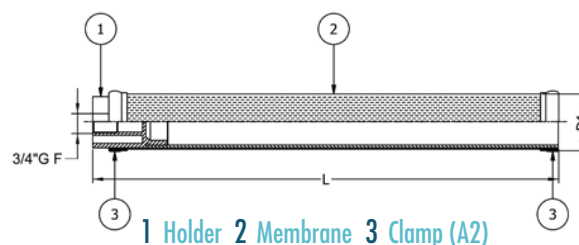
Dimensions

| Code | 04080 | 04105 | 04081 | 04106 | 04082 | 04107 |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| D 1 [mm] | 63 (2") | 63 (2") | 63 (2") | 63 (2") | 63 (2") | 63 (2") |
| Total length [mm] | 560 | 626 | 810 | 876 | 1.060 | 1.126 |
| Perforated length [mm] | 500 | 500 | 750 | 750 | 1.000 | 1.000 |
| Threaded connection | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G |
| Weight [Kg] | 0,88 | 0,98 | 1,21 | 1,24 | 1,52 | 1,55 |

Performance

| Code | 04080-04105 | 04081-04106 | 04082-04107 |
|------------------------------|-------------|-------------|-------------|
| Minimum airflow [Nm³/h] | 1,0 | 1,5 | 2,0 |
| Nominal airflow [Nm³/h] | 4,0 | 6,0 | 8,0 |
| Maximum airflow [Nm³/h] | 10,0 | 15,0 | 20,0 |
| Design airflow range [Nm³/h] | 2,0-6,0 | 3,0-9,0 | 4,0-12,0 |
| * Head losses [cm w.c.] | 54,0 | 54,0 | 54,0 |

* Head losses are calculated at nominal airflow and 4m submergence



Materials

| Code | 04080-04081-04082 | 04105-04106-04107 |
|------------------|-------------------|-------------------|
| Membrane | EPDM | EPDM |
| Holder | PVC | PP |
| Connector/saddle | ABS | PPGF 30% |

Membrane

| Code | 04080-04105 | 04081-04106 | 04082-04107 |
|---------------------------|-------------|-------------|-------------|
| Number of slits | 12.000 | 18.000 | 24.000 |
| Perforation [mm] | 1,25-2,25 | 1,25-2,25 | 1,25-2,25 |
| Active surface [m²] | 0,09 | 0,135 | 0,180 |
| Average thickness [mm] | 1,7 | 1,7 | 1,7 |
| Tensile strength [Kg/cm²] | >60 | >60 | >60 |
| Elongation at break [%] | 400 | 400 | 400 |
| Hardness [Shore A] | 40 | 40 | 40 |
| Plasticizer content [%] | 35 | 35 | 35 |

NOTES

SOTE according to EN 12255-15. Tolerances on the thickness $\pm 0,2$ mm

Tensile strenght according to ISO 37 type 1.

Elongation at break ISO 37 type 1.



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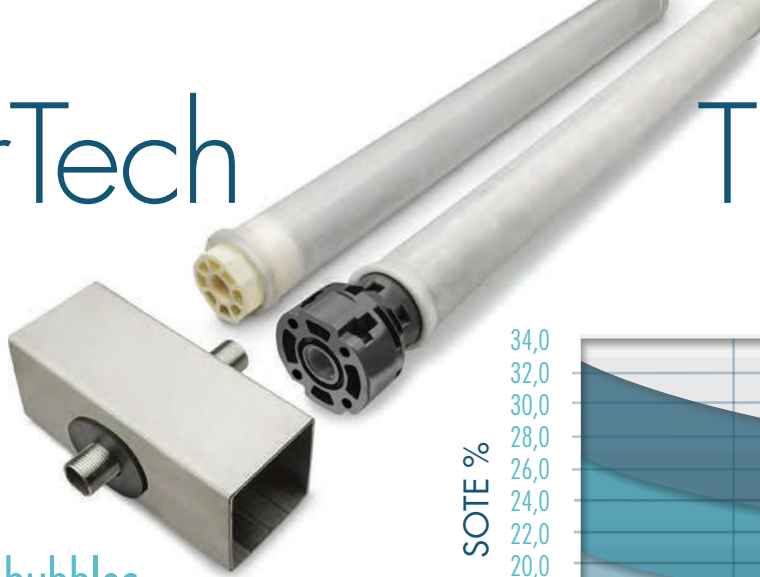


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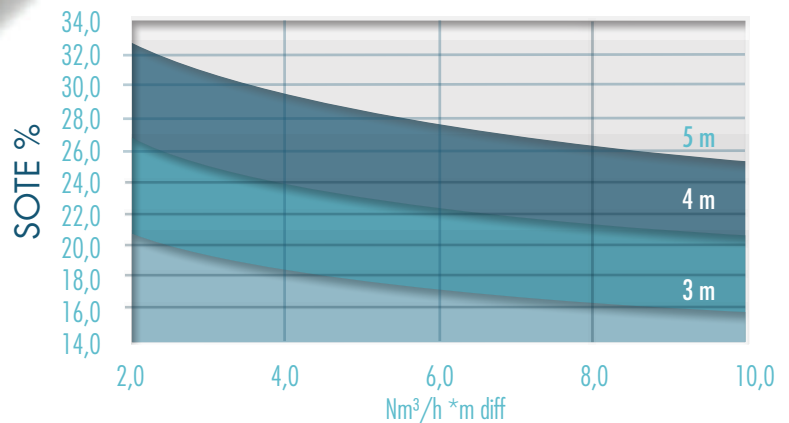
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AirTech

