Who is Marty and Hawks & Company?

Marty
- Owner/Operator since 2006
- Provides Design and Sales efforts

Hawks & Company
- Specializing in Senior Living facilities
- Serving the members of Leading Age for over 7 years
- 35 employees
- Service first mentality
- Core Values Driven
SMART HVAC and BAS Design

What does SMART mean?

• Practical/Common Sense
• Technology Driven
• Energy conscious
• Capital and Construction Costs
• Maintenance or Life Cycle Costs
What type of facility?
Independent Living – Skilled Nursing

Drivers:
Redundancy
Technology
Energy savings
Codes and requirements
Budget – initial cost and ongoing maintenance
SMART Solution (Real time example)

Original Design:
- 3 MM BTU Heating Plant – 6,500,000 BTU High Efficiency boilers
- 140 Ton of cooling plan – 2 70-ton chillers
- 750 BTU Domestic hot water plant – 3 250,000 BTU High Efficiency water heaters
- 4 large loop pumps – 2 hot water / 2 chilled water

Hawks SMART Design-Assist Solution:
- Reduce the quantity of heating boilers
  Installed 3 - 1MM BTU boilers
- Reduce the quantity of domestic water heaters
  Installed 2 - 400,000 BTU water heaters with, 2 - 200-gallon storage tanks
- Develop a SMART BAS strategy to operate all equipment
  Installed a Tridium BAS solutions to optimize efficiencies and monitor critical alarms
Hawks SMART Design-Assist Solution BENEFITS:

• Reduce the quantity of heating boilers
  Installed 3 - Larger boilers – Saved $74,500 in construction costs
  Reduced maintenance requirements & $$
  Maintained boiler efficiency

• Reduce the quantity of domestic water heaters
  Installed 2 - 400,000 BTU water heaters with, 2 - 200-gallon storage tanks
  Saved $17,600 in construction costs
  Reduced maintenance requirements & $$
  Created more supply of hot water without dips in water temperature

• Develop a SMART BAS strategy to operate all equipment
  Installed a Tridium BAS solutions to optimize efficiencies and monitor critical alarms
  Created a cloud-based solution to control and monitor all critical systems
  Increased the building maintenance personnel efficiency
SMART Ideas to Consider

Building Automation
  • Occupancy Sensors
  • Critical Alarms
  • Scheduling
  • Monitoring
  • Card Access
  • Lighting Control

Solutions:
  • Utilizing CO2 sensors
  • Incorporating Bipolar Ionization
  • Utilizing heat recovery

Make Up Air or Outdoor Air Requirements
  • This is a must have! Why?
  • Very expensive to condition
  • Humidity causes problems!
Rules of Thumb to be aware of:

• High efficiency equipment is always the best way to go

• By installing a variable frequency drive we have the maximum amount of savings

• A combination water heater and storage tank is the best solution for generating hot water

• I had an engineer design my system, I am covered on all fronts

• Outside air can be ducted into any air handling system
Variable Refrigerant Flow Systems (VRF)

What is it?
- 35-year-old technology
- Flexible Senior Living Applications
- Uses refrigerant as the heating and cooling medium
- System has variable speed compressors
- Utilizes return air temperature to determine the load
- Energy Efficient
- Zoning capabilities

Applications
- Resident rooms
- Dining Halls
- Conference Rooms
- Corridors
Planned Maintenance

Why is this SMART?
• Reduce down time
• Increase life cycle efficiency
• Reduce energy consumption
• Reduce operational spend

SMART Benefits
• Predictive Maintenance
• Life Cycle performance
• Equipment mapping
• Capital expenditure planning
Thank You!