



ADVANCED HEAT PUMP TECHNOLOGY WITH DUAL-FUEL CAPABILITY FROM YANMAR



WORLD-CLASS AND EARTH-FRIENDLY



HIGH-EFFICIENCY DUAL-FUEL ROOFTOP HEAT PUMP SYSTEM

**ELECTRIC HEAT PUMP + NATURAL GAS BACKUP = OPTIMIZED COMMERCIAL PERFORMANCE
SMARTER HVAC FOR SMARTER BUILDINGS**

Our new dual-fuel Rooftop System integrates an advanced electric heat pump with natural gas auxiliary heat to deliver cost-effective, year-round climate control for commercial buildings. Designed for flexibility, this system automatically shifts between electric and gas operation based on outdoor temperatures—ensuring your facility runs efficiently, reliably, and with minimal energy waste.

YANMAR's Energy Systems division began operation in 1984, and today has installed more than 375,000 Combined Heat and Power (CHP or cogeneration) and Variable Refrigerant Flow (VRF) Natural Gas Heat Pump systems worldwide. Using the same methodology we are now offering environmentally friendly rooftop units designed for reliability, efficiency, energy conservation, comfort, and long-term savings.

HIGH-EFFICIENCY DUAL-FUEL ROOFTOP HEAT PUMP SYSTEM

01 MAXIMUM OPERATIONAL EFFICIENCY

- The system uses the heat pump for primary heating and cooling during mild conditions—where it excels in efficiency and cost savings.
- When outdoor temperatures fall below a programmed threshold, the natural gas backup automatically engages, delivering high-output heating exactly when it's needed.
- This dynamic control reduces total run-time of both systems and lowers energy consumption across seasons

02 REDUCE OPERATING COSTS

- Cut wintertime energy bills by using the most economical fuel source at any given time.

03 BUILT-FLEXIBILITY FOR FACILITY DEMANDS

- Ideal for retrofit or new construction applications where energy efficiency is a priority.
- Compatible with demand response programs and energy management systems (EMS).
- Available in multiple capacities and configurations for light commercial to mid-sized commercial rooftops.

04 RELIABLE YEAR ROUND PERFORMANCE

- Delivers high-efficiency cooling in summer and variable heating output for spring, fall, and winter.
- Built with commercial-grade components to withstand rooftop exposure and extended duty cycles.

05 ENERGY EFFICIENT

- Automatically selects the most efficient fuel, based on demand and conditions.
- Modulating output capacity to match building load, resulting in maximum operating efficiency across varying conditions.
- Integrates with advanced controls to manage the seamless transition between the heat pump and furnace, optimizing energy usage based on outdoor temperatures, time-of-use electricity rates, and desired indoor comfort.

Experience the Superior Difference: Yanmar's New Advanced Rooftop Unit

Double Wall, 20-gauge Panels

Designed for superior strength and durability

2-Inch Cabinet Insulation

Increases the unit's efficiency.

Up to 21.3 IEER Efficiency Ratings

One of the highest IEER ratings in the industry.

Up to 4.2 COP @ 47°F Heat Pump

Exceptional heat pump performance and efficiency

ECM axial fans modulating 10–100%

With ECM axial fans capable of 10-100% modulation, the unit delivers superior efficiency.

Up to 4" thick MERV 13, MERV 15, and HEPA; up to 3-layer configurations

Optimal air quality is assured through various filter options.

5-year parts Warranty

Features one of the industry's best warranties.

25-year Non Prorated Heat Exchanger Warranty

Enjoy one of the industry's best costs of ownership, significantly enhanced by our non-prorated warranty.



Free 2-Year CasLink Monitoring

Our equipment comes with monitoring—a feature few manufacturers provide—made even better with two free years.

Typical Lead Time 3-4 weeks on Standard Units

Experience quick project timelines with our rapid equipment availability.



Made in the USA

Faster lead times, enhanced durability, and superior quality.

