

## SOLARBEAM™

Powerful. Versatile. Affordable.

|  |                           |                                      |   |   |
|--|---------------------------|--------------------------------------|---|---|
| <b>28.5kW</b><br>FOCAL POINT POWER<br>97,246 BTU | <b>1000X</b><br>SUN FOCUS | <b>270°C</b><br>FLUID TEMP<br>518° F | <b>800°C</b><br>DIRECT TEMP<br>1,472° F | <b>75 KPH</b><br>TRACKING SPEED<br>46 MPH |
|--|---------------------------|--------------------------------------|---|---|

## Lowest Cost per Watt CSP dish technology for OEM developers and installers of thermal & electricity systems

### Why Use SolarBeam 7M in Your Project?

The SolarBeam 7M parabolic concentrator design and low cost manufacturing is the key to the unmatched efficiency and lowest Cost per Watt energy production.

With an even light pattern and solar concentration of 1000x suns, OEM developers and solar installers can utilize the most advanced CSP system available for thermal & electricity production\*.

### Features

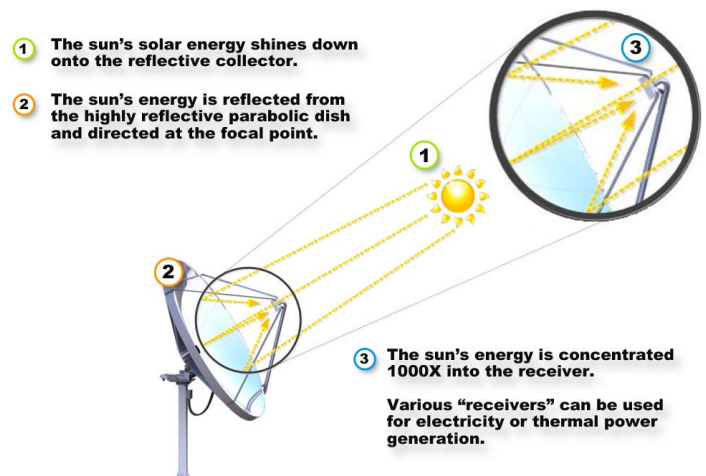
- Operates in Northern and Southern Hemisphere
- Works in all latitudes
- Horizontal tracking: 360 degrees
- Vertical tracking: 0 to 115 degrees
- System error monitoring
- Temperature set point control
- SCADA system integration

\* Requires third-party electricity generation equipment

### How the SolarBeam Works

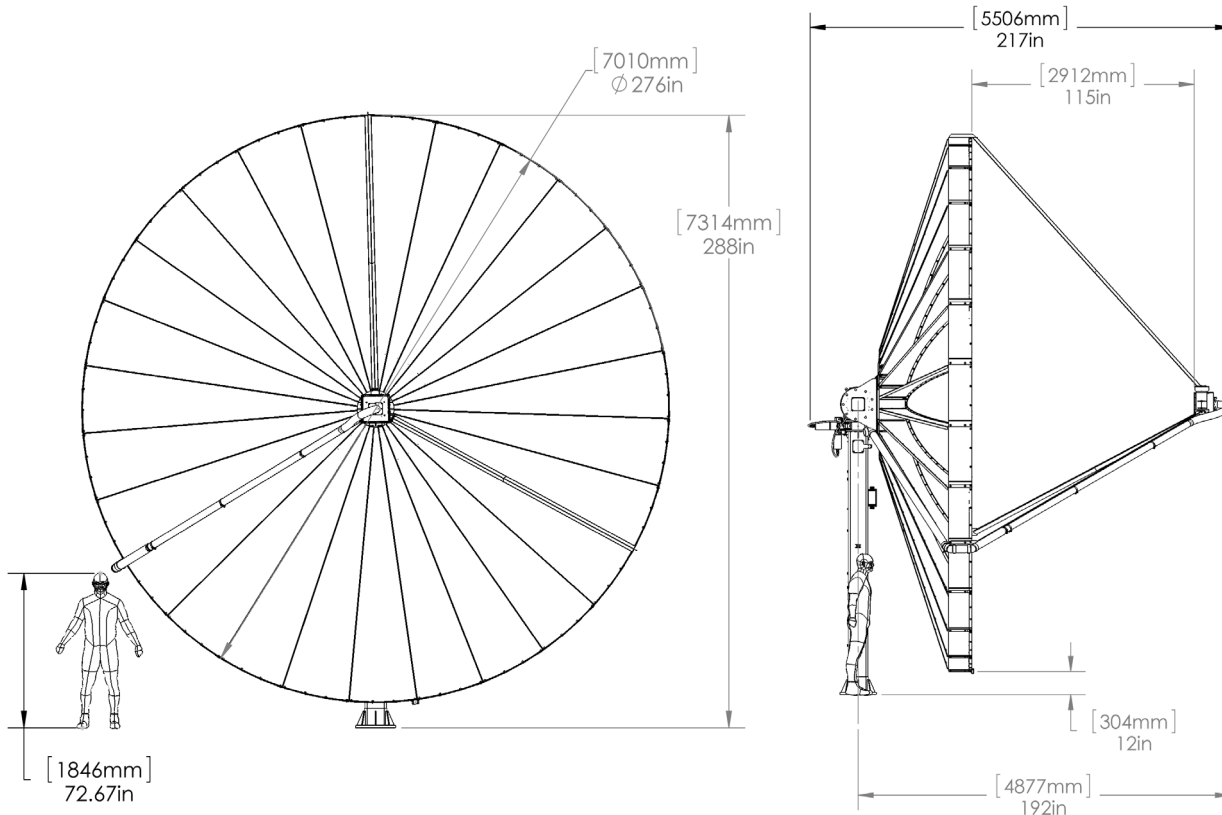
The SolarBeam 7M parabolic concentrator continuously tracks the sun throughout the day using a dual axis tracker enabling the system to harvest up to 25 kW (85,303 BTU) per hour of thermal fluid energy from early sunrise to late sunset.

