

# Effective Restaurant HVAC Management

Reducing operating costs and protecting building integrity during the shutdown.



## Covid-19 Response: HVAC System Strategies for Closed and Takeout-Only Restaurants

Business is far from usual for the restaurant industry. Before things return to normal, temporarily changing HVAC system strategies in quick serve and casual dining restaurants can help preserve capital and protect building infrastructure. We hope that by sharing our expertise, we will help you prepare for a rapid and strong reopening as soon as restrictions are lifted.

Trane® restaurant specialists have collaborated with leaders in restaurant facility management and members of RFMA® to develop recommendations for dark and kitchen-only HVAC system operation. The following temporary setting changes are intended to reduce energy use and cost, while running units enough to maintain proper humidity management and help prevent issues with the restaurant's building integrity.

Before changing system operation, consider the following checkpoints:

- 1 Consult the corporate office.** If your site is part of a franchise or restaurant group, consult the corporate restaurant operations department for guidance and proper protocols.
- 2 Share new protocols with third-party management companies.** Restaurants that contract an outside company for building monitoring and management should share this document (or other preferred temporary settings) for remote implementation.
- 3 Record all current settings!** Document set points, schedules and other important information. Writing down everything will expedite start up when normal settings can be restored.
- 4 Monitor conditions.** If necessary, adjust settings to improve comfort, humidity or air quality.

# HVAC System Operation Guides

The following information provides operational guidelines that will be effective in most situations. These recommendations can be applied to systems controlled by a programmable or smart thermostat, a local interface on a system controller or a building automation system with web or mobile phone access.

If you need additional assistance, including a customized strategy for a unique situation, contact your local Trane office for additional support.

## Dark Restaurants

|           |                              | QSR    |         |                          | CASUAL DINING |                           |         |                    |            |                          |
|-----------|------------------------------|--------|---------|--------------------------|---------------|---------------------------|---------|--------------------|------------|--------------------------|
|           |                              | Dining | Kitchen | IT Closet Critical Space | Dining        | Dining** RH Stabilization | Kitchen | Dish Area Scullery | Trash Room | IT Closet Critical Space |
| ALL HOURS | Fan (All Hours)              | AUTO   | AUTO    | ON                       | AUTO          | AUTO                      | AUTO    | AUTO               | AUTO       | ON                       |
|           | Cooling Set Point            | 78° F  | 83° F   | 78° F                    | 80° F         | 78° F                     | 83° F   | 83° F              | 76° F      | 78° F                    |
|           | Heating Set Point            | 55° F  | 55° F   | 60° F                    | 55° F         | 55° F                     | 55° F   | 55° F              | 55° F      | 60° F                    |
|           | Relative Humidity Set Point* | 60%    | 65%     | 60%                      | 65%           | 60%                       | 65%     | 65%                | 60%        | 60%                      |

\* Relative Humidity Set Point if HVAC Equipment is equipped with active dehumidification—hot gas reheat.

\*\* Operate a single HVAC unit equipped with active dehumidification in a large dining area to help maintain minimum RH levels.

## Additional actions:

- ✓ Identify and shut down all gas-consuming appliances: cooking equipment, water heaters, etc. Turn equipment off and shut off gas supply valves to the appliances.
- ✓ Shut down all make-up air units, including condensing units and exhaust fans, at the unit disconnect on the roof.
- ✓ HVAC space heating and cooling equipment should remain energized, and gas supply valves should remain open.
- ✓ All interior and exterior lighting: adjust time-of-day schedules to unoccupied or restaurant closed levels.
- ✓ Turn off dish washing machines, booster heaters and other non-critical appliances in the dish area/scullery.
- ✓ Turn off all heat generating non-critical equipment throughout the restaurant.
- ✓ Walk-in coolers, freezers and ice machines: determine which can be shut down. Remove all food products, drain water and leave the doors open for ventilation.
- ✓ Leave the manager's door open for ventilation if possible.

