

## INTRODUCTION

SOLARTIVA presents its **New Solar Tracker, which can be used on the roofs of industrial buildings**. The innovative product, which was in development for a year and a half, is unique to the market. The 2 axis solar tracker, which uses just one motor, is modular and can move 20 trackers of 4 panels each. This configuration reduces the maintenance and makes it possible to adapt it to any roof or land installation.

The result of our R&D is a solar tracker able to give higher profitability to the capital invested with a lower customer investment comparing with the fixed installations due to its 33% extra energy production.

The SOLARTIVA tracking system is a product that should definitely be considered from now on due to its low cost, 33% productivity and efficiency.

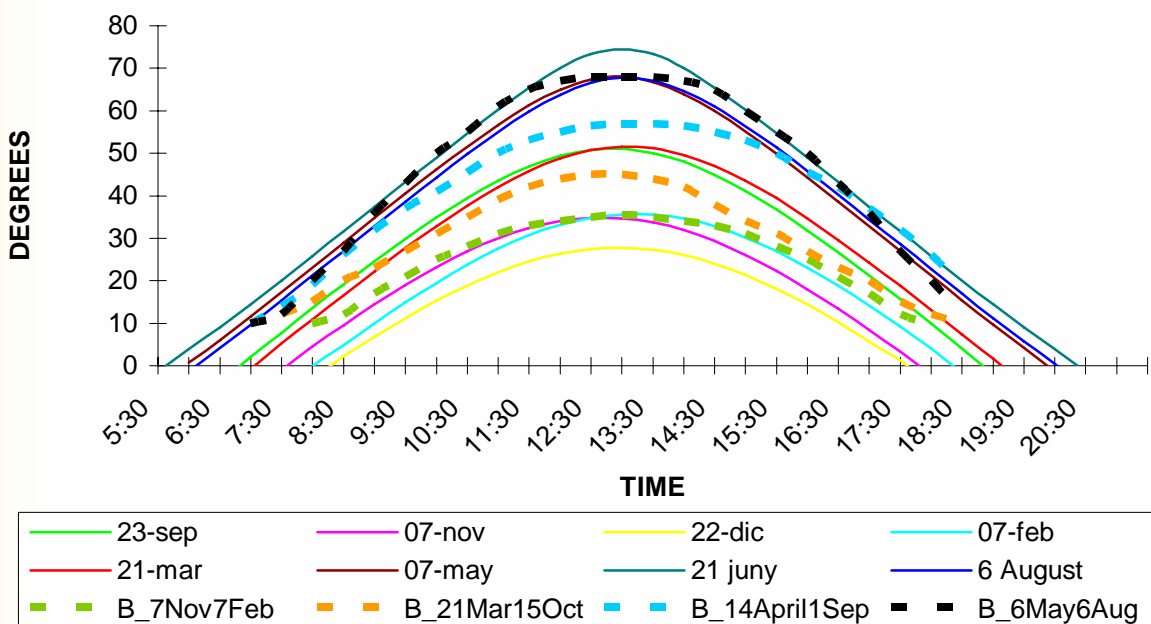
## DESCRIPTION

The SOLARTIVA solar tracker is available in two options and it is designed to support any standard photovoltaic panel in the market. The 3 panels solar tracker SG3 and the 4 panels solar tracker SG4 have a maximum capacity of 6 square meters and 8 square meters respectively.

Apart from using mechanics for the transmission, it also uses mechanics to move the zenith axis, achieving a 2 axis solar tracking system with just one motor.

In the following graph we illustrate the 4 paths followed by the SOLARTIVA solar tracker. All of them are placed inside the path followed by the sun throughout the year. Adjusting the vertical arm we can achieve a better approach to tracking through the different seasonal sun's paths.

### SOLAR TRACKER PATH



## MAINTENANCE

SOLARTIVA requires minimum maintenance due to the simplicity, light design and the small number of pieces of the tracker. All the mechanical components are auto lubricated and present a useful life 10 times higher than its work life, therefore wear or breaking is highly unlikely.

We use just one motor for a maximum of 80 panels and one unique control unit per installation so the number of pieces for maintenance is reduced considerably.

There are two options of maintenance:

1. **Annual positioning of the arm** with just the clearing of the solar panels. We have a 2 axis solar tracking system (see graph)
2. **Change the arm position and the arm length where selected**, then an improvement of the solar tracking is achieved getting a higher annual production. In this way, the second motor is not needed for the 2 axes, simplifying in a considerable way the mechanical design and the consumed power of the solar tracker.

## ADVANTAGE

- ❖ The technology and the principles beside the solar tracking system developed by SOLARTIVA, clearly achieve a remarkable reduction in the maintenance of the product.
- ❖ Use of mechanical transmission to reduce a considerable number of motors in the installation; therefore we get to reduce the total cost, the maintenance cost and the power consumption.
- ❖ Use of the mechanics to get the automation of the second axis to eliminate one motor per solar tracker.
- ❖ Use of one control unit able to move 200 tracker (10 modules – 800 panels)
- ❖ The control unit works with astronomic calculations and with one motor with an encoder, we get a positioning of the tracker by +/-1° accuracy.
- ❖ The lack of civil construction in roofing and fields means that the installations and assembly of the trackers can be straightforward and fast, as well as the division of the tracker in just three peaces with just three screws.

## SPECIFICATIONS

TECHNICAL SPECIFICATIONS		
Model	SG3	SG4
Modul configuration ( row*columns )	1*3	1*4
Maximum Modul area ( m2 )	6m2	8m2
Tracker dimensions (wide*high*depth) meters	3,10*2,30*0,5m	4,15*2,3*0,5
Trackers for motor	24	20
Maximun serial number of trackers	6	5
Azimuthal turn angle	180°	
Variation of Cenital angle	50°	
Solar Tracker Weigh ( kg )	80	95
Motor	550W Trifasic Motor controled by a driver	
Traking System	Astronomic Tracking System	
Control Unit	Wind speed control sensor	
	Safety Control position	
	Manual / Automatic Function	