

# THE RISE

STATE COLLEGE, PA, USA

RESIDENTIAL

## OVERVIEW

*The Rise is a student housing facility that provides apartment-style living for students that attend Penn State University.*

## PROJECT DETAILS

Reliable Controls Authorized Dealer, Nexgen Automation Inc., successfully completed this new construction project for "The Rise". The Rise is a 12-storey building in downtown State College, PA - one of the largest and newest buildings in the downtown area. The building was designed to house 570 students in apartment-style living.

Networked hardware for this project includes MACH-ProWeb™ and MACH-Pro2™ controllers with expansion modules for the HVAC portion of the project, and MACH-ProSys™ UUKL-listed smoke controllers and expansion modules for the smoke control system.

Mechanical equipment includes a water source heatpump loop with variable speed loop pumps, cooling tower, variable speed pumps for the tower, and three boilers. The system maintains the temperature of the loop at optimum temperatures to maximize efficiency for both the loop and the heatpumps it serves. Make-up air to the building is provided by six energy recovery units that are integrated into the system. In addition, the system monitoring the underground parking garage and controlling variable speed exhaust fans maintains safe carbon monoxide levels.

The smoke control system was a last-minute addition to the scope of work. A complex smoke evacuation sequence had to be implemented to achieve proper pressurization and smoke evacuation for the 12-storey building in the event of an emergency. All smoke control equipment, controls, panels, and wiring had to be procured and installed on an extremely tight schedule. In addition, complex custom software had to be written, tested, and validated to control the various exhaust fans, smoke dampers, and fire fighters' annunciator panel. Nexgen's team of professionals delivered a complete, operational, tested, and verified UUKL system and ensured the safety of the students in time for the start of the Fall semester.

This was a successful new construction project, which earned LEED® silver certification.

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**PROJECT TYPE:**  
New Construction

**INSTALLATION TYPE:**  
Boiler, Heatpump, HVAC, Smoke,  
Cooling Tower

**TOTAL AREA:**  
27,884 m<sup>2</sup> (300,139 ft<sup>2</sup>)

**NETWORK:**  
EIA-485, BACnet®

**POINTS:**  
224

**EQUIPMENT INSTALLED:**  
MACH-ProWebSys™  
MACH-Pro2™  
MACH-ProSys™

**RELIABLE CONTROLS® DEALER:**  
Nexgen Automation Inc.



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