



IRT FLEXARCH

EFFICIENT HEATING



SUPERIOR CURING TECHNOLOGY

No other piece of equipment improves paint finishing production times as dramatically as IRT dryers. IRT is a cost effective and proven technology which ensures 100% dry products before handling.

All IRT dryers use short-wave technology. This, together with the unique range of reflectors such as IRT FreeForm gold coated reflectors, provides the best heat transfer possible.

Short-wave IR has several other advantages. It is easy to control, provides full heat immediately and penetrates the paint completely. The paint cures from the inside and out without retaining solvents and moisture that gives rise to problems with quality. Heat losses to the air are minimal and all energy is transferred to the surface to be dried.

HEDSON TECHNOLOGIES

Hedson Technologies has a history from late 1960's, when we were the first to invent infrared dryers with short-wave IR and in the 1970's we developed spray gun cleaners and pneumatic lifts. Ever since then we have been market leader in the automotive refinishing industry.

With user experiences, innovative technology and well-planned concepts, all Hedson products have one thing in common, to deliver products that meets the high demands of professional customers.

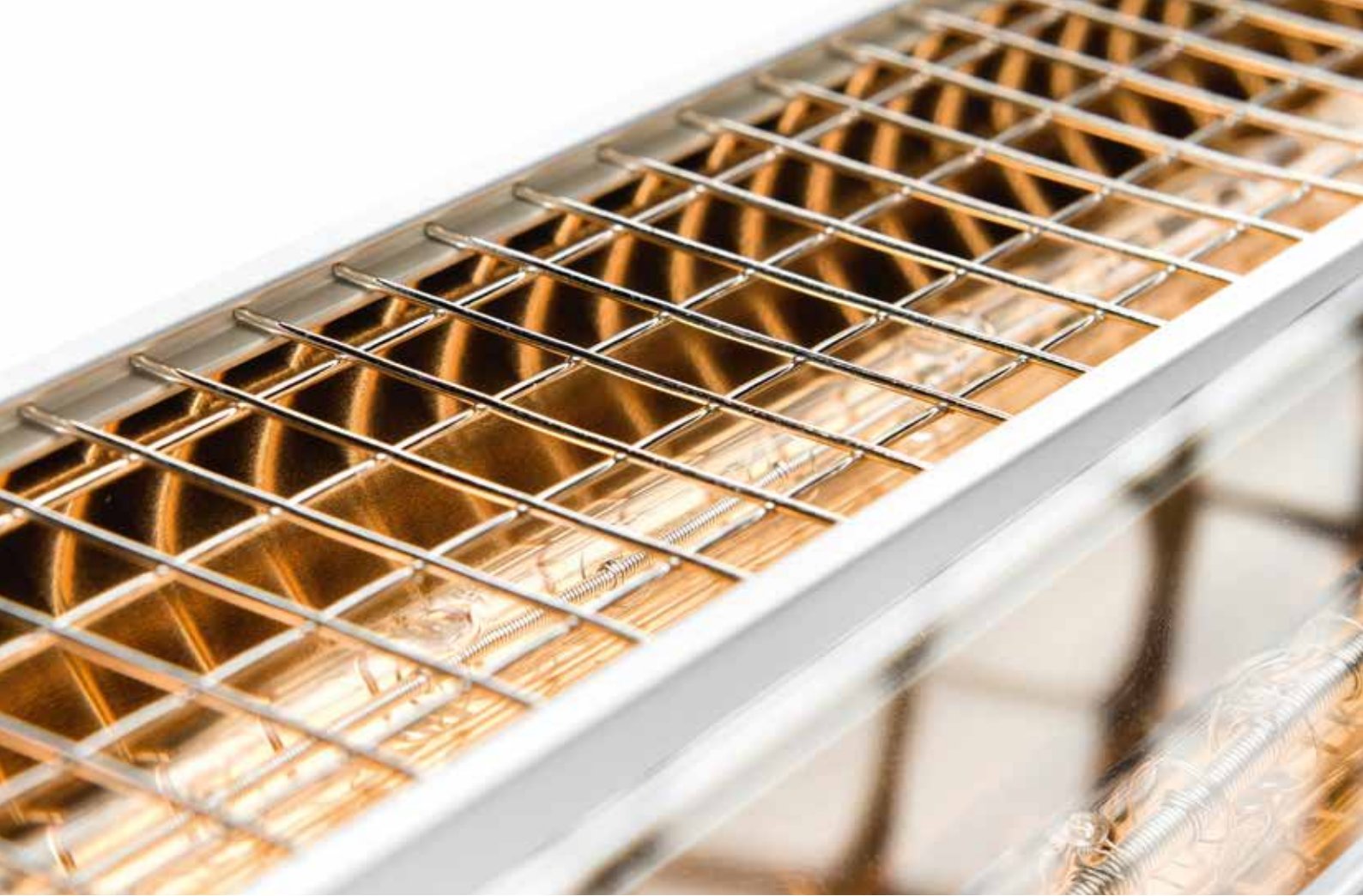
Hedson's products also stand for safety and environmental considerations. They therefore meet international demands and standards in accordance with the Quality Standard ISO-9001 and ISO-14001.

