

# Case Study

## Centennial Hills Chiller and Boiler Plant Optimization

### Site Information

User: Centennial Hills Hospital  
Location: Las Vegas, NV  
Boiler: Cleaver Brooks-Flextube  
Contractor: Lawyer Mechanical Services, Inc.  
Burner: St. Johnson NOXmatic™  
Emission Limit: <9ppm NOx



### Situation

Centennial Hills Hospital had operated (2) two Cleaver Brooks 400 HP Flextube Boilers with Sure-fire™ burners supported with FGR since 2007. When the Department of Air Quality Management reviewed their operating permit, it was determined that the existing burners could not satisfy the emission limits.

### Solution

Lawyer Mechanical Services, inc., a division of Lawyer Trane, delivered a St. Johnson NOXmatic™ Type -A burner system. This NOXmatic™ burner does not require flue gas recirculation to achieve ultra low NOx emissions, thereby eliminating the added expense of installing, operating and maintaining an FGR system.

The NOXmatic™ Type-A burner incorporates S.T. Johnson's trademark axial-flow air blower arrangement with swing-open housing to provide easy access to all burner internals for ease of maintenance. This allowed S.T. Johnson to provide a streamlined, compact package which was a direct replacement of the existing Cleaver Brooks Sure Fire™ burners and minimized installation work. The result was a very clean, quick and cost-effective installation.



### Results

Each St. Johnson NOXmatic™ burner took a total of four days to install and commission after arriving on the site. The burners passed the source test with fly-ing colors. Final performance parameters were as follows:

NOx limit:	9 ppm @ ref. 3% O2 dry
NOx emission actual:	8 ppm @ ref. 3% O2 dry
CO emission actual:	<3 ppm @ ref. 3% O2 dry

These boilers are sized as redundant, yet with one boiler running >\$5,000 was saved in gas the first month. For more information, please contact Lawyer Mechanical Services at 702-876-7530, a division of Lawyer Trane.

### Lawyer Trane

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Paul Mehl-Boiler team leader with over 30 years of experience

