

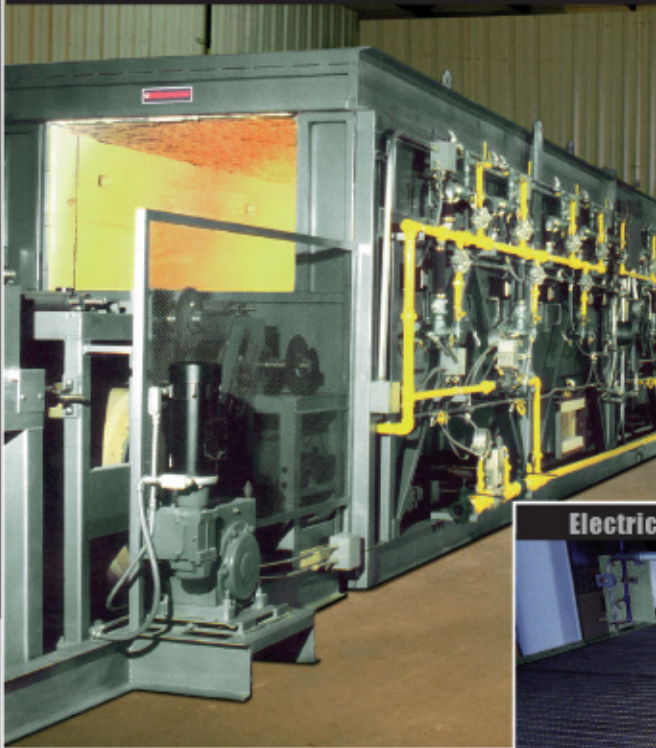


► FURNACES • KILNS • DRYERS • COATERS

# Fortress

## Continuous systems with high efficiency designs

Gas Fired Continuous Muffle Furnaces



Continuous Production Tape Casters/Coaters



Electric Conveyor Calciners



HED International offers a broad selection of continuous material processing systems. For over 50 years, UNIQUE/PERENY Kilns and Furnaces and PRO-CAST Tape Casters/Coaters have reliably served many customers. Like the venerated Flying Fortress, they are all rugged, stable, easy to operate and universally loved by their crews for bringing them through many difficult missions.

UNIQUE/PERENY Roller Hearth, Pusher Slab, Tunnel and Mesh Belt Conveyor kilns and furnaces are used to mass produce the world's highest quality ceramics, powders, and metal products. Gas, oil or electric heated units are available with a choice of product setting widths and lengths, conveyors, muffles, atmospheres and temperature ratings up to 1800°C (3272°F). The state-of-the-art controls, product handling and safety systems provided assure high quality production and efficient operation.

PRO-CAST Tape Casters/Coaters are routinely used to produce the finest thick films and coatings required by the world's leading manufacturers of fuel cells, batteries, coated foils, electronic and advanced ceramics.

Models are available from lab scale to production size units over 31m (100ft) long with various precision casting/coating surfaces, coating heads and carriers. Tape thickness of less than 0.025mm (0.001in) to over 3.1mm (0.125in), and up to 1.3m (52in) wide are currently produced on a daily basis to precise tolerances. Designed for batch or continuous production, these machines are the epitome of the mission critical performance that is expected of a Fortress.

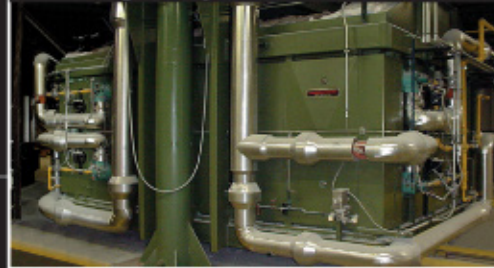
# Top Gun

## Periodic systems that provide firing cycle flexibility

High Temperature Elevator Kilns



High Temperature Bell Kilns



Vertical Door Furnaces



High Temperature Box Kilns



### UNIQUE/PERENY

FURNACES • KILNS • BELLERS • BELLS

Easily the best performing periodic kilns and furnaces in the world today are available from HED International. The UNIQUE/PERENY periodics are considered the finest all-round process heating systems for the production of premium quality products, especially high temperature ceramics. Given the Top Gun distinction, they have unsurpassed combinations of speed, range, versatility and firepower.

