**ELASTOX-T**

*Advanced Fine Pore Membrane Air Diffusers*

Aquatec-Maxcon offers the **Elastox-T** membrane to achieve maximum transfer of oxygen to wastewater, even under conditions where air flow is interrupted or during air cycling.

The **Elastox-T** membrane is a unique patented design from GVA mbH in Germany in the form of a flat disk, which can be used as an efficient alternative to ceramic disks or domes.

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**Rubber Membranes are Easy to Install, Efficient and Inexpensive**

**Design Advantages**

- Oxygen transfer efficiencies equal to those from fine pore ceramics (up to 4.5 kg/kWh wire-to-water at STP)

- Easy and inexpensive to install, rubber membranes have a life of many years and are easily replaceable

- Effective over wider range of air flows than other types of membrane diffusers

- Will not clog with mixed liquor backflow

- Ideal air flow/pressure loss characteristics, yielding a wide turndown capability without loss of equal air distribution

**Design Features**

- When the diffuser is not in use, the rubber fits tightly on the support (see figure below).

- As air is admitted through the sleeve connection, the membrane lifts off the support and thousands of tiny perforations successively open to emit streams of fine bubbles of 2 to 3 mm in diameter

- Backflow is prevented when air flow ceases by the tiny penetrations resealing

- A spring actuated check valve further prevents mixed liquor backflow while preventing "ballooning" of the membrane at higher air flows to ensure an even surface air distribution

**Membranes Can Be Used for Most Aeration Systems**

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**NOT IN OPERATION**

1. SUPPORTING PLATE  
2. RUBBER MEMBRANE  
3. SEALING BAND

**IN OPERATION**

4. ENCAPSULATED STEEL PLATE  
5. SLEEVE  
6. STAINLESS STEEL SPRING
**Two Types of Membranes are Offered to Fit Most All Aeration Scenarios**

Type A offers fine perforations and uniform spacing to ensure production of very fine bubbles for standard air flows up to 8 Nm³/h.

Especially fine perforations are offered for **Type B** for still greater oxygen transfer efficiency for air flows up to 6 Nm³/h.

Performance curves for the **Elastox-T** diffusers are given below at 0°C and 1 bar. Curve 1 corresponds to a diffuser spacing of 1 m, while curve 2 is for a spacing of 0.5 m. The efficiency of operation decreases as the distance between diffusers increases.

Note that low pressure loss over the wide operating air flow range. The last figure shows the pressure losses at varying rates of air flow.

**Applications**

- Activated sludge systems
- Intermittent aeration
- Oxidation ditches
- Aerobic sludge digestion
- Aquaculture
- Most industrial Biological treatment systems
- Most industrial biological treatment systems

The manufacturer reserves the right to alter performance, specification or design without notice.