



# **THE IDEAL HVAC SOLUTION**

**THERMOTEK'S ROOFTOP UNIT (RTU)**

 **ThermoTek**



# FRESH OUTDOOR AIR

## HELPING BUILDINGS BREATHE

Backed by 50 years of ventilation expertise, ThermoTek's RTU offers exceptional energy savings, unprecedented comfort, and precise humidity control. ThermoTek's RTU is the ideal HVAC solution for schools, hospitals, restaurants, grocery stores, hotel corridors, and a wide range of commercial and industrial HVAC applications.



LEARN MORE

**CASLINK**  
MONITOR + CONTROL

CASLink, ThermoTek's proprietary cloud-based building management system, collects real-time performance data to verify proper equipment operation, diagnose minor issues, and evaluate system efficiency. CASLink provides predictive analytics, advising on potential issues before they arise, and allows for remote unit adjustments, often eliminating the need for an onsite service tech visit. CASLink is compatible with existing building management systems and is included on every ThermoTek rooftop unit free of charge with no subscription fees.



**24 / 7**  
MONITORING +  
COMPLETE CONTROL





# RAPID REPLACEMENTS & RETROFITS

With 6 regional factories throughout the US, we are happy to quickly and reliably swap out your existing unit with ThermoTek's RTU. Our in-house curb adaptors make this a simple process that uses your current RTU footprint. Contact your local ThermoTek sales region for assistance.

[THERMOTEK.COM](http://THERMOTEK.COM)

# CASSERVICE®

## RELIABLE SERVICE & TECHNICAL SUPPORT

ThermoTek offers unmatched factory service and technical support through its rapidly expanding nationwide CASService team. Additionally, every ThermoTek RTU includes a CASService System Design Verification (SDV) performed by a CASService tech to ensure that your system is installed and operating exactly as designed.



CERTIFIED  
TECHNICIANS



FAST LEAD  
TIMES



EMERGENCY  
SUPPORT



NATIONWIDE  
NETWORK



PREVENTATIVE  
MAINTENANCE



REPLACEMENT  
PARTS

# ThermoTek RTU

## THE SUPERIOR SOLUTION FOR YOUR SPACE.

Perfect for the following applications and many more!



RESTAURANTS



GROCERY



SCHOOLS



SENIOR LIVING /  
APARTMENTS



OFFICE  
SPACES



LABORATORIES /  
CLEAN ROOMS



HOTELS



WAREHOUSES



NATATORIUMS





## ENGINEERED TO LAST. INDUSTRY BEST WARRANTY.

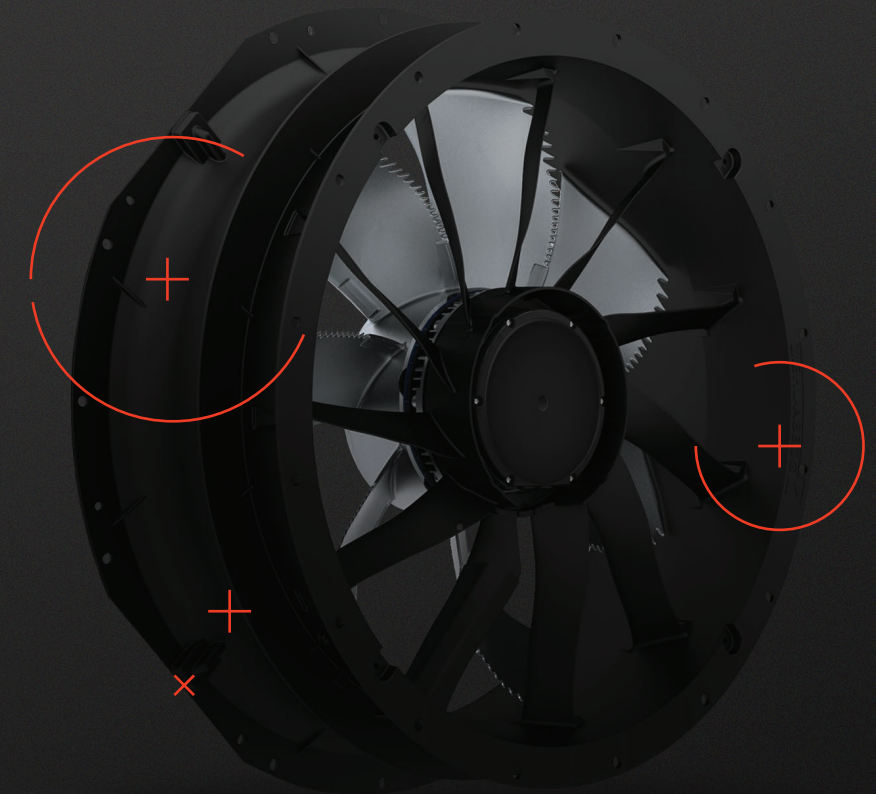
Every ThermoTek rooftop unit comes standard with a 5 year parts warranty. An extended 10 year full unit warranty is included at no extra charge when units are maintained with a CASService Preventative Maintenance subscription (terms and conditions apply).

