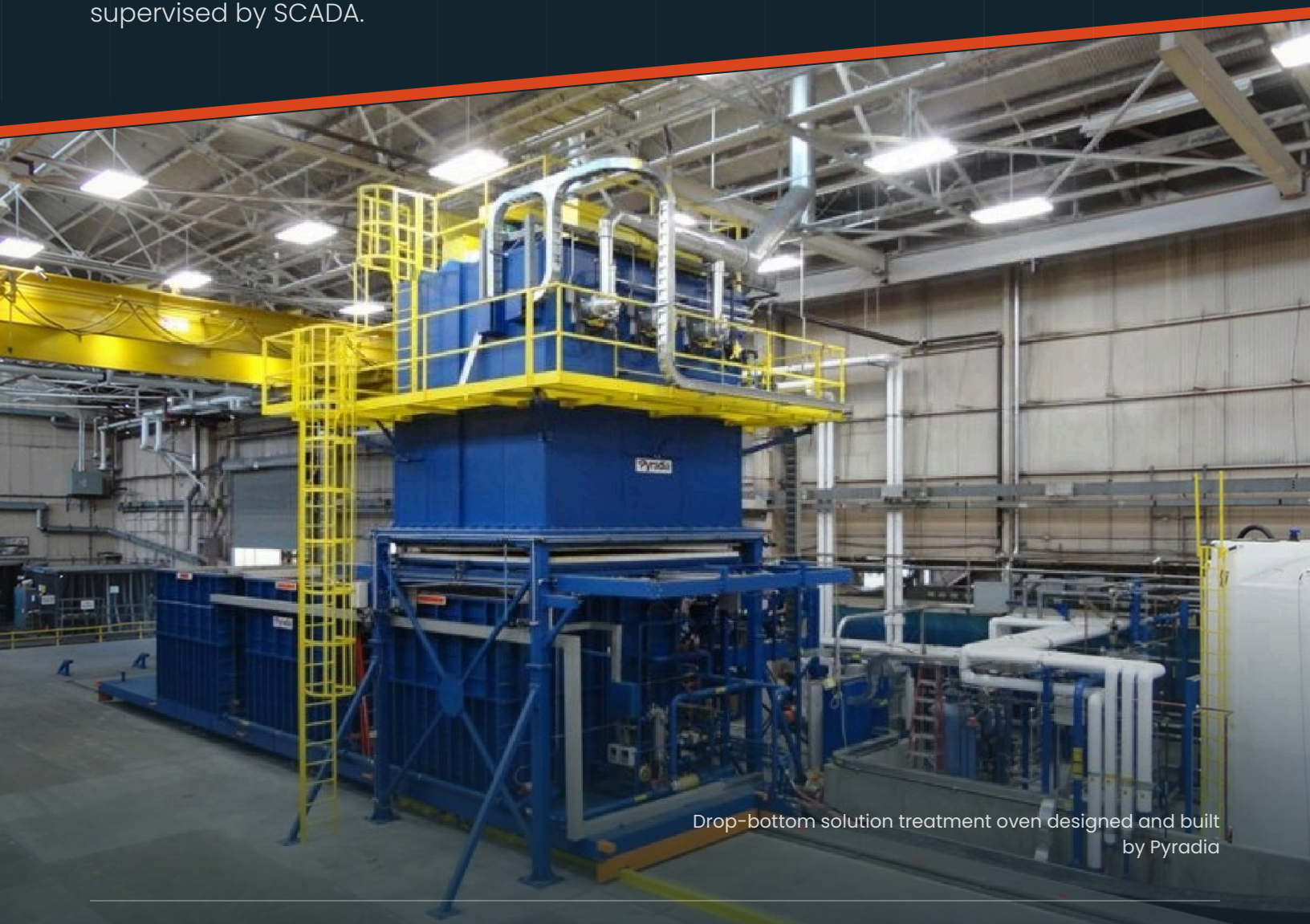
Pyradia

PYRADIA.COM

CUSTOM INDUSTRIAL OVENS & FURNACES

AEROSPACE & DEFENSE

Heat treating and composite curing equipment engineered for your process, built to AMS 2750 and supervised by SCADA.



