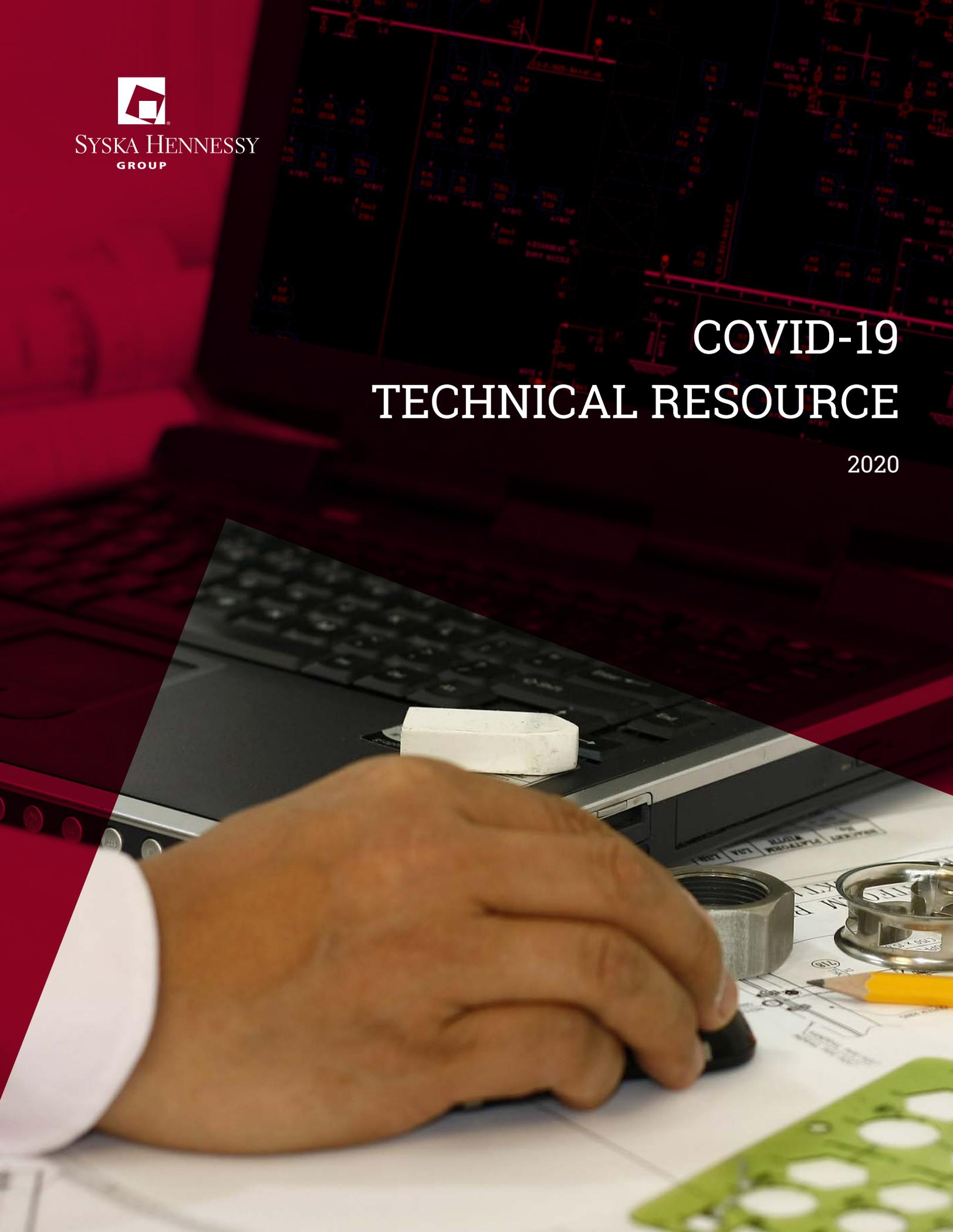




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# COVID-19 TECHNICAL RESOURCE

2020



In response to the ongoing health crisis surrounding COVID-19, Syska would like to share a few helpful links and tips on building HVAC systems as recommended by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) and Federation of European Heating, Ventilation, and Air Conditioning Associations (REHVA). We've also included suggestions from the Centers for Disease Control and Prevention (CDC) on water sources. This information supplements recommendations from the World Health Organization (WHO) and other recommendations of the CDC in reducing the spread of COVID-19.

Following is an excerpt from ASHRAE's [Guidance for Building Operations During the COVID-19 Pandemic](#) regarding HVAC systems:

- "Increase outdoor air ventilation (use caution in highly polluted areas); with a lower population in the building, this increases the effective dilution ventilation per person.
- Disable demand-controlled ventilation (DCV).
- Further open minimum outdoor air dampers, as high as 100%, thus eliminating recirculation (in the mild weather season, this need not affect thermal comfort or humidity, but clearly becomes more difficult in extreme weather).
- Improve central<sup>10</sup> air filtration to the MERV-13<sup>11</sup> or the highest compatible with the filter rack, and seal edges of the filter<sup>12</sup> to limit bypass.
- Keep systems running longer hours, if possible 24/7, to enhance the two actions above.
- Consider portable room air cleaners with HEPA filters.
- Consider UVGI (ultraviolet germicidal irradiation), protecting occupants from radiation,<sup>13</sup> particularly in high-risk spaces such as waiting rooms, prisons and shelters."

(See full document from ASHRAE for all Endnotes/references)

The following are a few additional strategies that can be considered for operation of existing building HVAC systems:

- Electrostatic filtration inside air handlers.
- Ionization treatment inside air handlers.
- If your air handling units are already equipped with UVGI lamps, consider preventive maintenance, including, but not limited to, UVGI lamp replacements, etc.
- Temporary installation of UV light fixtures in areas such as bathrooms.

In relation to water sources, the Centers for Disease Control (CDC) has issued a statement, in short:

- The COVID-19 virus has not been detected in drinking water.
- Conventional water treatment methods should remove or inactivate the virus.

Each building is unique and may respond differently to the recommendations listed above. We would be happy to provide additional guidance. We also suggest that owners and operators collaborate with infection control/prevention specialists and discuss strategies for prevention and risk mitigation. (Association for Professionals in Infection Control and Epidemiology) [www.apic.org](http://www.apic.org).

Please note that the recommendations and information provided in the links below are continually updated and should be checked regularly. Studies on COVID-19 and its transmission are in progress; much is still unknown.

As a reminder, Syska has implemented a remote working policy for the next several weeks, but we remain fully operational and committed to serving our clients and projects as usual. Feel free to contact one of our engineers if you'd like assistance evaluating operations or implementing additional design mitigation strategies during this difficult time.



Useful links:

**American Society of Heating, Refrigerating, and Air-Conditioning Engineers**

<https://www.ashrae.org/technical-resources/resources>

**World Health Organization**

<https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Disease Control and Prevention National Institute for Occupational Safety and Health**

<https://www.cdc.gov/niosh/surveyreports/pdfs/301-05f.pdf>

**Federation of European Heating, Ventilation, and Air Conditioning Associations**

<https://www.rehva.eu/activities/covid-19-guidance>

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