A continuous dispenser for advanced low vapor pressure precursors that are supplied in large containers (200L) and used with your deposition processes.

The Candi Bulk system is designed to provide end users with a continuous supply of a low vapor pressure liquid precursor (>1 Torr) delivered at a steady pressure.

Applications
Typical applications: liquid precursor supply to direct liquid injection (DLI), on-board bubbler or vaporizer and on-board buffer canister. Varied examples of possible precursors:
- BPSG processes: TEOS...
- Low-k dielectrics: OMCTS, TMCTS...
- Low-T SiN: HCDS...

Operation
As with the classic Candi, pressurized helium is used to transfer a precursor from the shuttle tank to an internal day tank and from this day tank to the tool. The day tank allows for the continuous dispensing of the chemical during a shuttle tank change-out.

End users also benefit from the classic Candi features, such as the patented purge, the back-up distribution mode, the day tank level control and the empty shuttle tank detection technique for maximum chemical use, all of which ensure a reliable & cost saving distribution of the precursor to the process.

Unlike the classic Candi, the Candi Bulk accepts large shuttle container (200L) and includes a bigger day tank suited for bulk use. The system was designed accordingly; appropriate enclosure retention, pigtail design, purge sequences...

Qualification
The Candi Bulk is qualified by most tool manufacturers for 300-mm processes:
- Referenced on multiple OEMs platforms
- Pre-defined interfacing with multiple OEMs
Candi™ Bulk

Product description

Features

- Precise delivery pressure control (± 50 mbar) for the most demanding applications
- System adapts to any SEMI-compliant shuttle tank up to 200L
- 40L day tank
- Patented back-up mode for improved reliability
- Smart empty control for maximal chemical usage
- Chemical purge sequence validated with live chemicals
- PLC based technology with 10” color touch screen
- Ethernet communication port for SCADA monitoring
- Customized signal interface with tool manufacturers

Options

- On-board vacuum pump
- On-board degassing device
- Pigtailed heating
- Up to 4 on-board outlet processes
- Valves Manifold Box (VMB) for distribution to multiple points of use
- Different communication protocols available
- Start-up and operator training

Safety features

- Fully automatic distribution and tank change-out sequences
- Easy to reach “Emergency Machine Off” button
- Standard exhaust flow alarm
- Optional fire and gas detection alarms
- Leak detection
- Open door detection
- Individual pressure switch and relief valve on N₂ and He pressurized lines
- Timers for pressurization/depressurization of each tank, for day tank refill
- Precise alarm messages
- Operator intervention reduced to a minimum
- Multi-level password protection to restrict access to critical functions

Reliability

- MTBF > 8760 hrs
- Uptime > 99.98%

Technical specifications

Utilities requirements

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>He</td>
<td>7 barg, UHP, 1 Nm³/h</td>
</tr>
<tr>
<td>N₂</td>
<td>7 barg, UHP, 10 Nm³/h</td>
</tr>
<tr>
<td>Pneumatics</td>
<td>7 barg, 5 Nm³/h</td>
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<tr>
<td>Exhaust</td>
<td>400 Nm³/hr</td>
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<tr>
<td>Vacuum</td>
<td>&lt; 2 Torr</td>
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<tr>
<td>Power</td>
<td>UPS, 110/240VAC, 50/60Hz, 1kVA</td>
</tr>
</tbody>
</table>

Process data

Chemical maximum flow rate: 1 slpm when working at Candi maximum pressure of 5 barg

Certifications

CE Mark
Atex zone 2 for process compartment
Optional SELO certification for pressurized tanks

Contacts

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For your advanced precursor needs:
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