FAN POWERED

CHILLED WATER

TERMINAL UNITS

33SZ SERIES

Sensible Cooling (DOAS) • Constant or Variable Volume

Nailor®

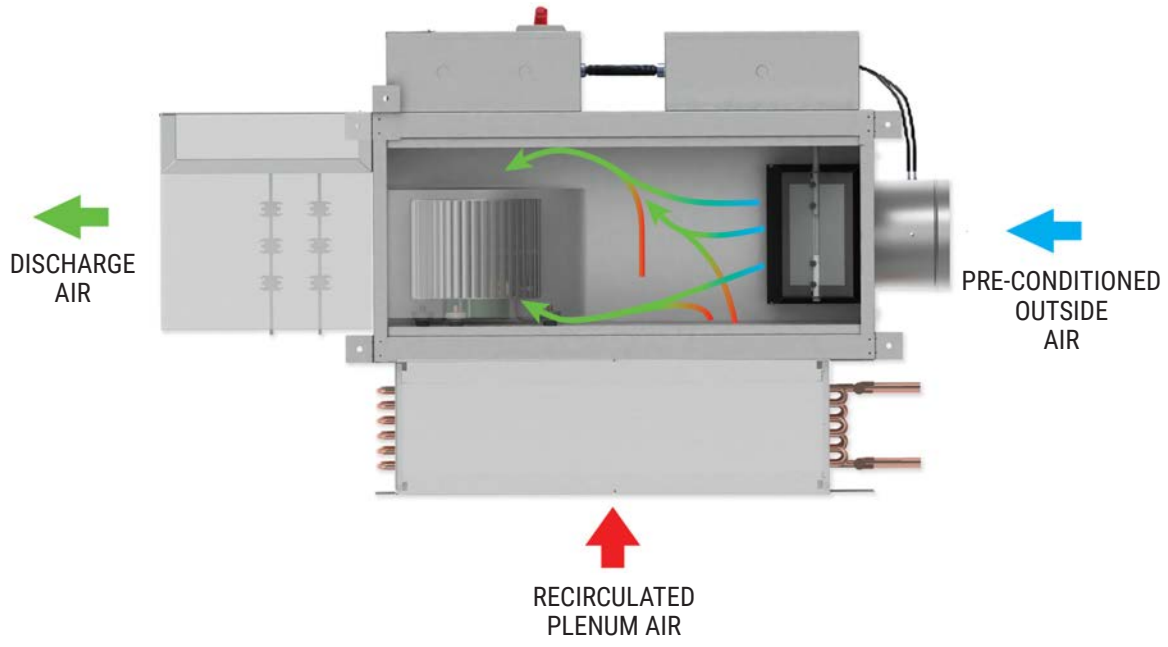
nailor.com

NAILOR FAN POWERED CHILLED WATER TERMINAL UNITS

DEDICATED OUTDOOR AIR. PRECISE SENSIBLE COOLING.

DOAS Compatibility & Flexibility

The Nailor 33SZ Series Fan Powered Chilled Water Terminal Units (FPCWTU) supports an HVAC design in which the Dedicated Outdoor Air System (DOAS) manages latent loads, while the terminal unit handles sensible loads within the space. This approach eliminates the need for a central Air Handling Unit (AHU). Suitable for commercial and educational applications such as classrooms, offices, and auditoriums, the 33SZ series is a flexible, industry-familiar unit that delivers effective zone sensible cooling while the dedicated outdoor air inlet meets ventilation requirements.



