

VANCOUVER AQUARIUM ENTRANCE COMPLEX

VANCOUVER, BC, CANADA

INTRODUCTION

Vancouver Aquarium is known as Canada's first public aquarium. At almost 100,000 square feet, the aquarium consists of several buildings constructed in a number of phases, dating back to the construction of the original facility in 1955. In 2014 the ribbon was cut on a new Aquarium Entrance Complex, an innovative, sustainability-centered venue that showcases the facility's natural setting in Stanley Park. In 2016 it received LEED Gold certification from the [Canada Green Building Council](#).

PROJECT DETAILS

Authorized Dealer [Webir Automation & Control Services](#) installed a Reliable Controls building automation system during construction of the Aquarium Entrance Complex to control air-handling units, heat exchangers, a variable air volume system, a cooling tower, and air-cooled chillers.

The aquarium has unique environmental requirements. Facility managers depend on the building management system to regulate fresh- and saltwater systems and provide water currents and surges in exhibits. Water quality is monitored for temperature, pH, conductivity, chlorine, oxidation reduction potential, and flow.

The Reliable Controls system also controls heat pumps for office areas and uses seawater cooling and gas-boiler heating. Monitoring includes electric panels, current transmitters, boiler efficiency, water flow rates, and energy efficiency. The facility uses rainwater for irrigation and flushing.

John Nightingale, president and CEO of Vancouver Aquarium Marine Science Centre at the time the new building opened, noted that creating a green complex was the goal from the start. "Sustainability was at the core of the new building's plans from the day the blueprints were drawn. From installations that significantly minimize water use to our energy-efficient heat-exchange system, the exploratory visitor complex represents some of the most innovative applications of green design."

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MARKET SEGMENT

Recreational

PROJECT TYPE

New construction

INSTALLATION TYPE

HVAC

TOTAL AREA

11,000 m² (116,000 ft²)

PROTOCOL

BACnet, Modbus

INSTALLED EQUIPMENT

5 MACH1™ controllers

3 MACH2™ controllers

6 MACH2 expansion cards

2 MACH-Global™ controllers

13 MACH-Global expansion cards

1 MODBUS-Link™ device

2 MACH-Net™ controllers

20 MACH-Zone™ controllers

12 SMART-Sensor™ devices

TOTAL SYSTEM OBJECTS

573

CERTIFICATIONS

LEED Gold

RELIABLE CONTROLS AUTHORIZED DEALER

WEBiR

AUTOMATION & CONTROL SERVICES LTD.

