

# Precisely control the weather

and your field, orchard and vineyards crops!



## Choose from 3 lower cost automatic retractable covering systems!

### **Auto-Dry™ Rain Shelter System**

The lowest cost automated rain shelter system in the world that can cover hectares of crops such as cherries, berries and table grapes in minutes to protect plants from rain and hail. Advance or delay harvests to hit the high price windows by manipulating temperatures.



### **Flat Roof Cooling houses or Net houses**

The lowest cost motorized roof system to manage temperatures and / or insects for rain tolerant crops. Uses the longest lasting roof coverings that are wind and hail resistant.



### **Flat Roof + Auto-Dry™**

The best of both worlds for crops such as vegetables and berries. The Flat Roof is installed above the Auto-Dry to provide efficient cooling, cold protection, wind protection, insect control, or blackout.

The Auto-Dry™ system provides rain protection and keeps heat closer to plants during cold conditions to maximize production in the winter.



**You can increase your profits by 50%-200% using the automatic retractable coverings to precisely control the climate to:**

- Advance or delay the harvest to hit peak market prices
- Optimize plant temperatures and transpiration to increase fruit size, firmness and brix
- Improve pollination by regulating temperature and humidity levels
- Increase overall plant health
- Help reduce disease and insect pressure
- Reduce irrigation requirements by 50%-70% in hot climates compared to outdoor crops
- Reduce chemical applications and residues



## **Auto-Dry™ motorized rain shelter systems**

**For seasonal protection from rain, hail, wind, cold protection and occasional sun protection**



One motor can close 0.8 ha or 2 acres of roofs in 4-6 minutes allowing for rapid protection of crops.



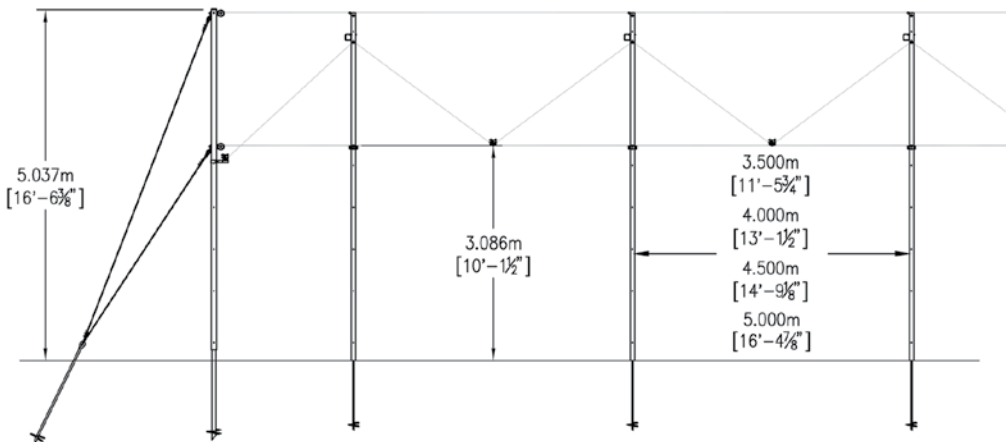
AUTO-DRY™ VIDEO



Standard rain shelter house design allows full coverage of roof area but then can not support a hanging crop.



Option to extend the first and last house so that a driveway can be located inside the house. It is not possible to cover roof area adjacent to the outside wall.





## Auto-Dry™ details

The optimal combination of conventional rain shelter and Cravo retractable roof technology



The unique drive design powers the roof covering at the peak and valley to ensure optimal closure of the roof covering. ( United States Patent Application No. 18/446,297, WO 2024/031185. )

Long service life since the drive cables are stainless steel and coated galvanized cable. The drive shaft is supported by heavy duty bearings.



The tight connection at the peak helps minimize the entry of rain, and a tight closure at the valley provides enhanced heat retention allowing you to advance the harvest by maintaining warmer temperatures in the spring and providing a greater degree of frost protection.



Retracting the covers before damaging winds arrive will help prevent damage to the covering or structure.



Tying up the retracted covers seasonally when not in use will help extend their life.



The structure can be installed using concrete or screw in augers. To better stabilize the drive system, concrete is highly recommended for the gable bracing anchors, especially in poor soil conditions.



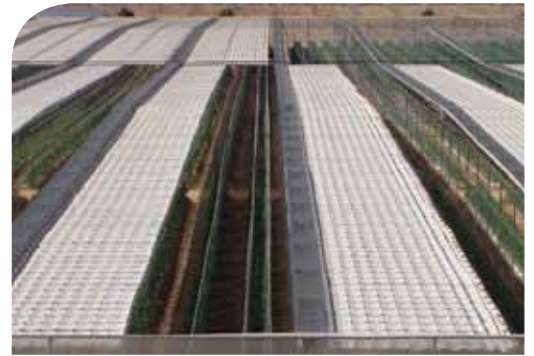
Interior posts are designed to be tilted up onto augers or stubs. Corner posts and cable braces at the ends of the houses must be set into concrete.





