



SUN LIFE PLAZA

HEATING, VENTILATION, & AIR CONDITIONING FACTSHEET

Address: 112, 140, 144 – 4th Avenue SW, Calgary, AB

General Description: Sun Life Plaza towers are 28 stories high and rise to 114.3 m (375 ft). Sun Life Plaza West was the first tower built and was completed in 1981. Development continued with Sun Life Plaza North, completed in 1982, and was concluded in 1984 with Sun Life Plaza East. The three office towers are connected by a spectacular 20,000 square foot glass covered atrium built in 1991.

Mechanical Engineer: TMP Consulting Engineers Ltd.

General:

- The building automation is a Honeywell EBI Version R600.
- Heating and cooling to the tenant spaces is provided by perimeter radiation (8 zones per floor) and Variable Air Volume ("VAV") interior and exterior (cooling) air boxes (26 per floor).
- All boilers and chillers were replaced between 2003 and 2008

Design Criteria: The VAV air system is mixed air cooling only for terminal VAV boxes. Central MAU (Makeup Air Unit) brings in 100% outside air with preheat and cooling coils located on the 29th floor serving the floor compartmental fan units. These compartmental units are VFD (Variable Frequency Drive) controlled, with cooling coils only and draw a fixed amount of makeup air and return air. Static pressure within the building, temperature, VFD speeds and CO2 controls regulate the minimum outdoor air requirement.

Filters: MERV 8 pre-filters and MERV 13 bag filters. Pre-filters are changed every two months and Bag filters dependent on pressure drop over the filter bank.

Heat: Three Smith Cast Iron Sectional hot water boilers located on the 29th floor of North, West and East Towers provide the heating to the building. Thermostatically controlled radiation valves on the floors modulate to control space temperature.

Air Conditioning: East Tower has Two Carrier chillers, North and West Towers each have One Carrier chiller located on the 29th floor to provide the cooling for the cooling coils on all the various air systems located in the building.



Air Exchange: Tower Floor Air Exchanges will be up to 6 times per hour. With a complete Outdoor air replacement every hour.

Standard Hours of HVAC Operation: 6:00 a.m. to 6:00 p.m. Monday to Friday
6:00 a.m. to 1:00 p.m. Saturday.

COVID-19 and HVAC

Ventilation and filtration provided by HVAC systems can reduce the airborne concentration and risk of transmission through the air. However, even the most robust HVAC system cannot control all airflows and completely prevent the spread of the virus. Ventilation and effective airflow pattern is however a primary infectious control strategy. The filtration systems in Sun Life Plaza are first class and at the high end of the MERV (Minimum Efficiency Reporting Value) rating system, which is consistent with recommendations from the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) April 2020 position paper on Infectious Aerosols. With the warmer weather, our dampers are open to allow for maximum fresh outdoor air to dilute air contaminants that are generated by the building, its furnishings and its occupants that may potentially carry COVID-19.