

DISC DIFFUSER Newair® Series 9"/12"/14" HDPE

Components for water and wastewater treatment



Newair® XS Series 9" HDPE

PRODUCT PROPERTIES

- energy-saving
- low head loss
- high air flow
- high oxygen transfer
- break-proof
- easy to install
- very good chemical resistance for continuous operation
- drinking water - approval



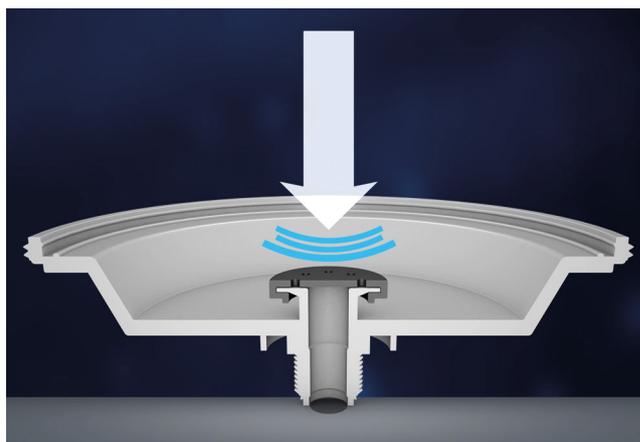
NEWAIR® XS EXTRA SMART SERIES 9" SPECIAL HDPE OPERATING RANGE

Model	Pore size µm	Range flow rate (Nm ³ /h) min-max	Optimal flow rate (Nm ³ /h)	Standard connection	Max temperature Celsius/ Fahrenheit	Operating procedure	Application
NWD XS9"	fine	1,5 - 8	4	3/4" M	80°C / 176° F	continuous intermittent	Aeration tank

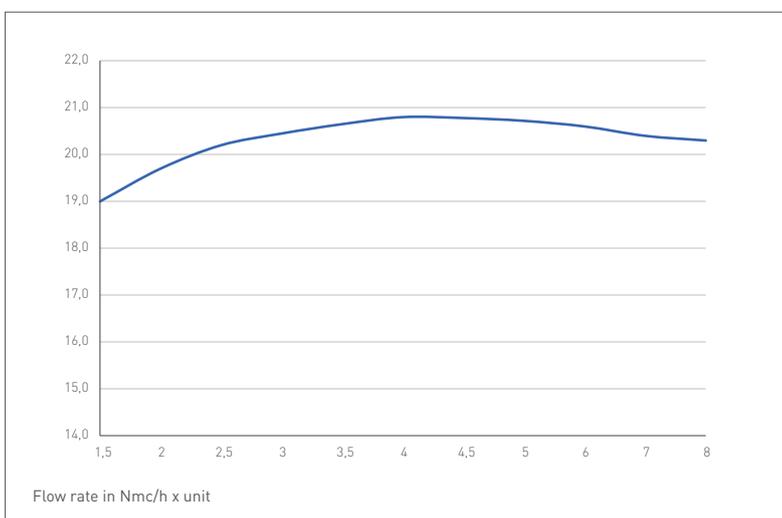
DIMENSION

Type	Total height (mm)	Diameter total (mm)	Diameter effective (mm)	Over all height above air distributor (mm)	Perforated area (m ²)	Total weight (kg)
NWD XS9"	93	240	193	73	0,03	0,8

Connection 3/4F, 1"M, 1"F or NPT thread, available on request



Oscillating non return valve, ensures that the non return valve is not blocked with any dirt.