In 2014 Hedson Technologies was acquired by Mellby Gård Innovation och Tillväxt AB, a solid well-known and privately owned Swedish industry investor.

Hedson has a global presence in nearly 80 countries, with offices in Sweden, Germany, France and North America.

WHEN YOU ARE GOING TO EQUIP, EQUIP TO WIN.





ELECTRIC SHORT-WAVE INFRARED

- Increase production speed with effective heat emitters built into existing line
- Low power consumption, no waste of energy or over-heating of parts
- Heating process starts/stops instantly
- 4 times more effective than convection oven (gas/oil)
- Extremely long service life
- The infrared short-wave range is 0.76-2 μm (appr. 1176°C-3538°C)
- Our equipment peaks in the center of this span to ensure maximum possible short-wave energy within the shortwave range; 1.2 μm , 2176°C

With IRT short-wave technique, you will reach full power within less than 1 second. The level of precision is also extremely high in regards to heating the paint material and not the surroundings.

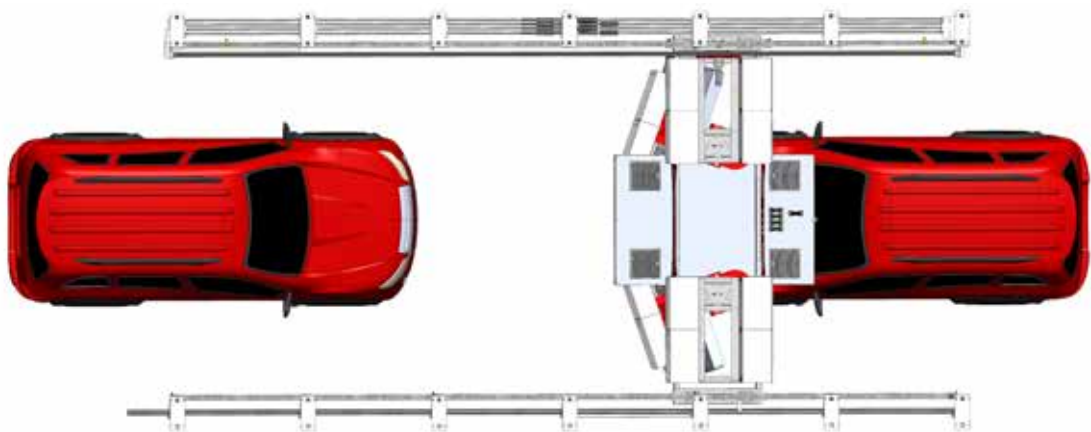
IRT FLEXARCH

Static curing process with pyrometer controlled surface temperature

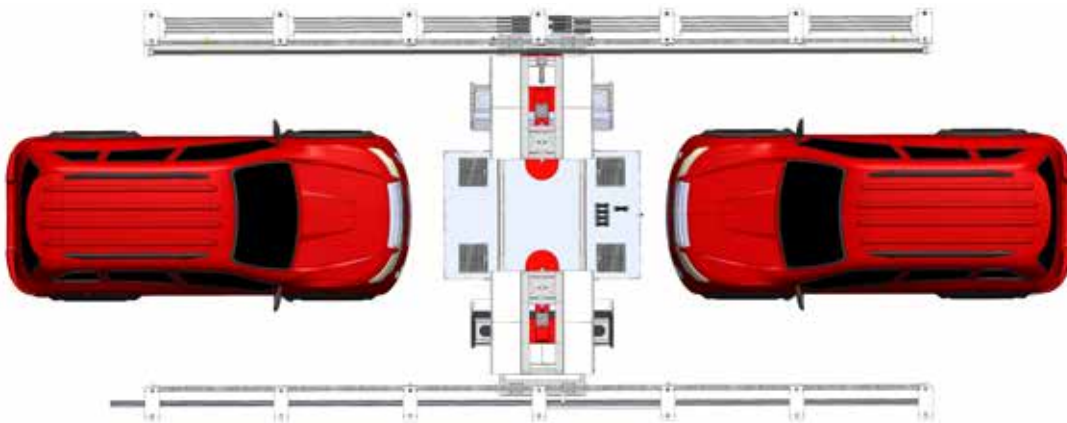
Simply choose the desired panels to be dried and start the curing process. IRT technology is based on gold coated reflectors behind the short wave infrared lamps, which provides 97% reflection of the emitted infrared radiation. The outstanding curing capability as well as the industry-wide shortest drying times belong to the characteristics of IRT.