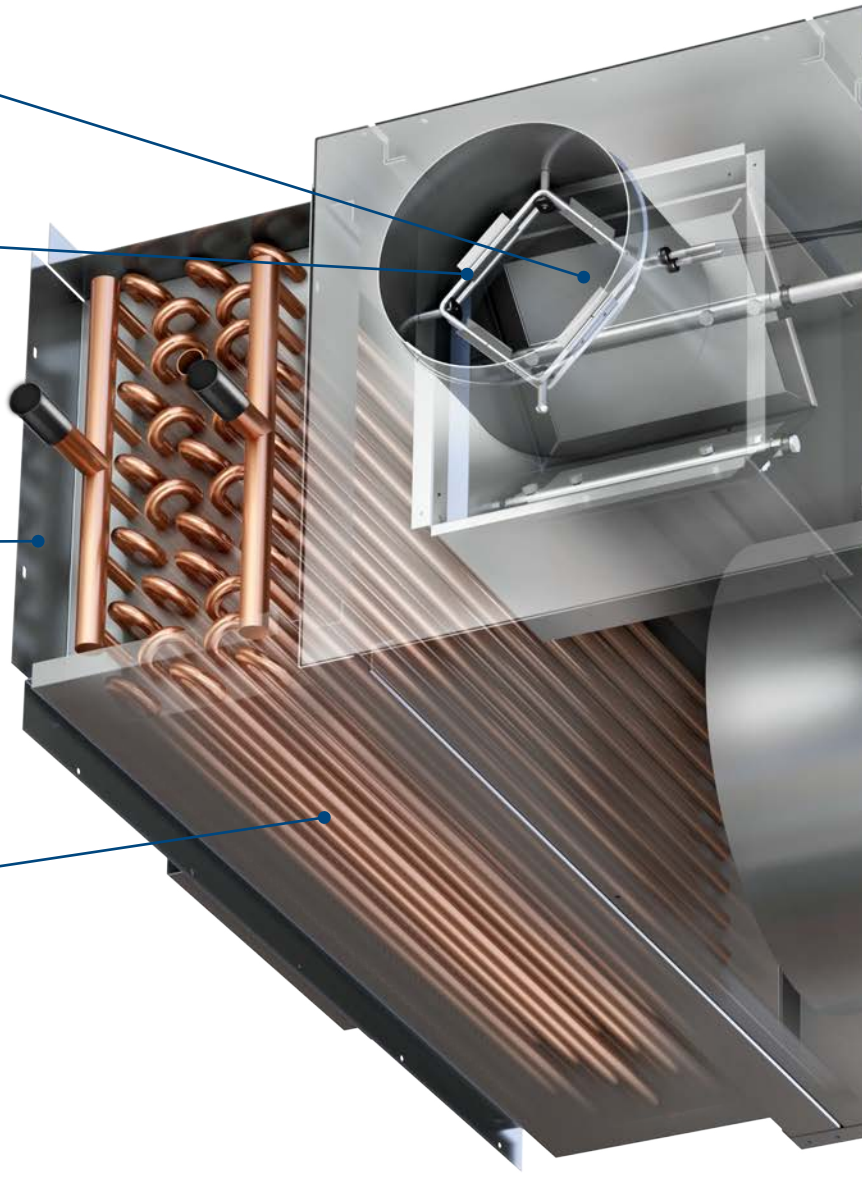
STANDARD FEATURES

Inclined Opposed Blade Primary Air Damper minimizes noisy turbulence and ensures smooth accurate control.

Multi-Point Diamond Flow Inlet Sensor
Durable aluminum multi-point averaging Diamond Flow sensor is more robust than a plastic option and is accurate to +/-5%, even with hard 90 elbow at the inlet.

18 ga. (1.31) Channel Space Frame Construction
Provides structural strength and secure mounting for the 20 ga. insulated panels. These panels provide access on top, bottom and side of the unit. Several liner options for any application.

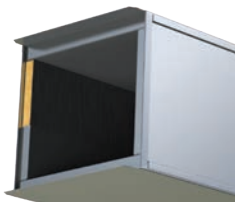
Sensible Cooling Coil
Cooling coils are available up to 8 rows to meet the needs of any application. Provided standard with drip pans.



