

INFRARED EQUIPMENTS FOR USE IN AUTOMOTIVE INDUSTRY

IWT Infrarot-Wärmetechnik is a supplier of Infrared Systems:

- Curing of repainted small areas at car bodies with standing units or ceiling Systems.
- Curing of larger repainted areas at car bodies with panel repair ovens.
- Curing of water-based and clear coatings by ovens with continuous speed.
- Pre – Heating of base-coatings and clear coatings.
- Heating up of wax applications.
- Warming of mount-parts for an easier assembly.

We offer standard Systems but our focus is on producing tailor-made equipment's without any compromises. Strictly designed after the guideline of our customers.

IR applications Automotive
Industry



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IWT Infrarot-Wärmetechnik GmbH

Infrared Standing Units



**MOBILE
FLEXIBLE
PRECISE
ROBUST**

Movable Infrared Heaters for use in preparation room or spray booths.

Built for curing of filler, base-coats and clear coatings.

Controller with 16 different programs, Set point, different ramps and baking times free programmable.

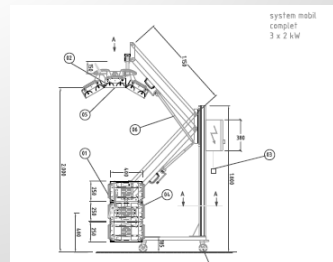
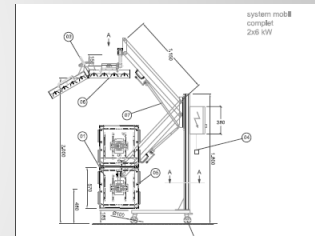
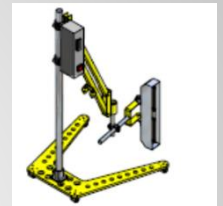
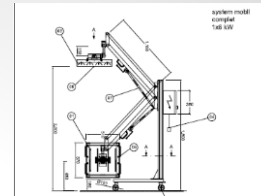
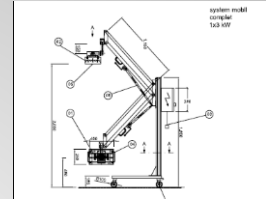
Touch free measurement of temperature, glare free emitters in short – wave and fast medium wave for optimized adaption to the absorption of all paints.

The complete construction is built after the guidelines and requirement's of the automotive industry. Easy to handle for the operator, easy to repair for the maintenance.

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Infrared Standing Units

- 3 / 6 / 12 KW as a standard unit with single cassettes, 2- or 3 divided cassettes.
- Different wheels, optimally adapted to the different grounds.
- The feet is constructed to allow the driving under very flat vehicle's. (Sport-Cars)
- The size and the power of all cassettes can chosen freely.
- Short wave / fast medium wave IR emitters with glare-free coating for perfect wavelength and high protection for the operators.
- Positioning of the cassettes in 3-dimensions, cassettes can follow the silhouette of the car-body.
- Regulation of the temperature after the IMR Principe: Outer zones can be added by an offset for perfect tolerance over the heated area.
- Large functions to control the process, Absolut and 2 relative temperature alarms, warning/interruption when set-point was not reached, interruption after thyristor and pyrometer fault.
- 16 different programs free programmable.
- All parameter's can be saved in an EPROM, all data's can be saved and can be transmitted to other systems.
- Password protection in 2 levels
- Complete construction after industrial standards.



Special Variations: Standing Units for use inside of the car-body, large cassettes for drying complete panels, Curing of hood panels even at SUV cars, Heating of rocker panels and regulation of the temperature with 4 different loops and pyrometers.

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Infrared Ceiling Systems



MOBILE
FLEXIBLE
PRECISE
ROBUST

Movable ceiling Systems with mechanical rails formed like a „U“ or like a „O“.

Movable Infrared Heaters for use in preparation room or spray booths.

No danger of bad surfaces because of no movable systems running above the fresh painted car.

Built for curing of filler, base-coats and clear coatings.

