

Anti-hail System

Grupo SPAG



The future of agriculture

The protection of the environment is the most important aspect of the whole design of the Anti-Hail System. By using physics in the structure of the hail, the natural thawing cycle of the hail is accelerated. Respecting at all times the hydrological cycle of the clouds.

General technical data

Protection	Hail	Height	6 Metres	Cone manufacture	Galvanised steel
Surface	80 Hectáreas	Diameter	0,80 m	Monitoring	Web application
Guarantee	1 año	Weight	1.600 Kg	automatic start	Via radar

Technical data

Conical element

Its hot-dip galvanised steel construction with a specific conical shape allows for the expansion of the waves.

Containment housing

Functional structure with the different elements for the proper functioning of the system.

Photovoltaic energy

Providing clean energy to every system, always taking care of the planet.

Acetylene gas rack

Essential component for wave generation, non-polluting and harmless.



Automation and monitoring

The artificial intelligence detects the cloud with hail and automatically goes into operation. Once the risk is over, the system automatically switches itself off, turns off on its own.

Management and control system

The Hardware is in charge of controlling the entire operating cycle of the equipment, ensuring all the variables and security for proper protection.

Combustion chamber

An essential part of the system where the shock wave is generated in a controlled manner at a given power and frequency.

Grupo SPAG

A technology company specialising in protection against hail and frost damage.

Contact details

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Technical characteristics of the system

General sensors

- ✓ Temperature sensor
- ✓ Pressure sensor

Solar power system

- ✓ Solar charger : MPPT 10A 24V
- ✓ Solar panel:33V 10A
- ✓ Electric Battery 24V XXXA

Communications

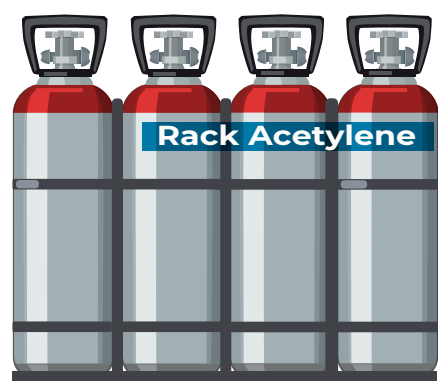
- ✓ Router 4G
- ✓ Sending information:
 - ✓ By industrial - IOT
 - ✓ Frequency : 15 minutes

Technical data acetylene gas

Type of Packaging	Geometric capacity (m³)	Outer diameter (mm)	Length (mm)	Tara (kg)	Gas capacity(Kg)	Filling Pressure (bar a 15°)
X33S	33	229	970	61,4	6	15
X40S	40	229	1.210	69,5	7	15
X50S	50	229	1.550	73,2	9	15
BL12X40S	480	1.200X880X1.620 ⁽²⁾		1.070	84	15
BL12X50S	600	1.250X930X1.750 ⁽²⁾		1.090	108	15

Especificaciones de calidades

Calidad	Pureza
Acetileno industrial	>99.5%



Rack Acetylene

The supply of acetylene (c22H2) is marketed in a rack of 12 cylinders joined together.



Acetylene bottle

individual acetylene gas bottle, this format is not supplied.

Ignition system

- ✓ Excitation voltage : 24V Maximum
- ✓ load voltage: 32V
- ✓ Maximum intensity : 6A

Data logging in SD

- ✓ SD 2GB
- ✓ Recording every 15 min with system at rest.
- ✓ Logging every 1 minute with system running.
- ✓ Logging of events and alarms when they occur.
 - ✓ System status.
 - ✓ Bottle pressure.
 - ✓ Operating pressure.
 - ✓ Combustion chamber temperature
 - ✓ State of solenoid valves and ignition
 - ✓ STOP mushroom status

Sending and receiving push notifications

- ✓ Sending and receiving SMS with Modern GPRS
- ✓ Commissioning via APP Mobile
- ✓ Push notifications with event logging

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