Drop-bottom solution treatment oven designed and built by Pyradia

AMS 2750 PYROMETRY | SCADA SUPERVISION | SERVICE ACROSS NORTH AMERICA

50+ YEARS OF MASTERING HEAT

Founded in 1973, Pyradia specializes in the design and manufacturing of custom industrial ovens and furnaces for the **heat treating industry**, providing advanced thermal processing solutions for annealing, tempering, stress relieving, solution heat treating, aging, and other specialized heat treatment applications. Every piece of equipment is designed, assembled and tested in our plant in Saint-Hubert, Quebec, by a team of engineers who work closely with your process specialists, from developing the specifications through commissioning.



THE PYRADIA TEAM

50+
years of expertise in heat processing equipment

41,000 ft²
plant in Saint-Hubert, Quebec (3,800 m²)

±5 °F
uniformity, AMS 2750 Class 1 (±3 °C), on our high-precision ovens

100%
designed, assembled and tested in our plant

MILESTONES

1973
Founded in Marieville, Quebec, building kilns for pottery and enameled copper.

1978-1979
Michel Hémond and Mario Bouthillier take the helm; first aerospace furnaces in Longueuil.

1985
Acquisition of Belfab, an industrial dust collection specialist.

1992
Launch of the web converting division.

1996
First Pyradia Class 1 drop quench oven, with a 3-second drop time.

2014
Relocation to our new plant in Saint-Hubert, Quebec.

2022
Rockwell Automation Silver OEM Partner.

2023
50 years of innovation and custom-built ovens.

> "Our mission: mastering our customers' needs and expectations, to design and manufacture innovative industrial ovens, with the goal of becoming a benchmark for customer satisfaction."

Pyradia

NORTH AMERICA 2026: A MARKET GAINING SPEED

Higher defense budgets on both sides of the border, munitions and shipbuilding ramp-ups, domestic sourcing and aircraft backlogs that run for years: demand for qualified heat treating is rising fast across North America.

NATO TARGET · CANADA AND THE UNITED STATES

OSW, June 2025; NATO, March 2026

5% of GDP for defense by 2035: the NATO target adopted in June 2025 by Canada, the United States and their allies, including at least 3.5% for core defense.

2% (Canada, 2025) | 3.5%: core defense | 5% (2035)

CANADA

C$81.8B — Global News, November 2025
in new defense funding over five years in Budget 2025, including C$6.6B for the Defence Industrial Strategy.

70% — Finance Canada, May 2026
of defense procurement targeted for Canadian firms within 10 years.

C$39.9B — AIAC and ISED, July 2026
in Canadian aerospace manufacturing revenue in 2025, up 7.3%.

UNITED STATES

US$1.5T — Greenberg Traurig, May 2026
requested for US defense in FY2027, including more than US$100B for the industrial base.

36,000 — DoD OIG, July 2026
155 mm shells produced per month in March 2026, against a goal of 100,000.

6,371 — Air Data News; CAPA, 2026
aircraft in Boeing's backlog (September 2026); 787 output set to reach 10 a month in 2027.

WHAT IT MEANS FOR YOU

01 CAPACITY
Munitions, shipbuilding and engine MRO ramp-ups on both sides of the border need new compliant heat treating capacity.

02 CANADIAN CONTENT
The Defence Industrial Strategy and the ITB Policy favor suppliers based in Canada, like Pyradia.

03 US FINANCING
Office of Strategic Capital loans and Defense Production Act Title III funds help pay for new production equipment.

04 TRACEABILITY
AMS 2750H (2024) tightens electronic records; CMMC in the US and the CPCSC in Canada now apply to defense contracts.

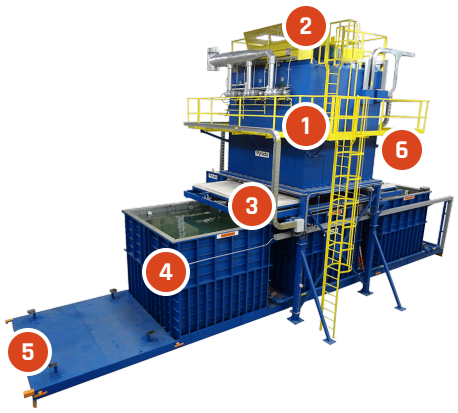
Sources: OSW (June 2025); NATO (March 2026); Global News (November 2025); Canadian Naval Review (February 2026); Finance Canada (May 2026); National Defence (February 2026); AIAC and ISED (July 2026); Greenberg Traurig (May 2026); DoD OIG (July 2026); Air Data News (October 2026); CAPA (September 2026); ISED (August 2026); CRS (May 2026); SAE International (2024); Goodwin (September 2025); PSPC (April 2026).