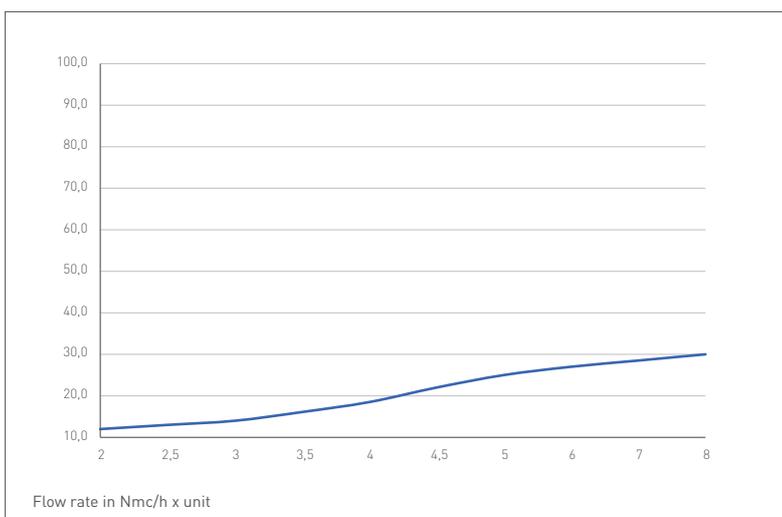
NEWAIR® XS EXTRA SMART DISC DIFFUSER FINE BUBBLE OXYGEN TRANSFER EFFICIENCY

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

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

Example:

Diffuser works with 4 Nmc/h and waterlevel above diffuser surface is 5 meter, then consider:
 $20.8\text{gr/Nmc} \times \text{m} * 4\text{Nmc/h} * 5\text{m} = 416\text{gr/h}$



NEWAIR® EXTRA SMART DISC DIFFUSER FINE BUBBLE HEAD LOSS

— Head loss in mbar (incl. check valve)

Data are referd to 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 data!

Newair® Series 12" HDPE

PRODUCT PROPERTIES

- energy-saving
- low head loss
- high air flow
- high oxygen transfer
- break-proof
easy to install
- very good chemical resistance
for continuous operation
- drinking water - approval



NEWAIR® DISC DIFFUSER SERIES 12"

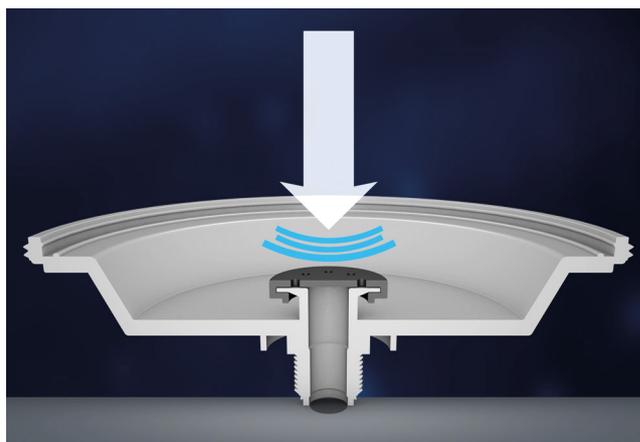
OPERATING RANGE

Model	Pore size variable	Range flow rate (Nm ³ /h) min-max	Optimal flow rate (Nm ³ /h)	Standard connection	Max temperature Celsius/ Fahrenheit	Operating procedure	Application
NWD280	fine	4-12	6	1" M	80°C/176°F	continuous intermittent	Aeration tank

