



IRT
SYSTEM

HEDSON

IRT **SINGLEHEATERS**



HEDSON

— PERFORMANCE ABOVE ALL —

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.

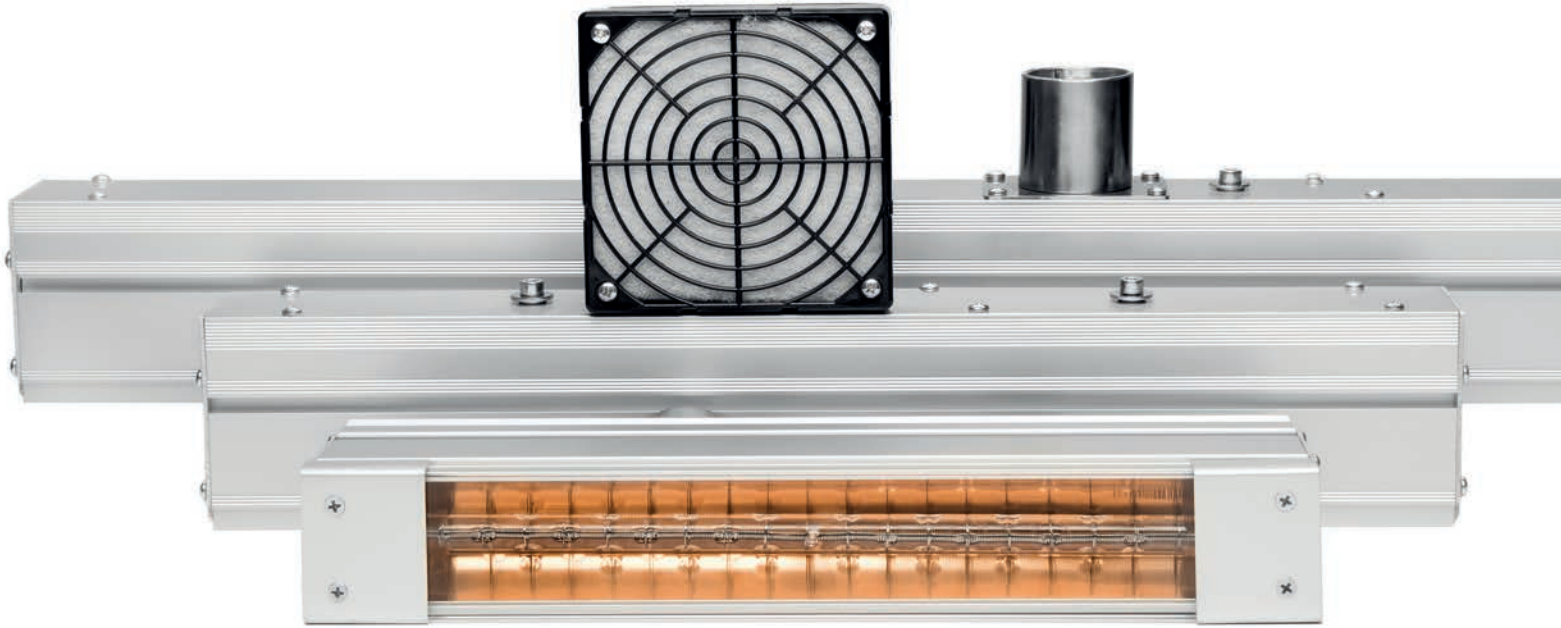
In 2014 Hedson Technologies was acquired by Mellby Gård Innovation och Tillväxt AB, a solid well-known and privately owned Swedish industry investor.

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.

A complete infrared IRT-oven has an extremely short conveyer length. Our IRT-Boosters and IRT-Systems fit in very restricted spaces.





IRT SINGLEHEATERS; A MODULAR SYSTEM

Fast, effective and energy efficient heating for all production lines

With SingleHeaters, we build simple, high precision effective and compact heat emitters with low power consumption, straight into the existing production line because so little space is required. This opens up great opportunities in getting the right kind of heat in the right place with tricky materials such as paper, plastics, metals, wood, paint and adhesives.

The SingleHeater reacts extremely quickly to heating power regulation.