## Flat Roof houses

The lowest cost motorized system to manage temperatures, strong winds and insects for rain tolerant crops



### Automatic protection options:

heat, cold, hail, impact of a hard rain, wind, insects, or day length



FLAT ROOF VIDEO

One motor closes almost one hectare or 2 acres in 4-6 minutes and uses only 3-5 kWh of electricity per hectare per day!



Extremely large areas can be covered cost effectively!  
45 hectare (115 acre) retractable cooling house - below.

A 10 hectare or 25 acre installation requires only twelve roof motors and 16 kW of power to close the entire roof in only 4-6 minutes, making it feasible to power remote fields or orchards using generators or solar panels.



It is easy to use mechanical sprayers in the large open growing areas.



Cravo suspended roof coverings have proven to be the longest lasting and most wind and hail resistant retractable roof coverings in the world, with an average life of 8-12 years!

5m or 6m tall structures are available. 6m is excellent for cooling in hot conditions and for tall crops.

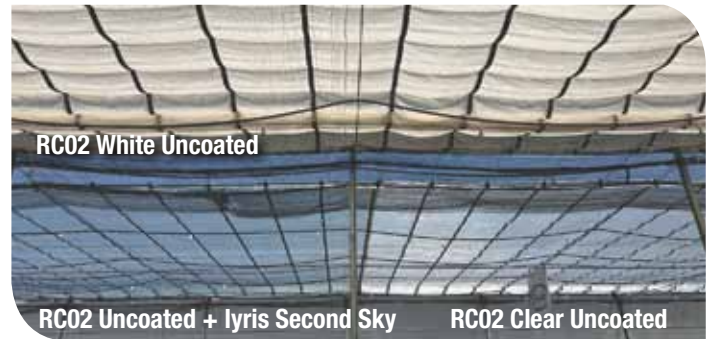




## Choose your Flat Roof covering

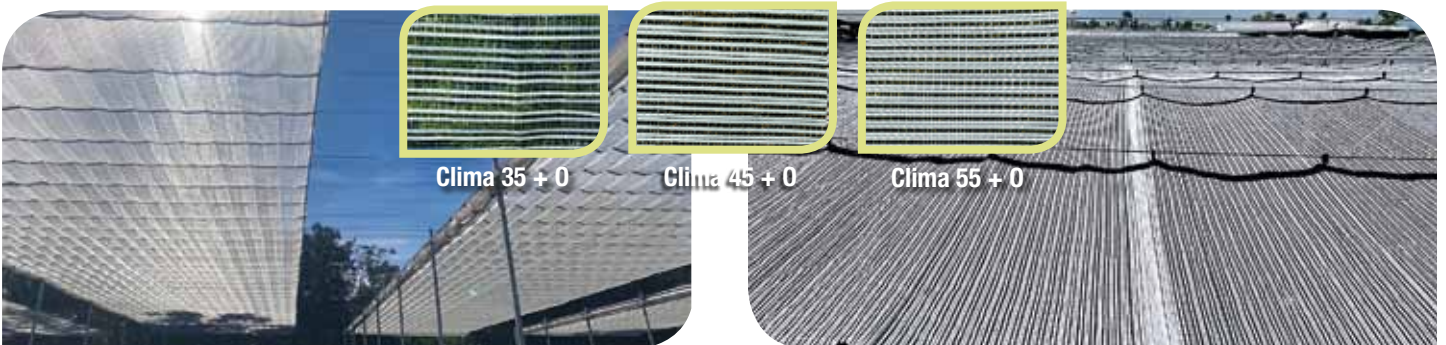
Cooling, cold protection, wind protection, hail protection

Closed white cooling roofs are used in arid climates where it is critical to protect crops from high temperatures with low humidity and cool night temperatures.



COVERING NAME	Shade %	Advance harvests	Ideal for cooling in hot dry climates	Ideal for cooling in tropical climates	Protects from frost, dew, dust
RC02 Clear Uncoated	20%	Yes	No	No	Yes
RC02 Uncoated + Iyris Second Sky	30%	Yes	Yes	No	Yes
RC02 White Uncoated	40%	No	Yes	No	Yes

Open white cooling roofs are typically used in tropical locations where humidity is excessive.



COVERING NAME	Shade %	Advance harvests	Ideal for cooling in hot dry climates	Ideal for cooling in tropical climates	Protects from frost, dew, dust
Clima 35 + 0	35%	No	Yes	Yes	No
Clima 45 + 0	45%	No	Yes	Yes	No
Clima 55 + 0	55%	No	Yes	Yes	No

Retractable insect net for improving climates for seed production, especially after rains and high humidity.

