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## Introduction

ARS is realization of dreams of the founders who felt passionate about working in the area of renewable energy especially Solar Energy, to bring it to the masses. The company is proud innovator & developer of solar grade mirrors for PAN INDIA with its patented technology. ARS is an official channel partner of Ministry of New & Renewable Energy [MNRE] since six successful years. Currently more than 85% of Concentrated Solar Thermal (CST) market in India is being served by ARS for their primary component requirement. ARS has experience of revamping & developing CST projects for various applications such as solar steam cooking, process heating, process cooling & thermal power generation. With support of MNRE & UNDP Schemes, ARS has revamped all the non-functioning CST plants in India with it's efficient & durable solar grade mirrors.

ARS has a vision to fulfill country's huge demand of pressurized steam for various sectors using it's innovative, cost-effective & highly efficient AGNI69 dish technology which will generate solar steam in easy plug-and-play model and reduce massive consumption of fossil fuel in many Industries. AGNI69 technology is next generation technology through which steam requirement will be fulfilled for Mass Cooking, Process Heating & Process Cooling applications.

Certificate of Registration of Design for Solar Concentrator Patent No. : 105702 (By The Patent Office, Govt. of India)



## **Mission**

Maintain positive growth of the company together with our customers and partners by offering them the best quality, technology and service.



## **Vision**

To be a socially responsible and comprehensive "Solar Glass Solution Provider" while creating greater values for our nation, customers and employees.

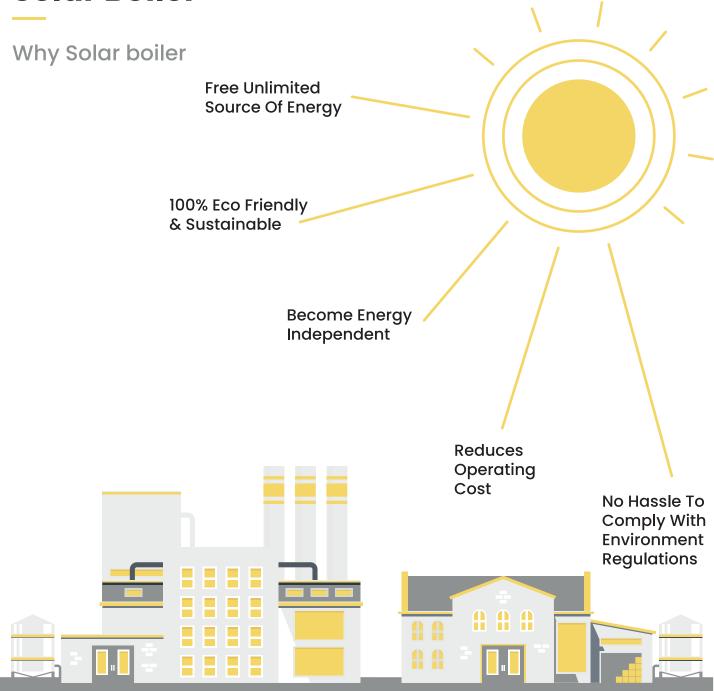


## **Values**

- Teamwork in all things
- Innovation in all Thinking
- Quality of all Products
- Responsibility in all Sectors
- Integrity in all Solutions

