

Benefits of the Aqua-Line Diffusers

Proven quality and efficiency

- Aqua-Line diffusers operate in 15 countries around the world
- serve more than 130 million people
- 40.6 million m³ of wastewater is treated at 634 plants
- save 101.5 million kW of electric power each year
- diffusers manufacturer has been awarded an **international quality certificate ISO-9001**

Benefits to the Installer

1. Saving time and money on installation

- It takes **3-4 times** less time to install Aqua-Line diffusers than disc or other types of tubular diffusers. This is due to the diffusers design which makes the assembly much easier and faster.

System	Number of air tanks	Total volume, m ³	Labour days to reequip the existing system	Relative assembly rate (tank volume per day), m ³ /day
Aqua-Line diffusers	1	8,000	2	4,000
Aqua-Line diffusers	2	38,000	10	3,800
Ceramic disc diffusers	3	11,400	12	~1,000

- The diffusers design combines features of **both air pipe and diffuser**. Therefore, the air piping system is not required in the water tank. Please, compare the Aqua-Line aeration (Left) and EDI systems (See pictures below)



- **The number of Aqua-Line diffusers** required to equip/ re-equip a plant is **30-50% less** than the other diffusers. This is due to their high mass exchange characteristics and low hydraulic resistance. It can be seen from the table below

Comparative characteristics of tubular diffusers by different manufacturers

Manufacturer	Diffuser model	Material of dispersive unit	Recommended air consumption (m ³ /h)	SOTE at 1 m of immersing (%)	Hydraulic resistance (kPa)
EnviroQuip	FlexLine™	EPDM	2.6-8.5	6.9	
ENVICON	EMR-20	EPDM	6-10	7.0-7.4	3-3.6
OTT System	O ₂ -Okonom Magnum	Flexnorm	2-10	5.6-8.2	3.5-5.5
Ecopolymer	Aqua-Line	HDPE	14-20	5.5-6.25	1.5-3.0

- Due to high mass exchange characteristics of the Aqua-Line diffusers, the air consumption is significantly lower. Therefore, a **smaller air blowing system** is required
2. The diffusers manufacturer may provide **assistance** in calculation and design aeration systems
 3. The diffusers manufacturer has a partner in China, which may provide **assistance** in assembly and installation of the aeration systems

Benefits to the operator

1. Low operation and maintenance cost

- Air consumption can be reduced by 30-50% compared to other aeration systems
- Energy cost for air compression can be cut by up to 30%
- The innovative non-interruptive cleaning method can be used to restore diffuser efficiency (access to basin not needed)

2. Versatility

- Aqua-Line diffusers work effectively at different depth and in a wide range of air flow rate
- Aqua-Line diffusers can be installed in fixed grid or retractable systems

3. Reliability

Due to diffusers design and materials (HDPE) used the Aqua-Line diffusers are highly resistant to

- chemicals, moisture, and heat from process water
- on and off cycles
- hydraulic hammer effects

4. Long service life

- Developers can guarantee long terms of service life under recommended conditions and with regular restoration cleaning
- Maximum current recorded service cycle for Aqua-Line diffusers is **8 years**