ThermoTek's RTU is designed with sustainability in mind and is built to last an industry leading 25 years.



## USER FRIENDLY WITH COMPLETE CONTROL.

Sensors throughout ThermoTek's RTU continually measure a wide variety of data points. All of this information is just a touch away through the onboard user control panel, as well as remotely accessible and configurable anytime through any internet connected device on the CASLink app. ThermoTek's in-house tech support and engineering teams also monitor your unit's performance through CASLink, ensuring that your unit operates at peak performance at all times.



## DURABLE, TOP QUALITY COMPONENTS.

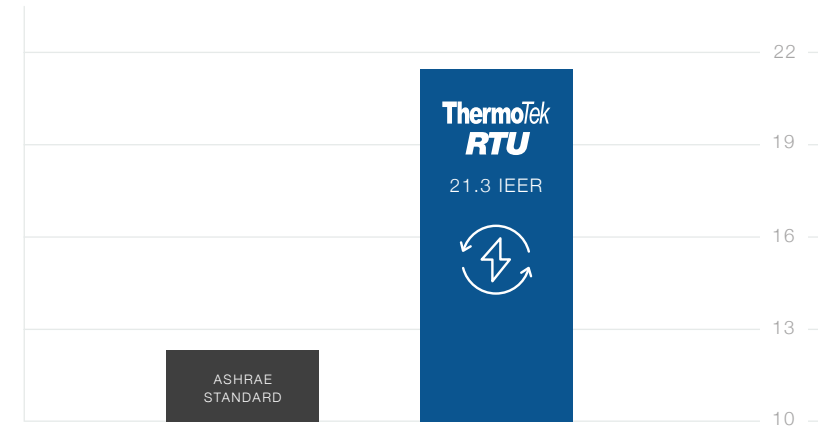
Every detail of ThermoTek's RTU has been carefully designed and selected to provide an exceptionally high quality product. Each aspect of the unit has been intentionally curated with performance and longevity in mind. All fans are 100% direct drive for high efficiency and maintenance-free operation. A variable speed inverter duty compressor is provided standard, and the unit itself is structurally reinforced with double wall, insulated construction. You can rely on ThermoTek's RTU to operate headache free for years to come.



“OUR CUSTOMERS  
DEMAND PERFECTION  
AND WITH OUR RTU,  
THAT’S EXACTLY  
WHAT THEY GET.”

