



An Impressive List of Features  
Built Right In.  
**RUUD HEAT PUMPS**



**We Thought of Everything... And Then Some.**

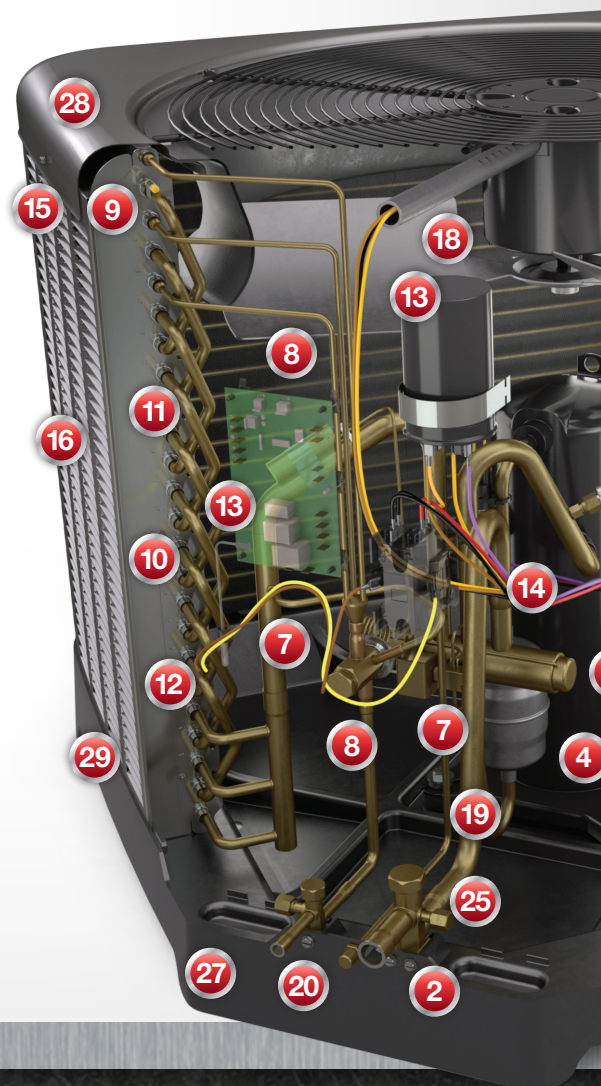


# PERFORMANCE AND QUALITY

Our new Ruud Heat Pumps are developed using our 360°+1 design philosophy, and have been completely re-engineered with 30 quality features to provide a trouble-free and reliable heat pump system.

## 30 Quality Features\*

- 1 New composite base pan** – Our new rigid composite base pan provides more durability against environmental conditions. The threaded inserts for the compressor bolts withstand compressor cycling, creating a highly robust foundation.
- 2 Rigidly mounted service valves** – The new heat pump line has service valves rigidly mounted on the composite base pan, isolating tubing connection movement and ensuring consistency in every application.
- 3 Scroll compressor** – A sound-abating feature added to the compressor significantly reduces noise when the system transitions in and out of defrost mode.
- 4 Large muffler** – A large muffler reduces vibration transfer to the tubing and overall compressor noise by suppressing compressor pulsations.
- 5 High and low pressure switches** – In the rare instance a heat pump loses charge (the cooling mechanism for the compressor), the low pressure switch will trip, preventing damage to the compressor. The high pressure switch prevents the compressor from potentially damaging high pressures that are caused if an outdoor fan motor fails.
- 6 Reversing valve** – The reversing valve is properly sized for the heat pump's capacity and R-410A refrigerant, ensuring proper, non-sticking shifting from cooling to heating modes.
- 7 Increased testing to prevent fatigue failures** – Every tube has undergone extensive strain and modal testing to prevent fatigue failures that could cause refrigerant leaks and unit failure. All tubes are fabricated to tight tolerances and placed in a fixture during assembly to ensure specifications are consistently met. Additionally, the overall length of the equalizer tube and the bulkhead line have both been significantly shortened while the diameter has been increased and formed to tight tolerances to improve robustness.
- 8 Long-lasting TXV valve** – The TXV valve used in the new heat pump line underwent rigorous cycle testing qualification to ensure reliability. Careful attention is given to the routing and securing of the TXV bulb and the capillary tube to decrease vibration, eliminating the potential for breakage.
- 9 Outdoor coil sensor** – The new, secure location of the temperature sensor enables accurate recording of the outdoor coil's temperature for proper defrost control.
- 10 Elimination of coil leaks at the endplates** – Extruded endplates and a new location for the flare on the hairpin prevent any scoring into the copper coil tubing.
- 11 Elimination of coil leaks at return bends** – Return bends are brazed into the coil's hairpin using 2% silver braze material to guarantee a leak-free joint.
- 12 Elimination of coil leaks at the headers** – Due to the location of headers at the end of the line, some vibration may be transferred to the location where the header is brazed to the coil. Therefore, the endplate has clearance holes, as opposed to an extrusion, to stop any tube gouging at this location preventing potential coil leaks.
- 13 Robust electrical controls** – To improve capacitor robustness, the new heat pump line uses a 440 VAC rated capacitor. Also, the defrost control features a normally open relay to increase reliability. Reduced electrical interference is obtained by delays during defrost cycles.