The operational economy is excellent since SingleHeaters are switched on and off based on specific production requirements.

Our SingleHeater consists of reflector body, replacable reflector strip with a surface coating of pure gold (reflects >98% of IR-radiation) and tubular IR-lamp of clear quartz (extremely high transmission capacity of IR-radiation).

Available in modular lengths and customized up to 6 m long, ready to install and connect.



RAPID HEATING THROUGHOUT

Reduced risk of bubble formation

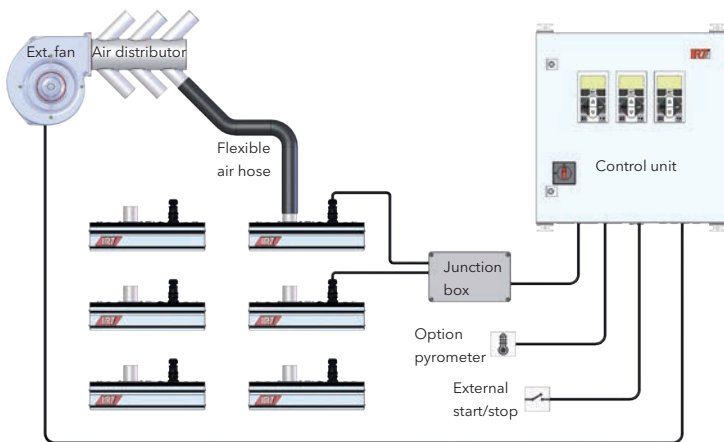
IRT SINGLEHEATERS; COMPACT HEAT EMITTERS

Most materials are partially transparent to IR radiation so that the heat is transmitted into the interior of the material. The result is:

- Rapid heating throughout
- Reduced risk of bubble formation and outer skins
- Increased degree of solvent release

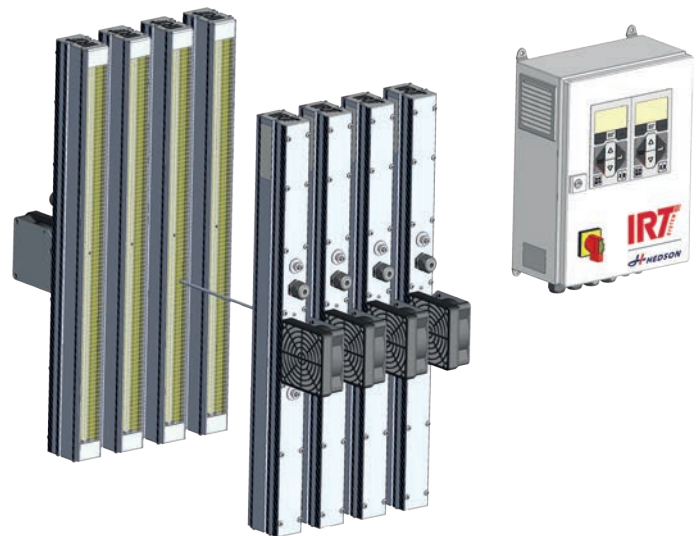
Our systems are based on high precision, effective and compact heat emitters, with low power consumption, which can be fitted straight into the existing production line because so little space is required. This opens up great opportunities in getting the right kind of heat in the right place without waste.

Curing paint, from the inside and out, takes appr 1 minute up to 180°C, plus holding time appr 3 minutes.



EXAMPLE SET-UP:

IRT SingleHeaters with external fan, control unit and pyrometer.



EXAMPLE PROJECT:

301000 Automotive industry, heating B-columns online (assembly line), 4 x 3 kW in two zones, for two B-columns.

Model	Power	Dimensions (mm)	Voltage
LE/LP 117	0,2 kW	120x92x74	230 V
LE/LP 117	0,2 kW	120x92x74	230 V
LE/LP 230	0,5 kW	233x92x74	230 V
LE/LP 230	1 kW	233x92x74	230 V
LE/LP 360	1 kW	363x92x74	230 V
LE/LP 360	2 kW	363x92x74	230 V
LE/LP 360	3 kW	363x92x74	230 V
LE/LP 360	4 kW	363x92x74	230 V
LE/LP 500	2 kW	503x92x74	400 V
LE/LP 500	3 kW	503x92x74	400 V
LE/LP 790	3 kW	793x92x74	400 V
LE/LP 790	4 kW	793x92x74	400 V
LE/LP 1124	4 kW	1127x92x74	400 V