- BILL GRIFFIN, VP OF ENGINEERING, THERMOTEK

IEER RATING

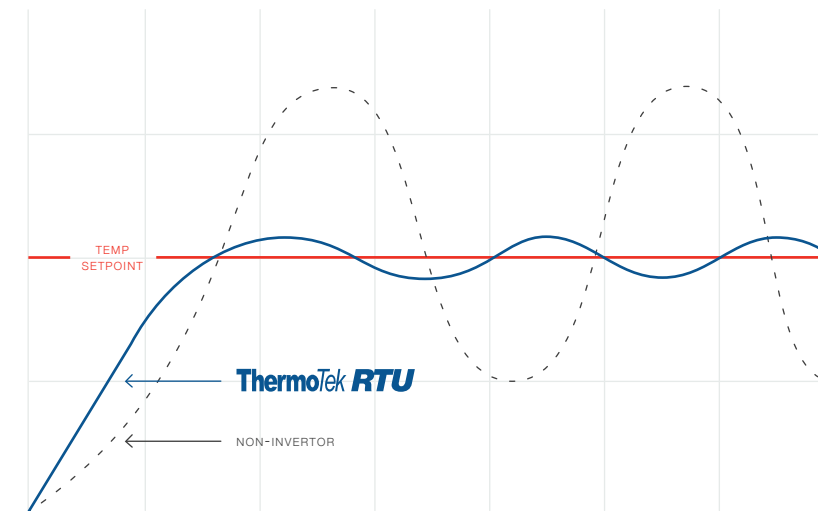


#### EXCEEDING EXCELLENCE

### SUPERIOR ENERGY EFFICIENCY

ThermoTek's RTU achieves up to an impressive 21.3 Integrated Energy Efficiency Ratio (IEER) rating which is over 1.5x the ASHRAE 90.1-2016 IEER standard. Designed with the future in mind, ThermoTek's RTU is poised to exceed rising IEER standards for years to come.

TEMPERATURE



#### RELIABLE PRECISION

### PRECISE TEMPERATURE & HUMIDITY CONTROL

ThermoTek's RTU contains fully modulating refrigeration and optional hot gas reheat components that deliver the amount of air requested at the exact desired temperature and humidity. Variable speed components allow ThermoTek's RTU to adjust its heating and cooling capacity to match the required load, providing a consistent temperature throughout the space and avoiding large temperature swings often associated with single stage equipment.

THERMOTEK'S RTU DETAILS: BACK OF UNIT

01 VARIABLE SPEED DIRECT DRIVE SUPPLY FAN

- + High efficiency Variable Frequency Drive (VFD) or Electronically Commutated Motor (ECM) control options available
- + Variable fan speed and total airflow monitoring with ThermoTek controls
- + Low maintenance and reduced failures due to brushless / beltless design
- + High Efficiency fans provide quiet operation and significant energy savings

04 UP TO THREE LAYERS OF OUTDOOR AIR FILTRATION

- + Standard 2" metal mesh outdoor air filters
- + Filtration options available: 2" thick MERV-8 & 13, 4" thick MERV-15 & HEPA
- + Allow for maximum clean airflow at reduced static pressures – available with clogged filter monitoring option

07 WIDE INDOOR COIL DESIGN

- + Up to 7-row coil allows for optimal equipment efficiencies, full conditioning of outdoor air, and moisture control through increased residence time of airstream
- + Staggered coil design reduces supply air bypass

02 LOW-LEAKAGE OUTDOOR AIR DAMPER / INTAKE LOUVER

- + Modulates to accurately meet variable outdoor air requirements
- + Integrated louver and bird screen assembly included, Exceeds AMCA Class 1A Leakage Standards
- + Low entering air velocity prevents debris or precipitation from entering the unit airstream

05 STAINLESS STEEL SLOPED CONDENSATE DRAIN PAN

- + Insulated drain pan allows for easy maintenance and serviceability
- + Float switch monitors water level and protects against condensate overflow
- + Exceeds ASHRAE 62.1 Standards

08 ELECTRONIC EXPANSION VALVE

- + Provides automated superheat control and monitoring by modulating from 0-100%
- + Precise position control prevents liquid migration during off-duty cycles