UNIQUE/PERENY Elevator, Bell, Carbottom, Shuttle and Front Loaded Kilns and Furnaces are used to manufacture electronic and advanced ceramics such as oxide and non-oxide powders, ferrites, bioceramics, wearparts, abrasives, catalysts and other products requiring variable operating cycles

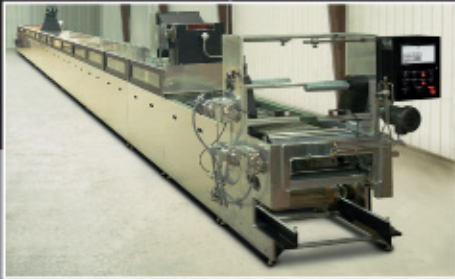
and precise heat processing. Units are available with capacities up to 30 cubic meters (1000cu.ft.) and with precision temperature control from 60°C (140°F) to 1800°C (3272°F) using gas, oil or electric heating systems.

Fuel fired models feature Isomax<sup>®</sup> high velocity, recirculating jet burners with air injection for uniform heat distribution and fast firing and cooling cycles. Oxygen enrichment and atmosphere capability are options. Both fuel and electric heated units also offer auxiliary air cooling as an option. The multiple loop program control systems assure precise heating and cooling profiles. The Top Guns are the smartest of the smart kilns and furnaces available on the planet.

# Stealth

## Special systems for virtually every heating requirement

Laboratory & Pilot Plant Tape Casters



Electric Front Load Kilns



Electric & Gas Crucible Furnaces



High Temperature Electric Kilns



Mesh Belt Conveyor Furnaces



## PRO-MELT

HED International has a range of material processing equipment that is widely used for research, development and small scale production by industry, government, universities and schools. In a knowledge-based environment, Stealth and proprietary processing methods are the competitive edge.

Emerging technologies are leading the advancements in the aerospace, automotive, electronic and telecommunications industries. HED International works with many of the major innovators in these fields who use Rotary Tube Furnaces for continuous thermal reaction processing of powders, Pro-Kiln Box Furnaces

for precise heat treatment and Pro-Melt Crucible Furnaces for melting aluminum and non ferrous metals. These units are available for operation with gas, oil or electric heating and with temperature ratings to 1750°C (3200°F).

We provide confidential custom equipment design and strategic technical consulting services for our customers. The diversity of applications and new product developments like Stealth are the driving force for many of the special material processing systems that have been spawned by HED International.

# HED International



The solution that fits. When you need new material processing equipment, you want to choose the best solution for your production requirement. That requires careful consideration of your particular needs because no one system is right for every job. That's why we've developed a very wide selection of continuous and periodic material processing systems, backed up by an engineering staff with the expertise to help you evaluate the solution that fits your individual needs.

Our Human Machine Interface (HMI) systems are designed to meet your requirements and interface with our equipment. The simplified operator and graphic displays we have developed provide essential information and ease of control while minimizing the need for user intervention. These systems are based on non-proprietary, open architecture software and are scalable to meet future requirements.



No matter which type of system is best suited for your application, we have the proven capability to design, build and service it. We supply parts, labor and engineering skills for jobs ranging from routine component replacement to complete updating or rebuilding.

Look over the advantages offered by HED International, then let our engineers review your present methods or requirements. Whether you want lower energy costs, higher production rates, better quality and efficiency, or a whole new manufacturing technology, we'll welcome the opportunity to recommend the best possible solutions and provide the data to evaluate their costs and benefits. You can be sure you've made a wise decision when you specify HED International.



 **UNIQUE/PERENY**

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**pro-cast** 

Precision Tape Casting Equipment

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**PRO-MELT**

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 **HED**<sup>®</sup>

**International**

PO BOX 246  
449 ROUTE 31  
RINGOES  
NEW JERSEY 08551

TEL: 609-466-1900  
FAX: 609-466-3608  
E-MAIL: [INFO@HED.COM](mailto:INFO@HED.COM)  
WEB: [WWW.HED.COM](http://WWW.HED.COM)