Control units and add-ons	
202052	Control unit 230V 1ph 6kW
202051	Control unit 230V 3ph 9kW
202053	Control unit 400V 3~N 12kW
202050	Control unit 400V 3ph 18kW
193889	Pyrometer 15:1, 3m
195475	Photocell with laser, incl cable 10m
716197	Junction box for 1 SingleHeater
716198	Junction box for 3 SingleHeater
202113	Junction box for 6 SingleHeater
110381	Air distributor SingleHeater 5 connections
110323	Air distributor SingleHeater 6 connections
121199	Cooling hose 50mm
122293	Hose clamp 50 mm

External cooling fans	
122295	Fan with filter 1ph, 230V, 105W, 3-6 SingleHeater
121454	Fan with filter 1ph, 230V, 41W, 1-2 SingleHeater
109029	Air distributor SingleHeater 1 connections
109323	Air distributor SingleHeater 2 connections
110380	Air distributor SingleHeater 3 connections
110324	Air distributor SingleHeater 4 connections
110381	Air distributor SingleHeater 5 connections
110323	Air distributor SingleHeater 6 connections
121199	Cooling hose 50mm
122293	Hose clamp 50 mm

By peaking in the shortwave range in combination with highly flexible intelligent software, IRT secures versatile heating transfer advantages for all industry requirements.

IRT SHORTWAVE INFRARED

- The infrared shortwave range is 0,76-2 μm (appr 1176°C-3538°C)
- Our equipment peaks in the center of this span to ensure maximum possible shortwave energy within the shortwave range; 1,2 μm , 2176°C

With IRT shortwave technique, you will reach full power within 1 second. That is 0-100% in only 1 second! Unrivalled. And it works with the same precision all through the intervall for any power setting. The level of precision is also extremely high in regards to heating the requested surface and not the surroundings, when combined with IRT gold coated reflectors.

IRT shortwave technique can be configured into electric installations, a comparatively clean form of energy. This is extremely versatile in combination with highly flexible intelligent software to easily adapt to industry requirements. Careful consideration of heating requirements results in effective, high quality finishing and energy consumption savings.