By using the IRT FlexArch curing times will be reduced to a minimum while increasing the paint shop capacity at the same time. Finally, using the controller is as easy as using your smartphone. The IRT FlexArch is designed to be installed inside a spray- or curing booth. Via a ceiling mounted rail system the IRT FlexArch can smoothly be moved to the affected car panels, in order to start the infrared curing process.

Possible application fields: curing of base- and clear coats.



CURING POSITION IRT FlexArch in curing position in booth 2.



PARKING POSITION IRT FlexArch in parking position between booth 1 and 2. IRT FlexArch moves to curing position from booth 2 to 1.

PROCESS DESCRIPTION

At its starting position the IRT FlexArch rests in standby mode at the assigned parking position. This position can be outside of the spray booth, in a parking garage between two spray booths, or inside a curing booth. After applying the base- or clear coat, the operator can make the following selections:

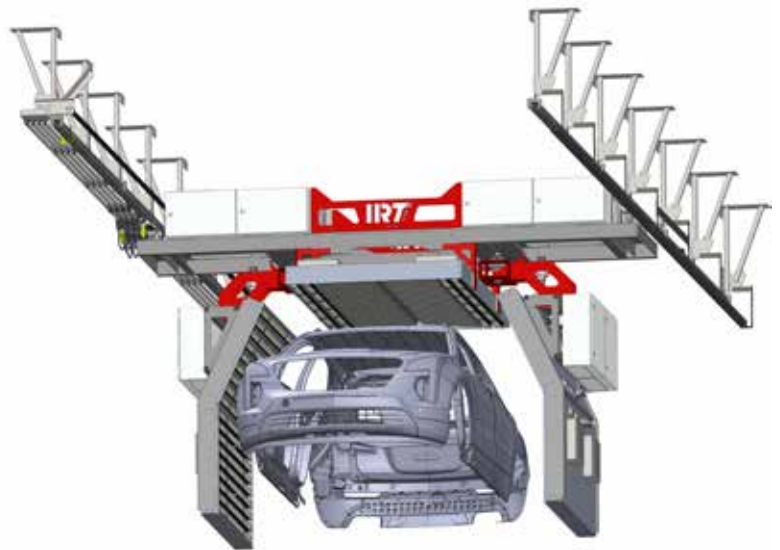
- Type of paint
- Car model
- Car panel

As soon as the selected choice has been confirmed, the IRT FlexArch moves automatically to the affected car panel and starts the curing process.

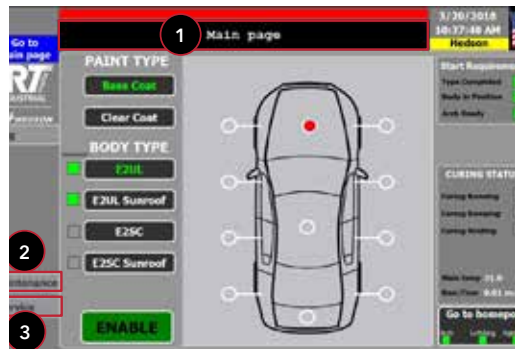
PERFECT HEAT DISTRIBUTION

On the basis of the pyrometer surveilled temperature control and monitoring system, the IRT FlexArch performs the curing process according to the common OEM process specifications. The specific arrangement of the infrared lamps ensures an exact heat distribution by 97% accuracy spread over the entire car panel.

