



Megawatt Solutions Pvt. Ltd. is an approved manufacturer and supplier of concentrated solar thermal systems by ministry of new & renewable energy (MNRE), Government of India.

MWS Solar Field™

MWS Solar Field™ consists of network of interconnected MWS Solar Dish Concentrators which deliver heat energy. MWS Dishes have automated two axis Sun-Tracking mechanism to ensure highest thermal efficiency & energy output from reflector. MWS Solar Field™ can be scaled from one to hundreds of dishes as per requirement, and can be retrofitted to existing industrial systems. MWS Solar Field is 100% indigenous solution, made in India.

Heating • Cooling • Cooking • Drying • Power Generation



Working Principle of MWS Solar Field

1. MWS Paraboloid Dish Concentrator consists of reflectors of solar grade mirrors, a cavity receiver and two-axis solar tracking system
2. The incoming radiation gets concentrated by reflectors on to the receivers which carries working fluids such as hot water, thermic oil, etc.
3. Energy output from each receiver is routed by a piping system for integration into an industrial process
4. Fully automated double axis tracking system ensures maximum energy collection and highest energy yield to displace maximum fuel consumption

MWS Solar Dish Specifications

Dish Models	M95	M55
Dish Area	95 m ²	55 m ²
Solar Tracking	2 Axis Automated	2 Axis Automated
Dish Diameter	11 Mtr.	8 Mtr.
Dead Weight	3 Tons	1.5 Tons
Peak Thermal Rating for each Dish	40,000 Kcals/hour 3 Lakh kCals/day*	20,000 Kcals/hour 1.5 Lakh kCals/day*
Operating Temperature	400°C	400°C
Ground Clearance Required per Dish	14 m (length) X 14 m (width)	10 m (length) X 10 m (width)



Equivalent energy output from one M95 Dish

Fuel Type	Fuel Saved per day by one M95 Dish*	Per unit Fuel Cost (Rs.)	Cost Savings per day (Rs.)
Electricity	290 kWh	8	2,326
Diesel	26 Ltr.	52	1,354
Furnace Oil	25 Ltr.	26	676
Coal	62.5 Kg	8	500
LPG/Natural Gas	35 Kg	60	2,100