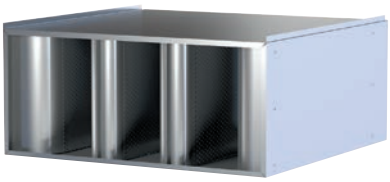
Additional options

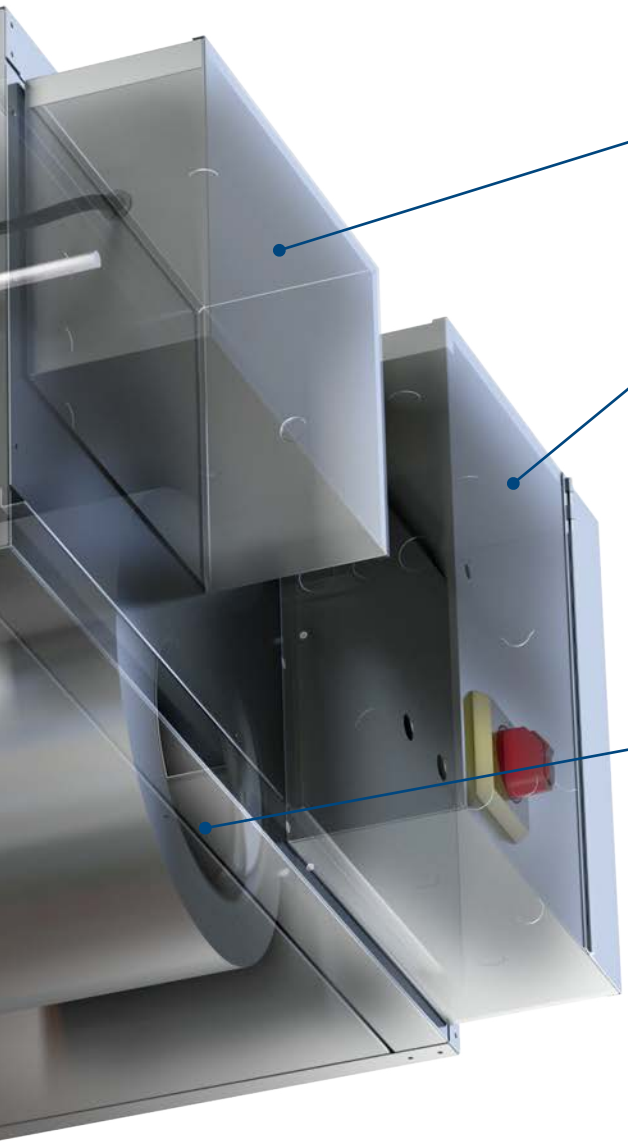
Universal Ducted Return Filter Rack
Optional DRFR with piano-hinged door flap with latch on the side and bottom allows easy replacement of the filter from multiple orientations.

3/4" (19) Dual Density Insulation meets requirements of NFPA 90A and UL 181. Insulation with a high density skin, on the exposed side and a low density core.



Stealth™ Induced Air Dissipative Silencer
Optional DSI provides maximum acoustic attenuation by reducing radiated sound power levels.





24V Controls Enclosure

Line Voltage Enclosure
With optional FN2 90° enclosure hinged for easy access. Several mounting options, including remote, allow NEC code requirements to be met in tight spaces.

Remote Line Voltage Control Enclosure
Optional FN3 on 48" (1219) umbilical.

ECM Motor
Highly efficient fan and motor combinations are specifically designed to handle advanced control sequences for the most efficient VAV systems.

Nailor is ETL Listed

Electric Heat Option (Discharge)
High efficiency arrowhead insulators eliminate glow and extend element life. Insulated coil elemental wrapper. Removable element rack.

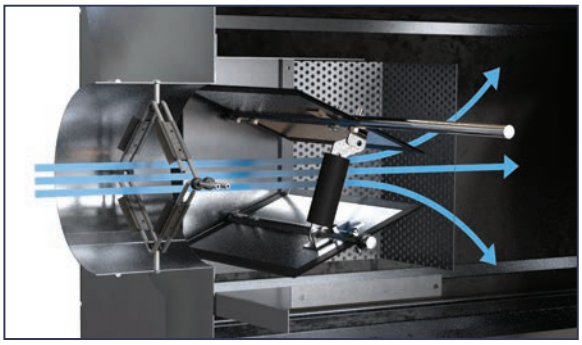
Hot Water Coils Option
Hydronic Hot Water Coils are fully encased and insulated.

Seismic Certification:
- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)

THE NAILOR DIFFERENCE

Opposed Blade Damper (OBD)

The Opposed Blade Damper (OBD) design provides many benefits over a traditional round butterfly damper found in most VAV designs. The OBD offers reduced inlet static pressure and provides better system efficiency. The OBD also lends to smoother airflow, which not only equals less turbulent air (less sound), but also more even distribution of airflow across the coils, for improved thermal performance. Opposed Blade Dampers also provide more linear control and flow relative to the input signal than round butterfly counterparts. This can mitigate "hunting" for the right setting.