\* Applies to RP14 and RP15 heat pump models only

# SO SMART – IT'S SIMPLE.

## 14 Electrical wire shorting protection –

Wiring issues caused by rubbing against tubing and sharp edges are prevented by tightly securing electrical wire with wire ties, guaranteeing no electrical shorting.

## 15 Rust-resistant screws –

Rust-resistant screws are confirmed through 1500-hour rated salt-spray testing.

## 16 Improved cabinet structure –

Cabinet bowing has been eliminated by utilizing formed louver panels. Furthermore, the distance from the backside of the louver to the coil face has been increased to assure no ice bridging.

## 17 Decreased unit sounds –

Sound testing has been done on the new heat pump line to determine that there is no objectionable fan blade noise.

## 18 Fan blade robustness –

Tighter specifications have been employed to decrease any likelihood of fan blade breakage.

## 19 Copper specification –

The grain size on all copper parts has been specified to reduce likelihood of fatigue failures.

## 20 PlusOne™ Expanded Valve Space –

The 3"-4"-5" service valve space provides a minimum working area of 27-square-inches for easier access when installing.

## 21 Integrated heat pump lift receptacle –

Allows standard CPVC stands to be inserted into the base.

## 22 15"-wide control box –

Additional space allows for easy electrical hook-up.

## 23 PlusOne™ Triple Service Access –

The 15"-wide, industry-leading corner service access makes repairs easier and faster. The two-fastener removable corner allows optimal access to internal unit components. Individual louver panels come out once the fastener is removed for faster coil cleaning and easier cabinet reassembly.

## 24 Diagnostic service window with

**two-fastener opening** – The diagnostic service window provides access to the reversing valve before opening the unit.

## 25 External gauge port access –

Easy connection of "low-loss" gauge ports is enabled by external gauge port access.

## 26 Single-row condenser coil –

The single-row condenser coil allows fast, efficient and complete defrosting.

## 27 Service trays –

New service trays on the base pan hold fasteners or caps during service calls.

## 28 Powder coat paint system –

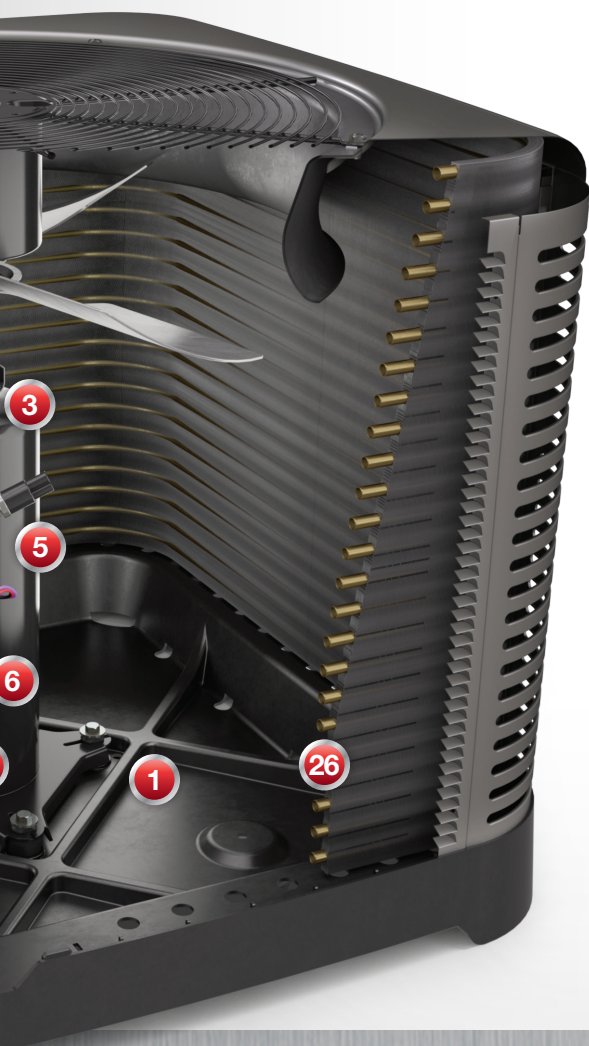
The powder coat paint system gives the new heat pump line a long-lasting professional finish and also eliminates sharp edges.

## 29 35% fewer cabinet fasteners and

**fastener-free base** – Enable faster access to internal components and hassle-free panel removal.

## 30 Multiple system options –

All heat pumps are matched to our new aluminum air handlers and cased coil, ensuring reliable, more durable system operation.







## WHY RUUD?

### Relationship, Dedication and Innovation

Ruud makes customers our first priority. Our approach as a company is to keep the dialogue going and to listen. Then act. The innovations we've developed throughout the years in both the HVAC and water heating industries are a direct result of that process. And we have a long list of industry firsts to show for it, with more to come. Ruud is dedicated to providing the products your customers need and the opportunities you want to expand your offerings and increase profitability. That's the Ruud 360°+1 approach to partnership.



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**Learn more at [MyRuud.com/360](http://MyRuud.com/360).**