SAFETY AND CERTIFICATION

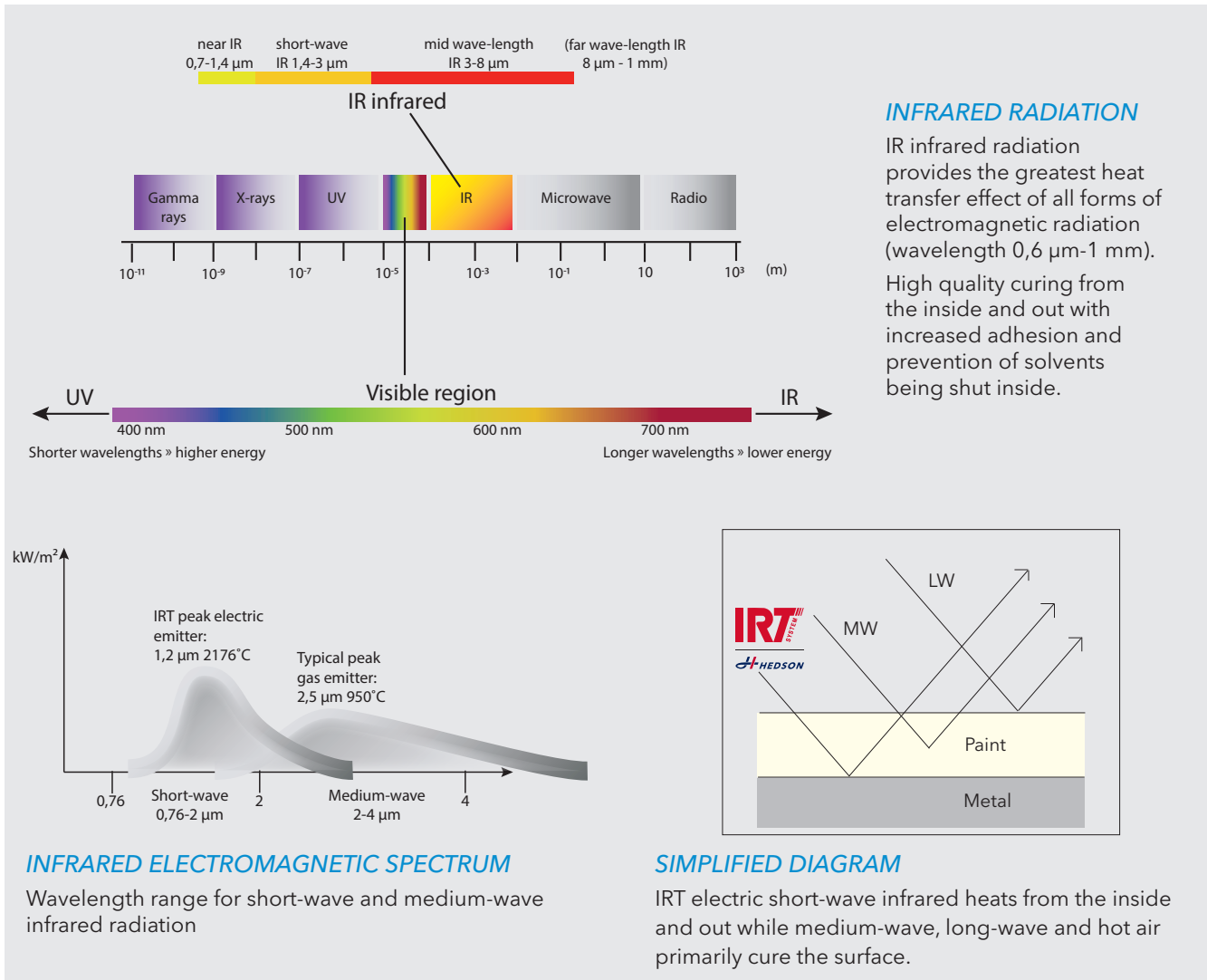
For your safety, we make sure all our products are certified, no matter where in the world you decide to use the equipment. We are always up-to-date with all European and US standards and are ISO certified since 1998.

Our global network of distributors assist on a national level with installation and service hubs in many countries. Most of our products are certified according to national standards and third party approved (for example GS, S, ETL).

IRT's successful combination of theoretical design and practical validation, both in our labs and together with certified third parties, is a strong foundation for high quality products with high performance.

Performance also implies that the product is not only designed to leave smallest possible environmental footprint during usage, but also throughout the entire sourcing process.





INFRARED RADIATION

IR infrared radiation provides the greatest heat transfer effect of all forms of electromagnetic radiation (wavelength 0,6 μm -1 mm). High quality curing from the inside and out with increased adhesion and prevention of solvents being shut inside.

INFRARED ELECTROMAGNETIC SPECTRUM

Wavelength range for short-wave and medium-wave infrared radiation

SIMPLIFIED DIAGRAM

IRT electric short-wave infrared heats from the inside and out while medium-wave, long-wave and hot air primarily cure the surface.

ELECTRIC SHORT-WAVE INFRARED

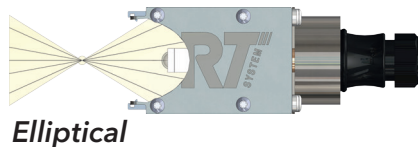
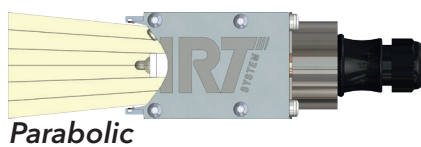
- Increase production speed with effective heat emitters built into existing line
- Low power consumption, no waste of energy or overheating of parts
- Heating process is started and ended instantly, at the exact requested output result
- Reach correct temperature within predetermined time
- 4 times more effective than convection oven (gas/oil)
- Optional curing analyzer tool reports process and energy consumption in easy-to-use graphs
- Extremely long service life with hassle-free operation
- Process control with self-instructive, easy-to-use default menus



300080 SingleHeater curing of insulation glue between joints on railway track parts.

THE WAVE

Our way of contributing to the environment by making sure nothing is wasted



(Gold-coated reflectors, because gold reflects 98% of IR radiation)

MINIMIZE YOUR CARBON FOOTPRINT:

Achieve the greatest possible proportion of direct and reflected radiation on the material.

