

**Digi-ACC™**



**Bes-Tech**

Saving Energy. Building Comfort.

# WHAT IS DIGI-ACC

Digi-ACC is a control kit for air cooled chiller systems, optimizing and coordinating the chiller and pumps thereby reducing consumption, kWh

- Retrofit control kit for air-cooled chiller system
- Optimizes the air-cooled chillers operation
- Upgrades the existing pump system(s) for a true variable flow system

Existing chiller controls sequencing is not optimized, causing low chiller efficiency

# Digi-ACC Applications

## – Chiller(s):

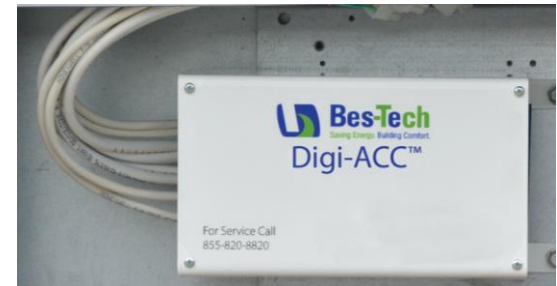
- 20 ton up to 500 ton each
- Two chillers - each chiller has two or more compressors
- One chiller - two compressors with or without sliding valve
- One chiller - four or more compressors

## – Pumping system:

- Primary only, constant water flow with bypass
- Primary only, variable water flow
- Primary-secondary
- With or without backup pump

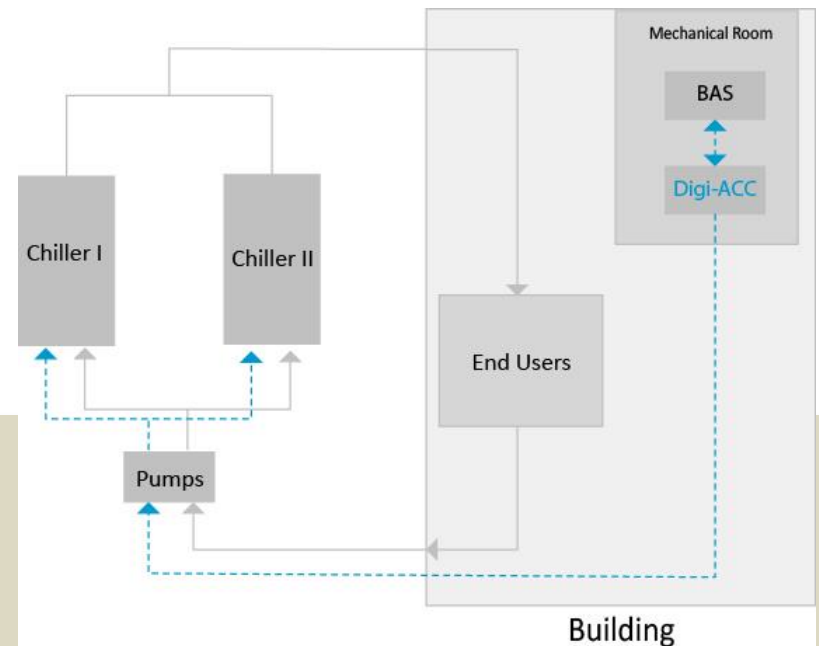
## – Control:

- BAS or standalone control



# Digi-ACC Features

- Chilled sequencing optimization
- Primary/secondary pump speed optimization
- Optimal chilled water temperature reset
- Reduced pump power at partial load
- Integrates with existing chiller controller(s) and BAS
- Remote enable and remote temperature reset are available from existing chiller controller
- Demand limiting function



# Digi-ACC Benefits

Integrates pump and chiller system operation providing a smooth and stable chilled water supply

Reduces:

- Chiller energy consumption 10 - 40%
- Pump electrical energy consumption by 30 - 70%
- Compressor hunting, extending chiller life
- Peak demand
- O&M costs

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## True Variable Flow System



# FAQ

## How does Digi-ACC save energy?

- ✓ Sequenced chillers maximize utilization of available evaporators and condensers
- ✓ Chilled water temperature reset based on measured building load
- ✓ Measuring pump flow and speed ensures pumps run at the most efficient point on the pump curve
- ✓ Compressors at partial speed during partial load conditions improve compressor efficiency

