Gas/Liquid Contactors
Compact and Efficient Gas Injection into Liquids
tell me more...

Air Products PRISM Membranes Gas/Liquid Contactors are compact and efficient. We’re changing the way industry thinks about dissolving gases into liquids.

Gas Infusion

Beverage industry
Air Products Prism Membranes Gas/Liquid Contactors (GLCs) use bubble-less transfer of gas through hollow fiber membranes to instantaneously deliver desired gas levels in beverages for on-demand service. Meeting FDA requirements for food contact safety, compact GLCs adjust carbonation levels in beer, preserve taste by removing dissolved oxygen, or create nitrogenated coffee.

Other applications
Other applications, such as aquaculture and aerobic processes, require precise addition of oxygen to optimize output. Air Products Prism Membrane GLCs offer a scalable solution for efficient gas injection.

Opportunity to bring products to market
Air Products PRISM Membranes is bringing their extensive experience in gas separations to the gas/liquid contactor market. We are actively seeking development partners who are interested in incorporating new gas/liquid contactors into a process or product design.

Actively Pursuing:
- Technology Licensees
- Technology Implementer
- Commercialization Partners

Examples include:
- On-demand carbonation
- Nitrogen-injected beverages like beer and coffee
- Fish farm oxygen injection
- Swimming pool water treatment
Performance example is for one gas/liquid contactor. Systems designed with multiple GLCs in parallel allow for varying process loading. Other GLC separators sizes available.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Liquid flow rate</td>
<td>1.5 oz/s (0.7 gpm)</td>
</tr>
<tr>
<td>Liquid Temperature</td>
<td>41°F (5°C)</td>
</tr>
<tr>
<td>Applied CO₂ Pressure</td>
<td>57 psig (4.9 bar)</td>
</tr>
<tr>
<td>Product Carbonation Level</td>
<td>4 v/v</td>
</tr>
<tr>
<td>Module Size</td>
<td>1&quot; D x 1.5' L</td>
</tr>
</tbody>
</table>

PRISM Gas/Liquid Contactors feature a high surface area to volume ratio, which promotes efficient transfer of gases into and out of liquid streams. Using bubble-less transfer of gas, GLCs can instantaneously deliver desired gas levels into source liquids. Meeting FDA requirements for food contact safety, GLCs displace large equipment and improve cycle times by infusing continuously rather than through long batch processes. PRISM Contactor units installed in parallel easily adjust for variable production loads by simply valving units on/off to match demand requirements.

For more information, please contact us at:

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Air Products is actively seeking development and commercialization partners to incorporate GLC Contactors into industrial or consumer products. Contact our Business Development specialists for more information.

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airproducts.com/membranes

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