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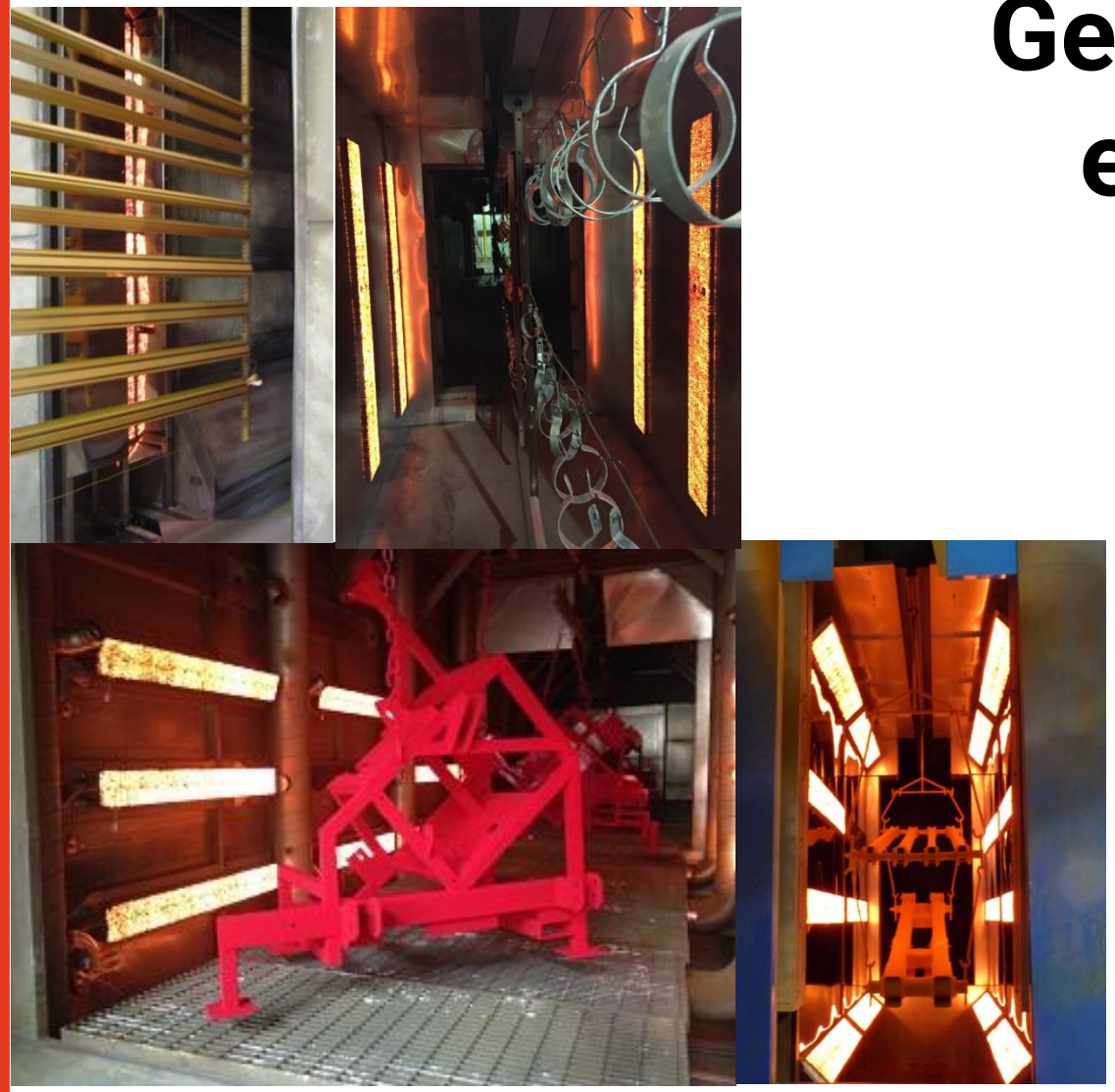

Gellification of powder and efficient heat-up of parts

in powder coating lines using infrared radiation

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International Market Manager

Challenges of powder coating application and curing

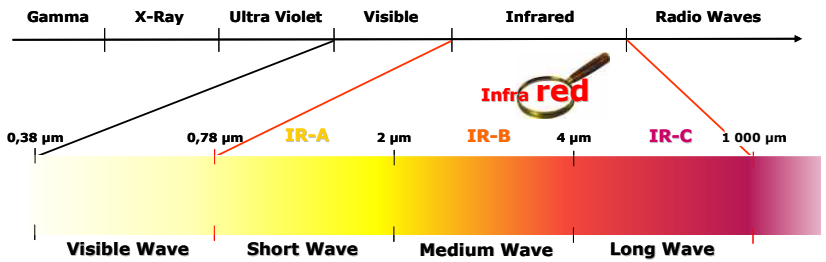
Qualitative & fast gellification

- Avoid powder loss
- Assure layer consistency and thickness
- Assure fast gellification