03 AVERAGING TEMPERATURE SENSOR / HUMIDITY SENSOR

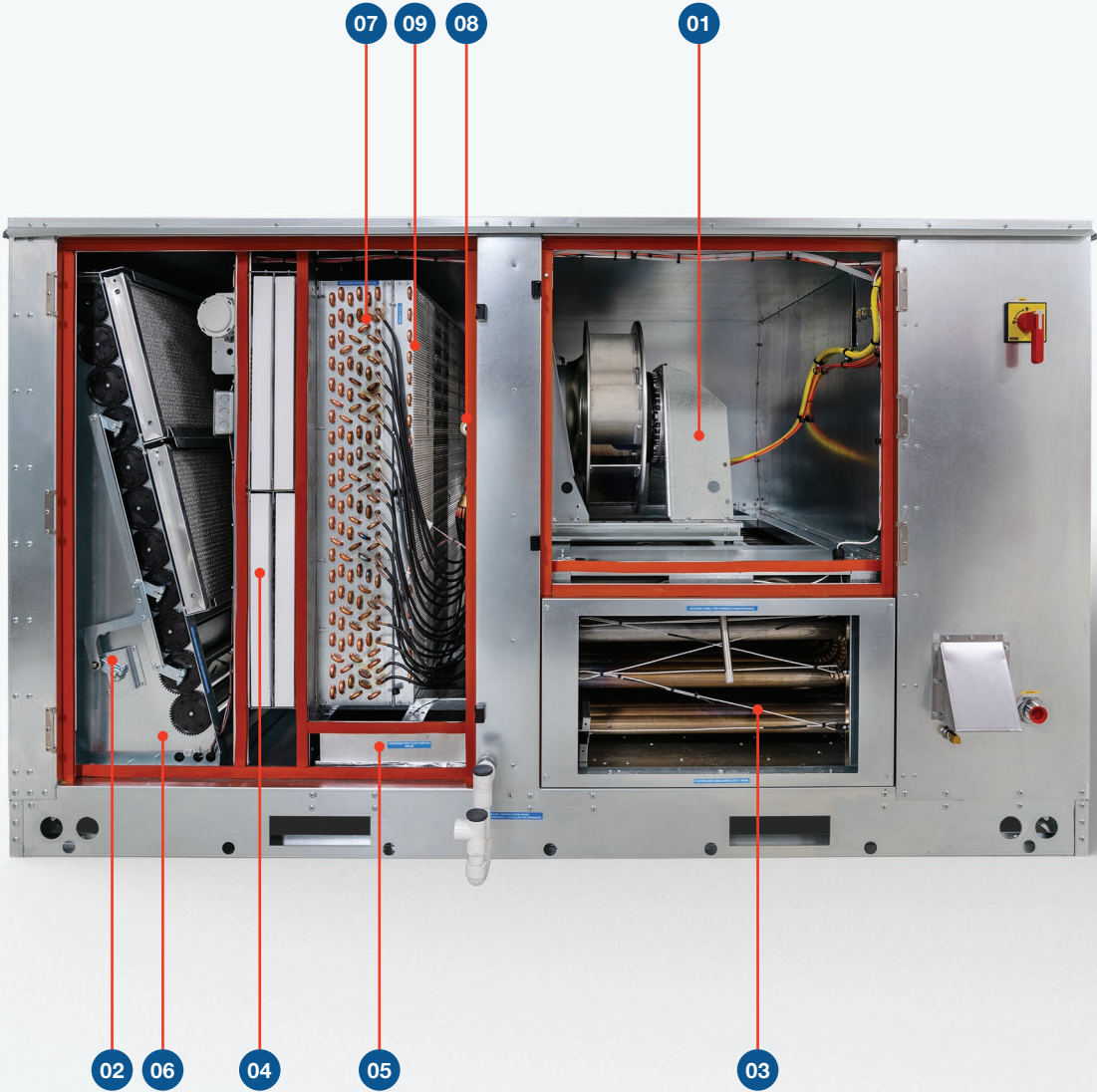
- + Monitors mixed air temperature / humidity
- + Available outdoor, return, mixed, discharge, and space air temperature / humidity measurements
- + Averaging Intake, Indoor Coil, and Discharge temperature sensors provide accurate temperature readings for correct unit modulation