TF63



2" fine bubbles
tubular diffuser with silicone
membrane - threaded connection



Cod. 04195 - 04095 - 04196 - 04096 - 04197 - 04097

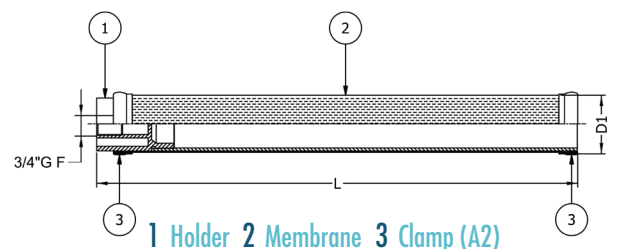
Dimensions

| Code | 04195 | 04095 | 04196 | 04096 | 04197 | 04097 |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| D 1 [mm] | 63 (2") | 63 (2") | 63 (2") | 63 (2") | 63 (2") | 63 (2") |
| Total length [mm] | 560 | 626 | 810 | 876 | 1.060 | 1.126 |
| Perforated length [mm] | 500 | 500 | 750 | 750 | 1.000 | 1.000 |
| Threaded connection | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G |
| Weight [Kg] | 0,83 | 0,93 | 1,12 | 1,15 | 1,38 | 1,41 |

Performance

| Code | 04195-04095 | 04196-04096 | 04197-04097 |
|------------------------------|-------------|-------------|-------------|
| Minimum airflow [Nm³/h] | 1,0 | 1,5 | 2,0 |
| Nominal airflow [Nm³/h] | 4,0 | 6,0 | 8,0 |
| Maximum airflow [Nm³/h] | 8,0 | 12,0 | 16,0 |
| Design airflow range [Nm³/h] | 2,0-5,0 | 4,0-8,0 | 6,0-10,0 |
| * Head losses [cm w.c.] | 38,0 | 38,0 | 38,0 |

* Head losses are calculated at nominal airflow and 4m submergence



Materials

| Code | 04195-04196-04197 | 04095-04096-04097 |
|------------------|-------------------|-------------------|
| Membrane | Silicone | Silicone |
| Holder | PVC | PP |
| Connector/saddle | ABS | PPGF 30% |

Membrane

| Code | 04195-04095 | 04196-04096 | 04197-04097 |
|---------------------------|-------------|-------------|-------------|
| Number of slits | 7.500 | 11.250 | 15.000 |
| Perforation [mm] | 1,0-3,0 | 1,0-3,0 | 1,0-3,0 |
| Active surface [m²] | 0,09 | 0,135 | 0,180 |
| Average thickness [mm] | 1,5 | 1,5 | 1,5 |
| Tensile strength [Kg/cm²] | >90 | >90 | >90 |
| Elongation at break [%] | 600 | 600 | 600 |
| Hardness [Shore A] | 60 | 60 | 60 |
| Plasticizer content [%] | 0 | 0 | 0 |

NOTES

SOTE according to EN 12255-15. Tolerances on the thickness $\pm 0,2$ mm

Tensile strenght according to ISO 37 type 1.

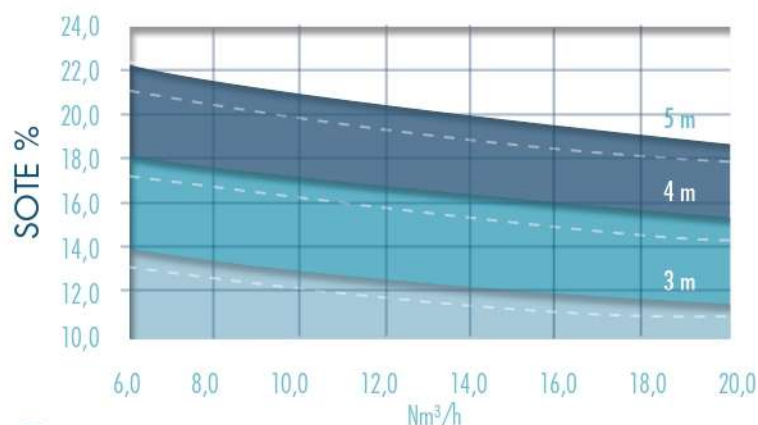
Elongation at break ISO 37 type 1.



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AirTech TF90

■ Cod. 04250-04350 --- Cod. 04239-04339

3" fine bubbles
tubular diffuser with silicone
membrane - threaded connection

Dimensions

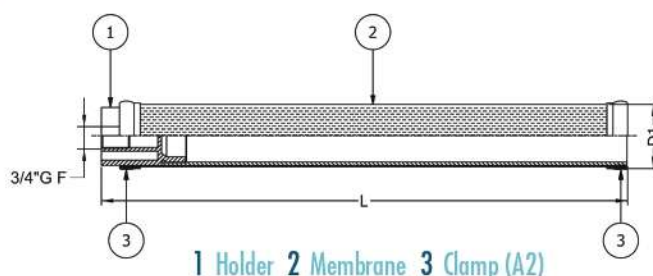
| Code | 04240 | 04251 | 04258 |
|------------------------|------------|------------|------------|
| D 1 [mm] | 90 (3") | 90 (3") | 90 (3") |
| Total length [mm] | 607 | 857 | 1.067 |
| Perforated length [mm] | 500 | 750 | 1.000 |
| Threaded connection | ISO 3/4" G | ISO 3/4" G | ISO 3/4" G |
| Weight [Kg] | 1,35 | 1,73 | 2,29 |