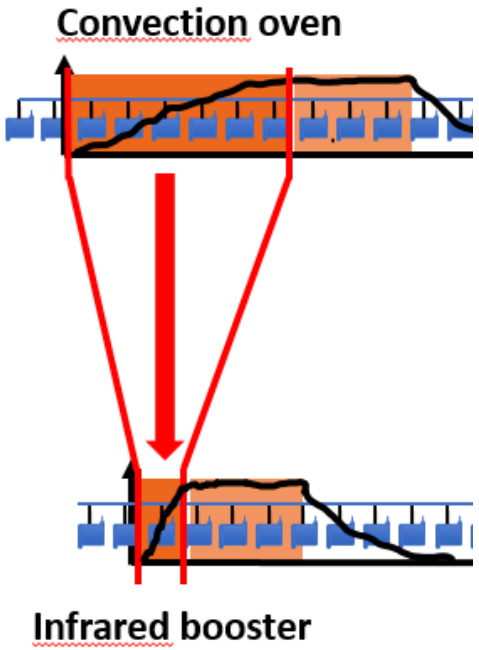
Energy efficiency

- Avoid colour changes by local over-heating
- Avoid burning of the powder
- Obtain a good surface tension
- Respect powder polymerisation requirements

- Control gas burner performance
- Control air speed to assure fast heat-up
- Reduce heat losses



How infrared heating can help



What is infrared heating

- Heat transfer through radiation
- Like from the sun to you
- Coming from the source (the emitter) directly to the receiver (your product)
- At the speed of light (electromagnetic waves like visual light)
- Without loss in between (no heating of the oven air)
- At high power densities (proportional to T^4)
- To meet absorption capacity of the product

