

Supply Air Solutions for Foodservice

Design smarter foodservice ventilation systems that improve guest comfort, reduce energy costs, and simplify installation no matter the kitchen type.

- Food Halls
- Small Restaurants
- Fast Food Venues
- Ghost Kitchen Facilities
- Event Venues
- Dining Rooms with High Occupancy



Supply Air Equipment Overview

SIMPLIFYING SUPPLY AIR SOLUTIONS FOR FOODSERVICE

Foodservice kitchens create intense heat, grease, and humidity challenges. Accurex designs supply air systems that directly address these conditions, helping operators maintain comfortable kitchens, protect the guest experience, and meet ventilation codes with confidence.

MAKE-UP AIR



MODELS XDGX, XMSX, XKID & XRID

Make-up air units replace exhausted kitchen air to maintain proper pressure balance, preventing heat and contaminants from spilling into dining areas while supporting safe and efficient hood operation.

Highly configurable and straightforward, make-up air units are commonly paired with packaged rooftop units for traditional restaurants with separate dining spaces.

PACKAGED ROOFTOP UNITS



MODELS XRT & XRV

Packaged rooftop units provide precise heating, cooling, and humidity control to keep occupants comfortable in a variety of applications. While often used in dining areas, they can also be used for comfort and supplemental airflow in the kitchen, or as an all-in-one unit in a space such as a coffee shop where kitchen exhaust volumes are minimal or similar. All-in-one designs can still handle exhaust, but not full-scale kitchen setups.

Our packaged rooftop units are specifically engineered for commercial cooking applications that require high outdoor air volumes. They are certified by AHRI, which is the trusted mark of performance assurance in the HVAC industry.

CHOOSING THE RIGHT SUPPLY AIR STRATEGY

Every foodservice space operates differently, and the supply air strategy should reflect that. The right approach depends on how air moves between the dining space and kitchen, how much humidity is generated, and how critical comfort is to the experience.

Use the scenarios on these pages to quickly identify the best-fit solution. The packaged rooftop units being recommended are Accurex's modulating RTUs capable of providing high percentages of outdoor air, with efficiency-boosting features such as variable-speed inverter compressors, modulating hot gas reheat, and double-wall injected foam cabinet construction.

Example Application Scenarios

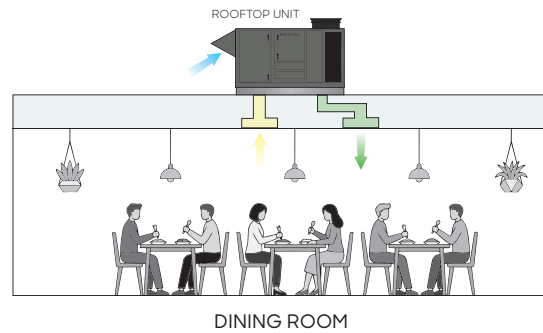
SCENARIO 1:

Small Restaurants, Quick-service (Separate Kitchen and Dining)

BEST FIT WHEN:

- Kitchen and dining areas are physically separated
- Humidity and heating loads are moderate
- Cost and simplicity are key priorities

DINING ROOM: PACKAGED ROOFTOP UNIT (RTU)

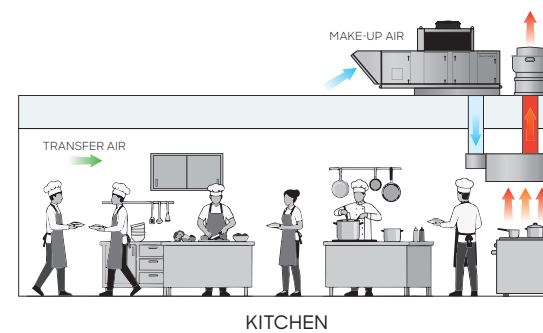


Use an RTU to keep the dining room ventilated and comfortable for guests. The Accurex XRT provides precise temperature and humidity control with a high-turndown indirect gas furnace and modulating hot gas reheat, minimizing issues like clammy spaces and temperature swings.

WHY IT WORKS:

- Cost-effective and familiar design
- Maintains proper hood performance and containment
- Separates ventilation and comfort control for flexibility

KITCHEN: MAKE-UP AIR (MUA)



Use a dedicated MUA unit to replace exhausted air and maintain proper kitchen pressure, as well as keeping kitchen staff comfortable. The dining area RTU provides supplemental tempered transfer air.



SCENARIO 3:

Coffee Shops, Small Restaurants, Bakeries (Single Space/Open-Concept)

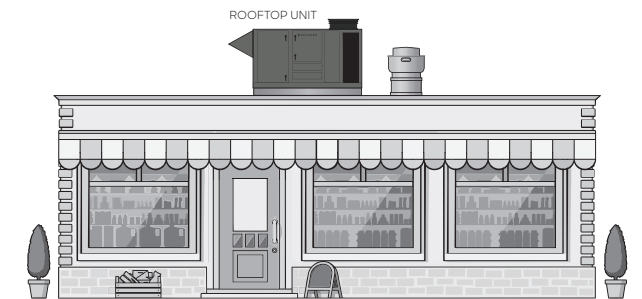
BEST FIT WHEN:

- Kitchen and dining areas share the same space
- A smaller footprint is needed
- A simpler system design is preferred

WHY IT WORKS:

- Easier controls and maintenance
- Lower installation cost
- High comfort performance

RECOMMENDED APPROACH: SINGLE PACKAGED RTU



In single spaces with low exhaust air needs where comfort is key, replace multiple supply units with a single Accurex packaged rooftop unit to maintain balanced conditions for a comfortable restaurant.