Performance

| Code | 04239-04339 | 04250-04350 |
|------------------------------|-------------|-------------|
| Minimum airflow [Nm³/h] | 2,0 | 2,0 |
| Nominal airflow [Nm³/h] | 7,5 | 10,0 |
| Maximum airflow [Nm³/h] | 20,0 | 30,0 |
| Design airflow range [Nm³/h] | 6,0-15,0 | 8,0-20,0 |

* Head losses [cm w.c.]

* Head losses are calculated at nominal airflow and 4m submergence



Materials

| Code | 04239-04250 | 04339-04350 |
|------------------|-------------|-------------|
| Membrane | Silicone | Silicone |
| Holder | PVC | PP |
| Connector/saddle | ABS | PPGF 30% |

NOTES

SOTE according to EN 12255-15
Tolerances on the thickness $\pm 0,2$ mm
Tensile strength according to ISO 37 type I
Elongation at break ISO 37 type I

Membrane

| Code | 04240 | 04251 | 04258 |
|---------------------------|---------|---------|---------|
| Number of slits | 14.300 | 21.400 | 28.600 |
| Perforation [mm] | 1,0-1,5 | 1,0-1,5 | 1,0-1,5 |
| Active surface [m²] | 0,120 | 0,180 | 0,240 |
| Average thickness [mm] | 1,9 | 1,9 | 1,9 |
| Tensile strength [Kg/cm²] | >60 | >60 | >60 |
| Elongation at break [%] | 400 | 400 | 400 |
| Hardness [Shore A] | 40 | 40 | 40 |
| Plasticizer content [%] | 35 | 35 | 35 |



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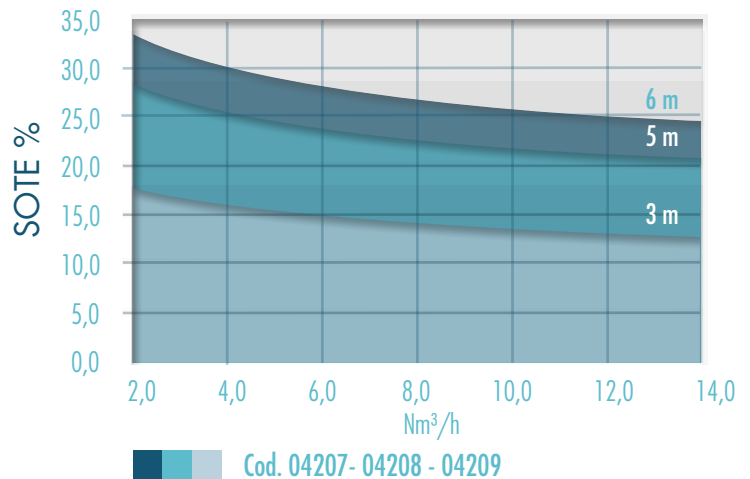
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AirTech ATc63/ 1000



2" fine bubbles tubular
diffuser with EPDM
membrane - clamp connection



Dimensions

| Code | 04207 | 04208 | 04209 |
|------------------------|------------|-------------|---------------|
| D 1 [mm] | 63 (2") | 63 (2") | 63 (2") |
| Total length [mm] | 1.195 | 1.205 | 1.207 |
| Perforated length [mm] | 1.000 | 1.000 | 1.000 |
| Threaded connection | Saddle D90 | Saddle D110 | Saddle D114,3 |
| Weight [Kg] | 1,85 | 1,85 | 1,85 |

- 1 Holder saddle
- 2 Membrane
- 3 Clamp (A2)
- 4 O-R
- 5 Screw M8x45 (A4)
- 6 Self-locking nut M8 (A4)
- 7 Washer M8 (A4)

Performance

| Code | 04207-04208-04209 |
|------------------------------|-------------------|
| Minimum airflow [Nm³/h] | 2,0 |
| Nominal airflow [Nm³/h] | 8,0 |
| Maximum airflow [Nm³/h] | 20,0 |
| Design airflow range [Nm³/h] | 4,0-12,0 |
| * Head losses [cm w.c.] | 54 |

Materials

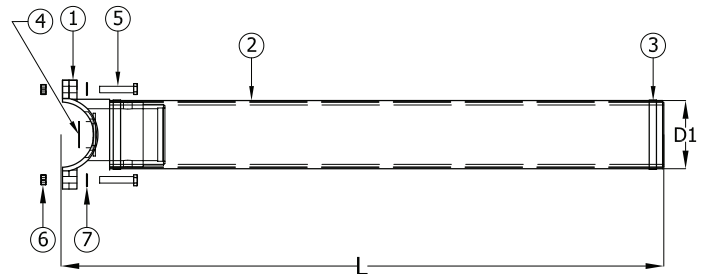
| Code | 04207-04208-04209 |
|------------------|-------------------|
| Membrane | EPDM |
| Holder | PP |
| Connector/saddle | PPGF 30% |