Retractable blackout for day length control plus retractable cooling roof.



## Upgrades to the Flat Roof house

### 1. Increase strength of the roof system for hail.

Roof suspension wires are positioned on 100cm centers but can be spaced on 80cm centers if significant hail accumulation is possible

### 2. Roof canopy

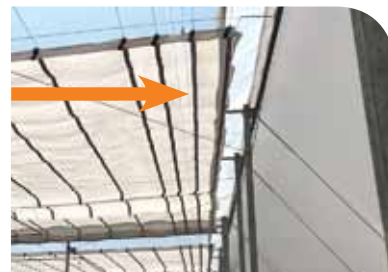
To help extend the life of the Flat Roof roof covering, an optional black shade canopy can be installed above the retracted roof covering to reduce the UV exposure.



### 3. Seals around the perimeter and between roof zones.

If it is desirable to have maximum heat retention when the roofs are closed, seals to close the gaps between the roof and the perimeter walls and where adjacent roof zones meet can be supplied.

The seals will help restrict the entry of insects but do not create a perfect closure.



### 4. Install stationary bird net below the roof for berry crops



### 5. Install stationary insect net below the roof with crop support wires for vine crops



FLAT ROOF &  
AUTO DRY VIDEO

## The best of both worlds!

**Install Auto-Dry™ under a flat roof for rain protection,  
additional temperature control and quick reaction to hurricanes!**

Expose crops to the complete natural outdoor environment when conditions are ideal. Retract both roofs in minutes if a hurricane is about to arrive!

Install a cooling curtain above the Auto-Dry™ for sensitive crops like berries or insect net for vegetable crops. The Auto-Dry can provide additional sun protection, heat retention and rain protection.





## Choose your Flat Roof house wall covering

**Stationary insect net**



**Stationary RC02 White Uncoated**



**Roll up to grade**

**Roll up to kneewall**

**Roll up with insect net**



### House Specifications

	Auto-Dry™	Flat Roof
Maximum wind speed when the roof and walls are closed	100 kph (60 mph)	110 kph (70 mph)
Post to post dimension	3.5 m, 4 m, 4.5 m, 5 m (11.5 ft, 13.1 ft, 14.75 ft, 16.4 ft)	4 m (13.1 ft)
Roof travel distance	6 m, 8 m, 9.6 m, 10 m (19.68 ft, 26.24 ft, 31.5 ft, 32.8 ft)	8 m, 9.6 m (26.24 ft, 31.5 ft)
Height to top of post	5 m (16.4 ft)	5 m, 6 m (16.4 ft, 19.68 ft)
Height to top of post for Flat Roof + Auto-Dry™ or second retractable Flat Roof below	-	6 m (19.68 ft)
Area powered by one motor	9,300 m <sup>2</sup> (100,000 ft <sup>2</sup> )	9,300 m <sup>2</sup> (100,000 ft <sup>2</sup> )
Roof travel per minute	1.2 m (4 ft)	1.2 m (4 ft)
Maximum length from drive shaft to pulley	86.4 m (283 ft)	86.4 m (283 ft)

If you need rain protection and a gutter system to collect rainwater, then the retractable X-Frame is the lowest cost solution



# Major mechanical advantages of the **Flat Roof+ Auto-Dry™** suspended retractable roof systems

1. The roof systems can be operated during 50 kph winds, so an environmental computer can move the roofs after adverse conditions are sensed by the weather station.
2. One motor can power up to 9,300m<sup>2</sup> of roofs, helping to minimize the cost for electrical wiring and back up generators. Maintenance on motors is minimal since the heavy duty gear motors have a typical useful life of 20+ years.



3. Rain shelter coverings typically last 3-6 years depending on wind exposure. The Flat Roof system can be closed to protect the Auto-Dry™ coverings from high winds.



## Chose your desired options

	Select		Select
<b>Auto-Dry™ motorized rain shelter</b>		<b>Flat Roof house options</b>	
Stationary bird / hail net or shade cloth		Roof Canopy	
		Add roof suspension wires for hail	
<b>Flat Roof House</b>		Perimeter seals for better heat retention	
Height: 5m, 6m (16.4 ft, 19.68 ft)		Stationary bird net support inside	
Roof covering		Stationery insect net inside	
		Crop support wires (specify quantity/ house)	
<b>Flat Roof Wall coverings</b>		Misting or fog line support wires (3/ house)	
Insect net, Stationary RC02 White uncoated, motorized roll up curtain		Auto-Dry™ system without crop support	
		Auto-Dry™ system with crop support	

**Do not settle for simply protecting profits  
against weather related loses.**

*Contact Cravo to find out how you can use Auto-Dry™  
and Flat Roof to increase your profits and revenues  
50%-200% and then automatically protect them  
from extreme weather conditions!*



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