



INDIRECT GAS FIRED DROP BOTTOM FURNACE
ALUMINUM SOLUTION HEAT TREATING
AEROSPACE

DROP BOTTOM OVENS

- + FOR ALUMINUM SOLUTION HEAT TREATING
- + ELECTRIC, DIRECT & INDIRECT GAS FIRED

MEETS ALL SPECIFICATIONS FROM THE AEROSPACE, DEFENCE AND AUTOMOTIVE INDUSTRIES

PYRADIA has developed the most advanced line of drop bottom ovens for aluminum solution heat treating. These ovens incorporate state of the art control system and hoist mechanism which make them the most efficient and reliable on the market. Pyradia ´s drop quench ovens are designed for an intensive and continuous use up to 1 200°F/650°C.

The loading and quenching systems are **fully automated using popular OEM PLC**. The dual speed electro-mechanical hoist system permits a controlled acceleration/deceleration of the load descent and has proven to be much more reliable and sturdy than the commonly used pneumatic systems.

The insulation consists of 6"/15 cm of ceramic fiber modules. This high efficiency material assures minimum heat loss and heat storage for **rapid heat cycling and energy savings**. Contrary to layered blanket arrangement, ceramic modules have a great abrasion wear resistance caused by high air velocity. This configuration is durable and requires very little if no maintenance at all.

We design our units using long lasting low power density tubular heating elements evenly distributed in the air ducts all around the working zone. The high efficiency fans located in the top plenum procure a powerful vertical airflow, which passes evenly through the working area. As a result, Pyradia ´s equipment can achieve a **temperature uniformity up to +/- 5°F (+/- 2.8°C)**.

- + TEMPERATURE UNIFORMITY
- + ACHIEVED VALUE OF +/- 5°F (+/- 2.8°C).
- + FASTEST RAMP-UP & LOWEST CONSUMPTION
- + DUAL SPEED ELECTRO-MECHANICAL HOIST SYSTEM
- + 3,7,10,15s QUENCH

+ EQUIPMENT QUALITY STANDARDS

- + AMS 2750
- + NADCAP
- + CQI 9

+ PROCESS QUALITY STANDARDS

- + AMS 2770
- + AMS 2771
- + AMS 2768
- + CQI 9

This state of the art indirect gas fired Drop Bottom Furnace is class II AMS2750E certified +/- 10°F (5.6°C) for a 9.5ft W x 11.5ft L x7ft H working zone and a 2000lbs load capacity.





CASE STUDY

**ELECTRIC DROP BOTTOM FURNACE –
ALUMINUM SOLUTION HEAT TREATING - AEROSPACE - CANADA**

AMS2750E | CLASS I | +/- 5°F (2.8°C)

Max operating temperature: 650°C

Working zone 1.2m x 1.8m x 1.2m

Quenching time from 6 to 15s

"We required temperature uniformity of +/- 10°F and the system delivered achieved +/- 4°F. Pyradia's equipment is well appreciated and easy to maintain". Program Manager, Cyclone Mfg

FEATURES

- + Electric or gas heating (direct or indirect fired)
- + Ceramic fiber block module insulation
- + Stainless steel air baffle
- + Sliding or swinging door
- + Electro-mechanical hoist system
- + High volume recirculating stainless steel fan
- + Pneumatically operated double action doors
- + Quench tank mounted on mobile cart
- + Heating elements and belt driven circulating fan mounted in protected chamber beside and above working area
- + Load capacity up to 2 000 lbs for standard models.
- + Temperature uniformity of +/- 9°F (5°C) at any temperature (From 300°F/150°C to 1 200°F/650°C)
- + Choice of quench time in less than 5,7,10, ou 15s

OPTIONS

- + Temperature uniformity of +/- 5°F/2.8°C
- + Quenching tank heating & cooling system
- + Quenching tank insulation
- + Rinse tank and additional quench tanks
- + Safety curtain
- + Water/Glycol separation system
- + Sand filtration-recuperation system
- + Supervision camera system
- + Higher capacity hydraulic hoist system
- + UPS hydraulic hoist system

SPECIFICATIONS

MODELS - ELECTRIC DROP BOTTOM OVENS

MODELS	WORKING AREA		
	WIDTH (inches/cm)	LENGTH (inches/cm)	HEIGHT (inches/cm)
036036042	36/91	36/91	42/106
048048048	48/121	48/121	48/121
048072048	48/121	72/182	48/121
048096060	48/121	96/244	60/152
060060060	60/152	60/152	60/152
060080060	60/152	78/200	60/152
048108060	48/120	108/275	60/152
048132060	48/120	132/335	60/152
048132072	48/120	132/335	72/180
048132060	48/120	156/396	60/152
048132072	48/120	156/396	72/180

- + Some of our most popular sizes, other dimensions available on request.
- + Gas models are also available, please contact us for further details.
- + PYRADIA is continuously improving its products. Specifications may change without notice.

Additional sizes for the treatment of aluminum cladding

Other heat treating solutions - Modular Line Retort Chamber Furnaces

- Modular bell type furnace with fully automated process integration and direct quenching load transfer.
- Simple proprietary sliding load transfer method no complex hooking mechanism
- Furnace-quench tank transfer time is less than 15 seconds

Maximum working temperature: 2015°F (1100°C)

Maximum gross load with loading fixtures: 11,000 lbs (5 mton)

Maximum useful load height: 180 in (4500 mm)



Pyradia Walk-in Oven



PYRADIA also designs and manufactures heat treating controlled atmosphere modular systems, ageing ovens, walk-in ovens, cabinet ovens and heavy duty 2300°F furnaces. For more information on our products and services, do not hesitate to visit our website www.pyradia.com.

WARRANTY
All PYRADIA drop bottom oven carry a one year warranty.

Equipment manufactured in Canada

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Pyradia INDUSTRIAL OVENS & FURNACES