Membrane

| Code | 04207-04208-04209 |
|---------------------------|-------------------|
| Number of slits | 24.000 |
| Perforation [mm] | 1,25-2,25 |
| Active surface [m²] | 0,180 |
| Average thickness [mm] | 1,7 |
| Tensile strength [Kg/cm²] | >60 |
| Elongation at break [%] | 400 |
| Hardness [Shore A] | 40 |
| Plasticizer content [%] | 35 |

NOTES

SOTE according to EN 12255-15
Tollerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1

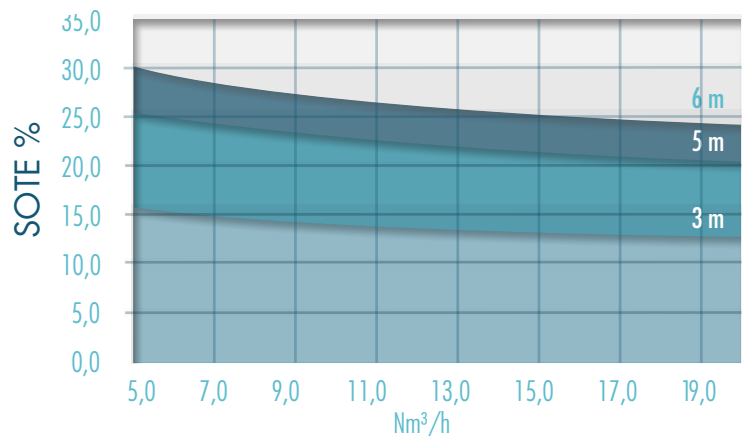


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AirTech ATc90/ 1000



3" fine bubbles tubular
diffuser with EPDM
membrane - clamp connection



Cod. 04233-04214-04215

Dimensions

| Code | 04233 | 04214 | 04215 |
|------------------------|------------|-------------|---------------|
| D 1 [mm] | 90 (3") | 90 (3") | 90 (3") |
| Total length [mm] | 1.176 | 1.186 | 1.188 |
| Perforated length [mm] | 1.000 | 1.000 | 1.000 |
| Threaded connection | Saddle D90 | Saddle D110 | Saddle D114,3 |
| Weight [Kg] | 2,4 | 2,4 | 2,4 |

- 1 Holder saddle
- 2 Membrane
- 3 Clamp (A2)

- 4 O-R
- 5 Screw M8x45 (A4)
- 6 Self-locking nut M8 (A4)
- 7 Washer M8 (A4)

Performance

| Code | 04233-04214-04215 |
|------------------------------|-------------------|
| Minimum airflow [Nm³/h] | 2,5 |
| Nominal airflow [Nm³/h] | 10 |
| Maximum airflow [Nm³/h] | 30 |
| Design airflow range [Nm³/h] | 5,0-20,0 |

* Head losses [cm w.c.] 36

* Head losses are calculated at nominal airflow and 4m submergence

Materials

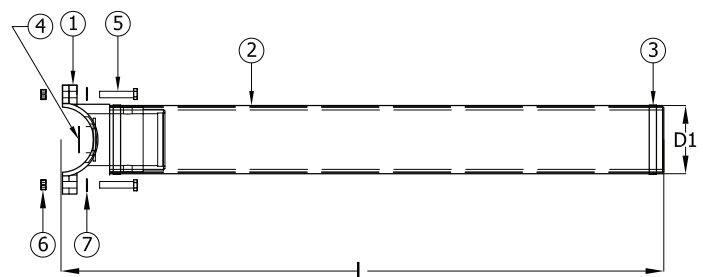
| Code | 04233-04214-04215 |
|------------------|-------------------|
| Membrane | EPDM |
| Holder | PP |
| Connector/saddle | PPGF 30% |

Membrane

| Code | 04233-04214-04215 |
|---------------------------|-------------------|
| Number of slits | 28.600 |
| Perforation [mm] | 1,0-1,5 |
| Active surface [m²] | 0,240 |
| Average thickness [mm] | 1,9 |
| Tensile strength [Kg/cm²] | >60 |
| Elongation at break [%] | 400 |
| Hardness [Shore A] | 40 |
| Plasticizer content [%] | 35 |

NOTES

SOTE according to EN 12255-15
Tolerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1



