



# REDUCING TENANT COMPLAINTS - MULTI-UNIT RESIDENTIAL

## ISSUE

A 600 suite apartment complex in Calgary was experiencing higher than normal tenant complaints related to insufficient heat when the outdoor temperature was very low, despite the recent installation of a new, high-performance heating plant. The problem had not been as severe in the prior heating season when the plant was installed however the very cold winter of 2010-2011 exacerbated the problem.

## ACTION

By analyzing the data collected from the building automation system, *Dimax* determined that a design flaw existed with the new higher performance boilers, which caused a load imbalance in the flow pressure between the boilers and the distribution system.

By resetting the distribution system pump variable speed drives to a lower differential pressure the:

- Flows were better matched
- Distribution system temperature difference increased by 8° F
- Required hot water temperature for the system could be met with 180° F supply water temperature from the boilers.

## RESULTS

Through the modification of the flow balance in the heating system, the following results were achieved:

- Tenant complaints were reduced by 30%
- Suite turn-over reduced by 9%
- Improved efficiency at the boiler plant resulted in cost savings of 20% or \$26,000



- Twin Residential Towers, 14 storeys each with a total of 608 suites
- New high performance heating plant for building heating with perimeter radiation in suites

## BOILER SYSTEM SCHEMATIC