Controller with 16 different programs, Set point, different ramps and baking times free programmable.

Touch free measurement of temperature, glare free emitters in short – wave and fast medium wave for optimized adaption to the absorption of all paints.

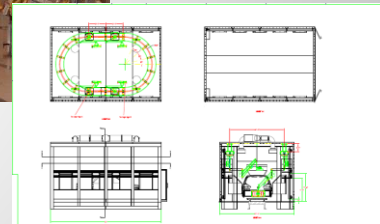
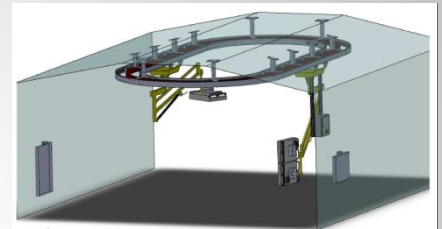
The complete construction is built after the guidelines and requirement's of the automotive industry. Easy to handle for the operator, easy to repair for the maintenance.



IWT Infrarot-Wärmetechnik GmbH

Infrared Ceiling Systems

- Mechanical rails in „U“ and „O“ form, made out of Aluminum or stainless steel. The dimension's of the rails are designed after the present situation, no standard construction has to be respected.
- Additional installation of more heaters later is possible.
- Rails often mounted directly under the top of the booth, very low dust deposits.
- All movable parts are not located above the fresh painted car body.
- Dimension and power of the IR cassettes are freely selectable.
- Park position and interface to the conveyer. (as an option)
- Short wave / fast medium wave emitters for high security for the operators and best wavelength compatible to all paints.
- Positioning of the cassettes in 3-dimensions, cassettes can follow the silhouette of the car-body.
- Regulation of the temperature after the IMR Principe: Outer zones can be added by an offset for perfect tolerance over the heated area.
- Large functions to control the process, Absolut and 2 relative temperature alarms, warning/interruption when set-point was not reached, interruption after thristor and pyrometer fault.
- 16 different programs free programmable.
- All parameter's can be saved in an EPROM, all data's can be saved and can be transmitted to other systems very easy.
- Password protection in 2 levels
- Complete construction after industrial standards.



Special Variations: Mechanical rails out of stainless steel, Rails fixed at the wall of the booth, IR systems with traverses, large IR cassettes for curing complete sides of vans, sensors for measurement of distances, recording of parameters by data-logger.



IWT Infrarot-Wärmetechnik GmbH

Infrared Panel Repair Ovens



MOVABLE PANEL REPAIR OVENS

STATINIORY SYSTEMS

2-7 TACTS

IR DRYER WITH CONTINOUES SPEED

Infrared Dryers are very successful for use in lines with continues speed or by using fixed cycle-times.

Large energy saving by using running light systems and in case of pre-heating zones.

Very low energy consumption when used as panel-repair ovens.

Perfect energy distribution by using single control of each emitter.

Controlling of each emitter or groups of emitters against fault.

Plenty of variations, from small panel repair ovens up to equipment's with 7 tact's. All built after the specification of the automotive industry.



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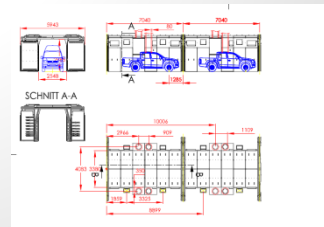
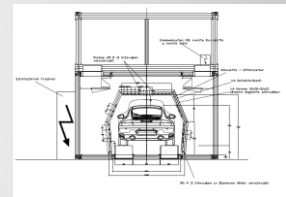
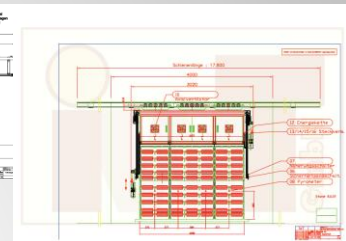
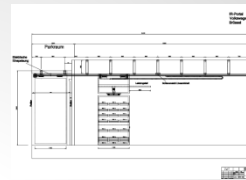
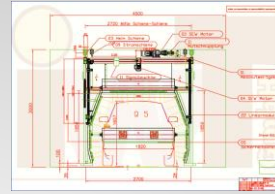
Infrared Panel Repair Ovens