We create and pre-programme zones to adapt to different shapes. The operational economy is excellent since lamps are automatically switched on and off based on exact production requirements.

For example, in the automotive industry assembly line, the lamps are programmed to add more effect onto the hood than onto the ceiling (since the ceiling is closer to the emitted radiation and will reach a correct temperature quicker). This process of turning on and off zones based on temperature demand, resembles a wave, with pulsing IR-radiation. And the wave saves a lot of energy.



20250 SingleHeaters in automotive industry, to cure seals of roof channels.

LOW MAINTENANCE WITH UNIQUE IRT LAMPS

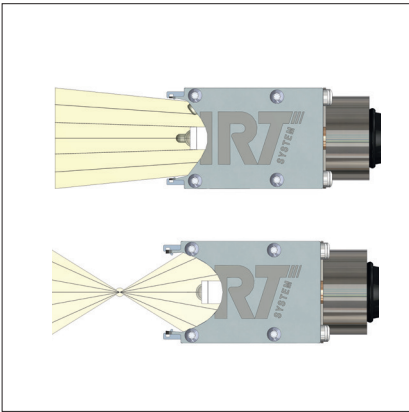
IRT:s unique lamps are very chock resistance. Tens of thousands of lamp installations in heavy-duty paper mill applications are proof of this. High quality filter and ventilation techniques are used to extend the lifetime of the lamps to impressive and guaranteed 20.000 operating hours. A normal life time is up to 40.000 operating hours.

TEMPERATURE CONTROL

IRT built-in versatile software monitors the detailed temperature curves.

PHOTOCELLS/BARCODE READING FOR AUTOMATIC START/STOPS

The object initiates the heating process and it automatically shuts down as soon as the required parameters are reached.



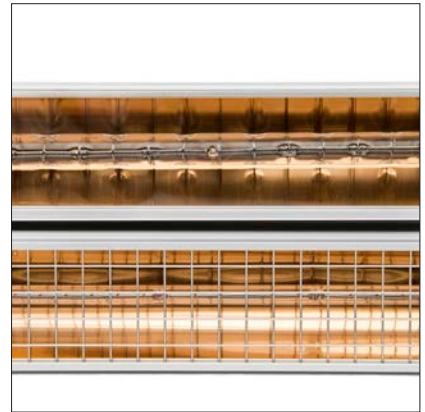
REFLECTORS

Top: Parabolic / Bottom: Elliptic
The SingleHeater secret; direct and reflected radiation on the material.



VENTILATION

Cooling can be performed with integrated, built-in fan or external fan.



PROTECTION

Safety glass or mesh in front of the lamp.



ADD-ON: CONTROL UNIT

Control the object surface temperature in complex thermal cycles with easy-to-use panels. Connect to process start/stop.



ADD-ON: AUTOMATIC START/STOP

Photo-electric cell detects production line activity.



ADD-ON: TEMPERATURE CONTROL

Pyrometer for automatic surface temperature control.

IRT SINGLEHEATERS; OPTIONS AND ADD-ONS

Options and addons create a flexible modular system.

Contact us for assistance. We will make sure you get the exact result you need, in shortest possible time and saving energy in the process.



MOBILE POWDER COATING OVEN

We cooperate closely with paint manufacturers to keep our products up-to-date with the latest materials. This mobile oven is used by powder coating producers to test and produce samples, project nr 399008.

LABORATORY RESOURCES

Custom-built heat transfer solutions for all industries

Our products are internationally recognized and highly valued. We offer laboratory resources for drying simulation and evaluation, prototype manufacturing, development, design and project resources.

We offer leading edge competence within heat transfer and surface coating with many years of cooperation from a wide range of manufacturing industries.

IRT supplies turnkey projects such as candy coating, heat expansion of parts for the aerospace industry, laminated board flattening and moisture profile monitoring, surface coating of a vast amount of materials and many, many other applications for the automotive industry.

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

