THE FUTURE
of Weather Trending

CELEBRATING
30 Years of Excellence

www.reliablecontrols.com

RUNtime

The Official Quarterly Newsletter of Reliable Controls® Corporation

Q1 - 2016

IDS

INTERNET DATA SERVICE

ISO 9001 14001 QUALITY ENVIRONMENTAL ASSURANCE

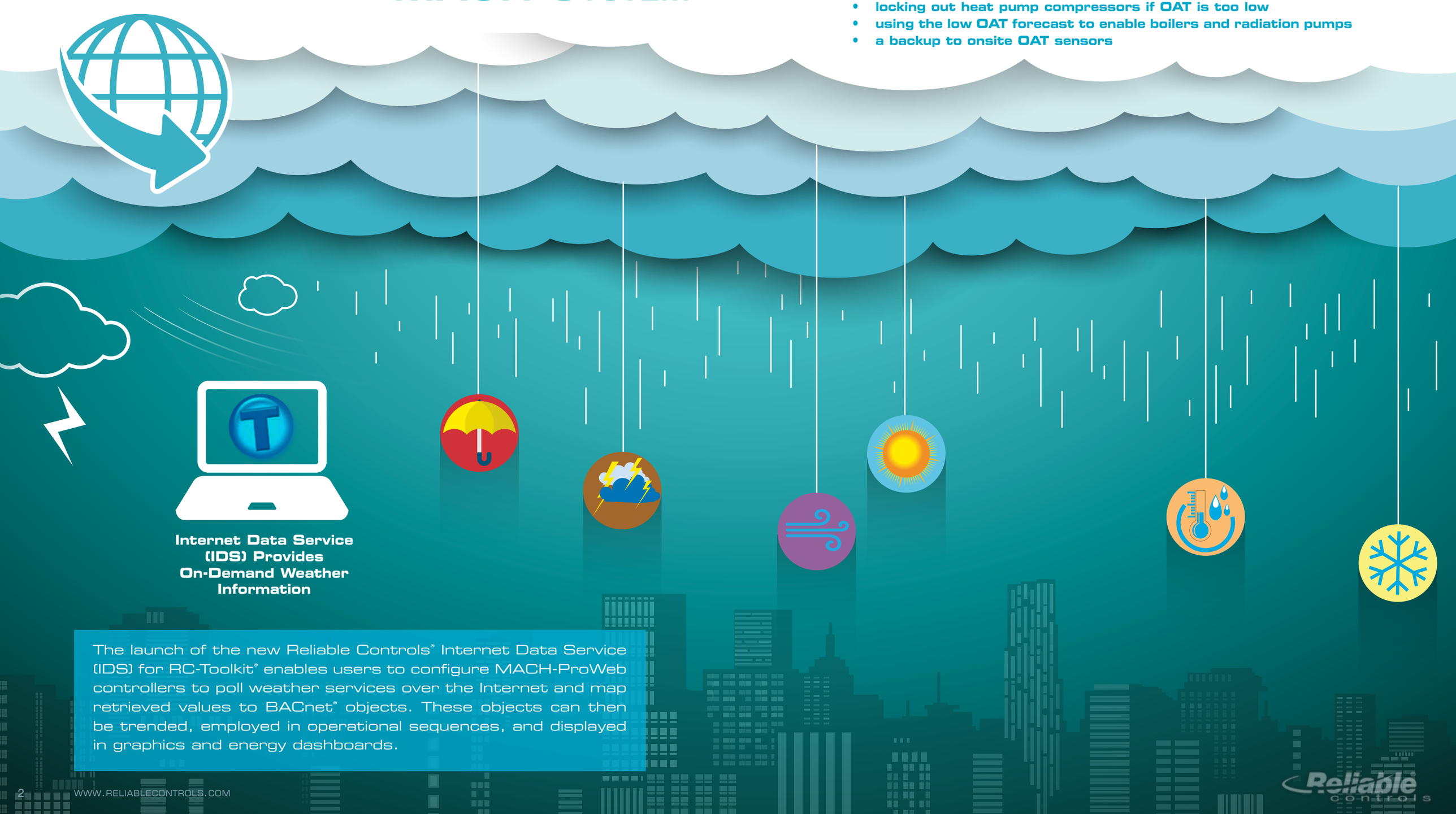
Member of BACnet International

Reliable® controls

Integrating Weather Data into the MACH-System

Mapping weather conditions and forecasts into Internet-enabled controllers has a number of practical benefits, including:

- **preheating or pre-cooling commercial buildings**
- **adjusting the amount of free cooling available to a facility**
- **locking out heat pump compressors if OAT is too low**
- **using the low OAT forecast to enable boilers and radiation pumps**
- **a backup to onsite OAT sensors**



Internet Data Service (IDS) Provides On-Demand Weather Information

The launch of the new Reliable Controls® Internet Data Service (IDS) for RC-Toolkit® enables users to configure MACH-ProWeb controllers to poll weather services over the Internet and map retrieved values to BACnet® objects. These objects can then be trended, employed in operational sequences, and displayed in graphics and energy dashboards.

