Remote Reservoir-Lung Assembly

The Dimatix Remote Reservoir-Lung Assembly is an efficient and robust fluid reservoir module for use — in line with or attached to — one or more Dimatix jetting assemblies.

The Remote Reservoir-Lung Assembly is a compact fluid reservoir for Dimatix jetting assemblies using liquid inks. While providing all the functionality of the standard Dimatix printhead reservoir, the Remote Reservoir has the added feature of being able to be used at a position slightly removed from the jetting assembly.

The reservoir holds a working volume of ink, metered by an integral ink-level sensor. As ink enters the reservoir, it first passes through an inlet filter to trap any particles which may have been introduced during umbilical connection. As the ink moves through the reservoir, it passes through the lung mechanism, which removes dissolved gasses from the jetting fluid. This degassing function is essential for fast priming and for preventing bubble growth in the ink at high jetting frequencies.

The Remote Reservoir-Lung Assembly is available in both anodized aluminum and stainless steel. The aluminum version comes with the necessary EPDM O-rings for installation, and the stainless steel version—designed for very aggressive inks — includes perfluoroethylene O-rings.

An optional heater cartridge and thermistor temperature sensor are available for thermal control of ink viscosity.

Features:
- Local supply of ink and ink level control
- Filtration of incoming ink
- Deaeration incorporating Dimatix' lung technology
- Broad materials compatibility
- Interface for vacuum and pressure regulation
- Ink level sensor
- Optional heater and thermistor
Remote Reservoir-Lung Assembly

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Remote Reservoir-Lung Assembly</th>
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</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>up to 1 cc/second</td>
</tr>
<tr>
<td>Ink filter</td>
<td>8 - 9 microns absolute</td>
</tr>
<tr>
<td>Meniscus vacuum</td>
<td>as required by the application</td>
</tr>
<tr>
<td>Lung vacuum</td>
<td>≥ 20 in Hg [0.67 bar], gage</td>
</tr>
<tr>
<td>Compatible fluids</td>
<td>Solvent, UV Curable, and Aqueous</td>
</tr>
<tr>
<td>Low on ink sensing</td>
<td>Thermistor, self heat mode</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>up to 90°C [194°F]</td>
</tr>
<tr>
<td>Typical ink viscosity (at operating temperature)</td>
<td>8-20 cP</td>
</tr>
<tr>
<td>Heater and thermistor</td>
<td>optional</td>
</tr>
</tbody>
</table>

Physical Characteristics

- **Dimensions:**
  - Width: 38.6 mm [1.53 in.]
  - Length: 101.6 mm [4.00 in.]
  - Height: 55.6 mm [2.19 in.]

- **Weight:**
  - 0.23 kg [0.5 lb] (Aluminum)
  - 0.68 kg [1.5 lb] (Stainless Steel)

Lung Performance

![Lung Deaeration Efficiency vs. Spectra® Galaxy-30 AAA Duty Cycle at Various Temperatures](chart)

- **Lung Deaeration Efficiency vs. Flow Rate (cc/sec):**
  - T = 85°C
  - T = 70°C
  - T = 55°C

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Product data presented above are for guideline purposes only. For design and engineering work using this product, please contact Dimatix Technical Support for the appropriate Product Manual containing full Product Specifications.