

# Advanced solar cooling system



## Description

This is an advanced solar cooling system (Solar-GAX cycle) consisting of an absorption heat pump with heat exchange air-cooled and assisted by a source of hybrid power, natural gas-solar power. The system uses ammonia-water as the working fluid. The Solar-GAX cycle absorption system provides the highest coefficient of performance (COP) than any other single effect cycle.

## Application

The system was modeled, simulated, designed, constructed and validated experimentally with a pilot unit of 10.6 kW (3 ton) cooling. A COP of 0.86 was obtained in cooling mode, while a COP of 1.86 was obtained in heating mode.

## Stage of Development

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## IP Status

Mexican patent No. 252,072

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Renewable  
Energies

## Market potential

In 2013 the production value of the Mexican market of air conditioning devices and systems reached US 200 million, with approximately 75,000 sold units.

## Transferring conditions

- ✓ Technological development agreement (optional)
- ✓ Licensing (includes front payment and royalties)



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