## Kitchen-Only Restaurants

|                  |                                    | QSR    |             |                                | CASUAL DINING |                                 |             |                       |               |                                |
|------------------|------------------------------------|--------|-------------|--------------------------------|---------------|---------------------------------|-------------|-----------------------|---------------|--------------------------------|
|                  |                                    | Dining | Kitchen     | IT Closet<br>Critical<br>Space | Dining        | Dining**<br>RH<br>Stabilization | Kitchen     | Dish Area<br>Scullery | Trash<br>Room | IT Closet<br>Critical<br>Space |
| OCCUPIED HOURS   | Fan                                | ON     | ON          | ON                             | ON            | ON                              | ON          | ON                    | ON            | ON                             |
|                  | Cooling<br>Set Point               | 78° F  | 73° - 75° F | 73° - 75° F                    | 78° F         | 78° F                           | 73° - 75° F | 73° - 75° F           | 73° - 75° F   | 73° - 75° F                    |
|                  | Heating<br>Set Point               | 60° F  | 68° - 70° F | 68° F                          | 60° F         | 60° F                           | 68° - 70° F | 69° - 70° F           | 70° - 70° F   | 68° F                          |
| UNOCCUPIED HOURS | Fan                                | AUTO   | AUTO        | ON                             | AUTO          | AUTO                            | AUTO        | AUTO                  | AUTO          | ON                             |
|                  | Cooling<br>Set Point               | 78° F  | 83° F       | 78° F                          | 78° F         | 78° F                           | 83° F       | 83° F                 | 76° F         | 78° F                          |
|                  | Heating<br>Set Point               | 60° F  | 55° F       | 60° F                          | 60° F         | 60° F                           | 55° F       | 55° F                 | 55° F         | 60° F                          |
|                  | Relative<br>Humidity<br>Set Point* | 60%    | 60%         | 60%                            | 65%           | 60%                             | 65%         | 65%                   | 60%           | 60%                            |

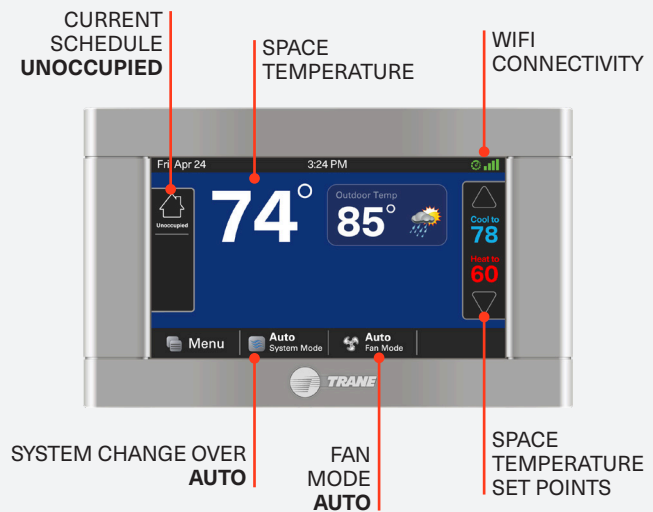
\* Relative Humidity Set Point if HVAC Equipment is equipped with active dehumidification—hot gas reheat.

\*\* Operate a single HVAC unit equipped with active dehumidification in a large dining area to help maintain minimum RH levels.

### Additional actions:

- ✓ Identify and shut down all **non-operational electric and gas consuming appliances**: cooking equipment, bar equipment, displays, etc.
- ✓ If the hood it serves is shut down or non-operational, shut down a make-up air unit's included condensing units and exhaust fans.
- ✓ In non-operational areas, adjust lighting time-of-day schedules to unoccupied levels.

**For customers with a programmable or smart thermostat, these settings can be verified by checking the display on the thermostat.**

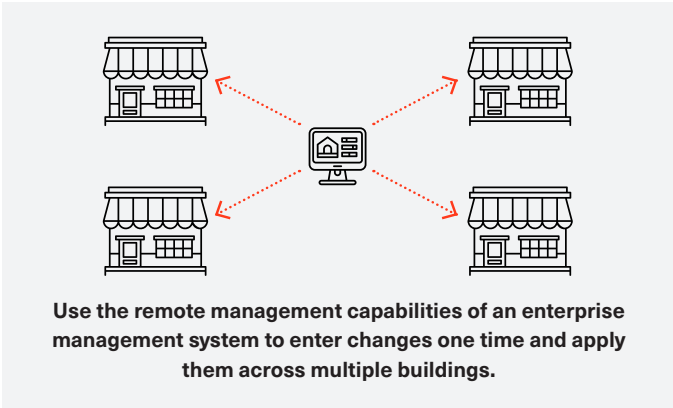


Trane® Pivot® Smart Thermostat

# Additional Considerations

## Changing Multi-Site Enterprise Management Systems

If equipped with an enterprise management system, change settings remotely to save time and ensure consistent, effective dark and kitchen-only conditions at multiple restaurant sites. Use the system’s functionality to implement uniform changes across multiple buildings.



## Adapting Settings in Single-Building Simple Thermostat Systems

If your restaurant runs on a simple non-programmable thermostat, your ability to adjust settings may be more limited. Use this table to help guide temporary setting and operational changes.

| Space Temp Set Points | Cool to 78° F | Heat to 60° F |
|-----------------------|---------------|---------------|
| Fan Mode              | Auto          |               |
| System Changeover     | Auto          |               |

# And When You Are Ready to Reopen...

Trane’s restaurant HVAC professionals are ready to help. We are here to answer your questions during the shutdown and standing by to offer support when you are ready to get back up and running again. Contact us if you need new, replacement or temporary rental HVAC equipment. Your local Trane office is prepared to respond quickly when you need emergency replacements, parts or supplies.

## Contact your local office by visiting [Trane.com](https://www.trane.com)

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