



Canadian Institute of Plumbing & Heating
L'Institut canadien de plomberie et de chauffage

A National Voice with Regional Roots | Une histoire régionale, une voix

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National Research Council Canada / Conseil national de recherches Canada
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SUBJECT: INDOOR AIR QUALITY (CCIAQ) COMMITTEE

Dear Mitra,

The Canadian Hydronics Council (CHC) of the Canadian Institute of Plumbing and Heating (CIPH) is aware of your committee's work, and we believe we can provide relevant information to support the Indoor Air Quality (CCIAQ) Committee and aid in the research required to improve Indoor air quality both during and after this pandemic.

The Council has represented Canada's hot water heating and cooling industries for over 50 years. Our mandate allows us to participate in the following:

- Education and Training including delivery of national certification curriculum
- Government Relations including participation in codes and standards development
- Industry and Consumer Marketing promoting the benefits of hot water heating systems

We are the only national body dedicated to the hot water heating industry and is available to those seeking technical expertise; industry consultation; consumer-friendly information; or just plain "know-how."

As an industry we recognize that increasing the outdoor air ventilation of a building poses some unique challenges. The variable air volume comfort systems found in most buildings today provide inadequate protection against airborne germs, viruses, and mold. In these types of systems, air is blown through ducts into every room, recirculating time and again. That air can pick up contaminants along the way and disperse them everywhere, bringing the risk of infection to everyone in its path.

The hydronics industry can provide viable solutions regarding ventilation and filtration of indoor air. Ventilation within a building space is defined as outside air. The current guidelines for commercial buildings are 12 CFM (cubic feet per minute) to 17 CFM per person of outside air. The potential guidelines to mitigate airborne pathogens are 24 CFM to 34 CFM per person of outside air.

Not only does the heating and cooling of the increase air ventilation result in higher energy costs, but the current building HVAC system needs to be assessed to determine whether it can handle the increased load on equipment. This is where as an organization we can play a critical role to your work.

Hydronic chilled beam systems enable the industry to take a whole systems approach to mitigate airborne pathogens while providing healthier indoor air quality and reducing energy costs. Hydronic chilled beam systems address key expert recommendations:

- No recirculation of air to adjacent spaces
- No indoor air is recirculated back into the building; 100% is exhausted outside the building
- Low velocity reduces air mixing and drafts



Most experts agree that:

- COVID-19 will not be the last pandemic and protecting buildings from the current and future pandemics needs to be considered; and
- the best mitigation strategies is to increase the outdoor air ventilation of the building's HVAC system.

The Canadian Hydronics Council would like to have the opportunity to meet either in person or virtually to highlight some solutions that can be incorporated in future modules on indoor air quality. We look forward to hearing from you.

Yours Sincerely,
Canadian Institute of Plumbing & Heating

Jason Jackson
Canadian Hydronics Council, Chairman

Dave Hughes
CIPH, Technical Advisor

c/o Canadian Hydronics Council
CIPH Regions
Plumbing and Mechanical Advisory Council



Founded in Montreal in 1933, the Canadian Institute of Plumbing and Heating (CIPH) is a not-for-profit trade association that is committed to providing members with the tools for success in today's competitive environment. More than 283 companies are members of this influential Canadian industry association. They are the manufacturers, wholesaler distributors, master distributors, manufacturers' agents, and allied companies who manufacture and distribute plumbing, heating, hydronic, industrial PVF, and waterworks, and other mechanical products. CIPH wholesalers operate more than 700 warehouses and showrooms across Canada. Total industry sales exceed \$7 billion annually and CIPH members have more than 25,000 employees from coast to coast.