



ARE YOUR AIR CONDITIONING SYSTEMS TRULY READY TO COME OUT OF THE LOCKDOWN?

Offices and commercial spaces have been closed for more than six weeks now. Once the lockdown ends, a certain amount of normalcy will return to our lives. This is the time to pay extra attention to the air conditioning systems in all places of business. To make sure that they're ready to function like before. But more importantly, to make them truly safe for all the employees returning to the workspace.

So are central air conditioning systems safe or not?

Central air conditioning systems are actually safe. In fact they are beneficial in commercial and public spaces as they control both temperature and humidity in the air conditioned space. This increases human resistance to infections which is a good thing in the current pandemic scenario. Contrary to belief that these are closed-air systems, central air conditioning systems are actually well-ventilated. In fact, a standard central air conditioning system design includes a mechanical ventilation plus filtration system that draws in adequate fresh air. The system also maintains Relative Humidity between 40% - 70%, which is ideal for avoiding the spread of the Covid-19 virus.



Should these systems be operated as before?

No. There are specific operating guidelines that must be followed to make workplaces safe and to stop any spread of the virus.



Set the temperature at around 26°C.



Increase the quantity of fresh air to two air changes per hour. This can be done by:

- Increasing the fresh air cut-out provisions suitably for ductable IDUs and AHUs.
- Providing additional fresh air fans for ductable IDUs and AHUs.
- Providing additional TFA system that feed fresh air for high wall or cassette type of indoor units.



Run the washroom and toilet exhaust units as long as the HVAC system is running.



Two air changes might increase the heat load. But raising the set temperature and following social distancing-compliant occupancy of up to 50%, the heat load should roughly remain the same. So most systems will not require additional cooling capacity or redesign. It is however recommended to re-evaluate the existing system design and TOOT MNE can help with its expertise in this regard.

Are there any more steps?

Absolutely. Because offices and other commercial establishments have remained closed for a long time, the air conditioning systems in these places will need maintenance before start-up. The air conditioned spaces, coils and ducts will pose health hazards due to fungus and molds which may have developed, depending on the humidity and temperature conditions. It is also possible to have insects and bird droppings, and the leavings of rodents.

So this is what we recommend:



The whole premises including the air conditioning room and spaces should be cleaned and sanitised as a first step.



Cleaning of indoor units as per TOOT MNE recommended procedures including filters, grills, diffusers and coils. Also, clean the condensate drain pan using disinfectant and ensure that the water flows without any obstructions.



In case the area has ducted air distribution, it is advisable to clean the ducts by an appropriate method that may include duct cleaning and sanitisation.



Start-up of outdoor units and systems:

- Carry the preventive maintenance of outdoor units, cooling towers, pumps and chilled water system as per the guidelines and recommended procedures of TOOT MNE
- Follow standard start-up and operation practice of all the installed condensing units, chillers, cooling towers, pumps, AHU and fans. This should include inspection, strainer-cleaning and checking the quality of water that is exposed to the environment especially in cooling tower sumps.



The following process is recommended for the air conditioning system during start-up:

- Open all the doors and windows of the space for at least four hours.
- Ensure that the indoor and outdoor units are serviced with special care given to the air side.
- Adjust the dampers and VFD settings for maximum fresh air intake setting.
- Start and run the exhaust systems if available.
- Start the air conditioning system in fan mode only, and run it for a minimum of six to eight hours with doors open while running the exhaust system.
- Remove and clean all filters.
- Start the air conditioning system in normal mode and run for two hours with doors open and then close the doors and windows.
- Maintain the temperature at 26°C. Relative Humidity (RH) will be automatically maintained by the system between 40% and 70%.
- It is advisable to use air purifiers in every possible space including cabins and conference rooms.
- Toilets must be kept under negative pressure (less than 5 Pa). Air should always pass through the toilet, not in reverse direction.
- The entire work space must be kept under positive pressure.



The fresh air and ventilation system should be kept on throughout the off cycle. Over the weekend and on holidays, it should be in air circulation mode.

If any abnormality is noticed (tripping, noise, less cooling and so on) then please switch off the unit and call us at **1800 209 1177** (toll free) or email **info@tootmnetech.com**

You can also reach us through our customer care app using the following links:

For iOS users:- <https://apps.apple.com/in/app/customer-care/id1192675631>

For Android users:- <https://play.google.com/store/apps/details?id>