Following the successful curing process, the IRT FlexArch returns to its parking position.



STARTING POSITION in standby mode.



SELECT type of paint, car model and car panel.



CURING of selected panels.

OPERATION

The IRT control unit is equipped with advanced technology as temperature supervision, laser pointer and ultrasonic distance measurement. The surface temperature of the paint is continuously monitored. By modifying the maximum surface temperature and the temperature increase per minute, the curing process can be adopted to the individual curing requirements of almost any paint used within the car industry. According to the easy handling, changing the curing parameters can be done by the customer. There is no need for an IRT technician to implement the changes. To avoid accidental changes of the curing programs, the controller is password secured.

SELF-INSTRUCTIVE MENU

- Choose program and start curing

RELIABLE APPLICATION

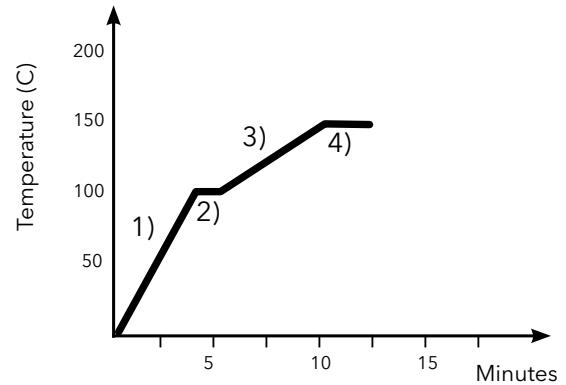
- Record your individual curing programs to quickly refer to if requested

ADJUSTABLE PARAMETERS

- Time
- Temperature rise per minute
- Maximum surface temperature

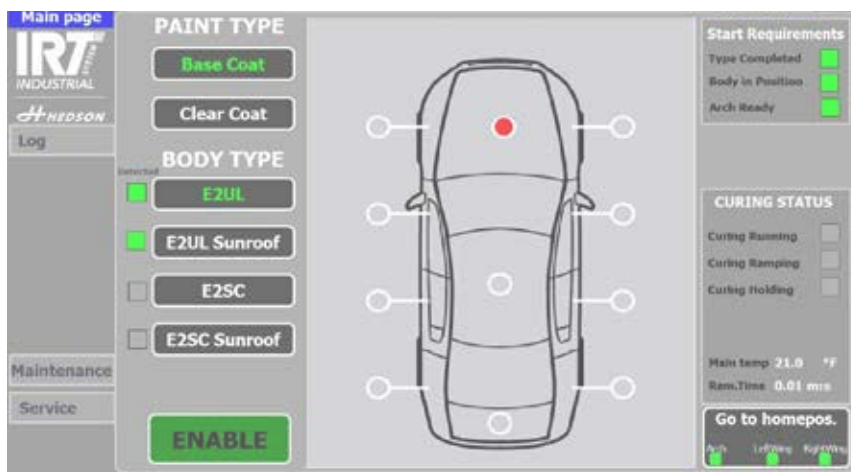
EQUIPPED FOR THE FUTURE

- Extend your recorded curing programs to be prepared for future production changes



- Ramp time
- Flash off holding time
- Curing phase
- Final curing

To avoid over curing the above described process is preprogrammed. All parameters can be adjusted to achieve the best and most effective curing result.





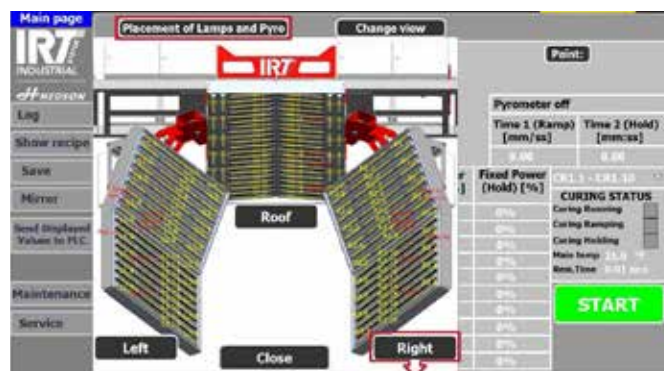
CAR TYPE DETECTION

Quality assurance for panel repair processes

With the development of the IRT FlexArch system, IRT has set new standards in quality assurance for panel repair processes. A key element of this new security strategy is the optional car type detection system (CTD). By using sensors in the top cassette, the IRT FlexArch is able to perform a plausibility check between the operators selected car type and the actual car inside the curing booth. In case of a difference between the car and the selected car type, the IRT FlexArch will inform the operator on the touch screen by requiring a confirmation of the selected parameters.

