“Uses Plasma Technology Platform already deployed by the US Navy and other demanding customers worldwide.”

Our system, the Steam Plasma Arc - SPARC™, destroys ozone depleting substances and other environmentally noxious chemicals (CFC, HCFC, HFC, PFC) with a **99.99999% efficiency destruction.**

Our system offers:

- **Flexibility**: Processes CFC, HCFC, HFC, halons, PFCs and other halogenated hydrocarbons
- **Compliance**: Far exceeds UNEP TEAP Guidelines destruction regulations
- **Low Operating Cost**: Uses steam as main plasma-forming gas
- **Is Not Incineration**: Process uses Steam Plasma Hydrolysis-low flue gas volume, excellent chemistry for complete destruction (guaranteed > 99.999%; expected > 99.9999%)
- **A Small Physical and Carbon Footprint**: Compact plasma technology runs on electricity, no fossil fuels
- **Carbon Offset** projects in both the regulated and voluntary markets
- **Safety, an Ease to Operate and Maintain**: All hallmarks of PyroGenesis' engineered systems

**Applications:**
- Refrigerant Waste Destruction
- Other Environmentally Noxious Chemicals Destruction

For more information, please contact:

**Business Development Department**
PyroGenesis Canada Inc.
plasma@pyrogenesis.com
T. +1 (514) 937-0002
F. +1 (514) 937-5757
**SPARC™ OVERVIEW**

**Independent Emissions Testing at customer facility**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SPARC-10™</th>
<th>SPARC-50™</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated Capacity (R-12 Basis)</strong></td>
<td>10 kg/h</td>
<td>50 kg/h</td>
</tr>
<tr>
<td><strong>Expected Capacity (R-12 Basis)</strong></td>
<td>12 kg/h</td>
<td>60 kg/h</td>
</tr>
<tr>
<td><strong>Footprint</strong></td>
<td>15 m²</td>
<td>23 m²</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>3.7 m</td>
<td>8.2 m</td>
</tr>
</tbody>
</table>

**SPARC-10™**

- **Rated Capacity (R-12 Basis):** 10 kg/h
- **Expected Capacity (R-12 Basis):** 12 kg/h
- **Footprint:** 15 m²
- **Height:** 3.7 m

**SPARC-50™**

- **Rated Capacity (R-12 Basis):** 50 kg/h
- **Expected Capacity (R-12 Basis):** 60 kg/h
- **Footprint:** 23 m²
- **Height:** 8.2 m

---

**Performance Qualification**

<table>
<thead>
<tr>
<th>Performance Qualification</th>
<th>TEAP Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DRE</strong></td>
<td>&gt; 99.99%</td>
</tr>
<tr>
<td><strong>Dioxins/Furans</strong>*</td>
<td>&lt; 0.2 ng TEQ/Nm³</td>
</tr>
<tr>
<td><strong>HCl/Cl₂</strong>*</td>
<td>&lt; 100 mg/Nm³</td>
</tr>
<tr>
<td><strong>HF</strong>*</td>
<td>&lt; 5mg/Nm³</td>
</tr>
<tr>
<td><strong>Particulates</strong>*</td>
<td>&lt; 50 mg/Nm³</td>
</tr>
<tr>
<td><strong>CO</strong>*</td>
<td>&lt; 100 mg/Nm³</td>
</tr>
</tbody>
</table>

**Guaranteed**

- 50 kg/h
- 60 kg/h

**Expected**

- 50 kg/h
- 60 kg/h

**Ozone Depleting Potential (ODP)**

- R-11: 1.0
- R-12: 1.0
- R-22: 0.055
- R-134a: 0

**Global Warming Potential, GWP 100 yrs**

- R-11: 4,660
- R-12: 10,200
- R-22: 1,760
- R-134a: 1,300

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**PyroGenesis Canada Inc. is a world-renowned high-tech company operating in the field of high temperature processing of materials and waste, which counts the US Navy and the US Air Force amongst its discerning client base.**

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Providing Advanced Plasma Systems to Industries since 1991

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