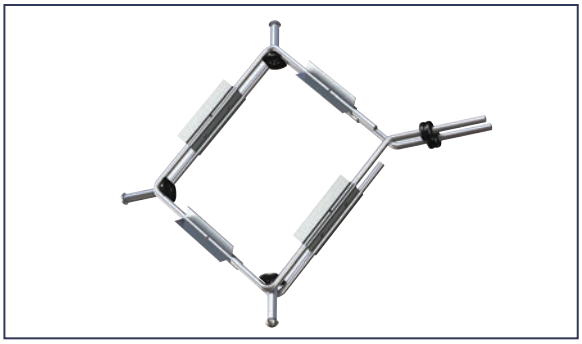


EPIC Fan Technology®

Proprietary fully programmable and pressure independent ECM motors are paired with highly efficient blowers. Our ECM controller uses EPIC Fan Technology® to provide the most advanced control sequences and enables custom control of electric demand to meet specific limits in the field. Dynamic fan control is available to track building loads and provide substantial HVAC energy savings when compared to constant volume operation.

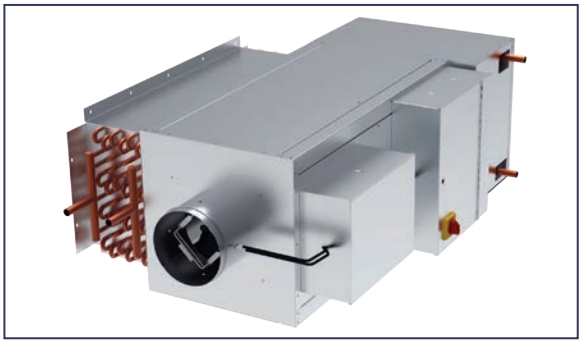
Diamond Flow Multi-Point Inlet Sensor

Nailor's Diamond Flow Inlet Sensor is a highly durable and accurate pressure measurement device designed with aluminum construction for enhanced long-term strength and reliability. The Diamond Flow Sensor is a multi-point averaging sensor that is accurate to +/- 5%, even at hard 90-degree elbows at the inlet.



Space Frame Cabinet Construction

Unique space frame construction provides increased strength and enables full size access panels on top and bottom.



FREQUENTLY ASKED QUESTIONS

Why use a Fan Powered Chilled Water Terminal Units (FPCWTU)?

The FPCWTU when combined with a DOAS enables a new paradigm of HVAC system design:

- Eliminate a central AHU
  - Increase rentable area
  - Distribute the HVAC system
- Substantially lower system cost when compared to chilled beam
- Demand Control ventilation at the zone level
  - Occupancy
  - CO_2

Is the Nailor 33SZ certified by AHRI?

There currently is not a certification program for FPCWTU, however all Nailor units are tested in accordance with AHRI practices.

For sound sensitive large projects, is it possible to mock-up the space to ensure sound levels?

Nailor has partnered with Energistics Laboratory that enables us to recreate any room and measure actual sound levels. Nailor also has several silencer and attenuation options for reducing unit sound.

Can controls be mounted in the field?

Yes, however factory mounting increases quality of the installation while reducing wire, conduit, and electrical box requirements. We mount any control manufacturers equipment supplied by the customer at our factory.

Do motor replacements have the original program?

Like the custom electrical limits above, Nailor stores the program of every motor by serial number. If a replacement order references the serial number, the new motor will contain the original program.

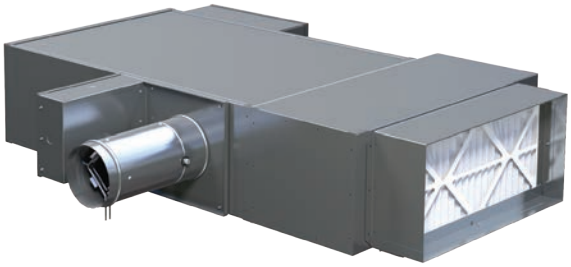
What liner options, beyond the standard dual density fiberglass, are available?

- Foil Faced Steri-Liner
- Fiber-Free Closed Cell Liner
- Perforated Metal Liner over fiberglass
- Solid Metal Liner (double wall) over fiberglass
- Additional thicknesses for added thermal efficiency

What are my options if latent loads are too high for the sensible coil of a 33SZ?

The Nailor 35FH and 37FH high capacity horizontal fan coil units with a draw through coil design are available with Outdoor Air Inlet to provide latent cooling to satisfy the space.

35FH High Capacity Fan Coil up to 4,000 CFM



37FH Low Profile Fan Coil only 11" height up to 1,200 CFM

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SCAN HERE TO LEARN MORE ABOUT NAILOR'S 33SZ DOAS UNITS

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