LAMP SURVEILLANCE

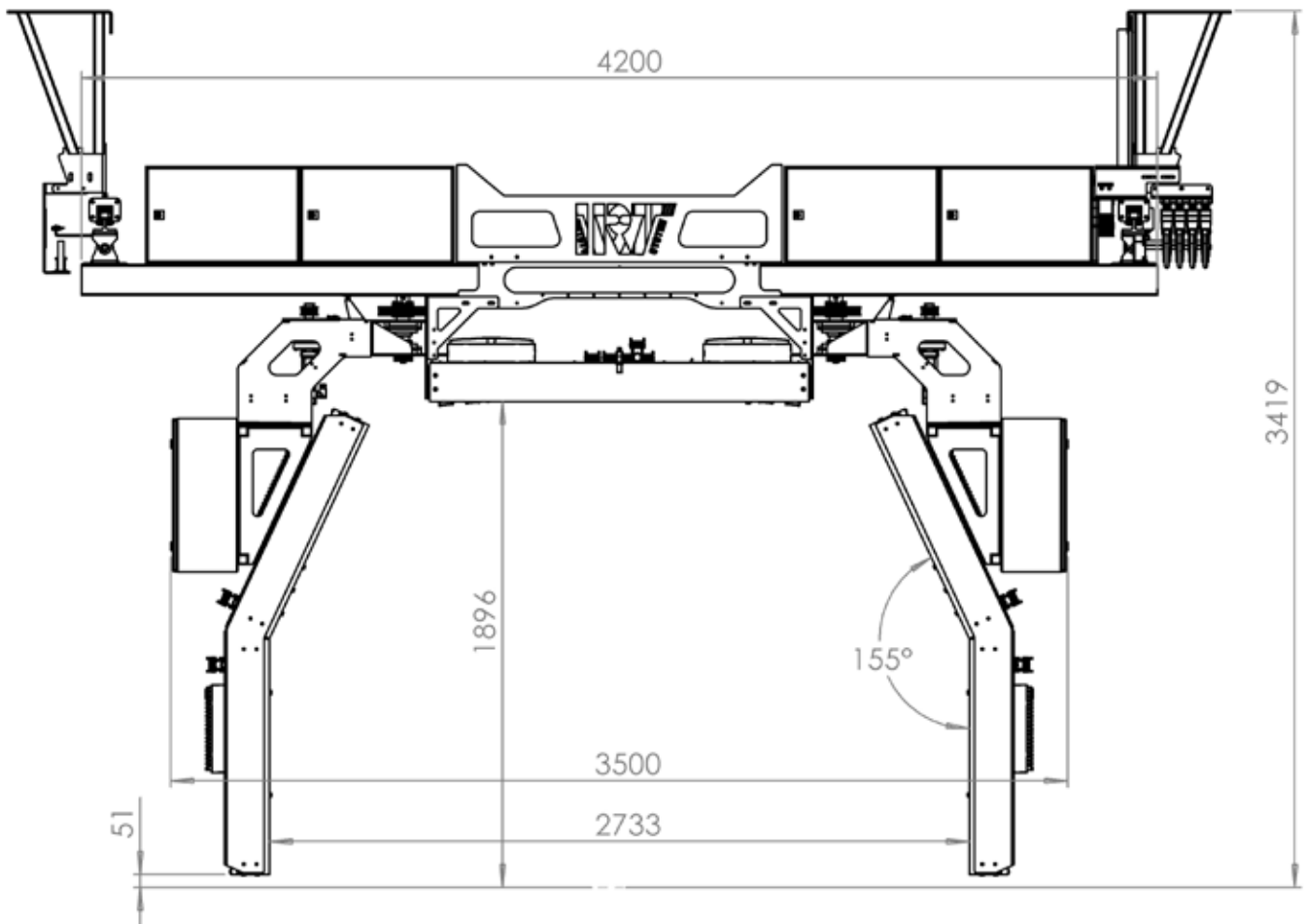
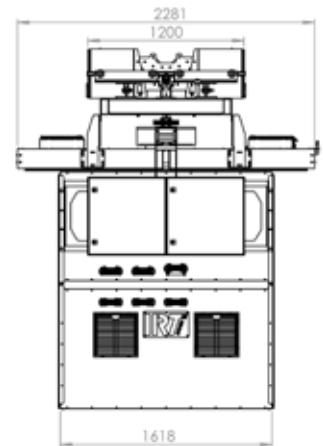
High quality paint curing requires a perfect function of all infrared lamps. Alternatively to a visual checkup of each single lamp, the IRT FlexArch is equipped with an electronic lamp surveillance. The operator can check the status of each lamp on the touch panel to ensure an impeccable condition of the lamps.



