

Complete Water Heating Solutions



Greener Solution For Industrial Heating & Cooling Application



About Heatray



Heatray Solar Pvt. Ltd. is an MNRE approved company specializing in providing Solar/ Clean thermal Energy solutions for industrial and domestic heating requirements. Established in 2004, Heatray Solar is committed towards reducing the Fuel expense by waste heat recovery and alternative thermal solutions and thereby reducing overall carbon foot print. We have our own manufacturing unit in Ambarnath & Badlapur where we manufacture the solar concentrators and Heat Pump. We have a world class testing facility for Heat Pump as well as solar equipment's.

Why Solar?



Long Term Investment



Zero Operational Cost



Abundant Source of Energy



Help India to achieve energy Independence by 2047



Reduce your Overall Carbon Foot Print



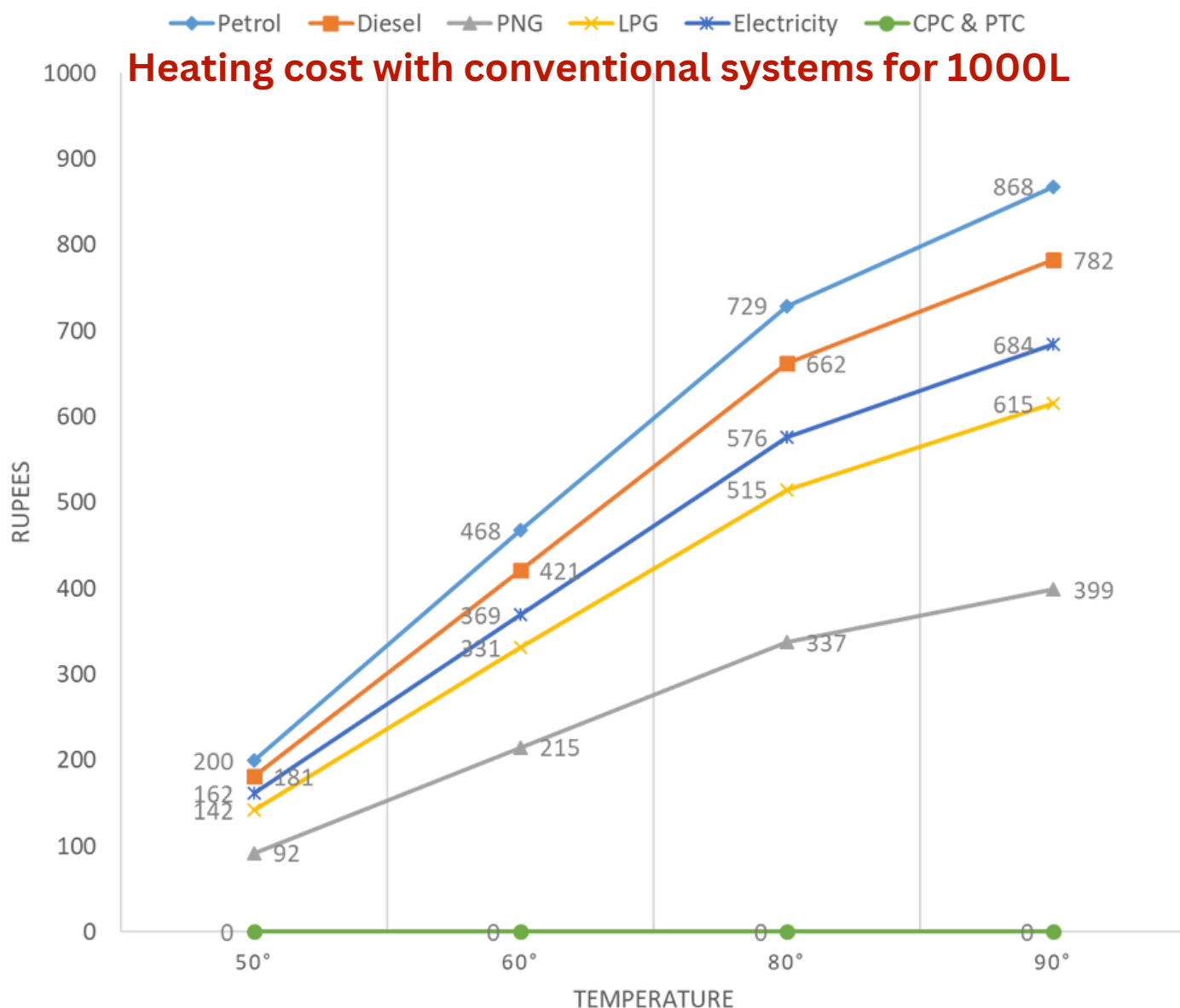
Reduce your Dependency on Fossil Fuel



Lets Mitigate Global Warming Together



Accelerated depreciation benefit on solar project





Compound Parabolic Concentrators (CPC) Lower Mid-Range Heating - For 30° to 90° C

