AEROTECH HERMAN NELSON EXTREME PORTABLE HEAT

BT400 SERIES

AEROTECH HERMAN NELSON INTERNATIONAL INC.

MADE IN CANADA

WORLDWIDE SHIPPING

CUSTOMER SATISFACTION 100% GUARANTEE

O-TL C US

MODERN TECHNOLOGY. MILITARY LEGACY. BUILT FOR DEMANDING INDUSTRIES.

From Military Roots to Industrial Power

At first glance, the BT400 NEX may resemble earlier Aerotech Herman Nelson models (BT400-10 through 46), which were based on rugged, time-tested technologies originally developed for the U.S. military. In its day, the original Herman Nelson heater set the standard for reliability.

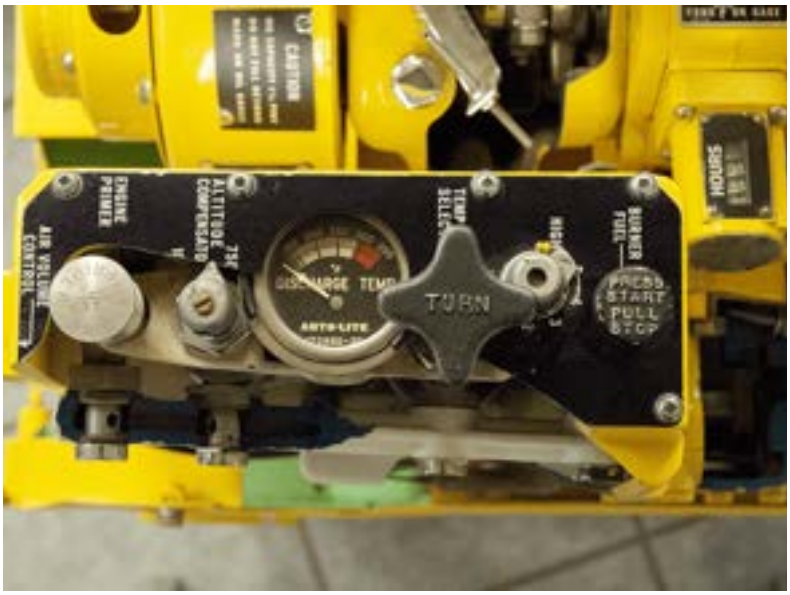
Today, the BT400 NEX represents a significant leap forward. Advancements in microprocessor (CPU) technology have enabled automated monitoring and control systems that were previously impossible. What was once an exclusive military-grade product has evolved into a highly trusted industrial solution used across aviation, construction, and exploration industries.

Achieving government safety certifications was a key milestone in making this transition. In today's industrial landscape, safety is not just expected—it's required. Under the hood, the BT400 NEX is a modern, efficient machine built to meet the high-performance heating demands of the world's most demanding sectors, including aviation, exploration, construction, and military operations.

"WHAT WAS ONCE MILITARY-GRADE ONLY IS NOW WIDELY ADOPTED BY COMMERCIAL INDUSTRIES

Temperature Control - Then & Now

SMARTER SYSTEMS, SAFER OPERATION—HOW TODAY'S TECHNOLOGY IMPROVES ON DECADES OF FIELD-TESTED EXPERIENCE.



Older BT400 models (such as the BT400-46 and earlier) relied on mechanical valves that required manual control. Operators had to closely monitor the heater and manually adjust the temperature by opening or closing valves—creating the potential for human error and inconsistent performance.

The introduction of an electronic thermostat with a wired sensor has replaced the mechanical valve, offering a low-cost, highly reliable alternative. The temperature range remains the same (150°F to 250°F), but the electronic system provides more precise and consistent control throughout the full range.

Unlike older capillary tube systems, which were prone to kinks, breaks, and fluid leaks, the wired sensor eliminates these vulnerabilities. Quick-disconnect terminals also simplify installation and servicing.

THE RESULT: BETTER TEMPERATURE ACCURACY, IMPROVED RELIABILITY, AND REDUCED MAINTENANCE.

AEROTECH HERMAN NELSON

MADE IN CANADA

WORLDWIDE SHIPPING

O-TL

CPU-Controlled Precision Heating

AUTOMATED FLAME DETECTION, FUEL REGULATION, AND TEMPERATURE MONITORING—ENGINEERED FOR SAFER, SMARTER OPERATION IN EXTREME CONDITIONS.

Computer-Controlled Performance

The new BT400 NEX features a microprocessor-driven Burner Control Module (CPU) that manages fuel delivery to the combustion chamber with precision. Instead of relying on manual valves, the system uses a solenoid to regulate fuel flow and a photo sensor to detect flame presence inside the chamber.

If no spark or flame is detected, the unit automatically enters lockout mode and stops fuel supply until the issue is resolved—enhancing both safety and reliability.

AEROTECH HERMAN NELSON EXTREME PORTABLE HEAT
BT400 SERIES

CPU Monitoring = Consistent Heat Control

With the integrated CPU, the heater can automatically cycle on and off to maintain a consistent temperature—eliminating the need for manual adjustments. Each unit is factory-calibrated to deliver a steady 250°F, ensuring optimal performance and extending the service life of the heat exchanger.