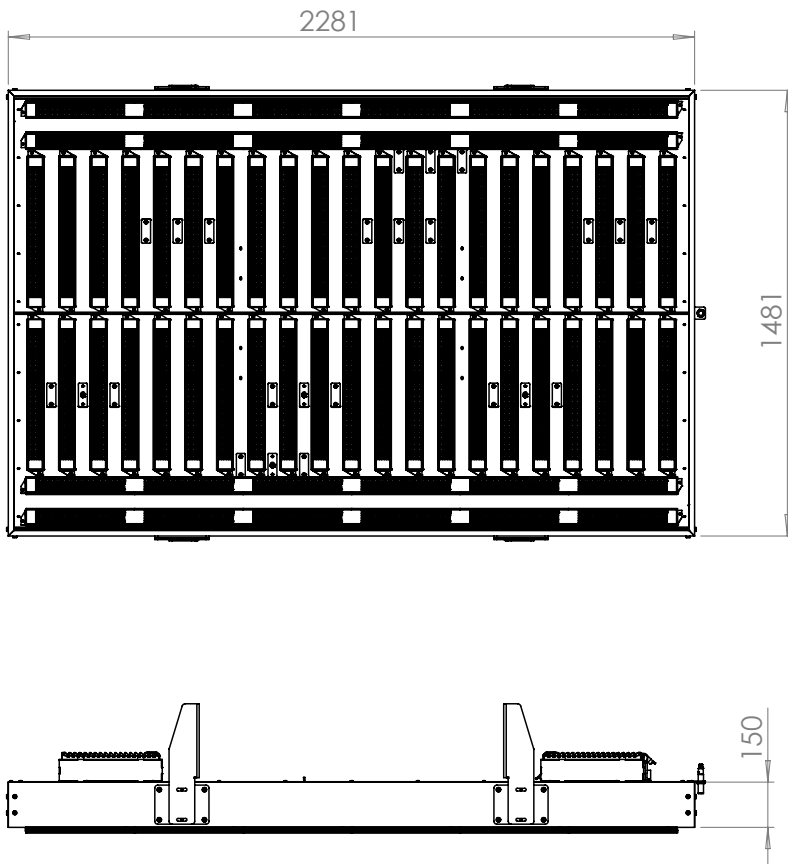
TECHNICAL DATA

IRT FlexArch

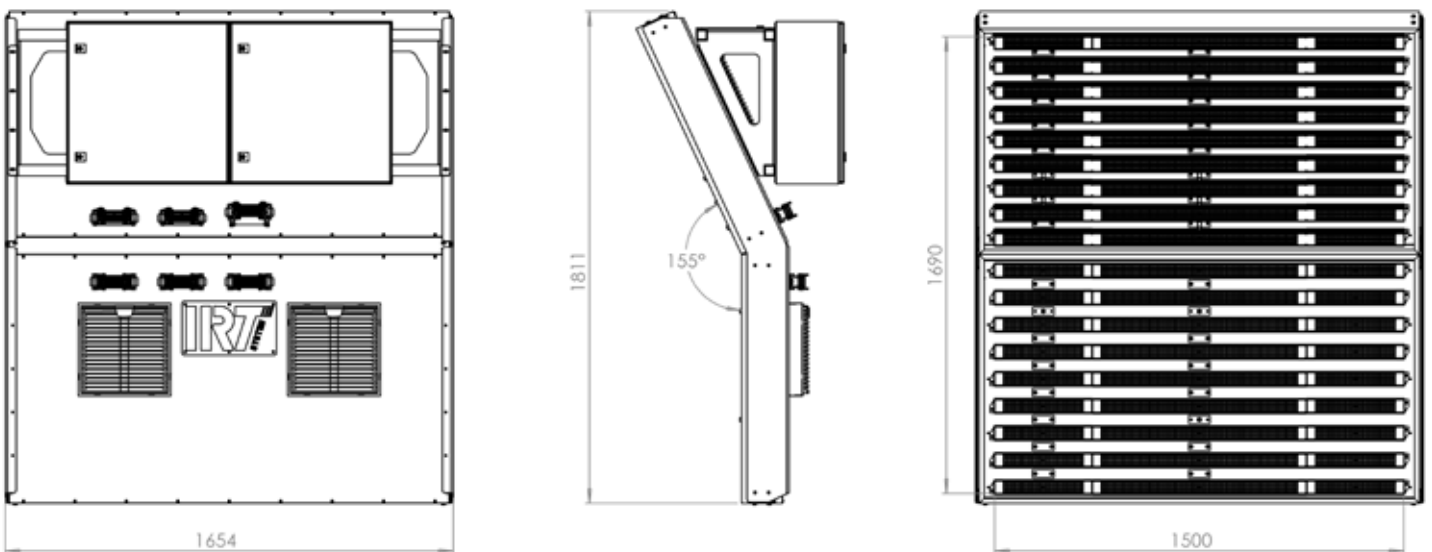
TECHNICAL DATA	
Installed power	288 kW
Car body types	SUV + Limousine
Lamps	180 pcs
Pyrometer	20 pcs
Temperature	0-170°C
Adjustable curing zones/car panels	1-11
Amount of different car body types	1-6
Weight IRT FlexArch	1125 kg
Weight left rail	150 kg
Weight right rail	250 kg



Top cassette - adjustable



Side cassette



BATTERY SURVEILLANCE SYSTEM

Temperature control for electric powered cars

The new IRT BSS (Battery Surveillance System) has been designed to control the surface temperature of the drive battery at the vehicle underbody. It consists of 4-8 magnetic remote sensors which can be freely positioned on the car underbody, as well as a remote receiver which can be connected to the IRT curing device. The BSS is mostly used for panel repairs inside a combi or curing booth.

Provided the booth is equipped with one of the following IRT products:
IRT PowerCure, IRT Tunnel or IRT FlexArch.



IRT POWERCURE



IRT TUNNEL



IRT FLEXARCH

SAFE DRYING OF SPOT AND TEFLA DAMAGES

The wireless sensors can be used at an ambient temperature of up to +60°C (cabin temperature). Due to the wireless data transmission, the IRT BSS is not stationary and can be attached to the underbody as soon as the car has been masked. After being activated, the sensors continuously send the measured surface temperature to the wireless server. This in turn collects the data of all sensors and transmits them to the PLC of the IRT product. The measured