Celebrating 30 YEARS of EXCELLENCE

Reliable controls

1986


COMPANY FOUNDED
in Surrey, BC, Canada. First Burke 1000 controller installed.

1992
2nd GENERATION
Development begins

1993


MNC100
[MACH-Net Controller] released

1994


COMPANY MOVES
to Victoria, BC, Canada

1995
PRODUCT CATALOG
First release
SMART-Sensor™ LED released

1996
TRAINING
First dealer training course held
First website posted
Commitment to ASHRAE Standard 135
BACnet protocol announced

2006


MACH-Stat™
controller released
RC-WebView® 2.0 software released

2005
SPACE-Sensor™
released

2004


COMPANY MOVES
to Hallowell Rd. Victoria, BC
RC-Studio® 2.0 released
RC-GrafxSet® 1.0 released
SMART-Sensor™ LCD released

2007


MILESTONE
100,000th controller shipped
MACH-ProCom™ controller released
RC-Archive® 2.0 released

2008


MACH-ProSys™
controller released
RC-LicenceManager® 1.0 released

2003
BTL®
First RCC product approvals from the BACnet® Testing Lab

2009
SMART-Space™
Controller released
RC-GrafxSet® 2.0 released
RC-Toolkit™ 2.0 released

2002
MACH-Global™
controller released
RC-WebView® 1.0 released
RC-Archive® 1.0 released

2001
MILESTONE
10,000th controller shipped
RCC joins BACnet® Manufacturers Association
Authorized Dealer brand launched

Reliable controls Authorized Dealer

1997
MILESTONE
1,000 MNC100s shipped
Launch of industry-leading 5-year warranty
Launch of new corporate logo

1998


MACH1™ & MACH2™
controllers released
ETHER-Link Portal
released

2000


RC-Studio® 1.0
released
MACH-Zone™ released

1999
MACH-Air™
controller released

2010
Flow Sensor
released

2011
MACH-ProWeb™
controller released
SSE & SSEA EnOcean®
Wireless sensor released
RCC becomes ISO 9001 certified

2012
MACH-ProZone™
controller released
RC-Archive3 released
MACH-ProAir™ released

2013
RCC-HQ
Annex becomes LEED Platinum certified

2014
MACH-Pro1™ & MACH-Pro2™
controllers released
RC-GrafxSet® 3 released
Reliable Controls becomes ISO 14001 certified

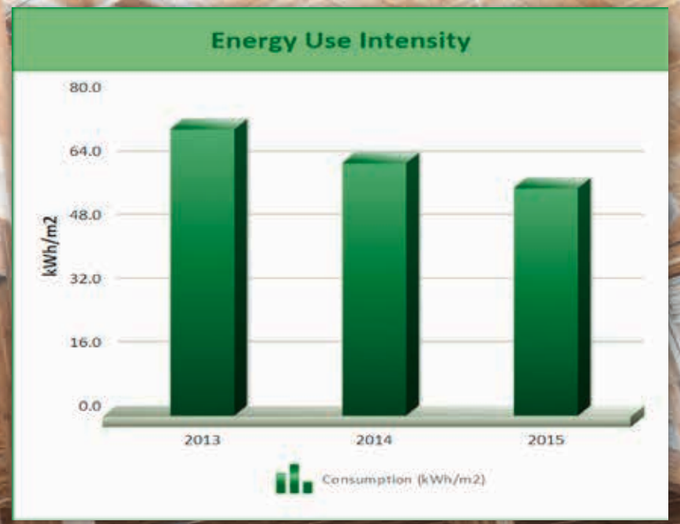
ISO 9001 14001 QUALITY ENVIRONMENTAL ASSURANCE

2015
myControl®
app released
RC-Reporter® 3 released
RC-WebView® 3 released

Better by design™

For 30 years, Reliable Controls has been committed to excellence in the building controls industry. Our business objectives have been and continue to be the best in terms of quality, dependability, and customer satisfaction. Thank you for purchasing our products and working with our worldwide network of Authorized Dealers for all these years.

Headquarters Annex Annual Review



LEED® Platinum Certified HQ Annex Update

2015 was an excellent year for energy performance at our headquarters in Victoria, BC, Canada. For the first time, we used less energy than design.