compared to

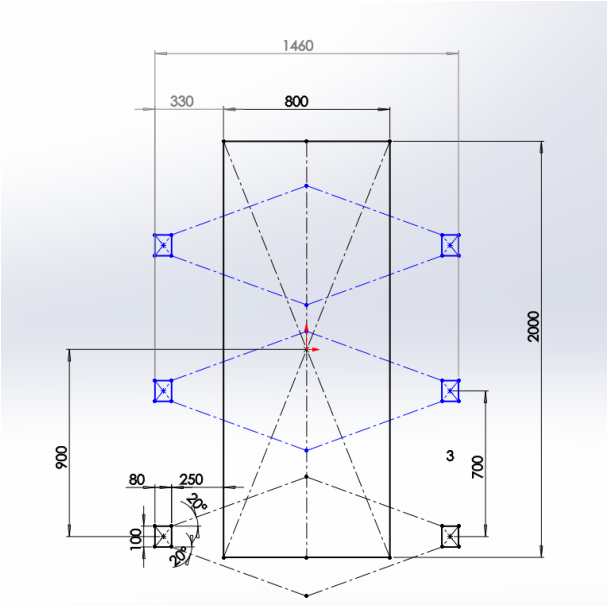
Convection heating

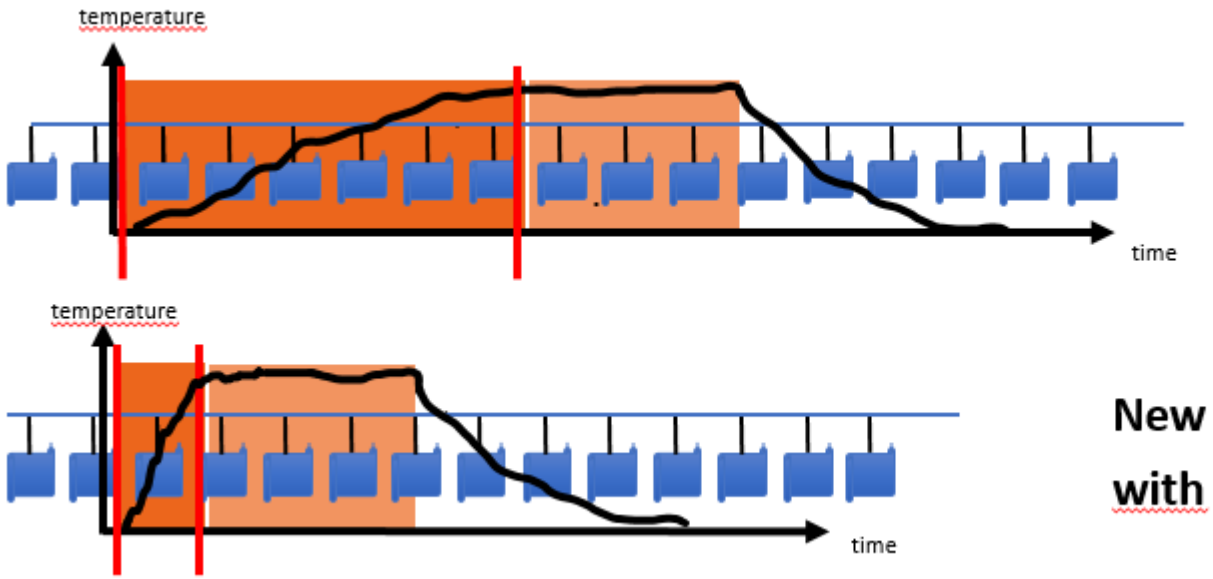
- Heat transfer with a hot gas/liquid
- Like heat from your hair dryer
- From the source (gas burner) via the hot air to the receiver (your product)
- At the speed of the moving air (one or two m/s max)
- At low power densitues (proportional to T)
- Needing a long time to transfer what the product needs

How infrared heating can help

Efficient heat-up

- Direct heating of powder
- No heating of ambiant air
- **Results in efficient heating of parts**



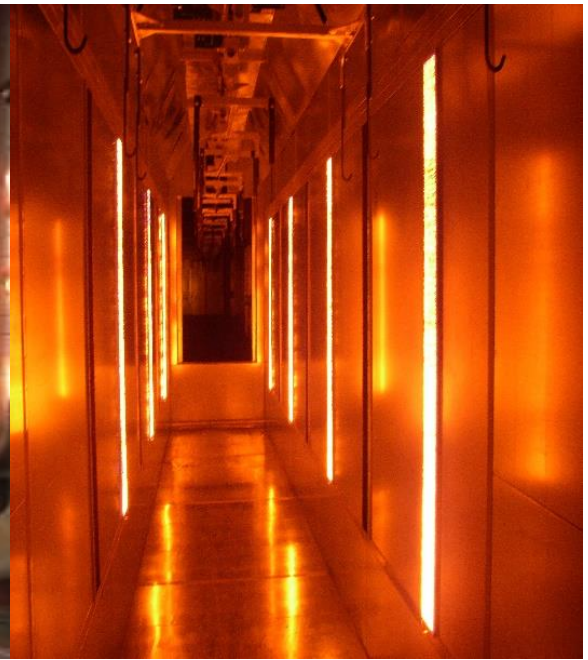


Conventional line
Convection oven

New line
with Infraroed booster

How infrared heating can help

Fast gellification



- No air movement required
- Avoids powder loss
- Results in a good surface tension
- **Assures fast gellification**

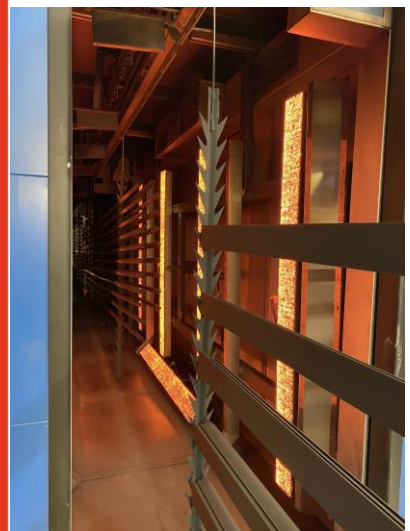
How infrared heating can help

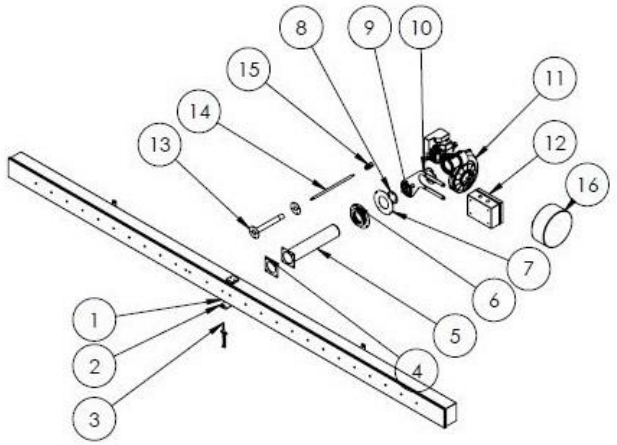
Energy saving

- Reduce heat losses
- Remainder of the oven just to keep parts at temperature
- **Reduce gas consumption**
- Increase productivity