# FAQ

## Does Digi-ACC modulate the compressor speed?

- ✓ Yes, when there is one chiller with up to two compressors

## Does Digi-ACC control the compressors staging?

- ✓ Indirectly, by dynamically resetting the chilled water temperature the compressors are staged

## Does the pump's existing VFDs need to be replaced?

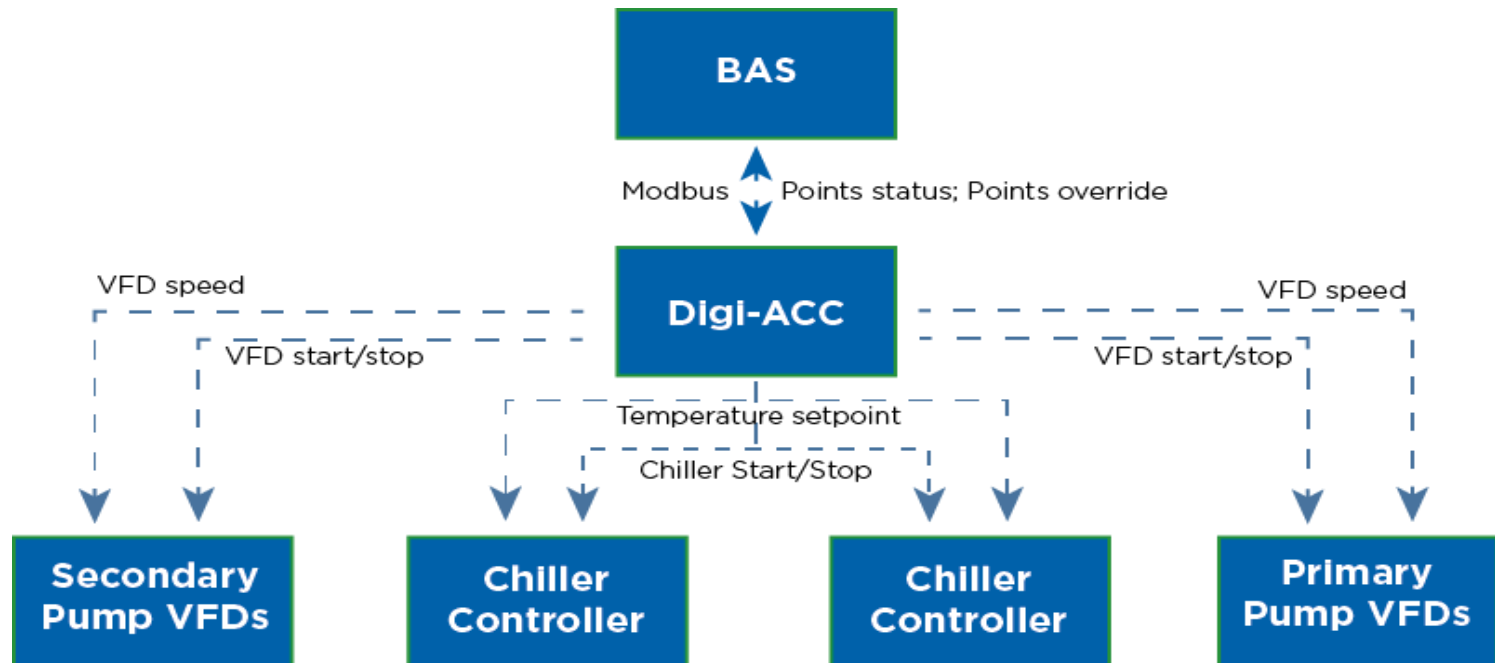
- ✓ VFD must output power and speed signal to Digi-ACC as an analog signal



# FAQ

## How does the Digi-ACC interact with existing chiller controller or BAS system?

Digi-ACC controller sits between the existing BAS and Chiller controllers



# FAQ

## Where is the Digi-ACC mounted?

- ✓ Mechanical room, chiller controller cabinet or, outside within a NEMA3R enclosure
- ✓ VFD for pumps can be mounted next to the pumps (either inside or outside of the building), or inside the mechanical room at close proximity of the pumps

## Install time for the Digi-ACC unit?

- ✓ 5 hours

## What is the typical energy savings?

- ✓ 1500kWh – 2200 kWh/ton

## What is Digi-ACC's warranty policy?

- ✓ *One year parts warranty on Digi-ACC*