temperature of all sensors is displayed on the OP display of the IRT control. If the maximum permissible surface temperature of the battery is exceeded (usually +80°C), the PLC switches off the drying process (emergency shutdown) and sends an error message to the customer's control center.

RELIABLE PROTECTION AGAINST

- Risk of fire and explosion
- Conductor damage
- Overheating of the battery system

IRT BSS - SCOPE OF SUPPLY



4-8 MAGNETIC RADIO SURFACE SENSORS

Input: Pt100 (maximum spread: -50 to +400°C)

Output: radio transceiver

Lithium-ion rechargeable battery pack

Ambient temperature -20 to + 60°C

Range with the internal antenna 20 m /
external antenna 100 m

WIRELESS RADIO SERVER

Wireless input with 16 channels for sensors/
transducers

Input: 2 SIM-Slots for sensors, respectively interfaces

Wireless output via WiFi

Output: 4 USB 2.0 / Ethernet

Voltage: 24 VCD 7 230 VAC

Range with an external antenna 100 m

PERFORMANCE ABOVE ALL

Hedson is a leading supplier of premium curing, lifting and cleaning systems for auto workshops and industry worldwide. We come from the land of engineering, and have decades of experience learning from and innovating to real customer needs – technologies that improve the working environment, protect workers and boost productivity. Our ambition to add real measurable values is obvious wherever Hedson solutions are seen, sold or working – from advanced yet easy to use equipment to unmatched customer service, Hedson stands for performance above all.

www.hedson.com



IRT
SYSTEM
INDUSTRIAL