Why you should choose Eratec infrared emitters

Eratec infrared emitters



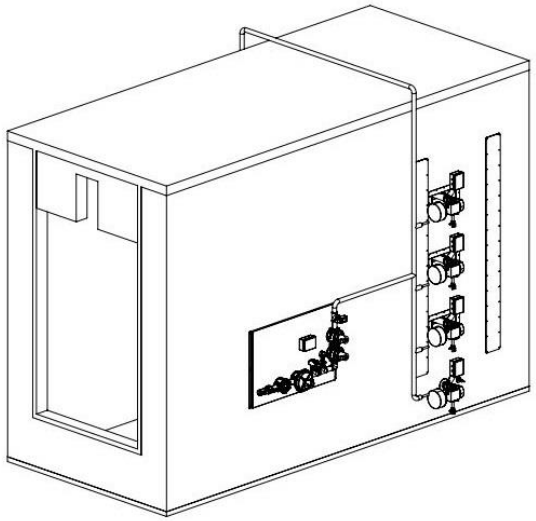


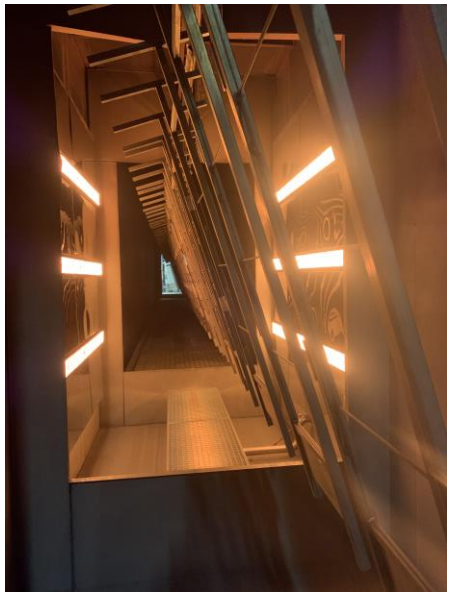
- Standard concept of emitter
- Adapted to your specific process needs
- Flexible in use
  - Immediate on/off
  - Immediate hot/cold
- Full & contunuous modulation of power
- Stable 24/7
- Safe 100% metallic & robust construction
- Low maintenance
- Durable

What this means for you

A combi-oven with infrared booster will give you

- Increased productivity (line speed m/min)
- Important energy savings (kWh/kg)
- Reduced footprint (capex)





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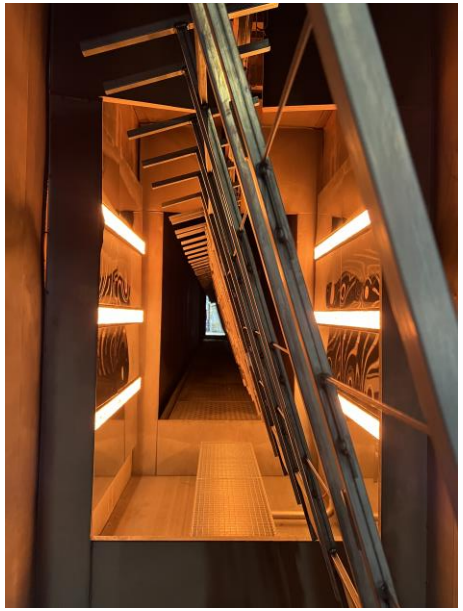




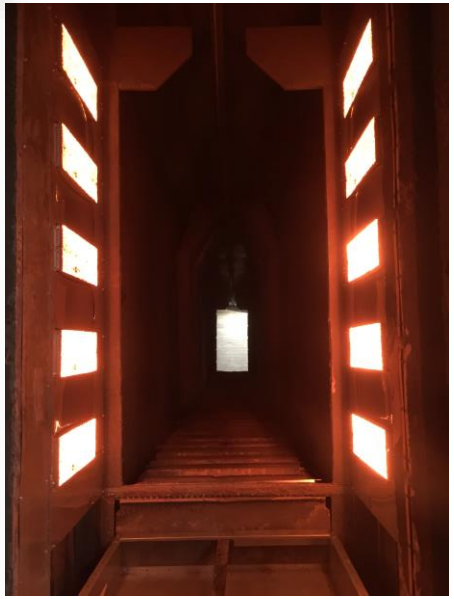

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