* Indicative values only



Reduce your carbon emission



System Cost covered in less than 3 years



Can be retrofitted to any existing system



Fully automated systems



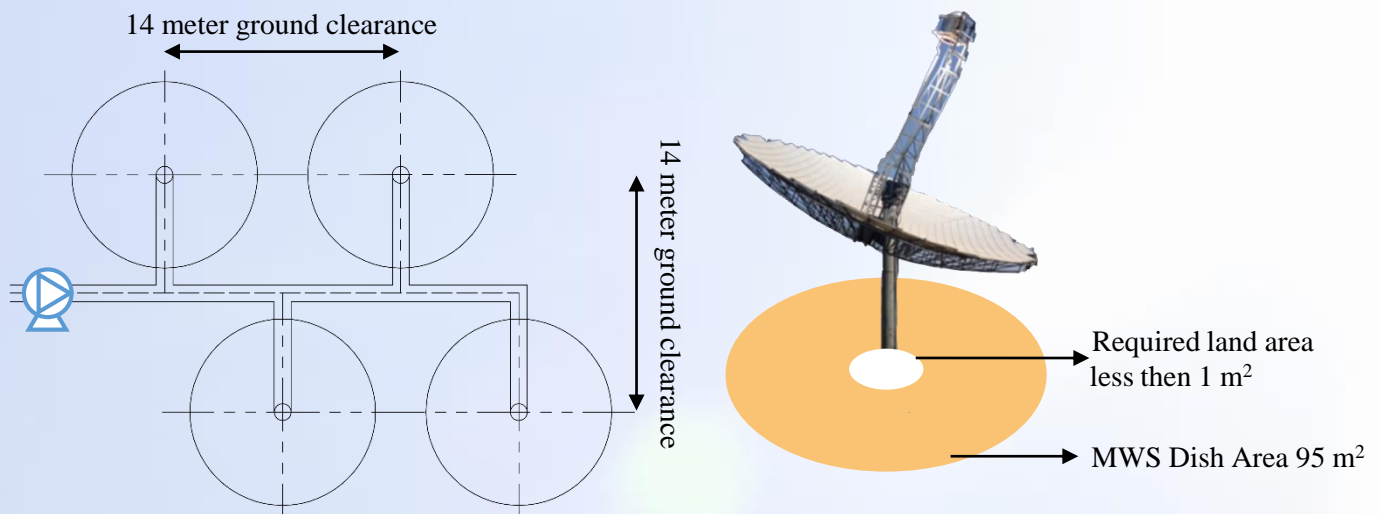
Can heat up to 400°C



Reduces your carbon footprint emission

Ensure reduction of up to 1500 Tons of CO₂ with each dish over its lifetime

Typical Solar Field™ Layout



Key Performance Indicators	Value*	Benefits
Thermal Efficiency	> 70%	Optimal usage of land space
Input Fuel for Heating	Sun's Radiation	Clean fuel with no carbon emission
Concentration Ratio	> 400	Enables viability across wide temperature range
Footprint Ratio (concentrator / land area)	> 300	Requires minimum land requirement for installation
Modularity	Yes	Viability at all scales from kW to MWs
Operations	Automated	Minimizes O&M
Design Specifications	Eng. Standards	25-30 Year equipment lifetime

* Indicative values only

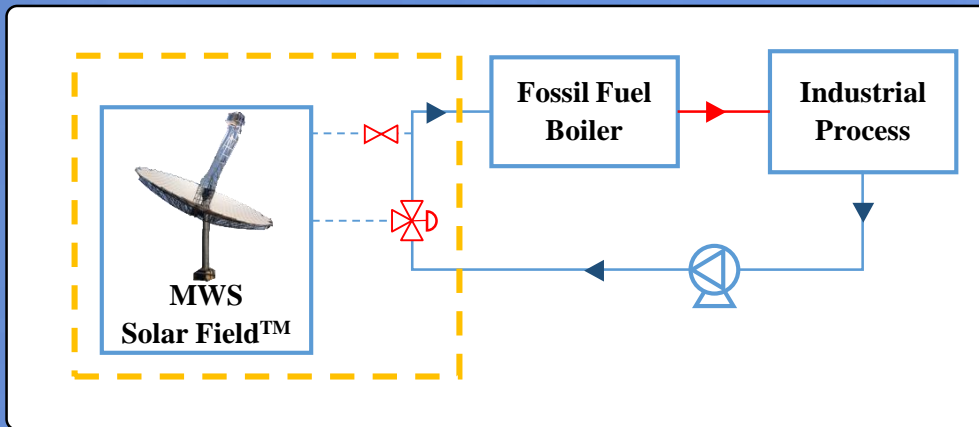
Applications of MWS Solar Field™

Industry	Working Fluids	Temperature Range	Application
Pharmaceutical	Steam, Air	80°C - 230°C	Sterilization, Drying, Process
Textile industry	Water, Steam	60°C - 150°C	Dying, drying
Chemical Industry	Steam, Air	80°C - 320°C	Effluent Treatment, Galvanization
Pulp & Paper Industry	Steam	Up to 185°C	Pulping, Bleaching, Effluent Treatment
Food Industry	Steam Thermic Oil	80°C - 280°C	Baking, Food Drying, Distillation
Automobile Industry	Water, Steam	60°C - 200°C	Cleaning, Degreasing, Paint Drying
Any other application that needs hot air, oil, water, steam from 50°C up to 300°C			

