

## Flex-F<sup>®</sup> 80. On-Site Fluorine Generator.



### Product description

Flex-F<sup>®</sup> 80 is the next generation on-site F<sub>2</sub> generator from Linde Electronics and is specifically designed for the semiconductor industry. On-demand, high purity 100% fluorine of up to 80 standard litres/hour (3.2kg/day) can be blended with N<sub>2</sub> or Ar and use existing F<sub>2</sub> cylinder supply pipework for rapid and cost effective installation with no process tool modification required.

### Features and benefits

- Low cost of ownership
- A safer gas delivery system than cylinder supply
  - Low gas pressure, temperature and velocity
  - Low stored inventory
  - No cylinder changes required
  - Double containment throughout
  - SEMI S2 certified and CE marked
- PFC Emissions reduction
  - F<sub>2</sub> has zero atmospheric lifetime and zero global warming potential
- Greater process capability
  - More stable process and higher purity – no frequent cylinder changes
  - Low F-F bond energy provides wider process window than other fluorinated cleaning gases
- Flexible modular capability to meet any installation or process requirement

### Options

- Buffer module to meet variable demand requirements
- Blending module enables F<sub>2</sub>/N<sub>2</sub>/Ar blends to be supplied
- Analysis for module on-line purity analysis
- Sampling module enables off line analysis
- Integral H<sub>2</sub> abatement
- Abatement module (HF, F<sub>2</sub>, extraction)

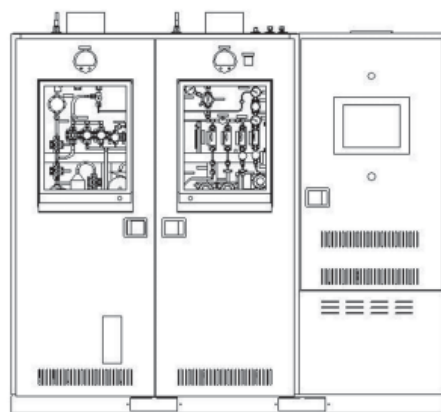
Utility Requirements

Electrical	70 Amps @ 208V 3 Phase, 3 wire with ground
Hydrogen Fluoride	Linde Electrolytic Grade Flow: 35 slpm (peak), 3 slpm (average) Pressure: >34 kPa, < 68 kPa (>5 psig, <10 psig)
Nitrogen	Grade 5 (H <sub>2</sub> O < 1 ppm, O <sub>2</sub> < 1 ppm) Flow: continuous 1-2 slpm, intermittent 100 slpm Pressure: >690 kPa, <792 kPa (>100 psig, <115 psig)
Cooling Water	Temperature: (10-30 °C) (filtered 100 micron) Flow: intermittent 0-150 lpm, depending on supply temperature Pressure: >206 kPa, <345 kPa (>30 psig, <50 psig)
Exhaust	Header: 30 mm H <sub>2</sub> O Approx. 13.5 m <sup>3</sup> /min (475 cfm) exhaust air (will contain up to 1.3 slpm H <sub>2</sub> , 0.1 slpm HF)
Fluorine Waste	Up to 90 slpm F <sub>2</sub> during maintenance
Life Safety System (LSS)	Customer facility LSS should be integrated with the generator system Gas sensors (HF, F <sub>2</sub> ) must be provided by the customer Number & location of gas sensors are installation dependent
Data Connection > 100 Mbps	A communication link is required for data acquisition and system monitoring
Floor	The surface where the generator skid is placed must be level to within 2.5 mm per m (1/32" per foot). Must be rated for 2000 kg
Environmental conditions	Temperature: 5-35 °C Elevation: <1500 m
Emergency Machine Off (EMO)	One from fire system, one from gas pad EMO - all volt free contacts

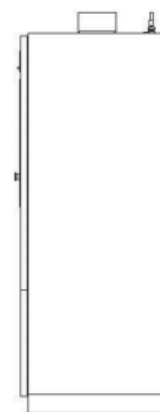
Dimensions

Depth	803 mm [31.6"]
Width	2340 mm [92.1"]
Height	2054 mm [80.9"]

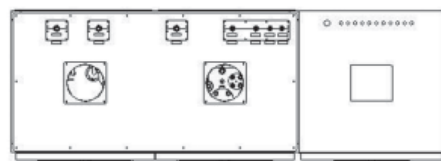
Dimensions do not include piping and ductwork.



Front.



Side.



Top.

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