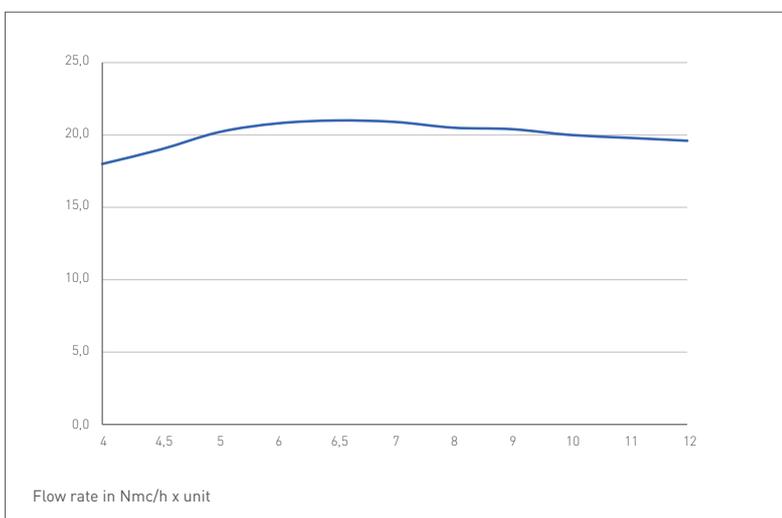
DIMENSION

Type	Total height (mm)	Diameter total [mm]	Diameter effective [mm]	Over all height above air distributor [mm]	Perforated area [m ²]	Fixed porous membrane	Total weight [kg]
NWD280	93	300	240	68	0,05	HDPE	1,35

Connection 3/4F, 1" M, 1" F or NPT thread, available on request



Oscillating non return valve ensures that the non return valve is not blocked with any dirt.

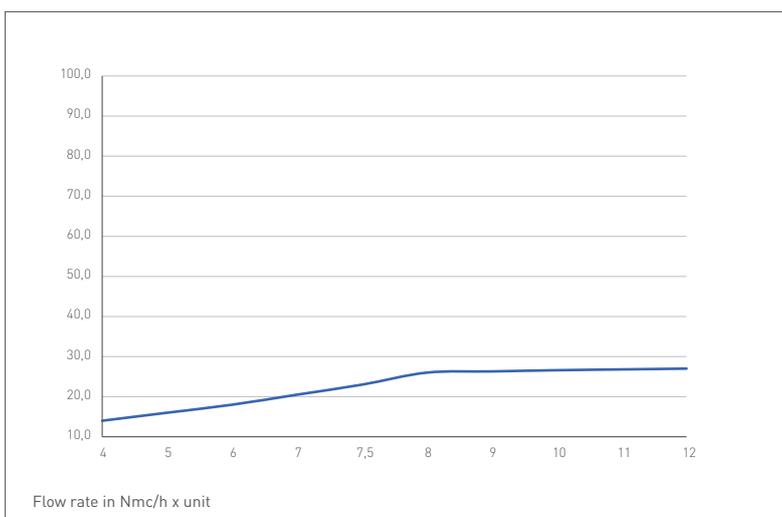


NEWAIR® NWA280 DISC DIFFUSER FINE BUBBLE OXYGEN TRANSFER EFFICIENCY

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

Data refers to clean tap water normal condition at 20°C, 101,3kPa

Example:
Diffuser works with 6.5 Nmc/h and waterlevel above diffuser surface is 5 meter, then consider:
 $21\text{gr/Nmc} \times \text{m} * 6.5\text{Nmc/h} * 5\text{m} = 682\text{gr/h}$



NEWAIR® DISC NWA280 DISC DIFFUSER FINE BUBBLE HEAD LOSS

— Head loss in mbar (incl. check valve)

Data refers to clean tap water normal 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 data!

Newair® XL Series 14" HDPE

PRODUCT PROPERTIES

- energy-saving
- low head loss
- high air flow
- high oxygen transfer
- break-proof
- easy to install
- very good chemical resistance for continuous operation
- drinking water - approval