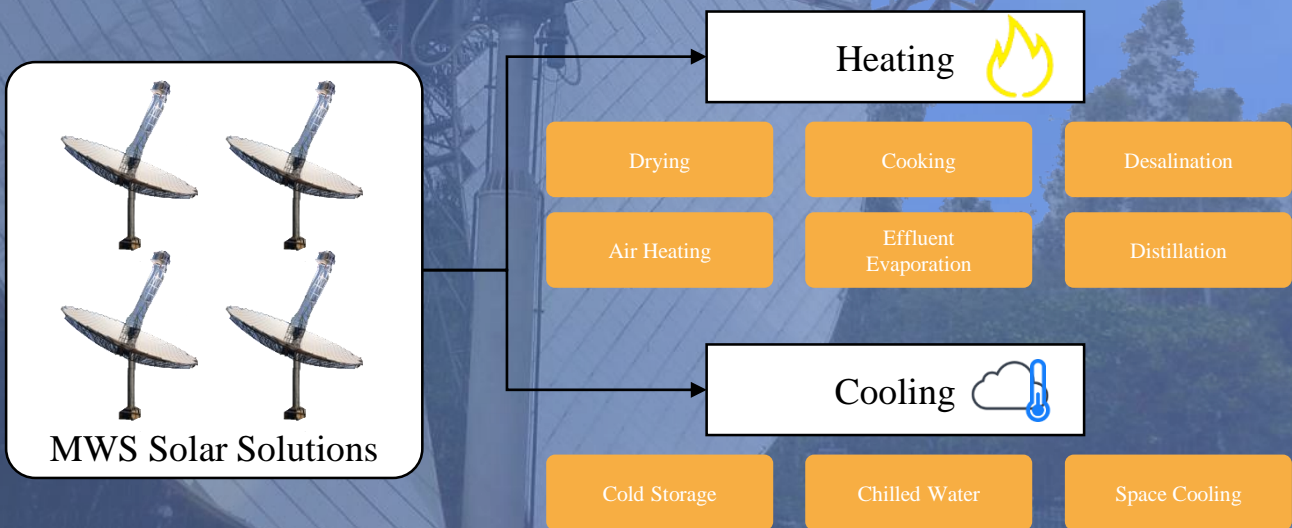
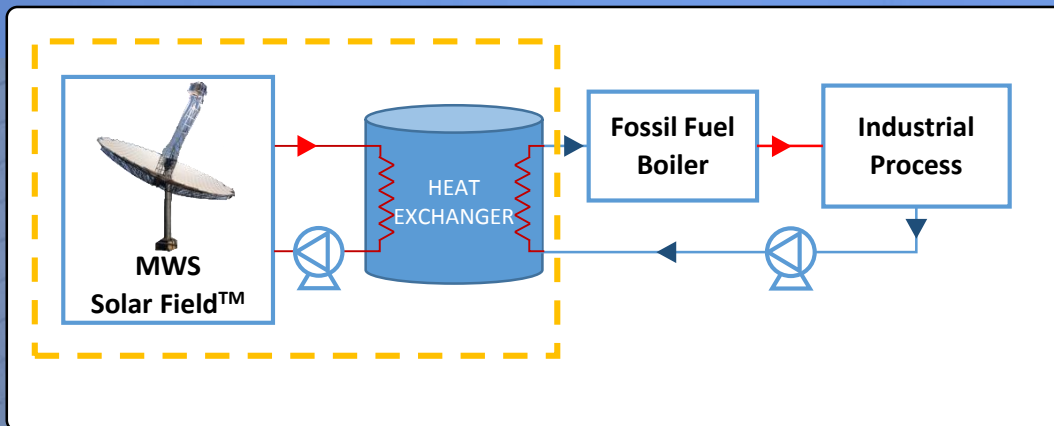
High Efficiency Delivered Indigenously

Typical integration of MWS Solar Field™

Schematic of MWS Solar Field™ for direct heat delivery



Schematic of MWS Field™ for indirect heat delivery



Contact us