AEROSPACE: PRECISION, CYCLE AFTER CYCLE

Landing gear, structures, engine parts and composites: every part must reach its properties the first time, with the records to prove it. Pyradia engineers ovens and furnaces that hold the uniformity AMS 2750 requires and can document every batch.

FLAGSHIP

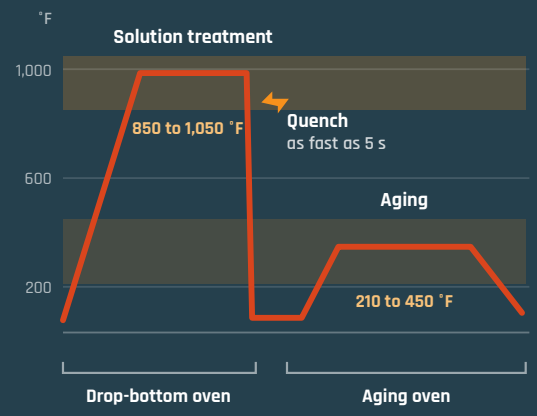
DROP-BOTTOM SOLUTION TREATMENT OVEN



1. Chamber: ±5 °F (±3 °C) from 300 to 1,200 °F
2. Electromechanical and hydraulic hoist with VFD
3. Quench in as little as 5 seconds
4. Quench tank on a rail-mounted cart
5. Loads of 10,000 lb (4,500 kg) and more
6. SAT ports; optional encrypted logging

INFOGRAPHIC

T6 ALUMINUM HEAT TREATMENT



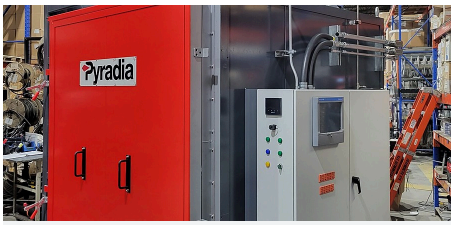
Alloys of the 2xxx, 6xxx and 7xxx series, T4 and T6 tempers. Every soak can be logged to AMS 2750 pyrometry requirements.



COMPOSITES

Vacuum-bag curing, 248 to 392 °F (120 to 200 °C), ±5 °F (±3 °C), thermocouples in the parts.

Composite curing ovens



STRESS RELIEVING

Aluminum, titanium and steel, up to 1,400 °F (760 °C).

HM Series stress-relief ovens



ENGINE PARTS

Stress relieving and brazing under argon, nitrogen or hydrogen, up to 2,000 °F (1,095 °C).

Atmosphere furnaces

> "The temperature uniformity we required was ±5 °F. The uniformity delivered is actually ±3 °F between 200 °F and 470 °F."
>
> Robin Dubé, research engineer, Centre technologique en aérospatiale (CTA)

THEY TRUSTED US

Pratt & Whitney Canada · Goodrich Aerostructures (Rohr) · Bell Textron · Cyclone Manufacturing · Héroux-Devtek · Steelville Manufacturing · CTA

Pyradia also designed a fully automated heat-treating line for the Airbus A380 landing gear.

DEFENSE: RUGGEDNESS, TRACEABILITY, DISCRETION

Naval, munitions, military vehicles and aircraft: defense demands qualified processes, traceable parts and complete confidentiality. Pyradia has supplied the industry for years with equipment that meets military specifications, including MIL-H-6088.



CAR-BOTTOM FURNACE: FOR LOADING LARGE, HEAVY PARTS



CONFIDENTIAL PROJECTS

Privacy screens in our shop and restricted access to the build area. Many customers prefer to stay discreet, and we respect that.

TYPICAL APPLICATIONS

MILITARY AIRCRAFT AND DRONES

Processes: aluminum solution treatment and aging, composite curing

Equipment: drop-bottom ovens, composite curing ovens, walk-in ovens

MUNITIONS AND FORGINGS

Processes: hardening and tempering, stress relieving

Equipment: roller hearth, batch and pit furnaces

NAVAL AND ARMORED VEHICLES

Processes: post weld heat treatment (PWHT), stress relieving of large weldments

Equipment: car-bottom furnaces up to 165 tons (150 t), batch furnaces

MISSILES, SPACE AND ELECTRONICS

Processes: titanium stress relieving, brazing and annealing under atmosphere, composites

Equipment: HM Series ovens (titanium option), atmosphere furnaces

WHY NOW

C$1.4B CANADA — to produce 155 mm ammunition in Canada, including three Quebec facilities.