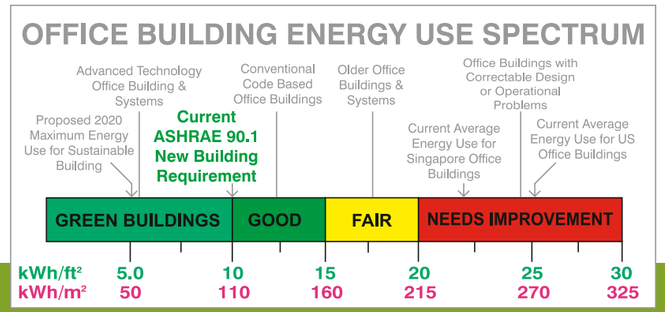
We minimized energy use in our parkade and stairwell lighting by changing zones, re-programming line-voltage sensors, and controlling zones according to ambient light levels instead of strict time of day scheduling.

We improved the efficiency of our water-to-water and air-to-water heat pumps by optimizing the sequence of operations with demand and outdoor air temperature.

As a result, the Reliable Controls HQ Annex completed 2015 with an Energy Use Intensity (EUI) of **57.1 kWh/m²**, just below the design EUI of **58.8 kWh/m²**.

Energy Use Intensity (EUI) is used by the building performance industry to benchmark building energy consumption and facilitate comparisons. The RC-Reporter chart (above) displays continuous improvement over the past three years in terms of EUI.

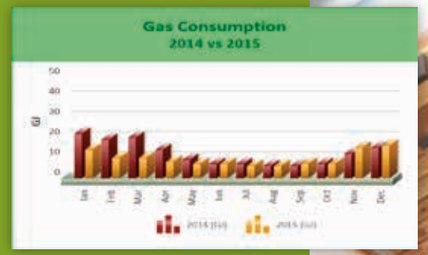
In a recent presentation by Thomas Hartman at the 2015 International Green Building Conference in Singapore, Mr. Hartman displayed the chart below to help stakeholders appreciate the spectrum of EUI in office buildings. A building designed to be ASHRAE 90.1 will result in an EUI of 110 kwh/m² (10 kwh/ft²). Do you know what the EUI is for your building?



Better by design™

For more information about RC-Reporter, visit: www.reliablecontrols.com/RCR

GREEN BUILDING IN REVIEW



At 57.1 kWh/m^2, the energy use spectrum chart puts the Reliable Controls HQ Annex well into green building territory, just where we expect it to be! But is there room for improvement? Of course... but it's getting harder now that the 'low hanging fruit' has been picked and the building is approaching full occupancy. Below is our "to-do" list for 2016.

LEED Platinum HQ Annex improvements on our 2016 "to-do" list:

- The wind tower dampers (used for natural ventilation) stay closed for about six months during the cold season. During that time they are a liability in terms of leakage through the cold blades, and conduction/radiation to the outdoors. What could we do to seal them up tight in the winter?
- Our air/water and water/water heat pumps are very efficient, but what else can we do with setpoints to ensure that when the heat pumps run, they are running at maximum efficiency?
- Further reductions to the operating hours of interior lights is possible. More motion sensors, more code!
- The hydronic force-flow heaters use too much energy for the four rooms that they heat. Can we find more suitable replacements?
- The plug loads in our building will soon be the greatest energy use category. We need to convince our occupants to turn everything off when they leave, or add devices to do it automatically.
- Conference room heating/cooling/ventilation is not ideal. Ductwork changes are required to improve it.
- The oil heater for the hydraulic elevator is inefficient and an alternative strategy needs to be implemented.
- Our server room cooling is inefficient and needs to be re-evaluated

We will report back in Q1-2017.

People and Technology You Can Rely On

Reliable Controls has been providing simple, flexible, and sustainable products and solutions for thirty years now. Originally founded in Surrey, BC, Canada, the company has come a long way, growing into an internationally recognized firm with world-class quality and exceptional customer service. The right people with the right processes and the right outlook determine the longterm success of a company. We have been very fortunate over the decades to have maintained a good balance in all those areas.

1986 – 1994: Reliable Controls head office and manufacturing facility in Surrey, BC