In addition to temperature regulation, the CPU continuously monitors key performance indicators such as fuel pressure, nozzle condition, and ignition status, providing intelligent protection and operational stability in extreme environments.

AEROTECH HERMAN NELSON INTERNATIONAL INC.

MADE IN CANADA

WORLDWIDE SHIPPING

O-TL C US

CUSTOMER SATISFACTION 100% GUARANTEE

Smart Safety & Control Systems

MODERN ENGINEERING MEETS FIELD-TESTED RELIABILITY—DESIGNED TO PROTECT YOUR CREW AND EQUIPMENT, EVEN IN THE HARSHEST ENVIRONMENTS.

Built-In Safety Features

Older models could continue delivering fuel to the combustion chamber even without an active flame, posing serious safety risks. The BT400 NEX eliminates this concern with a CDS photo sensor that actively monitors for flame presence. If a flame isn't detected, the system shuts down fuel delivery and enters lockout mode.

The unit is CSA, UL, and O-TL certified, and newer models include an emergency shut-off switch that simultaneously disables the burner and the engine for added protection. A 12V power socket is also included for accessories such as strobe lights.

Electric Start & Auto Throttle Control

Thanks to a 12V electrical system, the BT400 NEX now features key ignition for fast, reliable starting and stopping. This replaces the older manual throttle system that required a locking plunger—removing a common source of human error. The heater maintains a consistent 3600 RPM, extending the heat exchanger's lifespan when proper cool-down is followed.

Mechanical Valves

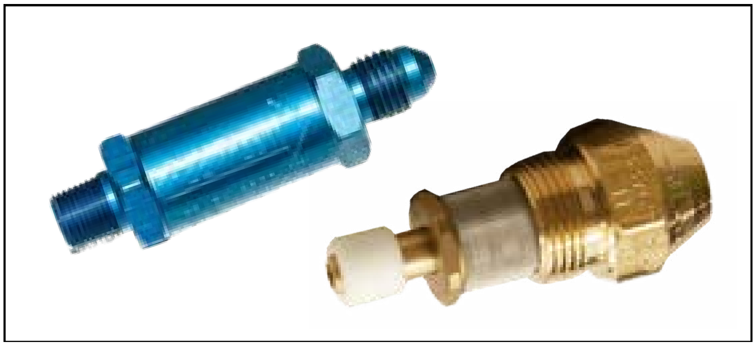
Solenoid

Solenoid vs Mechanical Valves

The solenoid valve, controlled by electric current, offers faster, safer switching than traditional manual valves. It improves system reliability, reduces maintenance needs, and prevents fuel delivery when no flame is detected—automatically activating lockout if a fault occurs. Replacement solenoids are also more cost-effective, with up to 40% lower replacement costs compared to manual valves.

Built for Harsh Environments

EVERY COMPONENT IS ENGINEERED FOR DURABILITY, EASE OF MAINTENANCE, AND LONG-TERM PERFORMANCE IN REMOTE AND EXTREME WORK SITES.



Reduced Maintenance Costs

Solenoid valves not only improve safety but are also more affordable and dependable than their manual counterparts. Aerotech continues to produce manual valves to support legacy systems, but the BT400 NEX's solenoid system delivers exceptional reliability with minimal upkeep.

Poly Fuel Tank vs Steel

Traditional steel fuel tanks are prone to rust and contamination, which can clog filters and shorten service intervals. The BT400 NEX now uses a high-density polyethylene resin tank, offering better longevity and corrosion resistance. For environmentally sensitive operations, a spill recovery tray can be added beneath the tank.

The Kubota Oil-Cooled Engine (OC60)

The oil-cooled Kubota OC60 engine maintains a more consistent operating temperature than air-cooled or liquid-cooled alternatives. This improves combustion efficiency, reduces thermal stress, and eliminates the need for radiators or pumps—minimizing the number of parts that can fail in the field.

Tow Bar & Tire Upgrades

The BT400 NEX comes standard with a long tow bar and now offers an optional swivel wheel kit for easier maneuverability. All models have been upgraded to tubeless tires and solid rims for enhanced durability and lower maintenance requirements.

Client Notes & Key Takeaways

USE THIS SPACE TO JOT DOWN YOUR QUESTIONS, THOUGHTS, OR APPLICATION-SPECIFIC CONSIDERATIONS AS WE EXPLORE HOW THE BT400 NEX SERIES FITS YOUR NEEDS.

Let's Talk About Your Operation

Now that you've seen what the BT400 NEX Series offers, we want to understand your specific needs. Use this page to jot down any questions, requirements, or feedback—we're here to help you find the right fit.

What are your primary heating challenges?

What environments will this unit be used in?

Which accessories or trailer options are required?

What certifications are important for your operation?

Any additional technical questions?

Aerotech Herman Nelson — Powering Productivity in the Coldest Conditions

AEROTECH HERMAN NELSON INTERNATIONAL INC.

Want to learn more? Contact us at:

100 Eagle Drive, Winnipeg, MB, CANADA, R2R 1V5

Outside of Canada:

1 (800) 486-4328

Within Canada:

1 (204) 633-1999

Email: Sales@hermannelson.com

Fax: 1 (204) 694-1612

Hours: Mon – Fri: 8:00am – 4:30pm CDT

Delivering to Customers Worldwide

MADE IN CANADA

WORLDWIDE SHIPPING