



Automobile<br/>IndustryPharmaceutical<br/>IndustryRubber & Plastic<br/>IndustryChemical<br/>IndustryFood<br/>IndustryOil & Gas<br/>Industry• Aerospace Industry• Steel Industry• Paper Industries

# **Infrared Heating System**

## **About KERONE**



KERONE is possessing experience of 40 years in engineering excellence.

KERONE is one of the most admired and valuable company for customer satisfaction.

MANUFACTURING EXCELLENCE

**1**40 **1** 







KERONE is having immense expertise in manufacturing and implementing various types of heaters and dryers.



KERONE is possessing employee strength of more than 140 experts continuously putting efforts for happy industrial heating solutions.

#### ENGINEERING



KERONE has reported annual revenue of \$8 to \$10 Million , increasing year-onyear.

KERONE Engineering Solutions Pvt. Ltd.

## **Our Vision and Mission**





#### Vision

- Turn into world leader in providing specialized, top-notch quality and ecological industrial heating, cooling and drying solution across the globe.
- To attain global recognition as best of quality and environment friendly engineering solution company.

#### Mission

- To enhance the value of customer operation through our customer need centric engineering solution.
- We are committed to provide our customers, unique and best in class products in Industrial heating, drying and cooling segment, with strategic tie-up for the technical know-how with renowned leader in the industry specific segment.
- We are company that believes in strong ethics and timely commitment helps to build long term relationship.



## Value Propositions





In Association with SVCH-Technologii, Moscow (Russia)

## **Introduction of Infrared**



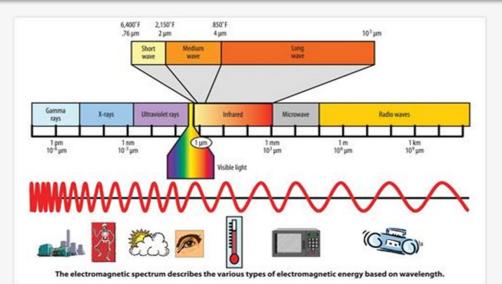
Infrared Heating System are part of Electromagnetic heating family.

Infrared heaters uses IR radiating waves falls just below visible light spectrum.

Infrared radiators heats produces heat on the surface of material.

Heat is transferred from outer surface to inner body.

Infrared heating system produces heat same as 'SUN' from hot surface to cold surface.



## **Infrared Heating Systems Classification**

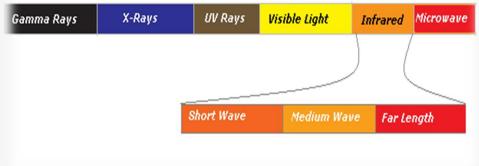


Infrared Heating System are basically classified based on its emitting wave length :

Short Wave (780 nm to 1400 nm )







## Infrared Heating System Vs Conventional Heating System



#### **Infrared Heating System**

IR heating systems are fast heating system, results in saving of time.

Instant heating of the material, hence no warm up time.

Environmental friendly and green heating solution, no carbon emission.

100% energy utilization, Heats only desired spot of material.

Better floor utilization index.

No Temperature loss in surrounding, ambient workplace.

#### **Conventional Heating System**

Conventional heaters have slow hating rate, heat is transferred via means of air.

Instance heating does not takes place, it requires warm-up of surrounding.

Produces carbon or toxic gases hence not much environmental friendly heating solutions.

100% energy utilization is not possible, as material is heated by surrounding hot air.

Poor floor utilization index.

Surrounding air temperature rises with rise in heater temperature.

## **Infrared Heating System Vs Microwave Heating System**



#### **Infrared Heating System**

IR heating systems utilizes electromagnetic system uses wavelength of about 0.01 centimeters.

Heats the object from surface of object.

Compact system providing better floor utilization index.

Infrared heaters are better substitution of traditional convention heaters.

Depth of heat penetration is lower in infrared heaters as it heats from surface.

Rate of heating depends on the surface characteristics of material.

#### Microwave/RF Heating System

Microwave heating systems utilizes electromagnetic system uses wavelength of about 1 centimeters.

Heats the objects from within the object.

Microwave heaters also does not require larges space hence offers better floor utilization index.

Microwave heaters cant not substitute the conventional heaters.

Depth of heat penetration is higher in Microwave heaters.

Rate of heating depends on the moisture content within the material.

## **Infrared Heating System in Pharmaceutical Industries**



Pharmaceutical industries has various application require efficient heating/drying for quality and hygienic output.



Aqueous film coating



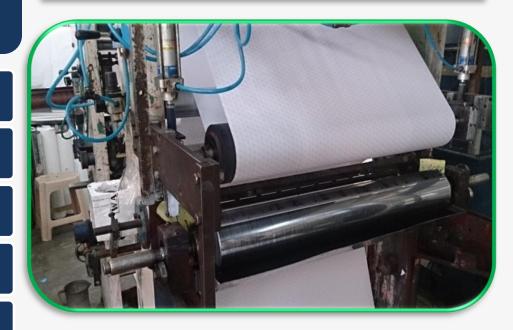


Powder Making





#### Infrared Dyer for Bandage manufacturing



## **Infrared Heating System for Pharmaceutical**



#### Infrared Dyer for Pharma



#### Infrared Dyer for Herbs dryer



## **Infrared Heating System for Pharmaceutical**



#### Infrared based Umbrella dryer



#### Infrared Dyer for Bottle Sterilization



## **Infrared Heating System for Pharmaceutical**



#### Infrared for Powder making



#### Infrared oven for chemical Processing





Plastic and Rubber has increased its application in various application, so the demand. Below and few important applications those require heating:



Plastic Thermoforming



Rubber extrusions





## Curing thermoset plastics



## Drying for injection molding



## **Infrared Heating System in Plastic and Rubber Industries**











The packing industry is evolving with large amount of packed goods required to be transported with care. Following are the areas require IR heating:



Activate adhesives



Seal plastic foil packages





Shrink film







Paper is one of the oldest industrial production process that require heating at very large scale from manufacturing to Printing. Below are some application in which IR fits in:





#### Infrared Heaters find multiple application in Glass and Ceramics:





#### Infrared heaters and dryers find following applications in metal industries:



## Infrared Heating System in Automobile Industries



#### Infrared heaters and dryers find following applications in Automobiles:



## **Trusted Partner of following consultants**



## **Our Clients**



**Serving across Continents:** 



We are Exporting more than 50 Countries...

KERONE Engineering Solutions Pvt. Ltd.

# THANK YOU

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