APPLICATIONS

COMMERCIAL | SOCIAL HOUSING | MULTIPLEX/AQUATIC CENTRES | GOVERNMENT | MUNICIPAL | HOSPITALS | SCHOOLS | HOTELS



EASY REPLACEMENTS & RETROFITS

Transitioning to a new HVAC system is seamless with Yanmar. Our standard fast availability means we can reliably swap out your old unit with a high-performance Yanmar HVAC system. Thanks to in-house curb adapters, it's a simple, drop-in replacement that utilizes your existing footprint. Reach out to your local Yanmar sales office for assistance.



ENGINEERED TO LAST. INDUSTRY BEST WARRANTY

Every Yanmar Rooftop Unit comes standard with a 5 year parts warranty. Yanmar'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 Yanmar'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. CASLink can monitor your unit's performance ensuring that your unit operates at peak performance at all times.



DURABLE, TOP QUALITY COMPONENTS

Every detail of Yanmar'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 Yanmar's RTU to operate headache free for years to come.



REMOTE MONITORING

Our remote monitoring offering is your cloud-based command center for building management. It continuously gathers real-time performance data from your HVAC units, letting you confirm proper operation, catch minor issues early, and understand system efficiency. With predictive analytics, remote monitoring proactively alerts you to potential problems before they happen and enables remote adjustments, often saving you an expensive on-site service call. It seamlessly integrates with your existing building management systems and comes standard with every Yanmar HVAC unit.



ENERGY EFFICIENT



EXCEEDING EXCELLENCE

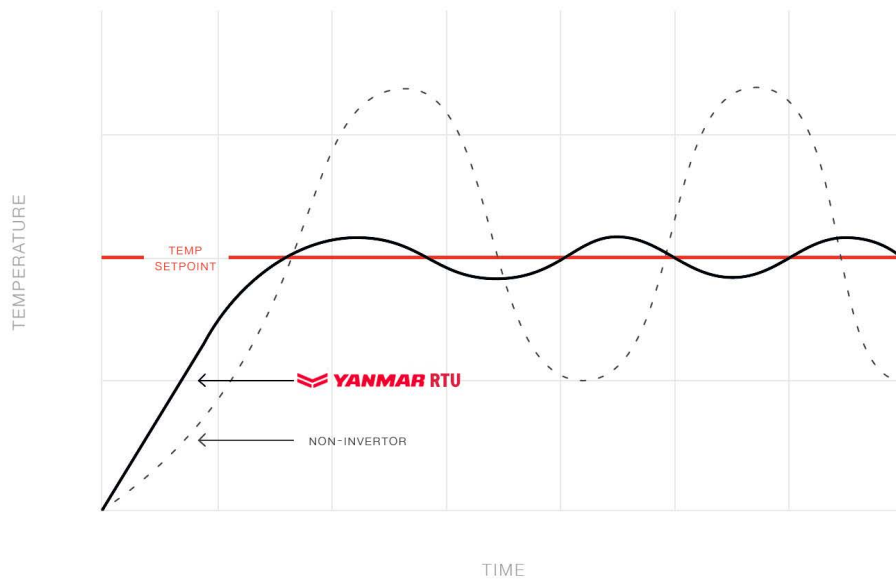
SUPERIOR ENERGY EFFICIENCY

Yanmar's RTU achieves up to an impressive 21.3 Integrated Energy Efficiency Ratio (IEER) rating which is 1.5× the ASHRAE 90.1-2019 IEER standard. Designed with the future in mind, Yanmar's RTU is poised to exceed rising IEER standards for years to come.

RELIABLE PRECISION

PRECISE TEMPERATURE & HUMIDITY CONTROL

Yanmar'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 Yanmar'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.



WARRANTY

GUARANTEED PERFORMANCE. LASTING VALUE.

WARRANTY

This unit comes with a standard 5-year parts warranty from date of shipment to be free from defects in materials and workmanship, under normal use and service.

This warranty shall not apply if:

1. The equipment is not installed by a qualified installer per the MANUFACTURER'S installation instructions shipped with the product.
2. The equipment is not installed in accordance with Federal, State, and/or Local codes and regulations.
3. The equipment is misused or neglected, or not maintained per the MANUFACTURER'S maintenance instructions.
4. The equipment is not operated within its published capacity.
5. The invoice is not paid within the terms of the sales agreement.