2004: Reliable Controls office and facility in Victoria, BC

2012: Ribbon cutting for LEED® Platinum certified HQ Annex

ISO 9001 14001 QUALITY ENVIRONMENTAL ASSURANCE

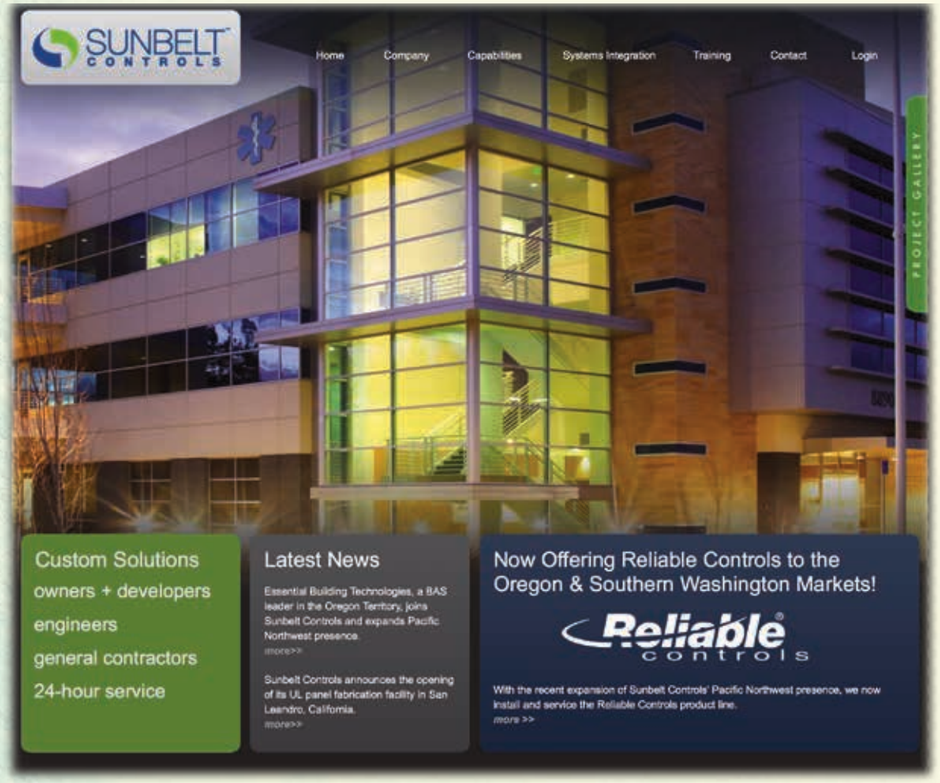
Celebrating 30 YEARS of EXCELLENCE

New Dealers

New Reliable Controls Authorized Dealers!

Trade Air Engineering (Pacific) Ltd.
Namaka, Nadi, Fiji

Sunbelt Controls
Washington/Oregon State



Trade Shows

Visit Reliable Controls at these upcoming trade shows:

Globalcon 2016
March 9-10, 2016
Boston, MA, USA

MCE 2016 - Mostra Convegno Expocomfort
March 15-18, 2016
Fiera Milano, Milan, Italy

NFMT 2016
March 22-24, 2016
Baltimore, Maryland, USA

IRHACE
April 7-8, 2016
Auckland/New Zealand

NFMT: High Performance Buildings 2016
May 3-4, 2016
Austin, Texas, USA

ARBS 2016
May 17-19, 2016
Melbourne, Australia

AIRAH - Perth 2016
June 9, 2016
Perth, Australia

Air Mobility Training Centre

CFB Trenton, Ontario, Canada

Government

Department of National Defence

One of the most complex facilities of its kind, the Air Mobility Training Centre (AMTC), located at 8 Wing at CFB Trenton, was built to house the equipment and personnel required to train pilots and maintenance crews for the new CC-320J Hercules aircraft purchased by the Canadian Forces. It will also provide support to Canadian troops serving in combat, as well as for peace keeping and humanitarian missions around the world.

Project Details

Equivalent to two football fields, the AMTC provides crews with a state-of-the-art environment in which to train. The LEED® silver certified facility consists of a combination of 2- and 3-storey educational and office spaces, designed and built to accomodate the latest in aircrew and technician simulation, making it one of the most advanced flight training facilities in the world.

Installed mechanical equipment includes chillers, boilers, lighting, power monitoring, fire alarm, emergency generator, DHW, chemical control, steam, and VFDs. The project required integration with several BACnet® vendors and had to comply with military standards.

The installation of highly sophisticated, state-of-the-art equipment, including flight simulators, means that the tolerances for the concrete floor are much lower than usual. The facility now benefits from remote access, integration to a large WAN for multiple buildings, and creative programming encompassing energy saving modes within the building. The expertise and diligence of the DDC professionals involved with this complex project brought in the AMTC almost $20 million under budget.

To learn more about projects using Reliable Controls® visit
www.reliablecontrols.com/projects/overview

Project Type:
New Construction

Installation Type:
Boiler, CO2 Monitoring, Lighting, Power Monitoring, VAV, Fire Alarm, Emergency Generator

Total Area:
17,000 m² (182,988 ft²)

Equipment Installed:
4 MACH-ProCom™
21 MACH-ProSys™
47 MACH-Zone™
303 MACH-Air™
2 MACH-ProAir™
241 Smart Sensor™
51 SmartSpace™

Network:
EIA-485, Ethernet, Fibreoptic, LAN, WAN

Integration:
BACnet®

Total System Points:
10579 points

Reliable Controls® Dealer:
R.E.L. Controls Inc.

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