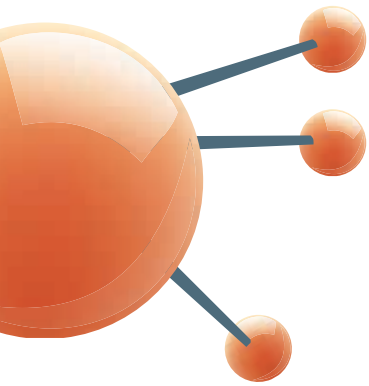


Candi™ Bulk



The Candi™ Bulk system supplies in large containers (200 L) and is designed to provide end users with a **continuous supply of a low vapor pressure liquid precursor** (>1 Torr) delivered at a **steady pressure**. It improves safety, reliability and stability of your deposition process.



Applications

Typical applications: liquid precursor supply to Direct Liquid Injection (DLI), on-board bubbler or vaporizer and on-board buffer canister. Possible precursors:

- BPSG processes: TEOS...
- Low-k dielectrics: OMCTS, TMCTS...
- Low-T SiN: HCDS...

Operation

As with the standard Candi™, pressurized helium is used to transfer a precursor from the shuttle drum to a process tank and from this one to the tool. The process tank allows for the **continuous dispensing of the chemical** during a shuttle drum change-out.

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



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

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

Product description

Features

- Precise delivery pressure control (± 50 mbar) for the most demanding applications
- System adapts to any EMI compliant shuttle drum up to 200 L
- Up to 100 L process 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 12" 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
- Baratron® for high accuracy vacuum detector
- Valves Manifold Box (VMB) for distribution to multiple points of use
- Different communication protocols available
- Start-up and operator training

Reliability

- MTBF*: 8,760 hours
 - Uptime: 99.98%
- *Mean Time Between Failures*

Safety features

- Liquid trap to contain liquid accidentally sent to the vent line
- 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 N_2 and He pressurized lines
- Timers for pressurization/depressurization of each tank, for process tank refill
- Precise alarm messages
- Operator intervention reduced to a minimum
- Multi-level password protection to restrict access to critical functions

Technical specifications

Utility requirements

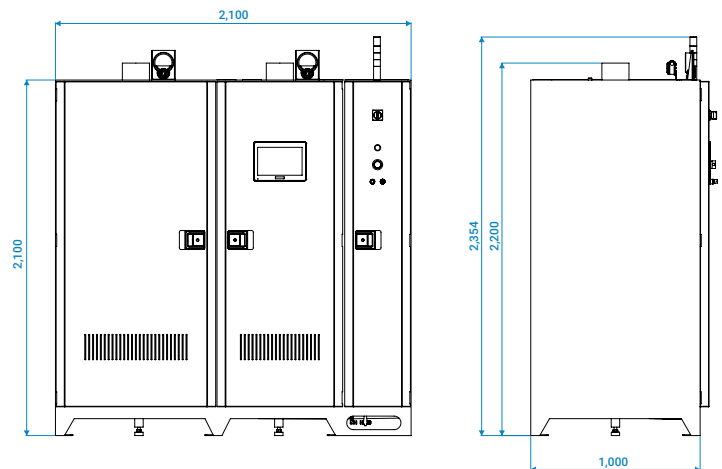
Helium	7 barg, UHP, 1 Nm ³ /h
Nitrogen	7 barg, UHP, 10 Nm ³ /h
Pneumatics	7 barg, 5 Nm ³ /h
Exhaust	400 Nm ³ /hr
Vacuum	< 2 Torr
Power	UPS, 110/240 VAC, 50/60 Hz, 1 kVA

Process data

Chemical maximum flow rate: 3.8 slpm when working at Candi™ maximum pressure of 5 barg.

Certifications

- CE Mark
- ATEX zone 2 compliance for process compartment
- Optional SELO certification for pressurized tanks
- SEMI S2 certified
- UL compliant & ASME (optional)



Contacts

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