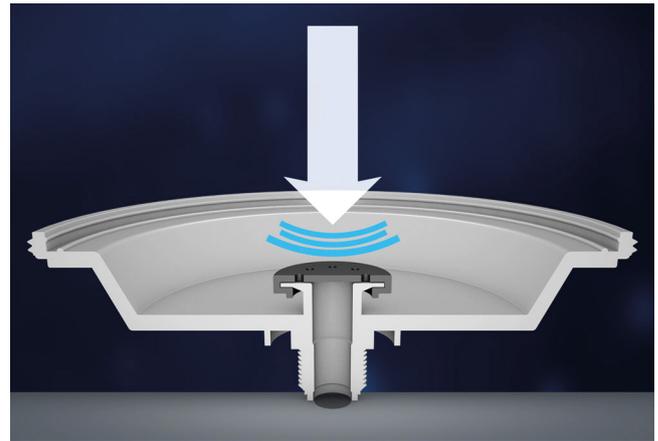
NEWAIR® XS EXTRA LARGE SERIES 14" DISC DIFFUSER SPECIAL HDPE OPERATING RANGE

Model	Pore size μm	Range flow rate (Nm^3/h) min-max	Optimal flow rate (Nm^3/h)	Standard connection	Max temperature Celsius/ Fahrenheit	Operating procedure	Application
NWD XL14"	fine	5 - 18	10	1" M	80°C / 176° F	continuous intermittent	Aeration tank

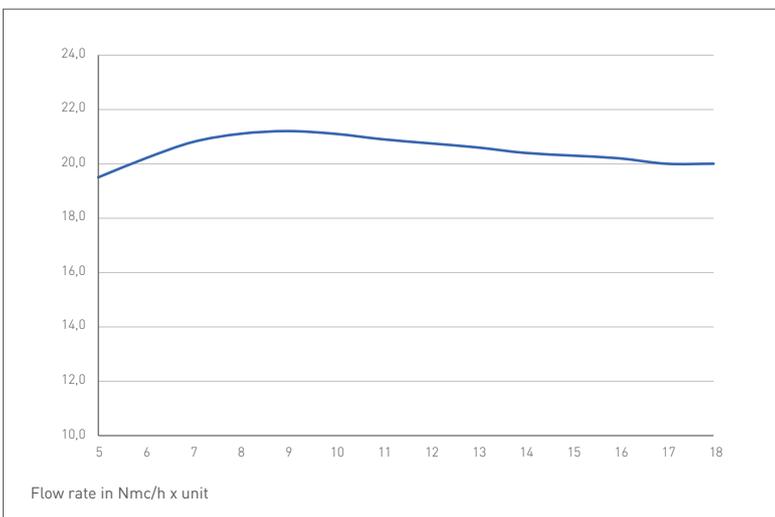
DIMENSION

Type	Total height (mm)	Diameter total (mm)	Diameter effective (mm)	Over all height above air distributor (mm)	Perforated area (m^2)	Total weight (kg)
NWD XL14"	93	360	310	73	0,075	1,7

Connection 3/4F, 3/4"M, 1"F or NPT thread, available on request



Oscillating non return valve ensures that the non return valve is not blocked with any dirt.



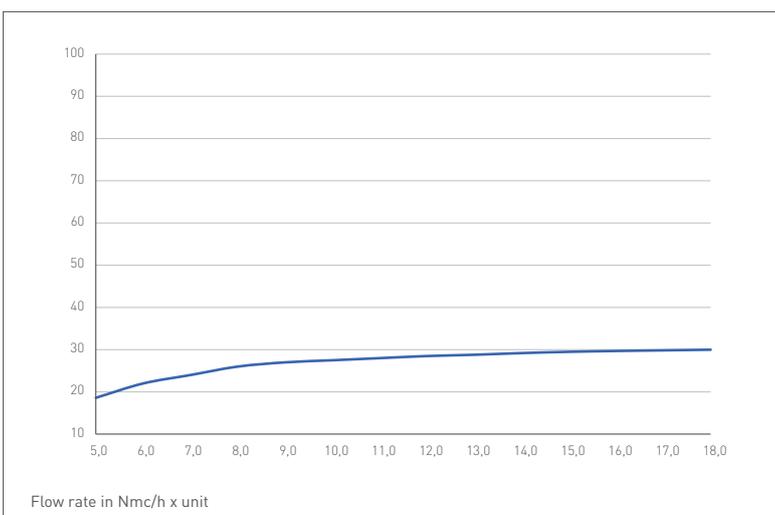
NEWAIR® XL EXTRA LARGE DIFFUSER FINE BUBBLE OXYGEN TRANSFER EFFICIENCY

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

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

Example:

Diffuser works with 9 Nmc/h and waterlevel above diffuser surface is 5 meter, then consider:
 $21,2\text{gr/Nmc} \times \text{m} * 9\text{Nmc/h} * 5\text{m} = 954\text{gr/h}$



NEWAIR® XL EXTRA LARGE DISC DIFFUSER FINE BUBBLE HEAD LOSS

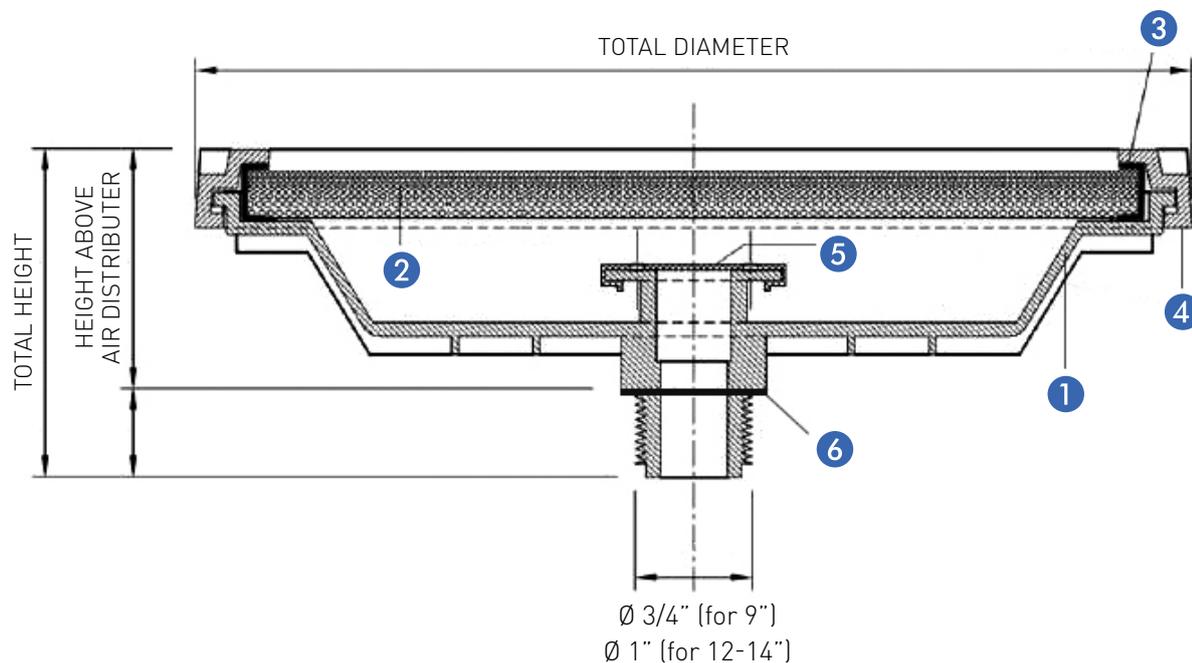
— Head loss in mbar (incl. check valve)

Data are referd to 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 data!

Newair® Series 9"-12"-14" HDPE

INSTALLATION DRAWING 9"-12"-14"



PRODUCT PROPERTIES

Number	HDPE
Colour	white
Wall thickness	9/11 mm
Density	0,97 g/cm ³
Chemical resistance	high
Pore size at the inside	350 µm
Pore size at the outside	120 µm
Operating temperature	0 - 80°C
Application	municipal and industrial waste water