Compound parabolic reflectors (CPRs) use two parabolic segments arranged to share a common focal line. Incoming rays are reflected and concentrated onto a receiver tube positioned along this line, heating the fluid inside rapidly due to focused solar irradiation.



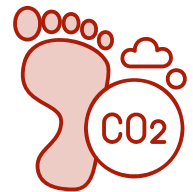
**No Operational
Cost**



**Less
Maintenance**



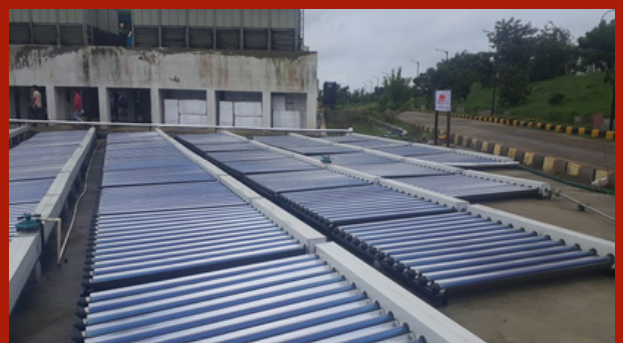
**100% Fuel
Saving**



**Zero Carbon
Footprint**

ROI in 3 - 4 years

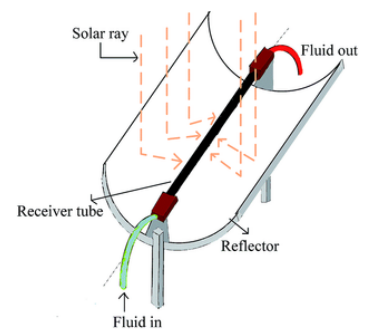
- It is based on high Fuel Cost
- Low Target Temperature
- High Solar Yield
- More Sunny Days and Less Cloudy Days





Parabolic Trough Collector (PTC) Upper Mid-Range Heating - For 90° to 200° C

The parabolic reflector is designed geometrically to focus incoming rays onto a straight line known as the focal line. Its specific surface shape ensures that all incoming rays are reflected towards the absorber/receiver tube, converging at the focal line. Positioned along the focal line, the receiver tube is where concentrated solar irradiation is directed. The fluid inside the receiver tube heats up as it absorbs the concentrated solar radiation received by the tube's surface. Concentrating radiation onto a small area enables quicker attainment of higher temperatures.



