



Airlift BioPULSE™ External MBR Systems

Model Number: 30D-990M Airlift BioPULSE™ External Membrane Skid

The bioprocessH₂O Airlift BioPULSE™ External MBR systems are highly efficient and compact membrane systems that can be applied to both existing and “new build” biological treatment systems. Within each vertically mounted tubular membrane module, the wastewater is air-lifted through the modules via a dedicated air diffuser that is integral to each membrane in order to maximize the flux potential of the membrane process, lower trans membrane pressure (TMP) and minimize power consumption.

Due to the high velocity air lift, the membranes are continuously air scoured to sustain higher flux values for extended periods of time minimizing “clean-in-place” (CIP) chemical cleaning processes. As a result, the Airlift MBR flux is twice that of “in basin” MBR membrane technologies. The TMP requirements for the Airlift BioPULSE™ is “ultra-low” resulting in lower energy consumption, attractive life cycle costs, low “OPEX” operational expenses. Since the external membranes are vertical mounted, the wastewater can be displaced by gravity and cleaned with chlorine based chemistry that is dedicated to each membrane module, significantly minimizing chemical consumption.

Airlift BioPULSE™ MBR Design Advantages:

- Compact System Footprint
- Ultra Low Energy Consumption
- Low Chemical Consumption
- Sustained High Membrane Flux
- Long Membrane Life
- Easily Maintained Membrane Process
- Simple Civil Works – Flat concrete slab
- Operator Friendly

Airlift BioPULSE™ Membrane Skid	SI Units	US Units
Nominal Length	6.0 m	19.6 ft
Nominal Width	1.6 m	5.25 ft
Nominal Height	4.6 m	15 ft
Nominal Surface Area (Membrane Skid)	990 m ²	10,652 ft ²
Membrane Pore Size	0.03 microns	
Nominal flux	45 – 65 l/mh	25 – 40 gsf/d
Trans Membrane Pressure (TMP)	0.05 – 0.3 bar	0.75 – 4.4 psig
Nominal Power Consumption	0.25 kWh/m ³	0.95 kWh/1000 gal
Materials of Construction membrane modules	PVDF housed in PVC casings	

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