



Using infrared to cure powder coatings is an excellent way to obtain a fast cure on a variety of parts. A gel state is reached quickly, usually within one to two minutes, on most parts. Total cure is possible in as little as two minutes. For applications with an existing convection oven, an infrared booster oven may provide the temperature increase required when converting a liquid system to powder.



## Using Innovative Technology To Gel, Boost, And Cure Powder Coatings

Increase Production

Energy Efficient

Low Environmental Impact

Flexible

Precise Temperature Control

Space Savings

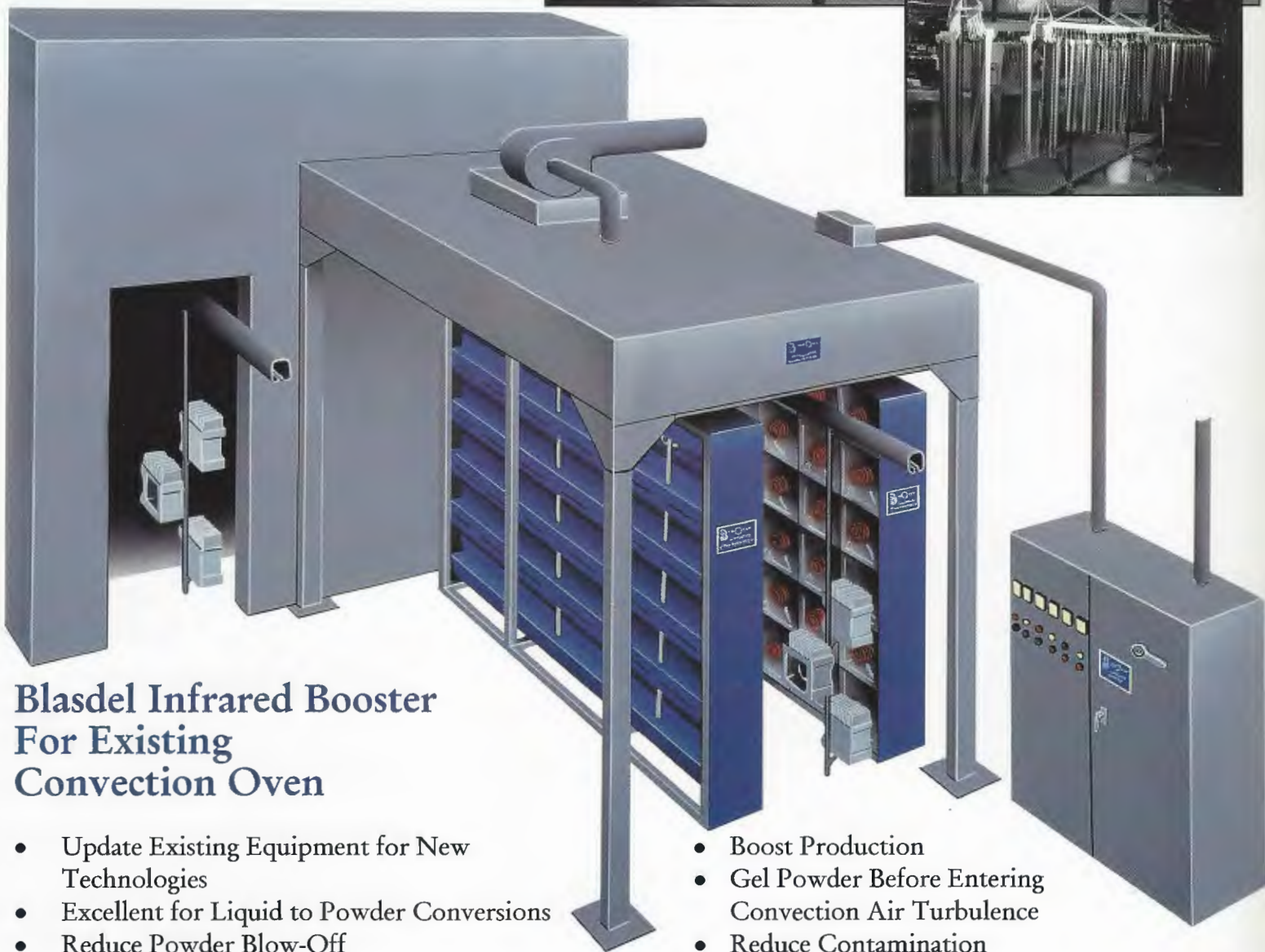
Clean Products

Low Maintenance



# Blasdel Infrared Ovens For A Perfect Cure

Infrared is an ideal way to cure or boost the cure for many parts. The organic compounds found in powder coatings readily absorb the infrared radiation resulting in a very fast cure. With the special square heat pattern projected by the Blasdel reflector, even reflective items may be clear coated. While the powder applied is still in a powder state, enough energy is absorbed to nearly cure the powder. The additional convective component in the Blasdel oven will finish the cure. Average cure cycles are 1/2 to 1/3 of the recommended convection cure cycle.



