A continuous dispenser for advanced low vapor pressure precursors that are used with your deposition processes.

The Candi 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, TEPO, TEB…
- Low-k dielectrics: 4MS, TMCTS, OMCTS, DMPS, BCHD…
- High-k dielectrics: DMAI, TDMAS, 4DMAS…
- Low-T SiN/SiO: HCDS, SAM.24TM, BTBAS…

**Operation**

Pressurized helium is used to transfer a precursor from the shuttle canister 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 canister change-out.

The patented Candi purge, which uses gas compression and expansion cycles, ensures a safe shuttle canister change-out and prevents the contamination of a supplied precursor often very sensitive to air and moisture.

**Qualification**

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

## Product Description

### Features
- Precise delivery pressure control (± 50 mbar) for the most demanding applications
- System adapts to any SEMI-compliant shuttle canister up to 40L
- 8L 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

### 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 canister 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*: 8,760 hours
- Uptime: 99.98%

### Technical Specifications

#### Utilities Requirements

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<tr>
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#### Process Data
- Chemical maximum flow rate: 1 slpm when working at Candi maximum pressure of 5 barg

#### Certifications
- CE Mark
- SEMI S2 certified
- Atex zone 2 for process compartment

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### Contacts

**Air Liquide Electronics Systems**
8, rue Méridiens – Sud Galaxie
38130 Echirolles – France
Phone: +33 (0)4 38 49 88 00
E-mail: frales-contact@airliquide.com

**For your advanced precursor needs:**
ALOHA™
E-mail: aloha@airliquide.com
www.aloha.airliquide.com

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The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 68,000 employees and serves more than 3 million customers and patients*. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide’s scientific territory and have been at the core of the company’s activities since its creation in 1902.

* Following the acquisition of Airgas on 23 May 2016