**Target
Temperature upto
150°**



**High Solar
Yield**



**ROI in 5 to 6
Years**



**No Operational
Cost**

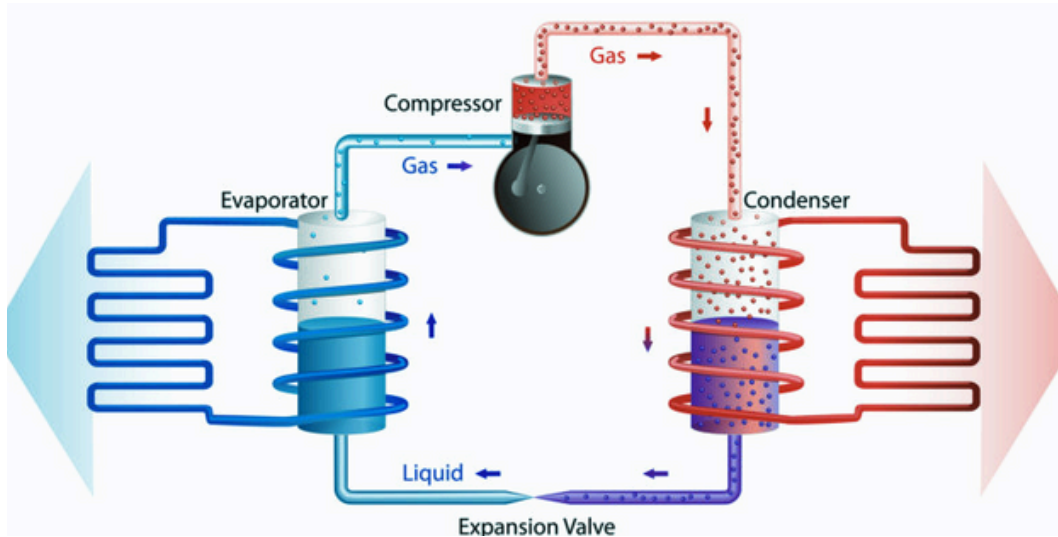


**Constantly
Tracks Sun**

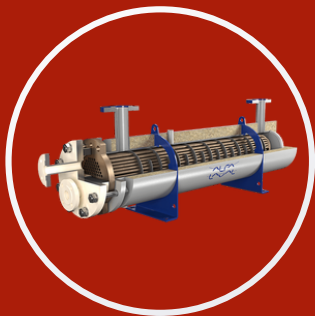


What is Heat Pump?

A heat pump uses electricity and refrigerant to transfer heat from one location to another. Heat is extracted from the air or water outside through a heat exchanger then the refrigerant is compressed, raising its temperature significantly. The heated refrigerant is then passed through another heat exchanger to transfer heat to air or water for use. The heat pump absorbs heat from the source and supplies it to where it's needed. It typically consumes 30% electrical power, utilizing the remaining heat from the atmosphere. This process achieves a high coefficient of performance (COP), producing 100% heat output.