15 CANADA — River-class destroyers under construction and up to 12 submarines planned.

85 USA — F-35s requested for FY2027, up from 47 the year before.

34 USA — ships in the FY2027 shipbuilding request (US$65.8B).

Sources: National Defence (March 2026); The Canadian Press (June and July 2026); Greenberg Traurig (May 2026).

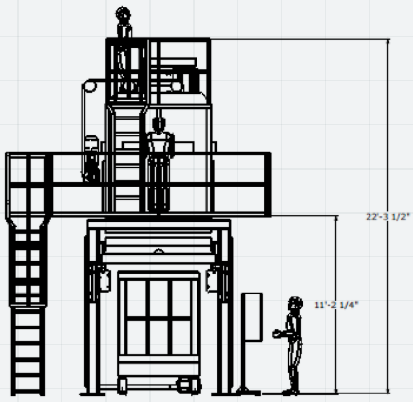
THE PYRADIA ADVANTAGE

- ✓ Proven with aerospace and defense manufacturers in Canada and the US
- ✓ MIL-H-6088, AMS 2750, BAC 5602
- ✓ Encrypted logging and SCADA
- ✓ Installation and service across North America
- ✓ Confidential projects

Reference: Class 1 (AMS 2750E) drop-bottom oven for aluminum aircraft parts for the defense industry, Steelville Manufacturing (USA).

YOUR PROCESS. OUR ENGINEERING.

At Pyradia, every unit is engineered around your process. You define your needs, priorities and constraints; we engineer the equipment that meets them, build it, and support it for its entire service life.



1 · SOLIDWORKS DRAWINGS AND 3D MODELS



2 · A PYRADIA DROP-BOTTOM QUENCH SYSTEM (2026)

ONE PROJECT, EIGHT STEPS, ONE POINT OF CONTACT

1. **ANALYSIS** — Process, parts, standards, throughput and floor space.
2. **ENGINEERING** — Engineering studies, SolidWorks 3D models and simulation.
3. **DESIGN** — Energy source, airflow, handling and automation.
4. **FABRICATION** — In our 41,000 ft² plant in Saint-Hubert.
5. **TESTING** — In-house testing before shipment.
6. **INSTALLATION** — Dismantling, shipping and supervised reassembly.
7. **COMMISSIONING** — Start-up, calibration and training.
8. **SUPPORT** — Spare parts, remote and on-site service.

WHAT WE TAILOR

- **SIZE AND LOAD** — car-bottom loads up to 165 tons (150 t)
- **ENERGY** — electric or gas, direct or indirect
- **ATMOSPHERE** — nitrogen, hydrogen, CO_2 (magnesium)
- **DOORS** — guillotine, sliding, swing
- **QUENCH** — heated, cooled, filtered tanks
- **HANDLING** — hoists, cars, rollers, conveyors
- **CONTROLS** — from controller to PLC with SCADA
- **COMPLIANCE** — AMS 2750, CQI-9, NFPA 86, CSA

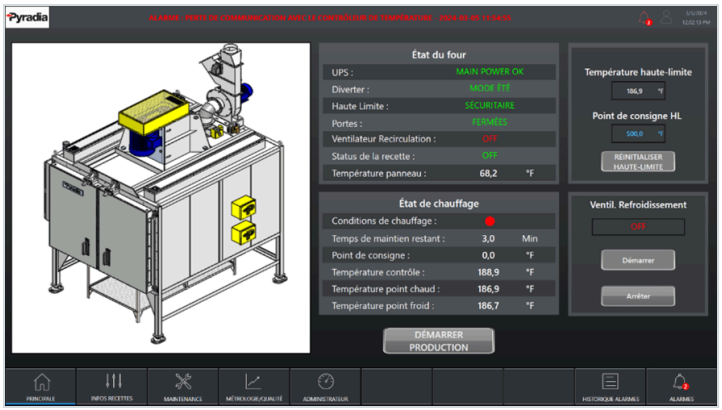
EVERY BATCH, SUPERVISED AND DOCUMENTED

Pyradia's technical department implements SCADA systems, from automating a single oven to supervising an entire fleet: automated heating sequences, temperature monitoring and production data recorded in real time.

