

**QUICK INSTALLATION**



**TSP SAFETY SYSTEM,  
EASY SAFETY HORIZONTAL  
POSITION FOR MAINTENANCE**



**HIGH TECH SOFTWARE  
AND PLATFORM**



**HIGH RISE SYSTEM  
FOR BIFACIAL PANELS**



**TRACKING SYSTEM**

Linear Single Axis  
East - West tilt system

**RAPTOR X-1**  
**SINGLE AXIS SOLAR TRACKER**

## MAIN FEATURES

**TRACKING SYSTEM:**

Linear Single Axis tilt up to +/- 55°

**TRACKING CONTROL:**

NREL astronomical algorithm

**TRACKER:**

(2P) Double row portrait installation, supports up to 80 PV modules

**ACCURATE:**

+/- 0.1 degree

**TERRAIN SLOPE:**

+/- 6 degree (adjustable for more)

**MATERIAL:**

Steel S235 + HDG and Aluminum

**WEIGHT:**

up to 50 ton/MW (without PV modules)

**HEIGHT:**

Up to 2,50 m in horizontal position

**CENTRAL AXIS:**

Box profile SHS 120 steel S235+HDG

**PURLINGS :**

Box profile RHS 80 steel S235 + HDG

**COLUMNS:**

IPE 140 steel S235 + HDG

**ACCESSORIES:**

Steel plates S235 + HDG

**BOLTS:**

Galvanized Steel bolts 8.8

**CLAMPS:**

Aluminum clamps and inox screws

**DAMPER:**

Solar Damper 1.000N, 2 Damper to each row

**ANEMOMETER:**

3 blade Industry standard version

**COMMUNICATION:**

Ethernet port with Modbus TCP interface

**COMPATIBILITY:**

Any type of PV modules, high rise installation system for bifacial PV modules

**POSITIONING:**

3D Inclinometer (no additional sensors needed)

The structural design of the STS tracking system meet the requirements of EUROCODE, DIN, EN as well as other international standards

## SERVICE PLANS MAINTENANCE

**ONSITE & REMOTE :**

Advisory, Operation, Tracker Maintenance & Monitoring System

## LINEAR DRIVES

**VOLTAGE OF MOTOR:**

24 V DC

**FORCE:**

24.000N, static=70.000N

**CERTIFICATE:**

ISO 1401, ISO 9001, CE test report, EMC test report

**IP RATING:**

IP66 test report

## ELECTRONICS

**CONTROLLER :**

Microprocessor controllers and Internet communication technologies Master and Slave controllers 12-24VDC - 0,4/1,0W with Modbus/RS485 or WIFI interface

**INCLINOMETERS:**

3D MEMS inclinometer sensors 5VDC

**OBSERVE-X MONITORING SYSTEM:**

Integrated platform for initialization and remote worldwide control and monitoring

**ROHS  
COMPLIANT**

**ISO 9001**

## WARRANTY

**CONSTRUCTION:**

10 years (extendable)

**ELECTRONICS:**

5 years (extendable)

**MOTORS AND DAMPERS:**

5 years (extendable)

## WEATHER

**WIND RESISTANCE:**

up to 33m/s storm position ( up to 17m/s operational) Adjustable to local requirements

**WEATHER CONDITIONS CLEAN/STORM:**

Automatic detection, horizontal position process (adjustable)

**ADDITIONAL:**

Snow and Hail sensors

## STEEL STRUCTURE

The steel production EN ISO 9001 certifies quality assurance system and provides full traceability of all products and processes, while its environmental management and health & safety systems are EN ISO 14001 and certified respectively.

## OTHER FEATURES

**BACKTRACKING:**

Standard (Adjustable)

**CLEAN MODE:**

Standard (Adjustable)

**REMOTE MONITORING :**

Optional

**BIFACIAL PANELS:**

Standard High rise

**IRRADIATION,  
SNOW AND HAIL SENSORS:**

Optional

**LOCAL ACCESS:**

Standard