Regardless of the season or latitude, the SolarBeam 7M maintains a 0.1 degree sun lock accuracy.



### Applications

- Industrial Process Heating
- Solar Water Desalination
- Solar Enhanced Oil Recovery
- Electricity Production\*



| Power                                       |  |
|---|--|
| Instantaneous Focal Point Power             | 28.5 kW (97,246 BTU) per hour                  |
| Thermal Fluid Power                         | 25 kW (85,303 BTU) per hour                    |
| Concentration Ratio                         | 1000X @ 18cm (7") light pattern                |
| Max Direct Temperature                      | 800° C   |
| Maximum Fluid Temp.                         | 270° C   |
| Operating Efficiency                        | 74%  |
| Dimension & Weights                         |  |
| Reflector Diameter                          | 7 m  |
| Gross Area of Collector                     | 38.5 m <sup>2</sup>                            |
| Focal Point Distance                        | 3.8 m  |
| Mounting Post                               | 3.5 m  |
| Collector Weight                            | 476 kg   |
| Total Weight                                | 1083 kg  |
| Absorber Dimension (for fluid heating only) |  |
| Absorber Size                               | 25.4cm X 25.4cm (10" X 10")                    |
| Gross Area of Absorber                      | 0.0645 m <sup>2</sup> (99.72 in <sup>2</sup> ) |
| Volume of Fluid in Absorber                 | 550 mL   |
| SolarBeam Parameters                        |  |
| Tracking                                    | Dual Axis                                      |
| Max Operating Pressure                      | As per customer specification                  |
| AC Power Interruption Protection            | Survival (115° Vertical Axis)                  |
| Heat Transfer Fluid                         | As per customer specification                  |
| Passed to Frost Level 2                     | - 25° C (- 13° F)                              |
| Operating Parameters                        |  |
| Mechanical & Electrical Temperatures        | -30° to +70° C (-4° to 158 F)                  |
| Wind Speed (Tracking)                       | 75 km/hour                                     |
| Wind Speed (Safety stow)                    | 160 km/hour                                    |
| Paint                                       |  |
| Color                                       | Stone Grey                                     |
| Environment                                 | ISO 12944-C5I                                  |

| SolarBeam Power Consumption |                               |
|-----------------------------|-------------------------------|
| Input Voltage               | 24 VDC                        |
| Vertical Axis Motor         | 48W, 10A                      |
| Horizontal Axis Motor       | 48W, 10A                      |
| Tracking Power Consumption  | 100 W                         |
| Enclosure Ratings           |                               |
| Cable Assembly              | IP66                          |
| Controller Interface        | IP66 and NEMA 4               |
| Protection Features         |                               |
| Power Outage                | Safety stow                   |
| Over Temperature Safety     | Safety stow                   |
| Wind Speed Protection       | Safety stow                   |
| Horizontal Monitor Axis     | Home Position                 |
| Vertical Monitor Axis       | Home Position                 |
| Pressure Loss               | Safety stow                   |
| Sensor Failure              | Safety stow                   |
| SolarBeam Controller        |                               |
| Voltage                     | 120 /220 V                    |
| Current                     | 5A                            |
| Analog Inputs               | 4x / 0-10VDC                  |
| Pulse Inputs                | 6x                            |
| Output Voltage              | 24 VDC                        |
| Frequency                   | 50/60 Hz                      |
| Communication               | Ethernet                      |
| Dimension                   | 51 cm x 40.64 cm x 17.78 cm   |
| Enclosure Rating            | IP 66 (NEMA 4X)               |
| Electrical Rating           | QPS (UL/CSA Equivalent) CE    |
| Operating Temperature       | -30° to +70° C (-4° to 158 F) |