TYPICAL ARCHITECTURE



Barcode reader · Remote access for support · UPS: data protected during power outages · EtherNet/IP network



Operator interface of a Pyradia oven

PROJECT EXAMPLE

For a world-class aeronautics manufacturer: automation of every chamber sequence, heating profile management, production data logging and real-time monitoring on the Movicon platform.

DATA RECORDED FOR EVERY BATCH

- ✓ Operation: annealing, solution treatment or aging
- ✓ Batch or load number
- ✓ Date of operation
- ✓ Number of parts (manual or barcode)
- ✓ Loading time
- ✓ Furnace number
- ✓ Soak temperature
- ✓ Start of soak, PLC timestamp
- ✓ End of cycle, PLC timestamp



Thermocouple rack for a TUS

THE 4 PILLARS OF AMS 2750

CALIBRATION
sensors and instruments

TUS
temperature uniformity

SAT
system accuracy

INSTRUMENTATION
types A to E, offered as needed

UNIFORMITY CLASSES

Class 1	**±5 °F** (±3 °C)
Class 2	**±10 °F** (±6 °C)
Class 3	**±15 °F** (±8 °C)
Class 4	**±20 °F** (±10 °C)
Class 5	**±25 °F** (±14 °C)
Class 6	**±50 °F** (±28 °C)

Class 1 achieved by our high-precision ovens. Current revision: AMS 2750H (2024).

Pyradia

THE AEROSPACE & DEFENSE RANGE

Published maximum temperatures and uniformities. Every unit is then tailored to your process.

EQUIPMENT	MAXIMUM TEMPERATURE	UNIFORMITY	HIGHLIGHTS	STANDARDS
 **DROP-BOTTOM (SOLUTION)**	**1,200 °F · 650 °C**	**±5 °F** 300 to 1,200 °F	Quench 5 s, 10,000 lb+	AMS 2750, 2771, 2772, MIL-H-6088, BAC 5602
 **HORIZONTAL QUENCH**	**1,400 °F · 760 °C**	**±5 °F** 300 to 1,400 °F	Quench 7 s (small loads)	AMS 2750, 2771, 2772, MIL-H-6088, BAC 5602
 **HM SERIES STRESS RELIEF**	**1,400 °F · 760 °C**	**±5 °F** 300 to 1,200 °F	Aluminum, titanium, steel	AMS 2750, 2771, 2772, MIL-H-6088, BAC 5602
 **COMPOSITE CURING**	**800 °F · 425 °C**	**±5 °F**	Vacuum manifold, thermocouples inside parts	AMS 2750, 2771, 2772
 **WALK-IN AND CABINET**	**800 °F · 425 °C**	**±5 °F**	Combination airflow, air curtain	AMS 2750, 2771, 2772
 **CAR-BOTTOM**	**1,200 °F · 650 °C**	**±10 °F**	Up to 165 tons (150 t), multi-zone	AMS, CQI-9, ASTM, SAE
 **ROLLER HEARTH**	**1,900 °F · 1,040 °C**	**±10 °F**	Continuous production	AMS, CQI-9, ASTM, SAE
 **PIT FURNACE**	**2,300 °F · 1,260 °C**	**±5 °F*** 300 to 1,200 °F	Long parts, overhead crane	AMS 2750, MIL-H-6088 (option)
 **ATMOSPHERE FURNACE**	**2,000 °F · 1,095 °C**	**±25 °F** up to 1,400 °F	Nitrogen, hydrogen or blend	AMS, CQI-9 (option)

* Optional. Unless otherwise noted, equipment complies with NFPA 86, with a NEMA 12 cCSAus panel and CSA-certified oven. Also available: aging ovens, batch furnaces, annealing furnaces, box furnaces and conveyor ovens. Pyradia continuously improves its products and may change specifications without notice.

LET'S TALK ABOUT YOUR NEXT PROJECT

SEND US YOUR SPECIFICATIONS.

Our engineers will propose the equipment that fits your process, your standards and your floor space.

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AEROSPACE & DEFENSE PAGE

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