

A German corporate rooted in the aerospace industry searches for manufacturers in the field of air filters/conditioning, innovative environmental technologies as well as heat exchange and recovery with engineering expertise

## Summary

Profile type	Company's country	POD reference
<b>Business request</b>	<b>Germany</b>	<b>BRDE20220815005</b>
Profile status	Type of partnership	Targeted countries
<b>PUBLISHED</b>	<b>Supplier agreement</b>	<b>• World</b>
Contact Person	Term of validity	Last update
<a href="#">Tim Zebahl</a>	<b>15/08/2022</b> <b>15/08/2023</b>	<b>15/08/2022</b>

## General Information

### Short summary

A corporate from northern Germany rooted in aerospace industry, developed a prototype of an air filter system. Customers of this system will be companies in need of biogenic CO2 for their processes and/ or their carbon reduction strategy. In order to build the small series of these devices the company is looking for manufacturing partners, preferably from the area of air filters/conditioning, innovative environmental technologies as well as heat exchange and recovery.

### Full description

A corporate rooted in aerospace industry from northern Germany developed an air filter system for companies in need of biogenic CO2 for their processes and/ or their carbon reduction strategy.

For a small series production manufacturing partners are sought in the field of

- air filters/conditioning
- innovative environmental technologies
- heat exchange and recovery

Additionally engineering expertise is supposed to be an asset.

The system shall be designed for Air inlet & Air Outlet pressure in the ambient level, and shall be operated fully

automatic with all necessary sensors and control systems. It consists of two radial filters through which air is conveyed using fans. The paths of the air can be controlled by air flaps.

The filters are heated by a heat circuit which consists of a tank, heaters and valves, similar to a regular home heating system with a high degree of insulation. The system is controlled by a controller built into an electrical system that can address all electronic components. At each critical position, a number of sensors (relative humidity, temperature, pressure, flow) are installed and implemented into the software. The dimensions are around 2,6m x 2,7m x 1m. The air outlet has a diameter of 600mm. The total weight shall not exceed 500kg.

The filter system shall be designed in such a way that it is safe for the operator and there is access to all important interfaces. The construction shall be based on components-off-the-shelf (COTS) parts as far as possible. It shall be designed for environmental conditions, according to protection class IP54C and shall contain an Emergency Stop Switch. All Components in the heating cycle shall be resistant to temperatures up to 110°C. All heat transfer elements shall be isolated as far as possible and the Heating System shall be able to be pressurised with a relative pressure of 0,5bar. Further, the system shall contain an interface for a forklift and the structure shall stand on height adjustable, damped feet.

The dimension of the system shall fit in an envelope of:

Height [m]: < 2,60m

Base [m<sup>2</sup>]: < 2,7m<sup>2</sup>

Width [m]: < 2,7m

Companies with engineering expertise are sought for producing ca 26 of these devices in 2023 as a small series

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#### Advantages and innovations

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#### Stage of development

**Lab tested**

#### IPR Status

**IPR applied but not yet granted**

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#### Sustainable Development goals

- **Goal 11: Sustainable Cities and Communities**
- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 13: Climate Action**

## Partner Sought

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#### Expected role of the partner

Manufacturers are sought in the field of air filters/conditioning/ventilation, innovative environmental technologies as well as heat exchange and recovery technologies with engineering expertise.

The partner should be able to produce and deliver the required devices in a small series.

#### Type of partnership

#### Type and size of the partner

### Supplier agreement

- Big company
- SME <=10
- SME 11-49
- SME 50 - 249

## Dissemination

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#### Technology keywords

- **02002012 - Mixing (powder, etc.), separation (sorting, filtering)**
- **04009 - Carbon capture and energy**
- **10002006 - Ecology**
- **10002007 - Environmental Engineering / Technology**
- **010002001 - Air Pollution/Treatment**

#### Targeted countries

- **World**

#### Market keywords

- **08003001 - Machine tools, other metal working equipment (excl. numeric control)**
- **08003007 - Other industrial equipment and machinery**
- **08004001 - Air filters and air purification and monitoring equipment**

#### Sector groups involved

- **Environment**
- **Aeronautics, Space and Dual-Use Technologies**

## Media

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### Images



[Design Layout CAD.PNG](#)

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[Ventilatorsystem.PNG](#)

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