## Blasdel Infrared Booster For Existing Convection Oven

- Update Existing Equipment for New Technologies
- Excellent for Liquid to Powder Conversions
- Reduce Powder Blow-Off

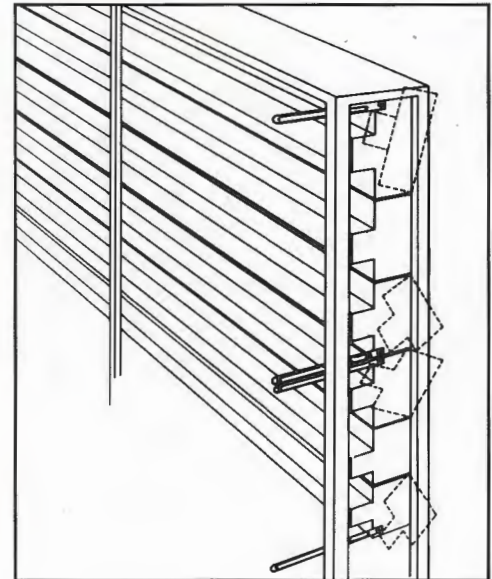
- Boost Production
- Gel Powder Before Entering Convection Air Turbulence
- Reduce Contamination

Blasdel Enterprises, Inc. offers an extremely versatile infrared oven for processing a variety of parts and coatings. It is ideal for job shops. The most flexible oven available just got better by adding adjustable height settings. Selected rows of the Adjustable Height oven may tilt upward or downward to accommodate multiple products.

The standard Adjustable Width oven features varying opposed widths to "focus" the radiant panels at the appropriate distance from the product, zoning in height and length, and a modular design. Minimal floor clearances are required for framing since a "clutter free" overhead design is used. Areas of the oven that are not required for a given part may be turned off independently.

### Phase Down:

Phase Down is a special option that can be added to all Blasdel Enterprises, Inc. ovens. It is an additional circuit that overrides the standard operating settings of the oven to a lower, energy saving setting during breaks and line stoppages. One switch activates the Phase Down mode. Parts left in the oven during down time utilizing the Phase Down option will be less likely to be over cured or under cured. If extended stoppages are expected, a Phase Down/Shut Down circuit may be recommended. With this feature, the oven heat will be shut off after an elapsed time period.



The modular design of Blasdel Enterprises, Inc. infrared ovens make them an excellent capital investment. Simply by changing the framing and configuration, the same infrared units may be used for many applications throughout your facility. Occasionally, increasing the wattage of the element may be necessary to meet new process specifications. Higher wattage elements will fit in the same housing, however, some control panel modifications may be required.

# Q & A About Infrared

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## IS ELECTRIC IR MORE EXPENSIVE TO OPERATE THAN GAS IR OR CONVECTION?

Due to the efficiencies of the equipment, electric IR can be very competitive. In fact, electric may appear to be 3 times higher per KW or BTU and still have competitive operating costs.

## HOW MUCH MAINTENANCE IS REQUIRED FOR A BLASDEL INFRARED OVEN?

Very little maintenance is required. Elements should be visually checked periodically to be sure that all are working. If the oven is placed in a location with extreme vibration, control panel connections should be tightened. Reflectors should be rebuffed or dusted when the accumulated dirt starts to absorb heat. This may range from monthly to annually depending on the shop environment.

## IS IT TRUE THAT I CAN ONLY BAKE FLAT PARTS IN AN IR OVEN?

Absolutely not. Especially in the case of a Blasdel infrared oven, complex shapes can be evenly cured due to the reflector design and containment of convection heat. Much of the heat transfer in a convection oven is due to conduction of heat through the part. The same is true for IR. Several specific examples are given in our literature.

## CAN I ONLY USE IR AS A PREHEAT OR BOOSTER FOR POWDER COATING?

Infrared may be used as a booster prior to convection oven or for a full cure on many parts. Process testing can determine how much time would be required for a full cure compared to the convection specifications listed on the powder technical sheets.

## CAN I PUT IR SECTIONS INSIDE OF MY CONVECTION OVEN FOR A BOOSTER SECTION?

Generally this is not recommended. They should be placed outside of the oven in the vestibule area. Blasdel IR sections need to be accessed from behind for element replacement. Good ambient air flow is important for maintaining an appropriate ambient air temperature for the electrical components. Each case should be examined separately.

## AS A JOB SHOP, I NEVER KNOW WHAT PARTS I WILL BE COATING. IS INFRARED FLEXIBLE?

Blasdel's adjustable infrared ovens are the most flexible oven you can buy. They have precise zoning controls and the sides of the oven move in and out for varying widths of parts or racks. It is also possible to change the angle on the horizontal rows of this type of oven. Details and photographs are contained in this brochure.

## WHAT INFORMATION WILL I NEED TO PROVIDE TO DETERMINE IF MY PROCESS IS A GOOD CANDIDATE FOR INFRARED?

Your Blasdel representative will need to know: part configurations, mass, type of substrate, temperature required, and the type of process. In addition, he/she will require the voltage available, production rates, and line speed and intended location for the oven. Upon receipt of this information and testing materials, our engineering team will compile a report and quotation for evaluation.

## WHAT IS THE AVERAGE LIFE OF AN ELEMENT?

Both the ceramic and the COR generators are noted for exceptionally long service life. On average, one can expect about 10,000 hours, however much longer is not uncommon. Proper controls must be used to achieve this performance.

## WHAT IS THE NORMAL DELIVERY FOR AN INFRARED OVEN?

Generally, delivery is quoted as 6 to 8 weeks for "standard" ovens. Extremely large ovens are usually 8 to 10 weeks. Blasdel Enterprises works closely with their customers to coordinate shipping dates with the customer's installation crews. We are also able to expedite orders for customers that need an oven in as little as a few weeks.

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### Typical Powder Coated Products:

Aluminum Wheels  
Appliance Hardware  
Chairs  
Steel Wheels  
Tubular Products

Castings  
Wire Shelving  
Bicycle Frames  
Aluminum Cans  
Oil Filters

Lawn Furniture  
Lighting Fixtures  
Appliance Trim  
Hand Tools  
Lawn Equipment

Automobile Trim  
Computer Components  
Office Furniture  
Drawer Slides  
Electrical Hardware