IR Panel Repair ovens are built in 3 variations:

1. **Paint-Curing Arch:** The IR oven starts out of a parking space and moves to the repainted panel. Only the pre selected panel is cured.
 - 1.1. As a more or less simple solution with 48 KW for low requirements
 - 1.2. As a „Comfort“ solution with 72/96 KW with more different zones for better temperature stability.
 - 1.3. „Premium“ solution with 240 KW, 240 single group, , Visualization, Controlling of each emitter, recording of the complete process , interface to superordinated levels. For highest demands like best temperature stability. Absolutely built after the specification of the automotive industry.

2. **Stationary Panel Repair Ovens:** The car is moved by hand or with a conveyer inside the oven. The doors close and the pre – selected panel is cured. This oven is able to cure very large panels up to a complete car-body. This type delivers the best performance for a stable temperature and minimizes the ingress of dust.

3. **Ovens with continuous speed:** The car body is moved by a conveyer with continues speed. This oven is often used as a pre-heated zone, a water-based paint dryer. In conjunction with a running-light controlling of the emitters a very energy saving way to cure a car body in a very short time.



IWT Infrarot-Wärmetechnik GmbH

Heating up wax for cavity protection



INFRARED EQUIPMENTS FOR HEATING OF WAX

Made for:

- Water based wax systems
- Solvent based wax
- Solvent free wax („Drop-Stop-Effect“)

INFRARED curing is an ideal method for heating up car bodies on a very short time.

The heating is only used at parts of the car body, where the energy is needed. Not the complete vehicle has to be warmed up.

The IR emitters will only be switched on if the energy is needed. Between the tact's, when the line is stopped or during any breaks no energy is consumed.

Big equipment's for air supply and exhaust are not needed.

INFRARED units do only need maximum 2 tact's that means 10 m length. Convection lines do need more than 4 times more to get the car body up to the requested temperature.

All these features show, that INFRARED heating of waxed car bodies is a very quick, efficient and energy saving method.

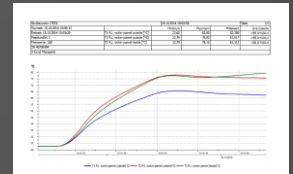
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Heating up wax for cavity protection



SAVE Energy costs

The energy consumption of an INFRARED equipment is much more lower than the needed power of a gas or oil fired convection tunnel. Alone the costs for the ventilation what will be necessary will be higher than the actually consumed power of the INFRARED system.



SAVE Invest costs

Each INFRARED equipment at the tilt station will not need the invest costs of a convection oven.



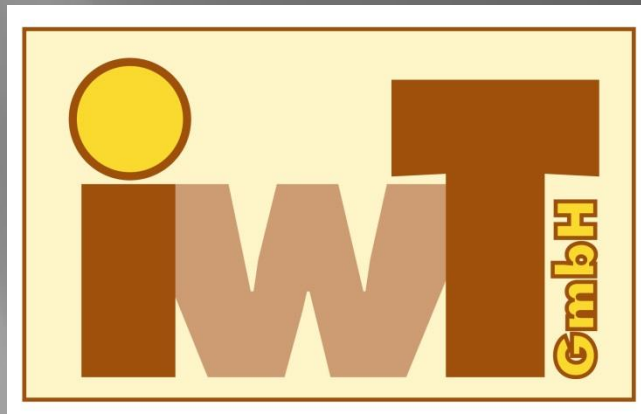
SAVE maintenance costs

INFRARED ovens do not need more maintenance procedures as any other comparable system, not even the emitters have to be replaced during the lifetime.



SAVE Cooling time

Because of not heating up the complete car body the time for cooling down the metal will be much more shorter.



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