The MANUFACTURER shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the standard 5-year warranty period, upon examination by the MANUFACTURER, such part will be repaired or replaced by MANUFACTURER at no charge. The BUYER shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without MANUFACTURER'S prior authorization, and all returned equipment shall be shipped by the BUYER, freight prepaid to a destination determined by the MANUFACTURER.

NOTE: To receive warranty coverage, register this product by filling out the Start-up and Maintenance Document on page 143 of the IOM Manual or on the warranty document forms and email the form to rtusupport_ya@yanmar.com.

COASTAL APPLICATION

- Units installed within 1-mile of salt-water coasts and waterways must be equipped with an E-Coated Outdoor Coil. Position the unit so the fresh air inlet and outdoor coil are protected from direct salt spray. Failure to protect the fresh air inlet and outdoor coil from direct salt spray will void the unit's warranty.

FURNACE WARRANTY

- Subject to all terms stated herein, the MANUFACTURER warrants to BUYER the stainless steel heat exchanger to be free from defects in material and workmanship under normal use and service for 25-year, non-prorated, from the date of manufacture and warranty is limited to replacement of the heat exchanger only.

YANMAR'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 Yanmar controls
- Low maintenance and reduced failures due to brushless / beltless design
- High Efficiency fans provide quiet operation and significant energy savings

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 air stream

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

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

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

06 SMOKE DETECTOR (OPTIONAL)

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

07 WIDE INDOOR COIL DESIGN

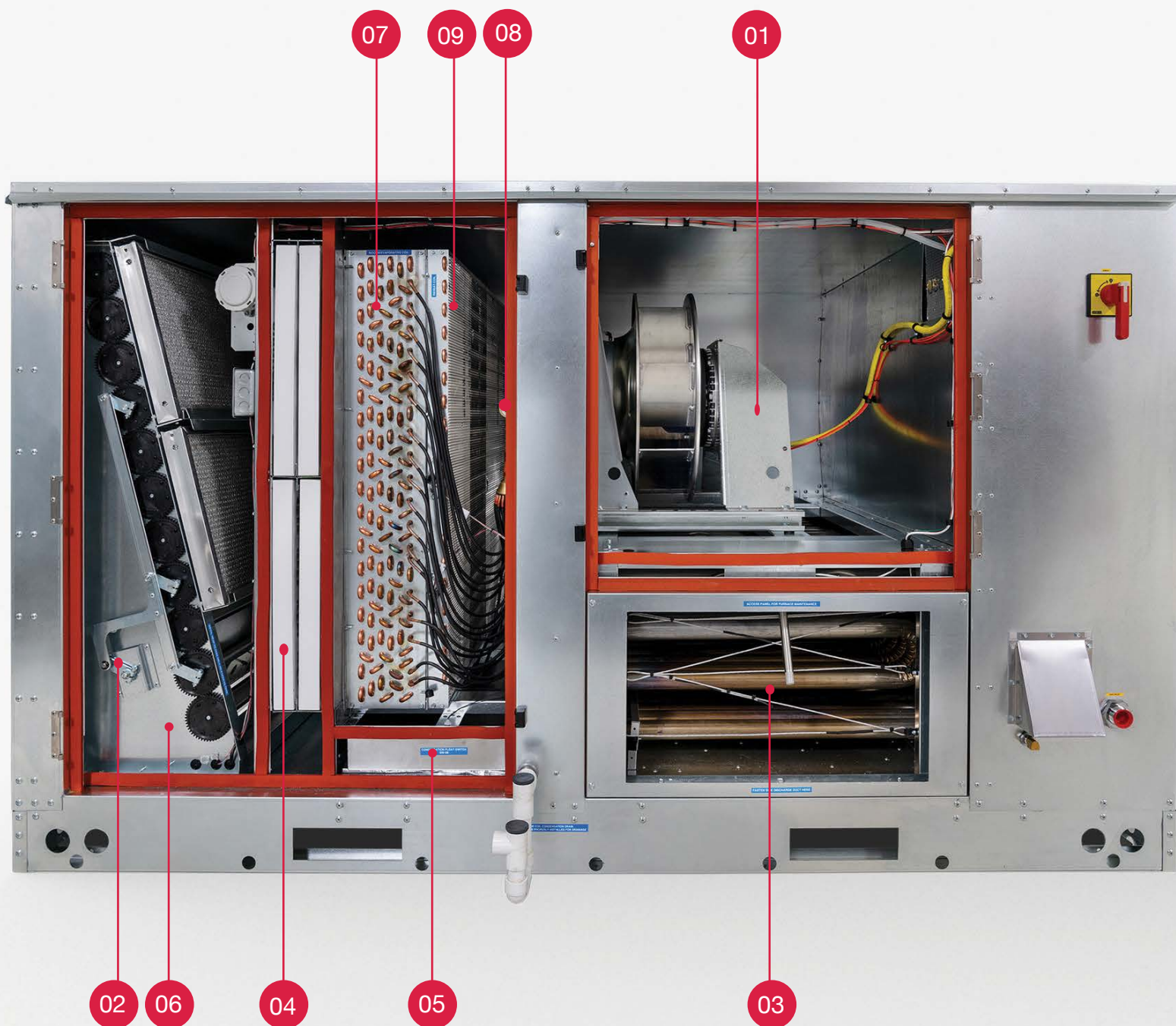
- Up to 7-row coil allows for optimal equipment efficiencies, full conditioning of outdoor air, and moisture control through increased residence time of air stream
- Staggered coil design reduces supply air bypass
- Chilled Water and Cooling Only options available

