

An Israeli novel dehumidifier and heater for cold climate greenhouses

Summary

Profile type	Company's country	POD reference
Technology offer	Israel	TOIL20230726022
Profile status	Type of partnership	Targeted countries
PUBLISHED	Investment agreement Commercial agreement with technical assistance	• World
Contact Person	Term of validity	Last update
Rita ELSTE - TOMSONE	26 Jul 2023 25 Jul 2024	26 Jul 2023

General Information

Short summary

An Israeli manufacturer specializes in designs, develops and manufactures air conditioning and dehumidification systems. It has developed and manufactured a ventilated hear converter (VLHC), a patented, field tested dehumidification system for cold climate greenhouses. It solves humidity elated problems, including yield-damaging botrytis, while lowering energy for heating and fungicide expenses. The company is seeking partnership in order to offer professional services and technical support.

Full description

An Israeli manufacturer of air conditioning and dehumidification systems has developed A revolutionary patented, field-tested dehumidification system for cold-climate greenhouses. It solves humidity-related problems, including yield-damaging botrytis, while actually reducing energy and fungicide expenses. The VLHC takes in humid air from inside the greenhouse, optionally along with fresh air. It converts water vapor into water and heat by blowing the air through a matrix of desiccant-filled elements in a compact cooling tower. In this process, vapor condensation naturally warms up the desiccant, and this heat is released by the unit into the greenhouse as warm, dry air. The VLHC thus efficiently converts the latent heat stored in the water vapor to usable heat, a welcome by-product in cold-climate greenhouses dramatically reducing energy consumption. In addition to helping maintain healthy and high-volume yields, the VLHC dehumidifier also reduces the need for

intensive fungicide use - saving money and helping conventional and organic growers conform to local and international regulations.

Furthermore, the VLHC cost-effectively cleans and filters greenhouse air, without expelling costly CO₂-enriched air - reducing the need for external cold air input - further lowering heating expenses. Seeking partnership in order to offer professional services and technical support.

Advantages and innovations

Innovative aspects

A new concept and system, which gathers air humidity and converts it into energy.

Main advantages:

- Prevents botrytis without chemicals
- Is environmentally-friendly,
- Saves 50-70% energy
- Reduces expenses to prevent from CO₂ enrichment
- Eliminates humidity-related problems in heated greenhouses
- Solves problems of yield-damaging botrytis, while lowering energy for heating and fungicide expenses.

Technical specification or expertise sought

Stage of development

Already on the market

IPR Status

IPR granted

Sustainable Development goals

- **Goal 3: Good Health and Well-being**

Partner Sought

Expected role of the partner

Type of partner sought: industry

- Specific area of activity of the partner: Greenhouse manufacturer and integrator

- Task to be performed by the partner sought: Manufacturing, Integrating and maintain in greenhouses

Type of partnership

Investment agreement

Commercial agreement with technical assistance

Type and size of the partner

- **SME 50 - 249**

Dissemination

Technology keywords

- **07001001 - Agriculture Machinery / Technology**
- **02009011 - Air pollution control for cars and transport**

Targeted countries

- **World**

Market keywords

- **08005 - Other Industrial Products (not elsewhere classified)**

Sector groups involved