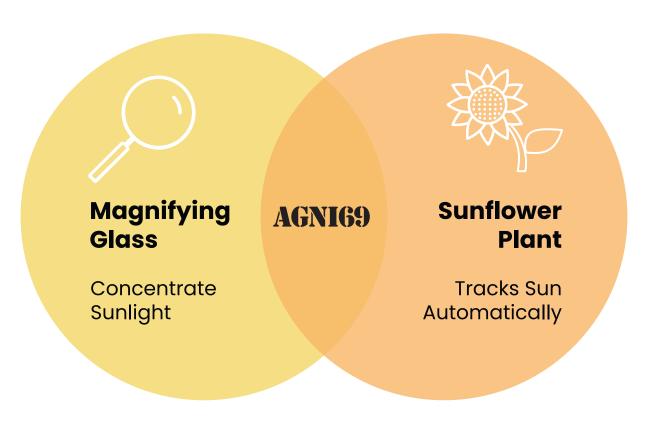
INTRODUCING
INDIA'S
MOST EFFICIENT
SOLAR BOILER

# **Solar Boiler**



# **Agni69 Dish Technology**

### Concept

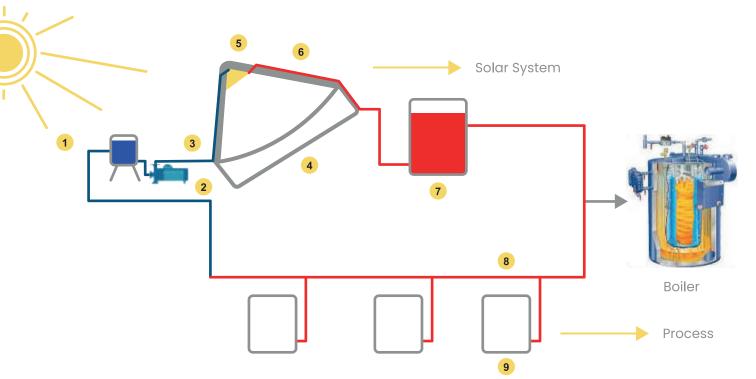


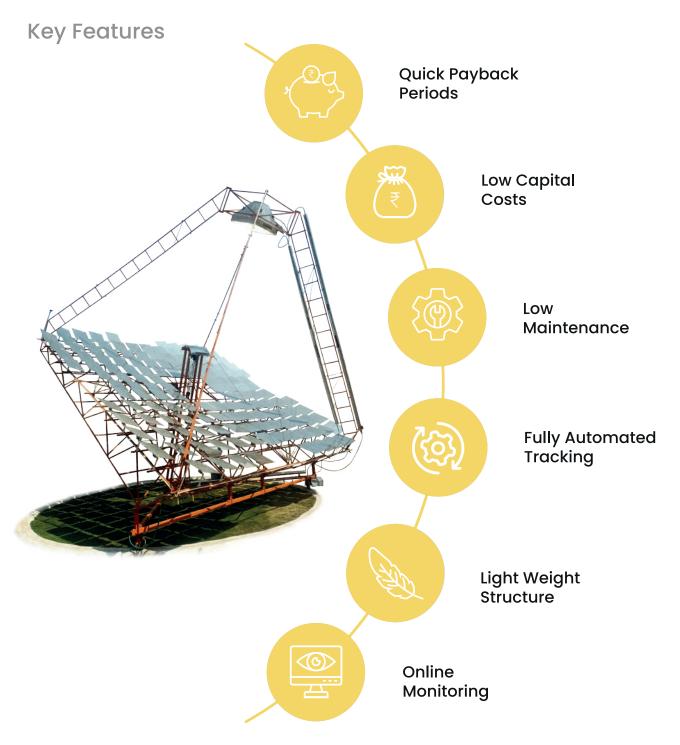
AGNI69 Dish Technology generates heat energy using concentrated sunlight through either magnifying glasses that concentrate sunlight or the Sunflower Plant technique that tracks the Sun automatically. AGNI69 can also produce heat energy by combining both the above methods.

- Our DISH technology is based on the principles of a magnifying glass and a sunflower. It uses a smart, two dimensional, fresnelized mirror arrangement scheme to get a 3-D parabola effect.
- Like a sunflower, our DISH automatically tracks the sun from sunrise to sunset on both East-West and North-South axes to catch maximum sunlight throughout the year at any location.
- Each dish reflects the sun radiation onto a receiver that is placed at its focal area.
- The heat transfer fluid gets heated when being sent to the receiver.
- The heated fluid will then be transferred to the application by transferring the solar heat through a heat exchanger or connect to the existing boiler headerline.
- The extra heat energy can be stored in the insulated storage tank for non-sunny hours.

#### Solar Dish Typical Integration with Existing Process Setup

- 1. Feed Tank 4. Solar Dish 7. Buffer Tank
- 2. Pump 5. Receiver 8. Common Header
- 3. Cold Fluidline 6. Hot Fluidline 9. Processes





### **Technical Data**

Geometry	Any one from the table
Dish Size (m)	8.3 x 8.3
Aperture Area (m²)	68.89
Focal Length (m)	6.2
Performance	
Peak Thermal Capacity (KW <sub>thp</sub> )	18.5
Energy generation per day (KWh <sub>th</sub> ) or (Lakh.Kcal)	148 KWh <sub>th</sub> or 1.27 lakh Kcal
Max. Temperature & Operating Media	Hot Water - 95-100°C Steam - 180°C Thermic Oil 250°C
Operating Media	Thermic Fluid/Water
Operating Temp. & Pressure	250°C (thermic fluid) & 1-8 bar (water)
Steam Generation Capacity (up to 180 °C & 10kg/cm²)	25 kg/hr or 200 kg/day
Equivalent fuel savings per day	Diesel = 17 lit LPG = 12.7 kg FO = 18 kg
Weight (tons)	1500 kgs
Sun Tracking	Fully automated Dual axes
Sun Tracking Accuracy	0.5°
Structure	Galvanized/Painted Structural Steel
Max. Survival Wind Speed ( Parked) (kmph)	200
Operating Wind Speed (kmph)	50
Method of Solar Integration with existing setup	Hybrid mode: integrated with existing setup
Reflectors	Solar Grade Mirrors
Installation Mode	Roof top (RCC type) or Ground

### **Application**

#### Solar Boiler For Industrial Process Heat



Textile



Hospitality



Pharma



Dairy



**Food Processing** 



**Paper Pulp** 



**Brewery** 



Cement



Chemical



Agro

Any other industry having thermal energy requirement from 50°C up to 250°C

#### Solar Boiler For Community Solar Cooking

Solar thermal cooking systems are efficient and hygienic for community cooking like industrial / institutional canteens, religious places, community centers, etc. Several organizations in India are successfully using solar thermal energy for cooking and industrial applications.

AGNI69 solar dish can assist in cooking food on a community scale, occupying less space & providing efficient output at the same time. As AGNI69 solar dish can deliver temperatures as high as 300°C (thermic oil), it can be used in frying or baking chapatis, that require higher temperatures of around 250°C.



A Typical Solar Kitchen

### Why Agni 69



AGNI69

- Higher Output Generation
- Fully Automated System
- Sun Tracking Accuracy of 0.1°
- Attractive ROI
- Low Maintenance

# Why ARS Glasstech

AGNI69 is an advanced and productive solar solution that implements innovative techniques. It possesses a fully automated system that enables higher output generation. It is also highly convenient and economical with an attractive ROI and low maintenance. It also induces precision and accuracy with Sun Tracking Accuracy of 0.1°.



## Clientele



























# **Recognition Nationally & Globally**



Indigenization of CST / CST Components in the country.. Awarded by Government of INDIA – By Mr.Piyush Goyal





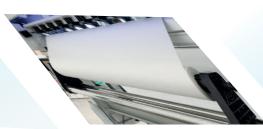


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*PROFITABLE* 



**JUBANIATEU** 



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