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

09 FULLY MODULATING HOT GAS REHEAT COIL (OPTIONAL)

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



YANMAR'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, Hot Water, Modulating SCR Electric Heat, and Heating Only 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)

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

12 DANFOSS VARIABLE SPEED INVERTER SCROLL COMPRESSOR

- Modulating and throttling ability to provide precise load matching with reduced energy consumption
- Protective operating envelope and Pump down 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

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
- Integrated temperature/humidity sensor avoids need for additional space measurements

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

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

16 VARIABLE SPEED OUTDOOR FANS WITH EC MOTORS

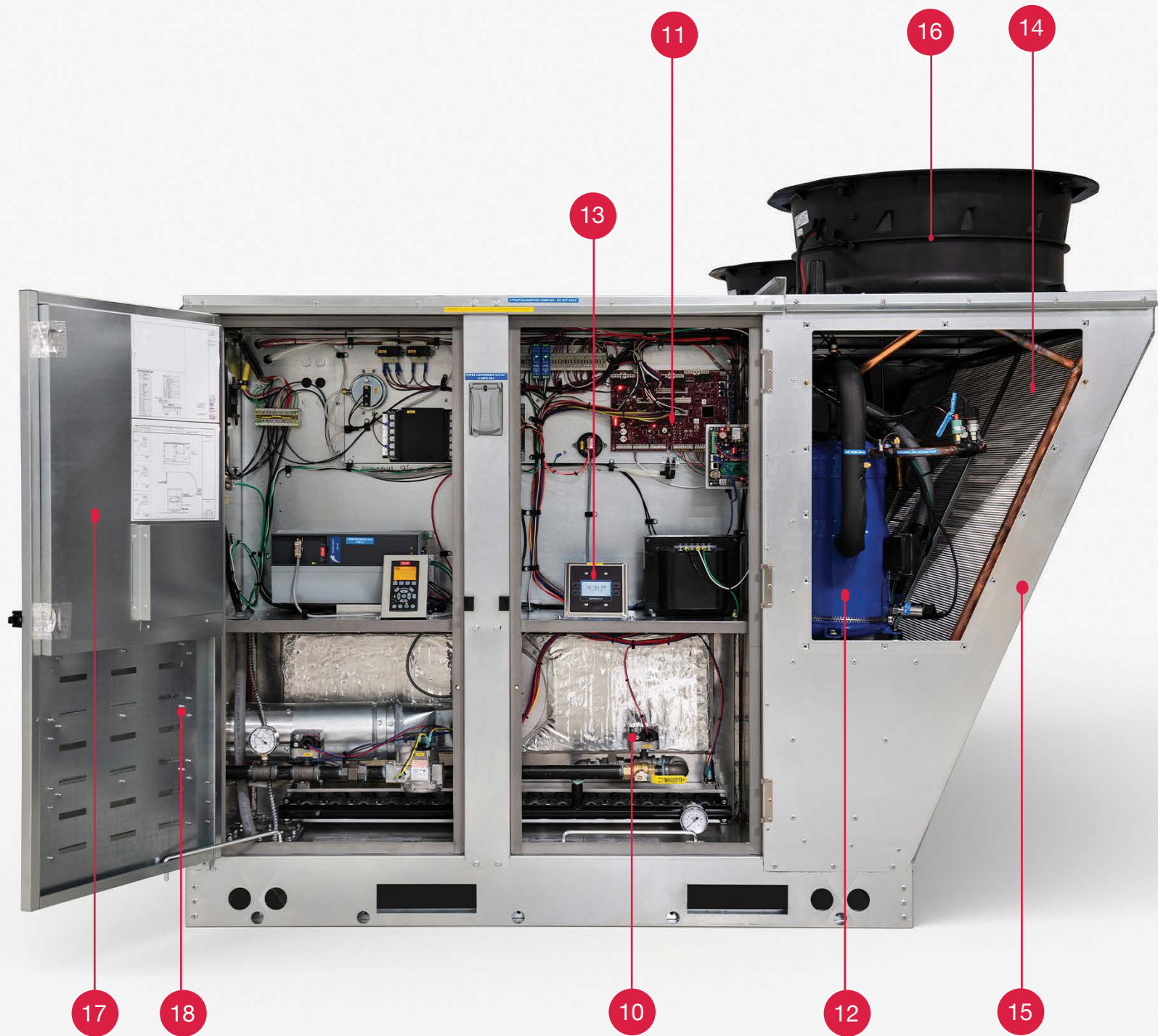
- 10:1 turn down maintains peak efficiency for all outdoor air conditions
- Aerodynamically designed bionic blades drastically reduce noise emissions