06 SMOKE DETECTOR (OPTIONAL)

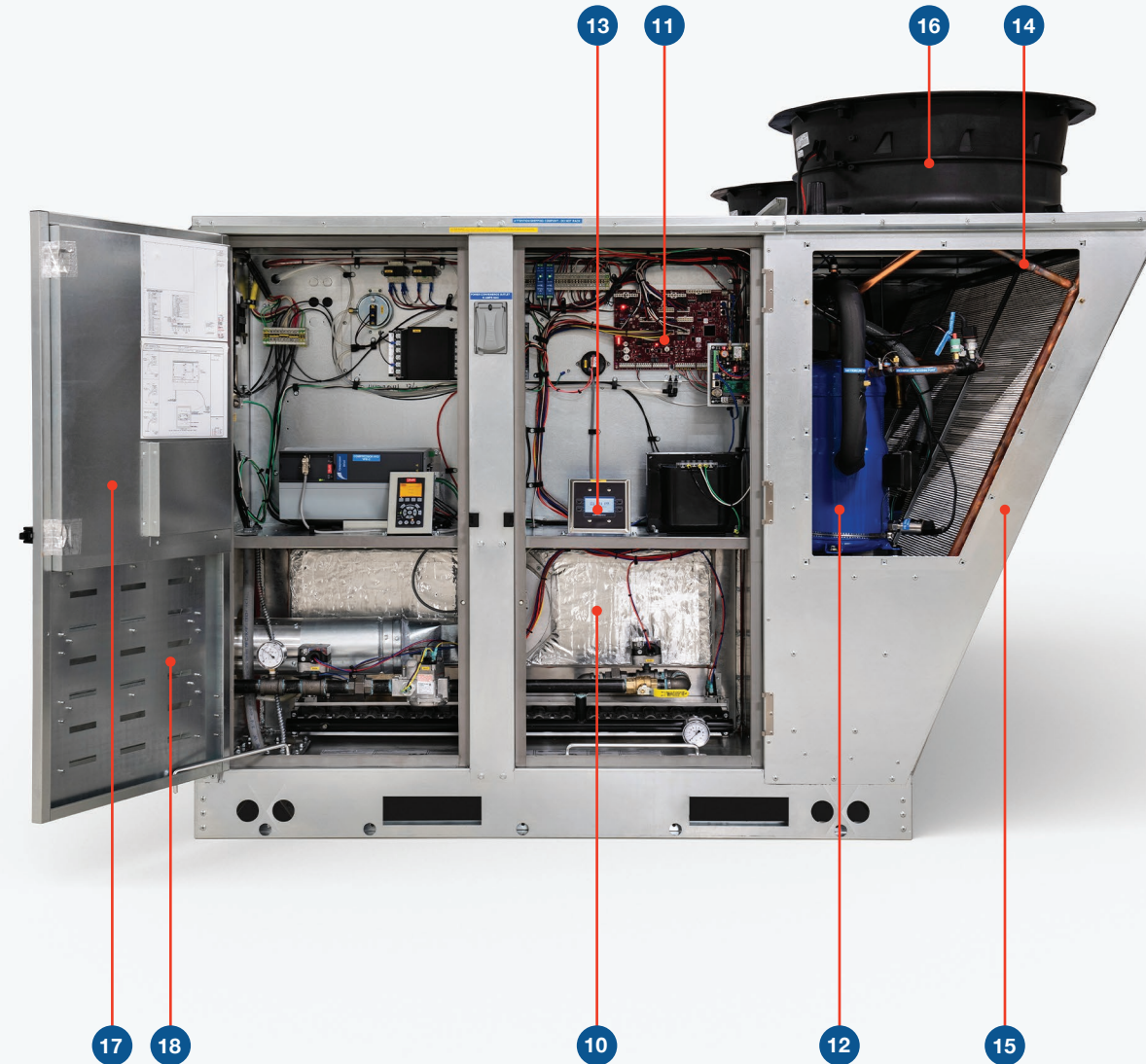
- + Monitors "fire activity" in the return airstream
- + Shuts down blower to protect unit from smoke or fire damage
- + Available to "Ship Loose" for preferred installation locations

09 FULLY MODULATING HOT GAS REHEAT COIL (OPTIONAL)

- + Provides highly accurate humidity/temperature control
- + Electronic reheat valve allows for precise capacity control







## THERMOTEK'S RTU DETAILS: SIDE OF UNIT

**10 MODULAR / SPLIT MANIFOLD HEATING (OPTIONAL)**

- + Natural gas indirect fired furnace with constant 81% efficiency throughout modulation (90% high efficiency option available)
- + Propane, Heat Pump, and Modulating SCR Electric Heat options available
- + Enhanced heating turndown (18:1) for minimum temp. rise at low loads
- + Double safety components (Pressure Switch, On/Off Gas Valve, Modulating Valve, Gas Shut-off Valve)

**13 HUMAN MACHINE INTERFACE (HMI)**

- + Total control of the unit through HMI with access to real-time space temperature, humidity, refrigerant temperature, and pressure data
- + Customizable user-friendly interface allows for simple programming of temperature, humidity and scheduling settings
- + Integrated temperature/humidity sensor avoids need for additional space measurements