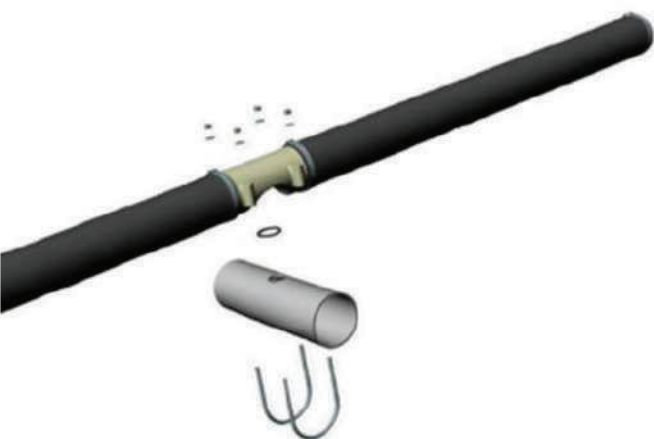
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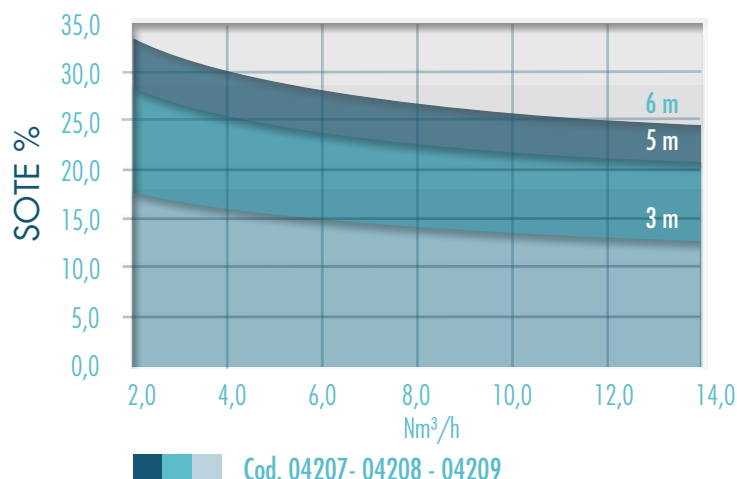
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AirTech AT S63/1000



2" fine bubbles tubular diffuser with EPDM membrane - clamp connection



Dimensions

| Code | 04207 | 04208 | 04209 | 1 Snappy saddle | 5 Self Locking nut MB |
|------------------------|------------|-------------|---------------|---------------------|-----------------------|
| D 1 [mm] | 63 (2") | 63 (2") | 63 (2") | 2 Membrane | 6 Washer MB (A4) |
| Total length [mm] | 1.195 | 1.205 | 1.207 | 3 SS U Bolt MD (A4) | 7 SS Clamps |
| Perforated length [mm] | 1.000 | 1.000 | 1.000 | 4 O-R | 8 Pipe |
| Threaded connection | Saddle D90 | Saddle D110 | Saddle D114,3 | | |
| Weight [Kg] | 1,85 | 1,85 | 1,85 | | |

Performance

| Code | 04207-04208-04209 |
|------------------------------|-------------------|
| Minimum airflow [Nm³/h] | 2,0 |
| Nominal airflow [Nm³/h] | 8,0 |
| Maximum airflow [Nm³/h] | 20,0 |
| Design airflow range [Nm³/h] | 4,0-12,0 |
| * Head losses [cm w.c.] | 54 |

Materials

| Code | 04207-04208-04209 |
|------------------|-------------------|
| Membrane | EPDM |
| Holder | PP |
| Connector/saddle | PPGF 30% |

Membrane

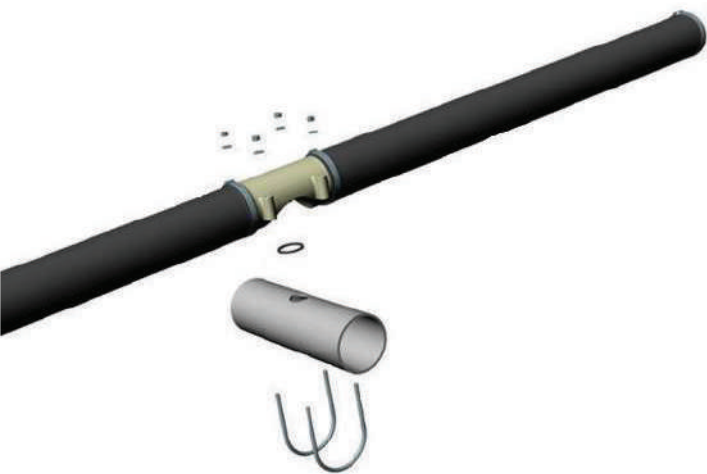
| Code | 04207-04208-04209 |
|---------------------------|-------------------|
| Number of slits | 24.000 |
| Perforation [mm] | 1,25-2,25 |
| Active surface [m²] | 0,180 |
| Average thickness [mm] | 1,7 |
| Tensile strength [Kg/cm²] | >60 |
| Elongation at break [%] | 400 |
| Hardness [Shore A] | 40 |
| Plasticizer content [%] | 35 |

NOTES

SOTE according to EN 12255-15
Tollerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1