NEWAIR® DISC DIFFUSER, MATERIAL OF THE SINGLE COMPONENTS

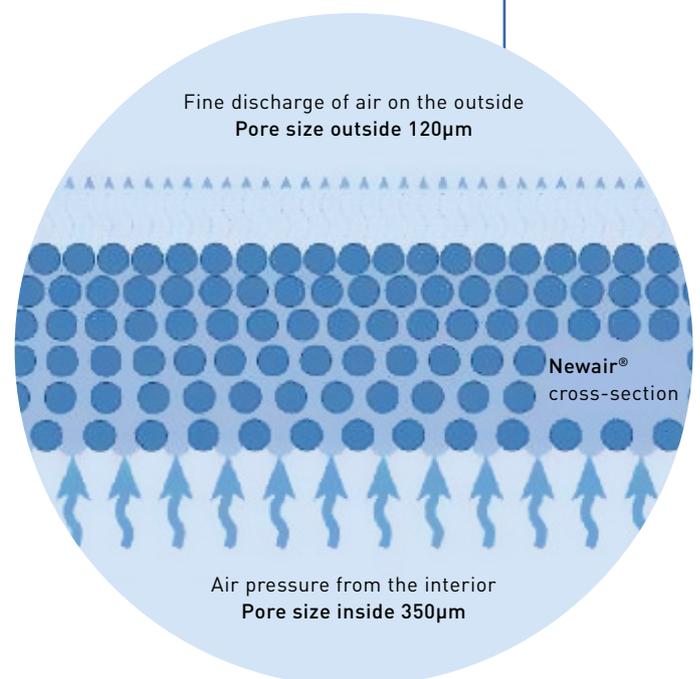
Number	Description	Material
1	Diffuser body	Polypropilene, glass fiber reinforced
2	Porous Disc	HDPE
3	H-Gasket	EPDM
4	Retaining ring	Polypropilene, glass fiber reinforced
5	Non return valve	Silicone
6	Gasket	EPDM

All data are approximate data!

FUNCTION



THE NEWAIR AERATOR
IS CHARACTERIZED
BY A SPECIAL MATERIAL
STRUCTURE



Newair® Series 9"-12"-14" HDPE

AIR FLOW

The **optimum air flow** for the Newair® disc diffuser depending on the model, the airflow range can be from 1,5÷18 Nm³/h. If the air flow rate falls below the optimum range for a longer period of time (approx. 24 hrs.), the flushing of the aerator elements with an air flow rate of 40 Nm³/(h x diff.) is recommended.

The following recommendations for the storage, cleaning, and maintenance of elastomers are based on the international standard DIN 7716.

STORAGE

The diffusers and all accessories must be packed in a condition free from tension, compression and deformation. They must be kept in the original packaging until installation and do not place heavy weights on the packed products. Store in a dry, covered and aerated room free from sources of

heat, humidity and dust. The storage of rubber components up to the installation should not exceed 1 year. Should they be transported in open receptacles like lattice boxes, the packed products have to be covered for protection against UV radiation.

MAINTENANCE

Newair® aerators require only a little service, but they are not maintenance-free. The functioning of the aerators depends on the discharge of air from the porous structure of the aerators. Therefore the structure should be free from sediments and incrustation because these affect or can even prevent the discharge process. As a rule, waste water contains substances

which can cause the formation of sediments, such as carbonates (water hardness), ferric and aluminium salts (precipitants), biological growth, polymers.

For a trouble-free operation it is recommended to dose precipitants and other auxiliary agents with the objective of making sparing use of those according to the technical regulations.

LIFETIME

The precondition for a long lifetime is that the aerators are used in communal waste water. The composition of existing trade and industrial effluents must comply with the regulations laid down in the latest version of working sheet ATV A 115.

If the discharge of industrial effluents exceeds a proportion of 20 %, the manufacturer has to be consulted. In addition, the assembly and operating instructions must be adhered to.

SERVICE

It is in your interest to perform regular controls of the aerator system by using the types of maintenance mentioned above. They help to prolong the lifetime of the aerators.

If necessary, you can send aerators to the

manufacturer in order to obtain an analysis of the condition of the aerators (charge according to time involved). The aerators sent in for this purpose should be rinsed, but not cleaned with a pressure washer.

Our continuing commitment to quality product, may mean a change without notice of specification, design and other content included in this brochure.



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



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