**16 VARIABLE SPEED OUTDOOR FANS WITH EC MOTORS**

- + 10:1 turndown maintains peak efficiency for all outdoor air conditions
- + Aerodynamically designed bionic blades drastically reduce noise emissions

**11 INTEGRATED CONTROLS**

- + In-house controls developed using multiple PID loops to maximize energy efficiency
- + Several control offerings – full integration to BAS/DDC
- + Available extreme low ambient logic allows for DX cooling operation in ambient conditions down to -25 °F
- + Total Unit Economizer monitors intake conditions to provide exact (least) amount of conditioning needed to meet space conditions, reducing energy consumption

**14 HEAVY DUTY PIPING & SUPPORTS**

- + Hanging supports and vibration isolators prevent refrigeration piping from moving during transport and operation
- + Machine-bent copper piping reduces amount of brazes and possible failure points

**17 DOUBLE WALL, GALVANIZED STEEL CONSTRUCTION**

- + Insulated with 2" thick, R13 closed cell foam or 1" thick, R4.3 fiberglass board
- + Corrosion resistant, heavy gauge, G-90 galvanized steel

**12 DANFOSS VARIABLE SPEED INVERTER SCROLL COMPRESSOR**

- + Modulating and throttling ability to provide precise load matching with reduced energy consumption
- + Protective operating envelope and Pumpdown logic minimizes risk of damage and premature failure
- + Variable Frequency Drive (VFD) provides phase and over-amp protection to maximize life of unit
- + Standard oil level sensor, crankcase heater, and suction line accumulator

**15 OUTDOOR COIL HAIL GUARD (OPTIONAL)**

- + Protects outdoor coil from damage
- + Correctly sized to ensure a clean overall look with total protection
- + Undamaged coils provide more efficient heat transfer during normal operation

**18 REMOVABLE HINGED ACCESS DOORS**

- + Allow for easier maintenance and serviceability
- + Fully insulated controls cabinet reduces condensation, avoiding damage to controls

## SYSTEM SIZING & SPECIFICATIONS

UNIT SIZE (Nominal Tonnage)	5	6	7.5	8	10	12.5	15	20	22	25	30	40	50
Min Airflow (CFM)	500	600	750	800	1000	1250	1500	2000	2200	2500	3000	4000	5000
Max Airflow (CFM)	2000	2400	3000	3200	4000	5000	6000	7000	8800	10000	12000	15000	15000
Indoor Coil Rows	4	4	5	5	5	6	6	7	5	5	6	6	10
Cooling Turndown Ratio	7:1	7:1	7:1	7:1	7:1	7:1	4:1	4:1	4:1	4:1	4:1	8:1	10:1
IEER	17.9	19.5	18.6	20.2	18.6	21.3	18.8	18.2	18.1	17.9	17.8	16.6	17.1
Max Heating Turndown Ratio*	20:1	17:1	14:1	21:1	16:1	25:1	16:1	16:1	18:1	18:1	18:1	18:1	18:1
Furnace Input Capacity (MBH)	50-200	50-200	50-200	50-300	50-300	150-500	150-500	150-500	200-800	200-800	200-800	200-800	200-800
Electric Coil Capacity (kW)	10-60	10-60	10-60	15-60	15-60	15-100	15-100	15-100	30-240	30-240	30-240	30-240	30-240
Curb Size (L x W)	71" x 41"	71" x 41"	71" x 41"	75" x 49.5"	75" x 49.5"	91" x 59.5"	91" x 59.5"	91" x 59.5"	111" x 80"	111" x 80"	111" x 80"	111" x 80"	111" x 80"
Unit Length	77.25"	77.25"	77.25"	81.75"	81.75"	99"	99"	99"	174"	174"	174"	174"	174"
Unit Width	62"	62"	62"	80.75"	80.75"	89.75"	89.75"	89.75"	89.75"	89.75"	89.75"	89.75"	89.75"
Unit Height	47.5"	47.5"	47.5"	60.75"	60.75"	69"	69"	69"	94"	94"	94"	94"	94"
Approximate Weight (lbs)	1000	1100	1200	1650	1730	2440	2500	2650	4250	4700	5000	6000	6250

\*Contingent upon heat source



For additional information, contact your local ThermoTek sales representative.

1.800.476.5888

THERMOTEK.COM