FERGUSON

COMMERCIAL RTU AND SPLIT SYSTEMS REPLACEMENT GUIDE

for the Multi-Trade Commercial Contractor



WHEN DOES REPLACEMENT MAKE MORE SENSE THAN REPAIRS?

Every mechanical system has a lifespan, which means that every mechanical system reaches a point when extending that lifespan via repairs comes with more downsides than benefits.

Common Replacement Triggers

- **Repeated Failures:** One outage is a concern. Two is a problem. Three or more? That's a pattern you can expect to continue. Extended downtime frustrates clients and forces your crew to revisit jobsites to implement stopgap measures instead of focusing on more profitable work.
- **Warranty Limitations:** As parts warranties expire, the cost to repair grows. When the sum of those repairs begins to rival the cost to replace, starting over with a new system makes significantly more sense than putting new parts into a system that may not last to the end of the repair parts' warranty.
- **Equipment Age:** An HVAC unit exceeding its expected lifespan sounds good on the surface. After 10-15 years in service, however, the unit has also likely outlived its prime operating efficiency, its warranty, and the regulatory guidance in place when it was manufactured. As the years increase, energy efficiency decreases, so the longer that unit remains in service, the more money it's going to cost your clients.
- **OEM Parts Availability:** Commercial air and water technologies are evolving faster than ever, which means that new generations of equipment are constantly being produced. As this happens, resources for aging or discontinued models become harder to find—a scarcity that only gets worse with time.

Setting Up the Repair-vs-Replace Conversation

When talking with clients about whether it's time to replace HVAC equipment, contractors should frame the discussion around long-term value, operational risk, and total lifecycle cost. Many systems reach a point where repairs may temporarily extend operation but no longer make financial or performance sense.

Conversation-Driving Questions:

- How old is the system?
- When was the last time you experienced an outage?
- Are your water/energy bills significantly higher than at this point last year?
- When do your parts/system warranties expire?

THESE QUESTIONS HELP CLIENTS UNDERSTAND THAT REPLACEMENT IS NOT JUST REACTIVE — IT'S STRATEGIC.

WHAT CHANGES AND WHAT TO WATCH FOR

RTU and split replacements remain some of the most common upgrades for mechanical systems. However, today's equipment introduces new physical, regulatory, and logistical considerations that can complicate a seemingly simple swap.

Typical Replacement Scenarios Include:

- End-of-life rooftop units
- Seasonal system failures
- Upgrades prompted by energy efficiency or refrigerant changes
- Replacements triggered by major component failures

Critical Constraints To Evaluate

Replacing commercial HVAC equipment isn't always a plug-and-play scenario. Technicians should assess:

FOOTPRINT AND CLEARANCE

Modern systems — especially those with micro-channel coils — often differ in size and service-clearance requirements compared to legacy equipment. Evaluate existing roof space and service access zones.

NEW UNIT DIMENSIONS VS. OLD

Even small dimensional differences can affect functionality, airflow, or code compliance once installed. Confirm that:

- Supply/return openings align or can be adapted
- Height changes won't interfere with walls, parapets, or duct runs
- Weight differences won't exceed structural allowances

CURB ADAPTERS AND OVERHANG CONSIDERATIONS

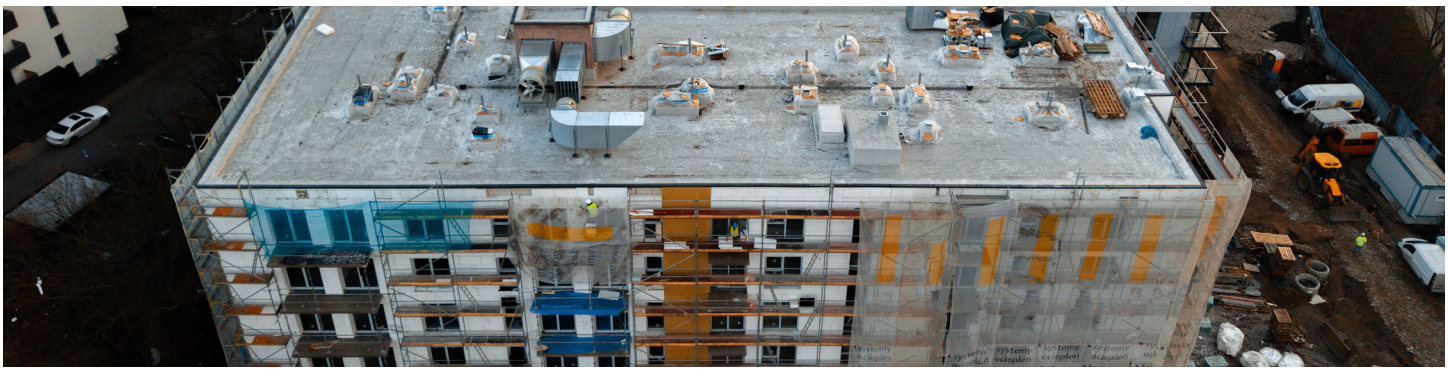
Curb adapters can solve dimensional conflicts but introduce airflow, static pressure, and service-access complications if not properly selected. Overhangs or architectural features may restrict lift or placement.