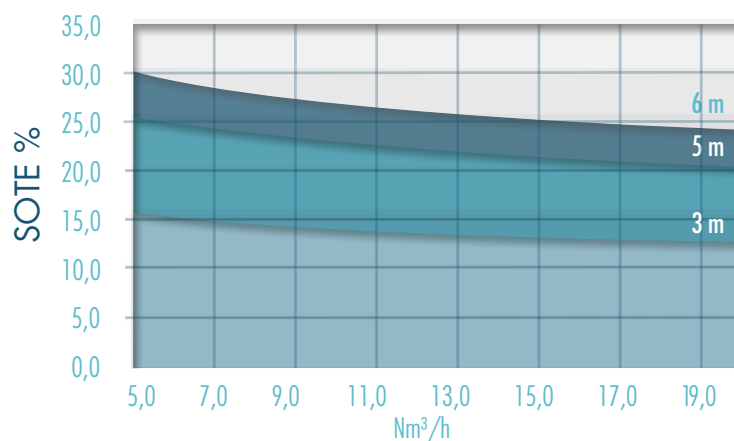


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AirTech ATS90/1000

3" fine bubbles tubular
diffuser with EPDM
membrane - clamp connection



Cod. 04233-04214-04215

Dimensions

| Code | 04233 | 04214 | 04215 | | |
|------------------------|------------|-------------|---------------|---------------------|----------------------------|
| D 1 [mm] | 90 (3") | 90 (3") | 90 (3") | 1 Snappy saddle | 5 Self Locking nut M8 (A4) |
| Total length [mm] | 1.176 | 1.186 | 1.188 | 2 Membrane | 6 Washer M8 (A4) |
| Perforated length [mm] | 1.000 | 1.000 | 1.000 | 3 SS U Bolt M8 (A4) | 7 SS Clamps |
| Threaded connection | Saddle D90 | Saddle D110 | Saddle D114,3 | 4 O-R | 8 Pipe |
| Weight [Kg] | 2,4 | 2,4 | 2,4 | | |

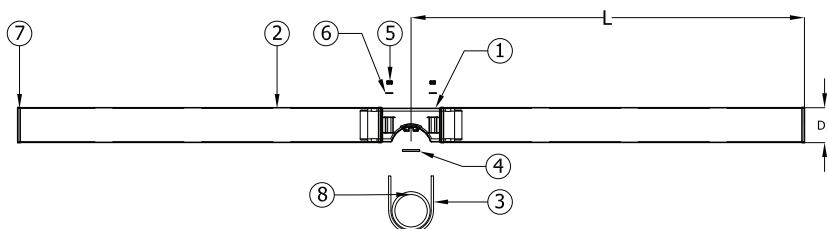
Performance

| Code | 04233-04214-04215 |
|------------------------------|-------------------|
| Minimum airflow [Nm³/h] | 2,5 |
| Nominal airflow [Nm³/h] | 10 |
| Maximum airflow [Nm³/h] | 30 |
| Design airflow range [Nm³/h] | 5,0-20,0 |
| * Head losses [cm w.c.] | 36 |

* Head losses are calculated at nominal airflow and 4m submergence

Materials

| Code | 04233-04214-04215 |
|------------------|-------------------|
| Membrane | EPDM |
| Holder | PP |
| Connector/saddle | PPGF 30% |



Membrane

| Code | 04233-04214-04215 |
|---------------------------|-------------------|
| Number of slits | 28.600 |
| Perforation [mm] | 1,0-1,5 |
| Active surface [m²] | 0,240 |
| Average thickness [mm] | 1,9 |
| Tensile strength [Kg/cm²] | >60 |
| Elongation at break [%] | 400 |
| Hardness [Shore A] | 40 |
| Plasticizer content [%] | 35 |

NOTES

SOTE according to EN 12255-15
Tolerances on the thickness $\pm 0,2$ mm
Tensile strenght according to ISO 37 type 1
Elongation at break ISO 37 type 1

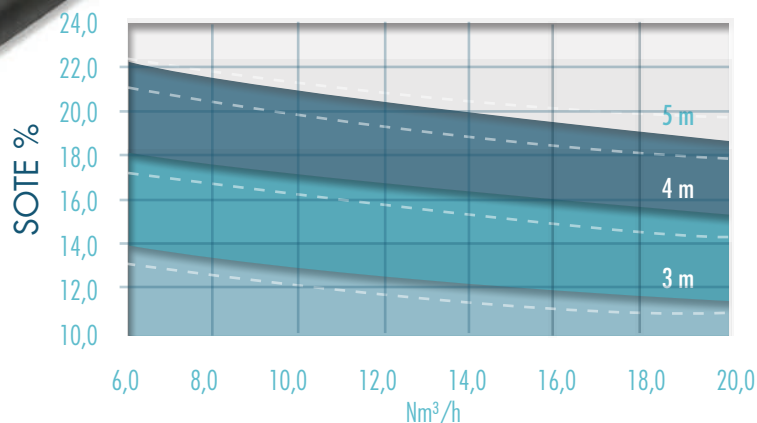


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AirTech TF90

Cod. 04250-04350
 Cod. 04239-04339

3" medium bubbles
tubular diffuser with EPDM
membrane - threaded
connection

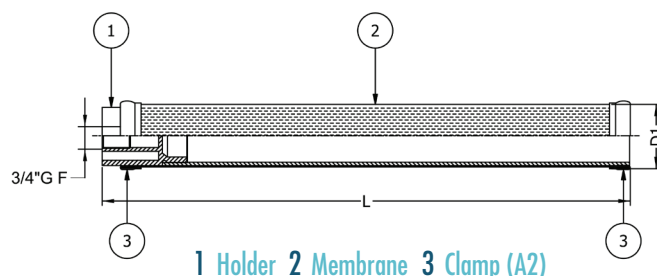
Dimensions

| Code | 04239 | 04339 | 04250 | 04350 |
|------------------------|-----------|-----------|-----------|-----------|
| D 1 [mm] | 90 (3") | 90 (3") | 90 (3") | 90 (3") |
| Total length [mm] | 567 | 607 | 817 | 857 |
| Perforated length [mm] | 500 | 500 | 750 | 750 |
| Threaded connection | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G | ISO 3/4"G |
| Weight [Kg] | 1,62 | 1,35 | 2,24 | 1,73 |