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

18 REMOVABLE HINGED ACCESS DOORS

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



YANMAR'S HEAT PUMP ADDITIONAL OPTIONS

01 EXTREME LOW AMBIENT (ELA) HEAT PUMP (OPTIONAL)

- High Output metal blade “outdoor coil” fans (same used in HA Cooling option)
- Two new solenoids in the refrigeration system
- Solenoid 1: “Low Ambient” solenoid/circuit allows hot gas refrigerant be pulled right from the discharge of the compressor back to the suction line of the compressor
- Solenoid 2: “Pre-Defrost” solenoid/circuit also pulls hot gas refrigerant directly from the discharge of the compressor, discharging back to the outdoor coil inlet

02 DUEL FUEL GAS HEAT (OPTIONAL)

- Natural gas indirect fired furnace with constant 81% efficiency throughout modulation
- High efficiency condensing furnace option is 50-400 MBH at 90% rated efficiency
- Propane, Hot Water, Modulating and 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)

SYSTEM SIZING & SPECIFICATIONS:

UNIT SIZE (Nominal Tonnage)	5	6	7.5	8	10	12.5	15	17.5	20	22	25	30
Min Airflow (CFM)	500	600	750	800	1000	1250	1500	1750	2000	2200	2500	3000
Nominal Airflow (CFM)	2000	2400	3000	3200	4000	5000	6000	7000	7000	8800	10000	12000
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	4:1
IEER	17.9	19.5	18.6	20.2	18.6	21.3	18.8	18.2	18.2	18.1	17.9	17.8
COP @47F	3.5	3.6	3.4	3.7	3.4	3.9	3.5	3.1	3.4	3.3	3.3	3.3
COP @17F (with Low Ambient Option)	2	2.2	2.1	2.3	2.1	2.4	2.2	2.8	2.1	2.1	2	2
Max Heating Turndown Ratio*	20:1	17:1	14:1	21:1	16:1	25:1	16:1	16:1	16:1	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	150-500	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	15-100	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"	91" x 59.5"	111" x 80"	111" x 80"	111" x 80"
Unit Length	77.25"	77.25"	77.25"	81.75"	81.75"	99"	99"	99"	99"	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"
Unit Height	47.5"	47.5"	47.5"	60.75"	60.75"	69"	69"	69"	69"	94"	94"	94"
Approximate Weight (lbs)	1000	1100	1200	1650	1730	2440	2500	2600	2650	4250	4700	5000

FOR MORE INFORMATION:

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