ROOFTOP ACCESS AND SITE CONDITIONS

Before equipment arrives:

- Verify crane reach, rigging points, and building access paths.
- Assess potential street closures or lift permits.
- Plan around tenant schedules or rooftop use restrictions.

A PRE-REPLACEMENT SITE AUDIT DRAMATICALLY REDUCES LIFT-DAY SURPRISES.









GETTING THE SWAP RIGHT

Water heating and pumping systems demand precision during replacement due to performance, safety, and complications related to downtime.

Common Replacement Scenarios

- Failed tanks or heat exchangers
- Pumps no longer meeting system demand
- Aging circulators with worn bearings or degraded efficiency
- Emergency replacements due to leaks or no-hot-water conditions

Why Accurate Sizing Matters

Undersized units cause comfort issues and excessive cycling; oversized units waste energy and strain components. Confirm compatibility with system loads, operating conditions, and connected equipment.

Field Audits, Data Logging, and Load Calculations

Use field data when available to validate real-world duty cycles—especially for variable-load buildings like hospitality or mixed-use properties.

Pump Replacement Fundamentals

- Flange-to-flange or face-to-face alignment ensures a true drop-in replacement.
- Evaluate swap-out feasibility to avoid unplanned piping work.
- Consider mechanical performance as it relates to comfort and uptime, as pump failures directly affect building occupants or process operations.

ACCESSORY READINESS: AVOIDING COSTLY SECOND TRIPS

One of the most common—and expensive—replacement pitfalls is missing critical accessories. When cranes with rigid schedules get involved, streets have to be closed down, permits need to be pulled, and tight access windows constrain your resources, replacement jobs often leave little to no room for error.

Commonly Overlooked Components

- Curbs, fresh air dampers, and economizers
- Float switches, heat kits, or control boards
- Safety devices (condensate, smoke detection)
- Pipe, valves, and fittings
- Electrical disconnects, whips, and fuses
- Water heater venting or pump isolation kits

Why Accuracy Matters

Missing even small accessories can:

- Delay startup
- Trigger callbacks
- Cause rescheduled crane lifts
- Reduce job profitability

PREPARATION IS A CONTRACTOR'S BEST DEFENSE AGAINST THE COST AND LOGISTICAL COMPLICATIONS OF A SECOND TRIP.





CONTRACTOR PRODUCTIVITY: SPEED, ACCURACY, FEWER SURPRISES

Replacement work increasingly demands rapid quoting, fast turnaround, and precise execution.

Contractor Expectations

- Faster bid responses with submittals and spec sheets
- Clear, accurate product recommendations
- Recommended accessories and installation supplies
- Application design considerations and alternative solutions
- Transparent lead times and delivery coordination
- Streamlining the quote-to-order-to-delivery process
- Submittal documentation for owners on installed equipment

KNOWLEDGEABLE PRODUCT SPECIALISTS HELP CONTRACTORS PROTECT MARGINS, AVOID SPEC ERRORS, AND KEEP PROJECTS ON SCHEDULE.

REPLACEMENT-FOCUSED SERVICES FOR MULTI-TRADE SUPPORT

To support replacement-heavy workflows, Ferguson offers extended services such as:

- 24/7 commercial water heater delivery and haul-away
- Boom truck and RTU lift rentals in select markets
- Sizing and design support for HVAC, water systems, and pumps in select markets
- Data logging and load calculation on hydronic systems for proper sizing and assessment
- Start-up supervision and factory commissioning, depending on the brand

THESE SERVICES HELP CONTRACTORS EXPAND THEIR REPLACEMENT CAPACITY ACROSS HVAC, PLUMBING, AND MECHANICAL TRADES WHILE MAINTAINING CLEAR, ACCURATE EXPECTATIONS.





PREPARATION, EXPERTISE, SPEED

Strong multi-trade support from the right partner helps contractors minimize risk, avoid surprises, and keep commercial buildings running smoothly.

Visit **ferguson.com/commercial** to learn more.

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