

Generation-F[®] 80

On-Site Fluorine Generation

Product description

The Generation-F[®] 80 is specifically designed to meet the exacting requirements of CVD chamber cleaning within the semiconductor industry and is SEMI S2 certified and CE marked. On-demand, high purity 100% fluorine production of up to 80 standard litres / hour (3.2kg / day) is integrated with purification, compression and storage in a compact, easy to install extracted enclosure. Combined with a range of additional modules from Linde Electronics, any customer installation or process requirements can be met.

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
 - F₂ has zero atmospheric lifetime and zero global warming potential
- Greater process capability
 - More stable process and higher purity – no frequent cylinder changes
 - Much lower dissociation energy – significantly larger plasma process window
- Flexible modular capability to meet any installation or process requirement.

Options

- Buffer module – to meet variable demand requirements
- Blending module – enables F₂ / N₂ / Ar blends to be supplied
- Analysis module – on-line purity analysis
- Sampling module – enables off line analysis
- Integral H₂ abatement
- Abatement module (HF, F₂, extraction)

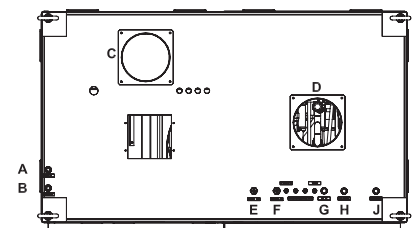
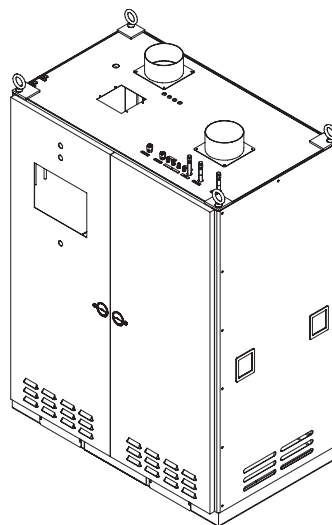
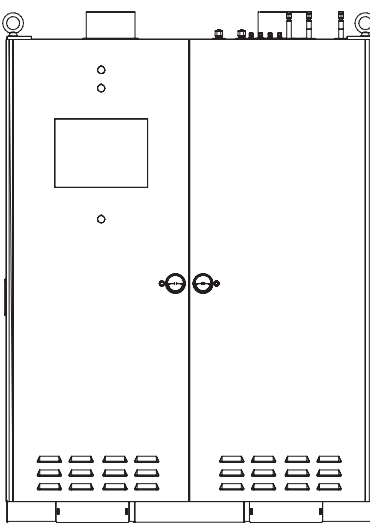


Utility requirements

Electrical	<ul style="list-style-type: none"> • 70 Amps @ 208V 3 Phase, 3 wire with ground
Hydrogen fluoride	<ul style="list-style-type: none"> • Linde Electrolytic Grade • Flow = 35 slpm (peak), 3 slpm (average) • Pressure >34 kPa, < 68 kPa (>5 psig, <10 psig)
Nitrogen	<ul style="list-style-type: none"> • Grade 5 (H₂O < 1 ppm, O₂ < 1 ppm) • Flow = continuous 1-2 slpm, intermittent 100 slpm • Pressure >690 kPa, <792 kPa (>100 psig, <115 psig)
Cooling water	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Header -30 mm H₂O • Approx. 13.5 m³/min (475 cfm) exhaust air (will contain up to 1.3 slpm H₂, 0.1 slpm HF)
Fluorine waste	<ul style="list-style-type: none"> • Up to 90 slpm F₂ during maintenance
Life Safety System (LSS)	<ul style="list-style-type: none"> • Customer facility LSS should be integrated with the generator system • Gas sensors (HF, F₂) must be provided by the customer • Number & location of gas sensors are installation dependent
Data connection >100 mbps	<ul style="list-style-type: none"> • A communication link is required for data acquisition and system monitoring
Floor	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Temperature: 5-35 °C • Elevation: <1500 m
Emergency Machine Off (EMO)	<ul style="list-style-type: none"> • One from fire system, one from gas pad EMO - all volt free contacts

Dimensions

- F80 = 915 mm D x 1524 mm W x 2032 mm H (36" D x 60" W x 80" H)
- Dimensions do not include piping and ductwork.



PLAN VIEW



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