Key Components



Heat Exchanger



Compressor



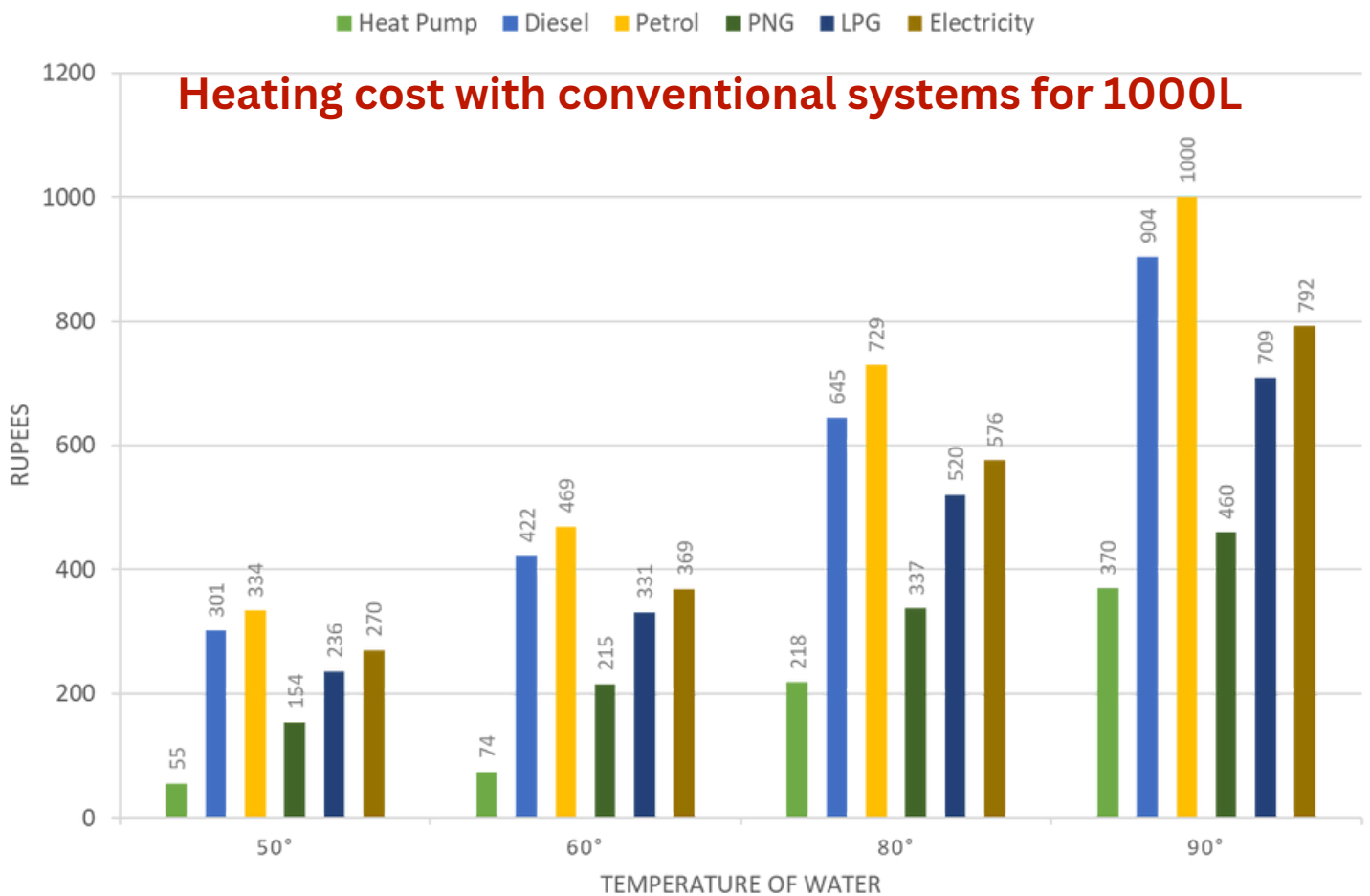
Expansion Valve



Controller



DX Coil



Types of Heat Pump based on Industries



Industrial

50° to 120° C



Sanitary & Hospitality

28° to 50° C

Types of Heat Pump based on Source

Air Source Heat Pump (Vayu Series Heat Pump)

Heat is extracted from ambient or waste hot air by an industrial heat pump, which transfers it to a target area, increasing efficiency.



Water Source Heat Pump (Jal Series Heat Pump)

Heat is transferred from ambient or waste hot water to target areas using a water source heat pump, enhancing efficiency through refrigerant and compressor electrical work.



Industrial Heat Pumps

1) High Temperature Heat Pump

Our industrial heat pump line offers both standard and custom-built options, with a focus on compressors, refrigerants, design, automation, and safety measures. With a 1000Kw/hr capacity and temperature range of 80-90°C, we stand out from domestic options.

- Multiple Interlocking safety features to protect Compressor
- Strong Built with anti-corrosive painting
- All component used are of a reputed make
- Easy to install and backed by hassle free service
- Can heat water up to 80°C.
- COP of the system 2.5 to 4.
- Silent Operation
- PLC base controller
- 24 X 7 operation cycle



2) Ultra High Temperature Heat Pump

The ultra-high temperature heat pump efficiently transfers heat from waste hot water for high-temperature heat supply, using refrigerant and compressor. It complements fuel boiler and chiller units to meet energy needs, achieving high efficiency with a COP above 3.5 for heating and 4 for cooling, totaling over 7.5. This system, which saves over 40% energy compared to traditional methods, operates without combustion, emissions, or waste, and can be tailored for various energy consumption patterns to ensure reliable performance.

