

## Case Study: MCS Controls upgrade on Carrier 30GX125-Y

### Site Location:

- Quest Building, Dallas, Tx
- Upgraded unit #1 in 10/11
- Upgraded unit #2 in 03/12

### Concerns:

- Failing of linear floats in the economizers
- Continuous shut down trips
- Existing Carrier controls were obsolete
- Excessive man hours spent on sight visits

### Equipment:

- Two Carrier 30GX125
- Nominal 125 ton Chiller
- Two (2) Refrigerant Circuits w/ Economizers
- One (1) Compressors per Circuit, Y-D start
- One (1) EXV's per Circuit
- Three (3) Condenser fans per circuit

### Steps Taken:

- Removed existing obsolete controls
- Installed MCS-Magnum Controls
- Replaced old canister style economizers with a new plate-frame style economizers.
- Replace Carrier proprietary EXV's with standard Sporlan EXV's
- Wired Carrier's compressor motor temperature sensors to the MCS-Magnum Controller
- Customer added additional fan contactors for improvement on the Discharge PSI control. (Optional)

### Results:

Two machines were upgraded within six months. Obsolete Carrier controls were replaced with the MCS-Magnum Controller. This provided the customer with a controls platform that is not built with a pre-planned obsolescence. The MCS Controls will allow for future updates and operational changes that can be made through updated software. Previously released MCS hardware remains supported with current and future products. Removal and replacement of Carrier's old style canister economizers with new plate-frame economizers eliminating reoccurring mechanical issues. The installation of standard Sporlan electronic expansion valves eliminated Carrier's proprietary electronic expansion valves.



### Upgrade Performed By