

Dutch company is looking for a solution for preserving filter media for air filters

Summary

Profile type	Company's country	POD reference
Technology request	Netherlands	TRNL20230424007
Profile status	Type of partnership	Targeted countries
PUBLISHED	Commercial agreement with technical assistance Research and development cooperation agreement	• World
Contact Person	Term of validity	Last update
Rita Elste - Tomsone	24 Apr 2023 23 Apr 2024	24 Apr 2023

General Information

Short summary

A Dutch company is looking for solutions to make the waste stream of air filters (for ventilation systems) more sustainable through reuse or bio-based filter media. Partners are sought in the framework of a technical solution.

Full description

This Dutch company group is forming consists of 17 companies in the Netherlands and Belgium designing, installing and maintaining climate systems. The company also has its own production facilities and sells parts for ventilation systems at home and abroad. They are now looking for solutions to make the waste stream of air filters for ventilations systems more sustainable through reuse or bio-based filter media.

Clean air is essential for a healthy indoor climate but also for the operation of the ventilation system. That is why almost every ventilation system contains one or more filters. Over time, these become saturated due to air pollution. It is essential that filters are cleaned regularly and replaced periodically.

One of the companies in the group specialises in manufacturing and selling air filters. These filters are used in many sectors. A fair amount of the filters end up in homes, specifically in the ventilation (MVHR) systems of homes.

In collaboration with the R&D department, they are now developing modular (MVHR) filters where the filter frame and filter material can be separated. That can easily be done without tools or damage so that the resident can do it himself. As a result, only the filter material needs to be disposed of.

Using fewer filters is to the detriment of air quality and the operation of the ventilation system. Cleaning filter media does not (yet) seem like an option to us because of the small size of the filter particles and the damage to the filter media. Regular replacement is, therefore, the only option (in our opinion). Due to the contamination of the filter medium and the fixed connection to the filter frame, the filters are not (yet) recyclable. Separate disposal is also not (yet) possible.

So, firstly, the company is now looking for ways to reuse the current material through either cleaning or recycling. In addition, in recent years, there has been an increasing focus on circular and bio-based materials to reduce the use of fossil resources. Hence, they are also also setting its sights on a sustainable filter medium (preferably biobased). Therefore they are looking for partners to explore this further in the framework of a technical cooperation agreement.

IMPORTANT NOTE: This technology request is part of an innovation challenge and is published on an open innovation platform from the 17th of April 2023 and will close on the 22nd of May 2023. If an organization does express interest in collaboration with this company before closing date, it will be guided through this open innovation platform and will be introduced to its moderator and the company's experts. Mind that posts on this platform are not confidential. Next step is that the company will select the SMEs with whom they would like to cooperate in the development of the solution.

Advantages and innovations

Technical specification or expertise sought

The requested solution comprises an creative and sustainable approach and can be a mix of a variety of expertise's:

- (biobased) material specialists
- Filter producers
- Knowledge of waste recycling

Stage of development

Sustainable Development goals

- **Goal 12: Responsible Consumption and Production**
- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 11: Sustainable Cities and Communities**

IPR Status

Partner Sought

Expected role of the partner

The requested solution comprises an creative and sustainable approach and can be a mix of a variety of expertise's:

- Advising on which materials may be suitable as filter media;
- Thinking along on production methods to make (raw) biobased material suitable for air filters;
- Set up the process and business model for the separate collection, cleaning, and/or recycling of filter material;
- Further testing the performance of a potential biobased filter medium.

The company is looking for partners to address this issue with. These can be partners across the whole filter spectrum. From the buyer to the producer, from the supplier to the recycler.

Interduct is open to all ideas, ripe and green (TRL1-9). Both fundamental ideas for air filters and turnkey solutions for recycling and filter materials can help Interduct and its partners tackle this problem.

They are not looking for market players to use this idea just for their own gain. The aim is to make the sector more sustainable together.

Type of partnership

Commercial agreement with technical assistance

Research and development cooperation agreement

Type and size of the partner

• **SME 11-49**

• **R&D Institution**

• **SME 50 - 249**

Dissemination

Technology keywords

• **10003004 - Recycling, Recovery**

Targeted countries

• **World**

Market keywords

• **08004001 - Air filters and air purification and monitoring equipment**

• **08001019 - Speciality/performance chemicals**

Sector groups involved