- High Temperature up to 120°C
- Customizable as per application
- Output Capacity 100 Kw – 1200 Kw
- Dual capacity Control
- Heat recovery function
- Continuous Operation
- Protection function origin
- Small footprint & robust design
- VFD Compliant Motor
- Low Noise Level & Low vibration



Industry with Processes which utilizes Hot water or Steam

Dairy Industry

- Washing and cleaning
- Pasteurization/ Sterilization/ Evaporation
- Spray drying

Automobile Industry

- Paint shop – pre-treatment
- Paint shop –air-conditioning
- Paint shop – evaporation and drying

Food Processing Industry

- Chilling/cold storage
- Cooking, extraction, brewing and baking
- Pasteurization/ Blanching
- Sterilization/ Bleaching
- Drying/ Dehydration

Leather Industry

- Pre-tanning/beam house operations – soaking, liming, pickling, etc.
- Tanning (Chrome and Vegetable)
- Post tanning operations – finishing, drying

Pulp & Paper Industry

- Debarking and chipping
- Digesting and washing
- Pulping
- Bleaching
- Paper drying

Pharma Industry

- Distillation
- Evaporation
- Drying



Chilling



Drying



AHU



Process Heating /
Pre - heating



CIP



ZLD

Cooperative Partner

Heat pump technology is our main strength. Heatray focuses on technological research and development, picking the best components for each heat pump. Heatray also appreciates technological communication and partnership with world-renowned companies.



Our Esteemed Clients

Clients are our main strength. Heatray Focuses on each and every customer individually. We customize our products based on the clients requirement. Heatray focuses on technological research and development, picking the best components for products.



ACG
CAPSULES

SIRIUS FOODS

APAR
CABLE SOLUTIONS

PREMIER
INDUSTRIES

Va

sohum spa

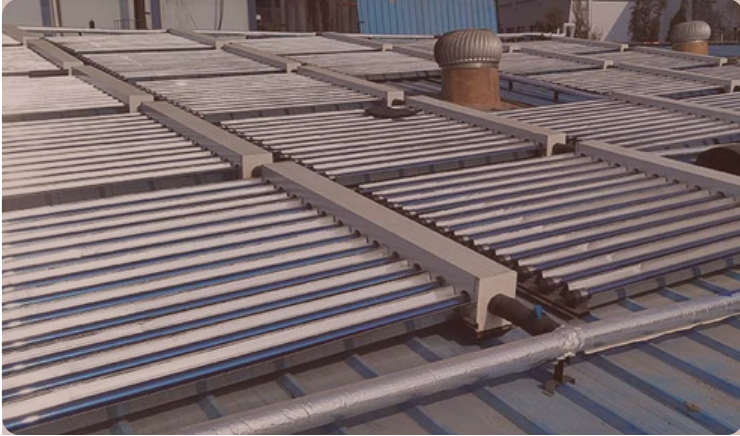
SAHAJANAND
INDUSTRIES LIMITED

C Custom
Capsule
Consultants

R
RALLIS INDIA LIMITED
A TATA Enterprise

Apothecon
Pharmaceuticals Pvt. Ltd.

Project Reference



**VA Life Science -
Parwanoo, HP**

**Apothecon -
Padra, Vadodara**



**ACG -
Pithampur, MP**



**Rallis -
Maharashtra**



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complete project
Details!



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HEATRAY SOLAR PVT. LTD.

Office Address - 108, Prabhadevi Unique Industrial Premises Co-op. Society Limited, Veer Savarkar Marg, Prabhadevi, Mumbai - 400025, India.

Factory Address - Plot No. G-7, Additional Ambernath MIDC, Ambernath - East, Dist. Thane 421506

Website -

Email - info@heatraysolar.com

Contact No. - 8424010203