SCENARIO 2:

Large Restaurants, Event Venues (High-Occupancy Dining)

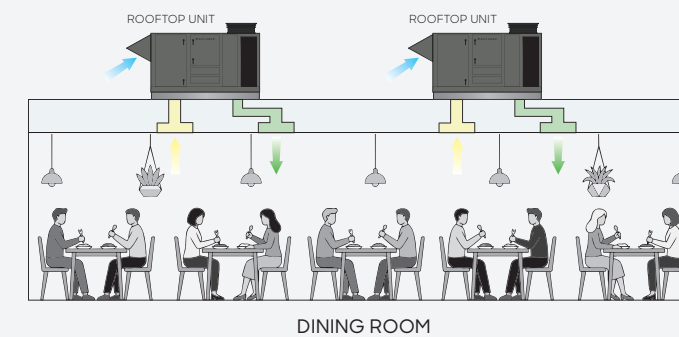
BEST FIT WHEN:

- Ventilation and occupancy loads vary across spaces
- Kitchen operations generate higher heat and exhaust demands
- Operational flexibility and guest comfort are high priorities

WHY IT WORKS:

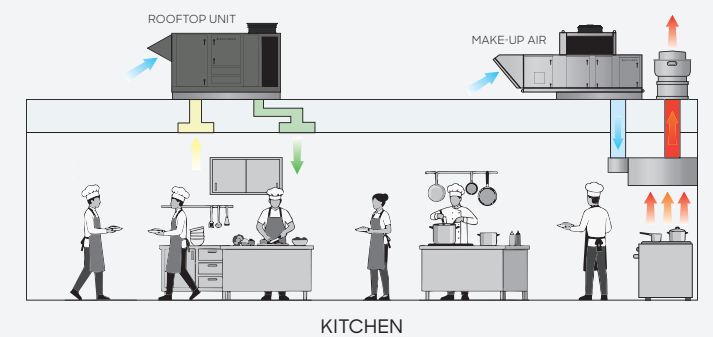
- Familiar installation and control strategy
- Improved indoor air quality (IAQ)
- Zone control

DINING ROOM: MULTIPLE PACKAGED RTUS



Dining spaces require code-mandated airflow based on occupancy and size, along with consistent conditioning to maintain guest comfort. The Accurex XRT is a dedicated unit for zone-level independent temperature and humidity control. Compared to other RTUs, it delivers high outdoor air and precise temperature conditioning in a single package, with modulating components to save operating costs.

KITCHEN: MAKE-UP AIR (MUA) WITH PACKAGED ROOFTOP UNIT



Use an MUA unit to replace exhausted air and maintain proper kitchen pressure. Large kitchens have a higher outdoor air requirement, which is where the high outdoor air capacity of the XRT comes in. For instance, if the kitchen hood exhausts 5,000 cfm and the MUA unit makes up 4,000 cfm, the XRT can efficiently provide 1,500 cfm plus space comfort, allowing you to stay in an optimized MUA unit.



SCENARIO 4:
Food Halls, Ghost Kitchens (High-Volume/Multi-Kitchen)

BEST FIT WHEN:

- Multiple cooking operations are in one space
- Loads are highly variable
- Ventilation and humidity demand are high

WHY IT WORKS:

- Handles fluctuating loads efficiently
- Maintains stable temperature and humidity
- Balances independent kitchen control with whole-building comfort

RECOMMENDED APPROACH: MULTIPLE PACKAGED RTUS



Ghost kitchens are enclosed and do not have dining areas. Use a MUA unit for each kitchen that has a hood. Use an RTU to provide tempering and dehumidification for multiple kitchens, and an additional RTU for the hallways and other spaces.

Food halls should use one or more RTUs to provide comfort to all occupants of the large open space, as well as a MUA unit for each kitchen with a hood.

For large or high-density ghost kitchens, a complete packaged rooftop strategy vs. MUA per kitchen, may be considered.

Application Scenario Guide

Use this guide to determine the best supply air solution based on your foodservice setup.

APPLICATION	DESIGN	SUPPLY UNIT APPLIED
Quick-service (separate kitchen and dining)	In the kitchen, MUA replaces exhaust air and maintains pressure. RTU controls temperature and humidity in the dining room and provides transfer air to the kitchen for comfort.	RTU in dining room and providing transfer air to kitchen; MUA in kitchen
Large restaurants (high-occupancy dining)	Meet code-mandated airflow requirements, and condition air for guest and staff comfort, with one or more RTUs in the dining room. A MUA unit can provide the primary code-required airflow in kitchens, supplemented by an RTU in large kitchens for additional airflow and comfort.	MUA in kitchen; RTU in dining room and optional in kitchen
Coffee shops and bakeries (single restaurant/ small space)	Control humidity and temperature to keep products fresh and occupants comfortable.	One RTU meets supply demands for the whole space
Food halls and ghost kitchens (multi-kitchen)	Use MUA for individual kitchens and food hall stalls where air is being exhausted. Use RTUs to ventilate, condition, and dehumidify the space outside the kitchens.	MUA in kitchen; one or more RTUs for food hall dining area or ghost kitchen hallways



Find your local Accurex expert to learn how we can simplify your kitchen challenges.



Do any of these scenarios sound like your project? Learn more about how our products can solve your supply air needs.



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