Performance

| Code | 04239-04339 | 04250-04350 |
|------------------------------|-------------|-------------|
| Minimum airflow [Nm³/h] | 2,0 | 2,0 |
| Nominal airflow [Nm³/h] | 7,5 | 10,0 |
| Maximum airflow [Nm³/h] | 20,0 | 30,0 |
| Design airflow range [Nm³/h] | 6,0-15,0 | 8,0-20,0 |
| * Head losses [cm w.c.] | | |

* Head losses are calculated at nominal airflow and 4m submergence



Materials

| Code | 04239-04250 | 04339-04350 |
|------------------|-------------|-------------|
| Membrane | EPDM | EPDM |
| Holder | PVC | PP |
| Connector/saddle | ABS | PPGF 30% |

NOTES

SOTE according to EN 12255-15
 Tollerances on the thickness $\pm 0,2$ mm
 Tensile strenght according to ISO 37 type 1
 Elongation at break ISO 37 type 1

Membrane

| Code | 04239-04339 | 04250-04350 |
|---------------------------|-------------|-------------|
| Number of slits | 10.500 | 15.500 |
| Perforation [mm] | 2,0-2,0 | 2,0-2,0 |
| Active surface [m²] | 0,120 | 0,180 |
| Average thickness [mm] | 1,9 | 1,9 |
| Tensile strength [Kg/cm²] | >60 | >60 |
| Elongation at break [%] | 400 | 400 |
| Hardness [Shore A] | 40 | 40 |
| Plasticizer content [%] | 35 | 35 |



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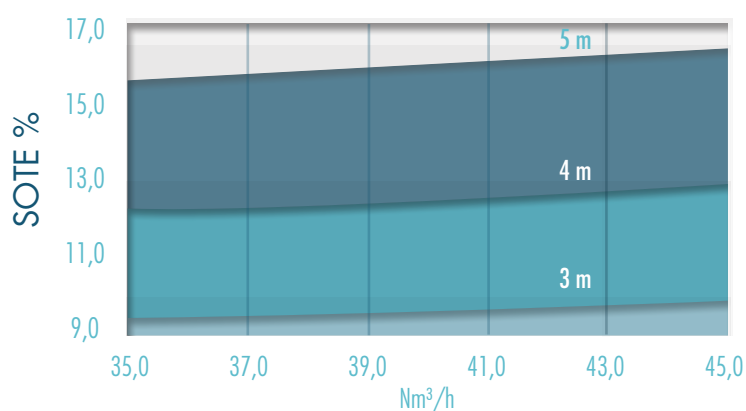
AirMax



AISI 316 coarse bubble tubular diffuser

Dimensions

| Code | 04100 | 04102 |
|---------------------|--------------|--------------|
| H1 [mm] | 50 | 50 |
| H2 [mm] | 100 | 100 |
| Total length [mm] | 606 | 606 |
| Threaded connection | ISO 3/4" G M | ISO 3/4" G F |
| Weight [Kg] | 1,33 | 1,39 |



Performance

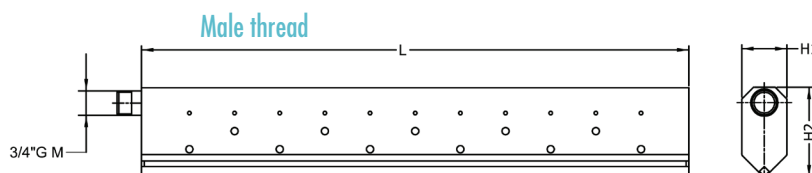
| Code | 04100-04102 |
|------------------------------|-------------|
| Minimum airflow [Nm³/h] | 7,0 |
| Nominal airflow [Nm³/h] | 40,0 |
| Maximum airflow [Nm³/h] | 80,0 |
| Design airflow range [Nm³/h] | 35,0-45,0 |

* Head losses [cm w.c.]

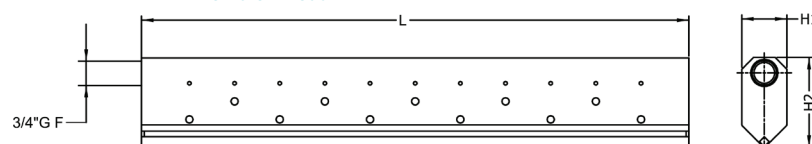
9,5

* Head losses are calculated at nominal airflow and 4m submergence

Cod. 04100-04102



Female thread



Materials

| Code | 04100-04102 |
|------|-------------|
| Body | AISI 316L |

Diffuser

| Code | 04100-04102 |
|------------------------------|-------------|
| Number of upper holes | 22 |
| Diameter of upper holes [mm] | 4,0 |
| Number of lower holes [mm] | 22 |
| Diameter of lower holes [mm] | 8,0 |

NOTES

SOTE according to EN 12255-15



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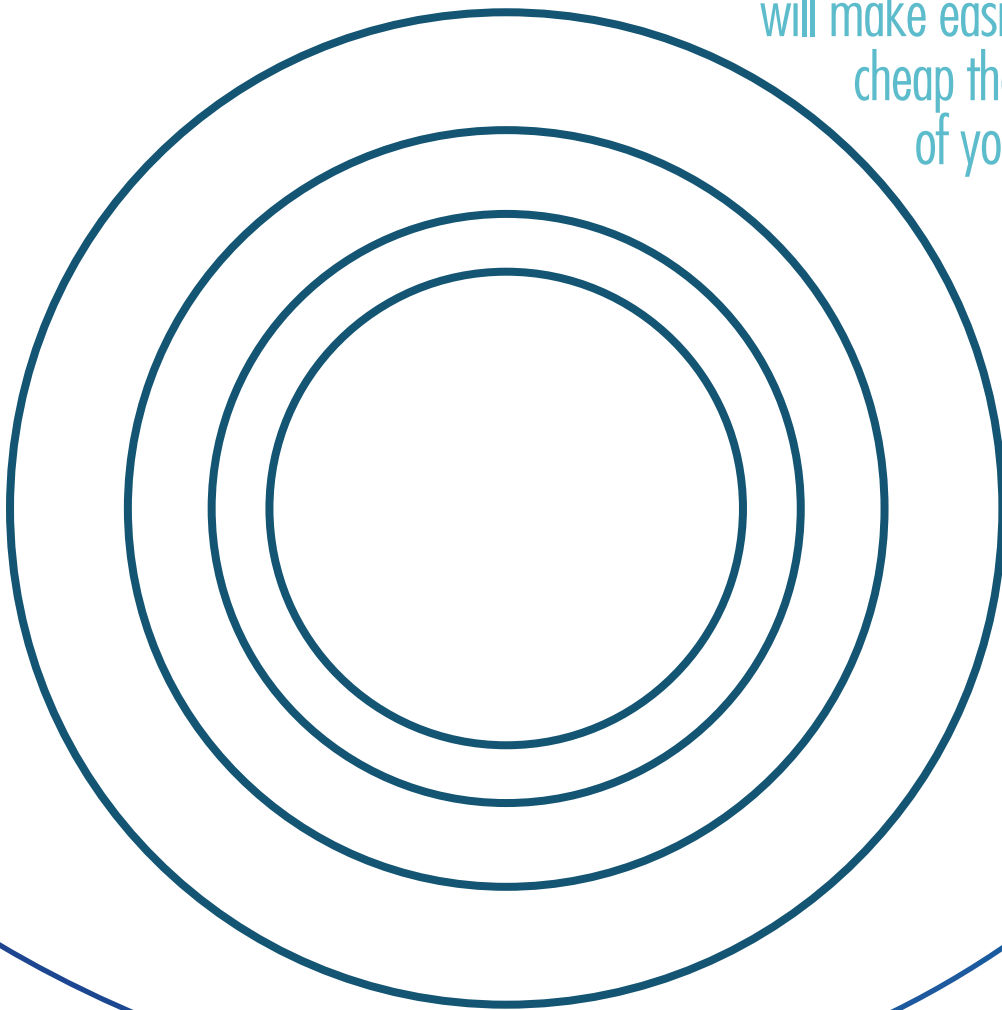


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Accessories for the aeration system

Our main product is the diffused
aeration system with u-PVC pipes;
for this reason, we studied and realized
a complete set of accessories that
will make easier and
cheap the installation
of your WTE system.



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SADDLES

Designed to settle on plastic and stainless-steel pipes, are manufactured with an innovative locking system with one bolt to reduce the mounting time.

They are available in the following sizes:

Dimensions

| Inches | DN | Plastic pipe ø | SS pipe ø |
|--------|----|----------------|-----------|
| 2" | 50 | 63 mm | 60,3 mm |
| 2 ½" | 65 | 75 mm | 76,1 mm |
| 3" | 80 | 90 mm | 88,9 mm |

All clamps are in strong polypropylene reinforced with 30% of fibre glass (PPGF30%) with bolt in A4.
Threaded connection is ¾" NPT

For the D110, our standard for lateral pipes, we can supply three different type of connections:

- EVC patch, for an easy and quick installation. It doesn't require glue or special tools;
- Quick connection saddle. Made in ABS fibre glass reinforced 30%, this innovative saddle doesn't require any bolt. The saddle is quick to install, cheap and has the possibility to be easily replaced in case of failure;
- PVC saddle to be glued on the pipe. It guarantees a safe and strong seal.

All these connections can be used on the same pipe since they keep the diffuser at the same level from the centerline of the pipe.



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CLAMP CONNECTION

Specifically studied for bottom aeration systems where air pressure is usually below 10 m of water column. They allow a fast installation compared to standard flanges thanks to the one bolt connection and are safer than a slotted band joint where the seal is in the "hands" of 2 band clamp.

The 2 stub are in ABS, while the clamp is made strong polypropylene reinforced with 30% of fibre glass (PPGF30%) with bolt in A4.



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STAINLESS STEEL SUPPORTS

Available for a broad range of pipes, from 2" up to 14", for both stainless steel and plastic pipes.



PLASTIC SUPPORTS

Specifically designed for plastic pipes D90 and D110, are a safe and cost-effective solution. Easily adjustable in height thanks to the 3 pieces joint solution.

CLEANING SYSTEM

A reliable solution to clean the membrane perforations without emptying the basin or interrupting the process. An atomiser injects an organic descaling liquid along the dropleg: from there the nebulised liquid reach the diffusers. A dosing pump permits to increase or to reduce the flow of the descaling liquid in order to adjust to the membranes condition.

MEMBRANES REPLACEMENT

WTE membranes are 100% interchangeable with most popular 9" diffusers on the market and available in different materials to fit with each customer requirement.

